LAUR 90-3400

Control Number 0025

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Los Alamos National Laboratory

Environmental Restoration

A Department of Energy environmental clean-up program

SOLID WASTE MANAGEMENT UNITS

REPORT

Los Alamos Environmental Restoration Records Processing Facility

ER Record I.D.# 0007513

Los Alamos National Laboratory

Revised November 1990

VOL III of IV
(TA-26 through TA-50)

LAUR 90-3400

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VOL III of IV
(TA-26 through TA-50)

LIST OF ACRONYMS

AEC	Atomic Energy Commission
ASL	Above Sea Level
BTX	Benzene, Toluene, Xylene
CEARP	Comprehensive Environmental Assessment and Response Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CMP	Corrugated Metal Pipe
CMR	Chemical Metallurgical Research (Building)
D&D	Decontamination and Decommissioning
DOE	U.S. Department of Energy
dU	Depleted Uranium
EETF	Experimental Engineering Test Facility (Building)
EID	New Mexico Environmental Improvement Division
EM	Electromagnetic
EPA	U.S. Environmental Protection Agency
EP TOXIC	Extraction Procedure Toxicity
ER	Environmental Restoration
FP	Fission Products
HE	High Explosive
HEPA	High Efficiency Purified Air (Filter)
HSE	LANL Health, Safety, and Environment Division
HSWA	Hazardous and Solid Waste Amendment to RCRA
IWMP	Interim Waste Management Program (DOE's Department of Defense Waste and Transportation Management)
LAAO	U.S. Department of Energy Los Alamos Area Office
LAMPF	Los Alamos Meson Physics Facility
LAMPRE	Los Alamos Molten Plutonium Reactor Experiment
LANL	Los Alamos National Laboratory
LAPRE	Los Alamos Power Reactor Experiment
LASCP	Los Alamos Site Characterization Program
LASL	Los Alamos Scientific Laboratory
LL	Low Level (Radioactive Waste)
MAP	Mixed Activation Products
MDA	Material Disposal Area
MEGAS	Multiple Energy Gamma Assay Spectrometer
MFP	Mixed Fission Products
N.C.	Non-Compactible (Radioactive Waste)
NMEID	New Mexico Environmental Improvement Division
NPDES	National Pollution Discharge Elimination System
O.D.	Outside Diameter
OWR	Omega West Reactor
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PHERMEX	Pulsed High-Energy Radiographic Machine Emitting X-rays
P.N.	Property Numbers
PPB	Parts Per Billion
PPM	Parts Per Million
RCRA	Resource Conservation and Recovery Act
RH	Remote Handled (Radioactive Waste)
SARA	Superfund Amendments and Reauthorization Act
SRF	Size Reduction Facility

LIST OF ACRONYMS
(Continued)

SWMU	Solid Waste Management Unit
TA	Technical Area
TCE	Trichloroethylene
TRU	Transuranic
Tsk	Task
TSTA	Tritium Systems Test Assembly (Building)
UST	Underground Storage Tank
WIPP	Waste Isolation Pilot Plant

TA-26
OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 26, D Site, operations consisted of a storage vault for nuclear materials, a sentry station, and a guard tower. The buildings were removed or demolished by 1966. The technical area was located on the north boundary of the Laboratory south of and adjacent to East Road on the narrow mesa between Los Alamos Canyon on the south and Pueblo Canyon to the north (DOE, 1987a). The site is within the current boundaries of TA-73.

The site of former TA-26 lies at an elevation of about 6,980 to 7,060 feet asl in the Pinon-Juniper overstory vegetation zone. Soil consists of Hackroy sandy loam. The potentiometric surface of the main aquifer in the Los Alamos region lies at about 5,850 feet asl at the site. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-26

26-001	CANYONSIDE DISPOSAL AREA
26-002	SUMP SYSTEM
26-003	SEPTIC SYSTEM

SUMMARY

LOCATION : TA-26
TYPE OF UNIT(s) : CANYONSIDE DISPOSAL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1965
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE

UNIT INFORMATION

A concrete building measuring 26'9" x 41'6" x 10'6" tall containing a vault was broken up and the concrete pieces disposed of over the edge of the mesa into Los Alamos Canyon south of TA-26. Most of the rubble fell on a ledge halfway down. Soil was then placed over the rubble. During the 1986 CEARP field survey, pieces of pipe and other material were seen projecting from the fill soil. The disposal area measures about 30' x 10' and is several feet deep.

WASTE INFORMATION

The debris included radionuclide-contaminated concrete. Counts on the intact concrete before breakup were thought to have been less than 1,000 dis/min gross alpha. The activity possibly originated from uranium-233 and -235.

RELEASE INFORMATION

Most of the rubble now rests on a ledge on the side of Los Alamos Canyon. No recent surveys have been undertaken to determine possible waste movement. Radioactive monitoring was conducted on the mesa top in 1985. No above-background readings were obtained.

NOTES

The location of this SWMU is within the current boundaries of TA-73.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
26-001	TA26-1-L-1-RW	26.001	Tsk 43 : 16	NEAR TA-26-1

SUMMARY

LOCATION : TA-26
TYPE OF UNIT(s) : SUMP
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1946 - 1950s
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : SUSPECTED

MATERIALS MANAGED : SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

The sump (TA-26-6) [26-002(a)] was connected via a drainline to the vault floor drains in TA-26-1. Engineering records note the sump as having a 4' internal diameter and a depth of 10'. A drainline from the sump ran to the edge of the canyon. The sump and associated drainlines were decommissioned in the mid-1960s. Additionally, a 4-inch diameter drainline [26-002(b)] from the equipment room in TA-26-1 discharged to an outfall in Los Alamos Canyon.

WASTE INFORMATION

Uranium and tritium potentially were present in the liquids discharged to the sump. These contaminants may also have been present in the liquid discharged to the drainline.

RELEASE INFORMATION

The sump and drainlines are believed to have been taken to MDA-C during decommissioning, although engineering records indicate that they were disposed of over the edge of the canyon. In terms of discharges during the sump's active life, although utility drawings show the overflow discharging to the canyon edge, there is no record of this actually occurring and if so, what the liquids may have contained. The extent of releases from the drainline to the outfall area is unknown.

NOTES

The location of this SWMU is within the current boundaries of TA-73.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
26-002(a)	TA26-2-O/CA-I-RW	26.001	Tsk 43 : 12	TA-26-6, -1
26-002(b)	TA26-2-O/CA-I-RW		Tsk 43 : 13	NEAR TA-26-1

SUMMARY

LOCATION : TA-26
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1948 - 1950s
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

This septic tank, TA-26-5, served Building TA-26-1 (vault). It served the toilet and sink in the east room of TA-26-1, which was considered the least contaminated. The tank was constructed of steel and had a capacity of 250 gallons. In 1966, the tank was removed and disposed of in the canyon just south of the site, according to engineering records.

WASTE INFORMATION

The septic tank most likely handled sanitary waste. However, because radioactive contamination was found in the building (uranium and possibly tritium), these contaminants may potentially have entered the tank.

RELEASE INFORMATION

The tank overflow discharged through a line to an outfall in Los Alamos Canyon. Whether the piping that connected the building to the tank was removed is unknown. No information is available to document the existence of any radioactive releases.

NOTES

The location of this SWMU is within the current boundaries of TA-73.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
26-003	TA26-3-ST-1-RW		Tsk 43 : 14 15	TA-26-5

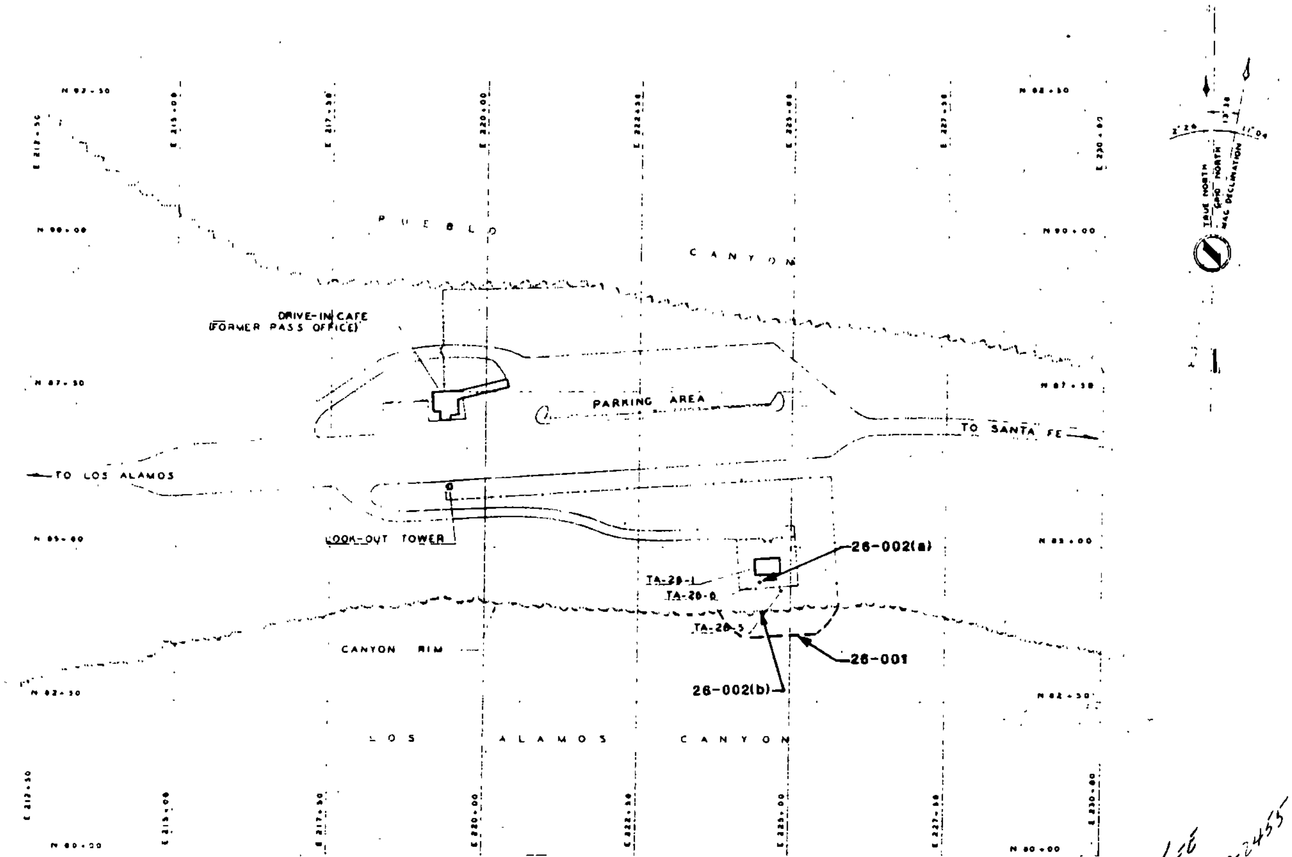
TA-26 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
26-001	26-1
26-002(a)	26-1, 26-2
26-002(b)	26-1, 26-2
26-003	26-2

NOTE: Some structure locations may contain more than one SWMU.

OFFICIAL USE ONLY

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-26-1	D-1	VAULT
TA-26-2	D-2	GUARD TOWER A (REM... D)
TA-26-3	D-3	GUARD TOWER B (REM... D)
TA-26-4	D-4	GUARD BUILDING (REMOVED)
TA-26-5	D-5	SEPTIC TANK (SANIT...)
TA-26-6	D-6	SETTLING SUMP (ACID)



REV. 1 4/30/90

EXPLANATION

26-001 SWMU LOCATION

FIGURE 26-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-26

Void - See Rev. 10, Eng-R-2455

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MICROFILMED FROM BEST AVAILABLE MATERIAL

OFFICIAL USE ONLY

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
ENGINEERING DEPARTMENT

STRUCTURE LOCATION PLAN
TA-26 D-SITE

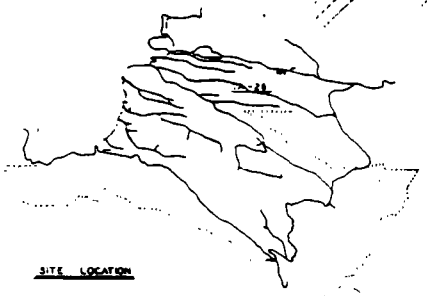
REVISED TO STATUS OF
REVISED TO STATUS OF
REDRAWN TO STATUS OF JULY 1, 1953

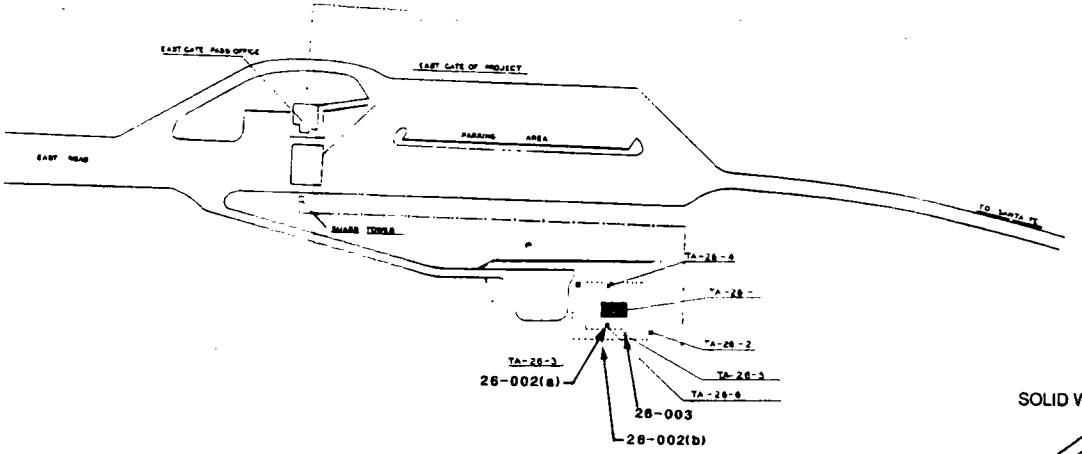
N. OYERS

301215 02 01 137

OFFICIAL USE ONLY

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-26-1	D-1	VAULT
TA-26-2	D-2	GUARD TOWER A
TA-26-3	D-3	GUARD TOWER B
TA-26-4	D-4	GUARD BUILDING - REMOVED
TA-26-5	D-5	SEPTIC TANK
TA-26-6	D-6	SETTLING SUMP





REV. 1 4/30/90

EXPLANATION

26-001 SWMU LOCATION

FIGURE 26-2

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-26

OFFICIAL USE ONLY

NORTH (MAGNETIC)

AUTHORIZED FOR	LOS ALAMOS SCIENTIFIC LABORATORY
HEALTH, SAFETY, FIRE PR., CONS., SEC.	DEPARTMENT OF ENGINEERING—CONSTRUCTION & MAINTENANCE GROUP
	STRUCTURE LOCATION PLAN TA-26 D-SITE
	SCALE 1" = 100'

UNCLASSIFIED

TA-27
OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 27, called Gamma Site, was used during the war years in a plutonium gun assembly program. It also included firing sites at which large shots could be tested. These shots contained uranium or thorium and beryllium. One test firing went low order and scattered high explosives. Sweeps to recover the explosive have taken place. The army also used the area as a mortar impact area. Gamma Site has been decommissioned (DOE, 1987a). The former site now lies within the boundaries of TA-36.

The site was located in Pajarito Canyon southeast of TA-18 and south of TA-54 at elevations between 6,650 and 6,700 feet asl. The present Pajarito Road covers some of the old area and obscures the former topography. The adjacent canyon walls are steep in this area. The canyon floor consists of alluvial silt, sand, and gravel, and the underlying bedrock is welded and non-welded Bandelier Tuff. Drill-holes near the former location of TA-27 encountered 8 to 11 feet of alluvium in the center of the channel, thinning toward the canyon walls (Apt and Lee, 1975). Vegetation is from the Ponderosa Pine/Pinon-Juniper, and Pinon-Juniper overstory vegetation zones. A non-forested, Shrub-Grass-Forb component also exists within the site. Soil consists primarily of Totavi gravelly loamy sand (Nyhan et al., 1978).

At the site, the potentiometric surface of the main aquifer in the Los Alamos area lies at about 5,800 to 5,850 feet asl. There are over 800 feet of unsaturated tuff and volcanic rock between the surface and the ground water table. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

Stream flow in Pajarito Canyon in the area of former TA-27 occurs only in response to storm runoff and snow melt (IT, 1987a). Perched ground water occurs in the alluvium of Pajarito Canyon at TA-27, but it is not connected hydraulically with the main aquifer. The saturated thickness of the alluvium in Pajarito Canyon varies, but average 10.01 feet in a monitoring well closest to the site of TA-27. Seasonal fluctuations are noted in the saturated thickness of the alluvium, with the highest water levels occurring in the summer. The range in flow rate of this perched ground water is 8 to 23 feet per day (IT, 1987a).

The quality of the perched ground water in Pajarito Canyon is generally good and meets most drinking water standards. Some parameters rarely exceed numeric limits for drinking

water, such as manganese, total uranium, and total dissolved solids (Environmental Surveillance Group, 1986; Apt and Lee, 1975). No routinely analyzed volatile organic compounds have been detected in the water.

TA-27 was located within the Pajarito Canyon channel and, therefore, may be subject to flooding. The Final Environmental Impact Statement shows that, with the restriction due to a bridge at TA-18 (maximum discharge allowed = 42 cubic meters, or 1,500 cubic feet/s), the channel should carry the 100-year flood event (31 cubic meters or 1,080 cubic feet/s) (DOE, 1979). Ponding of runoff has been noted in the area of TA-27.

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-27

27-001	GAMMA SITE TRENCH
27-002	FIRING SITES
27-003	MORTAR IMPACT AREA
27-004	SOIL CONTAMINATION

SUMMARY

LOCATION : TA-27
TYPE OF UNIT(s) : LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1945
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED RADIOACTIVE WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Around 1945, a trench is believed to have been dug near the base of the south-facing cliff at TA-27, downcanyon from TA-18. It was used to dispose of experimental pieces. The physical condition of the land makes establishing the exact location of the unit difficult. Results from a recent geophysical survey have been archived and were not reviewed.

WASTE INFORMATION

The buried items are believed to have been guns and gun barrels, and possibly gun assemblies which may have been contaminated with radionuclides. It is possible that, in addition, live ammunition may have been placed in the trench.

RELEASE INFORMATION

No information is available to document the existence of radioactive or hazardous waste releases from this unit.

NOTES

The location of this SWMU is within the current boundaries of TA-36.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
27-001	TA27-1-L-1-HW/RW	27.001 18.076	Tsk 16 : 9	

SUMMARY

LOCATION : TA-27
TYPE OF UNIT(s) : FIRING SITE
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1944 - 1947
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

These were five firing pits located in an area that was about a mile downcanyon from what is now TA-18. The sizes of experimental shots conducted in the pits ranged to a maximum of 2 tons of HE.

WASTE INFORMATION

The shots included HE, uranium, thorium, and beryllium. Lead is a suspected constituent.

RELEASE INFORMATION

In one experiment, a shot went low order scattering HE into the surrounding area. The large size of shots would have widely dispersed material. HE pieces were gathered during surface sweeps conducted in the 1960's and 1970's. Surveys conducted in 1985 indicated background levels for uranium in soil at Firing Sites 1, 4 and 5; however, uranium levels at Firing Sites 2 and 3 were two to ten times greater than background.

NOTES

The location of this SWMU is within the current boundaries of TA-36.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
27-002	TA27-2-CA-I-HW/RW	27.002	Tsk 17 : 32-36	

SUMMARY

LOCATION : TA-27
TYPE OF UNIT(s) : MORTAR IMPACT AREA
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1944 - 1948
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

This site, located on the south side of the present location of Pajarito Road, was used by the military to fire large guns. The impact area is fenced and posted.

WASTE INFORMATION

Not all the shells that were fired detonated. Waste has consisted of unexploded munitions and pieces of HE, as well as pieces of shell casings.

RELEASE INFORMATION

A fatal accident occurred when a civilian found an unexploded shell. A continuing program to periodically sweep all munition impact areas was then implemented to retrieve residuals. Any residuals potentially remaining would be located subsurface.

NOTES

The location of this SWMU is within the current boundaries of TA-36.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
27-003	TA27-2-CA-I-HW/RW	27.003 27.004	Tsk 16 : 1	

SUMMARY

LOCATION : TA-27
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : ?
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE

UNIT INFORMATION

Control building TA-27-2 was located at the northwest end of TA-27. The building has been removed.

WASTE INFORMATION

The waste materials associated with this structure are unknown.

RELEASE INFORMATION

Beta and gamma contamination was identified on the concrete floor in 1958. Decontamination efforts in 1959 were unsuccessful. A 1960 survey showed thorium contamination remaining inside the concrete structure. A 1988 beta and gamma screening of the building rubble did not reveal gamma exposure rates above background.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
27-004	TA27-3-L-I-RW		Tsk 16 : 7	TA-27-2

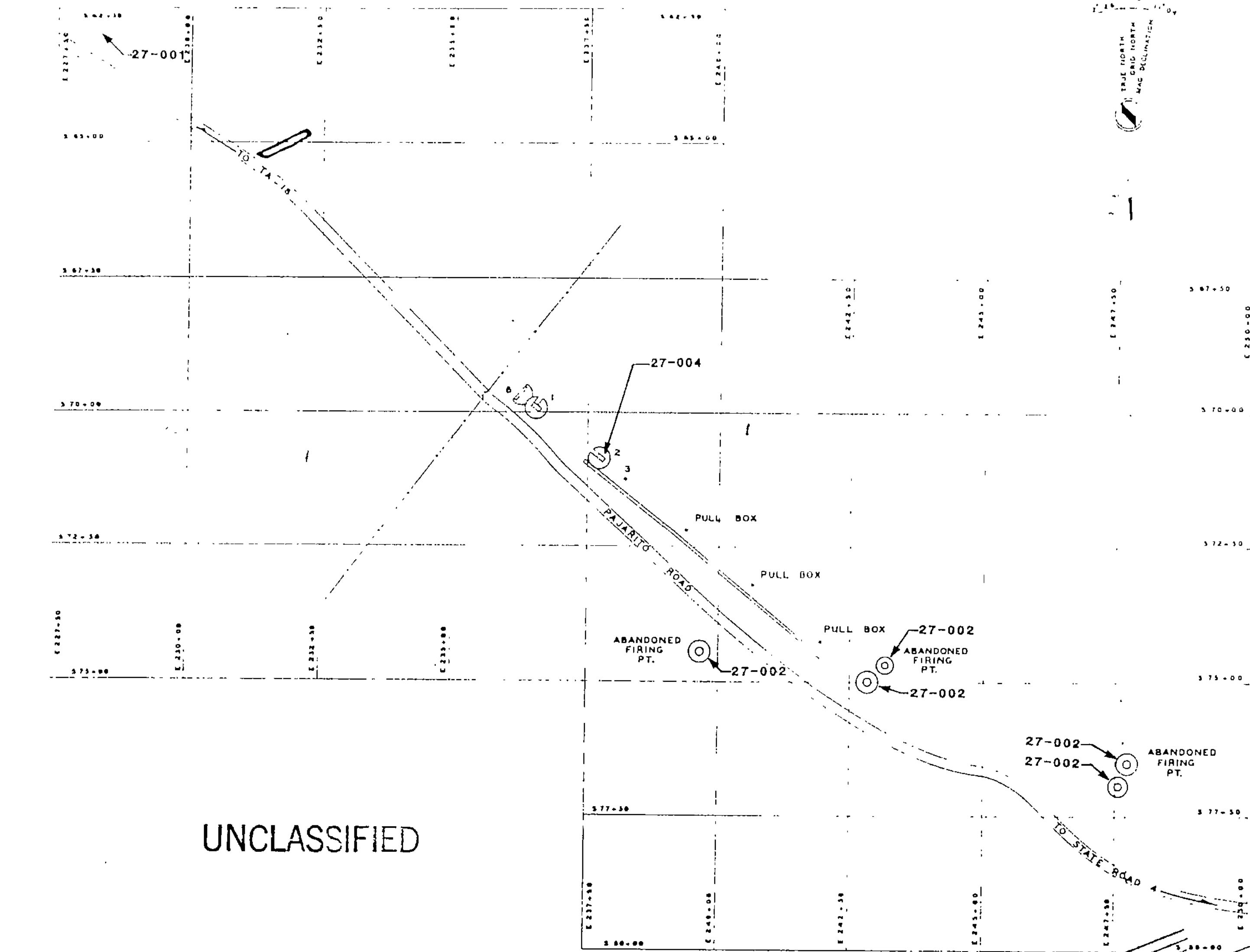
TA-27 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
27-001	27-1
27-002	27-1
27-003	27-2
27-004	27-1

NOTE: Some structure locations may contain more than one SWMU.

OFFICIAL USE ONLY

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-27-1	GAMMA-1	CONTROL BLDG
TA-27-2	GAMMA-2	CONTROL BLDG
TA-27-3	GAMMA-3	INSTRUMENT CHAMBER (MANHOLE)
TA-27-4	GAMMA-4	GUARD HOUSE (RELOCATED TO TA-18)
TA-27-5	GAMMA-5	TRANSFORMER STATION (REMOVED)
TA-27-6	GAMMA-6	BARRICADE



NOTES

UNIT 27-001: UNIT IS A DISPOSAL TRENCH; EXACT LOCATION IS UNKNOWN.

REV.1 5/23/90

EXPLANATION

27-001 SWMU LOCATION

FIGURE 27-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-27

UNCLASSIFIED

REDRAWN TO STATUS OF JULY 1, 1955

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
ENGINEERING DEPARTMENT LOS ALAMOS, N. M.

STRUCTURE LOCATION PLAN
TA-27 GAMMA SITE

DRAWN N. BYERS DATE 11/29/55 SCALE 1" = 100' SHEET 1 of 1 ENG-R 146

AUTHORIZED FOR HEALTH SAFETY FIRE PROT SEC.

OFFICIAL USE ONLY

3012150201B125

301215 02 01 142

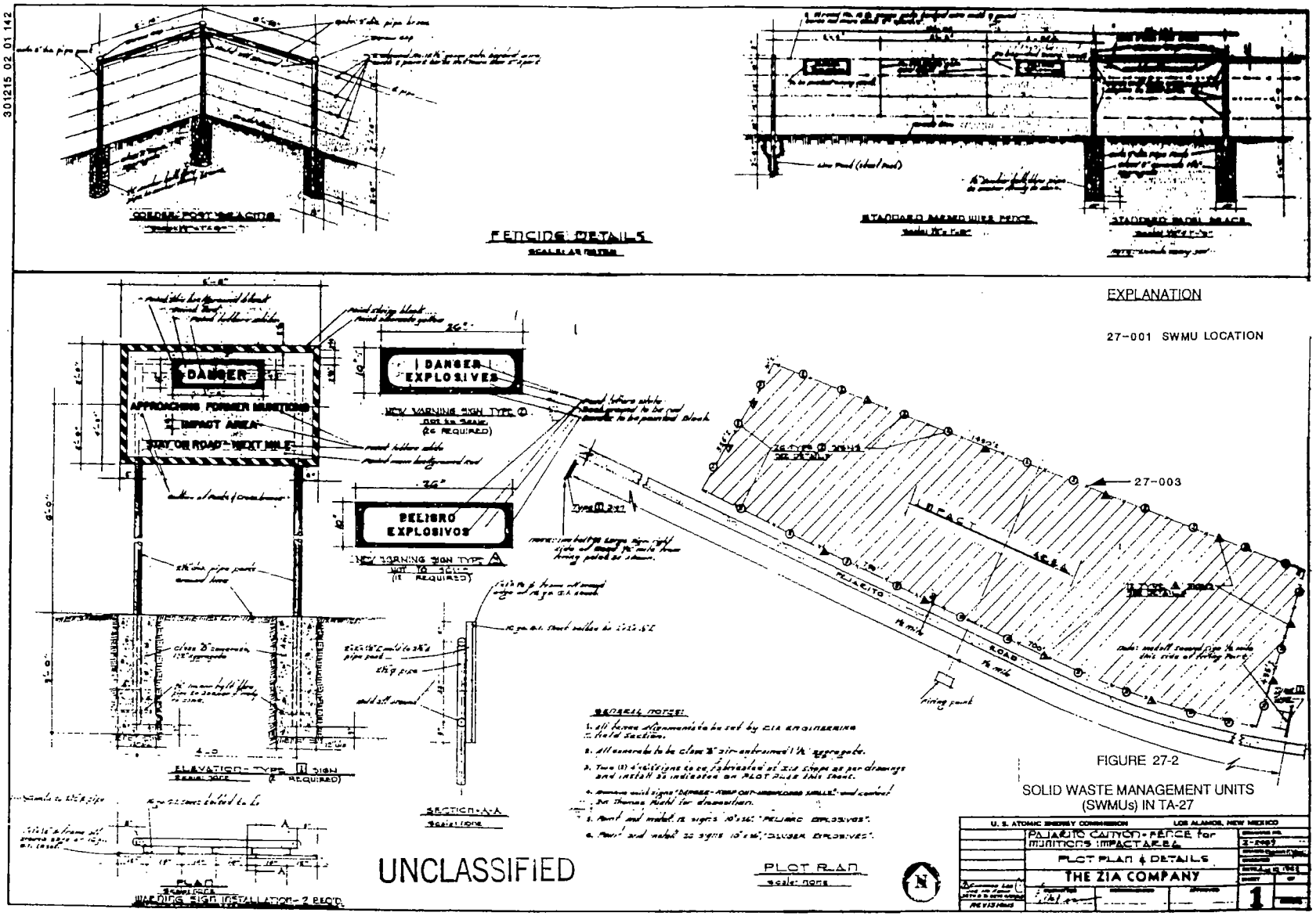


FIGURE 27-2

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-27

WORK ORDER S-308-009 LAB JOB 3274 LASL DWG NO ENG-C34559.

TA-28
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 28 consists of five magazines used to store high explosives. The containers are not opened at TA-28 except for periodic inspections (DOE, 1987a). TA-28 does not have any solid waste management units.

TA-28 lies at elevations between 7,260 and 7,560 feet asl. It is located on a narrow mesa formed between Water Canyon on the south and a small unnamed branch of Water Canyon on the north. The technical area lies on welded Bandelier Tuff. The soil series present at TA-28 include Tocal very fine sandy loam, Carjo loam, and rock outcrop. The area is in the Ponderosa Pine/Pinon-Juniper and Ponderosa Pine-fir overstory vegetation zones (Nyhan et al., 1978).

At TA-28, the potentiometric surface of the main aquifer in the Los Alamos area lies at about 6,230 to 6,310 feet asl. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

TA-29
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 29 consisted of a small magazine area, composed of two magazines, a water tower, and a latrine. The magazines were used for storage of high explosives. The structures were removed in 1958 or 1959 (DOE, 1987a). The former site of TA-29 lies within the current boundaries of TA-16. There are no solid waste management units at this technical area.

The site of former TA-29 is located at an elevation of about 7,560 feet asl. It is located on a mesa formed between Water Canyon on the north and northwestern branch of Frijoles Canyon on the south. Canyon walls are steep slopes or cliffs in this area. The area lies on welded Bandelier Tuff, in the Ponderosa Pine/Pinon-Juniper overstory vegetation zone. Soil consists of Pogna fine sandy loam and Carjo loam (Nyhan et al., 1978).

At the site of TA-29, the potentiometric surface of the main aquifer in the Los Alamos area lies at about 6,340 feet asl. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

TA-30
OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 30, a small site with a single hutment built in 1945, was an electronics test area that was decommissioned in 1948 (DOE, 1987a). The former site of TA-30 lies within the current boundaries of TA-3.

The site of former TA-30 is on Anchor Ranch Road at the intersection with Pajarito Canyon Road, at an elevation of about 7,500 feet asl. It is located on South Mesa, between Los Alamos Canyon on the north and Two Mile Canyon on the south. It lies in the Ponderosa Pine/Pinon-Juniper overstory vegetation zone. The soil at the site consists of Carjo loam (Nyhan et al., 1978).

The potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,280 feet asl at the former technical area. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-30

30-001 SURFACE DISPOSAL

SUMMARY

LOCATION : TA-30
TYPE OF UNIT(s) : SURFACE DISPOSAL/LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : UNKNOWN
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

TA-30 was used for electronics testing and has been inactive since 1948. Engineering drawing A5-R35, dated 1947, shows a box drain at the side of the hutment. This may be a storm drain. Fuel oil for the hutment's oil stove was stored in a tank outside the building. The status of this tank is unknown. A small amount of surface debris remains at TA-30, and there is speculation regarding the possible existence of a landfill uphill from the site.

WASTE INFORMATION

The wastes in the surface disposal appear to be building debris, including asphalt. The contents, if any, of the landfill are unknown.

RELEASE INFORMATION

There have been no known releases of hazardous constituents.

NOTES

The location of this SWMU is within the current boundaries of TA-3.

SWMU CROSS-REFERENCE LIST

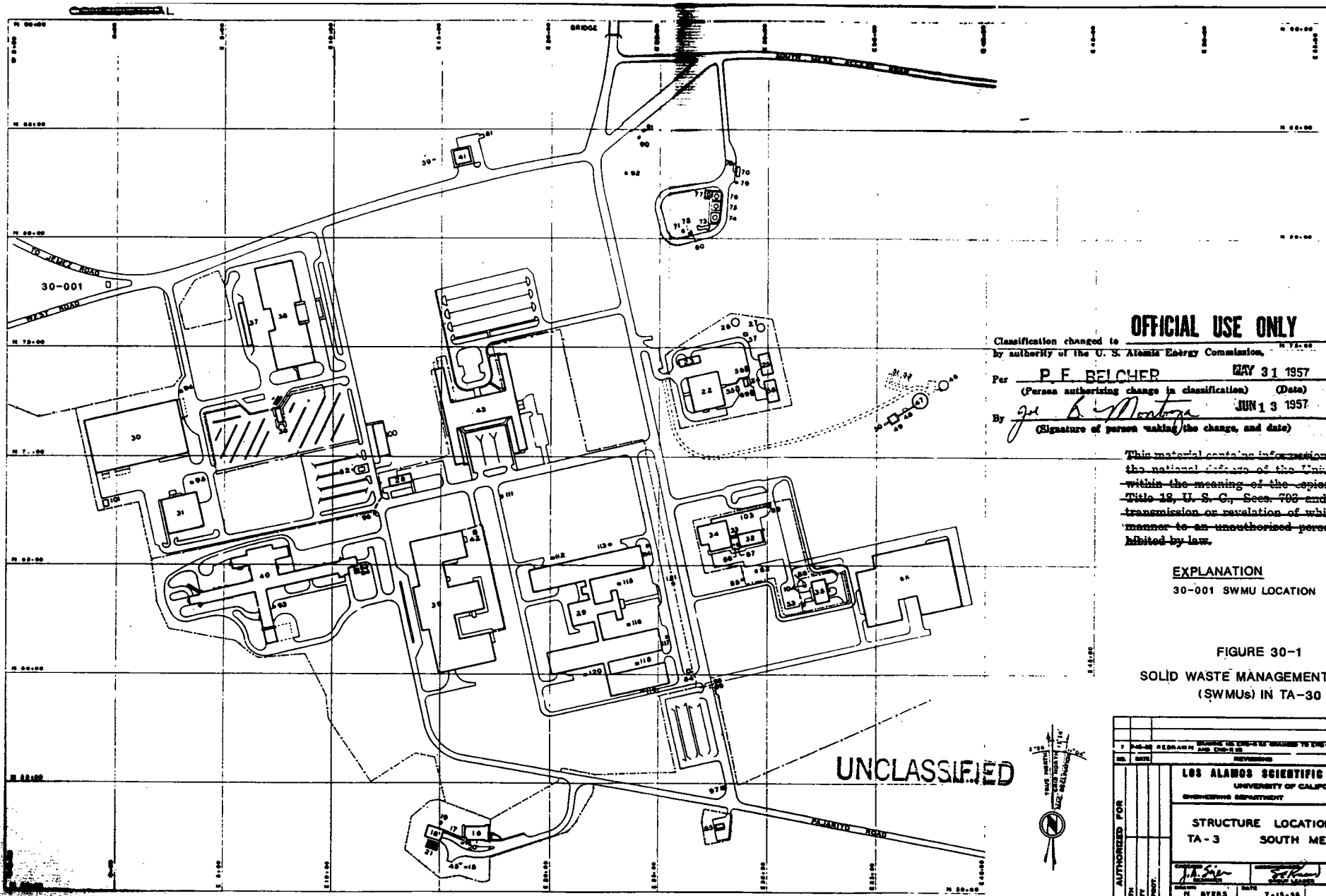
SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
30-001	TA-30			INSIDE TA-3

TA-30 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
30-001	30-1

NOTE: Some structure locations may contain more than one SWMU.

30125 2 of 832



Classification changed to OFFICIAL USE ONLY
by authority of the U. S. Atomic Energy Commission,
Per P. F. BELCHER MAY 31 1957
(Person authorizing change in classification) (Date)
By J. L. Montoya JUN 13 1957
(Signature of person making the change, and date)

~~This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U. S. C., Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.~~

EXPLANATION

30-001 SWMU LOCATION

FIGURE 30-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-30

7	7-15-55	REDRAWN	JAS
NO.	DATE	REVISIONS	BY

AUTHORIZED FOR: HEALTH, SAFETY, FIRE PROT., SEC.

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
ENGINEERING DEPARTMENT LOS ALAMOS, N. M.

STRUCTURE LOCATION PLAN
TA-3 SOUTH MESA SITE

DRAWN	N BYERS	DATE	7-15-55
SCALE	1" = 200'	SHEET	2 of 2

ENG-R 116

TA-31
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 31, known as the east receiving yard, was mainly a receiving area and warehousing operation, including drum storage. The buildings were removed in 1954 (DOE, 1987a). It is presently outside the current laboratory boundary, near the west end of the Los Alamos Airport. The area is now built over with private housing in what is called the "Eastern Area".

The site of former TA-31 is located at an elevation of about 7,200 feet asl. The mesa on which it is located, East Mesa, is bounded on the north by Pueblo Canyon and on the south by a branch of Los Alamos Canyon. Canyon walls are steep slopes or cliffs in this area. The area is underlain by welded Bandelier Tuff, in the Ponderosa Pine/Pinon-Juniper overstory vegetation zone. Soils have not been surveyed in the area, but they probably consist of Hackroy sandy loam.

At the location of TA-31, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 5,950 feet asl. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-31

31-001 SEPTIC SYSTEM

SUMMARY

LOCATION : TA-31
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1949 - 1954
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SANITARY WASTE

UNIT INFORMATION

This septic tank in TA-31, numbered TA-0-7, was constructed of reinforced concrete and has been estimated to measure approximately 4' x 3' x several feet deep. It was abandoned in 1955 and removed in 1988. At the time of removal soil samples were collected. The analytical results for the samples are pending. It most likely drained to a leach field which discharged to Pueblo Canyon.

WASTE INFORMATION

The tank received sanitary wastes.

RELEASE INFORMATION

There are no known releases of radioactive or hazardous constituents associated with this unit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
31-001	TA31-1-ST-I-HW/PP	? 31.001		TA-0-7

? Indicates uncertainty with RFA Unit correlation.

TA-31 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
31-001	31-1

NOTE: Some structure locations may contain more than one SWMU.

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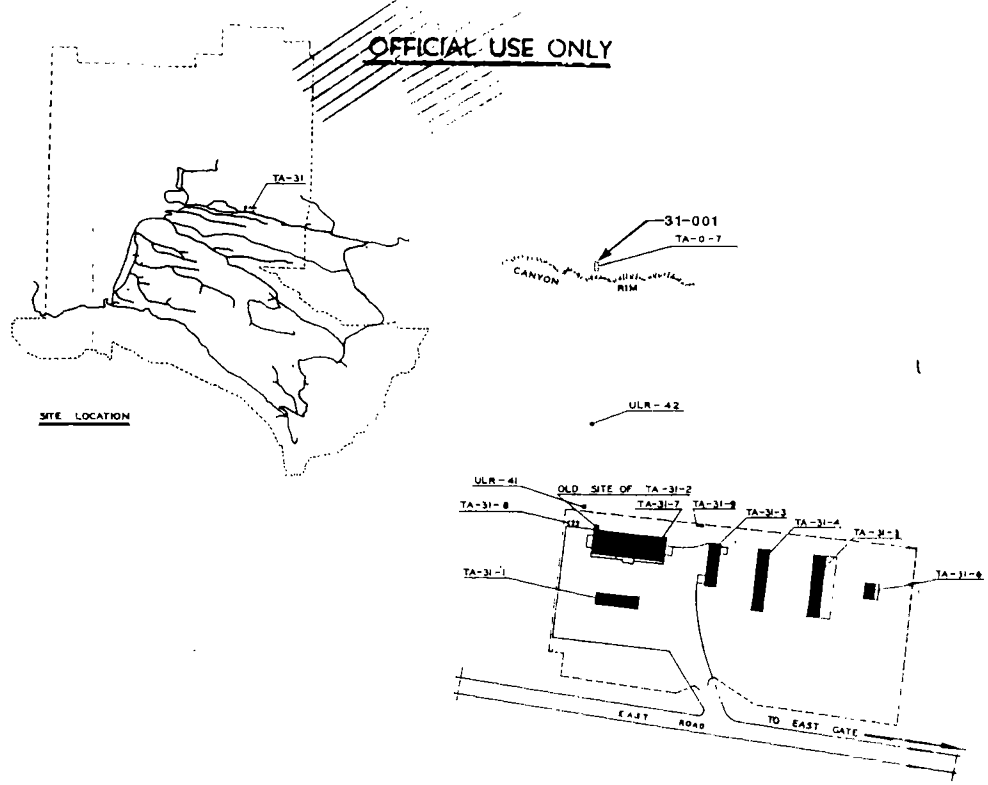

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-31-1	N-8	RECEIVING DESK
TA-31-2	N-9	WAREHOUSE REMOVED 8-4-49
TA-31-3	N-10	WAREHOUSE
TA-31-4	N-11	WAREHOUSE
TA-31-5	N-12	WAREHOUSE
TA-31-6	N-14	OFFICE & WAREHOUSE
TA-31-7	N-20	WAREHOUSE
TA-31-8	N-21	TRANSFORMER STATION
TA-31-9	N-22	DRUM STORAGE

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-0-7	ULR-7	SEPTIC TANK
TA-0-41	ULR-41	MANHOLE
TA-0-42	ULR-42	MANHOLE

REV. 1 4/30/90

EXPLANATION

31-001 SWMU LOCATION

FIGURE 31-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-31

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NORTH (MAGNETIC)

375

REV.	REV.	REV.	REV.	REV.
GENERAL REVISION TO STATUS OF JULY 1, 1953	GENERAL REVISION TO STATUS OF JULY 1, 1952 7-2-52	REQUIRED NO REV TO STATUS OF JAN 1, 1952	GENERAL REVISION TO STATUS OF JULY 1, 1951	GENERAL REVISION TO STATUS OF JAN. 1, 1951

AUTHORIZED FOR: HEALTH / SAFETY / FIRE PR. / COMM. / SEC.

LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT

STRUCTURE LOCATION PLAN
TA-31 EAST RECEIVING YARD

SCALE 1" = 100' | DRAWN BY: G. R. S. | CHKD. BY: | APPVD. BY: | DATE: | ENG R 188

301215 02 01 143

TA-32

OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 32, the medical research facility, was located outside the current Laboratory boundaries on the south side of Trinity Drive. The Los Alamos County Department of Roads now occupies the space. The Technical Area included three laboratories, an office building, and two other buildings. It is unknown when these buildings were removed. Work at the site included biological research involving radionuclides (DOE, 1987a).

The former site of TA-32 is located at about 7,260 feet asl. The mesa on which it is located, East Mesa, is bounded on the north by Pueblo Canyon and on the south by a branch of Los Alamos Canyon. Canyon walls are steep slopes or cliffs in this area. The area is underlain by welded Bandelier Tuff, in the Ponderosa Pine/Pinon-Juniper overstory vegetation zone. The soil consists of Pogna fine sandy loam (Nyhan et al., 1978).

At the site of TA-32, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,050 feet asl. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-32

32-001	INCINERATOR
32-002	SEPTIC SYSTEM

SUMMARY

LOCATION : TA-32
TYPE OF UNIT(s) : INCINERATOR
UNIT USE : TREATMENT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1948 - ?
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

The incinerator, TA-32-9, was constructed of brick and measured 2'6" x 2'6" x 10' tall. It was decommissioned in 1954.

WASTE INFORMATION

The incinerator received combustible wastes from the medical research laboratory. Wastes most likely included animal bedding and residues. Additional wastes may have included radionuclides of short-lived activity.

RELEASE INFORMATION

Data on any off-gas cleanup systems and other releases have not been obtained. The fate of the ash residues is unknown.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
32-001	TA32-3-IN-I-HW/RW		Tsk 40 : 9	TA-32-9

SUMMARY

LOCATION	: TA-32	MATERIALS MANAGED	: SANITARY WASTE
TYPE OF UNIT(s)	: SEPTIC SYSTEM		HAZARDOUS WASTE
UNIT USE	: TREATMENT/DISPOSAL		SUSPECTED RADIOACTIVE WASTE
OPERATIONAL STATUS	: INACTIVE/DECOMMISSIONED		SUSPECTED MIXED WASTE
PERIOD OF USE	: EST. 1948 - 1950		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

There were two septic tanks in TA-32. Septic tank TA-32-7 [32-002(a)] was of wood frame construction, measuring 4' x 8' x 4' deep. Septic tank TA-32-8 [32-002(b)] was constructed of reinforced concrete and measured 9' x 5' x 6' deep. The tanks probably overflowed through drains to Los Alamos Canyon. Septic tank TA-32-8 was removed in 1988 and taken to MDA-L. The tank was later removed from MDA-L, pulverized, and disposed of in MDA-G. The drain inlet, piping, and drain field remain in place. Tank TA-32-7 is assumed to have remained in place.

WASTE INFORMATION

The tanks handled sanitary waste from the medical research laboratory. Because an industrial waste system was not associated with the laboratory, the sanitary lines most likely also served lab sinks and drains from the animal handling facilities. Thus, the waste is suspected to have contained short-lived radionuclides and hazardous chemicals.

RELEASE INFORMATION

The tanks appear to have had overflow drains to outfalls in the canyon. Before the tank was removed, samples of the sludge and liquid in the tank were collected. The samples were analyzed for organics, metals, and radionuclides. Acetone and other common laboratory organics were detected.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
32-002(a)	TA32-2-ST/O/CA-I-HW/RW	32.001 32.003	Tsk 40 : 1 3	TA-32-7
32-002(b)	TA32-2-ST/O/CA-I-HW/RW	32.002	Tsk 40 : 2 11	TA-32-8

TA-32 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
32-001	32-1
32-002(a)	32-1
32-002(b)	32-1

NOTE: Some structure locations may contain more than one SWMU.

301215 02 01 144

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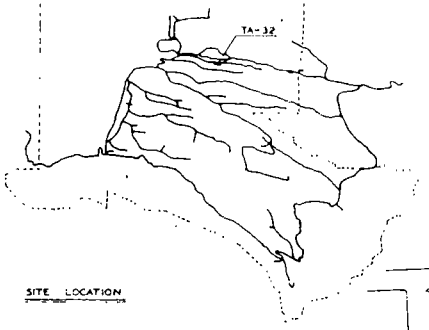
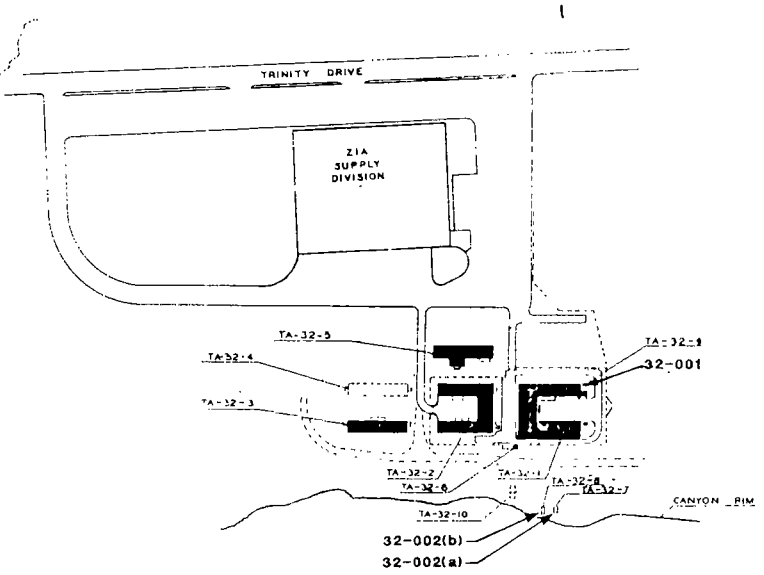
STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-32-1	MRL-1	LABORATORY BUILDING
TA-32-2	MRL-2	LABORATORY BUILDING
TA-32-3	MRL-3	OFFICE BUILDING
TA-32-4	MRL-4	WAREHOUSE BUILDING ASSIGNED TO HSRP
TA-32-5	MRL-5	LABORATORY, WAS 88 MINTH ST
TA-32-6	MRL-6	VALVE HOUSE (REMOVED)
TA-32-7	MRL-7	SEPTIC TANK (ABANDONED)
TA-32-8	MRL-8	SEPTIC TANK
TA-32-9	MRL-9	INCINERATOR
TA-32-10	MRL-10	TRANSFORMER STATION





EXPLANATION

32-001 SWMU LOCATION

REV. 1 4/30/90

FIGURE 32-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-32

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UNCLASSIFIED

AUTHORIZED FOR	LOS ALAMOS SCIENTIFIC LABORATORY DEPARTMENT OF ENGINEERING—CONSTRUCTION & MAINTENANCE GROUP		
HEALTH SAFETY FIRE PR. CONST. SEC.	STRUCTURE LOCATION PLAN TA-32 . MED. RESEARCH LAB.		
REV.	SCALE: 1" = 100'	DRAWN BY: GRS DATE: 3-21-90 CHKD. BY: DATE: 3-21-90 APPVD. BY: DATE:	DWG. NO. ENG R 104

TA-33
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 33, called the Hot Point Site, includes gun firing areas, a tower area, offices, and laboratories. The gun/tower activities have been discontinued. The area principally is used by earth scientists for the Hot Dry Rock Project, and other research. An aging tritium facility handling facility is being phased out. The area consists of several operational units joined by roads (DOE, 1987a).

TA-33 lies at elevations between 5,400 and 6,540 feet asl at the southern edge of the Laboratory. TA-33 structures are located on a mesa top bounded on the north by Ancho Canyon and on the south by Chaquehui Canyon. The technical area extends southeast to the Rio Grande River, southwest to Frijoles Canyon, northeast to include the southern wall of the lower part of Ancho Canyon, and northwest to State Road 4. Canyon walls are steep in this area. Most of TA-33 lies on welded Bandelier Tuff, in the Pinon-Juniper, Juniper/Saltbrush/Sagebrush/Rabbitbrush/Cholla Cactus/Grama Grass/Needle & Thread Grass, Ponderosa Pine/Pinon-Juniper, and Shrub/Grass/Forb overstory vegetation zones. In addition to rock outcrop, the surficial material at TA-33 consists of Hackroy-Rock outcrop complex, and Hackroy sandy loam (Nyhan et al., 1978).

At TA-33, the potentiometric surface of the main aquifer in the Los Alamos area lies between about 5,370 and 5,815 feet asl. Over 800 feet of unsaturated tuff and volcanic rock separate the surface around the structures of TA-33 from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-33

33-001	MATERIAL DISPOSAL AREA E
33-002	MATERIAL DISPOSAL AREA K
33-003	MATERIAL DISPOSAL AREA D
33-004	SEPTIC SYSTEMS / OUTFALLS
33-005	DECOMMISSIONED BUILDING 21 DRAIN SYSTEM
33-006	SHOT FACILITIES
33-007	GUN FIRING AREAS
33-008	FIRING AREA LANDFILLS
33-009	AREA 6 LANDFILL
33-010	CANYON-SIDE DISPOSAL SITES
33-011	INACTIVE STORAGE AREAS
33-012	ACTIVE CONTAINER STORAGE AREAS
33-013	TRITIUM-CONTAMINATED LIQUID WASTE STORAGE
33-014	BURN SITE
33-015	INCINERATOR
33-016	HE SUMP
33-017	TA-33 OPERATIONAL RELEASES

SUMMARY

LOCATION : TA-33
TYPE OF UNIT(s) : MATERIAL DISPOSAL AREA
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1949 - 1956
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : RADIOACTIVE WASTE
MIXED WASTE
SOLID WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

MDA-E lies on a point formed by Chaquehui Canyon and one of its tributaries. It has been used for storage and burial of low-level radioactively contaminated equipment and shot debris. Engineering drawings show six pits located in MDA-E, although two of the pits, numbers 5 and 6, may never have been used.

Information on the four pits known to have been used is as follows:

SWMU NO.	PIT NO.	SIZE (ft)	PERIOD OF USE	COMMENTS
33-001(a)	1	15 x 75 x 6-7	1949-1951	West side of MDA-E
33-001(b)	2	15 x 45 x 6-7	1949-1963	South side of MDA-E
33-001(c)	3	5 diameter	1949-1951	Hand dug, SE corner of MDA-E
33-001(d)	4	15 x 100 x 6-7	1949-1963	East side of MDA-E

An underground unit, Chamber 3, TA-33-29 [33-001(e)], collapsed during an experiment in 1956 and contains the residuals of the experiment, possibly including beryllium. The chamber was a 6 x 8 x 48 ft deep shaft with an octagonal test chamber to one side. The chamber was 14 ft in diameter, 11 ft high, and had 2-ft thick concrete walls, floor, and ceiling. Two additional underground chambers, TA-33-70 and -71, were constructed north of MDA-E. These chambers were never used and have been filled in with clean fill. In 1963, apparently, some or all of the pits open at that time were filled and compacted to minimize erosion and the ponding of water. There may be additional pits outside of the fenced area.

WASTE INFORMATION

The waste consists primarily of low-level radioactive (uranium) contaminated equipment, and test and shot debris possibly containing beryllium. The contents of two of the six pits are unknown, and these pits may not have been used. Pits 1-4 contain materials contaminated with polonium (decayed out), beryllium, and uranium. Documentation exists that Pit 3 contains a can of beryllium dust immersed in kerosene. Testing in TA-33-29 may have involved explosives, beryllium, depleted uranium, nickel, cadmium, or lead.

RELEASE INFORMATION

Soil samples in 1952 and 1954 showed polonium (now decayed out) and uranium. A recent radiation survey showed no contamination. It is not known whether releases of hazardous constituents have occurred.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-001(a)	MDA-E	? 33.009 33.013	Tsk 2 : 8	WEST SIDE OF MDA-E
33-001(b)	MDA-E	? 33.009 33.013	Tsk 2 : 9	SOUTH SIDE OF MDA-E
33-001(c)	MDA-E	? 33.009 33.013	Tsk 2 : 10	SOUTHEAST CORNER OF MDA-E
33-001(d)	MDA-E	? 33.009 33.013	Tsk 2 : 11	EAST SIDE OF MDA-E
33-001(e)	MDA-E	33.013	Tsk 2 : 16	TA-33-29
33-001(misc)		33.014	Tsk 2 : 7 12 13 Tsk 3 : 73	

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION	: TA-33	MATERIALS MANAGED	: SANITARY WASTE
TYPE OF UNIT(s)	: MATERIAL DISPOSAL AREA		MIXED WASTE
UNIT USE	: TREATMENT/DISPOSAL		HAZARDOUS WASTE
OPERATIONAL STATUS	: ACTIVE/INACTIVE		RADIOACTIVE WASTE
PERIOD OF USE	: 1950s - PRESENT		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

MDA-K is composed of a septic system, two sumps, and associated leach field that serve Building TA-33-86. The septic system, which serves buildings TA-33-86 and -90, includes a drainline, a septic tank, and a siphon tank. This system has EID Permit Number LA-35. The septic tank, TA-33-93 [33-002(a)], was installed in 1954. The sumps were probably used for treatment of tritium and solvent-contaminated solutions between 1955 and 1959. One of them, an acid sewer sump, TA-33-134 [33-002(b)], was built in 1955. It is an unlined seepage pit and is 6′ in diameter and 8′ deep, and has a 3" concrete cover overlain by soil. The sump has been inactive since 1959. The other sump, TA-33-133 [33-002(c)], was also built in 1955 and is an unlined seepage pit that is 6′ in diameter, 8′ deep, and has a 3" concrete cover overlain by 1" of soil. It is located a few feet west of sump TA-33-134. The sump has been inactive since 1959. Drainage lines connect a large sink and floor drains once used in the maintenance and repair of an old-style tritium transfer pump to the sumps. Non-contact cooling water from building TA-33-86 is discharged to an NPDES-permitted outfall via a drainline [33-002(d)]. The portion of the drainline from building TA-33-86 to the inactive sump, TA-33-133, is the cast-iron pipe that was originally used to discharge to the sump. This line has been connected to a vitrified clay drainline in the inactive sump. The 4" vitrified clay pipeline extends approximately 90′ from the sump. A roof drain, serving building TA-33-86, discharges to an outfall east of building TA-33-86 [33-002(e)]. The 2" drainline is approximately 90′ long and is used intermittently, during precipitation events. The active portion of MDA-K covers approximately 0.01 acre.

WASTE INFORMATION

Septic tank TA-33-93 has received tritium and possibly uranium-233, -235 and -238. In 1961, it received two emergency releases of plutonium-contaminated liquid. The septic system is presently used primarily for sanitary waste but also for disposal of tritium-contaminated liquids. Sump TA-33-134 received organic contaminants such as ethanol and methanol (less than 5 gallons/year) and trichloroethene, benzene, and acetone contaminated with tritium (about 5 gallons/year). The sump may also have received beryllium, mercury, and depleted uranium. Sump TA-3-133 received tritium and small quantities of solvents (trichloroethene, methanol, ethanol, acetone, propanol). The noncontact cooling water contains tritium, and no other contaminants are expected to be present. The roof drain serves to drain water from the roof of TA-33-86; it is expected to contain tritium that has been released from the stacks (see 33-017).

RELEASE INFORMATION

The septic system discharges to adjacent soils via a leach field. It is unknown whether releases of hazardous materials have occurred beyond the system boundaries. The sumps, TA-33-134 and -133, discharged to adjacent soils. The non-contact cooling water drainline discharges to an NPDES-permitted outfall (EPA number 04A, serial number 147; see Appendix A). The TA-33-86 roof drain intermittently discharges to an outfall. Tritium contamination of soils surrounding building TA-33-86 have been documented (see 33-017).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-002(a)	MDA-K TA33-7-ST-A/I-HW/RW		Tsk 2 : 3	TA-33-93, -86
33-002(b)	MDA-K TA33-7-ST-A/I-HW/RW	? 33.011	Tsk 2 : 4	TA-33-134, -86
33-002(c)	MDA-K TA33-7-ST-A/I-HW/RW	? 33.011	Tsk 2 : 5	TA-33-133, -86
33-002(d)	MDA-K		Tsk 2 : 2 6	TA-33-86
33-002(e)	MDA-K		Tsk 2 : 1 6	TA-33-86

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-33
TYPE OF UNIT(s) : MATERIAL DISPOSAL AREA
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1948 and 1952
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : RADIOACTIVE WASTE
SOLID WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

MDA-D is located on top of a mesa formed by Ancho Canyon and White Rock Canyon, which drain into the Rio Grande. It consists of two areas, each approximately 20' x 30', and each containing an underground concrete chamber, TA-33-4 and -6 [33-003(a) and (b)]. The shaft to each chamber was 6' x 8' x 46' deep and was shored with 2' x 12' timbers. The chambers, located at the bottom of each shaft, were used for testing involving the detonation of explosives. Engineering records show that Chamber TA-33-4 was an octagonal shape 16' x 18' x 11' high, outside dimensions, and 30' below grade. This chamber was destroyed during testing in April, 1948. Chamber TA-33-4 was covered with an earthen berm. The berm was removed in 1989 in order to locate the exact location of the shaft. Engineering records for chamber TA-33-6 show that it was an octagonal shape 18' x 18' x 16' high, outside dimensions, about 30' below grade. This chamber was destroyed during testing in April, 1952; a 10-ft deep crater that formed over the chamber was subsequently filled.

WASTE INFORMATION

The residue from the tests may contain beryllium and lead. Any of the original polonium has since decayed.

RELEASE INFORMATION

Chamber TA-33-4 was used for an experiment in 1948. A survey of the filled-in shaft after the experiment detected no radioactivity. Chamber TA-33-6 was used for two experiments, one in 1948 and one in 1952; the area around the shaft and chamber was bulldozed in 1953. A radiation survey was then made and the results were negative. It is unknown whether hazardous wastes have been released from the units.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-003(a)	MDA-D	33.004 33.005	Tsk 2 : 14	TA-33-4
33-003(b)	MDA-D	33.004 33.005	Tsk 2 : 15	TA-33-6

SUMMARY

LOCATION	: TA-33	MATERIALS MANAGED	: SUSPECTED RADIOACTIVE WASTE
TYPE OF UNIT(s)	: SEPTIC SYSTEM		SUSPECTED HAZARDOUS WASTE
UNIT USE	: TREATMENT/DISPOSAL		SANITARY WASTE
OPERATIONAL STATUS	: ACTIVE/INACTIVE		
PERIOD OF USE	: SEE BELOW		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

In addition to septic tank TA-33-93, described under MDA-K (see 33-002), the following septic systems, drainlines, and outfalls are present in TA-33:

TA-33-31 [33-004(a)]: Serves 56 people (1360 gal. volume) as the septic system from buildings TA-33-19, -39, -113, -114, and -168. The system appears to be operating properly. The present TA-33-31 septic system connects the six buildings via a drainline through manholes 80 and 81 to the septic tank (TA-33-31). The tank discharges to two seepage pits via a PVC drainline. Prior to 1951, wastes from buildings TA-33-19 and -27 discharged to the septic tank through manholes 73 and 77. The tank discharged to a 90' x 80' tile field via a vitrified clay pipe through manhole TA-33-78. The 4" tile drains in the drainage field are spaced 10 ft apart and run roughly north to south. After 1951, the sanitary sewer from TA-33-19 was rerouted and the old drainlines were truncated. The new lines connected both TA-33-19 and TA-33-39 to the septic tank (TA-33-31) through manholes TA-33-80 and -81. In 1975, buildings TA-33-113, -114, -168, and -27 were connected to the septic tank TA-33-31. From 1949 to 1951, the industrial waste from building TA-33-19 discharged to an outfall via a 65' long, 8" diameter vitrified clay pipe. In 1951, this drainline was connected to the TA-33-31 septic system. This system has EID Permit Number LA-32.

TA-33-33 [33-004(b)]: Serves 0 people (730 gal. volume) and originates from control building TA-33-24. The system is made up of a 6" steel drainline from the building to the septic tank and a similar drainline to the canyon outfall. Two additional drainlines run from the building to the canyon, bypassing the septic tank, within the same trench. Although it receives little use, the system appears to be operating properly. The tank has been active from 1950 to present. This system has EID Permit Number LA-33.

TA-33-96 [33-004(c)]: Now serves 0 people (768 gal. volume) but was previously used to route sewage from the firing site control building TA-33-87. Zia Company drawing SE-52 indicates that effluent discharged from septic tank TA-33-96 to a drain field of 4" drain tile. The tank has been active from 1955 to present and appears to be operating properly. This system has EID Permit No. LA-34.

TA-33-121 [33-004(d)]: Inactive system. Originally served portable lab building TA-33-1, which is inactive. The system currently receives runoff from the north side of the access road. A drainage line collects runoff and discharges to the 500-gallon tank; a 4" PVC pipe drains from the tank to an outfall in Chaquehui Canyon.

TA-33-161 [33-004(e)]: Served 17 people (volume is unknown) from the portable office building TA-33-169, now removed. Overflow went to a seepage pit at TA-33-188, approximately 20' west of the tank (TA-33-161).

TA-33-23 [33-004(f)]: The tank north of the building, TA-33-23, was constructed in 1987. It consists of a 1,000-gallon fiberglass septic tank that serves a residential trailer, TA-33-181. The tank is pumped and has no discharges to the environment. This system has EID Permit Number LA-124.

TA-33-16 [33-004(g)]: Drainline from the gun-firing building (TA-33-16) discharges to the northwest to an outfall in Chaquehui Canyon. TA-33-16 was originally built for office space, but was converted to the gun-firing building in 1961.

TA-33-20 [33-004(h)]: Drainline from TA-33-20, a warehouse used to store uranium and beryllium, to an outfall east of TA-33-20. The drainline is 75' long and is an 8" diameter vitrified clay pipe. It was installed in 1950 and is currently inactive.

TA-33-39 [33-004(i)]: Two drainlines from building TA-33-39, the machine shop, discharged to an outfall east of the building. The machine shop was used to store uranium and also housed a furnace to melt lead. The drainlines were installed in 1951, when the machine shop was built, and are now inactive.

TA-33-26 [33-004(j)]: Outfall system from building TA-33-26, an x-unit vault and associated shot pad, and from TA-33-146, the rail gun. The outfall system includes a building drainline, a channel cut into the tuff, a culvert, and an arroyo draining to Chaquehui Canyon. The TA-33-26 shot pad was built in 1948, and the associated support building was constructed in 1950. The outfall system is currently inactive.

(continued)

UNIT INFORMATION, continued

TA-33-87 [33-004(k)]: Two drainlines exit building TA-33-87, are parallel to each other and merge prior to daylighting near TA-33-116, the gun mount. The merged drainlines discharge to an outfall. The control building was built in 1955 and the outfall is currently inactive.

TA-33-89 [33-004(l)]: A perforated corrugated metal pipe drains from building TA-33-89, an x-unit vault and discharges to an outfall on the rim of White Rock Canyon. 1986 aerial photos show light colored soils down gradient from the outfall. The outfall is currently inactive.

LANL engineering drawing and building records (R01e and R04r) show a septic tank identifier TA-33-122, but indicate that the structure was canceled. The septic system (if it exists), its location, and potential contamination are not known. However, during site visits, a LANL structure sign for TA-33-122 was observed east of building TA-33-40 and very close to the septic system TA-33-21. If the septic system does exist, it may serve the same buildings as septic system TA-33-31. The Active Septic Tank Systems List (December, 1989) provided by the Environmental Surveillance Section (HSE-8) shows two additional septic systems. TA-33-179 [33-004(m)] was installed in 1987 and has a capacity of 1,000 gallons. It serves the NRAO Building and discharges to a leach field. TA-33-206 [33-004(n)] was installed in 1987 and has a capacity of 1,000 gallons. It serves a trailer and discharges to a holding tank.

WASTE INFORMATION

The wastes in these septic tanks is predominantly sanitary sewage. However, there is a possibility that beryllium, mercury, lead, various organic constituents, and radioactive liquid wastes (tritium and depleted uranium) may have been discharged to drains serving several of the tanks, especially TA-33-31. The tank north of the trim building, TA-33-23, may have received HE previously. Septic system TA-33-121 may have received photo processing waste (including silver and other metals) and volatile organic compounds from TA-33-1 from the 1940s to the 1960s. Waste constituents discharged currently are unknown. The drainlines and outfalls from the buildings may have contained uranium, lead, barium, propellants, and HE.

RELEASE INFORMATION

The septic systems appear to be in good working order. There is no specific information on whether releases of hazardous wastes have occurred, although waste handling procedures at TA-33 as of 1971 required that liquids be discarded down designated drains. A radiation survey for tritium at tank 31 was negative. Wastes from septic systems TA-33-24 and TA-33-121 were discharged to Chaquehui Canyon via individual outfalls. It is unknown whether releases of hazardous materials occurred from the drainlines and outfalls.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-004(a)	TA33-7-ST-A/I-HW/RW	? 33.002 ? 33.016-33.018	Tsk 3 : 21	TA-33-31
33-004(b)	TA33-7-ST-A/I-HW/RW	? 33.002 ? 33.012 ? 33.016-33.018	Tsk 3 : 19	TA-33-33
33-004(c)	TA33-7-ST-A/I-HW/RW	? 33.002 ? 33.012	Tsk 4 : 85	TA-33-96
33-004(d)	TA33-7-ST-A/I-HW/RW	? 33.002 ? 33.012 ? 33.016-33.018	Tsk 3 : 18	TA-33-121
33-004(e)	**	? 33.002 ? 33.018	Tsk 4 : 88	TA-33-161
33-004(f)	**	? 33.002 ? 33.018	Tsk 4 : 89	NORTH OF TA-33-23
33-004(g)	**	? 33.016-33.017	Tsk 3 : 20	TA-33-16
33-004(h)	**	? 33.016-33.017	Tsk 3 : 22	TA-33-20
33-004(i)	**	? 33.016-33.017	Tsk 3 : 23	TA-33-39

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-004(j)	**	? 33.016-33.017	Tsk 3 : 24	TA-33-26
33-004(k)	**	? 33.016-33.017	Tsk 3 : 25	TA-33-87
33-004(l)	**	? 33.016-33.017	Tsk 3 : 26	TA-33-89
33-004(m)	**			TA-33-179
33-004(n)	**			TA-33-200
33-004(misc)			Tsk 4 : 87	TA-33-122

? Indicates uncertainty with RFA Unit correlation.
** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-33	MATERIALS MANAGED	: SANITARY WASTE
TYPE OF UNIT(s)	: SEPTIC SYSTEM		RADIOACTIVE WASTE
UNIT USE	: TREATMENT/DISPOSAL		SUSPECTED HAZARDOUS WASTE
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: 1950 - 1971		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

This unit includes three drainage systems that received effluent from Building 21. The drainage systems include the septic system [33-005(a)], the "noncontaminated" drainage system [33-005(b)], and the industrial waste drainage system [33-005(c)]. The septic system served the restroom and change room lavatories, urinals, and commodes. The septic drainlines discharged to the manhole (TA-33-74), which drained to the septic tank (TA-33-32). Overflow from the septic tank surfaced a few meters south of the septic tank. The septic tank was decommissioned in the 1950s. No radioactive contamination was found. In addition to the sanitary system, TA-33-21 was served by two liquid waste drain systems: 1) a contamination-free drainline that served a sink, a floor drain, and a safety shower in the counting room and 2) a contaminated industrial waste system that served the sink, shower, glovebox drains in the process room, and glovebox drains in the hot change room. The industrial waste system discharged to a leach field approximately 16 meters south of TA-33-21. In 1974, the contaminated material from the associated leach field was removed and buried at TA-54, MDA-G. During removal of the industrial waste line distribution system, only 10 meters of trench were found to be contaminated to levels of 80 pCi/g gross alpha. Approximately 2.5 cubic meters of contaminated soil and all of the clay pipe were buried at MDA-G as nonretrievable (<10 microCuries/g) waste. After the decommissioning program was completed, a 10- to 15-centimeter deep depression at the site was backfilled with topsoil and seeded with native grasses to restore the site. The septic tank, drain manhole, and industrial wasteline/leach field may have discharged to three separate outfalls.

WASTE INFORMATION

The leach field contained radioactive waste (plutonium) at the time of decommissioning. It is unknown whether hazardous constituents were present.

RELEASE INFORMATION

After removal of contaminated drain lines, leach field, and soil, the remaining soil contained less than 20 pCi/gm gross alpha.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-005(a)	TA33-2-O/S-A/I-RW/HW TA33-7-SFA/I-HW/RW	? 33.012	Tsk 3 : 82	TA-33-32, -74
33-005(b)	TA33-2-O/S-A/I-RW/HW TA33-7-SFA/I-HW/RW		Tsk 3 : 82	SERVES TA-33-21
33-005(c)	TA33-2-O/S-A/I-RW/HW TA33-7-SFA/I-HW/RW		Tsk 3 : 82	SERVES TA-33-21

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-33
TYPE OF UNIT(s) : FIRING SITE
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : LATE 1940s - 1960s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : MIXED WASTE
RADIOACTIVE WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Full- and half-scale pad shots for initiator development and other tests were conducted at TA-33. Each pad measured about 10'x 10' in size. The shots, being uncontained, spread contamination at the firing areas, with the amount of contamination dependent on the shot size. A half-scale site was on the southern mesa, including a shot pad, TA-33-26, and a rail gun, TA-33-146 [33-006(a)], and a full-scale site was on the eastern mesa. The eastern mesa site [33-006(b)] had firing pads TA-33-97 and TA-33-98. In addition to the firing pads, the site included a berm to the north and east of the pads, a gun mount (TA-33-130) and gun building (TA-33-127). There were two additional sites located on the east mesa. Shot sizes at TA-33 ranged from 275 to 5000 lbs. of HE, with only a few of the larger shots.

WASTE INFORMATION

Possible constituents of the residues from shots at these sites include HE, beryllium, beryllium oxide, polonium (now decayed out), uranium, tritium (much of which has decayed), and lead.

RELEASE INFORMATION

During the summer of 1984, selected areas at the firing sites near MDA-D and MDA-E were cleaned up of radioactive contamination and debris. Soil and materials known to be contaminated were taken to TA-54, MDA-G. A radiation survey was conducted after the cleanup, and no residual radiation was detected. The survey did not include sampling for nonradioactive contamination. Nonradioactive residuals were disposed of in one of two landfills in TA-33 (see 33-008).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-006(a)	TA33-4-CA-I-HW/RW	? 33.019	Tsk 3 : 74	TA-33-26, -146
33-006(b)	TA33-4-CA-I-HW/RW	? 33.019	Tsk 3 : 75	TA-33-97, -98, -127, -130

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION	: TA-33	MATERIALS MANAGED	: MIXED WASTE
TYPE OF UNIT(s)	: FIRING SITE		SOLID WASTE
UNIT USE	: TESTING/DISPOSAL		SUSPECTED HAZARDOUS WASTE
OPERATIONAL STATUS	: DECOMMISSIONED/INACTIVE		
PERIOD OF USE	: EARLY 1950s-1960s		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

Most of the work performed at TA-33 has involved gun assembly design and testing for weapons projects. This program started in the early 1950's and continued until the mid-1960's. All three testing areas, eastern mesa gun firing area, tower area, and Area 6 [33-007(a), (b), and (c), respectively] at TA-33 were used for this work, but the most extensive activities took place in the east mesa area. The east mesa site consisted of 3 gun mounts (TA-33-116, -117, and -135) and two former "catcher boxes" or recovery chutes (berms) (TA-33-118 and -136). Additionally, there was a mobile 8" howitzer gun (tracked vehicle) which occasionally fired into several embankments on the east mesa. The tower area firing area consisted of gun mount TA-33-85, berm TA-33-43, and an area west of the berm used to test a free recoil weapon. The free recoil weapon fired projectiles into earthen embankments to the west and north of the weapon. Also in the tower area was a separate firing site that included a gun building (TA-33-25) and a barricade (TA-33-63). The Area 6 firing area consisted of two firing areas. One area included a gun building (TA-33-16), a gun mount (TA-33-64), and a barricade (TA-33-60). Projectiles were fired from two guns at model initiators placed in front of the barricade. Barricade TA-33-60 was destroyed in 1952, but site visits observed that part of the barricade remains. This site has been decommissioned. The second Area 6 firing area included a large gun (TA-33-65), a hillside embankment (TA-33-61), and two small barricades (TA-33-62 and -72) located north and east of the gun. The large gun was fired into the hillside embankment. Gun sizes ranging from 4" to 8" bore fired projectiles into berms ("catcher boxes") full of soil, wood chips, and vermiculite. Projectiles were retrieved and studied. These assemblies incorporated combinations of various metals with radionuclides and HE. Occasionally during testing, projectiles would stray from the target or break open, thereby spreading contamination. Typical incidents involved cracks in the assembly. In general, grease was applied to broken assemblies to stop or retard radionuclide leakage. Broken or dissected assemblies were taken to MDA-E for disposal (see 35-001).

WASTE INFORMATION

Potential contaminants include polonium (now decayed out), beryllium, tritium, cobalt-60, uranium, HE, oil, and possibly metals.

RELEASE INFORMATION

Projectiles occasionally strayed from the target or broke open and spread contamination. During test firing at the east mesa site on June 4, 1962, a projectile was lost and scattered Cobalt-60 and 30 kg of uranium-238. In 1984, radioactive materials were removed and taken to TA-54, MDA-G, for disposal. Nonradioactive residuals were disposed of in one of two landfills located in TA-33 (see 35-008). A radiation survey was conducted after the cleanup and no residual contamination was detected. The survey did not include sampling for nonradioactive waste constituents.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-007(a)	TA33-6-CA-I-HW/RW	? 33.019	Tsk 3 : 76 81	TA-33-116, -117, -118, -135, -136
33-007(b)	TA33-6-CA-I-HW/RW	? 33.019	Tsk 3 : 77 78	TA-33-25, -43, -63, -85
33-007(c)	TA33-6-CA-I-HW/RW	? 33.019	Tsk 3 : 79 80	TA-33-16, -60, -61, -62, -64, -65, -72

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION	: TA-33	MATERIALS MANAGED	: SOLID WASTE
TYPE OF UNIT(s)	: LANDFILL		SUSPECTED HAZARDOUS WASTE
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: 1984		
HAZARDOUS RELEASE	: NONE		
RADIOACTIVE RELEASE	: NONE		

UNIT INFORMATION

Two landfills were created to dispose of nonradioactive wastes removed during the cleanup of TA-33 firing areas in 1984. One is located inside the berm of TA-33-43 [33-008(a)]. The debris was placed inside the horseshoe-shaped berm and covered with soil. The other landfill is located near TA-33-151 [33-008(b)]. Barricades from firing sites and other operational debris were placed near building TA-33-151 and covered with soil.

WASTE INFORMATION

The waste in the landfills may have included material from firing sites and contaminated facilities and therefore may possibly contain timbers with small amounts of lead, beryllium, HE, and unknown chemicals.

RELEASE INFORMATION

There have been no known releases of hazardous wastes from these units.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-008(a)	TA33-4-CA-I-HW/RW	? 33.008	Tsk 3 : 45	INSIDE TA-33-43
33-008(b)	TA33-4-CA-I-HW/RW	? 33.008	Tsk 3 : 46	NEAR TA-33-151

? Indicates uncertainty with RFA Unit correlation

SUMMARY

LOCATION	: TA-33	MATERIALS MANAGED	: RADIOACTIVE WASTE
TYPE OF UNIT(s)	: SURFACE DISPOSAL		HAZARDOUS WASTE
UNIT USE	: DISPOSAL		PCBs
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: EST. 1962 - 1974		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

This large surface disposal area measuring 6500 square feet, was actively operated at Area 6. In 1974-1975, it was excavated and the debris removed to TA-54. This disposal area was at the edge of a canyon. It was used for disposal of approximately 100 defective energy storage capacitors, beginning in 1967. While in use, elevated readings on a dose-rate meter were as high as 5 mR/hr at contact.

WASTE INFORMATION

The waste disposed of in this unit was removed in 1974. Complete records on the characteristics of the wastes are not available, however, based on interviews with LANL personnel, some waste materials are known. The oil in the capacitors contained PCBs. An estimated four to five pounds of depleted uranium in the form of metal chunks and turnings were reported. Also present at the site were 55-gallon drums, old automobile tires, and fluorescent lighting tubes.

RELEASE INFORMATION

There is no documentation of past releases from this unit. Because the waste in the unit was removed, no current releases are expected in the area having undergone decommissioning. After the 1974 clean-up operations were completed, a radiation survey of the decommissioned region showed that radiation levels at the site in the range of 15 to 30 microRem/hour were found. Even after the cleanup, debris remains in the area, especially downslope, in the canyon. Downslope migration was not surveyed.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-009	TA33-3-L-I-HW/RW	? 33.008	Tsk 3 : 43	AREA 6

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-33
TYPE OF UNIT(s) : SURFACE DISPOSAL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1950s - 1960s
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : SOLID WASTE
SUSPECTED MIXED WASTE
SUSPECTED HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

Debris remaining at firing pits and pads in TA-33 was in the past bulldozed to the canyon side. The debris included contaminated soil, firing wires, connectors, shrapnel, wood, foam rubber, glass, and conduit. One of the sites [33-010(a)] is located to the south on a gently sloping side of White Rock Canyon, south of former catcher box, TA-33-118. The debris volume is not large, but is scattered and may be from the former catcher box. Another site [33-010(b)] is on a cliff shelf of White Rock Canyon to the southwest of TA-33-89. The third site [33-010(c)] is at the Tower Area, south of TA-33-26, and to the west of MDA-E. There is a ditch that passes immediately east of the debris pile. A 1987 ER Program reconnaissance observed that debris is scattered in the drainage ditch and that closer to TA-33-26, material appears to have been bulldozed down the hill. A fourth site, 33-010(d), is northwest of TA-33-6. It is an area formerly scattered with debris from the east mesa firing sites. During a 1984 surface cleanup, this debris was removed. A fifth site, 33-010(e), is located in a canyon southeast of TA-33-2. It consists of Area 6 firing site barricade debris identified during an ER Program site reconnaissance in 1987. A sixth disposal site, 33-010(f), was identified during an ER Program site reconnaissance in 1987. It is located east of building TA-33-86 where concrete, old cans, and other metal pieces litter the area. South of MDA-E is a seventh surface disposal site [33-010(g)]. This site consists of debris scattered along the canyon rim and upper part of the canyon walls. An eighth surface disposal area, 33-010(h), was observed during a 1987 ER Program site reconnaissance around TA-33-43 where discarded materials were scattered over the mesa surface.

WASTE INFORMATION

Uranium, beryllium, lead, and residual HE material are suspected. The debris from the east mesa firing sites may have contained beryllium, tungsten, and other metals. The materials in the TA-33-2 surface disposal area may contain uranium, HE and metals. Wastes present in the disposal area near TA-33-86 are unknown except for the concrete, cans, and metal pieces observed at the site. The debris area south of MDA-E and near TA-33-43 contained shrapnel, cables, and operational materials, probably originating from shot pad and gun firing activities; thus uranium, beryllium, metals and HE may be present.

RELEASE INFORMATION

Although no sampling has been conducted to confirm whether a release has occurred, surface drainage and wind erosion may have mobilized waste constituents. At the Tower Area disposal site, a beta-gamma radiation survey conducted by the ER Program Reconnaissance in 1987 observed levels four times background levels on top of the debris. In addition, sampling conducted by the DOE Environmental Survey at the same site indicated the presence of alpha and gamma emitters in the soil. A radiation survey of the east mesa debris site indicated no radiation levels above background. Non-radioactive contaminants have not been evaluated.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-010(a)	TA33-3-L-I-HW/RW	? 33.008	Tsk 3 : 51	SOUTH OF TA-33-118
33-010(b)	TA33-3-L-I-HW/RW	? 33.008	Tsk 3 : 52	SOUTHWEST OF TA-33-89
33-010(c)	TA33-3-L-I-HW/RW	? 33.008	Tsk 3 : 44	SOUTH OF TA-33-26
33-010(d)	**	? 33.008	Tsk 3 : 36	NORTHWEST OF TA-33-6
33-010(e)	**	? 33.008	Tsk 3 : 47	SOUTHEAST OF TA-33-2
33-010(f)	**	? 33.008	Tsk 3 : 48	EAST OF TA-33-86
33-010(g)	**	? 33.008	Tsk 3 : 49	SOUTH OF MDA-E
33-010(h)	**	? 33.008	Tsk 3 : 50	AROUND TA-33-43

? Indicates uncertainty with RFA Unit correlatic
** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-33	MATERIALS MANAGED	: SUSPECTED HAZARDOUS WASTE
TYPE OF UNIT(s)	: CONTAINER STORAGE AREA		SOLID WASTE
UNIT USE	: STORAGE		PCBs
OPERATIONAL STATUS	: INACTIVE		RADIOACTIVE WASTE
PERIOD OF USE	: 1948 - 1988		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

One storage area [33-011(a)], approximately 0.25 acre, was located at the drilling storage yard and contained 55-gallon steel drums placed on pallets or directly on the soil. The unit was intended for the storage of waste oils until recycling. The drums have been removed from the drilling storage yard. Another storage yard [33-011(b)], started in 1948, was located in the area around the elevator building, TA-33-3. It was used to store equipment used at the firing sites. The equipment was stored until a sufficient quantity was accumulated to allow a strategic materials recovery program to recover materials such as tungsten, uranium, and beryllium. This storage area was cleaned up in 1984, although a few pieces of iron scrap and a large, insulated tank remain on the site. A third soil contamination area is near TA-33-63, a soil berm [33-011(c)]. Tritium-containing reservoirs, called "blivits", were placed at this location and the tritium was allowed to leak into the tuff after undergoing acceleration experiments. The blivit storage area was fenced off during use. A fourth possible soil contamination area is around TA-33-20 [33-011(d)]. Uranium and beryllium were stored in and outside of building TA-33-20. Additionally, recovered scrap from shots containing uranium, beryllium, and tungsten were stored south of building TA-33-20. A fifth area of soil contamination is located northwest of TA-33-22 [33-011(e)]. The DOE Environmental Survey observed and sampled an area where materials stored in drums have contaminated the soil. In response to this environmental problem, LANL will implement improved methods of storage.

WASTE INFORMATION

The drums contained waste oils potentially contaminated with PCBs. Potential contaminants at the TA-33-3 storage yard are tungsten, beryllium, uranium, and HE. Soil in the former blivit storage area received tritium, although its physical form (gas or liquid) is unknown. Materials stored in and near TA-33-20 include uranium, beryllium, and tungsten. The types of materials maintained in drum storage near TA-33-22 are unknown.

RELEASE INFORMATION

The RFA reports that the soil samples have shown 1-2 ppm PCBs. The drums and soil have been removed. The presence or extent of contaminants beneath the former TA-33-3 storage yard are unknown. Tritium was released to the tuff in the former blivit storage area. Contaminants from materials stored outside of TA-33-20 may have been released. A 1987 site reconnaissance visit did not identify any materials remaining in the area. Soil sampling near building TA-33-22 has detected uranium and gamma emitters above natural activity.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-011(a)	**	33.006	Tsk 3 : 34 54	NEAR TA-33-21
33-011(b)	**		Tsk 3 : 32	AROUND TA-33-3
33-011(c)	**		Tsk 3 : 35	NEAR TA-33-63
33-011(d)	**		Tsk 3 : 37	AROUND TA-33-20
33-011(e)	**			NORTHWEST OF TA-33-22

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-33
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - 1988
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE
HAZARDOUS WASTE
SUSPECTED PCBs

UNIT INFORMATION

The following container storage areas are active areas according to the LANL container storage area database of October 1988. 1) A drum storage area [33-012(a)] is satellite storage for the shop at TA-33-39. The unit consists of 55-gallon steel drums on an asphalt pad. The area is designed to store wastes generated from vehicle maintenance and equipment repair operations. Additional drums are stored either on pallets or directly on the pad and contain waste oils that may be recycled. 2) A satellite storage area [33-012(b)] consists of drums to store photo-processing chemicals at TA-33-114 in Room 116. 3) Another satellite storage area [33-012(c)] manages waste organics at TA-33-114 in Room 117. 4) A satellite storage area for solvents [33-012(d)] is located at TA-33-19.

WASTE INFORMATION

The wastes stored at TA-33-39 consist of solvents and solvent-contaminated oil potentially containing PCBs and metals. The area in Room 116 in TA-33-114 stores photo-processing chemicals including silver, and Room 117 in TA-33-114 stores waste organics. The storage area at TA-33-19 manages solvents, particularly freon.

RELEASE INFORMATION

Multiple oil stains have been observed around unit at TA-33-39. It is unknown whether hazardous releases have occurred from the other units, although releases are unlikely because the areas are inside buildings.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-012(a)	**	33.001	Tsk 3 : 38	STORAGE FOR TA-33-39
33-012(b)	**		Tsk 3 : 39	STORAGE FOR TA-33-114, Rm. 116
33-012(c)	**		Tsk 3 : 40	STORAGE FOR TA-33-114, Rm. 117
33-012(d)	**		Tsk 3 : 41	TA-33-19

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-33
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : LATE 1960s - PRESENT
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : MIXED WASTE

UNIT INFORMATION

This drum storage area was noted during the VSI. The area is used for the storage of tritium-contaminated liquid and solid waste. The unit is located within a fenced area at TA-33-86, next to a tritium receiving site. The drums are underlain by an asphalt pad. The area measures about 50 square feet.

WASTE INFORMATION

The wastes consist of oil and pumps contaminated with tritium. The oil may also contain metals and solvents.

RELEASE INFORMATION

Stains have been observed on the asphalt pad. It is not known whether the underlying soil was contaminated. The drums and equipment stored in this area were moved to the south side of building TA-33-86 in the spring of 1989. Soils in the area from which the drums were removed were not disturbed.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-013	**	33.003 33.007	Tsk 3 : 53	TA-33-86

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-33	MATERIALS MANAGED	: RADIOACTIVE WASTE
TYPE OF UNIT(s)	: BURN SITE		HAZARDOUS WASTE
UNIT USE	: DISPOSAL		SOLID WASTE
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: EST. 1950s		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: NONE		

UNIT INFORMATION

Little is known about the TA-33 burning pit. LANL staff interviewed by the ER Program remember that this pit was used to burn timbers and sawdust used in firing berms at TA-33. These materials contained depleted uranium, beryllium black powder, propellant powders, and residual HE. Propellants used at TA-33 included LA-148 and LA-248. References as to their potential toxicity are cited in CEARP.

WASTE INFORMATION

HE, including propellant powders, depleted uranium, and beryllium black powder are reported to have been burned.

RELEASE INFORMATION

It is unknown whether hazardous releases have occurred from this unit; however, complete combustion of the HE would be expected.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-014	TA33-5-CA-1-HW/RW	33.010	Tsk 2 : 17	

SUMMARY

LOCATION : TA-33
TYPE OF UNIT(s) : INCINERATOR
UNIT USE : TREATMENT
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1955 - ?
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

A small incinerator, TA-33-110, was once used at this site. It is located in the main laboratory area and is no longer in use. The incinerator was utilized from 1955; it is not known when use was discontinued.

WASTE INFORMATION

The wastes burned in this incinerator were noncontaminated waste paper and office trash.

RELEASE INFORMATION

The characteristics of any combustion products potentially released to the atmosphere are expected to have been nonhazardous. It can be expected that there are no residuals of hazardous wastes remaining. Considering the nonhazardous nature of the wastes managed by this unit, no further investigation is warranted.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-015	**		Tsk 3 : 42	TA-33-110

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-33	MATERIALS MANAGED	: SUSPECTED HAZARDOUS WASTE
TYPE OF UNIT(s)	: SUMP		SOLID WASTE
UNIT USE	: TREATMENT/STORAGE		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: UNKNOWN		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: NONE		

UNIT INFORMATION

A sump is located outside TA-33-23. Its dimensions are approximately 3' x 2' x 2' deep. The sump discharged to an outfall in Chaquehui Canyon, approximately 150 feet away from building TA-33-23.

WASTE INFORMATION

The sump may have received HE and oil.

RELEASE INFORMATION

The sump discharged to an outfall. It is unknown whether hazardous releases occurred from the outfall.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-016	**		Tsk 3 : 27 28	OUTSIDE TA-33-23

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-33	MATERIALS MANAGED	: RADIOACTIVE WASTE
TYPE OF UNIT(s)	: OPERATIONAL RELEASE		HAZARDOUS WASTE
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: INACTIVE/ACTIVE		
PERIOD OF USE	: VARIOUS		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

Materials handled at TA-33 have included tritium, deuterium, uranium, plutonium, polonium, beryllium, beryllium oxide, mercury, trichloroethylene, and other materials utilized in the manufacture of epoxies, resins, and niobium crystals. The CEARP notes several significant one-time spills, and there is evidence of routine releases of uranium and tritium through uncontrolled stacks. One example of past routine releases was from building TA-33-40. This building housed a slit saw that was used to cut depleted uranium alloy. Air samples inside the building during operations indicated uranium air concentrations of up to 36.5 times the allowable occupational levels. Exhaust fans were supposed to remove dust from cutting operations via uncontrolled stacks. Building TA-33-40 was built in 1951 at the present location of TA-33-90. In 1953 building TA-33-40 was relocated to its present location. Additionally, plutonium was known to have been accidentally released from building TA-33-21. Tritium releases to the atmosphere have been reported from building TA-33-86, the high-pressure tritium handling facility, ranging from 0.0 Curies in 1985 to 2000 Curies in 1984, although all releases were below the EPA air emission standards.

WASTE INFORMATION

Releases have included radioactive waste, organics, metals, and other materials listed above.

RELEASE INFORMATION

Above background levels of uranium and tritium have been measured in soils at TA-33 at sample locations near TA-33-86, TA-33-21, and TA-33-40. Analytical data is not available to document whether residuals of nonradioactive materials remain from these releases.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
33-017	TA33-1-CA-A/I-RW/HW	33.015	Tsk 3 : 29 30 31	NEAR TA-33-21, -40, -86

TA-33 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
33-001(a)	33-1, 33-2, 33-5
33-001(b)	33-1, 33-2, 33-5
33-001(c)	33-1, 33-2, 33-5
33-001(d)	33-1, 33-2, 33-5
33-001(e)	33-1, 33-2, 33-5
33-002(a)	33-1, 33-5
33-002(b)	33-1, 33-5
33-002(c)	33-1, 33-5
33-002(d)	33-1, 33-5
33-002(e)	33-1, 33-5
33-003(a)	33-2, 33-3, 33-5
33-003(b)	33-2, 33-3, 33-5
33-004(a)	33-1
33-004(b)	33-1
33-004(c)	33-1
33-004(d)	33-1
33-004(e)	33-1
33-004(f)	33-1
33-004(g)	33-1
33-004(h)	33-1
33-004(i)	33-1
33-004(j)	33-1
33-004(k)	33-1
33-004(l)	33-1
33-004(m)	Not Shown
33-004(n)	Not Shown
33-005(a)	33-2
33-005(b)	33-2
33-005(c)	33-2
33-006(a)	33-1
33-006(b)	33-3
33-007(a)	33-2, 33-3
33-007(b)	33-2
33-007(c)	33-2
33-008(a)	33-1
33-008(b)	33-1
33-009	33-4
33-010(a)	33-1
33-010(b)	33-1, 33-3
33-010(c)	33-1
33-010(d)	33-1
33-010(e)	33-1

TA-33 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX (CONTINUED)

SWMU	FIGURE NUMBER
33-010(f)	33-1
33-010(g)	33-1
33-010(h)	33-1
33-011(a)	33-1
33-011(b)	33-1
33-011(c)	33-1
33-011(d)	33-1
33-011(e)	33-1
33-012(a)	33-1
33-012(b)	33-1
33-012(c)	33-1
33-012(d)	33-1
33-013	33-1
33-014	33-1
33-015	33-1
33-016	33-1
33-017	33-1

NOTE: Some structure locations contain more than one SWMU.

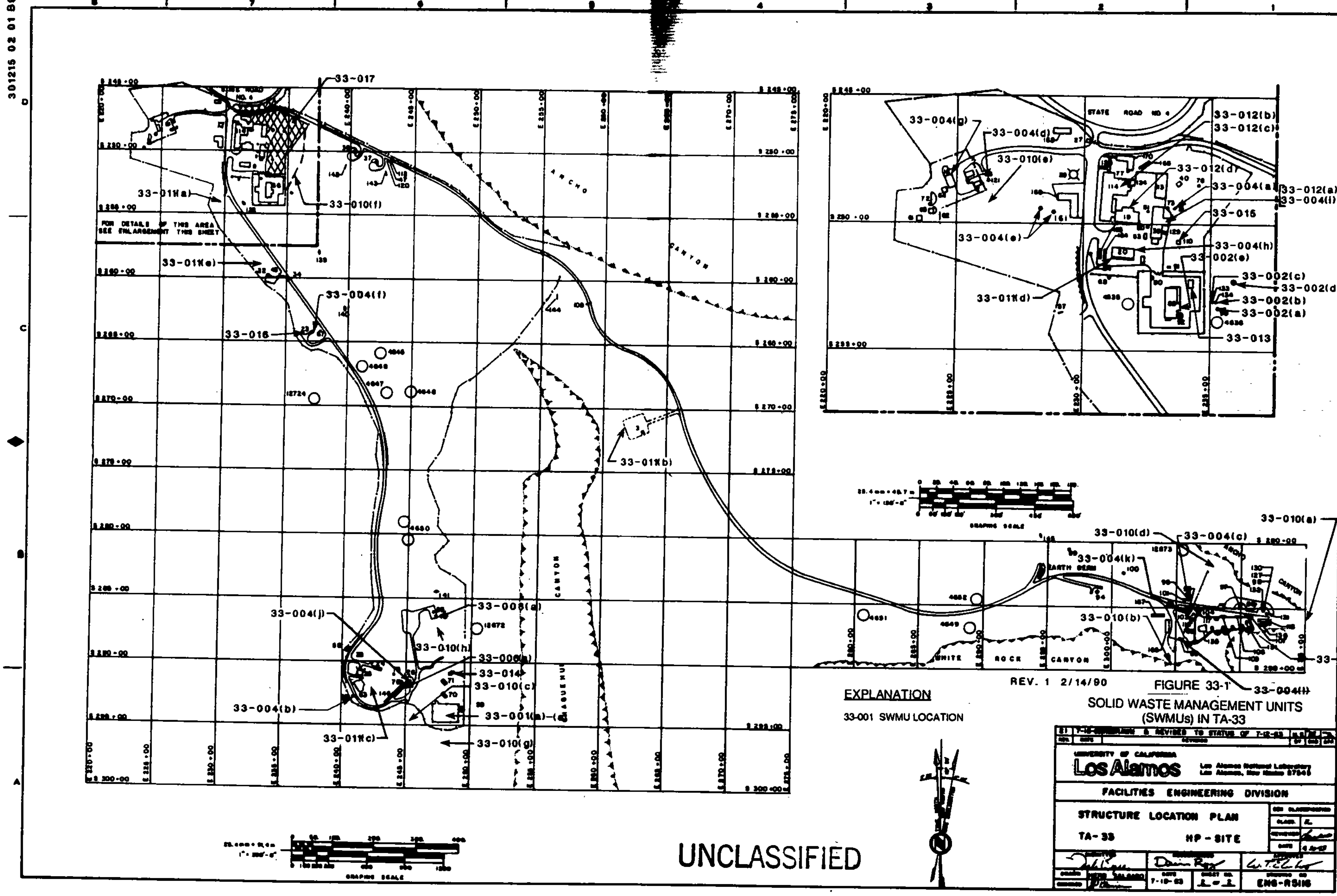


FIGURE 33-1
SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-33

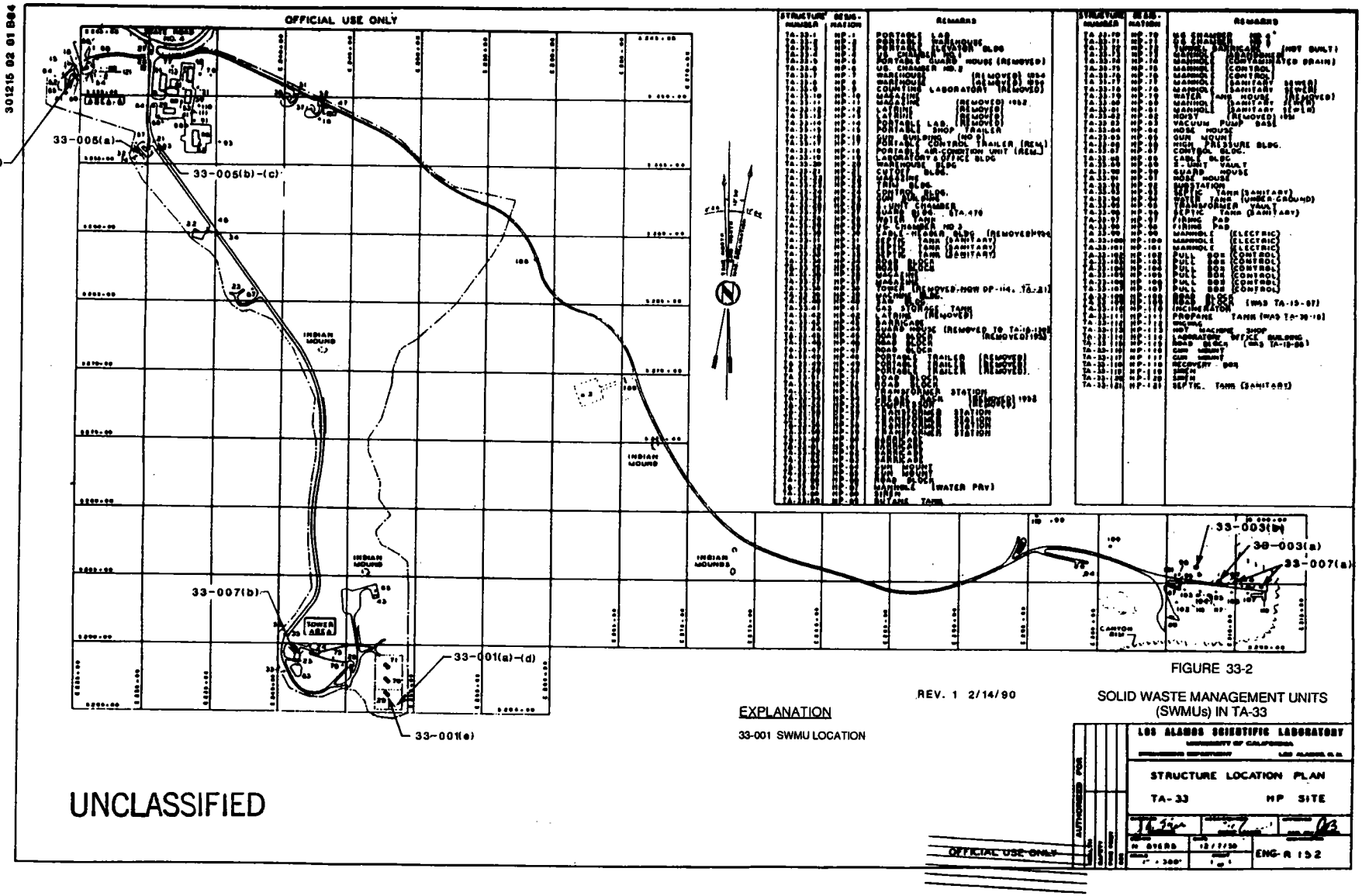
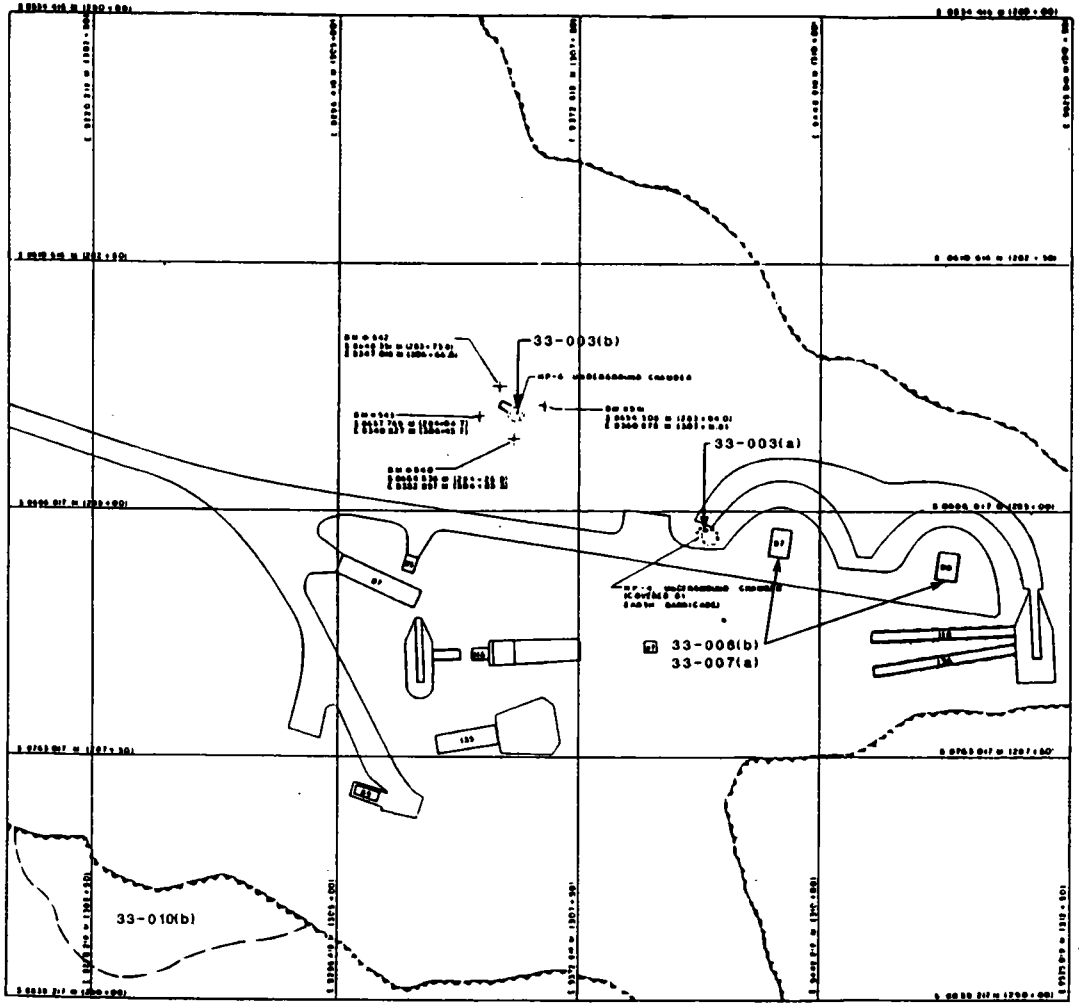


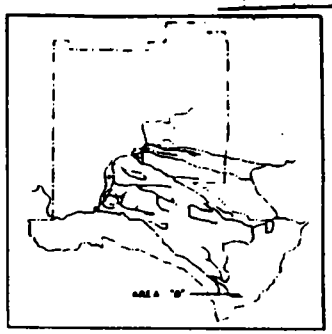
FIGURE 33-2

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-33

UNCLASSIFIED

301215 02 01 865





LOCATION PLAN

EXPLANATION

33-003 SWMU LOCATION

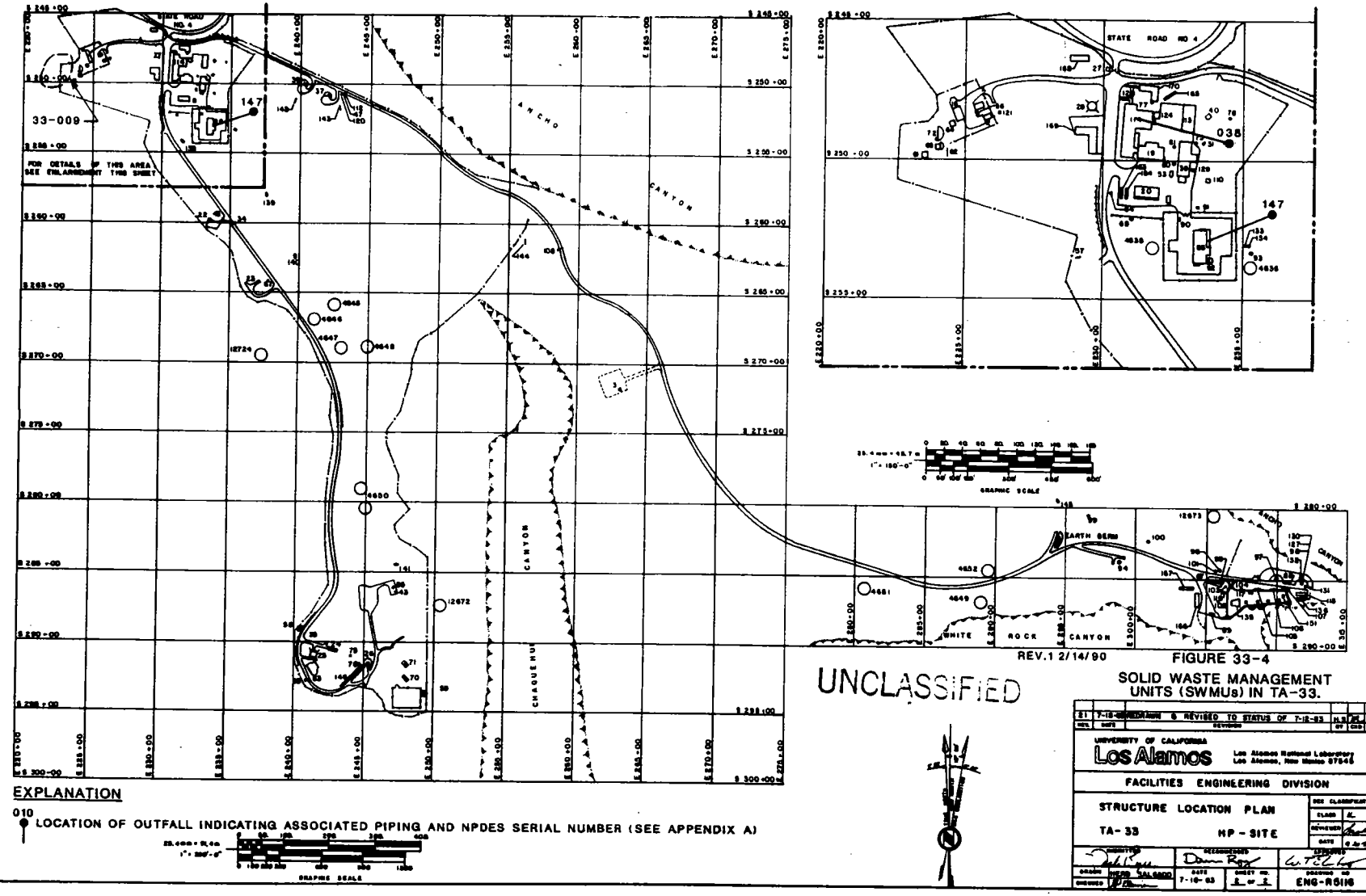
UNCLASSIFIED

FIGURE 33-3

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-33

LOS ALAMOS SCIENTIFIC LABORATORY

MATERIALS DISPOSAL AREAS



REV.1 2/14/90

FIGURE 33-4

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-33.

UNCLASSIFIED

EXPLANATION

010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBER (SEE APPENDIX A)

21	7-18-93	REVISED TO STATUS OF 7-12-93	H.R.
NO.	DATE	REVISION	BY

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

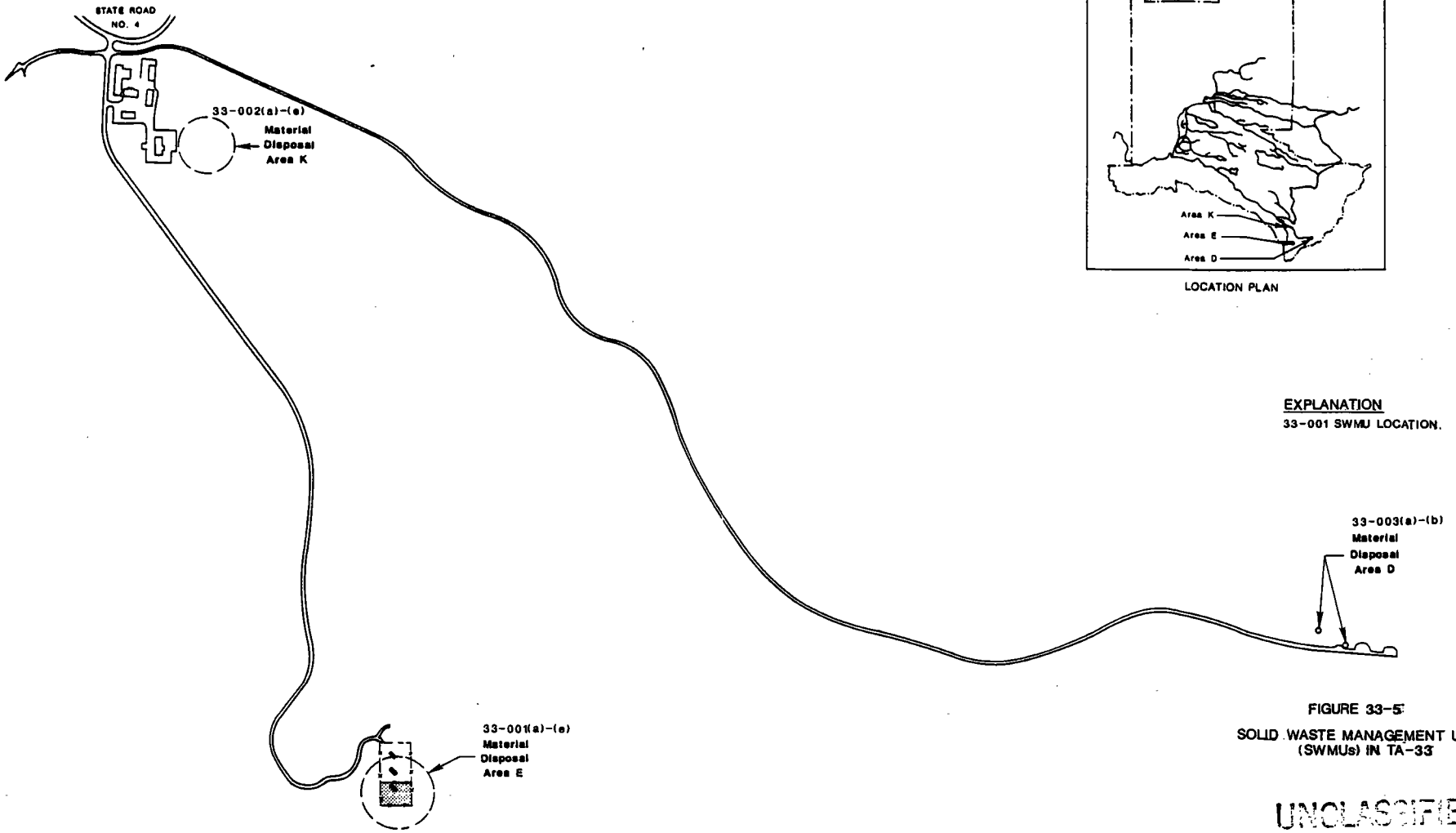
FACILITIES ENGINEERING DIVISION

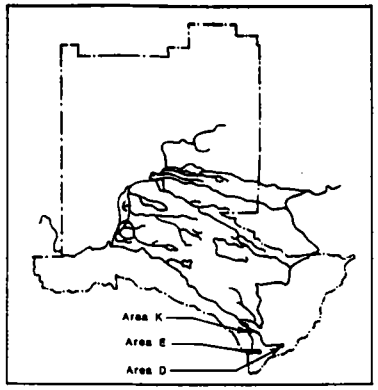
STRUCTURE LOCATION PLAN
TA-33 HP-SITE

SUBMITTED	RECOMMENDED	APPROVED	
DRAWN	DATE 7-18-93	SHEET NO. 2 OF 2	DRAWING NO. ENG-R5116
CHECKED			

DOE CLASSIFICATION
CLASS
REVIEWED
DATE

301215 02 91 6178





LOCATION PLAN

EXPLANATION

33-001 SWMU LOCATION.

FIGURE 33-5

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-33

UNCLASSIFIED

301215 02 01 B29

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-33-1	HP-1	PORTABLE LABORATORY		S230+00 E225+00
TA-33-2	HP-2	PORTABLE WAREHOUSE		S230+00 E225+00
TA-33-3	HP-3	PORTABLE ELEVATOR BLDG.		S270+00 E283+00
TA-33-4	HP-4		DESTROYED 1948	
TA-33-5	HP-5		REMOVED 1954	
TA-33-6	HP-6		DESTROYED 1948	
TA-33-7	HP-7		REMOVED 1954	
TA-33-8	HP-8		REMOVED 1954	
TA-33-9	HP-9		REMOVED 1954	
TA-33-10	HP-10		REMOVED 1974	
TA-33-11	HP-11		REMOVED 1953	
TA-33-12	HP-12		REMOVED 1950	
TA-33-13	HP-13		REMOVED 1950	
TA-33-14	HP-14		REMOVED 1951	
TA-33-15	HP-15		REMOVED 1967	
TA-33-16	HP-16	GUN BUILDING NO. 8		S250+00 E225+00
TA-33-17	HP-17		REMOVED 1951	
TA-33-18	HP-18		REMOVED 1951	
TA-33-19	HP-19	LABORATORY & OFFICE BLDG.		S230+00 E230+00
TA-33-20	HP-20	WAREHOUSE		S250+00 E230+00
TA-33-21	HP-21		DEMOLISHED 1975	
TA-33-22	HP-22	MAGAZINE		S200+00 E235+00
TA-33-23	HP-23	TRIM BUILDING		S200+00 E235+00
TA-33-24	HP-24	CONTROL BUILDING		S290+00 E245+00
TA-33-25	HP-25	GUN BUILDING		S290+00 E240+00
TA-33-26	HP-26	X-UNIT CHAMBER		S290+00 E245+00
TA-33-27	HP-27	GUARD HOUSE		S245+00 E230+00
TA-33-28	HP-28	TANK, WATER		S245+00 E230+00
TA-33-29	HP-29		DESTROYED 1950	
TA-33-30	HP-30		REMOVED 1954	
TA-33-31	HP-31	TANK, SEPTIC		S230+00 E235+00
TA-33-32	HP-32		REMOVED 1973	
TA-33-33	HP-33	TANK, SEPTIC		S280+00 E240+00
TA-33-34	HP-34	ROAD BLOCK		S280+00 E235+00
TA-33-35	HP-35	ROAD BLOCK		S280+00 E240+00
TA-33-36	HP-36	MAGAZINE		S250+00 E240+00
TA-33-37	HP-37	MAGAZINE		S250+00 E240+00
TA-33-38	HP-38		REMOVED 1952	
TA-33-39	HP-39	MACHINE SHOP		S250+00 E235+00
TA-33-40	HP-40	SAW BUILDING		S250+00 E235+00
TA-33-41	HP-41		REMOVED 1963	
TA-33-42	HP-42		REMOVED 1953	
TA-33-43	HP-43	BARRICADE		S265+00 E245+00
TA-33-44	HP-44		REMOVED 1951	
TA-33-45	HP-45		REMOVED 1953	
TA-33-46	HP-46	ROAD BLOCK		S280+00 E235+00
TA-33-47	HP-47	ROAD BLOCK		S250+00 E245+00
TA-33-48	HP-48		REMOVED 1953	
TA-33-49	HP-49		REMOVED 1951	
TA-33-50	HP-50		REMOVED 1951	
TA-33-51	HP-51		DESTROYED 1979	
TA-33-52	HP-52		DESTROYED 1979	
TA-33-53	HP-53	TRANSFORMER STATION		S250+00 E235+00
TA-33-54	HP-54		REMOVED 1952	
TA-33-55	HP-55		REMOVED 1975	
TA-33-56	HP-56	TRANSFORMER STATION		S250+00 E225+00
TA-33-57	HP-57	TRANSFORMER STATION		S235+00 E230+00
TA-33-58	HP-58	TRANSFORMER STATION		S280+00 E240+00
TA-33-59	HP-59	TRANSFORMER STATION	ABANDONED 1954	S295+00 E250+00
TA-33-60	HP-60		REMOVED 1962	
TA-33-61	HP-61	BARRICADE	ABANDONED 1962	S290+00 E220+00
TA-33-62	HP-62	BARRICADE	ABANDONED 1962	S230+00 E225+00
TA-33-63	HP-63	BARRICADE		S290+00 E240+00
TA-33-64	HP-64	GUN MOUNT	ABANDONED 1962	S250+00 E225+00
TA-33-65	HP-65	GUN MOUNT	ABANDONED 1962	S230+00 E225+00
TA-33-66	HP-66		REMOVED 1980	
TA-33-67	HP-67	MANHOLE, WATER PRV		S285+00 E240+00
TA-33-68	HP-68	SIREN		S250+00 E230+00
TA-33-69	HP-69		REMOVED 1964	
TA-33-70	HP-70	U.G. CHAMBER NO. 4		S285+00 E250+00
TA-33-71	HP-71	U.G. CHAMBER NO. 5		S290+00 E250+00
TA-33-72	HP-72	TUNNEL BARRICADE	ABANDONED 1962	S230+00 E225+00
TA-33-73	HP-73	MANHOLE, SANITARY	ABANDONED 1951	S230+00 E235+00
TA-33-74	HP-74		REMOVED 1975	
TA-33-75	HP-75	MANHOLE, CONTROL		S290+00 E245+00
TA-33-76	HP-76	MANHOLE, CONTROL		S290+00 E245+00
TA-33-77	HP-77	MANHOLE, SANITARY		S250+00 E230+00
TA-33-78	HP-78	MANHOLE, SANITARY		S250+00 E235+00
TA-33-79	HP-79		REMOVED 1952	
TA-33-80	HP-80	MANHOLE, SANITARY		S250+00 E230+00
TA-33-81	HP-81	MANHOLE, SANITARY		S250+00 E230+00
TA-33-82	HP-82		REMOVED 1951	
TA-33-83	HP-83		REMOVED 1975	
TA-33-84	HP-84	HOSE HOUSE		S250+00 E230+00
TA-33-85	HP-85	GUN MOUNT		S285+00 E245+00
TA-33-86	HP-86	LABORATORY BUILDING		S230+00 E235+00
[illegible]	HP-87	CONTROL BUILDING		S280+00 E300+00
[illegible]	HP-88	CABLE BUILDING		S285+00 E310+00
[illegible]	HP-89	X-UNIT VAULT		S280+00 E305+00
[illegible]	HP-90	GUARD HOUSE		S255+00 E235+00
[illegible]	HP-91	HOSE HOUSE		S233+00 E235+00
[illegible]	HP-92	SUBSTATION		S235+00 E235+00
[illegible]	HP-93	TANK, SEPTIC		S235+00 E235+00
[illegible]	[illegible]	TANK, WATER U.G.		S285+00 E300+00
[illegible]	[illegible]	TRANSFORMER VAULT		S285+00 E305+00
[illegible]	[illegible]	TANK, SEPTIC		S286+00 E305+00
[illegible]	[illegible]	FIRING PAD		S285+00 E310+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-33-98	HP-98	FIRING PAD		[illegible] E310+00
TA-33-99	HP-99	MANHOLE, ELECTRICAL		[illegible]
TA-33-100	HP-100	MANHOLE, ELECTRICAL		S280+00 E300+00
TA-33-101	HP-101	MANHOLE, ELECTRICAL		S280+00 E300+00
TA-33-102	HP-102	MANHOLE, CONTROL		S280+00 E300+00
TA-33-103	HP-103	MANHOLE, CONTROL		S285+00 E300+00
TA-33-104	HP-104	MANHOLE, CONTROL		S285+00 E305+00
TA-33-105	HP-105	MANHOLE, CONTROL		S285+00 E310+00
TA-33-106	HP-106	MANHOLE, CONTROL		S285+00 E310+00
TA-33-107	HP-107	MANHOLE, CONTROL		S285+00 E310+00
TA-33-108	HP-108	ROAD BLOCK		S200+00 E280+00
TA-33-109	HP-109		REMOVED 1967	
TA-33-110	HP-110	INCINERATOR		S330+00 E230+00
TA-33-111	HP-111		REMOVED 1963	
TA-33-112	HP-112	WIGWAG		S250+00 E245+00
TA-33-113	HP-113	HOT MACHINE SHOP		S250+00 E235+00
TA-33-114	HP-114	LABORATORY & OFFICE BLDG.		S250+00 [illegible]
TA-33-115	HP-115	ROAD BLOCK	RELOCATED TO TA-39-81	
TA-33-116	HP-116	GUN MOUNT		S285+00 E300+00
TA-33-117	HP-117	GUN MOUNT		S285+00 E310+00
TA-33-118	HP-118	RECOVERY BOX		S285+00 E310+00
TA-33-119	HP-119		REMOVED 1980	
TA-33-120	HP-120	SIREN		S230+00 E245+00
TA-33-121	HP-121	TANK, SEPTIC		S250+00 E225+00
TA-33-122	HP-122		CANCELLED	
TA-33-123	HP-123		CANCELLED	
TA-33-124	HP-124	SUBSTATION		S250+00 E230+00
TA-33-125	HP-125		REMOVED 1963	
TA-33-126	HP-126		REMOVED 1963	
TA-33-127	HP-127	GUN BUILDING		S286+00 E310+00
TA-33-128	HP-128	STAIRWAY		S250+00 E230+00
TA-33-129	HP-129	TEST CELL		S350+00 E235+00
TA-33-130	HP-130	GUN MOUNT		S285+00 E310+00
TA-33-131	HP-131	RECOVERY BOX		S280+00 E310+00
TA-33-132	HP-132	OBSERVATION BARRICADE		S280+00 E310+00
TA-33-133	HP-133	SUMP ACID SEWER		S255+00 E235+00
TA-33-134	HP-134	SUMP ACID SEWER		S255+00 E235+00
TA-33-135	HP-135	GUN MOUNT		S286+00 E305+00
TA-33-136	HP-136	RECOVERY BOX		S286+00 E310+00
TA-33-137	HP-137		REMOVED 1963	
TA-33-138	HP-138	TRANSFORMER STATION		S250+00 E230+00
TA-33-139	HP-139	TRANSFORMER STATION		S260+00 E235+00
TA-33-140	HP-140	TRANSFORMER STATION		S248+00 E240+00
TA-33-141	HP-141	TRANSFORMER STATION		S285+00 E245+00
TA-33-142	HP-142	TRANSFORMER STATION		S250+00 E240+00
TA-33-143	HP-143	TRANSFORMER STATION		S258+00 E245+00
TA-33-144	HP-144	TRANSFORMER STATION		S260+00 E260+00
TA-33-145	HP-145	TRANSFORMER STATION		S280+00 E295+00
TA-33-146	HP-146	GUN MOUNT		S295+00 E245+00
TA-33-147	HP-147		CANCELLED	
TA-33-148	HP-148		CANCELLED	
TA-33-149	HP-149		CANCELLED	
TA-33-150	HP-150		CANCELLED	
TA-33-151	HP-151	BUNKER		S285+00 E310+00
TA-33-152	HP-152			
TA-33-153	HP-153			
TA-33-154	HP-154			
TA-33-155	HP-155		CANCELLED	
TA-33-156	HP-156		REMOVED 1978	
TA-33-157	HP-157		REMOVED 1978	
TA-33-158	HP-158		CANCELLED	
TA-33-163	HP-163	TRAILER, OFFICE	FORMERLY TA-0-537	
TA-33-164	HP-164	TRAILER, OFFICE	FORMERLY TA-0-538	
TA-33-165	HP-165	TRAILER, OFFICE	FORMERLY TA-0-[illegible]	
TA-33-166	HP-166	TRAILER, INSTRUMENT	FORMERLY TA-0-[illegible]	
TA-33-167	HP-167	TRAILER, LAB	FORMERLY TA-0-[illegible]	
TA-33-168	HP-168	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1033	
TA-33-169	HP-169	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1181	
TA-33-170	HP-170	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1208	

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	[illegible]

UNCLASSIFIED

FIGURE 33-6

TA-33 STRUCTURE LOCATION INDEX

REV	DATE	REVISION	BY	CHD	APP
1	8-17-83	REVISED TITLE BLOCK & DWG. TO STATUS OF 7-12-83	[illegible]	[illegible]	[illegible]

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-33 HP-SITE

DATE 8-17-83 SHEET NO. 1 OF 1 DRAWING NO. ENG-R5116

TA-35
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 35 is used in safeguard studies, primarily for laser research and development, physics research, fusion work, and other experimental research. The work involves theory, materials development, and basic research in physics and chemistry. Formerly, the area was used in source manufacturing, manufacturing of specialty materials, and reactor development (including the building of several reactors) (DOE, 1987a). The area will continue to be developed for laser and fusion science.

TA-35 lies at elevations between about 6,950 and 7,250 feet asl. TA-35 structures are located on a finger mesa between Mortandad Canyon on the north and Ten Site Canyon (a branch of Mortandad Canyon) on the south. Canyon walls are steep slopes or cliffs in this area. TA-35 lies on welded Bandelier Tuff, in the Ponderosa Pine/Pinon-Juniper overstory vegetative zone, although small areas in the Ponderosa Pine-fir and Shrub-Grass-Forb overstory vegetation zones exist. Soil consists of Hackroy sandy loam, Totavi gravelly loamy sand, Hackroy-Rock outcrop complex, Carjo loam, Nyjack loam, and rock outcrop (Nyhan et al., 1978).

At TA-35, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 5,950 to 6,050 feet asl. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-35

35-001	MATERIAL DISPOSAL AREA W
35-002	MATERIAL DISPOSAL AREA X
35-003	WASTEWATER TREATMENT PLANT AND RECEIVING CANYON
35-004	ACTIVE / INACTIVE CONTAINER STORAGE AREAS
35-005	INACTIVE SURFACE IMPOUNDMENTS
35-006	DECOMMISSIONED SURFACE IMPOUNDMENT
35-007	WASTE OIL TREATMENT
35-008	SURFACE DISPOSAL / LANDFILL
35-009	SEPTIC SYSTEMS
35-010	SANITARY LAGOON AND SAND FILTER
35-011	ACTIVE UNDERGROUND TANKS
35-012	UNDERGROUND STORAGE TANKS
35-013	SUMPS
35-014	OPERATIONAL RELEASES
35-015	DECOMMISSIONED WASTE OIL TREATMENT
35-016	DRAINS AND OUTFALLS
35-017	SOIL CONTAMINATION FROM REACTOR OPERATIONS
35-018	LEAKING PCB TRANSFORMERS

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : MATERIAL DISPOSAL AREA
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1970s
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : MIXED WASTE

UNIT INFORMATION

This unit, Material Disposal Area W (MDA-W), consists of two vertical tubes used to dispose of liquid sodium coolant from the decommissioned LAMPRE reactor. The liquid sodium coolant was placed in 120' long stainless steel tubes with a 4" outer diameter. The stainless steel tubes were placed in carbon steel sleeves that lined 115' deep drill holes. The portion of the tubes that extend above grade (about 5') are entombed in concrete. The tubes are estimated to contain 500-650 lbs. of sodium and NaK (a reactive metal alloy) with plutonium-239 and traces of fission products.

WASTE INFORMATION

The steel tubes contain sodium and sodium/potassium alloy contaminated with plutonium and fission fragments.

RELEASE INFORMATION

There have been no known releases from this unit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-001	TA35-1-CA-A/I-HW/RW MDA-W	35.001 35.002	Tsk 7 : 112	MDA-W

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : MATERIAL DISPOSAL AREA
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1968 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
HAZARDOUS WASTE

UNIT INFORMATION

A reactor, LAPRE-II, was built in a steel-lined subgrade pit south of Building 2. The reactor had an associated subsurface fuel reservoir located north of the reactor pit. The stainless steel reactor vessel is approximately 1.8 m in diameter and 3 m long. The fuel reservoir is a stainless steel tank about 0.3 m in diameter and 3 m long. The uranium-235 fuel solution was drained from the reactor and fuel reservoir in 1959 and the area was later covered with soil and asphalt. It is now known as Material Disposal Area X (MDA-X). LAPRE-II is to be removed from MDA-X in 1990.

WASTE INFORMATION

Traces of the liquid metal solution and activation and fission products are believed to remain within the reactor pit and fuel reservoir.

RELEASE INFORMATION

Above background activity levels are found in the area around MDA-X. This is believed to be due to the residuals in the vessels within MDA-X and not migration of radionuclides.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-002	TA35-1-CA-A/I-HW/RW MDA-X		Tsk 7 : 111	MDA-X

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : WASTE TREATMENT PLANT
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED/INACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : SUSPECTED MIXED WASTE
SUSPECTED HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

A waste treatment plant was located at the end of the mesa, near the eastern boundary of TA-35. It consisted of waste lines, storage tanks, an air filter building, ion exchange columns, and chemical treatment and precipitation tanks. The facility covered an area of 1.7 acres. The receiving canyon was the disposal area for the treated liquids as well as emergency discharges of untreated liquids. Two waste lines, numbers 95 and 70, had outfalls that discharged directly into Ten Site Canyon.

STRUCTURE	SWMU NO.	STRUCTURE TYPE	STATUS	STRUCTURE	SWMU NO.	STRUCTURE TYPE	STATUS
TA-35-4	35-003(a)	tank	inactive	TA-35-96	35-003(j)	storage tank	removed 1976
TA-35-5	35-003(b)	tank	inactive	TA-35-97	35-003(k)	storage tank	removed 1976
TA-35-6	35-003(c)	tank	inactive	TA-35-8	35-003(l)	pump pit	removed 1984
TA-35-10	35-003(d)	hold-up tank bldg	removed 1984	TA-35-22	35-003(m)	sludge tank	removed 1981
TA-35-36	35-003(e)	storage tank	removed 1980	TA-35-3	35-003(n)	phase separator pit	inactive
TA-35-37	35-003(f)	flocculator tank	removed 1980	TA-35-12	35-003(o)	manhole	removed 1984
TA-35-38	35-003(g)	regenerant tank	removed 1980	TA-35-7	35-003(p)	air filter bldg	inactive
TA-35-31	35-003(h)	retention tank	removed 1984	TA-35-9	35-003(q)	pipe trench	removed 1984
TA-35-78	35-003(i)	surge tank	removed 1976				

Many of these structures have been removed; however, TA-35-4, -5, -6 and -7 (with many treatment units removed) remain. The phase separator pit (TA-35-3) was noted, during the 1988 E.R. Program site reconnaissance visit, to have been abandoned in place. TA-35-4, -5, and -6 were 600-gallon reinforced concrete underground storage tanks used for storage of liquid radioactive waste from building TA-35-2. Tank TA-35-36 was a 28,500-gallon tank used for storage of liquid radioactive waste. The tank was connected to the air filter building (TA-35-7) via two lines, each 3 inches in diameter, totaling 156 ft in length. A second line between the filter building and the tank was 150 ft long and 2 inches in diameter. Small segments of piping also remain. In particular, an 18 ft-long contaminated section of 4-inch diameter stainless steel pipe was 6 ft under the foundation of a transformer oil storage bank. Another 17 ft-long section of this same pipe remains under two concrete-encased water mains. In 1985, decommissioning of this facility included removal of TA-35-8, -9, -10, and associated waste lines. The treatment plant had an associated outfall [35-003(r)].

WASTE INFORMATION

The waste going into the treatment plant included radioactive-contaminated air from the work areas in building TA-35-2 and liquid contaminated with radioactive constituents (mainly strontium, but fission fragments, plutonium, and uranium were also present). The liquids probably also contained solvents and other chemicals.

RELEASE INFORMATION

The treated liquids (and in some cases emergency discharges of untreated liquids) were discharged from the end of the mesa into Mortandad Canyon. After an accidental spill in 1952, radioactive contamination was found in Ten Site Canyon and as far as 3 miles east of TA-35 in Mortandad Canyon. Pools of water were found 1 mile downstream. The TA-35 discharge area in the canyon has been estimated as 10,000 square meters. The residues are being mobilized as evidenced by elevated radioactivity levels in the canyon (cited in the CEARP); residues of hazardous, nonradioactive materials may also be present in the canyon. Some subsurface contamination remains near the old structures at TA-35. Removal of the holding tank structures in 1985 required removal of approximately 340 cubic meters of contaminated soil. The excavation reached a depth of 18-20 ft. Up to 346 pCi/g gross beta (Sr-90/Y-90) activity remains in the soil at this depth. The area was backfilled to grade. The sludge tank, TA-35-22, and a drainline were removed in 1981. Soil surrounding and under the tank had up to 46,000 dmp/g of soil from strontium-89 and cesium-137. The soil was excavated laterally until no further radioactive contamination could be detected. Excavation extended 10 ft downward, 4 ft below the bottom of the tank, in tuff. Activity levels in cracks in the tuff ranged between 180 and 5000 pCi/g gross beta. Further excavation was not feasible.

(continued)

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-003(a)	TA35-3-S/UST/CA-A/I-HW/RW	35.012	Tsk 7 : 114	TA-35-4
35-003(b)	TA35-3-S/UST/CA-A/I-HW/RW		Tsk 7 : 115	TA-35-5
35-003(c)	TA35-3-S/UST/CA-A/I-HW/RW		Tsk 7 : 116	TA-35-6
35-003(d)	TA35-3-S/UST/CA-A/I-HW/RW	35.003	Tsk 7 : 124 134	TA-35-10
35-003(e)	TA35-3-S/UST/CA-A/I-HW/RW		Tsk 7 : 125	TA-35-36
35-003(f)	TA35-3-S/UST/CA-A/I-HW/RW			TA-35-37
35-003(g)	TA35-3-S/UST/CA-A/I-HW/RW			TA-35-38
35-003(h)	TA35-3-S/UST/CA-A/I-HW/RW		Tsk 7 : 129	TA-35-31
35-003(i)	TA35-3-S/UST/CA-A/I-HW/RW			TA-35-78
35-003(j)	TA35-3-S/UST/CA-A/I-HW/RW			TA-35-96
35-003(k)	TA35-3-S/UST/CA-A/I-HW/RW			TA-35-97
35-003(l)	TA35-3-S/UST/CA-A/I-HW/RW		Tsk 7 : 124	TA-35-8
35-003(m)	TA35-3-S/UST/CA-A/I-HW/RW		Tsk 7 : 126	TA-35-22
35-003(n)	TA35-3-S/UST/CA-A/I-HW/RW		Tsk 7 : 73	TA-35-3
35-003(o)	TA35-3-S/UST/CA-A/I-HW/RW			TA-35-12
35-003(p)	TA35-3-S/UST/CA-A/I-HW/RW			TA-35-7
35-003(q)	TA35-3-S/UST/CA-A/I-HW/RW		Tsk 7 : 124	TA-35-9
35-003(r)	TA35-4-O/CA-I-HW/RW	? 35.023	Tsk 7 : 124	
35-003(misc)	TA35-3-S/UST/CA-A/I-HW/RW TA35-4-O/CA-I-HW/RW	35.003	Tsk 7 : 127 128 130-133	

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE
MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

The following table describes active satellite storage areas at TA-35.

STRUCTURE	SWMU NO.	LOCATION
TA-35-25	35-004(a)	east and south sides
TA-35-85	35-004(b)	east end, Room 109
TA-35-125	35-004(c)	south side
TA-35-125	35-004(d)	basement, Room 104
TA-35-2	35-004(e)	Room C18
TA-35-207	35-004(f)	Room 102
TA-35-67	35-004(g)	
TA-35-11	35-004(h)	
TA-35-58	35-004(i)	
TA-35-128	35-004(j)	
TA-35-2	35-004(k)	Room A135
TA-35-27	35-004(l)	Room 105
TA-35-86	35-004(m)	south side
TA-35-87	35-004(n)	Room 175, Room 158
TA-35-213	35-004(o)	north dock, outide

One storage area at TA-35-50 was seen during the visual site inspection. This storage area is currently inactive.

WASTE INFORMATION

The following table describes the stored waste in these areas.

LOCATION	WASTE
TA-35-25	Stoddard solvent, oil, solvents
TA-35-85, -125	acetone, alcohols, oils, solvents, contaminated rags, organics
TA-35-125 (basement)	laser dye/solvents(oil), acetone
TA-35-2	solvents, laser dyes, PCB oil, organics, lithium chloride
TA-35-207	laser dye/solvents, oil, acetone, alcohol
TA-35-67	oils, solvents, freon
TA-35-11, -58, -128	oil, capacitors, freon, solvents
TA-35-27	contaminated rags, Stoddard solvent, solvents
TA-35-86	solvents, freon, oil, contaminated rags
TA-35-87 (Room 175)	photo wastes, acid
TA-35-87 (Room 158)	solvents, oil, alcohol
TA-35-213	solvents, chemicals, kim wipes

RELEASE INFORMATION

Releases were apparent at TA-35-25 and -125 during the VSI, however these areas were reportedly cleaned up. However, during an E.R. Program site reconnaissance in 1988, stained soils were noted at TA-35-25, -85, -125, -2, -67, -11, and -128. The storage area at TA-35-2 is inside room C18; however, a spill that occurred inside the room ran out of the room and onto the soil outside the door. The CEARP reported leaking drums and capacitors in these same areas. The storage area near TA-35-67 was investigated as part of Environmental Problem 19 in the DOE Environmental survey. Three soil samples were collected an analyzed for alpha and gamma activities, metals, pesticides/PCBs, and volatiles. The samples had low alpha and gamma activities; some metals and acetone were the only contaminants detected. It is unknown if there have been hazardous releases from the other areas. Storage areas are inspected regularly.

(continued)

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-004(a)	TA35-11-CA-A-HW/PP		Tsk 7 : 102	TA-35-25
35-004(b)	TA35-11-CA-A-HW/PP	? 35.008	Tsk 7 : 103	TA-35-85
35-004(c)	TA35-11-CA-A-HW/PP		Tsk 7 : 104	TA-35-125
35-004(d)	TA35-11-CA-A-HW/PP		Tsk 7 : 104	TA-35-125
35-004(e)	TA35-11-CA-A-HW/PP		Tsk 7 : 105	TA-35-2
35-004(f)	TA35-11-CA-A-HW/PP		Tsk 7 : 106	TA-35-207
35-004(g)	TA35-11-CA-A-HW/PP		Tsk 7 : 107	TA-35-67
35-004(h)	TA35-11-CA-A-HW/PP	35.011	Tsk 7 : 108	TA-35-11
35-004(i)	TA35-11-CA-A-HW/PP	35.004	Tsk 7 : 109	TA-35-58
35-004(j)	TA35-11-CA-A-HW/PP		Tsk 7 : 110	TA-35-128
35-004(k)	TA35-11-CA-A-HW/PP			TA-35-2
35-004(l)	TA35-11-CA-A-HW/PP			TA-35-27
35-004(m)	TA35-11-CA-A-HW/PP			TA-35-86
35-004(n)	TA35-11-CA-A-HW/PP			TA-35-87
35-004(o)	TA35-11-CA-A-HW/PP			TA-35-213

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : SURFACE IMPOUNDMENT
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1980s
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : PCBs
HAZARDOUS WASTE
SOLID WASTE

UNIT INFORMATION

There are two surface impoundments currently awaiting closure according to submitted closure plans. One pond is located to the east of TA-35-85 [35-005(a)]. It was a Gunite-lined waste oil impoundment that had overflowed in the past, as indicated by stained soil and rock along the North Mesa rim. The pond was built to collect oil that may be spilled from the oil handling systems at the chemical laser facility (TA-35-85). Drains in the bermed areas surrounding the oil handling facilities discharged to this pond. Additionally, drains from oil-handling equipment inside of TA-35-85 may also have discharged to this pond. When the pond was in use, it was periodically pumped and the oil was recycled (see 35-007). The other pond [35-005(b)] is located on a bench south of TA-35-125. This pond was also a Gunite-lined waste oil impoundment that received waste oil from electrical equipment inside buildings TA-35-124, -125, and -126. When the pond was in use, it was periodically pumped and the oil was recycled (see 35-007). A stained area from past overflow was 6 ft wide and extended to the canyon floor.

WASTE INFORMATION

Storm water and liquids containing waste oil from TA-35-85 and TA-35-125 were discharged to the ponds. Solvents were also present in the liquid discharged to the TA-35-85 and TA-35-125 ponds.

RELEASE INFORMATION

Both ponds show evidence of continued releases through overflows. Soil samples from the stained areas around both impoundments were analyzed for PCBs in 1985 for the site characterization program although no analysis for volatile or semi-volatile contaminants were conducted. Samples from both areas were below the PCB detection limit of 1 microgram/g. The TA-35-125 impoundment was investigated as Environmental Problem 16 in the DOE Environmental Survey. Three soil or sludge samples were collected from within the impoundment. Gamma activity screens of the samples indicated only natural activities. A few metals and organic compounds were detected. EP toxicity tests of the sludge indicated elevated lead concentrations, but they were far below the EP-toxic level. Both the TA-35-85 and -125 ponds were drained in August, 1988. The overflow area from the TA-35-125 pond was also investigated as Environmental Problem 21 in the DOE Environmental Survey. Three samples, taken at 50 ft intervals down the slope below the impoundment, were analyzed for alpha and gamma activity, pesticides/PCBs, and volatile organic compounds. Alpha and gamma emitters were detected, at low levels, as were some PCBs and volatiles. In 1988, the liquid and sludge from both ponds were sampled. The liquid sample from TA-35-85 was analyzed for volatile organics, PCBs, E.P. toxicity metals, and radionuclide activity. Analytical results indicate that the TA-35-85 liquid contains some volatile organics and above-background alpha activity. The concentrations of metals were below E.P. toxicity minimum concentrations, and no PCBs were detected. Sludge from TA-35-85 was analyzed for volatile organics and E.P. toxicity metals. Volatile organics were detected and lead was the only metal above E.P. toxicity minimum concentration. Liquid samples from TA-35-125 were analyzed for volatile organics, PCBs, radionuclide activity, and E.P. toxicity metals. Volatile organics were the only analytes detected, radionuclide activity was at background and metals were far below E.P. toxic minimum concentrations. Sludge samples from TA-35-125 were analyzed for volatile organics; several compounds were present in the sample in detectable concentrations.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-005(a)	TA35-8-CA/SI-A-PP	35.005	Tsk 7 : 75	NEAR TA-35-85
35-005(b)	TA35-8-CA/SI-A-PP	35.006	Tsk 7 : 76	SOUTH OF TA-35-125

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : SURFACE IMPOUNDMENT
UNIT USE : STORAGE/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : ? - 1985
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

A lagoon was removed and the pond east of TA-35-85 [see 35-005(a)] was built in its place in 1985. The chemical laser facility used the lagoon to dispose of waste oil.

WASTE INFORMATION

The liquids discharged to the pond contained waste oil. It is unknown if other wastes, such as solvents, were also present.

RELEASE INFORMATION

It is unknown whether the pond released hazardous waste. However, the CEARP survey noted that the lagoon had occasionally overflowed to the canyon.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-006	TA35-9-SI/O-I-PP		Tsk 7 : 77	TA-35-85

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : WASTE TREATMENT
UNIT USE : TREATMENT
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

TA-35 has an active waste oil treatment system. The system includes an oil recovery unit that is enclosed in a trailer located in a curbed area behind TA-35-125. The system manages waste oil from TA-35 operations. This system includes a vacuum system and molecular sieves for water and carbon removal. The system also utilizes an underground storage tank, TA-35-197, located behind TA-35-125. Total capacity is 1,000 gallons. However, according to U.S. DOE description of underground storage tanks, the capacity of TA-35-197 is 24,000 gallons.

WASTE INFORMATION

Wastes handled are waste oils from TA-35 operations. These oils contain water and other contaminants which must be removed in order for the oil used in the Marx units to function properly.

RELEASE INFORMATION

This unit does not discharge to the environment. However, the curbed area discharged to the waste oil pond south of TA-35-125 [see 35-005(b)]. There have been no known hazardous releases.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-007	**	35.021	Tsk 7 : 97	NEAR TA-35-125, TA-35-197

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : SURFACE DISPOSAL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : ?
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
SOLID WASTE

UNIT INFORMATION

There is an open surface disposal area on the north side of TA-35. This area consists of material thrown over the canyon rim near the center portion of TA-35-85. The debris extends from the canyon rim to the canyon floor.

WASTE INFORMATION

The debris in the canyon behind TA-35-85 included scrap metal and pipe, paint cans, a 55-gallon drum, and miscellaneous building materials. Nonhazardous debris included concrete, conduits, asphalt, pipe, reinforcing rod, and dirt.

RELEASE INFORMATION

There have been no known releases of hazardous material from this surface disposal area.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-008	TA35-12-OL-1-SW	35.009	Tsk 7 : 100 101	TA-35-85

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Two active and two inactive septic systems are present at TA-35. The components of these systems are:

STRUCTURE	SWMU NO.	PERIOD OF USE	UNIT TYPE	CAPACITY	CONSTRUCTION	OVERFLOW
INACTIVE						
TA-35-14	35-009(a)	1951 - 1975	tank	1500 gal.		dosing chamber (TA-35-15)
TA-35-15	35-009(a)	1951 - 1975	dosing chamber			distribution box (TA-35-16)
TA-35-16	35-009(a)	1951 - 1973	distribution box			drain field and outfall
TA-35-76	35-009(b)	1966 - 1975	tank		reinforced concrete 7' x 14.5' x 6'	distribution box (TA-35-77)
TA-35-77	35-009(b)	1966 - 1975	distribution box		reinforced concrete 2.7' x 3.3' x 2.7'	drain field and outfall
ACTIVE						
TA-35-44	35-009(c)	1961 - present	tank	1290 gal.		pumped weekly
TA-35-45	35-009(c)	1961 - ?	distribution box			leach field and 2 outfalls
TA-35-65	35-009(d)	1966 - present	tank	1600 gal.		pumped weekly/leach field/ outfall

Additionally, a sewer drainline [35-009(e)] from the sodium building, TA-35-25, discharges to an outfall in Ten Site Canyon approximately 30 ft from the building.

The inactive systems discharged to drain fields. System TA-35-14, -15, and -16 discharged to a drain field on the south rim. This system was abandoned in place in 1975. System TA-35-76 and -77 discharged to a drain field. During an E.R. site visit in 1988, an outfall that had an odor of sanitary waste was noted near TA-35-77. This suggests that this septic system may be active, although it was reported as abandoned in place in 1975. System TA-35-44 discharges to a leach field that consists of three trenches covering a total area of 1600 square feet. The outfall from this system is registered as an unpermitted individual liquid waste stream with EID registration number LA-40. System TA-35-65 discharges to a leach field that consists of three trenches covering a total area of 1800 square feet. It is also registered as an unpermitted individual liquid waste stream with EID registration number LA-41. TA-35-65 is pumped because its leach field is saturated. Tank TA-35-44 is believed to have gone to a distribution box, TA-35-45 [35-009(c)], before being pumped on a weekly schedule. TA-35-16 has been removed.

WASTE INFORMATION

The septic systems manage primarily sanitary waste. Some industrial waste may have been discharged to the tanks.

RELEASE INFORMATION

The presence and extent of contaminants in the drain fields and outfall areas are unknown.

NOTES

Units formerly identified as 35-009(b) and (c) were all components of a single septic system; these components are now identified as 35-009(a). Units formerly identified as TA-35-76 and -77 are components of a single septic system; both are now designated 35-009(b). Unit formerly identified as 35-009(f) is part of a septic system with newly identified distribution box TA-35-45; these structures are both designated 35-009(c). Septic system TA-35-65 has been renumbered to 35-009(d).

(continued)

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-009(a)	TA35-6-ST-1/A-HW/RW		Tsk 7 : 63	TA-35-14, -15, -16
35-009(b)	TA35-6-ST-1/A-HW/RW		Tsk 7 : 48 64	TA-35-77, -76
35-009(c)	TA35-6-ST-1/A-HW/RW	? 35.010	Tsk 7 : 65	TA-35-44, -45
35-009(d)	TA35-6-ST-1/A-HW/RW		Tsk 7 : 66	TA-35-65
35-009(e)	**	? 35.022	Tsk 7 : 67	TA-35-25

? Indicates uncertainty with RFA Unit correlation.
** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : SURFACE IMPOUNDMENT
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED MIXED WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

This unit is three lagoons and four sand filters designed for biological treatment of liquid waste.

STRUCTURE	SWMU NO.	TYPE	DIMENSIONS	YEAR INSTALLED
TA-35-144	35-010(a)	lagoon	240′ x 59′	1975
TA-35-145	35-010(b)	lagoon	100′ x 115′	1975
TA-35-146	35-010(c)	lagoon	105′ x 115′	1975
TA-35-215	35-010(d)	sand filter	100′ x 45′	1980

The sides of the lagoons are concrete; the bottoms are lined with a mixture of bentonite and topsoil. The four sand filters are plastic lined. The lagoons and the sand filter are located in the canyon 300 ft east of TA-35. This information was abstracted from engineering records. The lagoons receive liquid waste from TA-50, TA-55, TA-48, and TA-35.

WASTE INFORMATION

Most of the waste is sanitary; however, some waste from photo processing and other industrial drains is present. In past years, small quantities of radionuclides, solvents, and other chemicals were present in the waste streams.

RELEASE INFORMATION

Liquids flow from the lagoons through the sand filter to a NPDES-permitted outfall (see Appendix A) in a tributary of Mortandad Canyon. The extent of any hazardous release, if any, is not known.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-010(a)	TA35-10-SI-A-NW	35.013	Tsk 7 : 78	TA-35-144
35-010(b)	TA35-10-SI-A-NW	35.014	Tsk 7 : 79	TA-35-145
35-010(c)	TA35-10-SI-A-NW	35.015	Tsk 7 : 80	TA-35-146
35-010(d)	TA35-10-SI-A-NW	35.016-35.019	Tsk 7 : 74	TA-35-215
35-010(misc)	TA35-10-SI-A-NW	35.013-35.019	Tsk 7 : 53	TA-35-215

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : UNDERGROUND TANK
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1969 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
SUSPECTED HAZARDOUS WASTE
SUSPECTED MIXED WASTE

UNIT INFORMATION

Two storage tanks [35-011(a)] are located in the basement of TA-35-2. The tanks hold about 1,000 gallons each and are active. HSE-7 removes the liquid from the TA-35-2 tanks and transports the liquid to TA-50 for treatment. An underground storage tank of 10,000 gallon capacity, TA-35-159 [35-011(b)], is located on the west side of Building TA-35-85. The U.S. DOE description of underground storage tanks specifies the capacity of TA-35-159 to be 4,000 gallons. Another tank, TA-35-197 [35-011(c)], is located on the east side of TA-35-125 (an aboveground tank is also associated with this system). Two underground storage tanks [35-011(d)] are located 50 ft south of the high voltage development laboratory, TA-35-188. The tanks are used to store dielectric oil. They are 9 ft long and 10.6 ft in diameter, with capacities of 6,000 gallons each. These tanks were installed in 1969 and they are presently active.

WASTE INFORMATION

The TA-35-2 tanks receive plutonium-contaminated solutions from activities in Building TA-35-2. The solutions probably include solvents and other chemicals. The waste in the 10,000 gallon tank consists of contaminated oil from TA-35-85. The TA-35-125 and the associated aboveground tank store hazardous waste. The two tanks near TA-35-188 reportedly store contaminated dielectric oil.

RELEASE INFORMATION

There have been no known hazardous releases to the environment. However, until site characterization yields information that indicates there were no releases, it must be assumed, based on historic information, that old underground storage tanks have leaked.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-011(a)	**		Tsk 7 : 68	TA-35-2
35-011(b)	TA35-7-UST/SST-A/I-PP	35.020	Tsk 7 : 121	TA-35-159
35-011(c)	TA35-7-UST/SST-A/I-PP		Tsk 7 : 123	TA-35-197
35-011(d)	**		Tsk 7 : 122	SOUTH OF TA-35-188

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : UNDERGROUND TANK
UNIT USE : STORAGE
OPERATIONAL STATUS : UNKNOWN
PERIOD OF USE : EST. 1976 - 1985
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Underground storage tank TA-35-158 [35-012(a)] was located near the Chemical Laser Facility, TA-35-85. The tank had a capecity of 1,000 gallons and was used to contain liquids from spills in TA-35-85. Engineering drawing ENG-R5117 indicates that the tank was removed in 1985; the tank may, however, still be present. Two underground storage tanks (TA-35-278 and -279) [35-012(b)] are referred to as "oil siege tanks". The tanks are located southwest of the experimental support laboratory (TA-35-207). The actual contents of the tanks and their function are unknown. These tanks have been removed.

WASTE INFORMATION

Waste oils and possibly solvents and chemicals are believed to have been in the liquid discharged to TA-35-158 [35-012(a)]. The siege tanks are assumed to have managed oil; other possible contaminants are unknown.

RELEASE INFORMATION

It is unknown whether the tanks leaked. However, until site characterization yields information that indicates there were no releases, it must be assumed, based on historic information, that old underground storage tanks have leaked.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-012(a)	TA35-7-UST/SST-A/I-PP		Tsk 7 : 117	TA-35-158
35-012(b)	**	? 35.024 ? 35.025	Tsk 7 : 95 96	TA-35-278, -279

? Indicates uncertainty with RFA Unit correlation.
** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : SUMP
UNIT USE : DISPOSAL/STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : LATE 1970s - PRESENT
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : SUSPECTED

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED MIXED WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Some liquid waste generated at TA-35 is stored in sumps prior to treatment. There are sumps [35-013(a)] located in the basement of TA-35-213. These sumps have capacities of 50-100 gallons. If the liquid in the sumps exceeds a standard for radioactivity the wastes are taken to TA-50 for treatment, otherwise, the wastes are discharged to the lagoons (see 35-010). Liquid wastes from TA-35-2 [35-013(b)] and TA-35-27 [35-013(c)] are collected in sumps located in the basement of each building. There are two sump pumps in TA-35-27 and one sump pump in TA-35-2. These wastes are also discharged to the TA-35 lagoon system. There are four sumps in the ground floor of TA-35-85 [35-013(d)]. The drains on the sumps are sealed and oil and grease now fill the sumps. The drains of these sumps are believed at one time to have gone to Tank TA-35-158 (see 35-012).

WASTE INFORMATION

The wastes at TA-35-213 are sanitary and industrial with possible radionuclide contamination. Wastes collected in TA-35-2 and TA-35-27 are believed to be sanitary, but some industrial waste could be present and may include solvents and other chemicals and small quantities of radionuclides. TA-35-85 sumps currently hold oil and grease; substances previously discharged to these sumps are unknown.

RELEASE INFORMATION

The wastes from TA-35-213, -2, and -27 that do not go to TA-50 are discharged to the sanitary lagoon, sand filter, and outfall. Presently, materials remain in the sumps at TA-35-85.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-013(a)	**		Tsk 7 : 69	TA-35-213
35-013(b)	**		Tsk 7 : 70	TA-35-2
35-013(c)	**		Tsk 7 : 71	TA-35-27
35-013(d)	**		Tsk 7 : 72	TA-35-85

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-35	MATERIALS MANAGED	: SUSPECTED HAZARDOUS WASTE
TYPE OF UNIT(s)	: OPERATIONAL RELEASE		SUSPECTED MIXED WASTE
UNIT USE	: DISPOSAL		RADIOACTIVE WASTE
OPERATIONAL STATUS	: INACTIVE		PCBs
PERIOD OF USE	: 1950s - 1970s		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: SUSPECTED		

UNIT INFORMATION

The soils at the east end of TA-35 have, in some places, above-background levels of radionuclides and perhaps other materials due to spills, air releases, and other routine releases which occurred during early operations at TA-35. High levels of radionuclide uptake have been measured in vegetation along the southwest area of TA-35-2 [35-014(a)]. An area with peach or nectarine trees outside TA-35-2 has been sampled, beginning in 1977. The vegetation samples were found to have above-background levels of tritium, strontium-90, plutonium-239, and natural uranium. Additionally, a leaking drum [35-014(b)] was near TA-35-2. The drum has been removed. A stained area [35-014(c)] 10 ft wide by 20 ft long was observed near TA-35-29 during an E.R. Program site reconnaissance visit. This staining may be the result of past oil spills from aboveground tanks located in the area. The tanks are labeled as PCB-free. Two additional stained areas [35-014(d)] were noted at siege tanks 1 and 2, near TA-35-29. This staining may be the result of dielectric oil leaks from the valve system of the siege tanks. Three dielectric oil spill areas [35-014(e)] are associated with past operations at the Chemical Laser Facility, TA-35-85. Two areas are located on the north side of TA-35-85 and the third is on the west side, between TA-35-85 and -222. Stained soil [35-014(f)] was also noted on the east side of the high voltage development laboratory, TA-35-188. The staining appears to be from a leaking dielectric oil handling system that connects an underground storage tank to the building. Three stained soil areas [35-014(g)] are present near the carbon dioxide laser facility, TA-35-86. One stain is 4 ft long by 2 ft wide in the discharge area of the storm drain system. The second area is directly south of TA-35-86. The third stained area is from an oil spill which ran into a storm culvert, across a parking lot at TA-35-207, and over the canyon rim into Ten Site Canyon.

WASTE INFORMATION

The wastes consist of radionuclides and possibly chemicals. The drum near TA-35-2 contained oil with 50.4 micrograms/gram of PCB in the oil. The stained areas near TA-35-25, -85, -86, and -188 probably contain oil.

RELEASE INFORMATION

The wastes may be undergoing mobilization by natural processes. The extent of contamination is unknown. Soil samples from stained areas near TA-35-85 and -188 showed detectable concentration of PCBs. The carbon dioxide laser facility presently uses only mineral oil with no PCBs. Types of oil used in past operations are unknown. The oil spill area from TA-35-86 that ran across the parking lot by TA-35-207 and into the canyon was investigated as part of Environmental Problem 25 in the DOE Environmental Survey. Eleven samples were collected along the stained trace of the spill to the canyon bottom and 100 ft downstream. The samples were analyzed for metals, pesticides/PCBs, alpha-, beta-, and gamma-emitters, semivolatile organics, and volatile organics. Some contaminants of each type were detected, except for beta-emitters.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-014(a)	**		Tsk 7 : 88	EAST END OF TA-35
35-014(b)	TA35-2-CA-I/A-HW/RW			TA-35-2
35-014(c)	TA35-2-CA-I/A-HW/RW		Tsk 7 : 81	TA-35-29
35-014(d)	TA35-2-CA-I/A-HW/RW		Tsk 7 : 82 83	TA-35-29
35-014(e)	TA35-2-CA-I/A-HW/RW		Tsk 7 : 84	TA-35-85
35-014(f)	TA35-2-CA-I/A-HW/RW		Tsk 7 : 85	TA-35-188
35-014(g)	TA35-2-CA-I/A-HW/RW		Tsk 7 : 86 87	TA-35-86

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : WASTE TREATMENT
UNIT USE : TREATMENT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : ?
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

At one time a tank farm [35-015(a)] that included tanks TA-35-149, -150, -151, -152, -153, and -154, a grease trap, and oil treatment unit was used to treat waste oil. These have been removed. Another oil handling facility [35-015(b)] was located near TA-35-29 for treating oil from the Gemini System. This system has been removed.

WASTE INFORMATION

These units treated waste oil.

RELEASE INFORMATION

Spills from the tank farm were discharged to a storm sewer and into the canyon by TA-35-207. Impacts from this practice have not been assessed. Stained areas have been noted throughout the tank farm. Existing data verifies that there are no hazardous constituents in the oil at the tank farm or TA-35-29.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-015(a)	TA35-7-UST/SST-A/I-PP	35.008	Tsk 7 : 89-94	TA-35-149, -150, -151, -152, -153, -154
35-015(b)	TA35-7-UST/SST-A/I-PP			NEAR TA-35-29

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : OUTFALL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : PCBs
SUSPECTED RADIAOCTIVE WASTE
SUSPECTED HAZARDOUS WASTE
SOLID WASTE

UNIT INFORMATION

The following are drainlines and outfalls in TA-35:

SWMU NO.	STRUCTURE SERVED	USE	PERIOD OF USE	STATUS	DRAINLINE LENGTH	NPDES NO.	OUTFALL LOCATION
35-016(a)	TA-35-34	sodium testing cooling water	1958 - ?	inactive	70 ft	04A089	Ten-Site Canyon
35-016(b)	TA-35-87	photo processing	1977 - present	active	175 ft	06A132	Ten-Site Canyon
35-016(c)	TA-35-67	warehouse	1964 - ?/ 1964 - 1987	inactive/ inactive	75 ft/ 125 ft	04A088/ 04A012	Ten-Site Canyon
35-016(d)	TA-35-46	reactor components	1962 - ?	inactive	50 ft	04A087	Ten-Site Canyon
35-016(e)	TA-35-85	chemical laser	1977 - ?	inactive	50 ft	04A090	Upp. Mortandad Cyn.
35-016(f)	TA-35-85	storm drains	? - present	active	50 ft	(none)	Upp. Mortandad Cyn.
35-016(g)	TA-35-213	target fabrication	1979 - present	active	100 ft	04A127	Upp. Mortandad Cyn.
35-016(h)	TA-35-213	storm drains	1979 - present	active	300 ft	(none)	Upp. Mortandad Cyn.
35-016(i)	TA-35-249	storm drains	? - present	active	50 ft	(none)	Upp. Mortandad Cyn.
35-016(j)	TA-35-125	storm drains	1975 - present	active	50 ft	(none)	Ten-Site Canyon
35-016(k)	TA-35-29	gas laser	1961 - 1987	inactive	40 ft	04A116	Ten-Site Canyon tributary
35-016(l)	TA-35-29	storm drains	1961 - present	active	55 ft	(none)	Ten-Site Canyon tributary
35-016(m)	TA-35-33	cooling tower	1966 - 1982	inactive	10 ft	034039	Upp. Mortandad Cyn.
35-016(n)	TA-35-86	storm drains	1977 - present	active	75 ft	(none)	Ten-Site Canyon
35-016(o)	TA-35-2	storm drains	1951 - present	active	125 ft	(none)	Upp. Mortandad Cyn.
35-016(p)	TA-35-27	nuclear safeguards research	1968 - present	active	20 ft	(none)	Upp. Mortandad Cyn.
35-016(q)	TA-35-34	storm water collection basins	? - present	active	?	(none)	Ten-Site Canyon

An E.R. Program site reconnaissance in 1988 located the locations of most of these outfalls. Oil spills have occurred in the source areas of TA-35-85, TA-35-29, and TA-35-86 storm drainage systems.

WASTE INFORMATION

Wastes managed by most of these drainlines and outfalls are unknown. The outfall from TA-35-87 is sampled for silver and cyanide under NPDES permit requirements. Drainlines from TA-35-213 are suspected of containing tritium. The concrete catch basin for the TA-35-29 storm drains was noted to have direct gamma radiation readings 50% above background during the 1988 E.R. Program site visit.

RELEASE INFORMATION

The extent of hazardous or radioactive releases from the outfalls is unknown. The storm water collection basin near TA-35-34 was investigated as part of Environmental Problem 24 in the DOE Environmental Survey. Three samples of sediment in the basin were analyzed for volatile and semivolatile organics, PCBs, and alpha-, beta-, and gamma-emitters. Semivolatile organics, PCBs, metals, alpha- and gamma-emitters were detected in the samples. No volatile organics or beta-emitters were present in detectable concentrations.

(continued)

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-016(a)	**		Tsk 7 : 44	TA-35-34
35-016(b)	**		Tsk 7 : 45	TA-35-87
35-016(c)	**		Tsk 7 : 46	TA-35-67
35-016(d)	**		Tsk 7 : 47	TA-35-46
35-016(e)	TA35-5-O-A-HW		Tsk 7 : 49	TA-35-85
35-016(f)	**		Tsk 7 : 50	TA-35-85
35-016(g)	TA35-5-O-A-HW		Tsk 7 : 51	TA-35-213
35-016(h)	**		Tsk 7 : 52	TA-35-213
35-016(i)	**		Tsk 7 : 54	TA-35-249
35-016(j)	**		Tsk 7 : 55	TA-35-125
35-016(k)	TA35-5-O-A-HW		Tsk 7 : 56	TA-35-29
35-016(l)	**		Tsk 7 : 57	TA-35-29
35-016(m)	**	35.022	Tsk 7 : 58	TA-35-33
35-016(n)	**		Tsk 7 : 59	TA-35-86
35-016(o)	**		Tsk 7 : 60	TA-35-2
35-016(p)	**	35.023	Tsk 7 : 61	TA-35-27
35-016(q)	**			NEAR TA-35-34

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1953 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : SUSPECTED

MATERIALS MANAGED : RADIOACTIVE WASTE

UNIT INFORMATION

Three reactors, LAPRE I, LAPRE II, and LAMPRE, were operated at TA-35-2 from 1953 to the early 1970s. LAPRE I was built in 1953 and went critical in 1956. LAPRE II was constructed in a steel-lined pit to the south of TA-35-2. LAPRE II was defueled in 1959 and all associated equipment, except the vessel and fuel storage reservoir, were removed. The remaining portions of LAPRE II were covered with soil and asphalt in 1968, and this area is Material Disposal Area X (see 35-002). LAMPRE was built in the 1960s in the area formerly occupied by LAPRE I. LAMPRE operated until 1964 and was decommissioned in the 1970s. Some of LAMPRE's sodium coolant was placed in Material Disposal Area W (see 35-001). During FY 1980, the reactor vessel, graphite rods, control rods, and associated systems were removed and disposed of at Area G, TA-54.

WASTE INFORMATION

Operational atmospheric releases and spills may have contained radionuclides and hazardous contaminants.

RELEASE INFORMATION

The extent of soil contamination from reactor operations is unknown.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-017	TA35-1-CA-A/I-HW/RW	35.001 35.002	Tsk 7 : 98 99	TA-35-2

SUMMARY

LOCATION : TA-35
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE (?)
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE
PCBs
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Transformers reported to have been leaking during a transformer assessment survey include:

SWMU NO.	STRUCTURE	LOCATION	TRANSFORMER PURCHASE DATE	PCB ID NO.	ASSESSMENT DATE	ASSESSMENT
35-018(a)	TA-35-32	south of building	?	5024	9/23/85	active leak requiring drip pan; no spill containment; located on porous concrete pad
35-018(b)	TA-35-2	basement	?	5547	?	moderately active leak; no spill containment

The transformer at TA-35-32 was placed on a list of leaking transformers requiring daily inspection on 7/23/87. The current status of both transformers is unknown.

WASTE INFORMATION

The transformers were leaking dielectric oil containing PCBs. Other potentially hazardous constituents are unknown.

RELEASE INFORMATION

The transformer near TA-35-32 was dripping onto a porous concrete pad. The extent of release to the underlying and surrounding soil is unknown. It is unlikely that the transformer in the basement of building TA-35-2 released to the environment.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
35-018(a)	**			TA-35-32
35-018(b)	**			TA-35-2

** No corresponding E. R. Program unit.

TA-35 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
35-001	35-1, 35-2
35-002	35-1, 35-2
35-003(a)	35-1
35-003(b)	35-1
35-003(c)	35-1
35-003(d)	35-2
35-003(e)	35-2
35-003(f)	35-2
35-003(g)	35-2
35-003(h)	35-2
35-003(i)	35-2
35-003(j)	Not shown
35-003(k)	Not shown
35-003(l)	35-2
35-003(m)	35-2
35-003(n)	35-2
35-003(o)	35-2
35-003(p)	35-2
35-003(q)	35-2
35-003(r)	35-2
35-004(a)	35-1
35-004(b)	35-1
35-004(c)	35-1
35-004(d)	35-1
35-004(e)	35-1
35-004(f)	35-1
35-004(g)	35-1
35-004(h)	35-2
35-004(i)	35-2
35-004(j)	35-1
35-004(k)	35-3
35-004(l)	35-3
35-004(m)	35-3
35-004(n)	35-3
35-004(o)	35-3
35-005(a)	35-1
35-005(b)	35-1
35-006	35-1
35-007	35-1
35-008	35-1

TA-35 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX
(CONTINUED)

SWMU	FIGURE NUMBER
35-009(a)	35-1, 35-2
35-009(b)	35-1
35-009(c)	35-1
35-009(d)	35-1
35-009(e)	35-1
35-010(a)	35-1
35-010(b)	35-1
35-010(c)	35-1
35-010(d)	35-1
35-011(a)	35-1
35-011(b)	35-1
35-011(c)	35-1
35-011(d)	35-3
35-012(a)	Not shown
35-012(b)	35-1
35-013(a)	35-1
35-013(b)	35-1
35-013(c)	35-1
35-013(d)	35-1
35-014(a)	35-1
35-014(b)	35-1
35-014(c)	35-1
35-014(d)	35-1
35-014(e)	35-1
35-014(f)	35-1
35-014(g)	35-1
35-015(a)	35-1
35-015(b)	35-1
35-016(a)	35-3
35-016(b)	35-3
35-016(c)	35-3
35-016(d)	35-3
35-016(e)	35-3
35-016(f)	35-3
35-016(g)	35-3
35-016(h)	35-3
35-016(i)	35-3
35-016(j)	35-3
35-016(k)	35-3
35-016(l)	35-3

TA-35 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

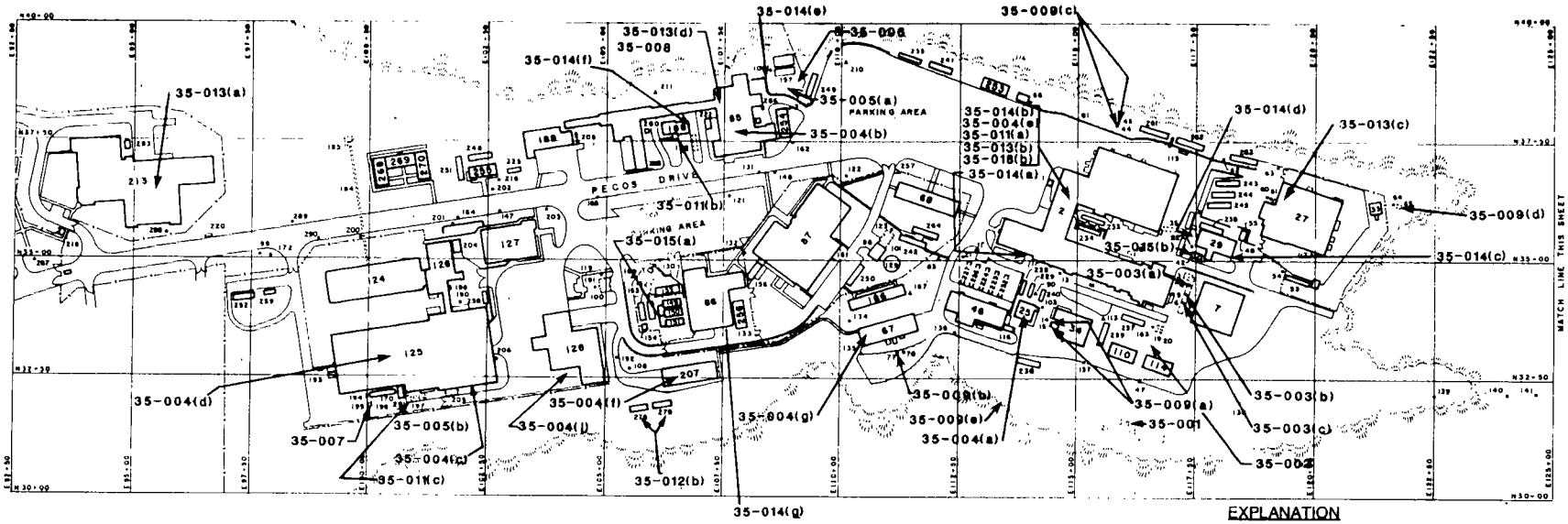
SWMU	FIGURE NUMBER
35-016(m)	35-3
35-016(n)	35-3
35-016(o)	35-3
35-016(p)	35-3
35-016(q)	35-3
35-017	35-3
35-018(a)	35-2
35-018(b)	35-1

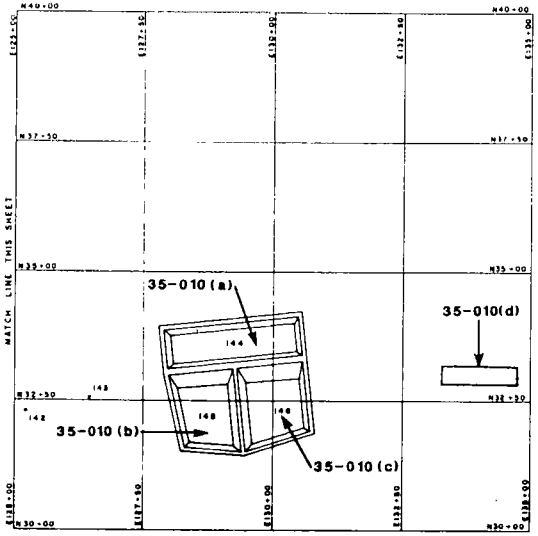
NOTE: Some structure locations contain more than one SWMU.

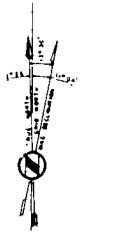
Rev. 1, 4/10/90

LAN:TA-Units/53

301215 02 01 8131







UNCLASSIFIED

EXPLANATION

35-001 SWMU LOCATION

NOTE

35-005(a), 35-005(b), 35-006
35-007, 35-008
APPROXIMATE LOCATIONS

REV. 1 4/10/90

FIGURE 35-1

SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-35

23	7-25-96	REDRAWN & REVISED TO STATUS OF 6-11-96	
REV	DATE	REVISION	BY

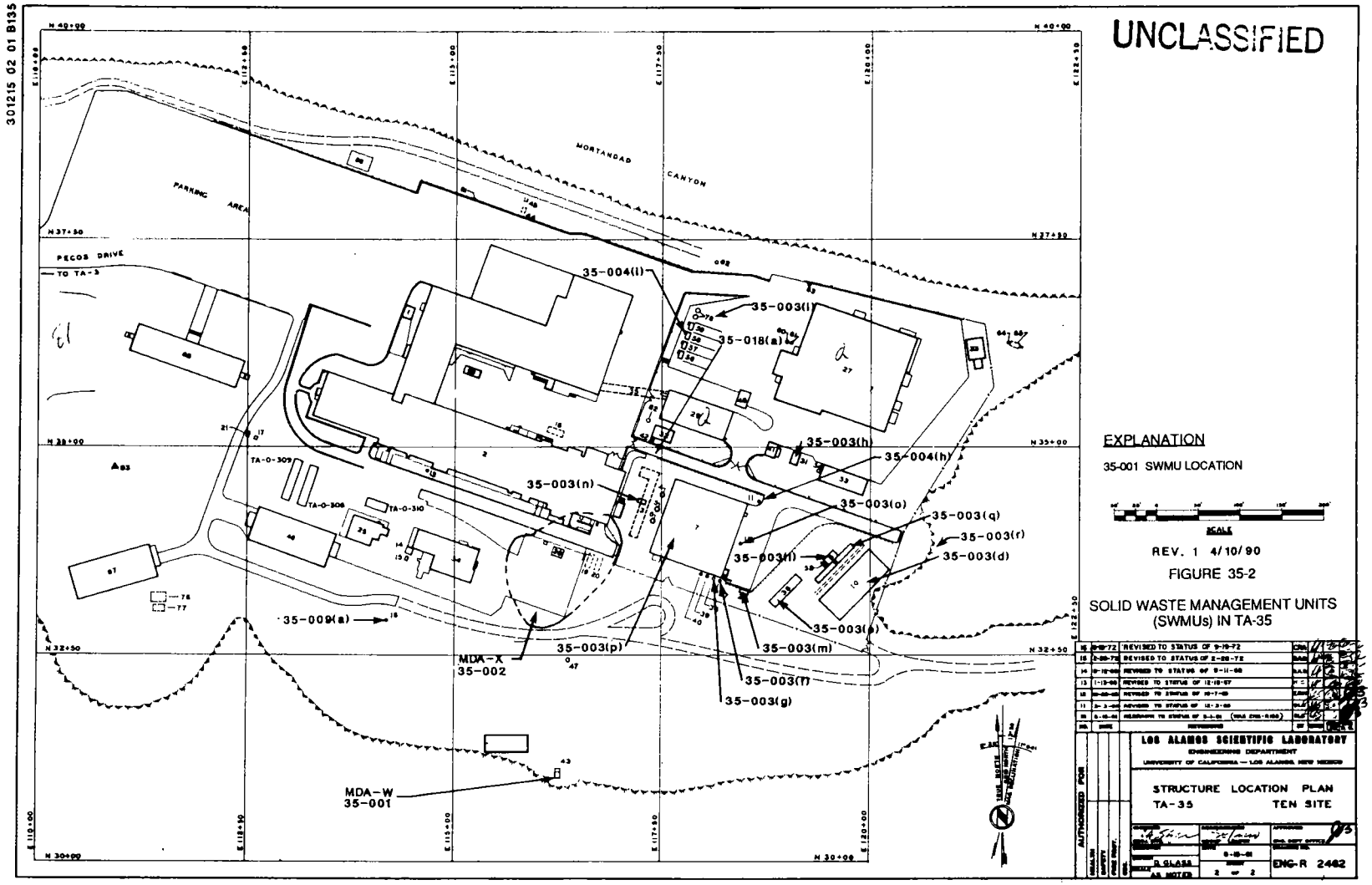
UNIVERSITY OF CALIFORNIA
Los Alamos

FACILITIES ENGINEERING DIVISION

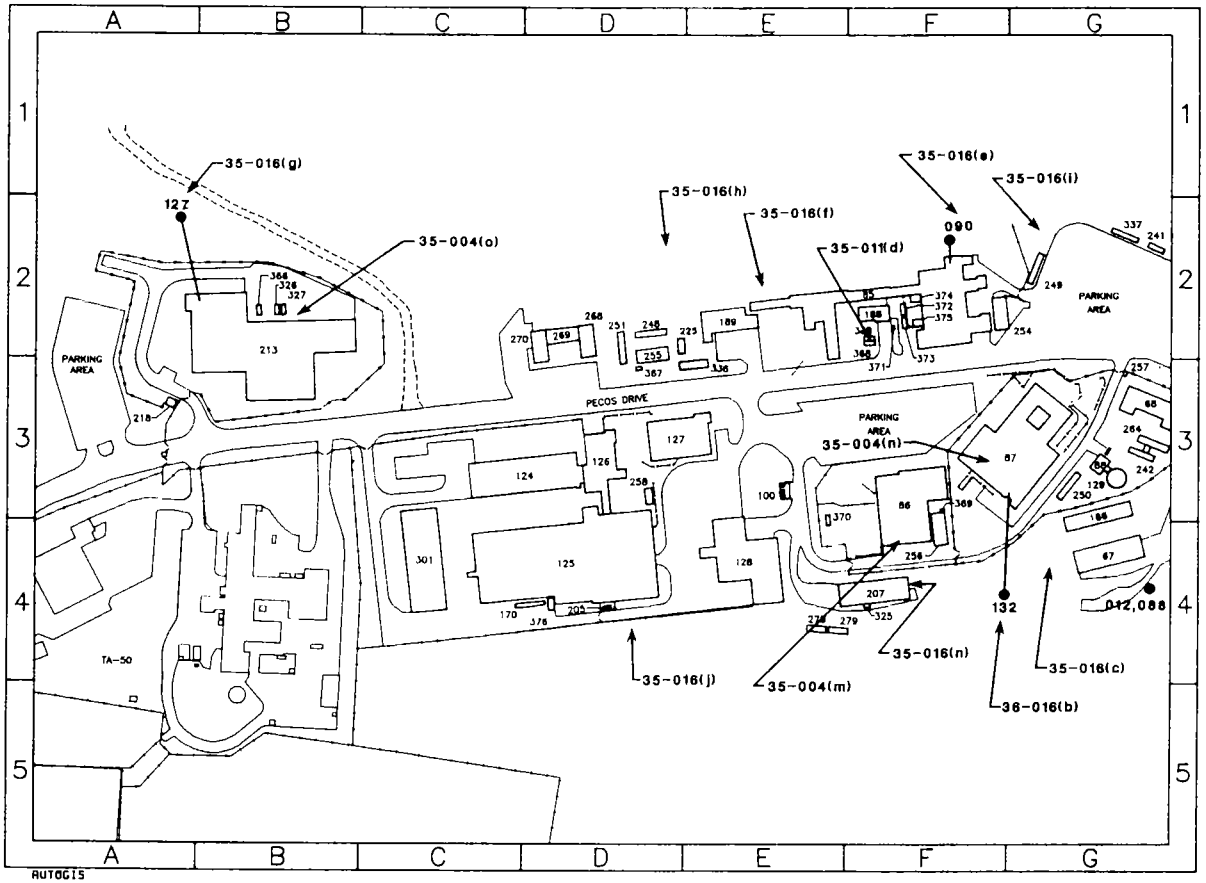
STRUCTURE LOCATION PLAN

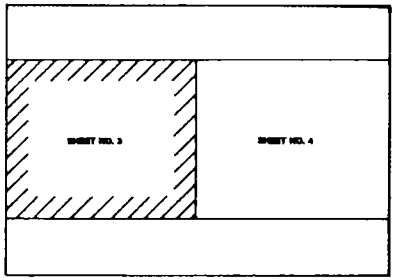
TA-35 TEN SITE

ENG-R5117


UNCLASSIFIED
301215 02 01 B135
MORTANDAD CANYON
PARKING AREA
PECOS DRIVE
TO TA-3
TA-0-309
TA-0-308
TA-0-310
35-004(l)
35-003(l)
35-018(a)
35-003(h)
35-004(h)
35-003(n)
35-003(o)
35-003(q)
35-003(r)
35-003(d)
35-003(k)
35-009(a)
35-003(p)
35-003(m)
35-003(f)
35-003(g)
MDA-X
35-002
MDA-W
35-001
EXPLANATION
35-001 SWMU LOCATION
SCALE
REV. 1 4/10/90
FIGURE 35-2
SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-35
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO
STRUCTURE LOCATION PLAN
TA-35 TEN SITE
ENG-R 2462

TA-35





TA-35 MAP GUIDE

EXPLANATION

35-001 SWMU LOCATION

010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBERS (SEE APPENDIX A)

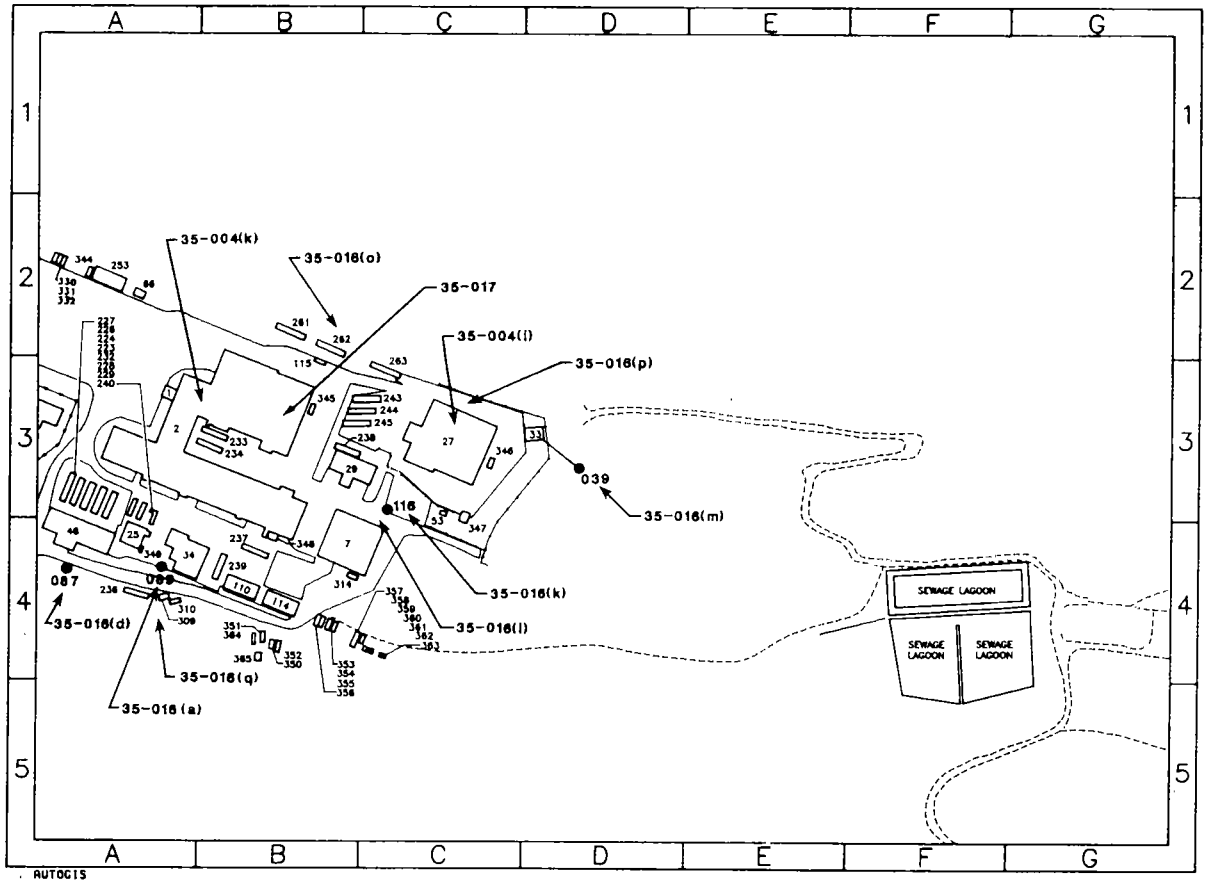
REV. 1 4/10/90

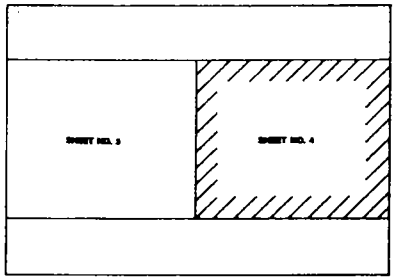
FIGURE 35-3
(1 OF 2)

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-35

UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION MAP
TA-35 TEN SITE
ENG-

TA-35





TA-35 MAP GUIDE

EXPLANATION

35-001 SWMU LOCATION

010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBERS (SEE APPENDIX A)

REV. 1 4/10/90

FIGURE 35-3
(2 OF 2)

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-35

UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION MAP
TA-35 TEN SITE
ENG- M-5117

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-35-1	TSL-1	GUARD HOUSE		N37+50 E115+00
TA-35-2	TSL-2	LABORATORY & OFFICE BLDG.		N35+00 E115+00
TA-35-3	TSL-3	PHASE SEPARATOR PIT	UNDERGROUND	N35+00 E117+50
TA-35-4	TSL-4	TANK, ACID HOLDING	UNDERGROUND	N35+00 E117+50
TA-35-5	TSL-5	TANK, ACID HOLDING	UNDERGROUND	N35+00 E117+50
TA-35-6	TSL-6	TANK, ACID HOLDING	UNDERGROUND	N35+00 E117+50
TA-35-7	TSL-7	AIR FILTER BUILDING		N35+00 E117+50
TA-35-8	TSL-8	PUMP PIT		N32+50 E120+00
TA-35-9	TSL-9	PIPE TRENCH		N32+50 E120+00
TA-35-10	TSL-10	CONCRETE TANK BUILDING		N32+50 E120+00
TA-35-11	TSL-11	MANHOLE	STORM DRAINAGE	N35+00 E117+50
TA-35-12	TSL-12	MANHOLE	WATER	N35+00 E117+50
TA-35-13	TSL-13	MANHOLE	SANITARY	N35+00 E115+00
TA-35-14	TSL-14	TANK	SEPTIC	N35+00 E115+00
TA-35-15	TSL-15	DOSING CHAMBER	SANITARY	N32+50 E115+00
TA-35-16	TSL-16	DISTRIBUTION BOX	SANITARY	N32+50 E115+00
TA-35-17	TSL-17	MANHOLE	WATER PRV.	N35+00 E112+50
TA-35-18	TSL-18	TANK	FUEL, UNDERGROUND	N35+00 E115+00
TA-35-19	TSL-19	TANK	FUEL, UNDERGROUND	N32+50 E117+50
TA-35-20	TSL-20	TANK	FUEL, UNDERGROUND	N32+50 E117+50
TA-35-21	TSL-21	MANHOLE	GAS DRIP POT	N35+00 E112+50
TA-35-22	TSL-22	TANK	SLUDGE	N32+50 E117+50
TA-35-23	TSL-23		REMOVED 1957	
TA-35-24	TSL-24		CANCELLED	
TA-35-25	TSL-25	SODIUM BUILDING		N35+00 E115+00
TA-35-26	TSL-26	POWER REACTOR TEST BLDG.	INCORPORATED WITH TSL-2	N37+50 E115+00
TA-35-27	TSL-27	NUCLEAR SAFEGUARDS LAB	WAS CORE TEST FACILITY	N35+00 E120+00
TA-35-28	TSL-28	PUMP PIT		N32+50 E117+50
TA-35-29	TSL-29	SMALL TEST PIT		N35+00 E117+50
TA-35-30	TSL-30		REMOVED 1967	
TA-35-31	TSL-31	TANK	RETENTION	N35+00 E120+00
TA-35-32	TSL-32	SUBSTATION		N35+00 E117+50
TA-35-33	TSL-33	COOLING TOWER		N35+00 E120+00
TA-35-34	TSL-34	SODIUM TEST BUILDING		N32+50 E115+00
TA-35-35	TSL-35	CONTROL TUNNEL	UNDERGROUND	N35+00 E117+50
TA-35-36	TSL-36	TANK, ACID	FORMERLY TA-21-101	N32+50 E120+00
TA-35-37	TSL-37	TANK	FLOCCULATOR	N32+50 E117+50
TA-35-38	TSL-38	TANK	REGENERANT	N32+50 E117+50
TA-35-39	TSL-39	TANK	ION	N32+50 E117+50
TA-35-40	TSL-40	TANK	ION	N32+50 E117+50
TA-35-41	TSL-41	CAUSTIC TREATER BLDG.		N35+00 E120+00
TA-35-42	TSL-42	MANHOLE	ELECTRICAL	N35+00 E117+50
TA-35-43	TSL-43	TANKS	SODIUM DISPOSAL	N30+00 E115+00
TA-35-44	TSL-44	TANK	SEPT	N37+50 E115+00
TA-35-45	TSL-45	DISTRIBUTION BOX	SANITARY	N37+50 E115+00
TA-35-46	TSL-46	REACTOR COMPONENT BLDG.		N35+00 E112+50
TA-35-47	TSL-47	MANHOLE	ELECTRICAL	N32+50 E117+50
TA-35-48	TSL-48	EXHAUST STACK		N35+00 E117+50
TA-35-49	TSL-49	STORAGE BUILDING, REMOVED, RELOCATED TO TA-3 NOW TA-3-1178		
TA-35-50	TSL-50		CANCELLED	
TA-35-51	TSL-51	ENG FIELD OFFICE	REMOVED 1967	
TA-35-52	TSL-52	CONTROL PANEL		N32+50 E120+00
TA-35-53	TSL-53	SUBSTATION		N35+00 E120+00
TA-35-54	TSL-54	MANHOLE, ELECTRICAL		N35+00 E120+00
TA-35-55	TSL-55		REMOVED 1965	
TA-35-56	TSL-56	MANIFOLD		N35+00 E117+50
TA-35-57	TSL-57	MANIFOLD		N35+00 E117+50
TA-35-58	TSL-58	MANIFOLD		N37+50 E117+50
TA-35-59	TSL-59	MANIFOLD		N37+50 E117+50
TA-35-60	TSL-60	MANHOLE, SANITARY		N37+50 E120+00
TA-35-61	TSL-61	MANHOLE, ACID		N37+50 E120+00
TA-35-62	TSL-62	MANHOLE, ELECTRICAL		N37+50 E117+50
TA-35-63	TSL-63	MANHOLE, SANITARY		N37+50 E120+00
TA-35-64	TSL-64	MANHOLE, SANITARY		N35+00 E122+50
TA-35-65	TSL-65	TANK	SEPTIC	N35+00 E122+50
TA-35-66	TSL-66	SWITCHGEAR STATION		N37+50 E115+00
TA-35-67	TSL-67	WAREHOUSE		N32+50 E112+50
TA-35-68	TSL-68	OFFICE BUILDING		N35+00 E112+50
TA-35-69	TSL-69	OFFICE TRAILER		N35+00 E115+00
TA-35-70	TSL-70	OFFICE TRAILER,	RENUMBERED TA-0-310	N35+00 E115+00
TA-35-71	TSL-71	OFFICE TRAILER, REMOVED, RELOCATED TO TA-53 NOW TA-0-299		
TA-35-72	TSL-72	OFFICE TRAILER, REMOVED, RELOCATED TO TA-53 NOW TA-0-298		
TA-35-73	TSL-73	OFFICE TRAILER, REMOVED, RELOCATED TO TA-53 NOW TA-0-297		
TA-35-74	TSL-74	OFFICE TRAILER,	REMOVED 1967	
TA-35-75	TSL-75	OFFICE TRAILER, REMOVED, RELOCATED TO TA-33 NOW TA-0-296		
TA-35-76	TSL-76	TANK	SEPTIC	N32+50 E112+50
TA-35-77	TSL-77	DISTRIBUTION BOX	SANITARY	N32+50 E112+50
TA-35-78	TSL-78	TANK	SURGE	N35+00 E117+50
TA-35-79	TSL-79	OFFICE TRAILER, REMOVED, RELOCATED TO TA-6 NOW TA-0-385		
TA-35-80	TSL-80	OFFICE TRAILER, REMOVED, RELOCATED TO TA-9 NOW TA-0-384		
TA-35-81	TSL-81	RETAINING WALL		N37+50 E115+00
TA-35-82	TSL-82	MANHOLE	ELECTRICAL	N37+00 E115+00
TA-35-83	TSL-83	TRANSFORMER STATION		N35+00 E110+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-0-308	ULR-308	TRAILER, OFFICE		N35+00 E112+50
TA-0-309	ULR-309	TRAILER, OFFICE		N35+00 E112+50
TA-0-310	ULR-310	TRAILER, OFFICE		N35+00 E115+00

UNCL…IED

FIGURE 35-4

TA-35 STRUCTURE LOCATION INDEX

REVIEWER ______
CLASS u DATE 7/19/72

REV.1: 4/10/90

NO.	DATE	REVISIONS
15	9-19-72	REVISED TO STATUS OF 9-19-72
14	2-28-72	REVISED TO STATUS OF 2-28-72
13	9-16-68	REVISED TO STATUS OF 9-11-68
12	11-1-65	REVISED TO STATUS OF 10-7-65
11	3-4-64	REVISED TO STATUS OF 12-3-63
10	9-15-61	REDRAWN TO STATUS OF 9-4-61 (WAS ENG-R188)

AUTHORIZED FOR: HEALTH, SAFETY, FIRE PROT., SEC.

LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-35 TEN SITE

DRAWN: LOGGAINS
SCALE: NONE
DATE: 9-15-61
SHEET 1 OF 2
ENG-R 2461

301215 02 01 B-6

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-35-1	TSL-1	GUARD HOUSE		N37+50 E115+00
TA-35-2	TSL-2	LABORATORY & OFFICE BUILDING		N35+00 E115+00
TA-35-3	TSL-3	PHASE SEPARATOR PIT	UNDERGROUND	N35+00 E117+50
TA-35-4	TSL-4	HOLDING TANK, ACID	UNDERGROUND	N35+00 E117+50
TA-35-5	TSL-5	HOLDING TANK, ACID	UNDERGROUND	N35+00 E117+50
TA-35-6	TSL-6	HOLDING TANK, ACID	UNDERGROUND	N35+00 E117+50
TA-35-7	TSL-7	AIR FILTER BUILDING		N35+00 E117+50
TA-35-8	TSL-8	PUMP PIT	REMOVED 1984	
TA-35-9	TSL-9	PIPE TRENCH	REMOVED 1984	
TA-35-10	TSL-10	CONCRETE TANK BUILDING	REMOVED 1984	
TA-35-11	TSL-11	MANHOLE, (CMP DRAIN)	REMOVED 1984	
TA-35-12	TSL-12	MANHOLE, WATER	REMOVED 1984	
TA-35-13	TSL-13	MANHOLE, SEWER		N35+00 E115+00
TA-35-14	TSL-14	SEPTIC TANK	ABANDONED 1975	N35+00 E115+00
TA-35-15	TSL-15	DOSING CHAMBER, SANITARY	ABANDONED 1975	N32+50 E115+00
TA-35-16	TSL-16	DISTRIBUTION BOX, SANITARY	REMOVED 1973	
TA-35-17	TSL-17	MANHOLE, PRV BOX, WATER		N35+00 E112+50
TA-35-18	TSL-18	DIESEL FUEL TANK	ABANDONED 1973	N35+00 E115+00
TA-35-19	TSL-19	FUEL OIL TANK	ABANDONED 1973	N32+50 E117+50
TA-35-20	TSL-20	FUEL OIL TANK	ABANDONED 1973	N32+50 E117+50
TA-35-21	TSL-21	MANHOLE, GAS DRIP POT		N35+00 E112+50
TA-35-22	TSL-22	SLUDGE TANK	REMOVED 1984	
TA-35-23	TSL-23	DISCHARGER	REMOVED 1957	
TA-35-24	TSL-24		CANCELLED	
TA-35-25	TSL-25	SODIUM BUILDING		N35+00 E115+00
TA-35-26	TSL-26	POWER REACTOR TEST BLDG	INCORPORATED WITH TSL-2	N37+50 E115+00
TA-35-27	TSL-27	NUCLEAR SAFEGUARDS RESEARCH LAB	WAS CORE TEST FACILITY	N35+00 E120+00
TA-35-28	TSL-28	PUMP PIT	REMOVED 1965	
TA-35-29	TSL-29	GAS LASER BUILDING		N35+00 E117+50
TA-35-30	TSL-30	OFFICE BUILDING	RELOCATED TO TA-3-255	
TA-35-31	TSL-31	RETENTION TANK	REMOVED 1984	
TA-35-32	TSL-32	TRANSFORMER, SUBSTATION		N35+00 E117+50
TA-35-33	TSL-33	COOLING TOWER		N35+00 E120+00
TA-35-34	TSL-34	SODIUM TESTING BUILDING		N32+50 E115+00
TA-35-35	TSL-35	CONTROL TUNNEL	UNDERGROUND	N35+00 E117+50
TA-35-36	TSL-36	STORAGE TANK	REMOVED 1980	
TA-35-37	TSL-37	FLOCCULATOR TANK	REMOVED 1980	
TA-35-38	TSL-38	REGENERANT TANK	REMOVED 1980	
TA-35-39	TSL-39	ION TANK	REMOVED 1980	
TA-35-40	TSL-40	ION TANK	REMOVED 1980	
TA-35-41	TSL-41	CAUSTIC TREATER BUILDING	REMOVED 1984	
TA-35-42	TSL-42	MANHOLE, ELECTRICAL		N35+00 E117+50
TA-35-43	TSL-43	SODIUM DISPOSAL TANKS		N30+00 E115+00
TA-35-44	TSL-44	SEPTIC TANK		N37+50 E115+00
TA-35-45	TSL-45	DISTRIBUTION BOX, SANITARY		N37+50 E115+00
TA-35-46	TSL-46	REACTOR COMPONENTS DEV BLDG		N35+00 E112+50
TA-35-47	TSL-47	MANHOLE, ELECTRICAL	ABANDONED 1975	N32+50 E117+50
TA-35-48	TSL-48	EXHAUST STACK		N35+00 E117+50
TA-35-49	TSL-49	STORAGE BUILDING	RELOCATED TO TA-3-378	
TA-35-50	TSL-50		CANCELLED	
TA-35-51	TSL-51	ENG FIELD OFFICE	RELOCATED TO TA-0-189	
TA-35-52	TSL-52	CONTROL PANEL	REMOVED 1984	
TA-35-53	TSL-53	SUBSTATION, ELECTRICAL		N35+00 E120+00
TA-35-54	TSL-54	MANHOLE, ELECTRICAL		N35+00 E120+00
TA-35-55	TSL-55	RETAINING WALL		N35+00 E117+50
TA-35-56	TSL-56	MANIFOLD	REMOVED 1974	
TA-35-57	TSL-57	MANIFOLD	REMOVED 1974	
TA-35-58	TSL-58	MANIFOLD	REMOVED 1974	
TA-35-59	TSL-59	MANIFOLD	REMOVED 1974	
TA-35-60	TSL-60	MANHOLE, SANITARY SEWER		N37+50 E120+00
TA-35-61	TSL-61	MANHOLE, ACID SEWER VALVE		N37+50 E120+00
TA-35-62	TSL-62	MANHOLE, ELECTRICAL		N37+50 E117+50
TA-35-63	TSL-63	MANHOLE, SANITARY SEWER		N37+50 E120+00
TA-35-64	TSL-64	MANHOLE, SANITARY SEWER		N35+00 E122+50
TA-35-65	TSL-65	SEPTIC TANK, SANITARY SEWER		N35+00 E122+50
TA-35-66	TSL-66	SWITCHGEAR STATION		N37+50 E115+00
TA-35-67	TSL-67	WAREHOUSE		N32+50 E112+50
TA-35-68	TSL-68	OFFICE BUILDING		N35+00 E112+50
TA-35-69	TSL-69	OFFICE TRAILER	RELOCATED TO TA-0-300	
TA-35-70	TSL-70	OFFICE TRAILER	RELOCATED TO TA-0-310	
TA-35-71	TSL-71	OFFICE TRAILER	RELOCATED TO TA-0-299	
TA-35-72	TSL-72	OFFICE TRAILER	RELOCATED TO TA-0-298	
TA-35-73	TSL-73	OFFICE TRAILER	RELOCATED TO TA-0-297	
TA-35-74	TSL-74	OFFICE TRAILER	RELOCATED TO TA-0-455	
TA-35-75	TSL-75	OFFICE TRAILER	RELOCATED TO TA-0-296	
TA-35-76	TSL-76	TANK, SEPTIC	ABANDONED 1975	N32+50 E112+50
TA-35-77	TSL-77	DISTRIBUTION BOX	ABANDONED 1975	N32+50 E112+50
TA-35-78	TSL-78	SURGE TANKS	REMOVED 1978	
TA-35-79	TSL-79	OFFICE TRAILER	RELOCATED TO TA-0-385	
TA-35-80	TSL-80	OFFICE TRAILER	RELOCATED TO TA-0-384	
TA-35-81	TSL-81	RETAINING WALL		N37+50 E115+00
TA-35-82	TSL-82	MANHOLE, ELEC. PRIMARY		N35+00 E117+50
TA-35-83	TSL-83	TRANSFORMER STATION		N35+00 E112+50
TA-35-84	TSL-84		CANCELLED	
TA-35-85	TSL-85	CHEMICAL LASER FACILITY		N37+50 E107+50
TA-35-86	TSL-86	CO_2 LASER BUILDING		N35+00 E107+50
TA-35-87	TSL-87	LAB OFFICE BUILDING		N35+00 E110+00
TA-35-88	TSL-88	PUMP HOUSE		N35+00 E110+00
TA-35-89	TSL-89		CANCELLED	
TA-35-90	TSL-90	TRANSFORMER STATION		N35+00 E115+00
TA-35-91	TSL-91		CANCELLED	
TA-35-92	TSL-92		CANCELLED	
TA-35-93	TSL-93		CANCELLED	
TA-35-94	TSL-94		CANCELLED	
TA-35-95	TSL-95		CANCELLED	
TA-35-96	TSL-96	STORAGE TANK	REMOVED 1976	
TA-35-97	TSL-97	STORAGE TANK	REMOVED 1976	

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-35-98	TSL-98		CANCELLED	
TA-35-99	TSL-99	TRANSFORMER STATION	NOT SHOWN-POLE MOUNTED	
TA-35-100	TSL-100	SUBSTATION, ELECTRICAL		N35+00 E105+00
TA-35-101	TSL-101	SUBSTATION, ELECTRICAL		N35+00 E110+00
TA-35-103	TSL-103	MANHOLE, STEAM		N35+00 E115+00
TA-35-104	TSL-104		CANCELLED	
TA-35-105	TSL-105		CANCELLED	
TA-35-106	TSL-106		CANCELLED	
TA-35-107	TSL-107		CANCELLED	
TA-35-108	TSL-108	MANHOLE, TELEPHONE		N32+50 E105+00
TA-35-109	TSL-109	MANHOLE, TELEPHONE		N40+00 E107+50
TA-35-110	TSL-110	TRANSPORTABLE OFFICE BLDG.		N32+00 E115+00
TA-35-111	TSL-111		CANCELLED	
TA-35-112	TSL-112		CANCELLED	
TA-35-113	TSL-113	TRANSFORMER STATION		N32+50 E115+00
TA-35-114	TSL-114	TRANSPORTABLE OFFICE BLDG		N32+50 E117+50
TA-35-115	TSL-115	SOLVENT STORAGE SHED		N37+50 E117+50
TA-35-116	TSL-116	CONCRETE PAD		N32+50 E112+50
TA-35-117	TSL-117	MANIFOLD		N35+00 E120+00
TA-35-118	TSL-118	MANHOLE, ELECTRICAL	REMOVED 1978	
TA-35-119	TSL-119	MANHOLE, ELECTRICAL		N35+00 E105+00
TA-35-120	TSL-120	MANHOLE, ELECTRICAL		N35+00 E105+00
TA-35-121	TSL-121	MANHOLE, ELECTRICAL		N37+50 E107+50
TA-35-122	TSL-122	MANHOLE, ELECTRICAL		N37+50 E110+00
TA-35-123	TSL-123	MANHOLE, ELECTRICAL		N35+00 E110+00
TA-35-124	TSL-124	TARGET BUILDING		N35+00 E100+00
TA-35-125	TSL-125	LASER BUILDING		N32+50 E100+00
TA-35-126	TSL-126	TRUCK ACCESS TUNNEL		N35+00 E102+50
TA-35-127	TSL-127	OFFICE BUILDING		N35+00 E102+50
TA-35-128	TSL-128	WAREHOUSE		N32+50 E105+00
TA-35-129	TSL-129	WATER STORAGE TANK		N35+00 E110+00
TA-35-130	TSL-130	RETAINING WALL		N35+00 E107+50
TA-35-131	TSL-131	MANHOLE, SANITARY SEWER		N37+50 E107+50
TA-35-132	TSL-132	MANHOLE, SANITARY SEWER		N35+00 E107+50
TA-35-133	TSL-133	MANHOLE, SANITARY SEWER		N32+50 E107+50
TA-35-134	TSL-134	MANHOLE, SANITARY SEWER		N32+50 E110+00
TA-35-135	TSL-135	MANHOLE, SANITARY SEWER		N32+50 E110+00
TA-35-136	TSL-136	MANHOLE, SANITARY SEWER		N32+50 E112+50
TA-35-137	TSL-137	MANHOLE, SANITARY SEWER		N32+50 E115+00
TA-35-138	TSL-138	MANHOLE, SANITARY SEWER		N32+50 E117+50
TA-35-139	TSL-139	MANHOLE, SANITARY SEWER		N32+50 E122+50
TA-35-140	TSL-140	MANHOLE, SANITARY SEWER		N32+50 E125+00
TA-35-141	TSL-141	MANHOLE, SANITARY SEWER		N32+50 E125+00
TA-35-142	TSL-142	MANHOLE, SANITARY SEWER		N32+50 E125+00
TA-35-143	TSL-143	MANHOLE, SANITARY SEWER		N32+50 E127+50
TA-35-144	TSL-144	SEWAGE LAGOON		N32+50 E130+00
TA-35-145	TSL-145	SEWAGE LAGOON		N32+50 E127+50
TA-35-146	TSL-146	SEWAGE LAGOON		N32+50 E130+00
TA-35-147	TSL-147	MANHOLE, TELEPHONE		N35+00 E102+50
TA-35-148	TSL-148	MANHOLE, TELEPHONE		N37+50 E107+50
TA-35-149	TSL-149	SEIGE TANK		N35+00 E107+50
TA-35-150	TSL-150	SEIGE TANK		N35+00 E107+50
TA-35-151	TSL-151	SEIGE TANK		N32+50 E107+50
TA-35-152	TSL-152	SEIGE TANK		N32+50 E107+50
TA-35-153	TSL-153	SEIGE TANK		N35+00 E105+00
TA-35-154	TSL-154	OIL HOLDING TANK		N32+50 E105+00
TA-35-155	TSL-155	REFRIGERATOR COOLANT PAD		N35+00 E107+50
TA-35-156	TSL-156	REFRIGERATOR COOLANT PAD		N35+00 E107+50
TA-35-157	TSL-157	REFRIGERATOR COOLANT PAD		N37+50 E110+00
TA-35-158	TSL-158	ACID SEWER STORAGE TANK	REMOVED 1985	
TA-35-159	TSL-159	OIL STORAGE TANK	UNDERGROUND	N37+50 E107+50
TA-35-160	TSL-160	MANHOLE, ELECTRICAL		N35+00 E105+00
TA-35-161	TSL-161	MANHOLE, ELECTRICAL		N35+00 E110+00
TA-35-162	TSL-162	MANHOLE, ELECTRICAL		N37+50 E107+50
TA-35-163	TSL-163	MANHOLE, SANITARY SEWER		N32+50 E117+50
TA-35-164	TSL-164	MANHOLE, SANITARY SEWER		N35+00 E102+50
TA-35-165	TSL-165	MANHOLE, SANITARY SEWER		N37+50 E105+00
TA-35-166	TSL-166		CANCELLED	
TA-35-167	TSL-167		CANCELLED	
TA-35-168	TSL-168		CANCELLED	
TA-35-169	TSL-169		CANCELLED	
TA-35-170	TSL-170	LIQUID NITROGEN TANK		N32+50 E100+00
TA-35-171	TSL-171		CANCELLED	
TA-35-172	TSL-172	MANHOLE, TELEPHONE		N35+00 E97+50
TA-35-173	TSL-173		CANCELLED	
TA-35-174	TSL-174		CANCELLED	
TA-35-175	TSL-175		CANCELLED	
TA-35-176	TSL-176		CANCELLED	
TA-35-177	TSL-177		CANCELLED	
TA-35-178	TSL-178		CANCELLED	
TA-35-179	TSL-179		CANCELLED	
			CANCELLED	
			CANCELLED	
TA-35-184	TSL-184	FLIGHT MEASUREMENT LINE		N35+00 E100+00
TA-35-185	TSL-185	TIME OF FLIGHT SHED		N32+50 E97+50
TA-35-186	TSL-186	MODULAR OFFICE BUILDING		N35+00 E112+50
TA-35-187	TSL-187	TRANSFORMER STATION		N35+00 E112+50
TA-35-188	TSL-188	HIGH VOLT DEVELOPMENT LAB		N37+50 E107+50
TA-35-189	TSL-189	OPTICS EVALUATION LAB		N37+50 E105+00
TA-35-190	TSL-190	MANHOLE, SANITARY SEWER		N35+00 E102+50
TA-35-191	TSL-191	MANHOLE, SANITARY SEWER		N35+00 E105+00
TA-35-192	TSL-192	MANHOLE, SANITARY SEWER		N32+50 E105+00
TA-35-193	TSL-193	TRAILER STATION		N32+50 E100+00
TA-35-194	TSL-194	TRAILER STATION		N32+50 E100+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-35-195	TSL-195	TRAILER STATION		[illegible]
TA-35-196	TSL-196	TRAILER STATION		[illegible]
TA-35-197	TSL-197	TANK, OIL, U.G.		[illegible]
TA-35-198	TSL-198	TRAILER STATION		[illegible]
TA-35-199	TSL-199	MANHOLE, ELECTRICAL		[illegible]
TA-35-200	TSL-200	MANHOLE, ELECTRICAL		[illegible]
TA-35-201	TSL-201	MANHOLE, ELECTRICAL		[illegible]
TA-35-202	TSL-202	MANHOLE, TELEPHONE		[illegible]
TA-35-203	TSL-203	MANHOLE, ELECTRICAL		[illegible]
TA-35-204	TSL-204	SWITCH GEAR STATION		[illegible]
TA-35-205	TSL-205	SUBSTATION		[illegible]
TA-35-206	TSL-206	MANHOLE, ELECTRICAL		[illegible]
TA-35-207	TSL-207	EXPERIMENTAL SUPPORT LAB		N32+50 E107+50
TA-35-208	TSL-208		CANCELLED	N35+00 E97+50
TA-35-209	TSL-209	TRANSFORMER STATION		N35+00 E97+50
TA-35-210	TSL-210	TRANSFORMER STATION		N40+00 E110+00
TA-35-211	TSL-211	TRANSFORMER STATION		N37+50 E107+50
TA-35-212	TSL-212	STORAGE SHED		N30+00 E115+00
TA-35-213	TSL-213	TARGET FABRICATION BLDG.		N37+50 E95+00
TA-35-214	TSL-214		CANCELLED	
TA-35-216	TSL-216	MANHOLE, ELECTRICAL		N37+50 E102+50
TA-35-218	TSL-218	GUARD STATION		N35+00 E92+50
TA-35-220	TSL-220	GAS METERING STATION		N35+00 E97+50
TA-35-222	TSL-222	SUBSTATION, ELECTRICAL		N37+50 E107+50
TA-35-223	TSL-223	TRAILER, OFFICE	FORMERLY TA-0-306	N35+00 E112+50
TA-35-224	TSL-224	TRAILER, OFFICE	FORMERLY TA-0-309	N35+00 E112+50
TA-35-225	TSL-225	TRAILER, OFFICE	FORMERLY TA-0-445	N37+50 E102+50
TA-35-226	TSL-226	TRAILER, OFFICE	FORMERLY TA-0-514	N35+00 E112+50
TA-35-227	TSL-227	TRAILER, OFFICE	FORMERLY TA-0-515	N35+00 E112+50
TA-35-228	TSL-228	TRAILER, OFFICE	FORMERLY TA-0-517	N35+00 E112+50
TA-35-229	TSL-229	TRAILER, OFFICE	FORMERLY TA-0-518	N35+00 E112+50
TA-35-230	TSL-230		CANCELLED	
TA-35-231	TSL-231		RELOCATED TO TA-3-1538	
TA-35-232	TSL-232	TRAILER, OFFICE	FORMERLY TA-0-530	N35+00 E112+50
TA-35-233	TSL-233	TRAILER, OFFICE	FORMERLY TA-0-532	N35+00 E115+00
TA-35-234	TSL-234	TRAILER, OFFICE	FORMERLY TA-0-533	N35+00 E115+00
TA-35-235	TSL-235	TRAILER, OFFICE	FORMERLY TA-0-536	N40+00 E110+00
TA-35-236	TSL-236	TRAILER, OFFICE	FORMERLY TA-0-660	N32+50 E115+00
TA-35-237	TSL-237	TRAILER, OFFICE	FORMERLY TA-0-662	N32+50 E117+50
TA-35-238	TSL-238	TRAILER, DIAGNOSTIC	FORMERLY TA-0-668	N35+00 E117+50
TA-35-239	TSL-239	TRAILER, OFFICE	FORMERLY TA-0-669	N32+50 E115+00
TA-35-240	TSL-240	TRAILER, LABORATORY	FORMERLY TA-0-676	N35+00 E112+50
TA-35-241	TSL-241		CANCELLED	
TA-35-242	TSL-242	TRAILER, OFFICE	FORMERLY TA-0-696	N35+00 E112+50
TA-35-243	TSL-243	TRAILER, OFFICE	FORMERLY TA-0-699	N35+00 E117+50
TA-35-244	TSL-244	TRAILER, OFFICE	FORMERLY TA-0-700	N35+00 E117+50
TA-35-245	TSL-245	TRAILER, OFFICE	FORMERLY TA-0-701	N35+00 E117+50
TA-35-246	TSL-246	TRAILER, OFFICE	RELOCATED TO TA-55-108	
TA-35-247	TSL-247	TRAILER, OFFICE	RELOCATED TO TA-55-109	
TA-35-248	TSL-248	TRAILER, OFFICE	FORMERLY TA-0-717	N37+50 E102+50
TA-35-249	TSL-249	TRAILER, OFFICE	FORMERLY TA-0-718	N37+50 E110+00
TA-35-250	TSL-250	TRAILER, OFFICE	FORMERLY TA-0-722	N35+00 E110+00
TA-35-251	TSL-251	TRAILER, OFFICE	FORMERLY TA-0-724	N37+50 E102+50
TA-35-252	TSL-252	TRAILER, OFFICE	FORMERLY TA-0-741	N35+00 E97+50
TA-35-253	TSL-253	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1039	N37+50 E112+50
TA-35-254	TSL-254	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1042	N37+50 E110+00
TA-35-255	TSL-255	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1046	N37+50 E102+50
TA-35-256	TSL-256	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1047	N32+50 E107+50
TA-35-257	TSL-257	GUARD STATION		N37+50 E112+50
TA-35-258	TSL-258	TRAILER, OFFICE		N35+00 E102+50
TA-35-259	TSL-259	TRAILER, OFFICE	FORMERLY TA-0-748	N35+00 E97+50
TA-35-260	TSL-260	STORAGE SHED		N35+00 E92+50
TA-35-261	TSL-261	TRAILER, OFFICE		N37+50 E117+50
TA-35-262	TSL-262	TRAILER, OFFICE		N37+50 E117+50
TA-35-263	TSL-263	TRAILER, OFFICE		N37+50 E117+50
TA-35-264	TSL-264	TRAILER, OFFICE		N35+00 E112+50
TA-35-265	TSL-265	TRAILER POWER PEDESTAL		
TA-35-266	TSL-266	CONCRETE PAD		

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FIGURE 35-5
TA-35 STRUCTURE LOCATION INDEX
(1 OF 2)

REV	DATE	REVISION	BY	CKD	APP
22	7-25-86	REVISED AND ADDED NEW INDEX SHEET	ALC		
21	7-14-83	REVISED TITLE BLOCK & DWG TO STATUS OF 7-14-83	HS		DP

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-35 TEN-SITE

SEC CLASSIFICATION — CLASS. U — REVIEWER — DATE 10-4-85

SUBMITTED — RECOMMENDED — APPROVED
DRAWN — CHECKED — DATE 7-14-83 — SHEET NO 1 OF 3 — DRAWING NO ENG-R5117

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-35-267	TSL-267		CANCELLED	
TA-35-268	TSL-268	TRANSPORTABLE OFFICE BLDG		N37+50 E100+00
TA-35-269	TSL-269	TRANSPORTABLE OFFICE BLDG		N37+50 E100+00
TA-35-270	TSL-270	TRANSPORTABLE OFFICE BLDG		N37+50 E100+00
TA-35-271	TSL-271		CANCELLED	
TA-35-272	TSL-272		CANCELLED	
TA-35-273	TSL-273		CANCELLED	
TA-35-274	TSL-274			
TA-35-275	TSL-275		CANCELLED	
TA-35-276	TSL-276		CANCELLED	
TA-35-277	TSL-277		CANCELLED	
TA-35-278	TSL-278	SIEGE TANKS		N32+50 E105+00
TA-35-279	TSL-279	SIEGE TANKS		N32+50 E105+00
TA-35-280	TSL-280			
TA-35-281	TSL-281			
TA-35-282	TSL-282			
TA-35-283	TSL-283	STORAGE SHED		N37+50 E 98+00
TA-35-284	TSL-284			
TA-35-285	TSL-285	RETAINING WALL		N37+30 E106+00
TA-35-286	TSL-286	LASER GAS TANK		N37+50 E107+50
TA-35-287	TSL-287	MANHOLE, SANITARY	FORMERLY TA-50-43	N35+00 E 92+50
TA-35-288	TSL-288	MANHOLE, SANITARY	FORMERLY TA-50-43	N35+00 E 95+00
TA-35-289	TSL-289	MANHOLE, SANITARY	FORMERLY TA-50-43	N35+00 E 97+00
TA-35-290	TSL-290	MANHOLE, SANITARY	FORMERLY TA-50-43	N35+00 E100+00
TA-35-291	TSL-291	AIR COMPRESSOR BLDG.		N32+00 E100+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

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REV.1: 4/10/90

FIGURE 35-5
TA-35 STRUCTURE LOCATION INDEX
(2 OF 2)

REV	DATE	REVISION	BY	CHD	APP
22	7-25-86	REVISED AND ADDED NEW INDEX SHEET			

UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
INDEX SHEET
STRUCTURE LOCATION PLAN
TA-35 TEN-SITE
DRAWN ANNABEL CLIFFORD DATE 7-25-86 SHEET 2 of 2
DRAWING NO. ENG-R5117

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TA-36
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 36, called Kappa Site, is principally a firing site designed to study the phenomena associated with the detonation of high explosives. Several hundred shots are fired each year. TA-36 encompasses several widely dispersed operational units connected by roads. Uranium has been used at the area, and other materials present include lead, zinc, barium, and beryllium (although beryllium is currently not used) (DOE, 1987a). The technical boundary of TA-36 also includes the location of former TA-27.

TA-36 lies at elevations ranging from 6,380 feet asl at State Road 4 to 7,120 feet asl at the western boundary of the Technical Area. Several operational units are located on separate mesa tops between a major branch of Pajarito Canyon on the north and Water Canyon on the south. Potrillo Canyon and Fence Canyon dissect the area, as do several other small, unnamed canyons. Other units are within Potrillo Canyon or branches of Fence Canyon. Canyon walls are steep in this area. TA-36 is underlain by welded Bandelier Tuff except for the bottom of Pajarito Canyon, which is underlain by alluvium. The area includes vegetation from the Pinon-Juniper, Ponderosa Pine/Pinon-Juniper, and Shrub-Grass-Forb overstory vegetation zones. Soil in the Technical Area includes Sanjue-Arribe complex, Nyjack loam, Hackroy-Rock outcrop complex, Hackroy sandy loam, Penistaja sandy loam, Prieta silt loam, Servilleta loam, and rock outcrop (Nyhan et al., 1978).

At TA-36, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 5,710 to 5,970 feet asl. Over 600 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-36

36-001	MATERIAL DISPOSAL AREA AA AND LANDFILLS
36-002	SUMP
36-003	SEPTIC SYSTEMS
36-004	FIRING SITES AND TEST FACILITIES
36-005	BONEYARD
36-006	SURFACE DISPOSAL AREAS
36-007	WASTE HIGH EXPLOSIVES CONTAINER STORAGE AREAS
36-008	WASTE EXPLOSIVE TREATMENT (renumbered)
36-009	MORTAR IMPACT AREA

SUMMARY

LOCATION	: TA-36	MATERIALS MANAGED	: RADIOACTIVE WASTE
TYPE OF UNIT(s)	: LANDFILL/SURFACE DISPOSAL		HAZARDOUS WASTE
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: ? - 1989		
HAZARDOUS RELEASE	: NONE		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

Material Disposal Area AA is located near TA-36-12 in an area of TA-36 termed "Lower Slobbovia". MDA-AA is shown on engineering drawings as consisting of three trenches. According to the CEARP, since that time, it is believed that at least one more trench was excavated and covered. The most recently active trench was approximately 30' x 200' x 10' deep. The trench was used for burning HE-contaminated combustibles until 1988. This firing site debris is no longer burned at TA-36, and it was closed in 1989 under New Mexico Solid Waste Regulations. The most recent trench is now being used as a surface disposal area for potentially HE-contaminated material. The exact location for these most recent disposal units is not known. In 1990, a new facility was constructed in this area; it is unknown how much of MDA-AA is affected by this construction.

WASTE INFORMATION

The waste consists of potentially HE-contaminated combustibles, such as cables and broken pieces of wooden tables. Very small quantities of depleted uranium may adhere to the combustibles and may be present in the ash. The ash from the burned test items would be expected to contain depleted uranium and perhaps lead.

RELEASE INFORMATION

There are no known releases other than combustion products. DOE Environmental Problem #2 addressed the presence of detectable levels of U-235, U-238, Th-230, Th-232, potassium-40, Cs-137, zinc, barium, chromium, and lead at 36-001. LANL responded in the Revised Implementation Plan in Response to DOE Environmental Survey Team Preliminary Report, January 12, 1990, Section 4.1.5.3, number 7.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
36-001	TA36-6-L-I/A-HW/RW	36.002		MDA-AA, NEAR TA-36-12
	TA36-8-L-I-HW/RW	36.005		
	MDA-AA	? 36.006		

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-36
TYPE OF UNIT(s) : SUMP
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1965 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

In previous years TA-36-48 was used as an assembly building and for temperature-controlled experiments. A sump, TA-36-49, receives liquid wastes from TA-36-48. The sump is 4' x 4' x 8' deep with a redwood cover.

WASTE INFORMATION

Small amounts of HE, acetone, zinc chloride, glue, and acids may have been in the liquid discharged to the sump. It is believed that the amount of liquid discharged has been very small.

RELEASE INFORMATION

It is unknown whether hazardous releases from the sump have occurred.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
36-002	TA36-4-S/ST/O-I/A-HW/RW	36.003 36.010		TA-36-49; IN TA-36-48

SUMMARY

LOCATION : TA-36
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
SUSPECTED MIXED WASTE
SANITARY WASTE

UNIT INFORMATION

Several septic systems are present in TA-36:

SWMU NO.	STRUCTURE	USE PERIOD	BUILDING(S) SERVED	CAPACITY	OVERFLOW
36-003(a)	TA-36-17	1950-present	TA-36-1, -22	1,360 gal	distribution box & seepage pit
36-003(b)	TA-36-61	1949-present	TA-36-55 (formerly TA-15-31)	420 gal	holding tank
36-003(c)	TA-36-70	1985-present	Guard Station	500 gal	seepage pit
36-003(d)	TA-36-100	1988-present	TA-36-1	1,000 gal	leach field

Tank TA-36-61, formerly TA-15-67, was once connected to a drainline, but it was plugged in 1989. Tank TA-36-100 is located next to TA-36-17 and was previously numbered TA-36-00. TA-36-17 has EID Registration Number LA-42. TA-36-100 has CID Number 025795.

WASTE INFORMATION

Sanitary waste and, in past years, potential laboratory wastes in TA-36-17 were discharged to the TA-36-17 seepage pit. Laboratory wastes may have included depleted uranium, solvents, and spent photo liquids. Septic tanks TA-36-61, TA-36-70, and TA-36-100 most likely receive only sanitary waste.

RELEASE INFORMATION

Contaminants in TA-36-17 may have been discharged to the associated seepage pit. It is unknown whether hazardous releases have occurred.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
36-003(a)	TA36-4-S/ST/O-I/A-HW/RW	36.004		TA-36-17, -1, -22
36-003(b)	TA36-4-S/ST/O-I/A-HW/RW	36.004	Tsk 23 : 1618	TA-36-61, -55
36-003(c)	**	36.004		TA-36-70
36-003(d)	**	36.004		TA-36-100, -1

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-36	MATERIALS MANAGED	: MIXED WASTE
TYPE OF UNIT(s)	: SOIL CONTAMINATION		HAZARDOUS WASTE
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: ACTIVE/INACTIVE		
PERIOD OF USE	: EST. 1950 - PRESENT		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

Several firing sites are located in TA-36. The CEARP identifies the following units: Eenie [36-004(a)], associated with Buildings 3 and 4; Meenie [36-004(b)], associated with Buildings 5 and 6; Minie [36-004(c)], associated with Buildings 7 and 8; Lower Slobbovia [36-004(d)], associated with Buildings 11 and 12, and I-J [36-004(e)], which was part of TA-15 until 1982, associated with Building 55 and associated trailers. A LANL employee also recalled the possibility of a few 500-lb test shots near the Moe site [36-004(f)]. A sled track is located at Lower Slobbovia. In the early 1950s, drop tower TA-36-36 was also located in Lower Slobbovia. Assembly drop tests were conducted. During that time the assembly was damaged and the equipment was burned. No contamination was found except in the burn pit. Burning occurred after one drop, and readings indicated radioactivity. Pieces from the drop tower experiments, which included uranium-238, were reportedly pulled from the pad area and burned near where the "dead man" (the anchor used to stabilize the tower) for the tower is located. Disks and uranium-238 may remain in the soil if the ash and debris were not removed to burial pits at MDA-AA (see 36-001). In previous years, some firing areas have been used to burn or detonate scrap explosives. The Minie site is used to detonate scrap HE, and unstable gas cylinders are detonated near the margin of this site. Detonators were disposed of by adding nitromethane and exploding the combination at Lower Slobbovia. Between March and October, 1959, 248 cans of detonators were destroyed. There is mention of burning test items contaminated with uranium in a pit at Lower Slobbovia. Ash from burns in adjacent areas may have been disposed of at this site. Cables and perhaps combustibles were burned near the firing pad at each firing site. Some cables were also burned near magazines TA-36-9 and -10 at the Moe site, and the residue removed. The CEARP indicates that there was a burn pit across the road from the Minie site. However, the operating group indicates that this area was never used as a burn site; it is used for detonation of unstable gas cylinders and, in the mid-1960s, the area caught on fire as a result of an explosives experiment. A burn site was also noted on the north side of the road about halfway between Moe and Lower Slobbovia, and may have copper, aluminum, and steel residues. At one time, dithekite, a mixture of nitric acid, nitrobenzene, and water, was used in firing experiments at TA-36. The standard operating procedure listed the proper disposal technique as "pouring on the ground not less than 100 feet from any building or road at Kappa Site."

WASTE INFORMATION

Materials used in the shots have included depleted uranium, beryllium, lead, copper, iron, barium, aluminum, steel, and various plastics. (Beryllium has not been used since 1977.) Other types of materials have included HE, nitric acid, nitrobenzene, liquid cyanogen, and tetranitromethane.

RELEASE INFORMATION

Since the firing residues are exposed to the atmosphere they can be mobilized through natural processes such as precipitation and wind. In 1962, barium concentrations at the Meenie site ranged from 0.028-3.89 mg/g and uranium concentrations ranged from 0.055 to 0.114 mg/g. A 1986 LANL report presents sample results for beryllium, lead, and mercury in water samples obtained from Fence Canyon at Meenie site. These were <50, <100, and <.02 micrograms/liter, respectively. Sediments showed concentrations of 2, 74, and <0.03 micrograms/liter, respectively. In 1957, soil sampling for uranium at Lower Slobbovia found 0.64 micrograms/g at the pit, 0.68 micrograms/g at the firing point, and 0.68 micrograms/g at the bunker. In a field study at Lower Slobbovia in 1974, the maximum measured concentration of uranium in soil was 220 +/-22 micrograms/g, whereas for Meenie site it was 12.3 +/-1.2 micrograms/g. Searches of Lower Slobbovia have been made to recover any remaining intact detonators or explosive material. On these occasions only metal and plastic fragments were found. The HE material was not recovered. At the I-J site, uranium shards were visible on the soil during the E.R. site reconnaissance visit in 1988. DOE Environmental Problem #1 addressed the presence of thorium-230, thorium-232, uranium (all isotopes), potassium-40, and cesium-137 in analyses from TA-36 firing sites. LANL response is contained in Section 3.2.4.3, number 2 of the Revised Implementation Plan in Response to DOE Environmental Survey Team Preliminary Report, January 12, 1990. Routine surveillance is continuing to determine any radionuclide accumulation or accelerated transport, and remedial actions will be determined by the results.

NOTES

SWMU No. 36-004(c) now includes former SWMU No. 36-008, Waste Explosive Treatment.

(continued)

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
36-004(a)	TA36-1-CA-I/A-HW/RW	? 36.008		EENIE, TA-36-3, -4
	TA36-6-L-I/A-HW/RW	? 36.009		
	TA36-5-CA-I-HW			
36-004(b)	TA36-1-CA-A/I-HW/RW	? 36.008		MEENIE, TA-36-5, -6
	TA36-6-L-I/A-HW/RW	? 36.009		
	TA36-5-CA-I-HW			
36-004(c)	TA36-1-CA-A/I-HW/RW	? 36.008		MINIE, TA-36-7, -8
	TA36-6-L-I/A-HW/RW	? 36.009		
	TA36-9-CA-A-HW			
	TA36-5-CA-I-HW			
36-004(d)	TA36-1-CA-A/I-HW/RW	? 36.008		LOWER SLOBBOVIA, TA-36-11, -12, -36
	TA36-3-CA-I-HW	? 36.009		
	TA36-6-L-I/A-HW/RW			
	TA36-5-CA-I-HW			
	TA36-2-CA-I-HW/RW			
36-004(e)	TA36-1-CA-A/I-HW/RW	15.010	Tsk 23 : 1638	I-J, TA-36-55
	TA36-6-L-I/A-HW/RW	? 36.008		
	TA36-5-CA-I-HW	? 36.009		
36-004(f)	TA36-1-CA-A/I-HW/RW	? 36.008		MOE, TA-36-9, -10
	TA36-6-L-I/A-HW/RW	? 36.009		
	TA36-5-CA-I-HW			

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-36
TYPE OF UNIT(s) : BONEYARD
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SOLID WASTE
RADIOACTIVE WASTE
HAZARDOUS WASTE

UNIT INFORMATION

During 1987 CEARP field survey and in follow-up surveys, cans marked "isopentane" and several unmarked drums and cylinders were noted. Since the CEARP survey, the boneyard has undergone a major cleanup. Cans marked "isopentane" and several unmarked drums and cylinders have been properly disposed. Uranium-contaminated iron and steel are no longer stored in this area. In addition, a large outdoor material storage area at Minie Site was noted to be used for storage of iron and steel (which are in some cases contaminated with uranium) and other pieces of seldom-used material. The RFA indicates that the boneyard is across the road from Bunker 7.

WASTE INFORMATION

The boneyard formerly stored 2 to 3 lead sheets, uranium-contaminated steel, and iron. It is unknown what is in the unmarked drums and cylinders. A 1988 field survey reports isopentane in some of these containers. The boneyard stores lead and uranium-contaminated items.

RELEASE INFORMATION

Whether any soil contamination has resulted from the storage operation is not known. DOE Environmental Problem #23 addressed the presence of barium, beryllium, chromium, copper, lead, silver, zinc, thallium, thorium-232, uranium (all isotopes), potassium-40, cesium-137, and possibly Terpene C10H16 in samples from the boneyard. LANL response is contained in Section 4.5.2.3, number 4 of the Revised Implementation Plan in Response to DOE Environmental Survey Team Preliminary Report, January 12, 1990. The Discussion indicates this to be an inactive waste site to be covered by the DOE Environmental Restoration Program once a second RCRA permit for mixed waste cleanup is received.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
36-005	TA36-7-CA-A-HW/RW	36.001		

SUMMARY

LOCATION : TA-36
TYPE OF UNIT(s) : SURFACE DISPOSAL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : ?
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

Cables and similar residuals are reported to have been disposed of to the north of Eenie along the canyon.

WASTE INFORMATION

The debris is solid waste. Hazardous constituents are unlikely.

RELEASE INFORMATION

There have been no known releases from this disposal area.

NOTES

SWMU No. 36-006(b), identified by the CEARP as a surface disposal site, was later determined by field checking to be soil excavated on site, and destined to be used for fill material. It has been moved to Appendix C.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
36-006	TA36-8-L-1-HW/RW			NORTH OF EENIE

SUMMARY

LOCATION : TA-36
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE
PRODUCT

UNIT INFORMATION

Preparation buildings TA-36-4, -5, -7, and -11 [36-007(a), (b), (c), and (d)] are used to store small quantities of solvents and waste explosives for short periods. In many cases the material stored in these buildings is product HE stored for upcoming shots. These four sites are active satellite storage areas. Building TA-36-8 [36-007(e)] is a small permitted treatment/storage (TS) area. Another storage area was at the Minie Site [36-007(f)].

WASTE INFORMATION

The material stored includes solvents, HE waste, and product HE.

RELEASE INFORMATION

There have been no known hazardous releases. Past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents. The waste HE not detonated is taken to TA-16 for burning, and the active storage areas are inspected regularly by LANL staff.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
36-007(a)	TA36-10-CA-A-HW			TA-36-4
36-007(b)	TA36-10-CA-A-HW			TA-36-5
36-007(c)	TA36-10-CA-A-HW			TA-36-7
36-007(d)	TA36-10-CA-A-HW			TA-36-11
36-007(e)	TA36-10-CA-A-HW			TA-36-8
36-007(f)	TA36-10-CA-A-HW			MINIE

NOTES

This SWMU has been renumbered to SWMU No. 36-004(c).

SUMMARY

LOCATION : TA-36
TYPE OF UNIT(s) : MORTAR IMPACT AREA
UNIT USE : TESTING
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1944 - 1948
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

This unit consists of a possible mortar impact area located in Upper Pajarito Canyon.

WASTE INFORMATION

The waste that may be present at the impact area is HE and buried shell residuals.

RELEASE INFORMATION

Ordnance and HE could have been present in this area; the extent of releases, if any, from these wastes is unknown.

NOTES

This SWMU was formerly SWMU No. 0-011(g).

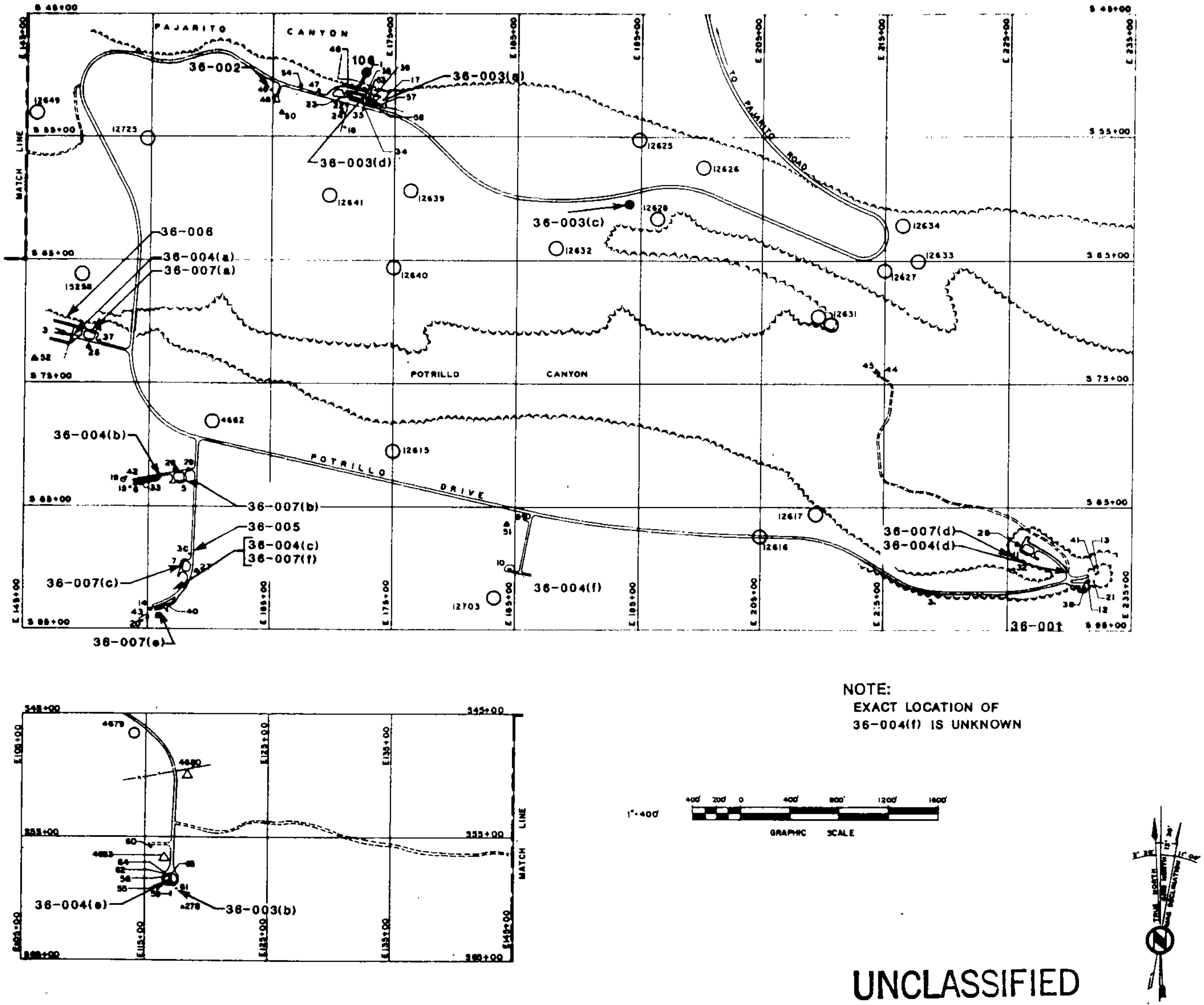
SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
36-009	TA0-11-CA-I-HW			PAJARITO CANYON

TA-36 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
36-001	36-1, 36-2
36-002	36-1, 36-3
36-003(a)	36-1, 36-3
36-003(b)	36-1
36-003(c)	36-1
36-003(d)	36-1
36-004(a)	36-1
36-004(b)	36-1
36-004(c)	36-1
36-004(d)	36-1
36-004(e)	36-1
36-004(f)	36-1
36-005	36-1
36-006	36-1
36-007(a)	36-1
36-007(b)	36-1
36-007(c)	36-1
36-007(d)	36-1
36-007(e)	36-1
36-007(f)	36-1
36-009	36-4

NOTE: Some structure locations contain more than one SWMU.



EXPLANATION

36-001 SWMU LOCATION

010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBERS (SEE APPENDIX A)

LEGEND: ARCHY SITE STATUS

△ EXCAVATED

○ UNEXCAVATED

REV. 1 7/11/90

FIGURE 36-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-36

UNIVERSITY OF CALIFORNIA

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-36 KAPPA SITE

ENG-R5118

UNCLASSIFIED

301215 02 01 B160

UNCLASSIFIED

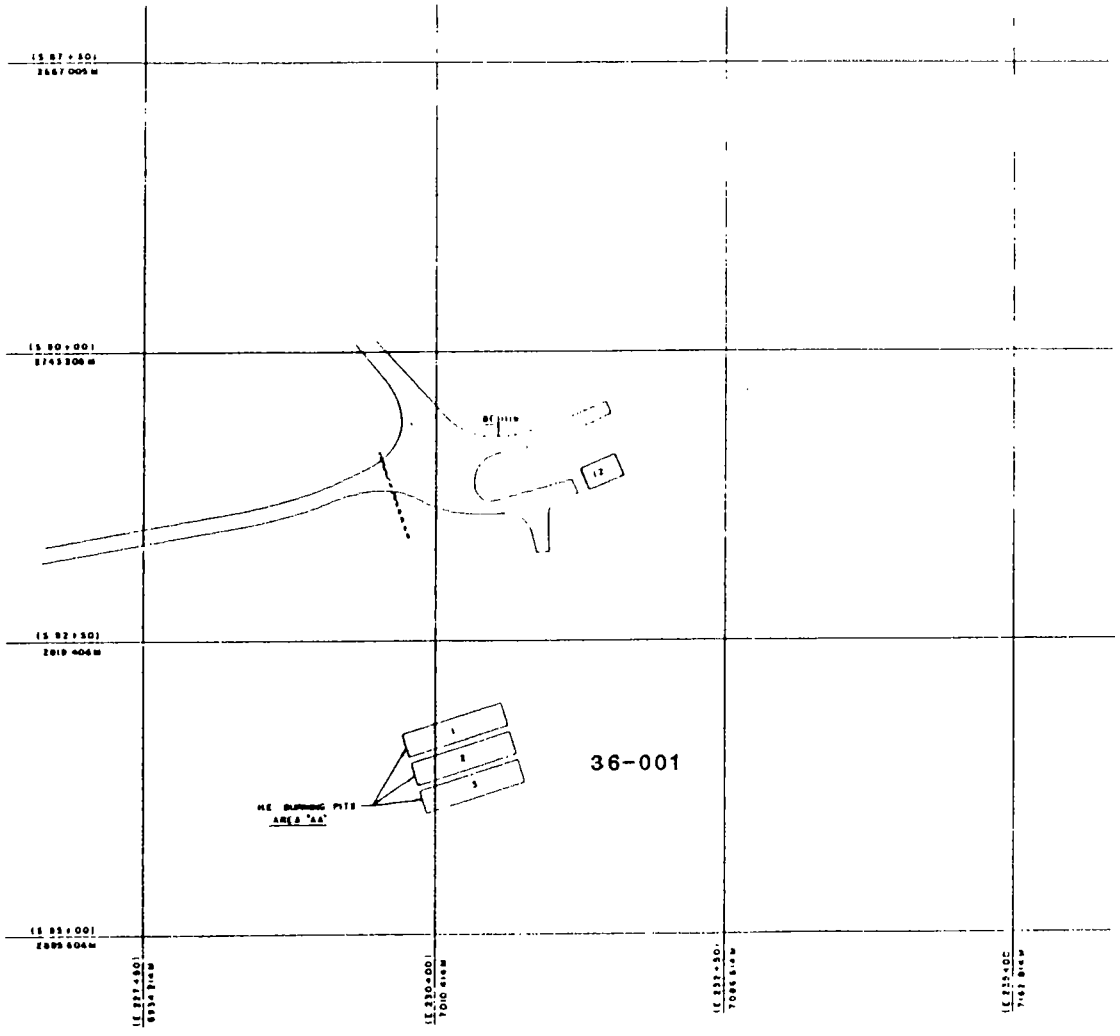
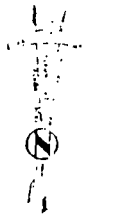


Figure MDA-AA. Materials Disposal Area AA

LOCATION PLAN

EXPLANATION

36-001 SWMU LOCATION



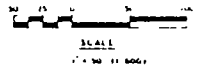
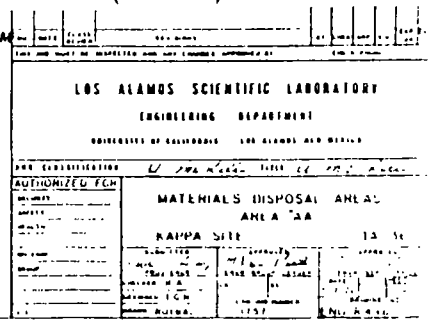
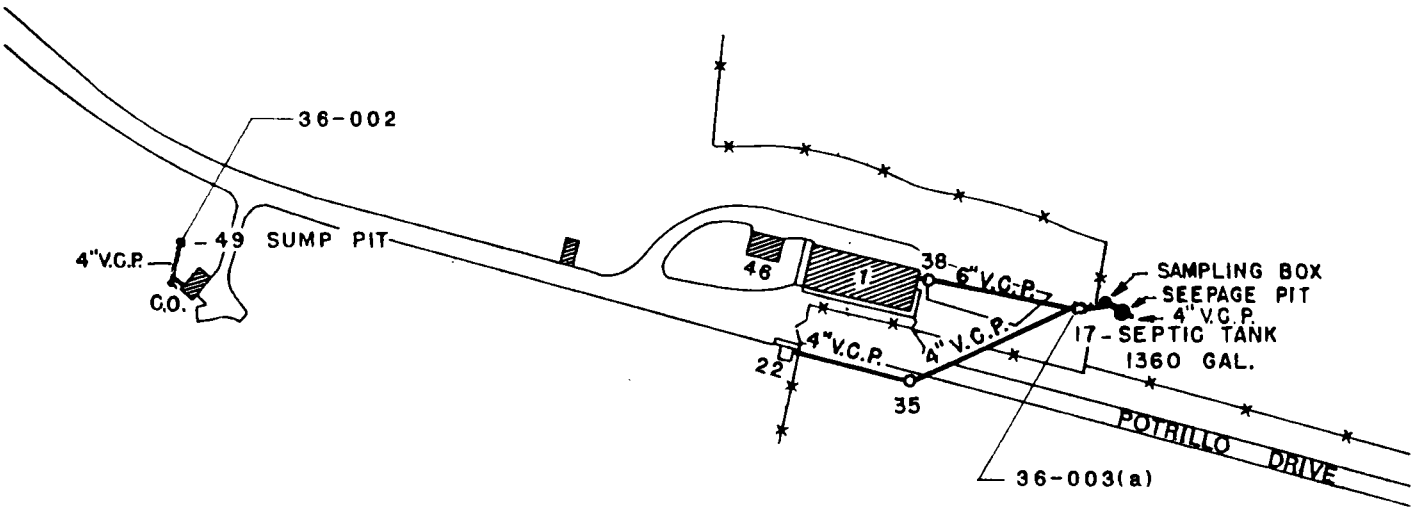


FIGURE 36-2

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-36



301215 02 01 A22



TA-36

FROM THE ZIA COMPANY SEWER SYSTEM DRAWING S-2 OF E-3

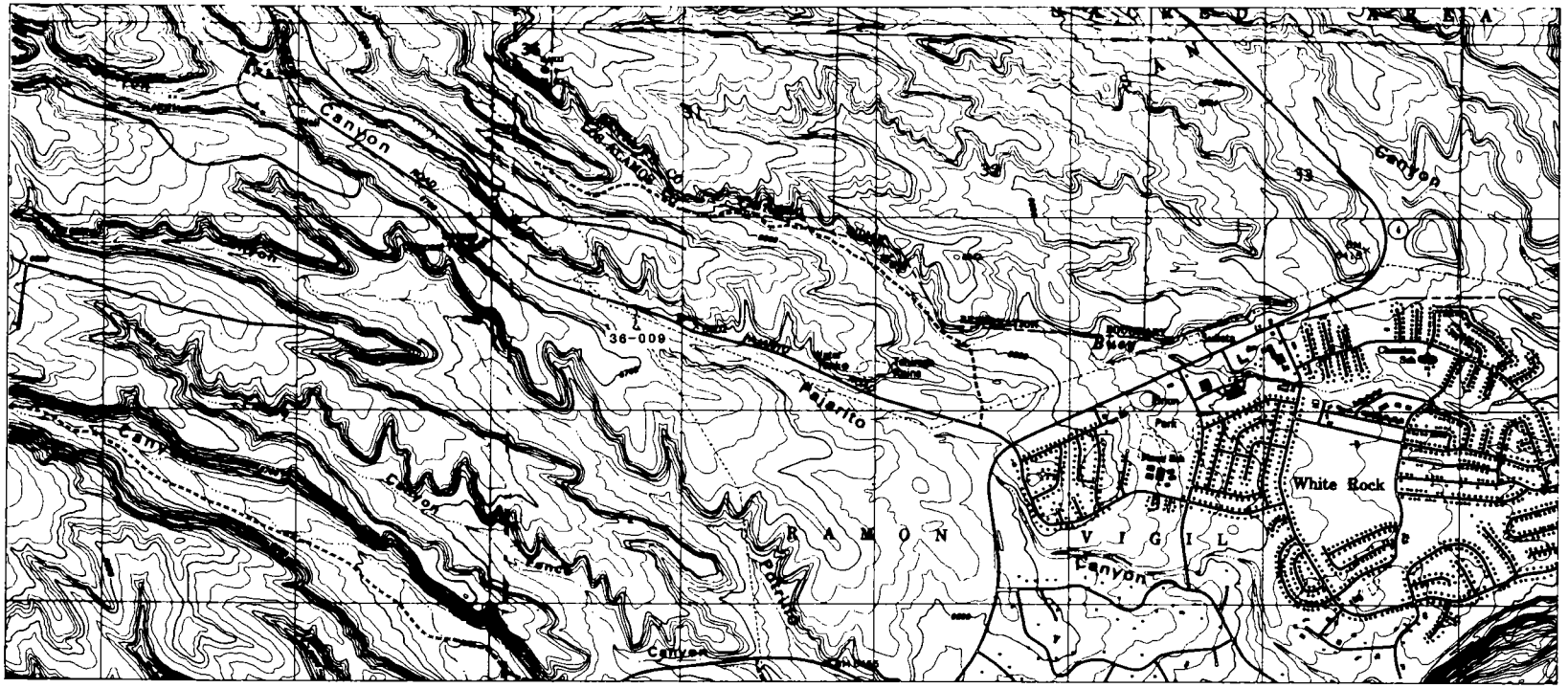
EXPLANATION

36-001 SWMU LOCATION

FIGURE 36-3

SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-36

301215.03.02.01 A2



MAP SOURCE: U.S. Geological Survey; 15' Topographic Maps: Frijoles, New Mexico (1984), White Rock, New Mexico (1984)

EXPLANATION

36-001 SWMU LOCATION

NOTE: EXACT LOCATION OF 36-009 IS UNKNOWN

SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

N

REV.1 7/11/90

FIGURE 36-4
SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-36

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-36-1	KAPPA-1	LABORATORY & OFFICE BLDG		S 55+00 E175+00
TA-36-2	KAPPA-2		UNASSIGNED	
TA-36-3	KAPPA-3	CONTROL BUILDING		S 75+00 E145+00
TA-36-4	KAPPA-4	PREPARATION BUILDING		S 75+00 E135+00
TA-36-5	KAPPA-5	PREPARATION BUILDING		S 85+00 E155+00
TA-36-6	KAPPA-6	CONTROL BUILDING		S 85+00 E135+00
TA-36-7	KAPPA-7	PREPARATION BUILDING		S 95+00 E135+00
TA-36-8	KAPPA-8	CONTROL BUILDING		S 95+00 E155+00
TA-36-9	KAPPA-9	MAGAZINE		S 95+00 E185+00
TA-36-10	KAPPA-10	MAGAZINE		S 85+00 E185+00
TA-36-11	KAPPA-11	PREPARATION BUILDING		S 85+00 E225+00
TA-36-12	KAPPA-12	CONTROL BUILDING		S 95+00 E235+00
TA-36-13	KAPPA-13	INSTRUMENT CHAMBER		S 95+00 E235+00
TA-36-14	KAPPA-14	FIRING BOX, DOUBLE		S 95+00 E155+00
TA-36-15	KAPPA-15	FIRING BOX, DOUBLE		S 85+00 E155+00
TA-36-16	KAPPA-16		REMOVED '503	
TA-36-17	KAPPA-17	TANK, SEPTIC		S 55+00 E175+00
TA-36-18	KAPPA-18	TANK, WATER		S 55+00 E175+00
TA-36-19	KAPPA-19	INSTRUMENT CHAMBER		S 85+00 E155+00
TA-36-20	KAPPA-20	INSTRUMENT CHAMBER		S 95+00 E155+00
TA-36-21	KAPPA-21	FIRING BOX, DOUBLE		S 95+00 E235+00
TA-36-22	KAPPA-22	GUARD STATION	STATION = 460	S 55+00 E175+00
TA-36-23	KAPPA-23	ANTENNA TOWER		S 55+00 E175+00
TA-36-24	KAPPA-24	TRANSFORMER STATION		S 55+00 E175+00
TA-36-25	KAPPA-25	TRANSFORMER STATION		S 75+00 E145+00
TA-36-26	KAPPA-26	TRANSFORMER STATION		S 85+00 E155+00
TA-36-27	KAPPA-27	TRANSFORMER STATION		S 95+00 E155+00
TA-36-28	KAPPA-28	TRANSFORMER STATION		S 85+00 E225+00
TA-36-29	KAPPA-29	WIGWAG		S 85+00 E155+00
TA-36-30	KAPPA-30	WIGWAG		S 85+00 E155+00
TA-36-31	KAPPA-31	WIGWAG		S 95+00 E215+00
TA-36-32	KAPPA-32	SIREN PLATFORM		S 95+00 E225+00
TA-36-33	KAPPA-33	RETAINING WALL		S 85+00 E155+00
TA-36-34	KAPPA-34	MANHOLE, WATER		S 55+00 E175+00
TA-36-35	KAPPA-35	MANHOLE STORM DRAINAGE		S 55+00 E175+00
TA-36-36	KAPPA-36	TEST STANCHION HOIST		S 95+00 E235+00
TA-36-37	KAPPA-37	WIGWAG		S 75+00 E155+00
TA-36-38	KAPPA-38	MANHOLE, SANITARY		S 55+00 E175+00
TA-36-39	KAPPA-39	RETAINING WALL		S 55+00 E175+00
TA-36-40	KAPPA-40	RETAINING WALL		S 85+00 E155+00
TA-36-41	KAPPA-41	FIRING BOX, SINGLE		S 95+00 E235+00
TA-36-42	KAPPA-42	FIRING BOX, SINGLE		S 85+00 E155+00
TA-36-43	KAPPA-43	FIRING BOX, SINGLE		S 95+00 E155+00
TA-36-44	KAPPA-44	STORAGE BUILDING	ABANDONED 1983	S 75+00 E215+00
TA-36-45	KAPPA-45	STORAGE BUILDING	ABANDONED 1983	S 75+00 E215+00
TA-36-46	KAPPA-46	STORAGE BUILDING		S 55+00 E175+00
TA-36-47	KAPPA-47	STORAGE BUILDING		S 55+00 E165+00
TA-36-48	KAPPA-48	CONTROLLED ENVIRONMENT BLDG		S 55+00 E165+00
TA-36-49	KAPPA-49	SUMP PIT		S 55+00 E165+00
TA-36-50	KAPPA-50	TRANSFORMER STATION		S 55+00 E165+00
TA-36-51	KAPPA-51	TRANSFORMER STATION		S 85+00 E185+00
TA-36-52	KAPPA-52	METERING STATION		S 75+00 E145+00
TA-36-53	KAPPA-53	STORAGE SHED		S 55+00 E175+00
TA-36-54	KAPPA-54	TRACTOR SHED		S 55+00 E165+00
TA-36-55	KAPPA-55	CONTROL BLDG.	FORMERLY TA-15-31	S 55+00 E115+00
TA-36-56	KAPPA-56	GUN EMPLACEMENT	FORMERLY TA-15-207	S 55+00 E115+00
TA-36-57	KAPPA-57	TRAILER, OFFICE	FORMERLY TA-0-504	S 55+00 E175+00
TA-36-58	KAPPA-58	TRAILER, OFFICE	FORMERLY TA-0-598	S 55+00 E175+00
TA-36-59	KAPPA-59	TRANSFORMER STATION	FORMERLY TA-15-58	S 55+00 E115+00
TA-36-60	KAPPA-60	TANK, WATER UG	FORMERLY TA-15-44	S 55+00 E115+00
TA-36-61	KAPPA-61	TANK, SEPTIC	FORMERLY TA-15-67	S 55+00 E115+00
TA-36-62	KAPPA-62	MANHOLE, ELECTRICAL	FORMERLY TA-15-164	S 55+00 E115+00
TA-36-63	KAPPA-63	MANHOLE, ELECTRICAL	FORMERLY TA-15-165	S 55+00 E115+00
TA-36-64	KAPPA-64	MANHOLE, ELECTRICAL	FORMERLY TA-15-167	S 55+00 E115+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

UNCLASSIFIED

REV.1 7/11/90

FIGURE 36-5

TA-36 STRUCTURE LOCATION INDEX

REV	DATE	REVISION	BY	CKD / APP
15	9-7-83	REVISED TITLE BLOCK & DWG TO STATUS OF 8-8-83 HS		

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-36 KAPPA SITE

SEC. CLASSIFICATION — CLASS: U

SUBMITTED — RECOMMENDED — APPROVED

DATE: 9-7-83 — SHEET NO: 1 OF 2 — DRAWING NO: ENG-R5118

301215 02 01 148

TA-37
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 37, called the "Permanent Magazine Area," consists of twenty-four magazines used to store high explosives. These magazines are not opened at TA-37 except for periodic inspections (DOE, 1987a).

TA-37 lies at elevations between 6,820 and 7,320 feet asl. It is located on a narrow mesa formed between Water Canyon on the south and a small unnamed branch of Water Canyon on the north. The technical area lies on welded Bandelier Tuff, in the Ponderosa Pine/Pinon-Juniper, Shrub-Grass-Forb, and Ponderosa Pine-fir overstory vegetation zones. Soil at TA-37 consists of Tocal very fine sandy loam, Frijoles very fine sandy loam, Carjo loam, Typic Ustorthents-Rock outcrop complex, and rock outcrop (Nyhan et al., 1978).

At TA-37, the potentiometric surface of the main aquifer in the Los Alamos area lies at about 6,000 to 6,140 feet asl. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-37

37-001 SEPTIC SYSTEM

SUMMARY

LOCATION : TA-37
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : ?
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

This septic tank, TA-37-28, served Building TA-37-1, which is an office building or a guard house. According to the registration of an unpermitted individual liquid waste system, TA-37-28 served a storage building. This tank is currently inactive. TA-37-28 had a capacity of 540 gallons and overflowed into a 2,400-sq ft trench. The tank has EID registration number LA-43.

WASTE INFORMATION

The septic tank most likely received only sanitary waste.

RELEASE INFORMATION

Because it is not known whether this tank discharged or was pumped, there are no known releases from this unit.

SWMU CROSS-REFERENCE LIST

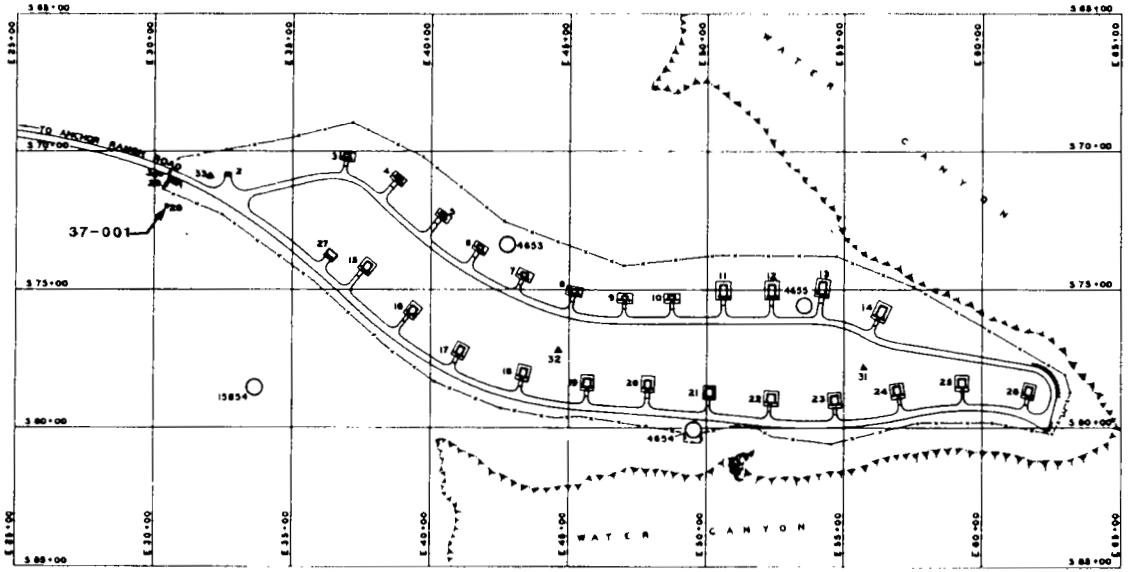
SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
37-001	TA37-2-ST-A-SW			TA-37-28

TA-37 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
37-001	37-1

NOTE: Some structure locations may contain more than one SWMU.

301215 02 01 874



EXPLANATION

37-001 SWMU LOCATION

NOTES

NO NPDES OUTFALLS.

LEGEND: ARCHY SITE STATUS

△ EXCAVATED

○ UNEXCAVATED

FIGURE 37-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-37

1" = 200'

GRAPHIC SCALE

UNCLASSIFIED

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-37 MAGAZINE AREA-C

DRAWN

DATE 9-12-95

SHEET NO. 1 OF 1

ENG-RDRD

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-37-1	MAC-1	OFFICE BUILDING		S70+00 E30+00
TA-37-2	MAC-2	TRIM BLDG		S70+00 E35+00
TA-37-3	MAC-3	MAGAZINE	FORMERLY 301	S70+00 E35+00
TA-37-4	MAC-4	MAGAZINE	FORMERLY 302	S70+00 E40+00
TA-37-5	MAC-5	MAGAZINE	FORMERLY 303	S70+00 E40+00
TA-37-6	MAC-6	MAGAZINE	FORMERLY 304	S70+00 E40+00
TA-37-7	MAC-7	MAGAZINE	FORMERLY 305	S75+00 E40+00
TA-37-8	MAC-8	MAGAZINE	FORMERLY 306	S75+00 E45+00
TA-37-9	MAC-9	MAGAZINE	FORMERLY 307	S75+00 E45+00
TA-37-10	MAC-10	MAGAZINE	FORMERLY 308	S75+00 E45+00
TA-37-11	MAC-11	MAGAZINE	FORMERLY 701	S75+00 E50+00
TA-37-12	MAC-12	MAGAZINE	FORMERLY 702	S75+00 E50+00
TA-37-13	MAC-13	MAGAZINE	FORMERLY 703	S75+00 E50+00
TA-37-14	MAC-14	MAGAZINE	FORMERLY 704	S75+00 E55+00
TA-37-15	MAC-15	MAGAZINE	FORMERLY 501	S75+00 E55+00
TA-37-16	MAC-16	MAGAZINE	FORMERLY 502	S75+00 E55+00
TA-37-17	MAC-17	MAGAZINE	FORMERLY 503	S75+00 E40+00
TA-37-18	MAC-18	MAGAZINE	FORMERLY 504	S75+00 E40+00
TA-37-19	MAC-19	MAGAZINE	FORMERLY 505	S80+00 E45+00
TA-37-20	MAC-20	MAGAZINE	FORMERLY 506	S80+00 E45+00
TA-37-21	MAC-21	MAGAZINE	FORMERLY 507	S80+00 E50+00
TA-37-22	MAC-22	MAGAZINE	FORMERLY 508	S80+00 E50+00
TA-37-23	MAC-23	MAGAZINE	FORMERLY 509	S80+00 E50+00
TA-37-24	MAC-24	MAGAZINE	FORMERLY 510	S80+00 E55+00
TA-37-25	MAC-25	MAGAZINE	FORMERLY 511	S80+00 E55+00
TA-37-26	MAC-26	MAGAZINE	FORMERLY 512	S80+00 E60+00
TA-37-27	MAC-27	STORAGE BUILDING		S80+00 E60+00
TA-37-28	MAC-28	TANK	SEPTIC	S75+00 E35+00
TA-37-29	MAC-29	TANK	WATER-UNDERGROUND	S70+00 E30+00
TA-37-30	MAC-30	MANHOLE	SANITARY	S70+00 E30+00
TA-37-31	MAC-31	TRANSFORMER STATION		S70+00 E30+00
TA-37-32	MAC-32	TRANSFORMER STATION		S80+00 E35+00
TA-37-33	MAC-33	TRANSFORMER STATION		S75+00 E45+00
				S70+00 E30+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

UNCLASSIFIED

FIGURE 37-2

TA-37 STRUCTURE LOCATION INDEX

REV	DATE	REVISION	BY	CKD	APP
13	8-18-83	REVISED TITLE BLOCK & DWG. TO STATUS OF 7-27-83	HS		

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-37 MAGAZINE AREA -C

SEC CLASSIFICATION: CLASS U
DATE 8-18-83
SHEET NO. 1 of 1
DATE 8-18-83
DRAWING NO. ENG-R5119

301215 02 01 B32

TA-39
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 39 is used as a remote high explosives firing site. Experiments conducted at the site involve research on equations of state, shock wave phenomena, development of implosion systems, development and application of explosively produced pulses of electrical power, and production of high magnetic fields. The area includes active and inactive open-air firing sites and a high-velocity gas gun facility. Materials used in shots have included beryllium, mercury, aluminum, copper, brass, iron, lead, steel, thallium, cadmium, chromium, thorium, and natural and depleted uranium (DOE, 1987a). The area will continue to be used for high explosives research. TA-39 includes the location of former TA-56.

TA-39 lies at elevations between about 6,300 and 6,960 feet asl in the southern part of the Laboratory, northeast of TA-33. The area includes much of the mesa between Water Canyon on the north and Ancho Canyon on the south. It is dissected by a northwestern branch of Ancho Canyon and by Indio Canyon. Structures are located on the floor of the branch of Ancho Canyon. Canyon walls are steep slopes or cliffs in this area. The area is underlain by Bandelier Tuff, except on the bottom of the two dissecting canyons, where it is underlain by a layer of alluvium. The area lies in the Ponderosa Pine/Pinon-Juniper, Pinon-Juniper, and Shrub-Grass-Forb overstory vegetation zones. Soil consists of fine-loamy Typic Eutroboralfs, Seaby loam, Hackroy-Rock outcrop complex, Hackroy sandy loam, Nyjack loam, Frijoles very fine sandy loam, and rock outcrop (Nyhan et al., 1978).

At TA-39, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 5,675 to 5,940 feet asl. Several hundred feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-39

39-001	MATERIAL DISPOSAL AREA Y AND OTHER LANDFILLS
39-002	ACTIVE WASTE STORAGE AREAS
39-003	INCINERATOR
39-004	FIRING SITES
39-005	SUMP AND DRAIN FIELD
39-006	SEPTIC SYSTEMS
39-007	INACTIVE WASTE STORAGE AREAS
39-008	SOIL CONTAMINATION AT GUN FIRING SITE
39-009	DRAINLINE AND OUTFALL

SUMMARY

LOCATION	: TA-39	MATERIALS MANAGED	: MIXED WASTE
TYPE OF UNIT(s)	: LANDFILL		SUSPECTED PCBs
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: SEE BELOW		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

This unit consists of a number of disposal pits. Since 1953, when TA-39 was built, most of the waste generated has been disposed of in on-site pits because of the distance to the Laboratory landfills. Trenches were constructed, filled, and covered with a soil cap. They were constructed in two separate areas in the floor plain within Ancho Canyon. The first area [39-001(a)] consists of 2 trenches, constructed in the 1960s, that were located east of Ancho Road, just north of TA-39-69 (LANL coordinates S215+00, E245+00). One trench is shown on an engineering drawing; a second trench may be closer to Ancho Road. A 1974 memo indicates that both trenches were 8-10 ft wide and 10 ft deep. The engineering drawing of 39-001(a) indicates that it was 80′ x 20′. Both trenches have been covered and a building (TA-39-69) and a volleyball court have been constructed on top of portions of the trenches. A geophysical survey of this area was conducted as part of Environmental Problem 22 during the DOE Environmental Survey. The results of this survey are not available. The other area [39-001(b)] to the north, is located to the east of Ancho Road, across from TA-39-56, at approximately S180+00, E215+00 (LANL coordinates). This area includes four trenches that were used in succession. The first trench in this area, known as Material Disposal Area Y (MDA-Y) is estimated to have been about 20′ x 150′ x 12′ deep. A second trench was constructed adjacent and parallel to MDA-Y. This second trench was also estimated to have been 20′ x 150′ x 12′. MDA-Y was used from the late 1960′s to 1970′s and the second trench was in use from about 1976 to 1981. Together they covered an area of approximately 100′ x 150′. A third trench in this area was constructed in 1981, south of and parallel to MDA-Y. This third trench was about 150′ x 40′ x 10′ deep. It was filled by 1986 and was covered with soil. The fourth trench is adjacent and parallel to the third trench. It was about 150′ x 40′ x 10′ deep. It was constructed in 1986 and was backfilled and covered with soil in accordance with state solid waste regulations in 1989.

WASTE INFORMATION

The earlier trenches near TA-39-69 reportedly contain waste that includes uranium, lead, mercury, and possible solvents, chemicals, beryllium, and PCB-containing oil. MDA-Y and the adjacent trenches received wastes from TA-39 firing sites, laboratories, and office buildings, including uranium, lead, mercury, chemicals, and oil (possible containing PCB). The fourth trench was used to dispose of nonhazardous material generated at TA-39.

RELEASE INFORMATION

These sites have not been monitored in detail, and it is unknown whether there have been hazardous releases. The MDA-Y area was investigated as Environmental Problem 14 during the DOE Environmental Survey. Three soil samples were obtained from the fourth trench, which was open, and one sample from a borehole located between the trench and the stream. The samples were analyzed for metals, HE, alpha emitters, gamma emitters, and volatile organics. Several metals were detected and acetone was detected in one sample. No HE was detected. The gamma screens indicated the presence of uranium-235 and total uranium. Potassium-40 was the only alpha emitter detected.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
39-001(a)	TA39-2-L-I/A-HW/RW	39.004 39.005		UNDER TA-36-69
39-001(b)	TA39-2-L-I/A-HW/RW MDA-Y	39.001		NEAR TA-39-56

SUMMARY

LOCATION : TA-39
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE
SOLID WASTE

UNIT INFORMATION

Several active satellite storage areas in TA-39 are listed on the 4/90 LANL Container Storage database:

SWMU NO.	STRUCTURE	OTHER LOCATION INFORMATION	MATERIAL STORED
39-002(a)	TA-39-2	NW corner	ethanol, acetone, trichloroethane, solvent-contaminated wipes
39-002(a)	TA-39-2	hallway outside Rm 184	used photo chemicals in 5-gallon containers
39-002(a)	TA-39-2	north end, outside	used vacuum pump oil contaminated with solvents, ethanol, acetone, trichloroethane, transformer oil
39-002(b)	TA-39-6	outside	ethanol, acetone, transformer oil, trichloroethane, vacuum grease
39-002(c)	TA-39-56	outside	paper and cloth contaminated with ethanol, acetone, trichloroethane, vacuum grease
39-002(d)	TA-39-57	outside bunker	unknown
39-002(e)	TA-39-69	outside, north wall	cloth rags, spent propellant, aluminum, brass, lead, steel, polyethylene, gloves, paraffin, quartz, carbon
39-002(f)	TA-39-88	outside	ethanol, acetone, copper sulfate, trichloroethane, vacuum grease, contaminated transformer oil
39-002(g)	TA-39-98	shop	freon, trichloroethane

WASTE INFORMATION

The wastes stored, as indicated above, include solvents, vacuum pump oil, vacuum grease, spent photo chemicals, metals, spend propellant, transformer oil, and freon.

RELEASE INFORMATION

It is unknown whether the drums in the storage areas have leaked. However, past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents.

NOTES

Inactive storage areas are addressed in SWMU No. 39-007. SWMU Nos. 39-002(b), (c), (g), and (h) are now addressed in SWMU Nos. 39-007(b), (a), (c), and (d), respectively. SWMU Nos. 39-002(e) and (f) have been deleted because only empty drums were noted at these areas.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
39-002(a)	**	39.002		TA-39-2
39-002(b)	**			TA-39-6
39-002(c)	**			TA-39-56
39-002(d)	**			TA-39-57
39-002(e)	**			TA-39-69
39-002(f)	**			TA-39-88
39-002(g)	**			TA-39-98

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-39
TYPE OF UNIT(s) : INCINERATOR
UNIT USE : TREATMENT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1955 - 1964
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

An incinerator, TA-39-55, burned waste generated at TA-39. The unit was removed in 1977 and placed in the landfill (39-001). The unit was a model C-15 with a 15 bushel capacity. It measured 3' x 3' x 4' high and was located between TA-39-2 and the nearest site security fence. The incinerator was used to burn combustible office waste. It has been reported that the former site of the incinerator was cleaned at the time of decommissioning. The incinerator itself was monitored for radioactivity and found to be "clean" before disposal in the landfill.

WASTE INFORMATION

Constituents of the waste are unknown.

RELEASE INFORMATION

It is unknown whether the incinerator caused a hazardous waste release.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
39-003	TA39-5-IN-I-SW	36.009		TA-39-55

SUMMARY

LOCATION	: TA-39	MATERIALS MANAGED	: HAZARDOUS WASTE
TYPE OF UNIT(s)	: FIRING SITE		RADIOACTIVE WASTE
UNIT USE	: TESTING		PCBs
OPERATIONAL STATUS	: INACTIVE/ACTIVE		
PERIOD OF USE	: SEE BELOW		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

There are several active and inactive firing sites at TA-39. The two inactive sites were completed in 1953 and were designated TA-39-7 and -8 [39-004(a) and (b)]. One active firing site was completed in 1953 and is designated TA-39-6 [39-004(c)]. The other two active firing sites are TA-39-57 and -88 [39-004(d) and (e)]. The active firing sites are pulsed power sites, which use electrical energy in addition to energy from detonating HE. These sites have large capacitor banks in bunkers beneath the firing pads and require that the assemblies be covered with dielectric oil. LANL personnel estimate that approximately 100 gallons of oil are used with each shot, much of which soaks into the soil that comprises the firing pad. Typical shots involve 10 to 100 lbs of HE; larger shots with up to 1,000 lbs of HE have been made. TA-39-57 was completed in 1958. This firing site included a 4' x 4' x 4' pit that was used for recovery of materials from the shot. When in use, the pit was filled with water to slow the velocity of the materials and aid in their recovery. After recovery was completed, the water was drained out and discharged to the ground at the site. This pit was in use in 1962, but it was replaced by plastic garbage containers full of water. TA-39-88 was built more recently and covers approximately 970 square feet. TA-39-57 is occasionally used for scrap HE detonation.

WASTE INFORMATION

Components of the shots have included uranium, mercury, lead, and beryllium. A 1955 memo indicates that thallium, platinum, paladium, germanium, zirconium, niobium, tantalum, and rhuthemium were used in the shots. In 1959, an H-5 Air Sample Data Sheet indicates that as much as 20 lbs of mercury was used in individual shots. In 1965, the level of mercury in the air near the focal point was >20 times the tolerance of the instrument immediately after the shot. Dielectric oil containing PCBs was used in the past. Currently, all oil used in shots is PCB-free. In 1963, a safety report noted that TCE was used on the firing pads to clean parts. Scrap HE is disposed of at TA-39-57.

RELEASE INFORMATION

Any residual debris from the shots or detonations that has not been picked up remains in the impact zone. The CEARP reports that in 1957, soil samples taken at TA-39-8 indicated a maximum of 1.0 micrograms beryllium/gram of soil and TA-39-7 indicated a maximum of 0.8 micrograms beryllium/gram of soil.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
39-004(a)	TA39-1-CA-1/A-HW/RW			TA-39-7
39-004(b)	TA39-1-CA-1/A-HW/RW			TA-39-8
39-004(c)	TA39-1-CA-1/A-HW/RW			TA-39-6
39-004(d)	TA39-1-CA-1/A-HW/RW	39.007		TA-39-57
39-004(e)	TA39-1-CA-1/A-HW/RW	39.008		TA-39-88

SUMMARY

LOCATION : TA-39
TYPE OF UNIT(s) : SUMP
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1953 - 1987
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

A sump served the trim building, TA-39-4. The decant from the sump discharged to a drain field. The sump and associated drain field have been removed.

WASTE INFORMATION

The sump received suspected HE liquid wastes from the trim building and possibly solvents. Any small pieces of HE would have separated from the liquid in the sump.

RELEASE INFORMATION

Contaminated soil was removed from the drain field area during decommissioning. No HE residuals are thought to remain.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
39-005	**			NEAR TA-39-4

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-39
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Two septic systems are currently active at TA-39. One system [39-006(a)] consists of a tank, TA-39-104 (formerly TA-39-12), a sand filter, and connecting drainlines. The tank has a capacity of 2,500 gallons and is registered as an Unpermitted Individual Liquid Waste System with EID Registration Number LA-44. This tank was built in 1952. In 1985, a subsurface sand filter was installed to prevent the daylighting of septic tank effluent directly to the Canyon Stream bed, according to the Environmental Assessment for the project. The sand filter is 30' x 60'. Engineering drawing ENG-R1437 (1955) shows that building TA-39-2 is connected to septic tank TA-39-12 (now TA-39-104), which is connected to the sand filter by 380 ft of 6"-dia vitrified clay pipe. Effluent from the sand filter is discharged to the stream bed via 210 ft of 4"-dia vitrified clay pipe. A 1972 memo indicates that septic tank TA-39-12 (now TA-39-104) was not functioning properly because photo processing solutions discharged to the tank were interfering with the sewage digestion processes in the tank. The practice of disposing of these solutions in the tank largely stopped. The LANL Photo-Waste Generators (1990) database indicates that approximately 1 gallon/month of tray and sink photo waste is discharged to the septic system. The filter was destroyed in 1977, and was rebuilt and returned to service in 1978. The Active Septic Tank Systems List (12/89) documents septic tank TA-39-132 [39-006(b)]. TA-39-132 was installed in 1985 and presently serves the pulsed power building. Its overflow discharges into a leach field and it has a capacity of 1,000 gallons.

WASTE INFORMATION

The TA-39-104 septic system handles sanitary and possibly photo processing wastes. Until recently small quantities of solvents and other chemicals from labs may have been discharged to the septic system. The TA-39-132 system receives only sanitary waste.

RELEASE INFORMATION

Overflow from TA-39-12 (now TA-39-104) was noted to be daylighting in 1973. Impacts to the soil are unknown. As of March 1988, no flow had emerged from the TA-39-104 sand filter. No releases from the TA-39-132 septic system have been noted. The extent of hazardous releases are not known.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
39-006(a)	TA39-3-CA/ST-I/A-RW/HW	39.006		TA-39-104, -12
39-006(b)	**			TA-39-132

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-39
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : ? - ?
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

Waste storage areas have been noted at several locations in TA-39; as these areas are not identified on the 4/90 LANL Container Storage Area database, they are assumed to be inactive. 1) The RFA noted a used oil container storage area at TA-39-63 [39-007(a)]. It is described as a 12 sq ft area with 2 steel drums on pallets. The waste oil had been removed by 1988. 2) Building TA-39-4 [39-007(b)] was listed as a satellite storage area in the 1988 LANL Container Storage Area database. The CEARP notes that TA-39-4 was also used for short-term storage of small quantities of scrap HE. This building has residual HE contamination. 3) A 1988 field survey noted additional container storage areas at TA-39-103 [39-007(c)] and at a boneyard south of TA-39-24 [39-007(d)]. The boneyard area consisted of a bermed asphalt pad for oil storage. 4) A waste storage area consisting of a shelter was noted north of MDA-Y [39-007(e)] on the 1988 field survey. This area was established to receive hazardous wastes to prevent hazardous waste disposal in the MDA-Y area trenches to prevent hazardous waste disposal in the MDA-Y area trenches. This storage area was removed in 1989 when the fourth landfill trench was closed.

WASTE INFORMATION

The wastes stored at these areas are as follows:

SWMU NO.	STRUCTURE	WASTES STORED
39-007(a)	TA-39-63	waste oil containing lead and solvents
39-007(b)	TA-39-4	scrap HE, unknown waste liquids
39-007(c)	TA-39-103	unknown waste liquids
39-007(d)	boneyard	waste oil
39-007(e)	near MDA-Y	lead, oil, organic solvents

RELEASE INFORMATION

It is unknown whether the drums that were in storage leaked. TA-39-4 is contaminated with HE, and it is unknown whether a release has occurred. However, past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
39-007(a)	**	39.003		TA-39-63
39-007(b)	TA39-7-CA-A-HW			TA-39-4
39-007(c)	**			TA-39-103
39-007(d)	**			SOUTH OF TA-39-24
39-007(e)	**			NORTH OF MDA-Y

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-39
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1960 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
HAZARDOUS WASTE

UNIT INFORMATION

There was a gun firing area located west of TA-39-137. The gun used gas as a propellant and projectiles were shot at targets on the cliff face. Neither the projectiles nor the targets were removed from the cliff face or from the talus at the base of the cliff. The gun was used from 1960 to 1975.

WASTE INFORMATION

The projectiles and targets included beryllium, lead, aluminum, and depleted uranium.

RELEASE INFORMATION

The extent of any releases is unknown.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
39-008	TA39-1-CA-1/A-HW/RW			WEST OF TA-39-137

SUMMARY

LOCATION : TA-39
TYPE OF UNIT(s) : OUTFALL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

A drainline from building TA-39-69, light gas gun facility, discharges noncontact cooling water to an outfall with NPDES number 04A141. The NPDES permit application for this outfall was submitted to EPA in 11/87.

WASTE INFORMATION

Constituents of the cooling water are unknown.

RELEASE INFORMATION

It is unknown whether hazardous releases have occurred.

NOTES

The location of this SWMU is within the current boundaries of TA-72.

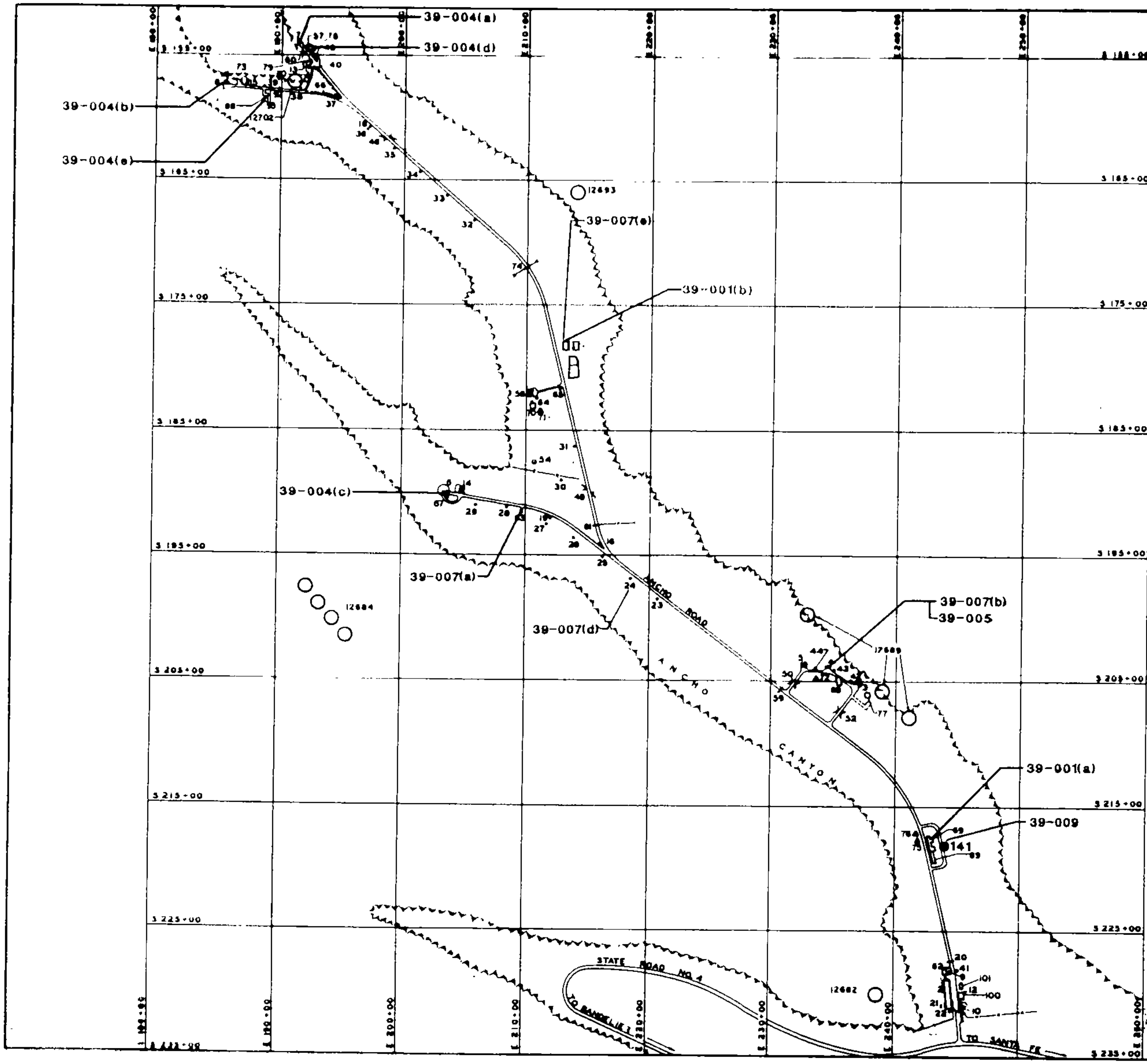
SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
39-009	**			TA-39-69

** No corresponding E. R. Program unit.

TA-39 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
39-001(a)	39-1
39-001(b)	39-1, 39-7
39-002(a)	39-3
39-002(b)	39-4
39-002(c)	39-4
39-002(d)	39-5
39-002(e)	39-3
39-002(f)	39-5
39-002(g)	39-3
39-003	39-2
39-004(a)	39-1
39-004(b)	39-1
39-004(c)	39-1
39-004(d)	39-1, 39-5
39-004(e)	39-1, 39-5
39-005	39-1
39-006(a)	39-6
39-006(b)	Not shown, location unknown
39-007(a)	39-1
39-007(b)	39-1
39-007(c)	39-3
39-007(d)	39-1, 39-4
39-007(e)	39-1
39-008	39-4
39-009	39-1



EXPLANATION

39-001 SWMU LOCATION

010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBER (SEE APPENDIX A)

NOTES

UNIT 39-005: UNIT IS LOCATED NEAR TA-39-4
UNIT 39-002(g): APPROXIMATE LOCATION
UNIT 39-002(h): APPROXIMATE LOCATION

LEGEND: ARCHY SITE STATUS
△ EXCAVATED
○ UNEXCAVATED

UNCLASSIFIED

1" = 400' GRAPHIC SCALE

REV.1 6/25/90

FIGURE 39-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-39

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

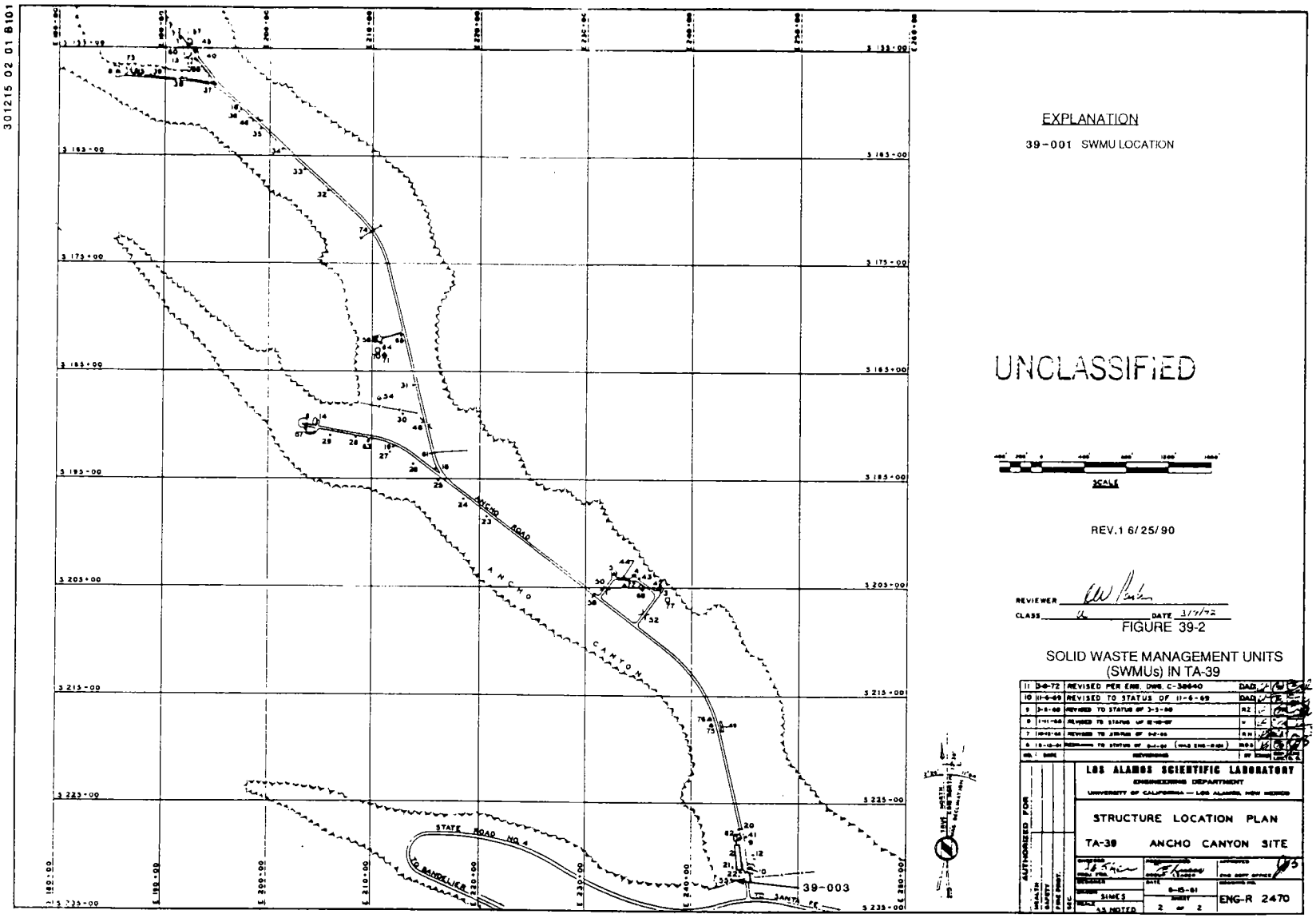
FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN

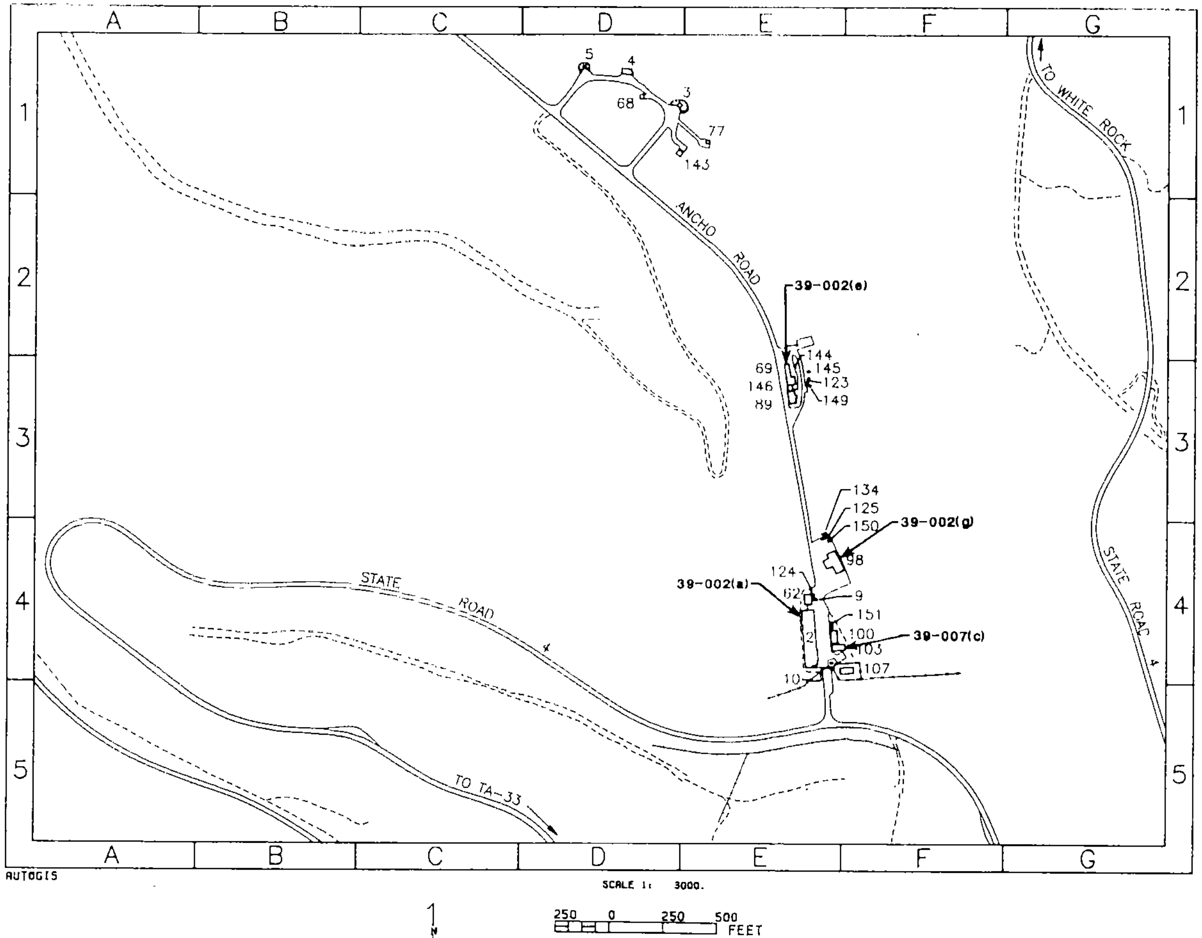
TA-39 ANCHO CANYON SITE

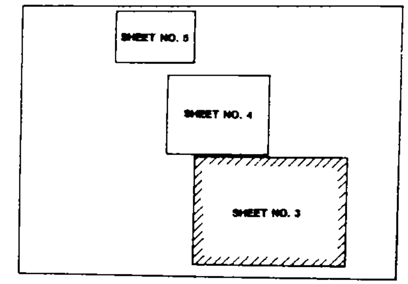
ENG-R5120

301215 02 01 B49


301215 02 01 B101
ANCHO ROAD
ANCHO CANYON
STATE ROAD NO. 4
TO BANDELIER
TO SANTA FE
39-003
EXPLANATION
39-001 SWMU LOCATION
UNCLASSIFIED
SCALE
REV.1 6/25/90
REVIEWER
CLASS
DATE 3/7/92
FIGURE 39-2
SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-39
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO
STRUCTURE LOCATION PLAN
TA-39 ANCHO CANYON SITE
ENG-R 2470

TA-39





TA-39 MAP GUIDE

EXPLANATION

39-001 SWMU LOCATION

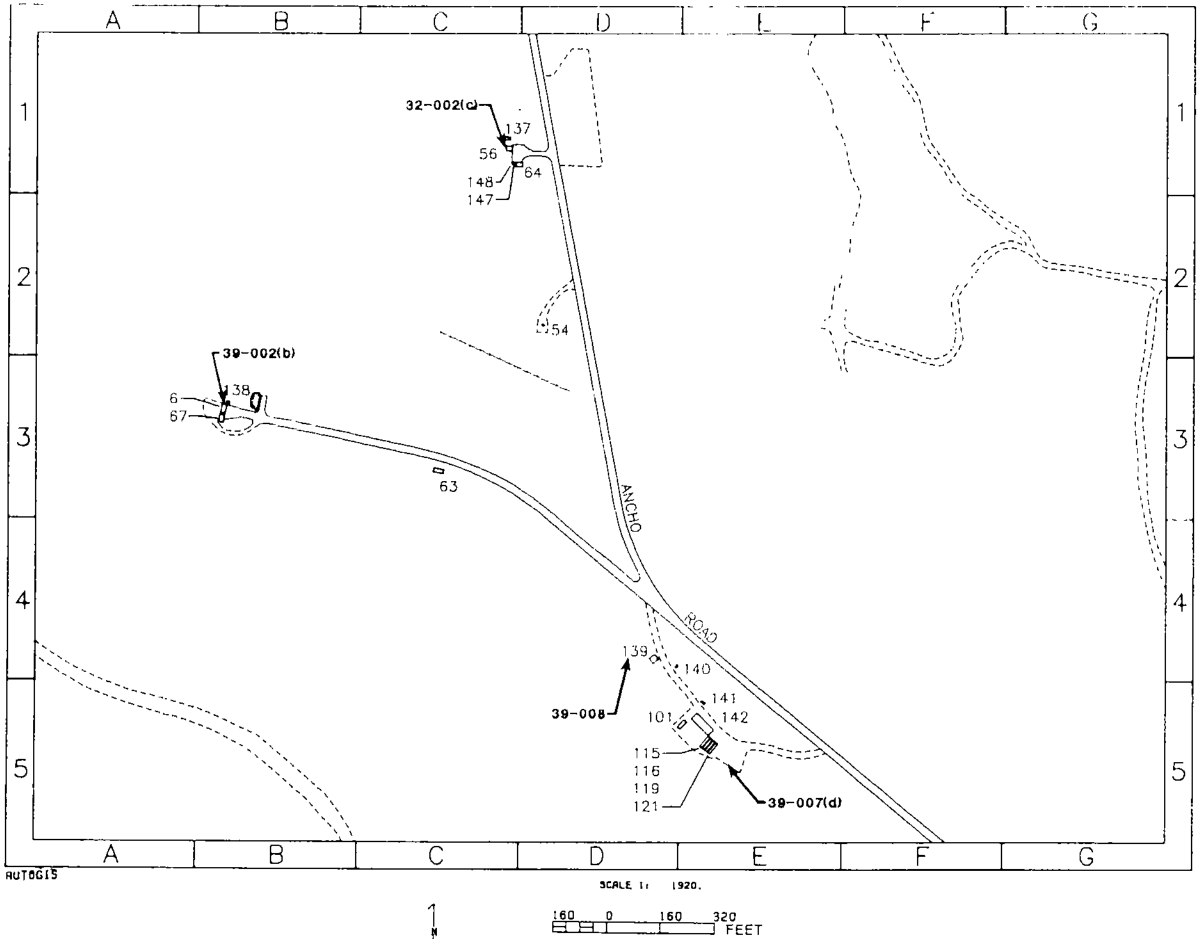
REV.1 6/25/90

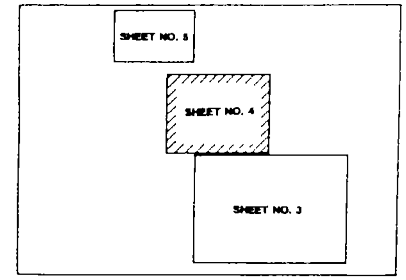
FIGURE 39-3

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-39

UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION MAP
TA-39 ANCHO CANYON SITE
DRAWN C. SANDOVAL
CHECKED M. SALAZAR
ENG-R 5120

TA-39





TA-39 MAP GUIDE

EXPLANATION

39-001 SWMU LOCATION

REV.1 6/25/90

FIGURE 39-4

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-39

UNIVERSITY OF CALIFORNIA

Los Alamos National Laboratory

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION MAP

TA-39 ANCHO CANYON SITE

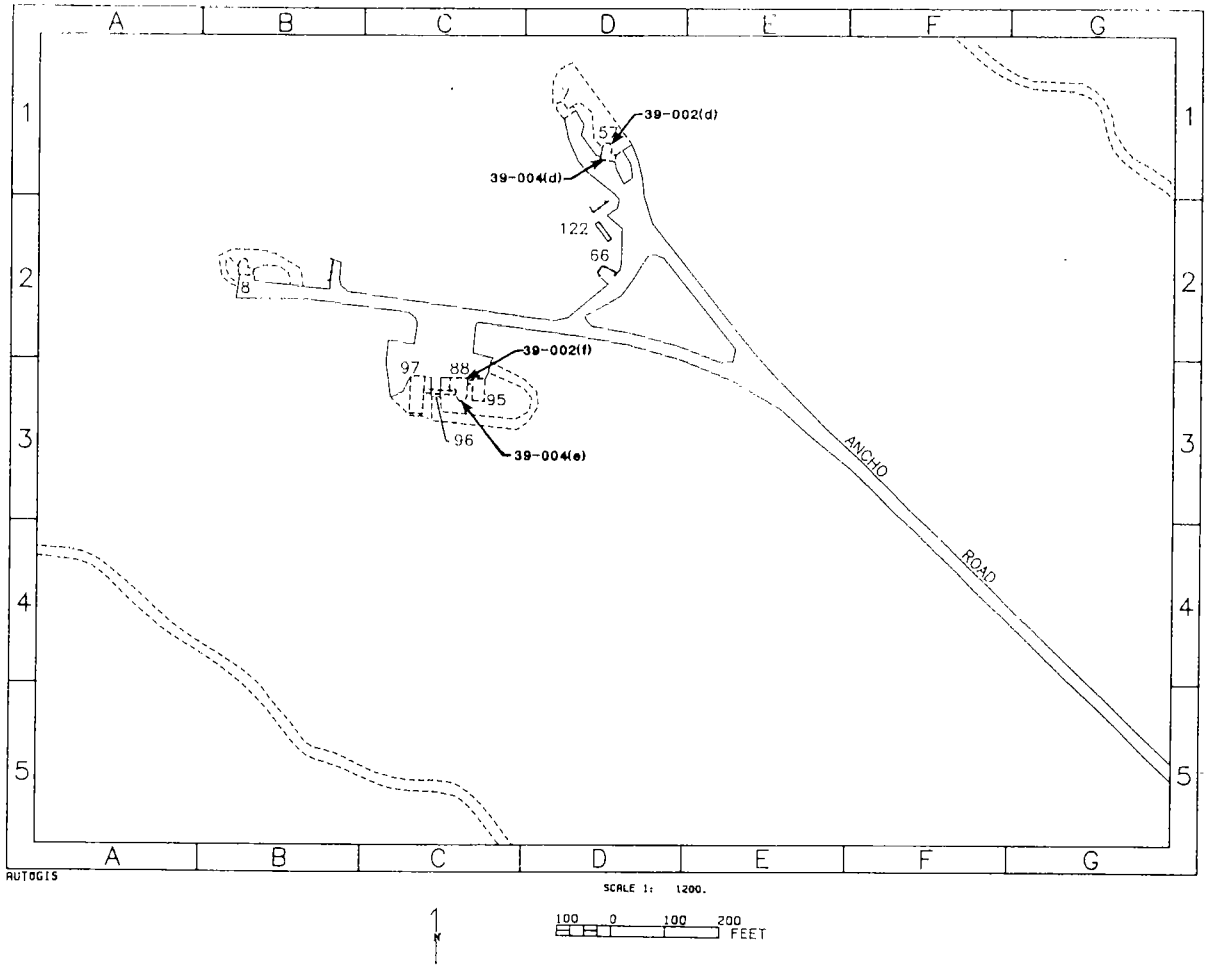
DRAWN C. SANDOVAL

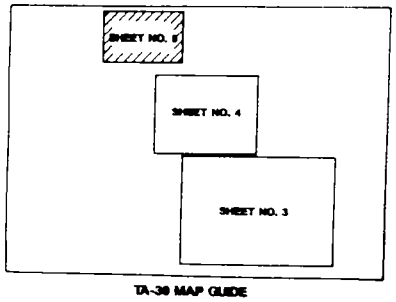
CHECKED H. SALAZAR

SHEET NO. 4 of 5

ENG-R 5120

TA-39





TA-39 MAP GUIDE

EXPLANATION

39-001 SWMU LOCATION

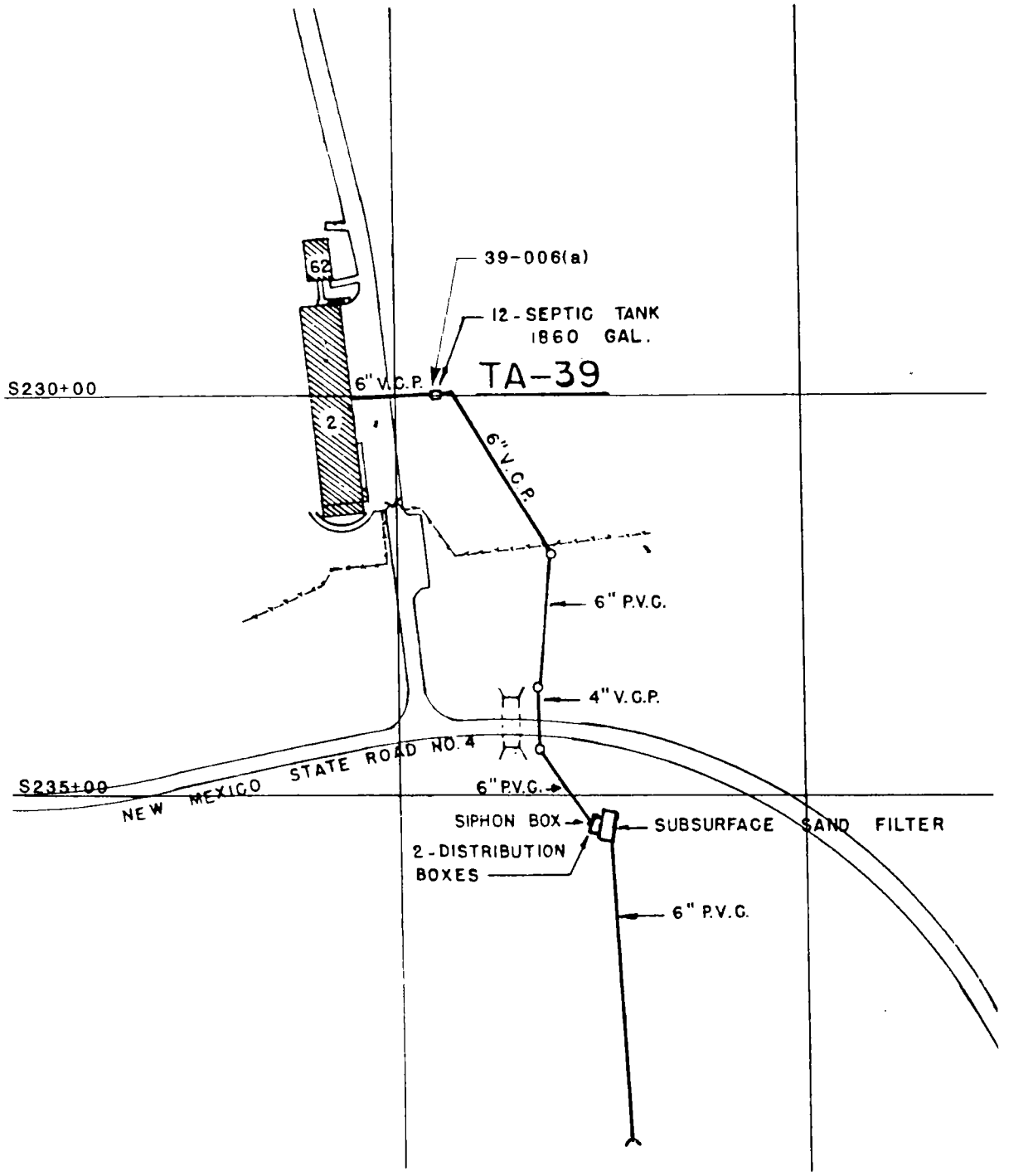
REV.1 6/25/90

FIGURE 39-5

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-39

UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION MAP
TA-39 ANCHO CANYON SITE
ENG-R 6120

301215 02 01 A23



FROM THE ZIA COMPANY SEWER SYSTEM DRAWING S-7 OF E-5

EXPLANATION

39-001 SWMU LOCATION

REV.1 6/25/90

FIGURE 39-6

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-39

UNCLASSIFIED

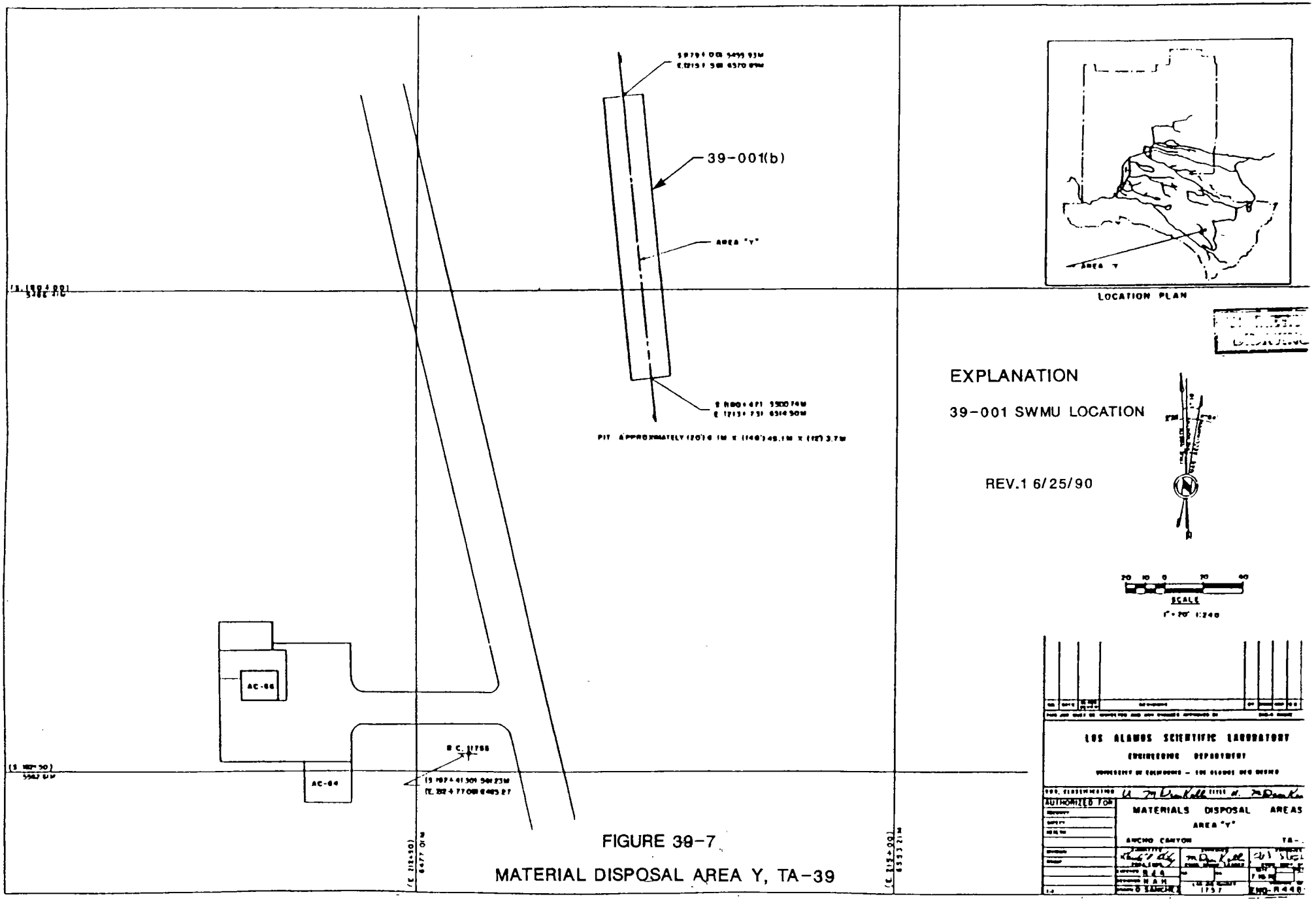


FIGURE 39-7

MATERIAL DISPOSAL AREA Y, TA-39

301215 02 01 834

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-39-1	AC-1		UNASSIGNED	
TA-39-2	AC-2	LABORATORY & OFFICE BLDG.		3185+00 E240+00
TA-39-3	AC-3	MAIN MAGAZINE		3205+00 E140+00
TA-39-4	AC-4	TRIM BUILDING		3205+00 E240+00
TA-39-5	AC-5	READY MAGAZINE		3205+00 E230+00
TA-39-6	AC-6	FIRING CHAMBER NO.1		3185+00 E200+00
TA-39-7	AC-7	FIRING CHAMBER NO.2		3155+00 E190+00
TA-39-8	AC-8	FIRING CHAMBER NO.3		3155+00 E180+00
TA-39-9	AC-9	HOSE HOUSE		3245+00 E240+00
TA-39-10	AC-10	HOSE HOUSE		3235+00 E250+00
TA-39-11	AC-11		REMOVED 1963	
TA-39-12	AC-12	TANK	SEPTIC	3235+00 E250+00
TA-39-13	AC-13	BARRICADE		3155+00 E190+00
TA-39-14	AC-14	BARRICADE		3185+00 E210+00
TA-39-15	AC-15	BARRICADE		3155+00 E180+00
TA-39-16	AC-16	WIGWAG		3195+00 E220+00
TA-39-17	AC-17		REMOVED 1968	
TA-39-18	AC-18	SIREN		3185+00 E200+00
TA-39-19	AC-19	SIREN		3185+00 E210+00
TA-39-20	AC-20	ROAD BLOCK		3225+00 E250+00
TA-39-21	AC-21	TRANSFORMER STATION		3235+00 E240+00
TA-39-22	AC-22	MANHOLE	WATER	3235+00 E245+00
TA-39-23	AC-23	MANHOLE	ELECTRICAL	3195+00 E220+00
TA-39-24	AC-24	MANHOLE	ELECTRICAL	3195+00 E220+00
TA-39-25	AC-25	MANHOLE	ELECTRICAL	3195+00 E220+00
TA-39-26	AC-26	MANHOLE	ELECTRICAL	3195+00 E210+00
TA-39-27	AC-27	MANHOLE	ELECTRICAL	3195+00 E210+00
TA-39-28	AC-28	MANHOLE	ELECTRICAL	3195+00 E210+00
TA-39-29	AC-29	MANHOLE	ELECTRICAL	3195+00 E210+00
TA-39-30	AC-30	MANHOLE	ELECTRICAL	3193+00 E210+00
TA-39-31	AC-31	MANHOLE	ELECTRICAL	3185+00 E210+00
TA-39-32	AC-32	MANHOLE	ELECTRICAL	3196+00 E210+00
TA-39-33	AC-33	MANHOLE	ELECTRICAL	3165+00 E200+00
TA-39-34	AC-34	MANHOLE	ELECTRICAL	3165+00 E200+00
TA-39-35	AC-35	MANHOLE	ELECTRICAL	3165+00 E200+00
TA-39-36	AC-36	MANHOLE	ELECTRICAL	3165+00 E200+00
TA-39-37	AC-37	MANHOLE	ELECTRICAL	3155+00 E190+00
TA-39-38	AC-38	MANHOLE	ELECTRICAL	3155+00 E190+00
TA-39-39	AC-39	MANHOLE	ELECTRICAL	3155+00 E190+00
TA-39-40	AC-40	MANHOLE	ELECTRICAL	3155+00 E190+00
TA-39-41	AC-41	MANHOLE	STORM DRAINAGE	3225+00 E250+00
TA-39-42	AC-42	MANHOLE	STORM DRAINAGE	3205+00 E240+00
TA-39-43	AC-43	MANHOLE	STORM DRAINAGE	3205+00 E234+00
TA-39-44	AC-44	MANHOLE	STORM DRAINAGE	3205+00 E230+00
TA-39-45	AC-45	MANHOLE	STORM DRAINAGE	3155+00 E190+00
TA-39-46	AC-46	BOX CULVERT		3165+00 E200+00
TA-39-47	AC-47	BOX CULVERT	INCORP. WITH AC-48	
TA-39-48	AC-48	BOX CULVERT		3195+00 E210+00
TA-39-49	AC-49	BOX CULVERT	INCORP. WITH AC-48	
TA-39-50	AC-50	BOX CULVERT		3205+00 E230+00
TA-39-51	AC-51	BOX CULVERT	INCORP. WITH AC-50	
TA-39-52	AC-52	BOX CULVERT		3205+00 E240+00
TA-39-53	AC-53	BOX CULVERT	INCORP. WITH AC-52	
TA-39-54	AC-54	MAGAZINE		3165+00 E210+00
TA-39-55	AC-55	INCINERATOR		3235+00 E240+00
TA-39-56	AC-56	GUN BUILDING		3185+00 E210+00
TA-39-57	AC-57	FIRING CHAMBER		3155+00 E190+00
TA-39-58	AC-58	ROAD BLOCK		3205+00 E230+00
TA-39-59	AC-59		REMOVED 1968	
TA-39-60	AC-60	RETAINING WALL		3155+00 E190+00
TA-39-61	AC-61	ROAD BLOCK	FORMERLY TA-33-113	3195+00 E220+00
TA-39-62	AC-62	STORAGE BUILDING		3225+00 E240+00
TA-39-63	AC-63	EQUIPMENT SHELTER		3195+00 E210+00
TA-39-64	AC-64	EQUIPMENT SHELTER		3185+00 E210+00
TA-39-65	AC-65	SIREN		3182+00 E210+00
TA-39-66	AC-66	BARRICADE		3155+00 E190+00
TA-39-67	AC-67	CAPACITOR BANK ENCLOSURE		3185+00 E200+00
TA-39-68	AC-68	STORAGE BUILDING		3205+00 E240+00
TA-39-69	AC-69	LIGHT GAS GUN FACILITY		3215+00 E240+00
TA-39-70	AC-70	JIB CRANE		3183+00 E210+00
TA-39-71	AC-71	TRANSFORMER STATION		3195+00 E210+00
TA-39-72	AC-72	TRANSFORMER STATION		3205+00 E230+00
TA-39-73	AC-73	BARRICADE		3155+00 E190+00
TA-39-74	AC-74	SAFETY GATE		3175+00 E210+00
TA-39-75	AC-75	TRANSFORMER STATION		3215+00 E240+00
TA-39-76	AC-76	TRANSFORMER STATION		3215+00 E240+00
TA-39-77	AC-77	MAGAZINE	PROPOSED	

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

REV.1 08/21/90

FIGURE 39-8

UNCLASSIFIED

TA-39 STRUCTURE LOCATION INDEX

REVIEWER JW Parker

CLASS U DATE 3/19/72

NO.	DATE	REVISIONS	BY	CHKD	APPD
11	3-8-72	REVISED TO STATUS OF 3-8-72	DAD		
10	11-6-69	REVISED TO STATUS OF 11-6-69	DAD		
9	3-3-66	REVISED TO STATUS OF 3-3-66	R.E.		
8	1-15-68	REVISED TO STATUS OF 12-18-67			
7	10-13-66	REVISED TO STATUS OF 8-8-66			
6	8-15-61	REDRAWN TO STATUS OF 8-15-61 (WAS ENG-A161)			

AUTHORIZED FOR: HEALTH, SAFETY, FIRE PROT., SEC.

LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-39 ANCHO CANYON SITE

CHECKED	RECOMMENDED	APPROVED	
PROJ. ENG.	GROUP LEADER	ENG. DEPT.	
DESIGNER	DATE	DRAWING NO.	
DRAWN ARZOLA	8-15-61	ENG-R 2469	
SCALE NONE	SHEET 1 OF 2		

301215 0201 B151

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-39-1	AC-1		UNASSIGNED	
TA-39-2	AC-2	LABORATORY OFFICE BLDG.		3225+00 E240+00
TA-39-3	AC-3	MAIN MAGAZINE		3205+00 E240+00
TA-39-4	AC-4	TRIM BUILDING		3200+00 E240+00
TA-39-5	AC-5	READY MAGAZINE		3200+00 E230+00
TA-39-6	AC-6	FIRING CHAMBER NO.1		3165+00 E200+00
TA-39-7	AC-7	FIRING CHAMBER NO.2		3155+00 E190+00
TA-39-8	AC-8	FIRING CHAMBER NO.3		3155+00 E180+00
TA-39-9	AC-9	HOSE HOUSE		3225+00 E240+00
TA-39-10	AC-10	HOSE HOUSE		3235+00 E230+00
TA-39-11	AC-11		REMOVED 1983	
TA-39-12	AC-12	TANK	SEPTIC	3235+00 E250+00
TA-39-13	AC-13	BARRICADE		3155+00 E190+00
TA-39-14	AC-14	BARRICADE		3195+00 E210+00
TA-39-15	AC-15	BARRICADE		3155+00 E190+00
TA-39-16	AC-16	WIGWAG		3195+00 E220+00
TA-39-17	AC-17		REMOVED 1988	
TA-39-18	AC-18	SIREN		3185+00 E200+00
TA-39-19	AC-19	SIREN		3195+00 E210+00
TA-39-20	AC-20	ROAD BLOCK		3225+00 E250+00
TA-39-21	AC-21	TRANSFORMER STATION		3235+00 E240+00
TA-39-22	AC-22	MANHOLE	WATER	3235+00 E240+00
TA-39-23	AC-23	MANHOLE	ELECTRICAL	3195+00 E220+00
TA-39-24	AC-24	MANHOLE	ELECTRICAL	3195+00 E220+00
TA-39-25	AC-25	MANHOLE	ELECTRICAL	3185+00 E220+00
TA-39-26	AC-26	MANHOLE	ELECTRICAL	3195+00 E210+00
TA-39-27	AC-27	MANHOLE	ELECTRICAL	3185+00 E210+00
TA-39-28	AC-28	MANHOLE	ELECTRICAL	3195+00 E210+00
TA-39-29	AC-29	MANHOLE	ELECTRICAL	3195+00 E210+00
TA-39-30	AC-30	MANHOLE	ELECTRICAL	3185+00 E210+00
TA-39-31	AC-31	MANHOLE	ELECTRICAL	3185+00 E210+00
TA-39-32	AC-32	MANHOLE	ELECTRICAL	3165+00 E210+00
TA-39-33	AC-33	MANHOLE	ELECTRICAL	3185+00 E200+00
TA-39-34	AC-34	MANHOLE	ELECTRICAL	3185+00 E200+00
TA-39-35	AC-35	MANHOLE	ELECTRICAL	3165+00 E200+00
TA-39-36	AC-36	MANHOLE	ELECTRICAL	3165+00 E200+00
TA-39-37	AC-37	MANHOLE	ELECTRICAL	3155+00 E190+00
TA-39-38	AC-38	MANHOLE	ELECTRICAL	3155+00 E190+00
TA-39-39	AC-39	MANHOLE	ELECTRICAL	3152+00 E190+00
TA-39-40	AC-40	MANHOLE	ELECTRICAL	3155+00 E190+00
TA-39-41	AC-41	MANHOLE	STORM DRAINAGE	3225+00 E250+00
TA-39-42	AC-42	MANHOLE	STORM DRAINAGE	3205+00 E240+00
TA-39-43	AC-43	MANHOLE	STORM DRAINAGE	3205+00 E240+00
TA-39-44	AC-44	MANHOLE	STORM DRAINAGE	3205+00 E230+00
TA-39-45	AC-45	MANHOLE	STORM DRAINAGE	3155+00 E190+00
TA-39-46	AC-46	BOX CULVERT		3165+00 E200+00
TA-39-47	AC-47	BOX CULVERT	INCORP. WITH AC-46	
TA-39-48	AC-48	BOX CULVERT		3195+00 E210+00
TA-39-49	AC-49	BOX CULVERT	INCORP. WITH AC-48	
TA-39-50	AC-50	BOX CULVERT		3205+00 E230+00
TA-39-51	AC-51	BOX CULVERT	INCORP. WITH AC-30	
TA-39-52	AC-52	BOX CULVERT		3205+00 E240+00
TA-39-53	AC-53	BOX CULVERT	INCORP. WITH AC-52	
TA-39-54	AC-54	MAGAZINE		3185+00 E210+00
TA-39-55	AC-55	INCINERATOR	REMOVED 1977	
TA-39-56	AC-56	GUN BUILDING		3185+00 E210+00
TA-39-57	AC-57	FIRING CHAMBER		3155+00 E190+00
TA-39-58	AC-58	ROAD BLOCK		3205+00 E230+00
TA-39-59	AC-59		REMOVED 1988	
TA-39-60	AC-60	RETAINING WALL		3155+00 E190+00
TA-39-61	AC-61	ROAD BLOCK	FORMERLY TA-33-113	3195+00 E220+00
TA-39-62	AC-62	STORAGE BUILDING		3225+00 E240+00
TA-39-63	AC-63	EQUIPMENT SHELTER		3195+00 E210+00
TA-39-64	AC-64	EQUIPMENT SHELTER		3185+00 E210+00
TA-39-65	AC-65	SIREN		3195+00 E210+00
TA-39-66	AC-66	BARRICADE		3155+00 E190+00
TA-39-67	AC-67	CAPACITOR BANK ENCLOSURE		3185+00 E200+00
TA-39-68	AC-68	STORAGE BUILDING		3205+00 E240+00
TA-39-69	AC-69	LIGHT GAS GUN FACILITY		3215+00 E240+00
TA-39-70	AC-70	JIB CRANE		3185+00 E210+00
TA-39-71	AC-71	TRANSFORMER STATION		3185+00 E210+00
TA-39-72	AC-72	TRANSFORMER STATION		3205+00 E230+00
TA-39-73	AC-73	BARRICADE		3159+00 E190+00
TA-39-74	AC-74	SAFETY GATE		3179+00 E210+00
TA-39-75	AC-75	TRANSFORMER STATION		3215+00 E240+00
TA-39-76	AC-76	TRANSFORMER STATION		3215+00 E240+00
TA-39-77	AC-77	MAGAZINE		3205+00 E240+00
TA-39-78	AC-78	PULL-BOX		3155+00 E190+00
TA-39-79	AC-79	PULL-BOX		3155+00 E190+00
TA-39-80	AC-80	PULL-BOX		3155+00 E190+00
TA-39-81	AC-81		CANCELLED	
TA-39-82	AC-82		CANCELLED	
TA-39-83	AC-83		CANCELLED	
TA-39-84	AC-84	TRANSFORMER STATION		3205+00 E240+00
TA-39-85	AC-85	FIRING POINT		3160+00 E190+00
TA-39-86	AC-86	GUN BUILDING		3220+00 E250+00
TA-39-87	AC-87	MAIL BOX, TELEPHONE		3155+00 E190+00
TA-39-88	AC-88	MAIL BOX, ELECTRICAL		3155+00 E190+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-39-100	SC-100	TRANSPORTABLE OFFICE BLDG		3200+00 E235+00
TA-39-101	AC-101	TRAILER, LABORATORY	FORMERLY TA-0-543	3225+00 E250+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

UNCLASSIFIED

REV.1 6/25/90

FIGURE 39-9

TA-39 STRUCTURE LOCATION INDEX

REV.	DATE	REVISION	BY	CKD.	APP.
14	9-22-83	REVISED TITLE BLOCK AND DWG. TO STATUS OF 8-1-83	VM		

UNIVERSITY OF CALIFORNIA
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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-39 ANCHO CANYON SITE

SEE CLASSIFICATION
CLASS. U
REVIEWER
DATE 10-5-83

SUBMITTED	RECOMMENDED	APPROVED
DRAWN	DATE 9-22-83	SHEET NO. 1 OF 2
CHECKED		DRAWING NO. ENG-R5120

TA-40
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 40 was built in the 1950 as a firing site for detonator firing tests. Support structures such as magazines, preparation buildings, laboratories, offices, and a darkroom are present in the area. A burning pit for high explosive contaminated combustibles and a firing pit were also located here (DOE, 1987a). They are no longer operational.

TA-40 lies at elevations between 6,960 and 7,480 feet asl. It is located on a narrow finger of Two Mile Mesa. The finger mesa is bounded on the north by an unnamed branch of Two Mile Canyon, and on the south by Pajarito Canyon. Canyon walls are steep slopes or cliffs in this area.

TA-40 lies on welded Bandelier Tuff. The area is in the Ponderosa Pine/Pinon-Juniper and Ponderosa Pine-fir overstory vegetation zones. The soil consists of Tocal very fine sandy loam, Carjo loan, and rock outcrop (Nyhan et al., 1978).

At TA-40, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,000 to 6,260 feet asl. Over 900 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-40

40-001	SEPTIC SYSTEMS
40-002	CONTAINER STORAGE AREAS
40-003	BURNING AREA / OPEN DETONATION
40-004	DECOMMISSIONED CONTAINER STORAGE AREA
40-005	SUMP
40-006	FIRING PADS
40-007	HE STORAGE AREAS
40-008	DECOMMISSIONED HE STORAGE
40-009	LANDFILL

SUMMARY

LOCATION : TA-40
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Septic Tank TA-40-22 [40-001(a)] is inactive, and apparently was used only during construction activities in 1950. Engineering drawing ENG-R1474 shows drains from TA-40-1 discharging into TA-40-22. The contents of the discharge are unknown. Two active septic tanks, TA-40-24 and TA-40-25 were installed in 1950 and continue to operate, although the latter is used only infrequently. TA-40-24 [40-001(b)] serves 37 people, has a capacity of 1,215 gallons, and overflow drains to a seepage pit. Drains from buildings TA-40-1, -19, and -23 discharge into TA-40-24. TA-40-25 [40-001(c)] was installed in 1949, serves 2 people in TA-40-11, has a capacity of 540 gallons, and must be pumped when full (about every three months). According to the Active Septic Tank System database, TA-40-24 has EID Registration No. LA-45 and TA-40-25 has EID Registration No. LA-40.

WASTE INFORMATION

The septic tanks receive sanitary and other liquid wastes from TA-40. Solvents and other chemicals from previous years are suspected.

RELEASE INFORMATION

There are no current releases associated with TA-40-22. It is not known whether TA-40-24 has discharged hazardous waste to its seepage pit. Engineering drawings show TA-40-25 as having a drain line, and it is not known if hazardous discharges have occurred.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
40-001(a)	TA40-6-CA/ST/O-A/I-HW			TA-40-22
40-001(b)	**			TA-40-24
40-001(c)	**			TA-40-25

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-40	MATERIALS MANAGED	: HAZARDOUS WASTE
TYPE OF UNIT(s)	: CONTAINER STORAGE AREA		SOLID WASTE
UNIT USE	: STORAGE		
OPERATIONAL STATUS	: ACTIVE		
PERIOD OF USE	: ? - PRESENT		
HAZARDOUS RELEASE	: NONE		
RADIOACTIVE RELEASE	: NONE		

UNIT INFORMATION

Active container storage areas in TA-40 include: a) A container storage area [40-002(a)], located near TA-40-23, is approximately 15' long by 6' wide, and is underlain by asphalt. Wastes are stored here temporarily in two closed steel drums. Oils and solvents are stored in separate drums. The quantity of waste never exceeds 55 gallons total. b) Containers kept near the firing areas (see 40-006) are used to store shot wastes [40-002(b)] before they are taken to TA-16 for disposal. Separate containers are used for combustible and noncombustible debris. TA-40 has a photo processing unit, TA-40-5 [40-002(c)], which consists of one processor and 6 trays and sinks. 3 gallons/month of waste is produced and stored in this area.

WASTE INFORMATION

The waste stored in the area near TA-40-23 consists of oil and solvents which are stored separately. The waste is from various TA-40 operations, and it is ultimately sent to TA-54 prior to off-site shipment. The wastes stored near the firing areas consist of firing residues (e.g., wood, metal, wire). Wastes stored in TA-40-5 consist of developer and fixer chemicals.

RELEASE INFORMATION

There are no known hazardous releases associated with these units. However, past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
40-002(a)	**	40.002		TA-40-23
40-002(b)	**			TA-40-15
40-002(c)	**			TA-40-5

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-40
TYPE OF UNIT(s) : OPEN DETONATION
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1950s - 1970s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

This unit consists of two sites. One site [40-003(a)] is located about 450 feet east of TA-40-15. It was used for the disposal of scrap HE material and detonators. According to the RFA, this site has an area of 2 acres. The site was later (in the 1960s) used for conducting burn and blast tests. This site is now inactive. A closure plan for this site is currently being written. In 1958, there was at least one incident in which detonators were not destroyed and were discharged up to 100 yards away from the site. Search operations may have failed to recover all of the intact detonators. A burning site [40-003(b)] east of TA-40-15 and east of the detonator area was used for burning HE contaminated combustible materials. This site was used from 1961 to the 1970's.

WASTE INFORMATION

The waste at these sites contained HE material. According to a 1961 memo, vegetation within a 200 ft radius was cleared using a herbicide. During a 1990 field investigation, it was noted that some of this area is being used to stockpile construction debris.

RELEASE INFORMATION

In 1985, samples were taken on the hillside above the scrap site [40-003(a)], approximately 100 ft. to the south, and also on the pad. Samples indicated nondetectable levels of arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Small pieces from detonators (nonhazardous) are visible on the surface at the site. It is unknown whether hazardous releases from the other site [40-003(b)] have occurred.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
40-003(a)	TA40-2-CA-I-HW	40.003		NEAR TA-40-15
40-003(b)	TA40-1-CA-I-HW	40.004		NEAR TA-40-15

SUMMARY

LOCATION	: TA-40	MATERIALS MANAGED	: SOLID WASTE
TYPE OF UNIT(s)	: CONTAINER STORAGE AREA		HAZARDOUS WASTE
UNIT USE	: PRODUCTION		
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: EST. 1980s		
HAZARDOUS RELEASE	: NONE		
RADIOACTIVE RELEASE	: NONE		

UNIT INFORMATION

This unit was located outdoors near TA-40-9 and was confined within a 15' by 15' area. It was used to store product chloroethane and vacuum pump oil. During the RFA, oil stains were observed on the surrounding soil and on the wooden pallets under the drums.

WASTE INFORMATION

The products stored were chloroethane and vacuum pump oil.

RELEASE INFORMATION

Oil stains have been observed in the past; all contaminated soil has, however, been removed, placed in drums, and disposed. Past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
40-004	TA40-7-CA-I-PP	40.008		TA-40-9

SUMMARY

LOCATION : TA-40
TYPE OF UNIT(s) : SUMP
UNIT USE : TREATMENT
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : EARLY 1950s-PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

Liquids which might contain small quantities of HE from Building TA-40-41 drain to this unit, which is a HE separation baffle-type sump outside the building. The sump is used only infrequently at present. The building and sump were part of TA-22 before being incorporated into TA-40 when TA-40 was expanded. The sump is concrete with a set-in aluminum tank. The dimensions of the sump are 4'6" x 6'4" x 5' deep. The sump is shown as TA-22-75 in engineering drawing C-22705 and ENG-R 5114. The LANL standard operating procedures (WX-3 SOP 12.1.0 and 12.1.4) call for the sludges in HE settling tanks to be picked up on request and transported to TA-16 for treatment and burning.

WASTE INFORMATION

The waste consists of liquids contaminated with HE that may contain barium. In past years solvents may have been present.

RELEASE INFORMATION

The sump has an outfall which drains to a small tributary of Pajarito Canyon.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
40-005	TA40-5-S-A-HW	40.006		TA-40-41

SUMMARY

LOCATION : TA-40
TYPE OF UNIT(s) : FIRING SITE
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1950s - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE
SOLID WASTE

UNIT INFORMATION

Three outside firing pads are used at TA-40 for HE detonation experiments. TA-40-15 [40-006(a)] is the largest and has an iron wall and firing bunker on two sides of the pad to provide some confinement of shot debris. After firing, the sand and very small pieces of shot debris are leveled. Some of the residues from firing are pushed over the canyon rim. Over the years, a bench about 15' high has been created by sand and residuals on the side of the canyon. The other two firing pads, TA-40-8 [40-006(b)] and TA-40-5 [40-006(c)], are smaller and have smaller benches associated with them. TA-40-5 has associated soil berms.

WASTE INFORMATION

Bench residues consist of sand with fragments of glass, metal, cables, wood, and occasionally small pieces of HE. In the past, shot constituents included thallium azide, lead azide, ClF3, and diethanol. Large pieces of shot residuals are picked up after firing.

RELEASE INFORMATION

Shot residue and other items are found on the south-facing slope of the canyon adjacent to the firing sites. Firing Pad TA-40-15 was investigated as Environmental Problem #1 in the DOE Environmental Survey. Soil samples were collected at different distances from the center of the firing pad, and gamma screens indicated the presence of only the natural activities of potassium-40, thorium-232, and uranium-238.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
40-006(a)	TA40-3-CA-A-HW TA40-4-OL-1-HW	40.005		TA-40-15
40-006(b)	TA40-3-CA-A-HW	40.005		TA-40-8
40-006(c)	TA40-3-CA-A-HW	40.005		TA-40-5

SUMMARY

LOCATION : TA-40
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1950 - 1980s
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

Some bunkers, TA-40-3, -6, -11, -14, and a bunker with former designation TA-22-41 [40-007(a), (b), (c), (d), and (e), respectively] are believed to have been used for very short periods of time to store scrap HE contaminated waste.

WASTE INFORMATION

The RFA describes the waste as detonators, live charges, and HE. Currently the HE is reused and is no longer considered waste.

RELEASE INFORMATION

There are no known releases associated with these storage areas. However, past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
40-007(a)	TA40-9-CA-A-HW			TA-40-3
40-007(b)	TA40-9-CA-A-HW			TA-40-6
40-007(c)	TA40-9-CA-A-HW			TA-40-11
40-007(d)	TA40-9-CA-A-HW			TA-40-14
40-007(e)	TA40-9-CA-A-HW			TA-22-41

SUMMARY

LOCATION : TA-40
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. ? - 1988
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

A bunker, TA-40-2, was used for a short time to store scrap HE contaminated waste. This unit measures 10' x 6' x 7' high. This storage area has been closed under an approved RCRA closure plan.

WASTE INFORMATION

The waste was scrap HE.

RELEASE INFORMATION

There has been no known release of hazardous waste from this decommissioned storage area. However, past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
40-008	**	40.001		TA-40-2

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-40
TYPE OF UNIT(s) : LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1967
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

In 1967, a major decommissioning effort was undertaken at TA-15. Several structures were burned. After monitoring the remaining noncombustibles for radioactivity, according to engineering records, the debris was taken to TA-40 and disposed of in the canyon between TA-40-15 and TA-40-5.

WASTE INFORMATION

The wastes were noncombustible residues. There is no record that samples were analyzed for hazardous constituents. The waste did not contain radioactive constituents.

RELEASE INFORMATION

It is unknown whether a hazardous release has occurred. The debris was not sampled for hazardous constituents.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
40-009	**			BETWEEN TA-40-15 AND TA-40-5

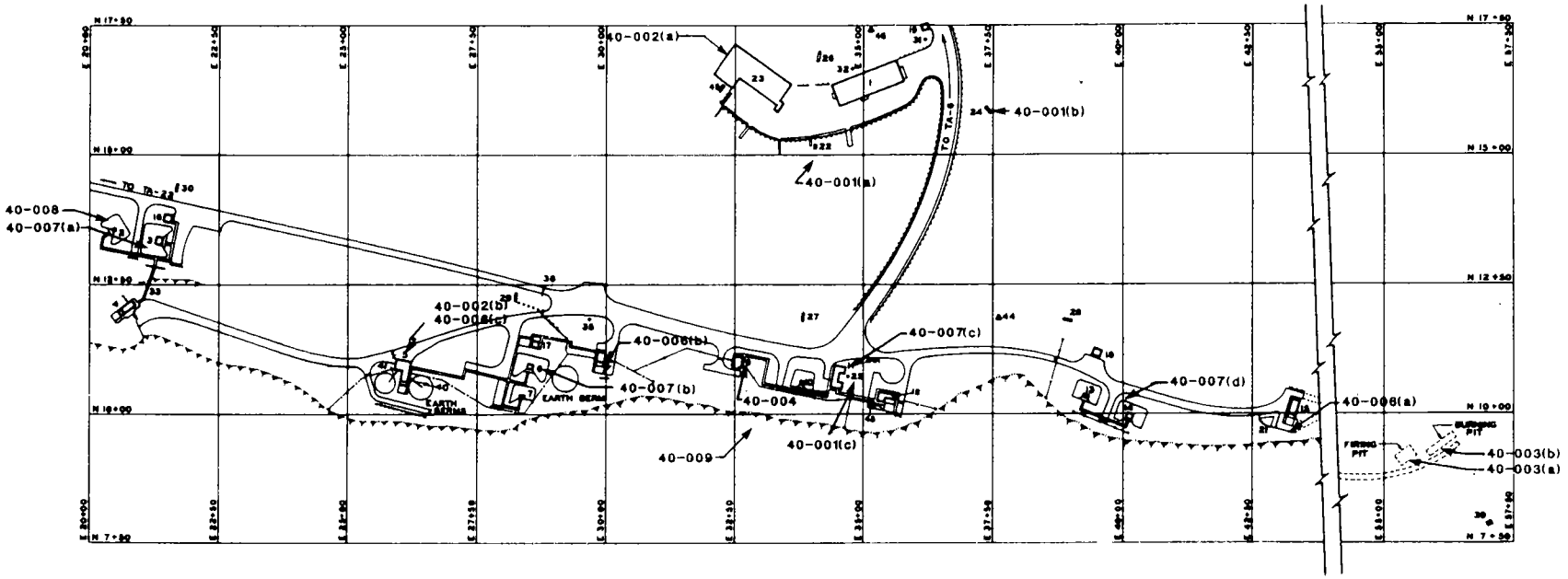
** No corresponding E. R. Program unit.

TA-40 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
40-001(a)	40-1
40-001(b)	40-1
40-001(c)	40-1
40-002(a)	40-1
40-002(b)	40-1
40-003(a)	40-1
40-003(b)	40-1
40-004	40-1
40-005	40-3
40-006(a)	40-1
40-006(b)	40-1
40-006(c)	40-1
40-007(a)	40-1
40-007(b)	40-1
40-007(c)	40-1
40-007(d)	40-1
40-007(e)	40-3
40-008	40-1
40-009	40-1

NOTE: Some structure locations may contain more than one SWMU.

301215 02 61 876



UNCLASSIFIED

FIGURE 40-1
REV. 1 07/11/90
SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-40

EXPLANATION

40-001 · SWMU LOCATION

1" = 100'

GRAPHIC SCALE

NOTES

UNIT 40-005: UNIT WAS FORMERLY TA-22-41, LOCATED ON THE TA-22 STRUCTURE LOCATION PLAN

UNIT 40-009: UNIT LOCATION IS APPROXIMATE

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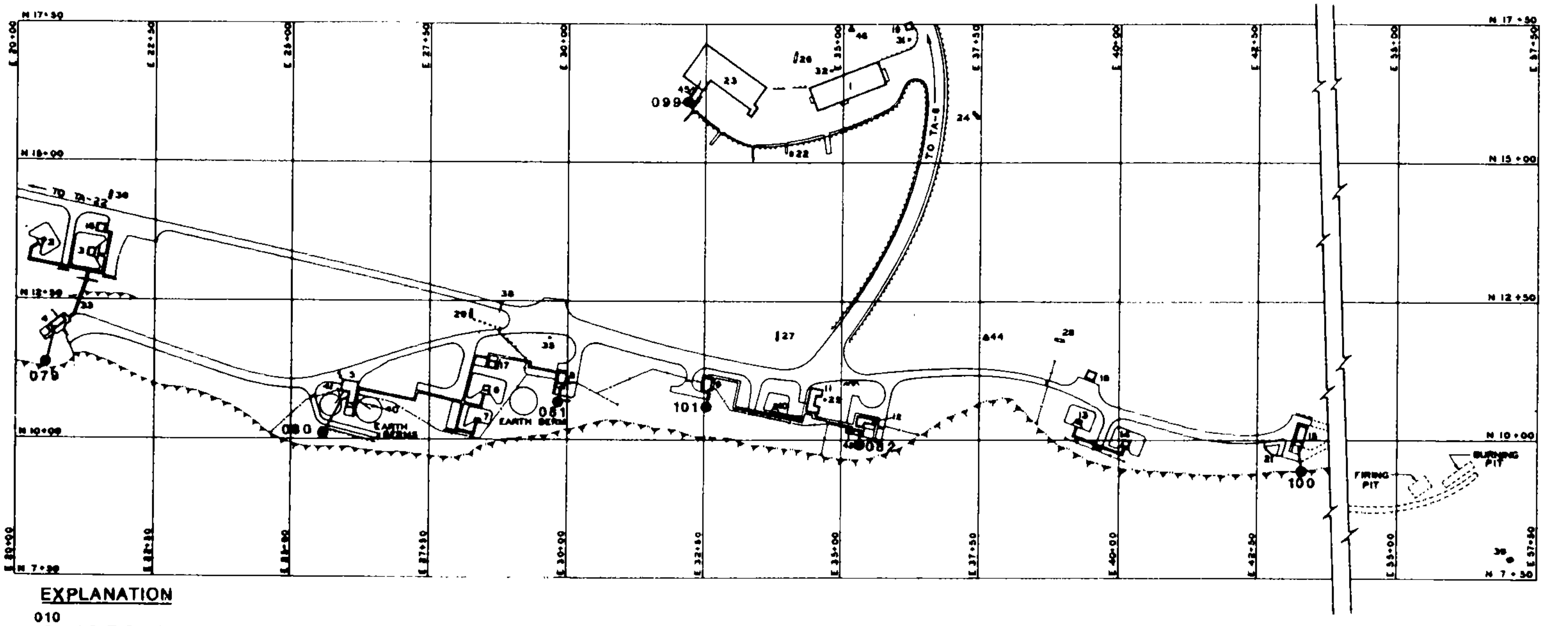
STRUCTURE LOCATION PLAN
TA-40 DF-SITE

ENG-RECD

301215 02 01 867



EXPLANATION

010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBER (SEE APPENDIX A)

UNCLASSIFIED

1" = 100'

GRAPHIC SCALE

FIGURE 40-2

OUTFALL LOCATIONS IN TA-40

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FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-40 DF-SITE

7-28-83

ENG-R5121

301215 02 01 B172

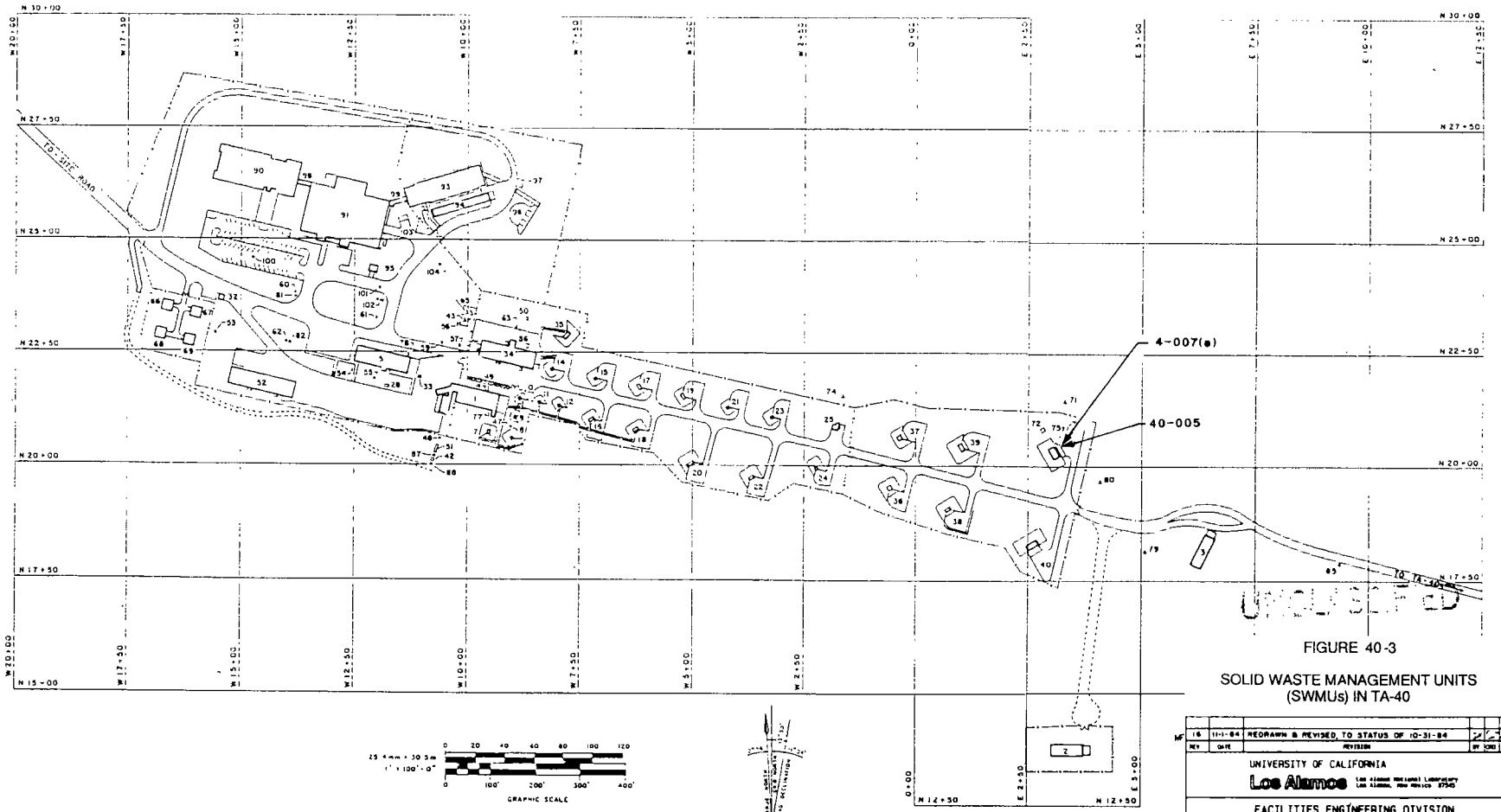

FIGURE 40-3

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-40

16	11-1-84	REDRAWN & REVISED, TO STATUS OF 10-31-84	
NO.	DATE	REVISION	BY

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-22 TD-SITE

SEC. CLASSIFICATION
CLASS
APPROVED
DATE

SUBMITTED
APPROVED
DRAWN
CHECKED
DATE 11-1-84
SHEET NO. 1 of 1
DRAWING NO. ENG-R 3114

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-40-1	DF-1	LABORATORY & OFFICE BLDG		[illegible]
TA-40-2	DF-2	MAGAZINE		[illegible]
TA-40-3	DF-3	PREPARATION BUILDING		[illegible]
TA-40-4	DF-4	FIRING POINT		[illegible]
TA-40-5	DF-5	FIRING POINT		[illegible]
TA-40-6	DF-6	PREPARATION BUILDING		[illegible]
TA-40-7	DF-7	MAGAZINE		N 10+00 E 27+50
TA-40-8	DF-8	FIRING POINT		N 10+00 E 27+50
TA-40-9	DF-9	FIRING POINT		N 10+00 E 30+00
TA-40-10	DF-10	MAGAZINE		N 10+00 E 32+50
TA-40-11	DF-11	PREPARATION & UTILITY BLDG		N 10+00 E 32+50
TA-40-12	DF-12	FIRING POINT		N 10+00 E 35+00
TA-40-13	DF-13	MAGAZINE		N 10+00 E 35+00
TA-40-14	DF-14	PREPARATION BUILDING		N 10+00 E 40+00
TA-40-15	DF-15	FIRING POINT		N 10+00 E 40+00
TA-40-16	DF-16	UTILITY BUILDING		N 10+00 E 42+50
TA-40-17	DF-17	UTILITY BUILDING		N 12+50 E 27+50
TA-40-18	DF-18	UTILITY BUILDING		N 12+50 E 27+50
TA-40-19	DF-19	GUARD HOUSE		N 12+50 E 40+00
TA-40-20	DF-20	TANK, FUEL		N 17+50 E 35+00
TA-40-21	DF-21	MISSILE BARRICADE	RELOCATED TO TA-9-103	
TA-40-22	DF-22	TANK, SEPTIC		N 10+00 E 42+50
TA-40-23	DF-23	WHSE. & CABLE ASSY. BLDG.		N 15+00 E 35+00
TA-40-24	DF-24	TANK, SEPTIC		N 17+50 E 32+50
TA-40-25	DF-25	TANK, SEPTIC		N 15+00 E 37+50
TA-40-26	DF-26	TRANSFORMER STATION		N 10+00 E 35+00
TA-40-27	DF-27	TRANSFORMER STATION		N 17+50 E 35+00
TA-40-28	DF-28	TRANSFORMER STATION		N 12+50 E 35+00
TA-40-29	DF-29	TRANSFORMER STATION		N 12+50 E 40+00
TA-40-30	DF-30	TRANSFORMER STATION		N 12+50 E 27+50
TA-40-31	DF-31	MANHOLE, SANITARY		N 15+00 E 22+50
TA-40-32	DF-32	MANHOLE, SANITARY		N 17+50 E 35+00
TA-40-33	DF-33	STAIRWAY		N 17+50 E 35+00
TA-40-34	DF-34			N 12+50 E 20+00
TA-40-35	DF-35	MANHOLE, WATER	REMOVED 1961	
TA-40-36	DF-36			N 12+50 E 30+00
TA-40-37	DF-37		REMOVED 1979	
TA-40-38	DF-38	ROAD BLOCK	CANCELLED	
TA-40-39	DF-39	OBSERVATION BARRICADE	FORMERLY TA-14-33	N 12+50 E 27+50
TA-40-40	DF-40	BARRICADE		N 7+50 E 37+50
TA-40-41	DF-41	BARRICADE		N 10+00 E 29+00
TA-40-42	DF-42			N 10+00 E 29+00
TA-40-43	DF-43	STORAGE BLDG	CANCELLED	
TA-40-44	DF-44	TRANSFORMER STATION		N 10+00 E 35+00
TA-40-45	DF-45	SOLVENT SHED		N 12+50 E 37+50
TA-40-46	DF-46	TRANSFORMER STATION		N 17+50 E 32+50
TA-40-47	DF-47	METERING STATION	1-SPAN N. OF DF-26 ~150'	N 17+50 E 35+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

UNCLASSIFIED

FIGURE 40-4

TA-40 STRUCTURE LOCATION INDEX

REV.	DATE	REVISION	BY	CHK.	APP.
1	8-16-85	REVISED TITLE BLOCK & DWG. TO STATUS OF 7-26-85	W.C.	[illegible]	[illegible]

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FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-40 OF-SITE

DATE 8-16-85 SHEET NO. 1 OF 1 DRAWING NO. ENG-R 5121

301215 02 01 B35

TA-41
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 41 is used in developing weapon subsystems, boosting systems, and long-term studies on critical weapons subsystems. Materials used or stored on at the site include uranium, plutonium, tritium, lithium isotopes, mercury, beryllium, lead and cadmium for shielding, nickel-cadmium and mercury batteries, explosives, and thermite type heat generators. There are also office and photographic laboratory facilities in the area. Formerly, operations required use of radioactive materials, toxic gases, mercury, and various organic chemicals (DOE, 1987a).

TA-41 lies at elevations between about 6,900 and 7,200 feet asl. It is located within Los Alamos Canyon, west of TA-41. Los Alamos Canyon receives treated industrial effluents and some sanitary effluents from TA-2 as well as TA-21 and -53, all downstream of TA-41. There are also occasional releases of cooling water from the Omega West Reactor at TA-2. On the flanks of the mountains, Los Alamos Reservoir impounds run-off from snowmelt and rainfall. Stream flow from this impoundment into the canyon is intermittent, dependent on precipitation, and may reach the Laboratory's eastern boundary. Infiltration of treated effluents and natural run-off maintains a shallow body of water in the alluvium of Los Alamos Canyon (Environmental Surveillance Group, 1986).

The soil at TA-41 consists of Typic Eutroboralfs-Rock outcrop complex and rock outcrop (Nyhan et al., 1978). The area lies in the Ponderosa Pine/Pinon-Juniper and Ponderosa Pine-fir overstory vegetation zones. At TA-41, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,010 to 6,090 feet asl. Over 800 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

Because TA-41 structures lie within the Canyon itself, flooding has been investigated as a potential environmental problem. The characteristics of the drainage basin indicate that a 100-year flood would result in a flow of 25 cubic meters per second (870 cubic feet per second). A 500-year flood event would produce about 37 cubic meters per second (1,290 cubic feet per second). The channel at TA-41 is capable of carrying a maximum flow of 46 cubic meters per second (1,600 cubic feet per second). Flooding of parking lots and roadways may occur in such an event only if the channel were to become clogged with

debris. Flooding of permanent buildings is unlikely. (DOE, 1979). Flooding of TA-41 by failure of the Los Alamos Canyon Reservoir Dam is unlikely assuming complete drainage in 45 minutes (15 minutes to crest, and 30 minutes recession).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-41

41-001	SEPTIC SYSTEM
41-002	SEWAGE TREATMENT PLANT
41-003	SUMP
41-004	CONTAINER STORAGE AREA

SUMMARY

LOCATION : TA-41
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1949 - 1953
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

Septic Tank TA-41-11 appears in an engineering drawing to be connected to Building 2, a guardhouse. The tank was abandoned in 1953.

WASTE INFORMATION

The tank received sanitary waste. The tank is noted to be radioactively contaminated in one report; however, there are no known discharges to this tank which could account for radioactive material in the system.

RELEASE INFORMATION

It is unknown whether hazardous releases have occurred from this unit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
41-001	TA41-2-ST-I-RW	? 41.001		TA-41-11

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-41
TYPE OF UNIT(s) : WASTEWATER TREATMENT PLANT
UNIT USE : TREATMENT
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : 1950 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED MIXED WASTE

UNIT INFORMATION

The components of the TA-41 sewage treatment plant consist of an Imhoff tank and a 10' x 8' x 10' chlorinator, TA-41-7 [41-002(a)]; a contact tank, TA-41-8 [41-002(b)]; and a sludge drying bed, TA-41-9 [41-002(c)]. This small treatment plant has received sanitary waste from TA-41 and TA-2. Presently these wastes are pumped to TA-3 for treatment. The treatment plant has been retained as a standby unit for use in the event of a lift pump failure. If the sewage treatment plant is in use, it discharges to a NPDES permitted outfall in Los Alamos Canyon (NPDES #SSS 06s; see Appendix A). In 1955, samples were taken of sewage entering tank TA-41-7 and effluent from the chlorine contact tank. Gross alpha counts ranged from 216 to 244 dis/min/L.

WASTE INFORMATION

The treatment plant, when active, treats sanitary waste. In previous years, the waste may have contained radioactive mixed constituents.

RELEASE INFORMATION

It is unknown whether hazardous releases have occurred.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
41-002(a)	TA41-3-CA/O-I/A-HW/RW	41.002 41.003 ? 41.005		TA-41-7
41-002(b)	TA41-3-CA/O-I/A-HW/RW			TA-41-8
41-002(c)	TA41-3-CA/O-I/A-HW/RW	41.004 ? 41.005		TA-41-9

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-41
TYPE OF UNIT(s) : SUMP
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1950 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

Site drawing ENG-R5122 indicates a sump pit, TA-41-10. It is 3'7-3/4" x 2' x 2'6" deep and discharges to Los Alamos Canyon.

WASTE INFORMATION

The sump reportedly handles storm water.

RELEASE INFORMATION

It is unknown whether a release has occurred from the sump pit.

NOTES

This SWMU was formerly SWMU No. 41-XXX.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
41-003	TA41-4-UST/S-A-RW			TA-41-10

SUMMARY

LOCATION : TA-41
TYPE OF UNIT(s) : STORAGE
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

There is an active satellite container storage area in Room 310 of TA-41-30. It stores waste from a photo processing lab and office machines.

WASTE INFORMATION

The waste consists of photo chemicals with sodium and ammonium hydroxide, silver salts and kerosene-based chemicals.

RELEASE INFORMATION

There have been no known releases from this site. However, past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
41-004	**			TA-41-30

** No corresponding E. R. Program unit.

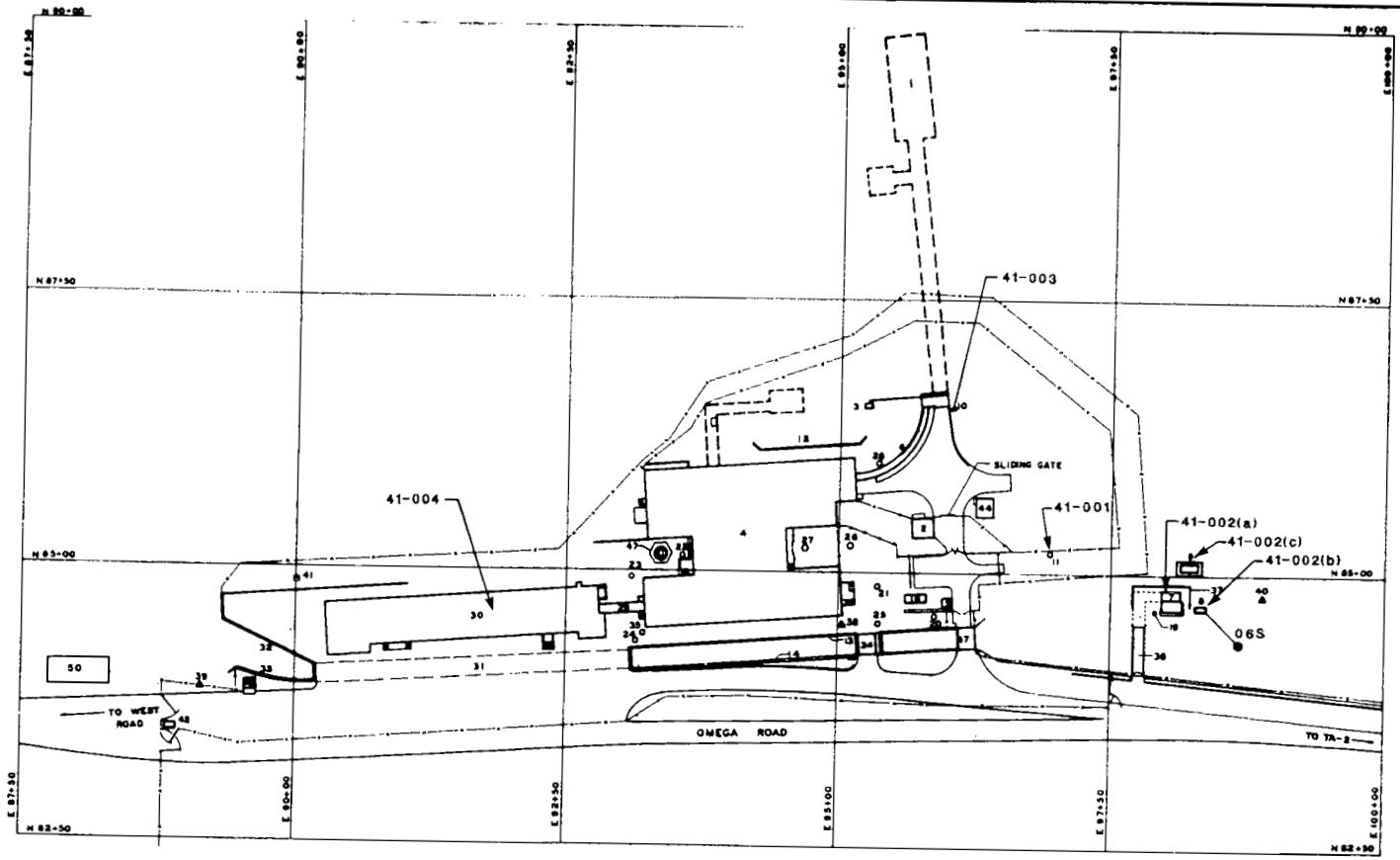
TA-41 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
41-001	41-1
41-002(a)	41-1, 41-2
41-002(b)	41-1, 41-2
41-002(c)	41-1, 41-2
41-003	41-1
41-004	41-1

NOTE: Some structure locations may contain more than one SWMU.

Rev. 1, 7/2/90

301215 02 01 661



EXPLANATION

41-001 SWMU LOCATION

010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBERS (SEE APPENDIX A)

REV. 1 07/02/90

FIGURE 41-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-41

1" = 50'

GRAPHIC SCALE

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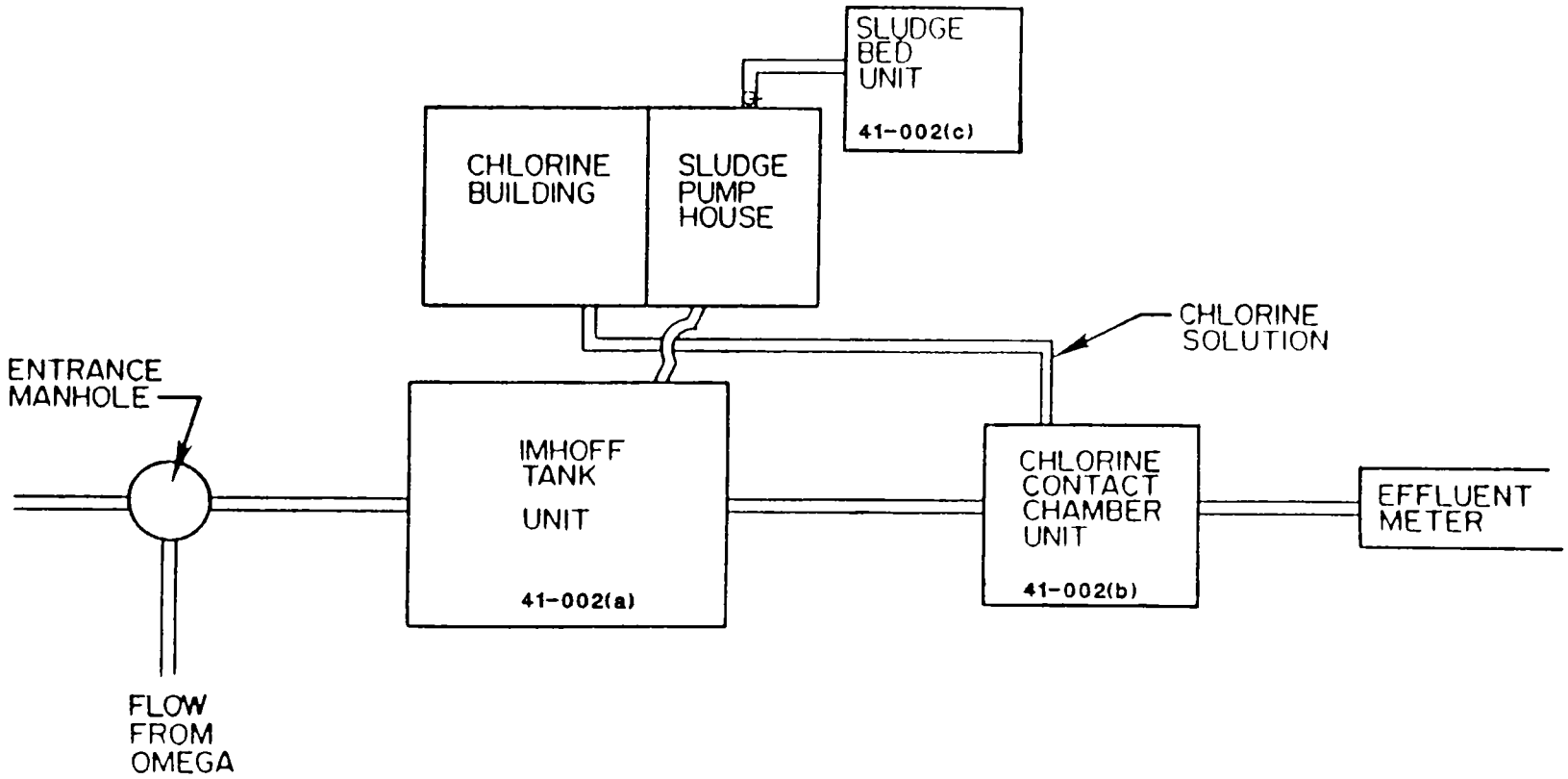
UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-41 W-SITE

DRAWING NO. ENG-R522

UNCLASSIFIED



EXPLANATION

41-001 SWMU LOCATION

FIGURE 41-2

SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-41

301215 02 01 B36

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-41-1	W-1	UNDERGROUND VAULT		N 85+00 E 85+00
TA-41-2	W-2	GUARD HOUSE		N 83+00 E 93+00
TA-41-3	W-3	BLOWER HOUSE		N 87+80 E 93+00
TA-41-4	W-4	LABORATORY BUILDING		N 85+00 E 93+00
TA-41-5	W-5	GUARD HOUSE		N 82+00 E 86+00
TA-41-6	W-6	COVERED PASSAGEWAY	BLDG. 1 TO BLDG. 4	N 85+00 E 85+00
TA-41-7	W-7	RUNOFF TANK & CHLORINE ROOM	SEWAGE PLANT	N 85+00 E 87+50
TA-41-8	W-8	TANK, CONTACT	SEWAGE PLANT	N 85+00 E 87+50
TA-41-9	W-9	DRYING BED	SEWAGE PLANT	N 85+00 E 87+50
TA-41-10	W-10	SUMP PIT		N 87+50 E 95+00
TA-41-11	W-11	TANK, SEPTIC	ABANDONED 1953	N 85+00 E 87+50
TA-41-12	W-12	RETAINING WALL		N 85+00 E 85+00
TA-41-13	W-13	RETAINING WALL		N 85+00 E 85+00
TA-41-14	W-14	RETAINING WALL		N 85+00 E 86+00
TA-41-15	W-15	BRIDGE	INCORPORATED IN TA-41-31	
TA-41-16	W-16	GUARD HOUSE		N 85+00 E 90+00
TA-41-17	W-17	BRIDGE		N 85+00 E 95+00
TA-41-18	W-18	MANHOLE	WATER PRV.	N 85+00 E 95+00
TA-41-19	W-19	MANHOLE	SANITARY	N 85+00 E 87+50
TA-41-20	W-20	MANHOLE	SANITARY	N 85+00 E 93+00
TA-41-21	W-21	MANHOLE	SANITARY	N 85+00 E 95+00
TA-41-22	W-22	MANHOLE, STORM DRAINAGE	TRANSFERRED TO ZIA 1961	N 85+00 E 92+50
TA-41-23	W-23	MANHOLE, STORM DRAINAGE	TRANSFERRED TO ZIA 1961	N 85+00 E 92+50
TA-41-24	W-24	MANHOLE, STORM DRAINAGE	TRANSFERRED TO ZIA 1961	N 85+00 E 92+50
TA-41-25	W-25	MANHOLE, STORM DRAINAGE	TRANSFERRED TO ZIA 1961	N 85+00 E 93+00
TA-41-26	W-26	MANHOLE, STORM DRAINAGE	TRANSFERRED TO ZIA 1961	N 85+00 E 93+00
TA-41-27	W-27	MANHOLE, STORM DRAINAGE	TRANSFERRED TO ZIA 1961	N 85+00 E 93+00
TA-41-28	W-28	MANHOLE, STORM DRAINAGE	TRANSFERRED TO ZIA 1961	N 85+00 E 95+00
TA-41-29	W-29	PASSAGEWAY		N 85+00 E 82+50
TA-41-30	W-30	ENGINEERING & LAB BLDG.		N 85+00 E 82+50
TA-41-31	W-31	BOX CULVERT		N 85+00 E 82+50
TA-41-32	W-32	RETAINING WALL		N 85+00 E 90+00
TA-41-33	W-33	RETAINING WALL		N 85+00 E 90+00
TA-41-34	W-34	BRIDGE		N 82+00 E 82+00
TA-41-35	W-35	MANHOLE	SANITARY	N 85+00 E 82+50
TA-41-36	W-36	BRIDGE		N 83+00 E 97+50
TA-41-37	W-37	RETAINING WALL		N 83+00 E 97+50
TA-41-38	W-38	TRANSFORMER STATION		N 83+00 E 95+00
TA-41-39	W-39	TRANSFORMER STATION		N 85+00 E 90+00
TA-41-40	W-40	TRANSFORMER STATION		N 85+00 E 100+00
TA-41-41	W-41	METERING STATION		N 85+30 E 90+00
TA-41-42	W-42	GUARD BUILDING		N 82+50 E 87+50
TA-41-44	W-44	STORAGE BUILDING		N 85+00 E 97+50
TA-41-45	W-45	TANK, IND. WASTE	NOT SHOWN	
TA-41-46	W-46	TANK, FUEL	NOT SHOWN	
TA-41-47	W-47	STACK		N85+00 E95+00
TA-41-49	W-49	TRANSFORMER STATION	NOT SHOWN	
TA-41-50	W-50	TRASPORTABLE OFFICE BLDG.	FORMERLY TA-0-1032	N82+50 E90+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

UNCLASSIFIED

FIGURE 41-3

TA-41 STRUCTURE LOCATION INDEX

REV.	DATE	REVISION	BY	CHK	APP
16	9-22-83	REVISED TITLE BLOCK AND DWG. TO STATUS OF 8-1-83	VM	[illegible]	DPA

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-41 W-SITE

SEC CLASSIFICATION
CLASS U
REVIEWER [illegible]
DATE 10-17-83

SUBMITTED [signature]
RECOMMENDED [signature]
APPROVED [signature]
DRAWN V.E. PEÑA
CHECKED [signature]
DATE 9-22-83
SHEET NO 1 OF 2
DRAWING NO ENG-R5122

TA-42
OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 42 was designed and built in 1951 as an incinerator site for radionuclide contaminated waste. It was never fully operational, and all buildings were removed in 1978. In the interim, the area was used for storage and decontamination work. Some radionuclide contamination of the site occurred, although subsequent cleanup activities have removed most of the contamination (DOE, 1978). The former site of TA-42 lies within the current boundaries of TA-55.

The location of former TA-42 is at an elevation of about 7,250 feet asl. It is located on the narrow mesa formed between Mortandad Canyon on the north and Two Mile Canyon, a branch of Pajarito Canyon, on the south. The former site is near the north edge of the mesa. Canyon walls are steep slopes or cliffs in this area. The site of TA-42 lies on welded Bandelier Tuff, in the Ponderosa Pine/Pinon-Juniper overstory vegetation zone. Soil consists of Carjo loam (Nyhan et al., 1978).

At the site, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,050 feet asl. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-42

42-001	INCINERATOR COMPLEX
42-002	DECONTAMINATION FACILITY
42-003	SEPTIC SYSTEM
42-004	CANYON DISPOSAL

SUMMARY

LOCATION : TA-42
TYPE OF UNIT(s) : INCINERATOR
UNIT USE : TREATMENT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1951 - 1952
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

The incinerator [42-001(a)] was in Building TA-42-1. It had a design throughput of 45.5-90.8 kg/hr. The off-gases were routed through an off-gas cleanup system prior to discharge to the atmosphere. Ashes from the off-gas system and incinerator were placed in two holding tanks TA-42-2 and TA-42-3 [42-001(b) and (c)]. The tanks had capacities of 140,000 liters each and had drainlines that extended beneath building TA-42-1. Because of operational problems, the system was used only irregularly and was removed (including the tanks) in 1978. When the tanks were decommissioned, a door was cut in each tank. One tank contained 2,000 liters of dry sludge with plutonium-239 in concentrations of 130 nCi/g. The other tank contained 2,600 liters of wet sludge with plutonium concentrations of 1000 nCi/g. The sludges were taken to Area G, TA-54. The piping was reported to have been filled with an unknown material.

WASTE INFORMATION

Radionuclide-contaminated wastes generated in the laboratory were to be incinerated in this unit; however, very little was actually incinerated due to its poor performance.

RELEASE INFORMATION

Operational problems associated with the off-gas cleanup system resulted in releases of radionuclide particulates. When the building was removed in 1978, soils were monitored for radioactive contamination. Details on the removal of the incinerator, tanks, associated piping, and soil are not available. When the foundation and incinerator were removed in 1978, 600 cu m of debris and 1200 cu m of soil with an activity less than 10 nCi/g of soil of Pu-239 were removed for burial in Area G, TA-54. Five cu m of ash residue containing more than 10 nCi/g of Pu-239 were packaged and stored to meet DOE's 20-year retrieval storage criteria. Sixty of 61 soil samples taken on site contained less than 25 pCi gross alpha per g of soil, and one sample contained 29 pCi/g. Backfill, approximately 20 ft in depth, was placed over the site.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
42-001(a)	TA42-1-CA-I-RW/HW		Tsk 6 : 5	IN TA-42-1
42-001(b)	TA42-1-CA-I-RW/HW		Tsk 6 : 4	TA-42-2
42-001(c)	TA42-1-CA-I-RW/HW		Tsk 6 : 4	TA-42-3

SUMMARY

LOCATION : TA-42
TYPE OF UNIT(s) : DECONTAMINATION FACILITY
UNIT USE : TREATMENT/STORAGE
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1956 - 1970
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
SUSPECTED MIXED WASTE

UNIT INFORMATION

A vacublaster [42-002(a)] used to remove radionuclides from various laboratory equipment was located at TA-42-1. Dry boxes were typical items decontaminated. The area also served as a storage area for contaminated equipment. According to a long-time LANL employee, objects that were too large to take inside of TA-42-1, such as trucks, were cleaned at the end of the asphalt driveway [42-002(b)] located west and northwest of TA-42-1.

WASTE INFORMATION

The waste treated consisted of radionuclides and other possible residues such as grease and oil removed from equipment. The wastes generated by the unit probably consisted of fine solid residues and liquids containing radionuclides and possibly acids and solvents.

RELEASE INFORMATION

The decontamination facility may have had very small releases to the air. The liquids apparently went to the septic system. It is assumed that fine solid residues were bagged and sent to a material disposal area. Liquids from the outdoor washing area ran down the embankment below the parking lot. It is unknown whether the soil in this area was cleaned up during the decommissioning of TA-42-1.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
42-002(a)	TA42-1-CA-1-RW/HW		Tsk 6 : 5	AT TA-42-1
42-002(b)	**			WEST OF TA-42-1

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-42	MATERIALS MANAGED	: SANITARY WASTE
TYPE OF UNIT(s)	: SEPTIC SYSTEM		RADIOACTIVE WASTE
UNIT USE	: TREATMENT/DISPOSAL		SUSPECTED MIXED WASTE
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: 1951 - 1952		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

This unit includes a septic system and surrounding contaminated soil. The septic system included a drainline from building TA-42-1, a 565-gallon septic tank, a filter trench, a tile field, and an outfall in Mortandad Canyon. The tile field daylighted at the edge of the canyon wall. Building TA-42-1 and its septic system were abandoned in 1952. In 1973, the septic tank was observed to contain water, and possibly to have overflowed. The liquid and sludge were analyzed and found to contain 4,116,800 counts/min/l gross alpha, 1,376,000 counts/min/l gross beta, and 39,000 counts/min/l gross gamma. The tank was pumped and the liquid treated at the TA-50 wastewater treatment plant [50-001]. The septic system and contaminated soil were removed in 1978 and taken to Area G in TA-54. The excavated area was then backfilled.

WASTE INFORMATION

The tank received radioactive liquid waste containing plutonium, uranium, tritium, and fission products from activities at TA-42. Because a decontamination operation took place at TA-42 (see 42-002), solvents and perhaps acids may have also been present. Liquid from the septic tank sampled in 1973 contained plutonium-239, uranium-235, tritium, and fission products. When the tank was decommissioned, the sludge contained 350 nCi/g of plutonium-239.

RELEASE INFORMATION

The tank liquids were periodically removed and either placed in Pit 4, Area G, TA-54, or treated at TA-50. In 1952, sampling in Mortandad Canyon downstream of this outfall showed contamination in the canyon. During decontamination in 1978, liquid from the tank was discharged into the canyon. The liquid contained Pu-239, U-235, tritium and fission products. Phoswich surveys indicated general contamination in the tile field and outfall area. During removal of the outfall, soil was excavated from an area 3.2 m wide, 3.8 m long and 3.2 m deep. The soil, approximately 1,200 cu m, was taken to Area G in TA-54. After the soil was removed, the following sampling results were reported: 1) gross alpha measurements indicated all septic tank area samples had a value of less than 25 pCi/g of soil, 2) 4 of the 17 tile field samples had an activity greater than 25 pCi/g of soil, the highest being 99 pCi, and 3) 5 of 8 samples from under the tile drain lines were greater than 25 pCi and the highest was 400 pCi. It is believed a liquid discharge from TA-42 reached Mortandad Canyon. No information is available on non-radionuclide constituents of any possible residuals.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
42-003	TA42-2-ST/O/CA-I-RW		Tsk 6 : 1 2	TA-42-4

SUMMARY

LOCATION : TA-42
TYPE OF UNIT(s) : CANYONSIDE DISPOSAL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1950s
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE
UNKNOWN

UNIT INFORMATION

Debris, including pipes, was disposed over the canyon edge at TA-42.

WASTE INFORMATION

The waste consists of building debris. It is unknown whether the debris contained hazardous constituents.

RELEASE INFORMATION

There have been no known hazardous releases from this disposal site.

NOTES

This SWMU was formerly SWMU No. 42-XXX.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
42-004	TA42-3-OL-1-HW/RW		Tsk 6 : 3	

TA-42 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
42-001(a)	42-1
42-001(b)	42-1
42-001(c)	42-1
42-002(a)	42-1
42-002(b)	42-1
42-003	42-1
42-004	42-1

NOTE: Some structure locations contain more than one SWMU.

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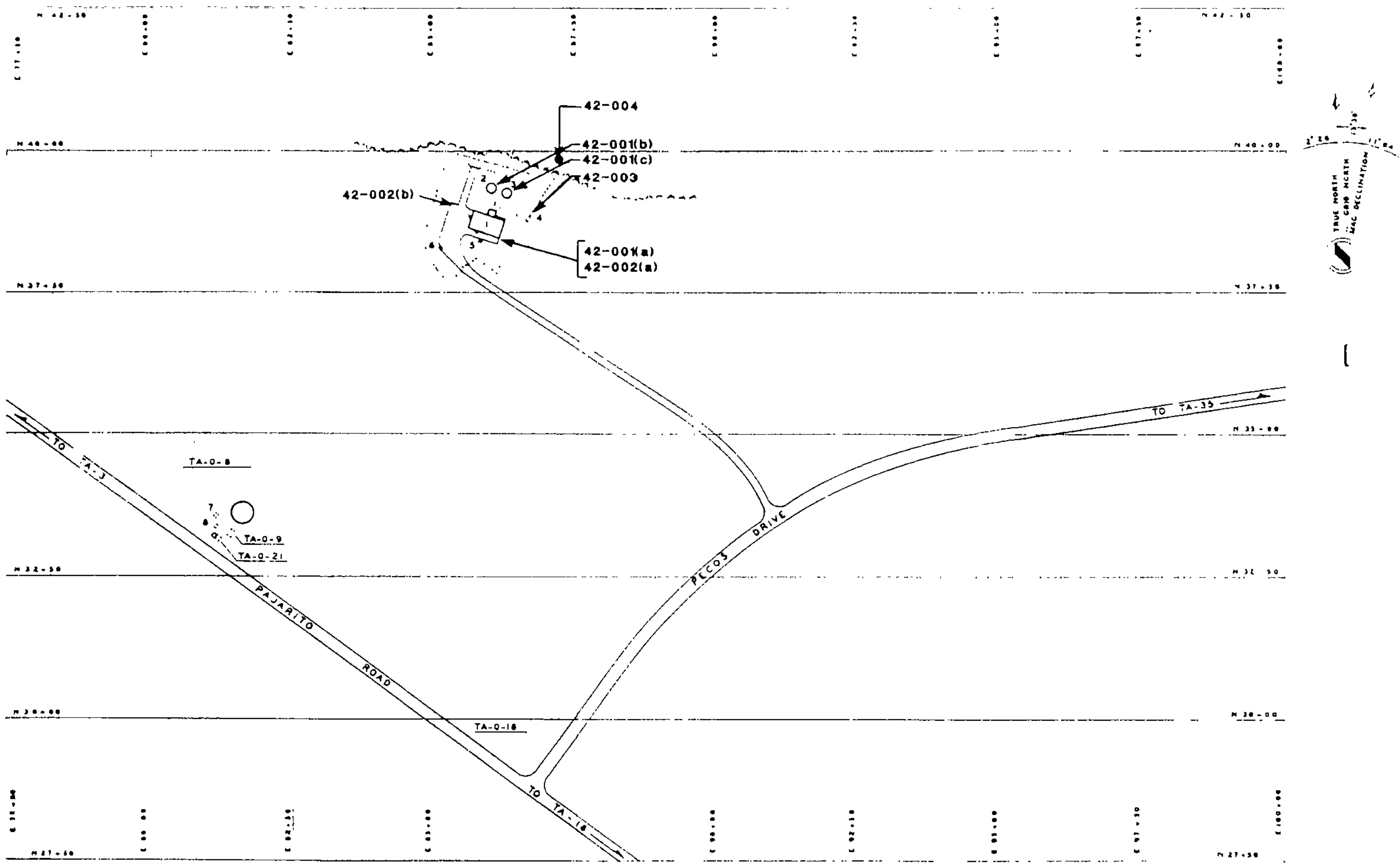
STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-0-8	ULR-8	WATER TANK
TA-0-9	ULR-9	MANHOLE (WATER)
TA-0-18	ULR-18	MANHOLE (GAS PRV)
TA-0-21	ULR-21	CHLORINATION STATION

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-42-1	DS-1	INCINERATOR BLDG
TA-42-2	DS-2	HOLDING TANK
TA-42-3	DS-3	HOLDING TANK
TA-42-4	DS-4	SEPTIC TANK
TA-42-5	DS-5	MANHOLE (GAS-DRIP POT)
TA-42-6	DS-6	MANHOLE (WATER)
TA-42-7	DS-7	MANHOLE (WATER)
TA-42-8	DS-8	MANHOLE (GAS)



EXPLANATION

42-001 SWMU LOCATION

REV. 1 3/6/90

FIGURE 42-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-42

7		REDRAWN TO STATUS OF JULY 1, 1955			
NO	DATE	REVISIONS		BY	

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
ENGINEERING DEPARTMENT LOS ALAMOS, N. M.

AUTHORIZED FOR: HEALTH, SAFETY, FIRE PROT., SEC.

STRUCTURE LOCATION PLAN
TA-42 INCINERATOR SITE

DRAWN N. BYERS DATE 10/6/55 SCALE 1" = 100' SHEET 1 OF 1

ENG-R 169

UNCLASSIFIED

OFFICIAL USE ONLY

TA-43
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 43 is used for biomedical research and, in the past, industrial hygiene research. The research is a mixture of basic and applied programs to study the mechanisms of action and to assess the health effects of radiation and materials associated with energy production. These studies are both structural and functional and are conducted at the molecular, cellular, and whole animal levels. Radioactive materials are utilized in this research. Occasional work with human pathogens is conducted in a level-3 biocontainment laboratory. Spills involving radioactive materials have been recorded at TA-43 (DOE, 1987a).

TA-43 lies at an elevation ranging from 7,000 to 7,300 feet asl. The structures are located on East Mesa, which is bounded by Pueblo Canyon on the north, within the Los Alamos town site, and by Los Alamos Canyon on the south. The technical area also includes both north and south walls of a portion of Los Alamos Canyon. Canyon walls are steep slopes in this area. TA-43 lies on welded Bandelier Tuff, in Ponderosa Pine/Pinon-Juniper and Ponderosa Pine-fir overstory vegetation zones. Soil types include Typic Ustorthents-Rock outcrop complex, Pogna fine sandy loam, and rock outcrop (Nyhan et al., 1978).

At TA-43, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,100 to 6,240 feet asl. Over 800 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-43

43-001	SANITARY AND INDUSTRIAL WASTE LINES
43-002	INCINERATOR
43-003	WASTE CONTAINER STORAGE AREAS
43-004	CARCASS STORAGE
43-005	RADIOACTIVE LIQUID WASTE STORAGE

SUMMARY

LOCATION	: TA-43	MATERIALS MANAGED	: MIXED WASTE
TYPE OF UNIT(s)	: WASTE LINE		SANITARY WASTE
UNIT USE	: DISPOSAL		HAZARDOUS WASTE
OPERATIONAL STATUS	: INACTIVE/ACTIVE		RADIOACTIVE WASTE
PERIOD OF USE	: 1953 - PRESENT		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: SUSPECTED		

UNIT INFORMATION

Industrial waste lines have been used in TA-43 over the years to dispose of radioactive-mixed waste generated by the Health Research Laboratory. Beginning in 1953, the drains handling sanitary and industrial waste from TA-43 [43-001(a)] were connected to the TA-45 treatment plant. In about 1963, the drains were connected to the county sanitary sewer line for treatment at the Bayo Sewage Plant (see SWMU No. 0-018). At that time, the waste continued to contain radioactivity, although at very low levels. All liquid wastes (sanitary and industrial) passed through the sewer line until 1975 when containers for radioactive liquid waste were placed in the laboratories for later transport to TA-50. Sanitary waste from drains continued to go to the Bayo Sewage Plant. In 1981, the building drains in TA-43 were redirected into the TA-3 sanitary sewer system. Most of the industrial waste line has been removed and the only remaining line is between the Health Research Laboratory, TA-43-1, and TA-0-60. Reports indicate that this section is contaminated with low levels of plutonium and fission products. In 1985, once-through coolant water and treated coolant water from TA-43-1 was identified as being disposed of through the sanitary collection system. This water was potentially radioactive. It was recommended that this non-sanitary flow source be eliminated from the sanitary waste system. Appendix A of the 1988 Solid Waste Management Unit Report indicated an active outfall of noncontact cooling water from TA-43-1 (NPDES serial number 040/041), and Figure 43-1 of that report located it west of TA-43-1. The 1987 CEARP notes an old NPDES map showing a similar outfall location; thus, the outfall may also have been active prior to 1985 connections to the sewage system. The outfall is no longer considered active, since it is not listed in the 1990 NPDES active outfall inventory. Photo processing occurs in TA-4-31, and until 1987 all photo chemicals were disposed of down the drains and into the sanitary waste system. After 1987, recovery units, collection points, and the types of photo chemicals were upgraded in an attempt to eliminate hazardous constituents. However, some photo chemicals are still discharged to the sanitary sewer. The 1987 CEARP also noted a pipe at the back of TA-43-24 that discharged from a drinking fountain [43-001(b)].

WASTE INFORMATION

The wastes from 43-001(a) include hazardous, sanitary, mixed and radioactive wastes. Specific constituents are unknown. The wastes from 43-001(b) are sanitary wastes.

RELEASE INFORMATION

There have been no known, documented leaks in the lines serving TA-43. Radioactive and/or hazardous substances are suspected to have been released from the coolant water outfall at 43-001(a). No hazardous or radioactive releases are known at 43-001(b).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
43-001(a)	TA43-2-CA/O-A/I-HW/RW	43.001		TA-43
43-001(b)	TA43-2-CA/O-A/I-HW/RW			TA-43-24

SUMMARY

LOCATION : TA-43
TYPE OF UNIT(s) : INCINERATOR
UNIT USE : DISPOSAL/TREATMENT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1960s
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

The unit was an incinerator used in TA-43-1 to dispose of wastes generated by health research activities. The incinerator was 400,000 Btu/hr, gas fired, and could burn 100 lbs/hr.

WASTE INFORMATION

The waste consisted of small animal carcasses, paper, and other health research-generated wastes.

RELEASE INFORMATION

Outside of combustion products, there were no known releases from this unit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
43-002	TA43-1-CA-A-MW/RW			TA-43-1

SUMMARY

LOCATION : TA-43
TYPE OF UNIT(s) : BUILDING/STRUCTURE
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

A small area within TA-43-1 is used as a satellite storage area. The materials are kept in a locked closet in room B-127. A photo processing lab in TA-43-1 stores waste chemicals for later silver recovery.

WASTE INFORMATION

The wastes in the satellite storage area include chemicals, and spent organics and inorganics. The photo processing lab stores photo chemical wastes.

RELEASE INFORMATION

There have been no known releases from these areas. However, past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
43-003	**			TA-43-1

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-43	MATERIALS MANAGED	: SOLID WASTE
TYPE OF UNIT(s)	: STORAGE		UNKNOWN
UNIT USE	: STORAGE		
OPERATIONAL STATUS	: ACTIVE		
PERIOD OF USE	: ? - PRESENT		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

Remains of animals that have been used in experiments are stored in freezers at TA-43-1. When enough carcasses are in storage, they are placed in 30 gallon drums and taken for shaft disposal in MDA-G.

WASTE INFORMATION

The waste is reported to be carcasses and parts of dead animals.

RELEASE INFORMATION

There have been no known releases.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
43-004	**			TA-43-1

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-43
TYPE OF UNIT(s) : TANKS
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1975 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : MIXED WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

Containers were placed in the TA-43-1 laboratories in 1975 for the storage of radioactively contaminated liquid waste. The waste is periodically collected for treatment at TA-50. Prior to 1975, radioactive liquid waste was disposed of down the drains [see 43-001(a)].

WASTE INFORMATION

The waste is radioactive or mixed waste in liquid form.

RELEASE INFORMATION

There are no known releases from these storage units.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
43-005	TA43-2-CA/O-A/I-HW/RW			TA-43-1

TA-43 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
43-001(a)	43-1, 43-2, 43-3
43-001(b)	43-1
43-002	43-1
43-003	43-1
43-004	43-1
43-005	43-1

NOTE: Some structure locations may contain more than one SWMU.

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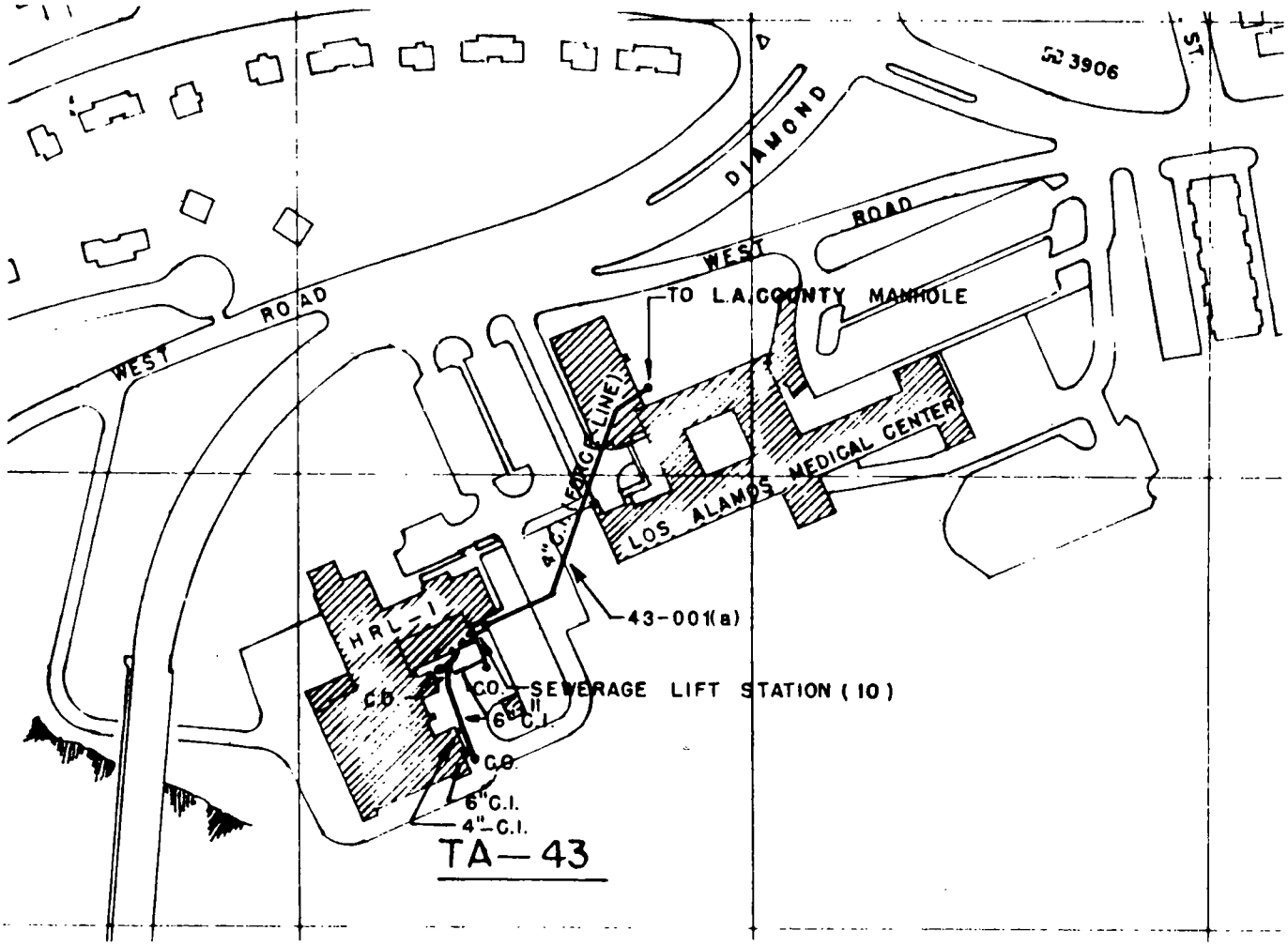


From the Zia Co. Sewer System Drawing

TA-3, TA-43, TA-61, TOWNSITE
DATED 3-26-80
SCALE 1" = 200'

EXPLANATION

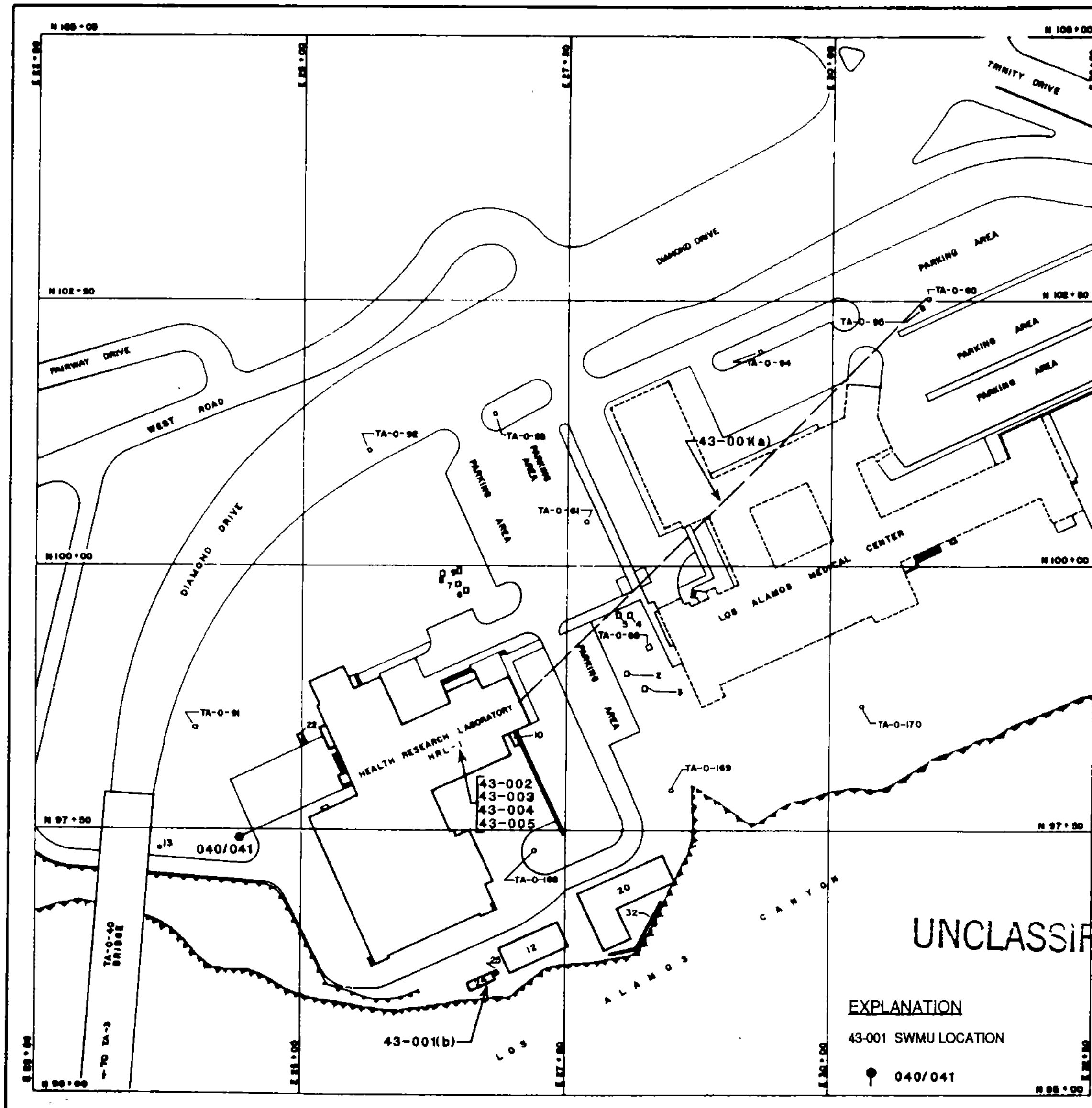
43-001: PART OF SANITARY SEWER LINE

UNCLASSIFIED

FIGURE 43-2

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-43

REV. 1 07/05/90



UNCLASSIFIED

EXPLANATION

43-001 SWMU LOCATION

040/041

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-43-1	HRL-1	HEALTH RESEARCH LAB		[illegible]
TA-43-2	HRL-2	MANHOLE	WATER P.I.V.	[illegible]
TA-43-3	HRL-3	MANHOLE	WATER	[illegible]
TA-43-4	HRL-4	MANHOLE	WATER	[illegible]
TA-43-5	HRL-5	MANHOLE	WATER	[illegible]
TA-43-6	HRL-6	MANHOLE	WATER	[illegible]
TA-43-7	HRL-7	MANHOLE	WATER	[illegible]
TA-43-8	HRL-8	MANHOLE	WATER	[illegible]
TA-43-9	HRL-9	MANHOLE	WATER	[illegible]
TA-43-10	HRL-10	SEWAGE LIFT STATION	TRANSFERRED TO ZIA AUG '70	[illegible]
TA-43-11	HRL-11	METAL LAWN BUILDING	REMOVED 19[illegible]	
TA-43-12	HRL-12	WAREHOUSE		N97+50 E27+50
TA-43-13	HRL-13	MANHOLE, TELEPHONE		N97+50 E25+00
TA-43-14	HRL-14			
TA-43-15	HRL-15			
TA-43-16	HRL-16			
TA-43-17	HRL-17		CANCELLED	
TA-43-18	HRL-18			
TA-43-19	HRL-19			
TA-43-20	HRL-20	TRANSPORTABLE, OFFICE		N97+60 E27+50
TA-43-21	HRL-21		CANCELLED	
TA-43-22	HRL-22	EMERGENCY ACCESS TO 43-1		N97+50 E27+50
TA-43-23	HRL-23		CANCELLED	
TA-43-24	HRL-24	TRAILER, OFFICE		N98+00 E27+50
TA-43-25	HRL-25	TRANSFORMER PAD		N98+00 E27+50
TA-43-26	HRL-26		CANCELLED	
TA-43-27	HRL-27		CANCELLED	
TA-43-28	HRL-28			
TA-43-29	HRL-29			
TA-43-30	HRL-30	STORAGE SHED		
TA-43-31	HRL-31		CANCELLED	
TA-43-32	HRL-32	RETAINING WALL		N97+60 E27+60
TA-43-33	HRL-33			
TA-43-34	HRL-34			
TA-43-35	HRL-35			
TA-43-36	HRL-36			
TA-43-37	HRL-37			
TA-43-38	HRL-38			
TA-43-39	HRL-39			
TA-43-40	HRL-40			
TA-43-41	HRL-41			
TA-43-42	HRL-42			
TA-43-43	HRL-43			
TA-43-44	HRL-44			

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-0-40	ULR-40	BRIDGE	TRANSFERRED TO ZIA 1966	N97+50 E22+50
TA-0-60	ULR-60	MANHOLE, ACID	ABANDONED 1966	N102+50 E30+00
TA-0-61	ULR-61	MANHOLE, ACID	ABANDONED 1966	N100+00 E27+50
TA-0-66	ULR-66	MANHOLE, ELECTRICAL	ABANDONED 1966	N100+00 E27+50
TA-0-91	ULR-91	MANHOLE, STEAM		N97+50 E25+00
TA-0-92	ULR-92	MANHOLE, STEAM		N100+00 E25+00
TA-0-93	ULR-93	MANHOLE, STEAM		N102+50 E27+50
TA-0-94	ULR-94	MANHOLE, STEAM		N102+50 E30+00
TA-0-96	ULR-96	MANHOLE, STEAM		N102+50 E30+00
TA-0-168	ULR-168	MANHOLE, ELECTRICAL		N97+50 E27+50
TA-0-169	ULR-169	MANHOLE, ELECTRICAL		N97+50 E27+50
TA-0-170	ULR-170	MANHOLE, ELECTRICAL		N97+50 E30+00

NOTES

UNIT 43-001: UNDERGROUND PIPING BETWEEN TA-43-1 AND TA-0-60. LOCATION OF INACTIVE OUTFALL INDICATING PIPING AND NPDES SERIAL NUMBERS FORMERLY ASSOCIATED WITH IT

50' 0 50' 100' GRAPHIC SCALE 1"=50'

FIGURE 43-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-43

REV.1 7/5/90

15 3-29-89 REVISED TO STATUS OF 3-11-89
14 7-6-88 REVISED TITLE BLOCK & DWG. TO STATUS OF 6-29-83

UNIVERSITY OF CALIFORNIA Los Alamos — Los Alamos National Laboratory, Los Alamos, New Mexico 87545

FACILITIES ENGINEERING, DIVISION

STRUCTURE LOCATION PLAN TA-43 HEALTH RESEARCH LABORATORY

DATE 7-6-88 SHEET 1 OF 1

ENG-R5123

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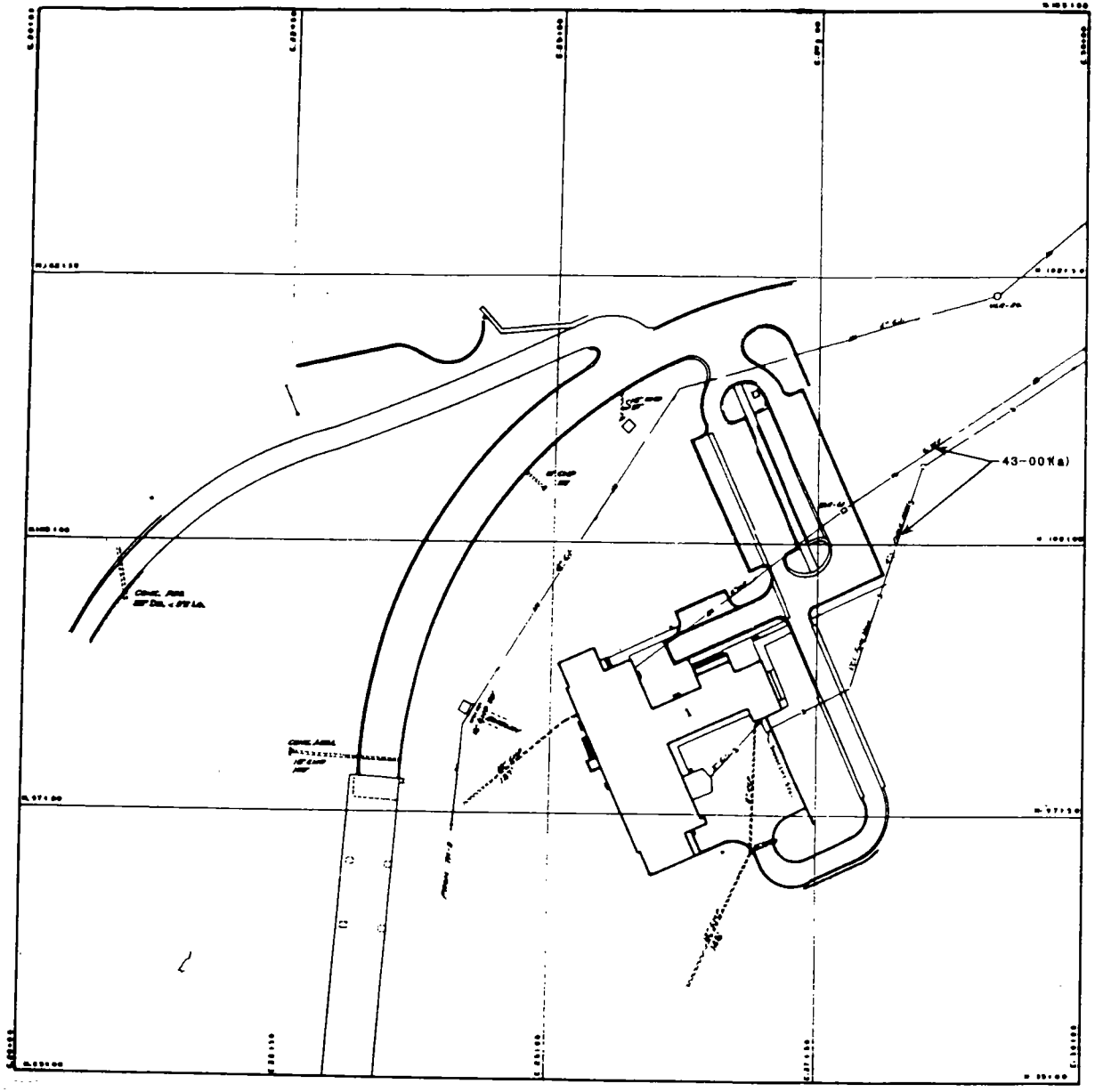

EXPLANATION

43-001(a) SANITARY SEWER LINES
AND ACID WASTE LINES

REV.1 7/5/90

FIGURE 43-3

LEGEND

Sanitary Sewer

Acid Waste

Storm Drainage

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA

UTILITY LOCATION PLAN
TA-43 HEALTH RESEARCH LAB.
SEWER SYSTEM

ENG- R1508

AUTHORIZED FOR
HEALTH
SAFETY
FIRE PROT
RISK

INFORMATION SHOWN
CURRENT AS OF 6-26-90

TA-44

OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 44, which was located in Los Angeles, California, was a custom machine shop. The site was abandoned in 1958 (DOE, 1987a). The site has no solid waste management units from laboratory use.

TA-45
OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 45 was included a plant to treat liquid industrial radionuclide-contaminated waste; treated effluent was discharged to Acid Canyon. It was built by 1951. The site is now outside the Laboratory boundary in the Los Alamos townsite. The plant and outfalls were shut down between 1963 and 1966 (DOE, 1987a).

The location of the TA-45 outfall is near the present intersection of Canyon Road and Central Avenue. Acid Canyon is a tributary to Pueblo Canyon, which joins Los Alamos Canyon. The areas of Acid, Pueblo, and Los Alamos Canyons between the Rio Grande and the TA-45 site are included with TA-45 as part of an area to be investigated for its potential impacts from the SWMUs identified at the former TA-45. The TA-45 site is at an elevation of about 7,240 feet asl. It lies on welded Bandelier Tuff, in the Ponderosa Pine overstory vegetation zone. Soils have not been surveyed in this area.

At the site, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,100 feet asl. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-45

45-001	RADIOACTIVE WASTEWATER TREATMENT FACILITY
45-002	VEHICLE DECONTAMINATION FACILITY
45-003	DECOMMISSIONED WASTE LINES
45-004	OUTFALLS

SUMMARY

LOCATION	: TA-45	MATERIALS MANAGED	: RADIOACTIVE WASTE
TYPE OF UNIT(s)	: WASTEWATER TREATMENT		MIXED WASTE
UNIT USE	: TREATMENT/DISPOSAL		HAZARDOUS WASTE
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: 1951 - 1964		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

The Radioactive Waste Treatment Facility, TA-45-2, received industrial liquid waste from, at various times, TA-1, TA-3, TA-43 and TA-48. The treatment plant consisted of storage, flocculation, sedimentation, and filtration equipment. Effluent was discharged through two outfalls to Acid-Pueblo Canyon (which had previously received effluent from the TA-1 industrial system). These outfalls were northeast of the abandoned acid waste line outfall from TA-1 (see 1-002). Sludges were taken to a material disposal area. The treatment facility was removed in the fall of 1966. After its transfer to Los Alamos County, this site was reported to have been used as a Los Alamos community landfill. The Larry A. Walkup Aquatic Center is located south to southwest of this property on the other side of the "draw".

WASTE INFORMATION

Influent consisted of liquids containing radionuclides, solvents, and other chemicals. Minute amounts of TNT were processed at TA-45; approximately 10 grams of TNT may have entered the sewer system over a period of several years, but no hazardous amounts of HE are believed to be present at TA-45.

RELEASE INFORMATION

Effluent was discharged to Acid-Pueblo Canyon, a tributary to Pueblo Canyon. Cleanup operations have removed most of the radionuclide contaminated rock and soil at the immediate outfall area. Radiation surveys since 1972 documented that the canyon system contains plutonium at above-background levels in all channels and banks from discharge points through lower Los Alamos Canyon. Areas of subsurface (greater than 25 cm depth) soil contamination at the former location of this facility may be present. A spill in the parking area resulted in plutonium contamination. The facility included two waste settling pits that were contaminated with 3,000 cpm alpha before their removal. The receiving Acid-Pueblo, Pueblo, and Lower Los Alamos Canyons, also contain the residual inventory of chemicals that were in the wastewater discharge.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
45-001	TA45-1-O/CA-I-HW/RW		Tsk 53 : 2 9	TA-45-2

SUMMARY

LOCATION : TA-45
TYPE OF UNIT(s) : DECONTAMINATION FACILITY
UNIT USE : TREATMENT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1951 - 1964
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
SOLID WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

This unit was located at TA-45-1 and served as a radionuclide decontamination facility for trucks. The facility included a building, a sump, and a drain system used to collect water for treatment in the waste treatment facility, TA-45-2 (see 45-001). There was a 2-inch diameter force main acid sewer line from the sump in the southeast corner of the building (TA-45-1) to manhole TA-45-8 and to the treatment facility. The unit and related equipment were removed in 1966. This land was transferred to Los Alamos County and is west of the Larry A. Walkup Aquatic Center.

WASTE INFORMATION

The waste generally consisted of residues such as dirt, oil, and grease contaminated with radionuclides removed during decontamination.

RELEASE INFORMATION

The wash water originally drained to an outfall that discharged to Acid-Pueblo Canyon. Decontamination and decommissioning of this facility began in 1966. The structure was demolished and taken to TA-54. A significant amount of soil was removed in the vicinity of the facility and its outfall. Additionally, some of the rock at the outfall was removed during decommissioning. Later, the wastewater was sent to TA-45-2 for treatment prior to discharge. Some areas of subsurface (greater than 25 cm depth) radioactive contamination may remain at the former location of this facility.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
45-002	TA45-1-O/CA-I-HW/RW		Tsk 53 : 3 8	TA-45-1, -8

SUMMARY

LOCATION : TA-45
TYPE OF UNIT(s) : WASTE LINE
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1951 - 1964
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : MIXED WASTE

UNIT INFORMATION

A number of waste lines connected TA-1, -3, -43, and -48 to the TA-45 waste treatment facility (see 45-001) at various times between 1951 and 1964. These lines have been removed, along with any associated radionuclide-contaminated soil, at the detection limits in 1964. Prior to the construction of the TA-45 waste treatment facility, the acid waste lines from TA-1 discharged untreated waste to Acid Canyon, a tributary to Pueblo Canyon. This outfall is described in 1-002. The land in Acid and Pueblo Canyons was transferred to Los Alamos County.

WASTE INFORMATION

The waste consisted of radioactive-mixed waste liquids generated by industrial operations.

RELEASE INFORMATION

General leaks from the waste lines had been reported in the past but were usually cleaned up for radionuclides. It is possible that radioactive contamination may remain in an area which had a leak in the lines from the TAs that crossed the Los Alamos Canyon region. The waste lines, manholes, and contaminated soil were removed and taken to TA-54. About 516 dump-truck loads of material were removed during these operations. Decommissioning operations extended from October, 1966 to July, 1967. A second decommissioning operation was undertaken in 1982, under FUSRAP, with lower levels mandated for radionuclides in soil. The 1982 decommissioning addressed only surface soils, and some areas of subsurface (greater than 25 cm depth) radioactive contamination may remain. No analyses or cleanup operations have been directed at hazardous components that may be present. Soil samples from a portion of the waste line from TA-1 to the TA-45 treatment plant that was beneath the old Central School site were collected and analyzed in 1990. Analytes included volatile and semivolatile organic compounds and inorganics. No significant concentrations of organic or inorganic compounds were detected.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
45-003	TA45-1-O/CA-1-HW/RW		Tsk 53 : 1 10	NEAR TA-45-1

SUMMARY

LOCATION : TA-45
TYPE OF UNIT(s) : OUTFALL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1951 - 1967
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED RADIOACTIVE WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

A sewer line from lift station TA-45-3 discharged station overflow to an outfall in Pueblo Canyon. The sanitary sewer line also discharged to this outfall. The sanitary sewer line connected buildings TA-45-1 and -2 and included manholes TA-45-5 and -6. According to engineering drawing ENG-R1513, the outfall was directly north of TA-45-3. However, a LANL employee recalls the outfall to have been directly west of TA-45-3. The land in Pueblo and Acid canyons was transferred to Los Alamos County.

WASTE INFORMATION

The sanitary sewer may have received small amounts of radioactive materials. Liquids containing solvents and other chemicals may also have been discharged to the sewer.

RELEASE INFORMATION

The sanitary sewer lines between buildings TA-45-1 and -2 were removed during decontamination and decommissioning of TA-45 in 1967. The lift station, TA-45-3, and manholes TA-45-5 and -6 were transferred to Los Alamos County.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
45-004	TA45-1-O/CA-I-HW/RW		Tsk 53 : 4 5	TA-45-1, -2, -3, -5, -6

TA-45 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
45-001	45-1
45-002	45-1
45-003	45-2
45-004	45-1

NOTE: Some structure locations may contain more than one SWMU.

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EXPLANATION

45-003 SWMU LOCATION

From Utility Location Plan,
Los Alamos Scientific Laboratory,
Eng. Dwg. No. ENG R95.

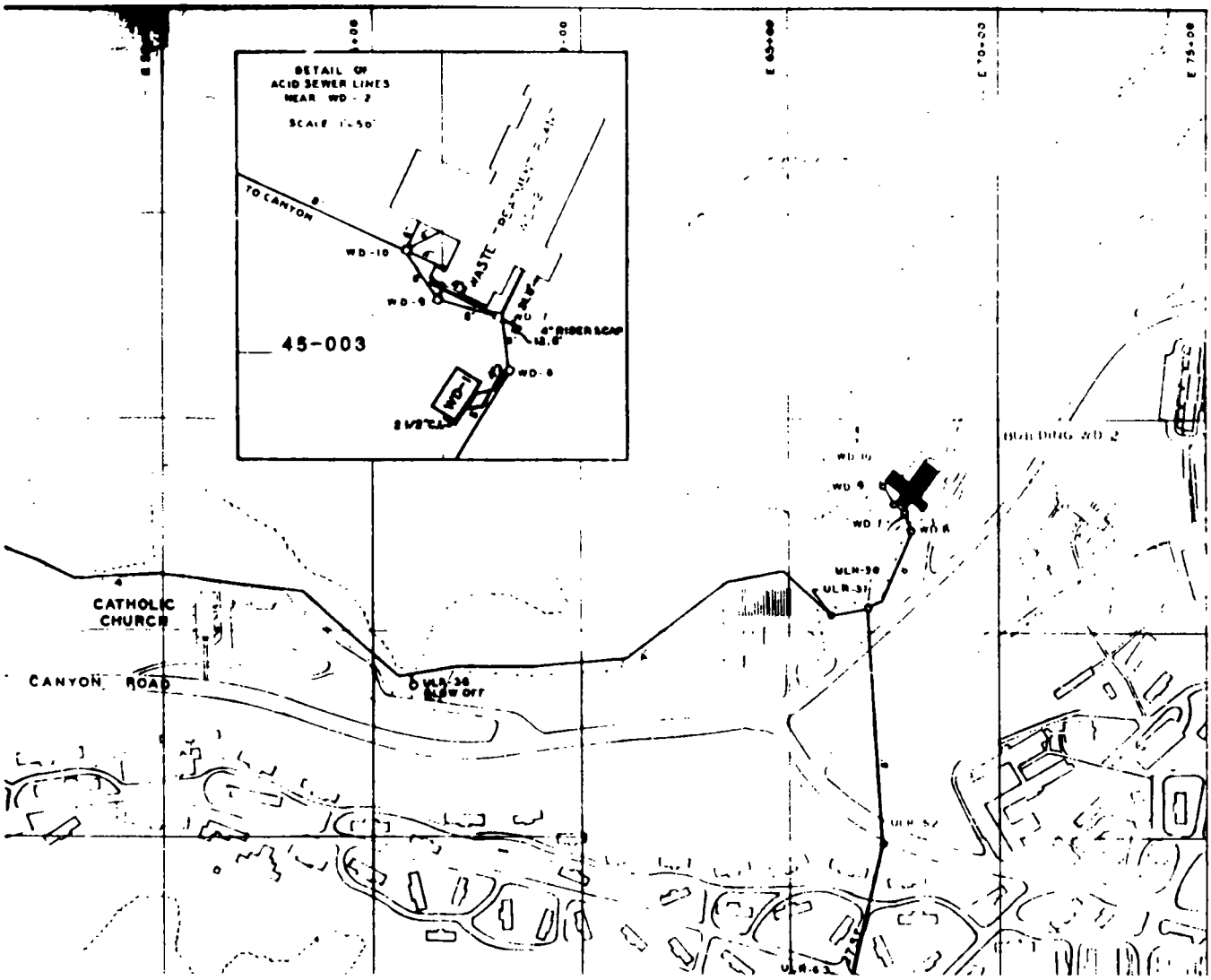
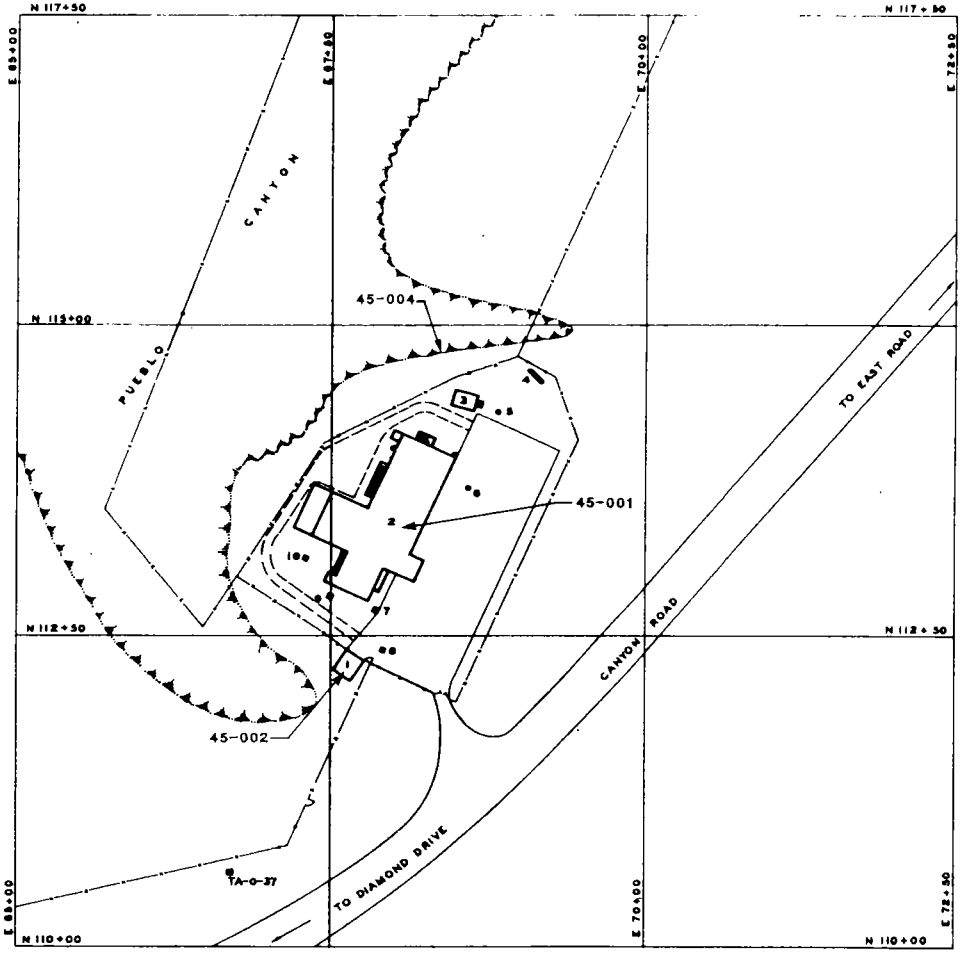


FIGURE 45-2

SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-45

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-45-1	WD-1	TRUCK WASHING BUILDING		N111+90 E 87+90
TA-45-2	WD-2	LABORATORY BUILDING		N111+90 E 87+90
TA-45-3	WD-3	SEWAGE LIFT STATION	SANITARY	N111+90 E 87+90
TA-45-4	WD-4	SEWAGE LIFT STATION		N111+90 E 87+90
TA-45-5	WD-5	MANHOLE	SANITARY	N111+90 E 87+90
TA-45-6	WD-6	MANHOLE	SANITARY	N111+90 E 87+90
TA-45-7	WD-7	MANHOLE	ACID	N111+90 E 87+90
TA-45-8	WD-8	MANHOLE	ACID	N111+90 E 87+90
TA-45-9	WD-9	MANHOLE	ACID	N111+90 E 87+90
TA-45-10	WD-10	MANHOLE	ACID	N111+90 E 87+90

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-0-37	ULR-37	MANHOLE	ACID SEWER	N110+08 E 87+50



REV. 1 4/30/90

EXPLANATION

45-001 SWMU LOCATION

UNCLASSIFIED

FIGURE 45-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-45

LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO

STRUCTURE LOCATION PLAN
TA-45 WD-SITE

AUTHORIZED FOR: HEALTH, SAFETY, FIRE PROT., ETC.

D. GLASS
AS NOTED
6-15-91
1 OF 1

ENG-R 2478

TA-46
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 46 has been used for a variety of projects including the Rover program to design a nuclear reactor for use as a rocket; applied photochemistry research including laser isotope separation technology and laser enhancement of chemical reactions; engineering technology; accelerator technology; materials, electronics, and computer simulation research; and solar energy research (DOE, 1987a). Various types of laser research are currently being done at TA-46.

TA-46 lies at elevations between about 6,820 and 7,140 feet asl. It lies near the center of the Laboratory on a mesa top between Pajarito Canyon and Canada del Buey. Canyon walls are steep slopes in this area. TA-46 is underlain by Bandelier Tuff that is welded near the surface, but variable in the subsurface. The site rests in the Ponderosa Pine/Pinon-Juniper and Pinon-Juniper overstory vegetation zones. Soil consists of Hackroy sandy loam, Hackroy-Rock outcrop complex, Typic Ustorthents-Rock outcrop complex, and rock outcrop (Nyhan et al., 1978).

At TA-46, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 5,900 to 5,980 feet asl. Over 800 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-46

46-001	SIX ACID STORAGE TANKS
46-002	SANITARY LAGOON AND SAND FILTER
46-003	SEPTIC SYSTEMS
46-004	SUMPS, DRAINS, AND OUTFALLS
46-005	SANITARY LAGOONS (FORMER SOLAR PONDS)
46-006	OPERATIONAL RELEASES
46-007	CESIUM TREATMENT DITCH
46-008	INACTIVE DRUM STORAGE AREAS
46-009	CANYONSIDE DISPOSAL
46-010	ACTIVE WASTE STORAGE AREAS

SUMMARY

LOCATION : TA-46
TYPE OF UNIT(s) : ABOVEGROUND TANK
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : EST. 1974 - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

The unit consists of six tanks located on the south side of TA-46-88. Four of the tanks are 3' x 3.5' x 4' (220 gallon capacity), are made of polyethylene in a steel mesh protective cage, and are being used for temporary (<90 days) storage of waste sulfuric acid. The sulfuric acid tanks are portable and only one is used at any given time. While one tank is filled with sulfuric acid inside a concrete berm area, the other three empty tanks are stored outside the bermed area on asphalt. When the one tank is filled, it is transported to TA-50 and the contents of the tank are diluted with acid waste from TA-55. The fifth tank is a 5000-gallon capacity stainless steel tank used for <90 day storage of waste nitric acid. The nitric acid tank is fixed and is also located inside the concrete berm. Waste nitric acid is periodically transferred by gravity to a 1000-gallon stainless steel dumpster tank (owned by HSE-7), which is transported to TA-50 where the contents are neutralized. During the period of 1979 - 1980, the tanks were not used.

WASTE INFORMATION

Four of the tanks are used to store waste sulfuric acid, although only one tank is used at any one time. The fifth and sixth tanks store waste nitric acid.

RELEASE INFORMATION

The site is addressed in the Revised Implementation Plan in Response to DOE Environmental Survey Team Preliminary Report, January 12, 1990. The discussion notes that one of the two unbermed tanks released hazardous waste (at least 5 gallons of 6 to 7 Molar nitric acid) in 1987. The tanks were subsequently bermed, emptied and cleaned, and no longer contain hazardous waste. The DOE Environmental Problem is not available.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
46-001	**	46.001 46.002 46.005		TA-46-88

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-46	MATERIALS MANAGED	: SOLID WASTE
TYPE OF UNIT(s)	: SURFACE IMPOUNDMENT		SUSPECTED MIXED WASTE
UNIT USE	: TREATMENT/DISPOSAL		
OPERATIONAL STATUS	: ACTIVE		
PERIOD OF USE	: 1973 - PRESENT		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: SUSPECTED		

UNIT INFORMATION

Sanitary lagoon TA-46-149 is a fenced, Gunite-lined lagoon located on the east edge of TA-46. The lagoon's dimensions are 62' x 102' x 11' deep. Liquids in the lagoon are treated and then discharged from the lagoon through a sand filter to Canada del Buey. The sand filter consists of three plastic-lined compartments measuring approximately 22' x 38' x 3' deep and separated by a concrete wall. The outfall from the sand filter to the canyon is permitted and is identified by NPDES serial number 07s (see Appendix A). The 1987 CEARP report identified chemical drains connected to the sanitary drainlines that empty into this lagoon. In 1973, a lime-lined pit was proposed for use as a stabilization pit for 901 1650-lb submarine batteries. Up to 25,000 gallons of acid was proposed to be emptied into the lime-lined pit, or else the actual batteries would be submerged in the pit. The 1987 CEARP identified TA-46-149 as potentially being the stabilization pit proposed for the battery disposal. No information is available on the fate of the batteries or the battery acid, although the 1987 CEARP also indicates that one employee remembered some batteries being sold as salvage, and others being used for other programs. Sanitary waste formerly handled by septic tanks TA-18-8, -22, -49, -53, -66, and -94 [SWMU Nos. 46-003(a) through (f)] are now handled by the sanitary lagoon. Sand removed from the filter beds is addressed in 46-009, Canyonside Disposal.

WASTE INFORMATION

Battery acid (sulfuric acid) or submarine batteries containing acid may have been disposed of in the ponds during the 1970s. Liquid wastes from TA-46 are biologically treated. In past years, the liquids may have contained small quantities of solvents, acids, and radionuclides.

RELEASE INFORMATION

It is suspected that the lagoon has discharged radioactive - mixed waste through its outfall (see Appendix A).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
46-002	TA46-3-SI/CA-A-HW/RW	46.003		TA-46-149
	TA46-8-SI-I-HW	46.004		

SUMMARY

LOCATION : TA-46
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : SUSPECTED

MATERIALS MANAGED : SUSPECTED MIXED WASTE
SANITARY WASTE

UNIT INFORMATION

There are several inactive septic tanks and one active septic tank in TA 46:

SWMU NO.	STRUCTURE	ESTIMATED USE PERIOD	STATUS	CONSTRUCTION/CAPACITY	OVERFLOW
46-003(a)	TA-46-8	1954 - 1973	abandoned	unknown	drain field
46-003(b)	TA-46-22	1956 - 1973	abandoned	steel/500 gal.	drain field
46-003(c)	TA-46-49	1956 - 1973	abandoned	unknown	drain field
46-003(d)	TA-46-53	1956 - 1973	abandoned	unknown	drain field
46-003(e)	TA-46-66	1960 - 1973	abandoned	unknown	drain field
46-003(f)	TA-46-94	1960 - 1974	abandoned/backfilled	unknown	unknown
46-003(g)	TA-46-230	? - present	active	1000 gal.	surface, unless pumped frequently

Septic tanks 46-003(a) through (e) may have been backfilled. Sanitary wastes formerly handled by septic tanks TA-46-8, -22, -49, -53, -66, and -94 [46-003(a) through (f)] are now handled by the sanitary lagoon (46-002). The septic systems include at least 3 abandoned sanitary manholes, 15 active sanitary manholes, and 3 active sanitary distribution boxes. TA-46-49 may have had a drainline that daylighted into Canyon del Buey. TA-46-230 received EID Registration Number LA-47 in 1987 as an Unpermitted Individual Liquid Waste System. In 1976, Warehouse TA-46-77 was found to be discharging untreated sanitary waste [46-003(h)], and a request was made to connect the warehouse with the sanitary lagoon. The 1987 CEARP indicates an open pipe was connected to TA-46-77 in 1986. A LANL employee said that the building is not currently discharging waste from the pipe.

WASTE INFORMATION

Sanitary wastes were handled by the tanks. However, the inactive tanks (TA-46-8, -22, -49, -53, -66, and -94) may also have handled industrial wastes since they all are reported as having possible radionuclide contamination. Plutonium was found in the sludge from TA-46-53 when the tank was pumped. Other contaminants could include organics, acid, and beryllium. Tank TA-46-230 is believed to manage only sanitary waste but may be suspect for other wastes. It is not known whether the sanitary discharge from TA-46-77 also contained hazardous or radioactive contaminants.

RELEASE INFORMATION

Active Tank TA-46-230 must be pumped frequently because it drains to the surface with heavy use and generates strong odors that are particularly notable in the summer months. Any contaminants that entered the inactive tanks may have contaminated the associated drain fields.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
46-003(a)	TA46-4-ST-A/I-HW/RW	? 46.007		TA-46-8
46-003(b)	TA46-4-ST-A/I-HW/RW	? 46.007		TA-46-22
46-003(c)	TA46-4-ST-A/I-HW/RW	? 46.007		TA-46-49
46-003(d)	TA46-4-ST-A/I-HW/RW	? 46.007		TA-46-53
46-003(e)	TA46-4-ST-A/I-HW/RW	? 46.007		TA-46-66
46-003(f)	TA46-4-ST-A/I-HW/RW	? 46.007		TA-46-94
46-003(g)	TA46-4-ST-A/I-HW/RW	? 46.007		TA-46-230
46-003(h)	TA46-4-ST-A/I-HW/RW			TA-46-77

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-46
TYPE OF UNIT(s) : SUMP
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : 1958 - present
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : SUSPECTED

MATERIALS MANAGED : MIXED WASTE
HAZARDOUS WASTE

UNIT INFORMATION

Sumps and drains in TA-46 include: a) Acid drains from Building TA-46-31 and Tank TA-46-81 [46-004(a) and (b)] went to a sump, TA-46-61 [46-004(c)]. TA-46-81 was a reactive metal cleanup tank constructed of concrete and used to clean alkali metal containers and components. It was removed in 1973. b) Sumps TA-46-69 and -70 [46-004(d) and (e)] connect in series to either a laboratory and shop building, TA-46-58, or from TA-46-16. The sumps were abandoned after 1973. c) A drain in Building TA-46-24 [46-004(f)] was used during a cleaning operation. d) The ducts and drains in TA-46-1 and TA-46-16 [46-004(g) and (h)] are believed to have uranium contamination. Several facilities have discharged blowdown into adjacent canyons: pumphouse TA-46-87 and its associated cooling tower, TA-46-86 [46-004(i)]; laboratory building TA-46-1 [46-004(j)]; and cooling tower TA-46-169 [46-004(k)]. Cooling tower TA-46-39 [46-004(l)], removed in 1968, may have been designed to recirculate fluids back to TA-46-24. Hydraulics laboratory TA-46-30 [46-004(m)] and warehouse TA-46-41 [46-004(n)] release noncontact cooling water to the ground, and Spectrometer Facility TA-46-200 [46-004(o)] releases treated cooling water to the environment.

SWMU NO.	ASSOCIATED STRUCTURE	KNOWN/SUSPECTED WASTE	RELEASE INFORMATION
46-004(a)	TA-46-31	industrial liquid waste	drains into sump TA-46-61 [see 46-004(c)]
46-004(b)	TA-46-81	industrial liquid waste	drains into sump TA-46-61 [see 46-004(c)]
46-004(c)	TA-46-61	industrial liquid waste from 46-004(a) and (b); plutonium, uranium thorium (1977)	NPDES outfall 043 into Canada del Buey
46-004(d)	TA-46-69	plutonium, uranium, thorium (1977); acids, mixed waste, solvents	assumed to have outlet into Canada del Buey
46-004(e)	TA-46-70	plutonium, uranium, thorium (1977); cesium, uranium, thorium (1989); acids, mixed wastes, solvents	assumed to have outlet into Canada del Buey
46-004(f)	TA-46-24	50% nitric acid, 50% hydrochloric acid	NPDES outfall 018 into Canada del Buey via storm drain
46-004(g)	TA-46-1	uranium	possible release into Canada del Buey
46-004(h)	TA-46-16	uranium	unknown
46-004(i)	TA-46-86,-87	cooling tower blowdown containing organic chelate, chemicals and acids to control scale, corrosion, algae growth, etc.	NPDES outfall 044 into Canada del Buey
46-004(j)	TA-46-1	cooling tower blowdown containing organic chelate, chemicals and acids to control scale, corrosion, algae growth, etc.	NPDES outfall 042 into Canada del Buey
46-004(k)	TA-46-169	cooling water	NPDES outfall 124 into Canada del Buey
46-004(l)	TA-46-39	cooling water	
46-004(m)	TA-46-30	noncontact cooling water	NPDES outfall 013
46-004(n)	TA-46-41	noncontact cooling water	NPDES outfall 117
46-004(o)	TA-46-200	treated cooling water	NPDES outfall 136

(continued)

WASTE INFORMATION

Lithium hydroxide from cleaning operations at TA-46-31 was diluted to 0.044 molar (96 ppm) in cooling tower blowdown, most likely from TA-46-86, which would then be released to the environment through pumphouse TA-46-87 [46-004(i)].

RELEASE INFORMATION

Lithium hydroxide (LiOH) discharges from 46-004(i) may have occurred no more than 15 times/year, for a lithium discharge of 50 to 100 lbs/year. An estimated 453,000 gallons of blowdown was discharged from 46-004(i) each year. The annual estimated blowdown discharge from 46-004(k) was 10,500 gallons. No information is available to indicate whether cooling water from TA-46-39 [46-004(l)] was discharged to the environment. DOE Environmental Problem 24 addressed sump TA-46-70, which was listed as abandoned. The Environmental Problem is discussed in the Revised Implementation Plan in Response to DOE Environmental Survey Team Preliminary Report, January 12, 1990.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
46-004(a)	TA46-1-CA/O-I-HW/RW			TA-46-31
46-004(b)	TA46-1-CA/O-I-HW/RW			TA-46-81
46-004(c)	TA46-1-CA/O-I-HW/RW	? 46.009		TA-46-61
	TA46-7-S-I-HW/RW/PP	? 46.013-46.016		
46-004(d)	TA46-7-S-I-HW/RW/PP	? 46.009		TA-46-69
46-004(e)	TA46-7-S-I-HW/RW/PP	? 46.009		TA-46-70
46-004(f)	TA46-1-CA/O-I-HW/RW	? 46.013-46.016		TA-46-24
46-004(g)	TA46-1-CA/O-I-HW/RW	? 46.013-46.016		TA-46-1
	TA46-5-CA-A/I-HW/RW/PP			
46-004(h)	TA46-5-CA-A/I-HW/RW/PP			TA-46-16
46-004(i)	TA46-1-CA/O-I-HW/RW/PP	? 46.013-46.016		TA-46-87, -86
	TA46-2-O/CA-A-HW/PP			
46-004(j)	TA46-1-CA/O-I-HW/RW	? 46.013-46.016		TA-46-1
	TA46-2-O/CA-A-HW/PP			
46-004(k)	TA46-2-O/CA-A-HW/PP	? 46.013-46.016		TA-46-169
46-004(l)	**	? 46.013-46.016		TA-46-39
46-004(m)	**	? 46.013-46.016		TA-46-30
46-004(n)	**	? 46.013-46.016		TA-46-41

? Indicates uncertainty with RFA Unit correlation.
** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-46
TYPE OF UNIT(s) : SURFACE IMPOUNDMENT
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : LATE 1980s - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

These units are lined surface impoundments that were used in experiments for LANL's solar energy program in the early 1980s, and contained sodium chloride solutions. In 1987, the sodium chloride solution was removed by a salt disposal company. In the late 1980s, the surface impoundments were connected to TA-46 sanitary waste lines. The impoundments currently treat sanitary waste and are fenced. An outfall is associated with these new sanitary lagoons (NPDES serial number 12s), but as of May, 1990, no waste had been discharged to Canada del Buey. When used for solar experiments, these surface impoundments were listed as TA-46-170 and -171. There is no structure number currently associated with these impoundments.

WASTE INFORMATION

Samples from the ponds were collected and analyzed in 1987 for EP-toxic metals and semi-volatile organic compounds. Results of the analyses showed concentrations to be below detection limits. There were no known hazardous constituents. The impoundments now treat sanitary waste. No information is available to indicate how sanitary wastes are treated or whether other wastes enter the lagoons.

RELEASE INFORMATION

There have been no known hazardous releases from these ponds.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
46-005	TA46-9-SI-1-HW	46.010		formerly TA-46-170, -171

SUMMARY

LOCATION	: TA-46	MATERIALS MANAGED	: MIXED WASTE
TYPE OF UNIT(s)	: OPERATIONAL RELEASE		HAZARDOUS WASTE
UNIT USE	: DISPOSAL		FUEL
OPERATIONAL STATUS	: INACTIVE/ACTIVE		PCBs
PERIOD OF USE	: 1956 - PRESENT		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

According to CEARP, several working areas of TA-46 may have been subject to spills and releases during the Rover program and more recently. The drainage ditch to the east of Manifold TA-46-71, which stored 15 drums containing dielectric oil [46-006(a)], and the drainage ditches near shed TA-46-197 [46-006(b)] and Building TA-46-158 [46-006(c)] were noted to contain oil. The CEARP survey noted evidence of oil spills in several areas at TA-46, including discoloration of the soil along the canyon edge behind TA-46-31 [46-006(d)]. TA-46-1 released effluent from metallurgical polishing [46-006(e)] into Canada del Buey. The effluent was estimated in 1965 to contain approximately 15 g/year of uranium.

WASTE INFORMATION

Petroleum products, chemicals, and radionuclides have been used at TA-46.

RELEASE INFORMATION

DOE Environmental Problem 19 addressed the area of 46-006(a), between and north of TA-46-1 and TA-46-42, that was believed to be contaminated by storage drums. The following were detected: barium, cadmium, chromium, copper, and zinc, alpha-BHC, Endosulfan I and II, gamma chlordane, 4,4'-DDD, 4,4'-DDT, Arochlor-1221 (a PCB) and -1254, and thorium-232, uranium-235, uranium-238, uranium (all isotopes), plutonium-238, plutonium-239, -240, strontium-90, potassium-40, and cesium-137. The problem has beeDOE Environmental Problem 19 addressed the area of 46-006(a), between and north of TA-46-1 and TA-46-42, that was believed to be contaminated by storage drums. The following were detected: barium, cadmium, chromium, copper, and zinc, alpha-BHC, Endosulfan I and II, gamma chlordane, 4,4'-DDD, 4,4'-DDT, Arochlor-1221 (a PCB) and -1254, and thorium-232, uranium-235, uranium-238, uranium (all isotopes), plutonium-238, plutonium-239, -240, strontium-90, potassium-40, and cesium-137. The problem has been addressed in the Revised Implementation Plan in Response to DOE Environmental Survey Team Preliminary Report, January 12, 1990. An oil-like substance leaking from and around shed TA-46-197 is addressed also; the DOE Environmental Problem associated with this structure is not available. Past spills at TA-46-197 included one at the southeastern corner of the shed, upgradient from a stormwater drain. The drain daylights outside the TA fence and stained soils were noted at the discharge point. A gThere is an outfall area north of TA-3-141 which received wastes from a floor drain, a roof drain, and possibly other drains. It is probable that prior to the NPDES permit program the soils in the outfall area received uranium. Uranium is no longer discharged to the outfall, and TA-3-141 currently discharges to a NPDES outfall. The outfall has EPA No. 04A and NPDES Serial No. 140.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
46-006(a)	TA46-2-O/CA-A-HW/PP	? 46.017		TA-46-71
46-006(b)	**	? 46.017		NEAR TA-46-197
46-006(c)	**	? 46.017		NEAR TA-46-158
46-006(d)	TA46-5-CA-A/I-HW/RW/PP	? 46.017		BEHIND TA-46-31
46-006(e)	**			TA-46-1

? Indicates uncertainty with RFA Unit correlation.
** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-46
TYPE OF UNIT(s) : TREATMENT DITCH
UNIT USE : TREATMENT
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1960s - ?
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE

UNIT INFORMATION

This unit consisted of a ditch located near the southwest corner of Building 1. Cells containing cesium metal were placed in the ditch and a stream of water was run over the cells to remove the cesium. Glassware containing cesium metal and cesium oxide were treated similarly. The glassware was broken and left in the ditch until periodic cleanup. This was reportedly a routine operation; however, the total quantities of cesium that were treated in the ditch are not known.

WASTE INFORMATION

The waste consisted of cells containing cesium metal and cesium oxide and broken glassware containing cesium.

RELEASE INFORMATION

The amount of cesium released is not known.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
46-007	TA46-1-CA/O-I-HW/RW			SOUTHWEST OF TA-46-1

SUMMARY

LOCATION : TA-46
TYPE OF UNIT(s) : STORAGE
UNIT USE : STORAGE
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : ? - 1980s
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE
PCBs
SOLID WASTE

UNIT INFORMATION

The 1986 CEARP field survey noted several locations where barrels, cans, and drums were stored. The RFA noted storage at TA-46-88 [46-008(a)] near manholes TA-46-6 and -15 [46-008(b)] and a storage area inside of a fenced area at TA-46 [46-008(c)]. A November 1988 field survey noted 2 unlabeled barrels of oil on the south side of TA-46-262 [46-008(d)]. Four barrels of what may have been waste vacuum oil were found on the east side of TA-46-255 [46-008(e)]. Four barrels of oil which may have been either product or waste were located on the southeast side of TA-46-31 [46-008(f)]. The Revised Implementation Plan in Response to DOE Environmental Survey Team Preliminary Report, January 12, 1990, noted storage of 20 drums directly on the ground south of TA-46-76 [46-008(g)]. All the container storage areas are inactive; these sites are not listed in the 4/90 LANL Active Container Storage Area Database. There was no DOE Environmental Problem that specifically addressed this site.

WASTE INFORMATION

Contents of the drums in the storage areas were reportedly waste acids, chemicals, oils, out-of-service transformers, power supplies, and waste oil. 46-008(g) contained dielectric oil which had not been tested for PCBs, chlorinated solvent, nor hydraulic fluid.

RELEASE INFORMATION

In the container storage areas there is evidence of spills and leaks. The extent of possible soil contamination is unknown. No leaks were observed in those storage areas noted during the November 1988 field survey.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
46-008(a)	**	46.006		TA-46-88
		? 46.011		
46-008(b)	**			TA-46-6, -15
46-008(c)	**			FENCED AREA AT TA-46
46-008(d)	**	? 46.008		TA-46-262
		? 46.011		
		? 46.012		
46-008(e)	**	? 46.008		TA-46-255
		? 46.011		
		? 46.012		
46-008(f)	**	? 46.008		TA-46-31
		? 46.011		
		? 46.012		
46-008(g)	**	? 46.008		SOUTH OF TA-46-76
		? 46.011		
		? 46.012		
46-008(misc)	TA46-6-CA-A/I-HW/PP			

? Indicates uncertainty with RFA Unit correlation.
** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-46
TYPE OF UNIT(s) : SURFACE DISPOSAL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : ?
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SOLID WASTE
HAZARDOUS WASTE

UNIT INFORMATION

During the 1986 CEARP field survey, a material fill area was found at the head of a tributary to Canada del Buey [46-009(a)]. A second area is immediately to the south of the sanitary lagoon, TA-46-149 [see 46-002].

WASTE INFORMATION

The fill area at 46-009(a) contains building debris, soil, and asphalt. The canyonside disposal site at 46-009(b) contains sand from the sanitary lagoon sand filter on the mesa above that has lost its filtering capability. Sanitary waste treated by the sand filters may have contained solvents, acids, and radionuclides.

RELEASE INFORMATION

It is unknown whether a hazardous release has occurred from 46-009(a) or (b). DOE Environmental Problem 22 addressed 46-009(a) as an inactive landfill. Amosite, mineral wool, chrysolite, and cellulose were found in quantities of less than 1% each. Barium, beryllium, cadmium, chromium, silver, and zinc were also detected.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
46-009(a)	TA46-10-L-I-HW-Unknown			
46-009(b)	TA46-3-SI-CA-H-HW/RW	46.003		TA-46-149
	TA46-8-SI-I-HW	46.004		

SUMMARY

LOCATION : TA-46
TYPE OF UNIT(s) : STORAGE
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

The following are active container storage areas (satellite), based on a 4/90 LANL database:

SWMU NO.	STRUCTURE	SETTING	MATERIALS MANAGED
46-010(a)	TA-46-1	outside, SWM corner of South Bay	acetone, ethanol, ethylene glycol, hydrofluoric acid, sodium hydroxide, freon TF, acetic acid, hydrochloric acid, nitric acid, vacuum pump oil
46-010(b)	TA-46-24	location will vary; can be near point of generation and include adjacent buildings (TA-46-59, TA-46-76, etc.)	vacuum pump oil (possibly with fluorine/chlorine), solvents, laser dye
46-010(b)	TA-46-24	outside, south side	used vacuum pump oil (possibly with fluorine/chlorine)
46-010(b)	TA-46-24	south side of building	spent photo chemicals
46-010(c)	TA-46-31	hall	methanol, ethylene glycol, ethanol, DMSO
46-010(c)	TA-46-31	outside, Rm 103, south gas rack (#1)	methanol with laser dye, rags or tissue with: methanol with or without dye, acetone, hexane, trichloroethylene
46-010(d)	TA-46-41	south side of building near the road under covered shed	acetone, methanol, ethanol, liquid and absorbed on wipes, vacuum pump oils
46-010(e)	TA-46-154	outside, and in Rm 114B	methanol, ehtylene glycol
46-010(f)	TA-46-158	outside, east side	acetone, ethanol, freon, trichloroethane, rags

Active container storage areas are inspected regularly. The schedule is dependent on the type of material stored.

WASTE INFORMATION

Wastes stored included solvents, dyes, pump oil, spent photo chemicals and acids as indicated above.

RELEASE INFORMATION

There have been no known releases from the storage facilities. However, past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
46-010(a)	**	? 46.008 ? 46.012		TA-46-1
46-010(b)	**	? 46.008 ? 46.012		TA-46-24
46-010(c)	**	? 46.008 ? 46.012		TA-46-31
46-010(d)	**	? 46.008 ? 46.012		TA-46-41
46-010(e)	**	? 46.008 ? 46.012		TA-46-154
46-010(f)	**			TA-46-158
46-010(misc)	TA46-6-CA-A/I-HW/PP			

? Indicates uncertainty with RFA Unit correlation.
** No corresponding E. R. Program unit.

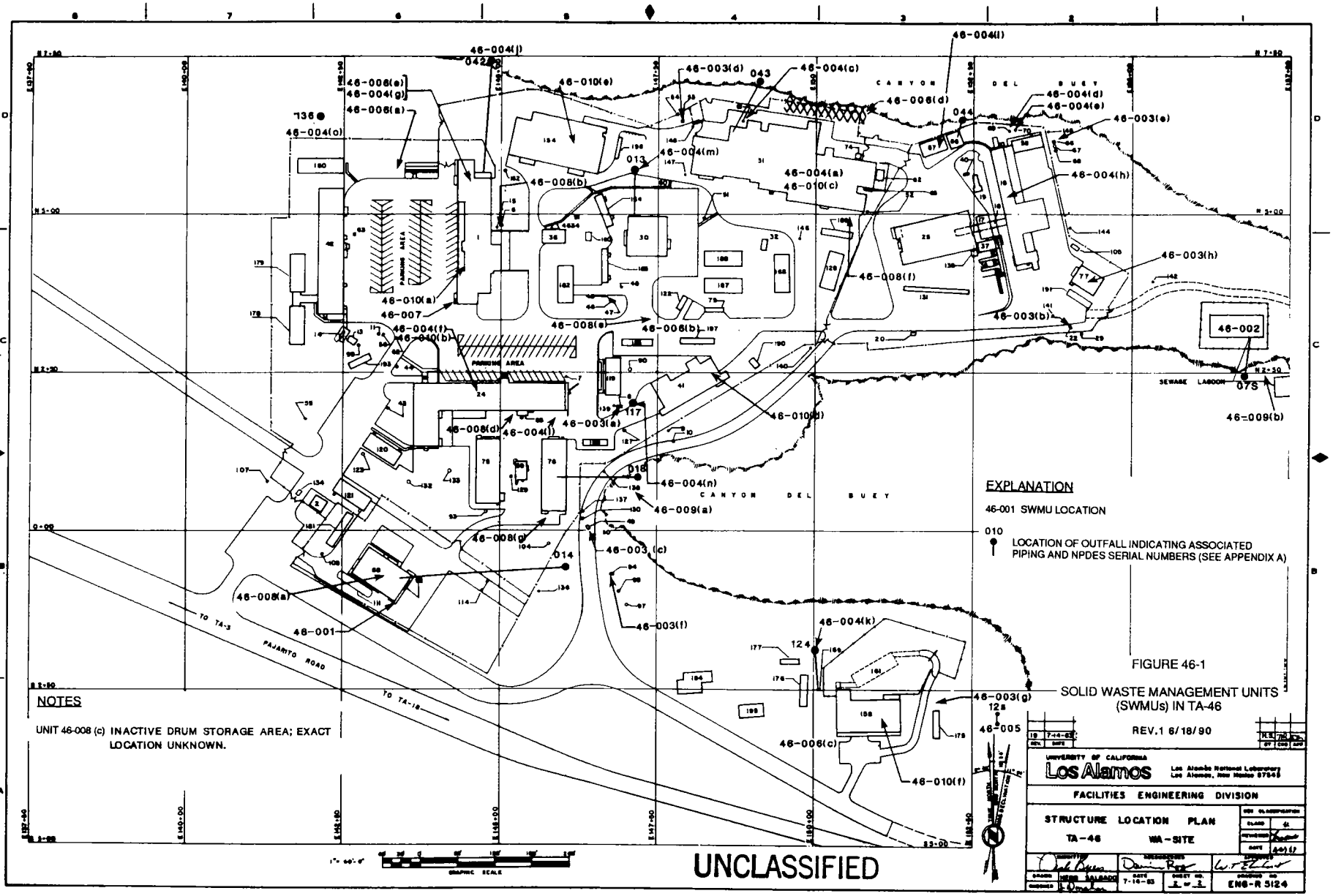
TA-46 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

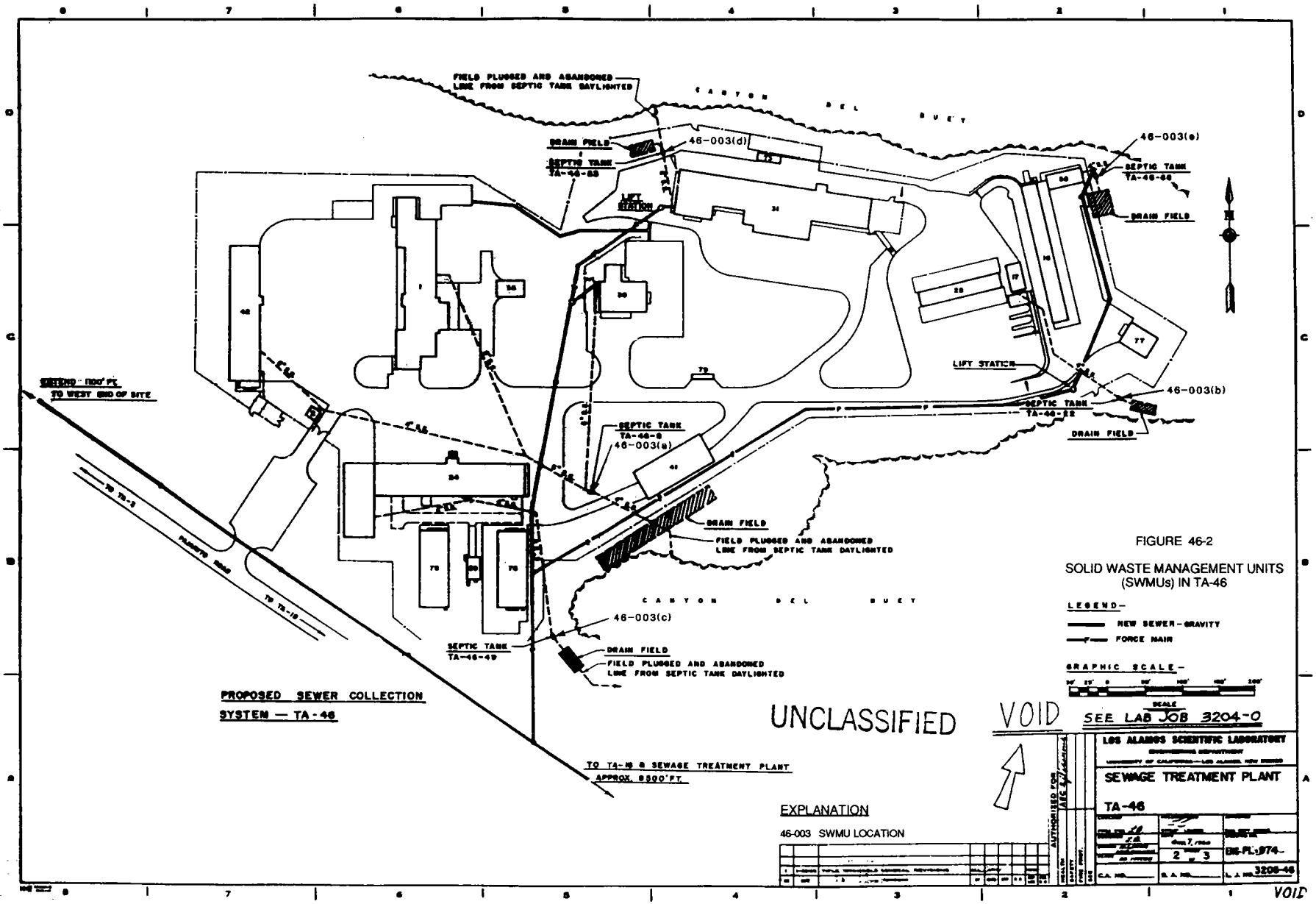
SWMU	FIGURE NUMBER
46-001	46-1
46-002	46-1
46-003(a)	46-1, 46-2
46-003(b)	46-1, 46-2
46-003(c)	46-1, 46-2
46-003(d)	46-1, 46-2
46-003(e)	46-1, 46-2
46-003(f)	46-1
46-003(g)	46-1
46-003(h)	46-1
46-004(a)	46-1, 46-3
46-004(b)	46-3
46-004(c)	46-1, 46-3
46-004(d)	46-1
46-004(e)	46-1
46-004(f)	46-1
46-004(g)	46-1
46-004(h)	46-1
46-004(i)	46-1
46-004(j)	46-1
46-004(k)	46-1
46-004(l)	46-1
46-004(m)	46-1
46-004(n)	46-1
46-004(o)	46-1
46-005	46-1
46-006(a)	46-1
46-006(b)	46-1
46-006(c)	46-1
46-006(d)	46-1
46-006(e)	46-1
46-007	46-1
46-008(a)	46-1
46-008(b)	46-1
46-008(c)	Not shown
46-008(d)	46-1
46-008(e)	46-1
46-008(f)	46-1
46-008(g)	46-1
46-009(a)	46-1
46-009(b)	46-1

TA-46 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX
(CONTINUED)

SWMU	FIGURE NUMBER
46-010(a)	46-1
46-010(b)	46-1
46-010(c)	46-1
46-010(d)	46-1
46-010(e)	46-1
46-010(f)	46-1

NOTE: Some structure locations may contain more than one SWMU.


46-004(j)
042
46-003(d)
043
46-004(c)
46-004(l)
CANYON DEL BUEY
46-006(e)
46-004(g)
46-006(a)
46-010(e)
46-006(d)
046
46-004(d)
46-004(e)
46-003(e)
136
46-004(o)
013
46-004(m)
46-004(a)
46-010(c)
46-004(h)
46-008(b)
46-008(f)
46-003(h)
46-010(a)
46-007
46-004(f)
46-010(b)
46-008(e)
46-006(b)
46-003(b)
46-002
PARKING AREA
SEWAGE LAGOON
07S
46-009(b)
46-008(d)
46-004(j)
46-003(a)
117
46-010(d)
018
46-004(n)
46-009(a)
46-008(g)
014
46-003(c)
46-008(a)
46-001
TO TA-3
PAJARITO ROAD
TO TA-18
46-003(f)
46-004(k)
124
46-003(g)
12a
46-005
46-006(c)
46-010(f)
EXPLANATION
46-001 SWMU LOCATION
010
LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBERS (SEE APPENDIX A)
NOTES
UNIT 46-008 (c) INACTIVE DRUM STORAGE AREA; EXACT LOCATION UNKNOWN.
UNCLASSIFIED
FIGURE 46-1
SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-46
REV.1 6/18/90
UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA-46 WA-SITE
ENG-R 5124


FIELD PLUGGED AND ABANDONED LINE FROM SEPTIC TANK DAYLIGHTED
CANYON DEL BUEY
DRAIN FIELD
46-003(d)
SEPTIC TANK TA-46-53
LIFT STATION
46-003(e)
SEPTIC TANK TA-46-55
DRAIN FIELD
LIFT STATION
46-003(b)
SEPTIC TANK TA-46-52
DRAIN FIELD
EXTEND - 1100' FT. TO WEST END OF SITE
SEPTIC TANK TA-46-8
46-003(a)
DRAIN FIELD
FIELD PLUGGED AND ABANDONED LINE FROM SEPTIC TANK DAYLIGHTED
TO TA-3
PUEBLO ROAD
TO TA-16
CANYON DEL BUEY
46-003(c)
SEPTIC TANK TA-46-49
DRAIN FIELD
FIELD PLUGGED AND ABANDONED LINE FROM SEPTIC TANK DAYLIGHTED
PROPOSED SEWER COLLECTION SYSTEM — TA-46
TO TA-16 & SEWAGE TREATMENT PLANT APPROX. 6300'FT.
EXPLANATION
46-003 SWMU LOCATION
FIGURE 46-2
SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-46
LEGEND-
NEW SEWER-GRAVITY
FORCE MAIN
GRAPHIC SCALE-
UNCLASSIFIED
VOID
SEE LAB JOB 3204-0
LOS ALAMOS SCIENTIFIC LABORATORY
SEWAGE TREATMENT PLANT
TA-46
DE-PL-1974-
3206-46
VOID

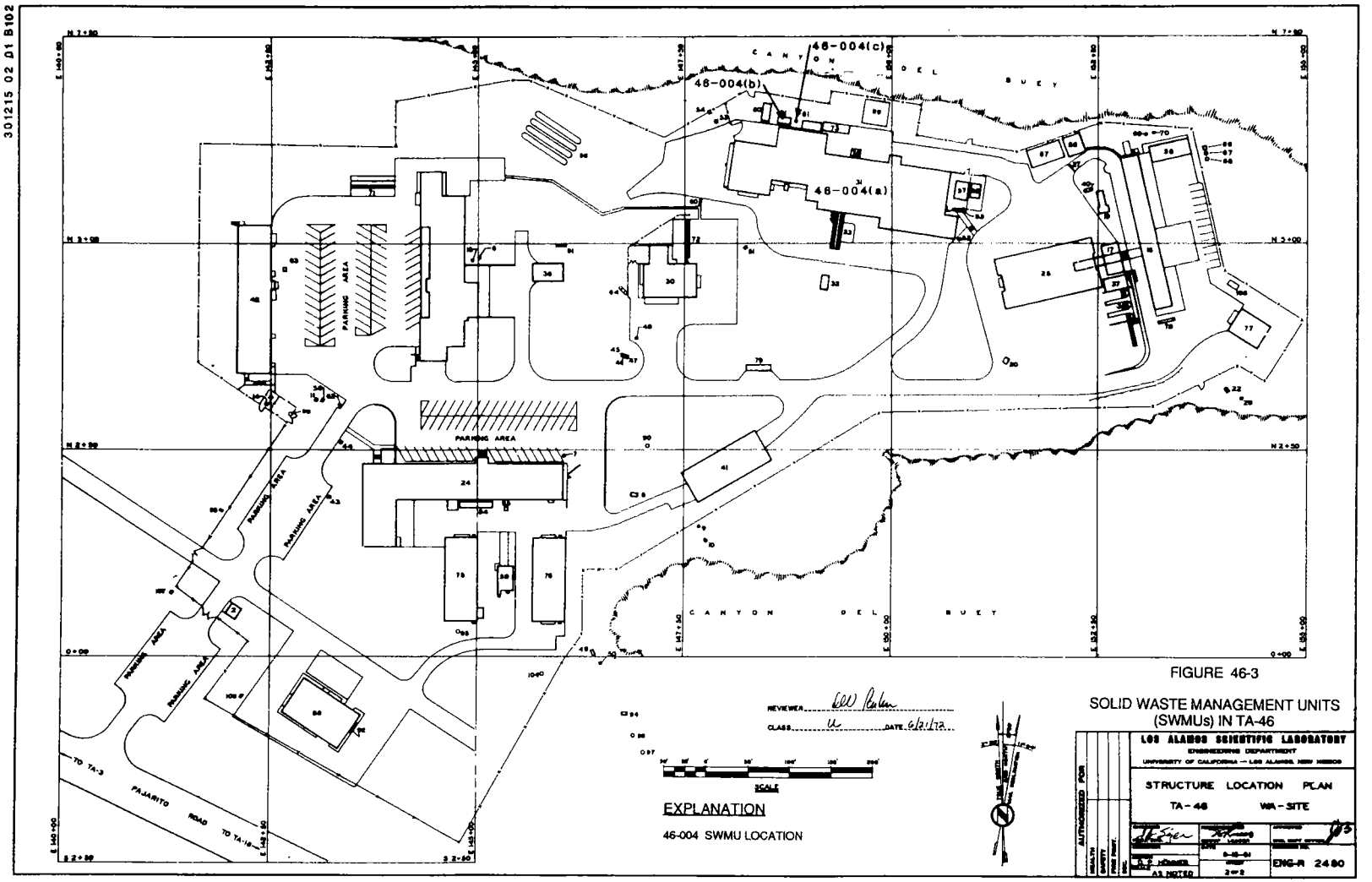


FIGURE 46-3

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-46

UNCLASSIFIED

301215 02 01 837

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-46-1	WA-1	LABORATORY BUILDING		N 3+00 E143+00
TA-46-2	WA-2	GUARD HOUSE	STATION #11	N 2+50 E142+50
TA-46-3	WA-3	PEDISTAL	REMOVED 1960	
TA-46-4	WA-4	PEDISTAL	REMOVED 1960	
TA-46-5	WA-5	PEDISTAL	REMOVED 1960	
TA-46-6	WA-6	MANHOLE, SANITARY		N 5+00 E145+00
TA-46-7	WA-7	MANHOLE, SANITARY		N 2+50 E145+00
TA-46-8	WA-8	TANK, SEPTIC	ABANDONED 1973	N 2+50 E147+50
TA-46-9	WA-9	DISTRIBUTION BOX		N 2+50 E147+50
TA-46-10	WA-10	DISTRIBUTION BOX		N 2+50 E147+50
TA-46-11	WA-11	MANHOLE, ELECTRICAL		N 2+50 E142+50
TA-46-12	WA-12	MANHOLE, ELECTRICAL	REMOVED 1960	
TA-46-13	WA-13	TRANSFORMER STATION		N 2+50 E142+50
TA-46-14	WA-14	LIGHTING TRANSFORMER		N 2+50 E142+50
TA-46-15	WA-15	MANHOLE, STORM DRAINAGE		N 3+00 E145+00
TA-46-16	WA-16	TEST BUILDING NO. 1		N 5+00 E152+50
TA-46-17	WA-17	UTILITY BUILDING		N 5+00 E152+50
TA-46-18	WA-18	UTILITY TUNNEL		N 5+00 E152+50
TA-46-19	WA-19	TRANSFORMER STATION		N 3+00 E152+50
TA-46-20	WA-20	HOSE HOUSE		N 2+50 E152+50
TA-46-21	WA-21		CANCELLED	
TA-46-22	WA-22	TANK, SEPTIC	ABANDONED 1973	N 2+50 E155+00
TA-46-23	WA-23	ROAD BLOCK	REMOVED 1968	
TA-46-24	WA-24	LABORATORY & OFFICE BLDG.		N 2+50 E145+00
TA-46-25	WA-25	BATTERY BUILDING		N 3+00 E152+50
TA-46-26	WA-26		CANCELLED	
TA-46-27	WA-27	ROAD BLOCK	REMOVED 1980	
TA-46-28	WA-28	ROAD BLOCK	REMOVED 1967	
TA-46-29	WA-29	DISTRIBUTION BOX	ABANDONED 1973	N 2+50 E153+00
TA-46-30	WA-30	HYDRAULICS LABORATORY		N 5+00 E147+50
TA-46-31	WA-31	TEST BUILDING NO. 2		N 5+00 E150+00
TA-46-32	WA-32	SUBSTATION		N 5+00 E150+00
TA-46-33	WA-33	MANIFOLD	REMOVED 1975	
TA-46-34	WA-34	ROAD BLOCK	REMOVED 1987	
TA-46-35	WA-35	MANIFOLD		N 5+00 E152+50
TA-46-36	WA-36	STORAGE BUILDING		N 5+00 E145+00
TA-46-37	WA-37	PROPELLANT PUMP HSE. NO. 1		N 5+00 E152+50
TA-46-38	WA-38		CANCELLED	
TA-46-39	WA-39	COOLING TOWER	REMOVED 1968	
TA-46-40	WA-40	TRANSFORMER STATION		N 5+00 E152+50
TA-46-41	WA-41	WAREHOUSE		N 2+50 E147+50
TA-46-42	WA-42	SHOP & EQUIP CHECKOUT BLDG.		N 3+00 E142+50
TA-46-43	WA-43	MANHOLE, TELEPHONE		N 2+50 E142+50
TA-46-44	WA-44	MANHOLE, ELECTRICAL		N 2+50 E142+50
TA-46-45	WA-45	MANHOLE, ELECTRICAL		N 2+50 E147+50
TA-46-46	WA-46	MANHOLE, FIRE ALARM		N 2+50 E147+50
TA-46-47	WA-47	MANHOLE, TELEPHONE		N 2+50 E147+50
TA-46-48	WA-48	MANHOLE	ABANDONED 1973	N 3+00 E147+50
TA-46-49	WA-49	TANK, SEPTIC	ABANDONED 1973	0+00 E147+50
TA-46-50	WA-50	DISTRIBUTION BOX	ABANDONED 1973	0+00 E147+50
TA-46-51	WA-51	MANHOLE, ELECTRICAL		N 5+00 E147+50
TA-46-52	WA-52	MANHOLE, ELECTRICAL		N 3+00 E150+00
TA-46-53	WA-53	TANK, S. [illegible]	ABANDONED 1973	N 7+50 E147+50
TA-46-54	WA-54	DISTRIBUTION BOX	ABANDONED 1973	N 7+50 E147+50
TA-46-55	WA-55	MANHOLE, TELEPHONE		N 2+50 E142+50
TA-46-56	WA-56	MANHOLE, TELEPHONE		N 2+50 E142+50
TA-46-57	WA-57	SUBSTATION	RELOCATED TO TA-3-432	
TA-46-58	WA-58	LABORATORY & SHOP BUILDING		N 3+00 E152+50
TA-46-59	WA-59	ENGINEERING TEST BUILDING		0+00 E148+00
TA-46-60	WA-60	STAIRWAY		N 5+00 E147+50
TA-46-61	WA-61	MANHOLE, ACID SUMP		N 7+50 E150+00
TA-46-62	WA-62	MANHOLE	ABANDONED	N 2+50 E148+50
TA-46-63	WA-63	MANHOLE, ELECTRICAL		N 5+00 E142+50
TA-46-64	WA-64	TRANSFORMER STATION	REMOVED 1980	
TA-46-65	WA-65		CANCELLED	
TA-46-66	WA-66	TANK, SEPTIC	ABANDONED 1973	N 3+00 E152+50
TA-46-67	WA-67	SIPHON	ABANDONED 1973	N 3+00 E152+50
TA-46-68	WA-68	DISTRIBUTION BOX	ABANDONED 1973	N 3+00 E152+50
TA-46-69	WA-69	SUMP	ABANDONED 1973	N 7+50 E152+50
TA-46-70	WA-70	SUMP	ABANDONED 1973	N 7+50 E152+50
TA-46-71	WA-71	MANIFOLD		N 5+00 E142+50
TA-46-72	WA-72	MANIFOLD	REMOVED 1975	
TA-46-73	WA-73	TRAILER PAD	REMOVED 1975	
TA-46-74	WA-74	TEST FACILITY		N 5+00 E150+00
TA-46-75	WA-75	WAREHOUSE		0+00 E145+00
TA-46-76	WA-76	WAREHOUSE		0+00 E145+00
TA-46-77	WA-77	WAREHOUSE		N 3+00 E155+00
TA-46-78	WA-78	MANIFOLD, GAS		N 5+00 E152+50
TA-46-79	WA-79	DRUM STORAGE BUILDING		N 2+50 E147+50
TA-46-80	WA-80	TRANSFORMER STATION	REMOVED 1980	
TA-46-81	WA-81	CLEANUP TANK, ACID	REMOVED 1973	
TA-46-82	WA-82	TRANSFORMER STATION		N 3+00 E150+00
TA-46-83	WA-83	TRANSFORMER STATION		N 3+00 E150+00
TA-46-84	WA-84	TANK, VACUUM	REMOVED 1980	
TA-46-85	WA-85	MANHOLE, SANITARY	ABANDONED 1973	N 2+50 E145+00
TA-46-86	WA-86	COOLING TOWER		N 5+00 E152+50
TA-46-87	WA-87	PUMP HOUSE		N 5+00 E152+50
TA-46-88	WA-88	CORE SUPPORT FACILITY		S 2+50 E142+50
TA-46-89	WA-89		CANCELLED	
TA-46-90	WA-90	MANHOLE, WATER METER		N 2+50 E147+50
TA-46-91	WA-91	STAIRWAY		N 5+00 E143+00
TA-46-92	WA-92	MANIFOLD		S 2+50 E142+50
TA-46-93	WA-93	MANHOLE, SANITARY	ABANDONED 1974	0+00 E149+00
TA-46-94	WA-94	TANK, SEPTIC	ABANDONED 1974	S 2+50 E147+50
TA-46-95	WA-95	MANHOLE, SANITARY	ABANDONED 1974	S 2+50 E147+50
TA-46-96	WA-96	CYLINDER STORAGE TANK	RELOCATED TO TA-53	
TA-46-97	WA-97	DISTRIBUTION BOX, SANITARY	ABANDONED 1974	S 2+50 E147+50

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-46-98	WA-98	MANHOLE, ELECTRICAL	ELECTRICAL	N 2+30 E142+30
TA-46-100	WA-100		CANCELLED	
TA-46-101	WA-101		CANCELLED	
TA-46-102	WA-102	TRANSFORMER STATION	REMOVED 1968	
TA-46-104	WA-104	MANHOLE, WATER	WATER	0+00 E148+00
TA-46-105	WA-105	SUBSTATION, ELECTRICAL	ELECTRIC	N 3+00 E138+00
TA-46-106	WA-106	VOLTAGE REGULATOR	RELOCATED TO TA-3-377	
TA-46-107	WA-107	MANHOLE, TELEPHONE	TELEPHONE	0+00 E142+50
TA-46-108	WA-108	MANHOLE, TELEPHONE	TELEPHONE	0+00 E142+50
TA-46-109	WA-109		CANCELLED	
TA-46-110	WA-110		CANCELLED	
TA-46-111	WA-111	TANK, LIQUID NITROGEN		0+00 E142+50
TA-46-112	WA-112		CANCELLED	
TA-46-113	WA-113		CANCELLED	
TA-46-114	WA-114	GAS TRAILER STATION		0+00 E145+00
TA-46-115	WA-115		CANCELLED	
TA-46-116	WA-116	TRANSFORMER STATION	REMOVED 1980	
TA-46-117	WA-117	CAPACITOR STATION	LOC. APPROX. 500' SE OF WA-116, TA-46	
TA-46-118	WA-118	TRANSFORMER STATION	LOC. APPROX. 700' SE OF WA-116, TA-46	
TA-46-119	WA-119	MODULAR OFFICE BLDG.		N 2+50 E147+50
TA-46-120	WA-120	MODULAR OFFICE BLDG.		0+00 E143+50
TA-46-121	WA-121	MODULAR OFFICE BLDG.		0+00 E142+50
TA-46-122	WA-122	GAS STORAGE SHED		N 2+50 E147+50
TA-46-123	WA-123	TRANSFORMER STATION		0+00 E142+50
TA-46-124	WA-124		CANCELLED	
TA-46-125	WA-125		CANCELLED	
TA-46-126	WA-126		CANCELLED	
TA-46-127	WA-127	TRANSFORMER STATION		N 2+50 E147+50
TA-46-128	WA-128	MODULAR OFFICE BLDG.		N 3+00 E150+00
TA-46-129	WA-129	TRANSFORMER STATION		0+00 E148+00
TA-46-130	WA-130	TRANSFORMER STATION		0+00 E147+50
TA-46-131	WA-131	SOLAR PANELS		N 2+50 E152+50
TA-46-132	WA-132	MANHOLE, STORM DRAIN	STORM DRAIN	0+00 E145+50
TA-46-133	WA-133	MANHOLE, EXPERIMENTAL	EXPERIMENTAL	0+00 E145+00
TA-46-134	WA-134	GUARD STATION		0+00 E142+50
TA-46-135	WA-135	COLLECTION TANK PAD		N 3+00 E152+50
TA-46-136	WA-136	MANHOLE, SANITARY		0+00 E149+00
TA-46-137	WA-137	MANHOLE, SANITARY		0+00 E147+50
TA-46-138	WA-138	MANHOLE, SANITARY		0+00 E147+50
TA-46-139	WA-139	MANHOLE, SANITARY		N 2+50 E147+50
TA-46-140	WA-140	MANHOLE, SANITARY		N 2+50 E150+00
TA-46-141	WA-141	MANHOLE, SANITARY		N 2+50 E152+50
TA-46-142	WA-142	MANHOLE, SANITARY		N 2+50 E155+00
TA-46-143	WA-143	MANHOLE, SANITARY	NOT SHOWN	
TA-46-144	WA-144	MANHOLE, SANITARY		N 5+00 E155+00
TA-46-145	WA-145	MANHOLE, SANITARY		N 7+50 E152+00
TA-46-146	WA-146	MANHOLE, SANITARY		N 5+00 E150+00
TA-46-147	WA-147	MANHOLE, SANITARY		N 5+00 E147+50
TA-46-148	WA-148	MANHOLE, SANITARY		N 7+50 E147+50
TA-46-149	WA-149	STABILIZATION PIT	NOT SHOWN	
TA-46-150	WA-150		CANCELLED	
TA-46-151	WA-151	TRANSFORMER STATION	POLE MOUNTED-NOT SHOWN	
TA-46-152	WA-152		CANCELLED	
TA-46-153	WA-153	TRANSFORMER STATION	POLE MOUNTED-NOT SHOWN	
TA-46-154	WA-154	LASER ISOTOPE ENRICHMENT FAC.		N 7+50 E148+00
TA-46-155	WA-155	TRANSFORMER STATION	POLE MOUNTED-NOT SHOWN	
TA-46-156	WA-156	TRANSFORMER STATION	NOT SHOWN	
TA-46-157	WA-157		CANCELLED	
TA-46-158	WA-158	LASER INDUCED CHEMISTRY LAB.		S 2+50 E150+00
TA-46-159	WA-159	SUBSTATION	NOT SHOWN	
TA-46-160	WA-160	TRANSFORMER STATION		N 5+00 E147+50
TA-46-161	WA-161	ACCELERATOR VAULT FACILITY		S 2+50 E150+00
TA-46-162	WA-162	PULL BOX, TELEPHONE		N 5+00 E145+00
TA-46-164	WA-164	TRANSFOMER STATION	LOC APPROX 220' SE OF WA-118, TA-46	
TA-46-165	WA-165	TRANSPORTABLE OFFICE BLDG.		N 5+08 E150+00
TA-46-166	WA-166		CANCELLED	
TA-46-167	WA-167		CANCELLED	
TA-46-168	WA-168		CANCELLED	
TA-46-169	WA-169	COOLING TOWER		S 2+50 E150+00
TA-46-172	WA-172	SWITCHING STATION, ELEC.	NOT SHOWN	
TA-46-173	WA-173	MANHOLE, ELECTRICAL	NOT SHOWN	
TA-46-174	WA-174	MANHOLE, ELECTRICAL	NOT SHOWN	
TA-46-175	WA-175	TRAILER, OFFICE		S 2+50 E152+50
TA-46-176	WA-176	TRAILER, OFFICE		S 2+50 E150+00
TA-46-177	WA-177	TRAILER, LABORATORY	FORMERLY TA-0-444	S 2+50 E150+00
TA-46-178	WA-178	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1039	N 2+50 E142+50
TA-46-179	WA-179	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1040	N 2+50 E142+50
TA-46-180	WA-180	TRAILER, OFFICE	FORMERLY TA-0-704	N 5+00 E152+50
TA-46-181	WA-181	TRAILER, OFFICE	FORMERLY TA-0-714	0+00 E142+50
TA-46-182	WA-182	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1031	N 2+50 E148+00
TA-46-183	WA-183	TRAILER, OFFICE	FORMERLY TA-0-882	N 5+00 E147+50
TA-46-184	WA-184	TRAILER, OFFICE	FORMERLY TA-0-883	N 5+00 E147+50
TA-46-185	WA-185	TRAILER, OFFICE	FORMERLY TA-0-442	N 2+50 E147+50
TA-46-186	WA-186	TRAILER, OFFICE	FORMERLY TA-0-384	N 2+50 E147+50
TA-46-187	WA-187	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1030	N 5+00 E147+50
TA-46-188	WA-188	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1027	N 5+00 E147+50
TA-46-189	WA-189	TRAILER, OFFICE	FORMERLY TA-0-884	N 5+00 E150+00
TA-46-190	WA-190	TRAILER, OFFICE	FORMERLY TA-0-194	N 2+50 E150+00
TA-46-191	WA-191	TRAILER, OFFICE	FORMERLY TA-0-385	N 2+50 E150+00
TA-46-194	WA-194	SOLAR HOUSE	FORMERLY TA-0-680	S 2+50 E147+50

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-46-195	WA-195	SOLAR HOUSE	FORMERLY TA-0-681	S 2+50 E150+00
TA-46-196	WA-196	GAS MANIFOLD		N 3+00 E147+50
TA-46-197	WA-197	STORAGE SHED		N 2+50 E147+50

FIGURE 46-4

UNCLASSIFIED

TA-46 STRUCTURE LOCATION INDEX

REV.	DATE	REVISION	BY	CHD	APP
18	8-1-83	REVISED TITLE BLOCK & DWG TO STATUS OF 8-25-83	N.S		

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-46 WA-SITE

SUBMITTED	RECOMMENDED	APPROVED
DRAWN N. SALDADO	DATE 8-29-83	SHEET NO. 1 OF 8
CHECKED		DRAWING NO. ENG-R 5124

SEC CLASSIFICATION
CLASS. U
REVIEWED
DATE 8-1883

301215 02 01 B57

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-46-1	WA-1	LABORATORY BUILDING		N 5+00 E145+00
TA-46-2	WA-2	GUARD HOUSE		N 2+50 E142+50
TA-46-3	WA-3		REMOVED 1960	
TA-46-4	WA-4		REMOVED 1960	
TA-46-5	WA-5		REMOVED 1960	
TA-46-6	WA-6	MANHOLE	SANITARY	N 5+00 E145+00
TA-46-7	WA-7	MANHOLE	SANITARY	N 2+50 E145+00
TA-46-8	WA-8	TANK	SEPTIC	N 2+50 E147+50
TA-46-9	WA-9	DISTRIBUTION BOX	SANITARY	N 2+50 E147+50
TA-46-10	WA-10	DISTRIBUTION BOX	SANITARY	N 2+50 E147+50
TA-46-11	WA-11	MANHOLE	ELECTRICAL	N 2+50 E142+50
TA-46-12	WA-12		REMOVED 1960	
TA-46-13	WA-13	SUBSTATION, RELOCATED TO TA-46-142		N 2+50 E142+50
TA-46-14	WA-14	SUBSTATION		N 2+50 E142+50
TA-46-15	WA-15	MANHOLE	STORM DRAINAGE	N 5+00 E145+00
TA-46-16	WA-16	TEST BUILDING NO. 1		N 5+00 E152+50
TA-46-17	WA-17	UTILITY BUILDING		N 5+00 E152+50
TA-46-18	WA-18	UTILITY TUNNEL		N 5+00 E152+50
TA-46-19	WA-19	SUBSTATION		N 5+00 E152+50
TA-46-20	WA-20	HOSE HOUSE		N 2+50 E152+50
TA-46-21	WA-21		CANCELLED	
TA-46-22	WA-22	TANK	SEPTIC	N 2+50 E155+00
TA-46-23	WA-23		REMOVED 1948	
TA-46-24	WA-24	LABORATORY & OFFICE BLDG.		N 2+50 E145+00
TA-46-25	WA-25	BATTERY BUILDING		N 5+00 E152+50
TA-46-26	WA-26		CANCELLED	
TA-46-27	WA-27	ROAD BLOCK		N 5+00 E152+50
TA-46-28	WA-28		REMOVED 1967	
TA-46-29	WA-29	DISTRIBUTION BOX	SANITARY	N 2+50 E155+00
TA-46-30	WA-30	HYDRAULICS LABORATORY		N 5+00 E147+50
TA-46-31	WA-31	TEST BUILDING NO. 2		N 5+00 E150+00
TA-46-32	WA-32	SUBSTATION		N 5+00 E150+00
TA-46-33	WA-33	MANIFOLD		N 5+00 E150+00
TA-46-34	WA-34		REMOVED 1967	
TA-46-35	WA-35	MANIFOLD		N 5+00 E152+50
TA-46-36	WA-36	STORAGE BUILDING		N 5+00 E145+00
TA-46-37	WA-37	PROPELLANT PUMP HSE. NO. 1		N 5+00 E152+50
TA-46-38	WA-38		CANCELLED	
TA-46-39	WA-39		REMOVED 1969	
TA-46-40	WA-40	TRANSFORMER STATION		N 5+00 E152+50
TA-46-41	WA-41	WAREHOUSE		N 2+50 E147+50
TA-46-42	WA-42	SHOP & DRUM CHECKOUT BLDG.		N 5+00 E142+50
TA-46-43	WA-43	MANHOLE	TELEPHONE	N 2+50 E142+50
TA-46-44	WA-44	MANHOLE	ELECTRICAL	N 2+50 E142+50
TA-46-45	WA-45	MANHOLE	ELECTRICAL	N 2+50 E147+50
TA-46-46	WA-46	MANHOLE	FIRE ALARM	N 2+50 E147+50
TA-46-47	WA-47	MANHOLE	TELEPHONE	N 2+50 E147+50
TA-46-48	WA-48	MANHOLE	SANITARY	N 5+00 E147+50
TA-46-49	WA-49	TANK	SEPTIC	0+00 E147+50
TA-46-50	WA-50	DISTRIBUTION BOX	SANITARY	0+00 E147+50
TA-46-51	WA-51	MANHOLE	ELECTRICAL	N 5+00 E147+50
TA-46-52	WA-52	MANHOLE	ELECTRICAL	N 5+00 E150+00
TA-46-53	WA-53	TANK	SEPTIC	N 7+50 E147+50
TA-46-54	WA-54	DISTRIBUTION BOX	SANITARY	N 7+50 E147+50
TA-46-55	WA-55	MANHOLE	TELEPHONE	N 2+50 E142+50
TA-46-56	WA-56	MANHOLE	TELEPHONE	N 2+50 E142+50
TA-46-57	WA-57	SUBSTATION		N 5+00 E150+00
TA-46-58	WA-58	LABORATORY & SHOP BUILDING		N 5+00 E152+50
TA-46-59	WA-59	ENGINEERING TEST BUILDING		0+00 E145+00
TA-46-60	WA-60	STAIRWAY		N 5+00 E147+50
TA-46-61	WA-61	MANHOLE	ACID SUMP	N 7+50 E150+00
TA-46-62	WA-62	MANHOLE	SANITARY	N 2+50 E142+50
TA-46-63	WA-63	MANHOLE	ELECTRICAL	N 5+00 E142+50
TA-46-64	WA-64	TRANSFORMER STATION		N 5+00 E147+50
TA-46-65	WA-65		CANCELLED	
TA-46-66	WA-66	TANK	SEPTIC	N 5+00 E152+50
TA-46-67	WA-67	SIPHON	SANITARY	N 5+00 E152+50
TA-46-68	WA-68	DISTRIBUTION BOX	SANITARY	N 5+00 E152+50
TA-46-69	WA-69	SUMP	ACID DRAIN	N 7+50 E152+50
TA-46-70	WA-70	SUMP	ACID DRAIN	N 7+50 E152+50
TA-46-71	WA-71	MANIFOLD		N 5+00 E142+50
TA-46-72	WA-72	MANIFOLD		N 5+00 E147+50
TA-46-73	WA-73	TRAILER PAD		N 7+50 E150+00
TA-46-74	WA-74	TEST FACILITY		N 5+00 E150+00
TA-46-75	WA-75	WAREHOUSE		0+00 E145+00
TA-46-76	WA-76	WAREHOUSE		0+00 E145+00
TA-46-77	WA-77	WAREHOUSE		N 5+00 E155+00
TA-46-78	WA-78	MANIFOLD	GAS	N 5+00 E152+50
TA-46-79	WA-79	DRUM STORAGE BUILDING		N 2+50 E147+50
TA-46-80	WA-80	TRANSFORMER STATION		N 7+50 E147+50
TA-46-81	WA-81	TANK	CLEANUP ACID	N 7+50 E147+50
TA-46-82	WA-82	SUBSTATION		N 5+00 E150+00
TA-46-83	WA-83	TRANSFORMER STATION		N 5+00 E150+00
TA-46-84	WA-84	TANK	VACUUM, FORMERLY AT TA-48	N 2+50 E145+00
TA-46-85	WA-85	MANHOLE	SANITARY	N 2+50 E145+00
TA-46-86	WA-86	COOLING TOWER		N 5+00 E152+50
TA-46-87	WA-87	PUMP HOUSE		N 5+00 E152+50
TA-46-88	WA-88	CORE SUPPORT FACILITY		S 2+50 E142+50
TA-46-89	WA-89	LIQUID HYDROGEN FACILITY		N 7+50 E150+00
TA-46-90	WA-90	MANHOLE	WATER METER	N 2+50 E147+50
TA-46-91	WA-91	STAIRWAY		N 5+00 E145+00
TA-46-92	WA-92	MANIFOLD		S 2+50 E142+50
TA-46-93	WA-93	MANHOLE	SANITARY	0+00 E145+00
TA-46-94	WA-94	TANK	SEPTIC	S 2+50 E147+50
TA-46-95	WA-95	MANHOLE	SANITARY	S 2+50 E147+50
TA-46-96	WA-96	CYLINDER STORAGE TANK		N 7+50 E145+00
TA-46-97	WA-97	DISTRIBUTION BOX	SANITARY	S 2+50 E147+50

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-46-99	WA-99	MANHOLE	ELECTRICAL	N 2+50 E142+50
TA-46-100	WA-100			
TA-46-101	WA-101			
TA-46-102	WA-102		REMOVED 1960	
TA-46-103	WA-103			
TA-46-104	WA-104	MANHOLE	WATER	0+00 E145+00
TA-46-105	WA-105	SUBSTATION	ELECTRIC	N 5+00 E155+00
TA-46-106	WA-106	VOLTAGE REGULATOR	MOVED TO TA-3-377	
TA-46-107	WA-107	MANHOLE	TELEPHONE	N 0+00 E142+50
TA-46-108	WA-108	MANHOLE	TELEPHONE	N 0+00 E142+50
TA-46-109	WA-109	CHEMICAL LASER FACILITY	PROPOSED	
TA-46-110	WA-110	LASER FACILITY BUILDING	PROPOSED	
TA-46-111	WA-111	TANK LIQUID NITROGEN	PROPOSED	
TA-46-112	WA-112	PLATFORM	PROPOSED	
TA-46-113	WA-113	LAB OFFICE BUILDING	PROPOSED	

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

FIGURE 46-5

TA-46 STRUCTURE LOCATION INDEX

REVIEWER ______

CLASS ______ DATE ______

NO.	DATE	REVISIONS	BY
10	5-9-72	REVISED TO STATUS OF 5-9-72	
9	12-15-69	REVISED TO STATUS OF 12-15-69	DAD
8	3-1-69	REVISED TO STATUS OF 3-1-69	
7	10-15-66	REVISED TO STATUS OF 6-15-66	
6	3-3-64	REVISED TO STATUS OF 1-27-64	
5	8-15-61	REDRAWN TO STATUS OF 8-1-61 (WAS ENG-R171)	CEL

AUTHORIZED FOR: HEALTH, SAFETY, FIRE PROT., SEC.

LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-46 WA-SITE

CHECKED | RECOMMENDED | APPROVED
DRAWN: LOGGAINS | DATE: 8-15-61
SCALE: NONE | SHEET: 1 OF 2
ENG-R 2479

TA-47

OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 47 was located in Santa Fe, near the intersection of Cerrillos Road and St. Michael's Drive. It was a receiving point for materials shipped to the Laboratory in the early years. The site was abandoned in 1958 and no longer exists as a site (DOE, 1987a). The technical area does not have any solid waste management units from laboratory activities.

TA-48
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 48 is used for chemical and radiochemical analyses. Activities are related to weapons, waste disposal, basic research, and radio-isotope production for nuclear medicine. Materials handled on-site include very small quantities of uranium, transuranics, fission products, tritium activation products, various acids, and organic chemicals (DOE, 1987a).

TA-48 lies at elevations between about 7,100 and 7,320 feet asl. It is located on the long, narrow finer mesa formed between Mortandad Canyon on the north and Pajarito Canyon on the south. Canyon walls are steep slopes or cliffs in this area. TA-48 lies on welded Bandelier Tuff, in the Ponderosa Pine/Pinon-Juniper, Pinon-Juniper and Ponderosa Pine-fir overstory vegetation zones. Soil types in the technical area include Carjo loam, Tocal very fine sandy loam, and rock outcrop (Nyhan et al., 1978).

At TA-48, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,030 to 6,180 feet asl. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-48

48-001	AIR EXHAUST SYSTEM
48-002	CONTAINER STORAGE AREAS
48-003	INACTIVE SEPTIC SYSTEM
48-004	SUMPS AND TANKS
48-005	WASTE LINES
48-006	ACTIVE SEPTIC SYSTEM
48-007	DRAINS AND OUTFALLS
48-008	LEAKAGE FROM PCB TRANSFORMERS
48-009	SOIL CONTAMINATION FROM AIR COMPRESSOR OPERATIONS
48-010	SURFACE IMPOUNDMENT

SUMMARY

LOCATION : TA-48
TYPE OF UNIT(s) : OPERATIONAL RELEASE
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1950s - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
HAZARDOUS WASTE

UNIT INFORMATION

In the Alpha Wing in the northeast corner of TA-48-1, some hoods have filters. However, other hoods do not have filters because of possible problems with clogging and corrosion. No air scrubbers are currently being used. Approximately one-half to one-third of the major acids used are vented to the hoods.

WASTE INFORMATION

The wastes discharged contain acids including hydrochloric, hydrofluoric, nitric and perchloric. Mixed fission products, uranium and plutonium are in the airborne releases.

RELEASE INFORMATION

Because of the long history of operation at this facility, ground deposition of airborne releases may have resulted in contamination surrounding the building. In 1984, airborne releases were 1566, 1.3 and 2.6 microcuries of mixed fission products, uranium and plutonium, respectively. Since not all hoods have filters, it is expected that acidic vapors have also been released.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
48-001	TA48-1-CA-A-HW/RW TA48-7-CA-A-HW/RW		Tsk 6 : 17	TA-48-1

SUMMARY

LOCATION	: TA-48	MATERIALS MANAGED	: HAZARDOUS WASTE
TYPE OF UNIT(s)	: CONTAINER STORAGE AREA		UNKNOWN
UNIT USE	: STORAGE		
OPERATIONAL STATUS	: ACTIVE/INACTIVE		
PERIOD OF USE	: EST. 1957 - PRESENT		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

Five container storage areas have been identified at TA-48. A container storage area [48-002(a)] is located on the south end of TA-48-1. High purity mercury was stored there during the period starting between 1976 to 1981, and ending in approximately 1989. No leaks were noted at this area. A second container storage area [48-002(b)] was located on the south side of TA-48-1. The 1986 CEARP field survey noted labeled and unlabeled drums at this site. The 1989 LANL subcontractor environmental audit noted only a long, unlabeled cylinder. A third container storage area [48-002(c)] is located midway along the east side of TA-48-1, on the asphalt. Drums, lead pigs and batteries were stored in this area in 1988-89. Some drums were labeled as containing chemical waste, decontamination waste, or pump oil. A fourth container storage area [48-002(d)] was reported in 1989. It is located on the west side of TA-48-1. LANL personnel indicated that the containers may contain waste from a hot cell. A fifth storage area [48-002(e)] was identified as an active satellite container storage area in the 1988 LANL Active Container Storage Area Database. According to LANL personnel, it is located on the east side of TA-48-1.

WASTE INFORMATION

SWMU NO.	KNOWN WASTE INFORMATION
48-002(a)	Mercury
48-002(b)	Unknown drum and cylinder waste
48-002(c)	Lead pigs, batteries, unknown drum waste
48-002(d)	Possible hot cell waste
48-002(e)	Solvents (cutting oil)

RELEASE INFORMATION

Records do not indicate releases in 48-002(a), (c), (d), or (e). The November 1988 field survey noted spills at 48-002(b), apparently due to leaky drums. Past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
48-002(a)	TA48-4-CA-A-HW		Tsk 6 : 18	SOUTH END OF TA-48-1
48-002(b)	TA48-5-CA-A/I-HW/RW/PP		Tsk 6 : 19	SOUTH END OF TA-48-1
48-002(c)	**			EAST SIDE OF TA-48-1
48-002(d)	**			WEST SIDE OF TA-48-1
48-002(e)	**			EAST SIDE OF TA-48-1

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-48
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1957 - 1986
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED RADIOACTIVE WASTE
SUSPECTED HAZARDOUS WASTE
SANITARY WASTE

UNIT INFORMATION

This unit consists of a septic tank, TA-48-5, a filter bed, TA-48-6, and an inactive outfall into Mortandad Canyon. This septic system served building TA-48-1 and was installed in 1957. Sanitary wastes from this building went to the tank, with the decanted liquid going to the filter bed. The tank and filter bed were removed from service in 1986. The tank and filter bed were removed and buildings TA-48-44 and TA-48-45 now occupy the septic tank and filter bed site. A 1988 ER Program site reconnaissance located the outfall north of the former location of the filter bed. The inactive outfall had an NPDES serial number (08s) and an EPA ID number (SSS), both of which were subsequently delisted and combined with NPDES serial number 10s. The waste that was handled by this septic system now discharges to sanitary lagoons in Mortandad Canyon below TA-35.

WASTE INFORMATION

The septic system managed sanitary waste; there is a possibility that chemical waste, such as photo processing solutions, radionuclides, and chemicals were discharged to this tank.

RELEASE INFORMATION

It is unknown whether a hazardous release has occurred. Readings taken in a 1988 ER Program site reconnaissance indicated 14 microRem/hour gamma activity three feet from the surface near the filter bed.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
48-003	TA48-6-CA/ST-A/I-HW/RW		Tsk 6 : 6 13	TA-48-5, -6, -1

SUMMARY

LOCATION : TA-48
TYPE OF UNIT(s) : SUMP/TANK
UNIT USE : TREATMENT
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1950s - 1970s
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE
MIXED WASTE

UNIT INFORMATION

The sumps and tanks at TA-48 were all part of the neutralization process in TA-48-1 and were used before the waste was piped without pre-treatment to TA-50 for treatment. The tanks and sumps were not used after the 1970s and were abandoned in place in 1982, some of which were subsequently removed. The inactive sumps and tanks remaining in TA-48-1 include the following: 1) Two sumps are below the floor of the shop room [48-004(a)]; one is approximately 4' x 3' x 2' deep and the other is about 6' x 6' x 5' deep. 2) Three sets of tanks are in the south basement, Room 80 [48-004(b)]. One set is located in a pit. In addition, there is a sump in the pit area. 3) Two tanks are located in the north basement [48-004(c)]. 4) A tank is located below a hot cell in the basement [48-004(d)]. This tank may never have been used. The treated liquids were sent to TA-50 for further processing. The mud was drummed and buried in the contaminated disposal area.

WASTE INFORMATION

The mixed wastes were liquid wastes generated in the chemical operations at TA-48. The waste mud in the second set of tanks in the south basement [48-003(b)] had radionuclide contamination. The tanks in the north basement [48-003(c)] contained sodium hydroxide solutions.

RELEASE INFORMATION

There were no known releases of hazardous materials.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
48-004(a)	TA48-2-CA/SST/S-I-HW/RW		Tsk 6 : 16	TA-48-1
48-004(b)	TA48-2-CA/SST/S-I-HW/RW		Tsk 6 : 16	TA-48-1
48-004(c)	TA48-2-CA/SST/S-I-HW/RW		Tsk 6 : 16	TA-48-1
48-004(d)	TA48-2-CA/SST/S-I-HW/RW		Tsk 6 : 16	TA-48-1

SUMMARY

LOCATION : TA-48
TYPE OF UNIT(s) : WASTE LINE
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE/DECOMMISSIONED
PERIOD OF USE : 1957 - 1984
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
MIXED WASTE

UNIT INFORMATION

During the operational history of TA-48, various liquid waste lines transported waste to treatment facilities. Two radioactive waste lines, lines 36 and 37, were located northwest of TA-48-1. In 1981, line 37 was completely removed from the north end of TA-48-1 northward to canyon outfall. The cast iron pipe was 56 ft long and 2 inches in diameter. Line 36 is a 3"-diameter cast iron pipe that runs from the north wing of TA-48-1 to line 34. A 330-ft section of line 36 remains inside the security fence at a depth of approximately 11 ft. On March 19, 1982 an investigation to determine the cause of ponding water at the northwest corner of TA-48-1 revealed a broken radioactive waste main over a leaking water main. The break and leaks were repaired and contaminated soil was removed. The sources of the radioactive waste were connected to the new collection system so that the radioactive waste main could be drained and abandoned. Most of the inactive lines have been removed. During January-February 1984, line 34 outside the TA-48 fenced area was removed. The 330-ft section of line 36 which connected TA-48-1 to line 34 was not removed. No activity was detected in line 36.

WASTE INFORMATION

The liquid wastes contained radionuclides and chemicals.

RELEASE INFORMATION

In March 1982, an investigation determined that the source of ponding water at the northeast corner of TA-48-1 was a broken radioactive waste line over a leaking water main. The break and leaks were repaired, and the contaminated soil was removed.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
48-005	TA48-2-CA/SST/S-I-HW/RW		Tsk 6 : 15	NORTHWEST OF TA-48-1

SUMMARY

LOCATION : TA-48
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : MID 1980s - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SANITARY WASTE

UNIT INFORMATION

An active septic system is structure number TA-48-32, located northwest of TA-48-29. The system consists of two 1,000 gallon tanks connected in parallel. However, according to the registration of an unpermitted individual liquid waste system (1983), this system is a 2,000-gallon tank. The overflow from this unit goes to a seepage pit. It serves about 70 people in 6 transportable office buildings. The system required frequent pumping prior to 1986 when a blockage was removed from the line between the tank and the pit.

WASTE INFORMATION

The system is believed to manage only sanitary wastes as the buildings served consist of offices.

RELEASE INFORMATION

This system has not managed hazardous waste so far as is known.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
48-006	TA48-6-CA/ST-A/I-HW/RW		Tsk 6 : 14	TA-48-32

SUMMARY

LOCATION : TA-48
TYPE OF UNIT(s) : OUTFALL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SOLID WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

During a 1986 field survey, four liquid waste outfalls to Mortandad Canyon were noted [48-007(a), (b), (c), and (d)]. It is believed that water from three cooling towers on the roof of building TA-48-1 discharges to these outfalls, and includes industrial noncontact cooling water. Outfall 48-007(a) also discharges treated cooling water. Outfall 48-007(d) has created a wetlands area. Outfalls 48-007(e) and (f) discharge noncontact cooling water into Mortandad Canyon from buildings TA-48-8 and TA-48-46, respectively.

OUTFALL SWMU NO.	NPDES PERMIT NUMBER	WASTE SOURCE	OURFALL LOCATION
48-007(a)	045/046EPA03A 015/045EPA04A	TA-48-1	East of TA-48-1
48-007(b)	016EPA04A	TA-48-1	North of TA-48-1
48-007(c)	131EPA04A	TA-48-1	Northeast of TA-48-1
48-007(d)	(none)	TA-48-1	East of TA-48-1
48-007(e)	126EPA04A	TA-48-8	Northwest of TA-48-8
48-007(f)	137EPA04A	TA-48-46	Northeast of TA-48-46

WASTE INFORMATION

Water treatment chemicals are added to cooling towers to control scale, corrosion, microbiological growth, algae and slime. Chemicals, including organics and major solvents such as acetone, alcohol and benzene, are used in building TA-48-8. Materials used in TA-48-46 are unknown.

RELEASE INFORMATION

The origin of the cooling water for each discharge point in building TA-48-1 is not known, and it is possible for leaks to have occurred that would have resulted in contamination of the cooling water and, hence, outfalls 48-007(a), (b), (c), and (d). There is no release history for 48-007(e). Possible releases to the receiving canyon of outfall 48-007(f) are unknown.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
48-007(a)	TA48-3-O/CA-A-HW/RW		Tsk 6 : 7	EAST OF TA-48-1
48-007(b)	TA48-3-O/CA-A-HW/RW		Tsk 6 : 8	NORTH OF TA-48-1
48-007(c)	TA48-3-O/CA-A-HW/RW		Tsk 6 : 11	NORTHEAST OF TA-48-1
48-007(d)	TA48-3-O/CA-A-HW/RW		Tsk 6 : 12	EAST OF TA-48-1
48-007(e)	**		Tsk 6 : 9	NORTHWEST OF TA-48-8
48-007(f)	**		Tsk 6 : 10	NORTHEAST OF TA-48-46

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-48	MATERIALS MANAGED	: SOLID WASTE
TYPE OF UNIT(s)	: OPERATIONAL RELEASE		PCBs
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: ? - 1986		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

A transformer (identification number 5549) located in Room 26 of TA-48-1 is mentioned on a 1987 memo regarding leaking PCB transformers requiring daily inspections. It was noted to have been leaking from the top valve. In September, 1989 both this transformer and the transformer next to it (identification number 5548) leaked a combined total of approximately 4 gallons of PCB-containing oil. Transformer 5549 had 40.3 ppm of PCBs and transformer 5548 had 51.9 ppm of PCBs.

WASTE INFORMATION

The transformer contained < 50 ppm PCBs.

RELEASE INFORMATION

Cleanup operations were conducted. It is unknown whether contamination was evident, or if residual contamination remains.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
48-008	**			TA-48-1

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-48
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1970s - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Two compressors are located in a caged area on a loading dock east of TA-48-1. Each compressor is approximately 3' x 4'6" x 3'6" and contains 35 gallons of oil. One of the units compresses air for TA-48-1; the second acts as a backup. Since the beginning of 1989, the active compressor has periodically broken down (every 2 to 3 months), blowing approximately 2 to 3 gallons of oil from its crankcase to the ground and activating the backup compressor. An absorbent clay material has been placed below the compressors to absorb the oil. The material is removed and replaced after each breakdown. A trail of visible oil stains approximately 200 ft in length has been seen beginning at the caged area, leading across the paved parking lot, and proceeding down to a level area that drains into Mortandad Canyon.

WASTE INFORMATION

The waste consists only of oil. It was sampled for PCBs in 1989 and found to contain none.

RELEASE INFORMATION

Oil is occasionally released.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
48-009	**			TA-48-1

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-48
TYPE OF UNIT(s) : SURFACE IMPOUNDMENT
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1978 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN
MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

Surface impoundment 48-010 is associated with outfall 48-007(a) that discharges into Mortandad Canyon. It is believed that water from cooling towers on the roof of TA-48-1 discharges to this outfall and surface impoundment, and includes industrial noncontact cooling water and treated cooling water. LANL personnel report that the surface impoundment is located 500 ft southeast of TA-48-1 [250 ft east of outfall 48-007(a)]. It is an unlined pond that was excavated into the tuff in 1978.

WASTE INFORMATION

Water treatment chemicals are commonly added to cooling towers to control scale, corrosion, microbiological growth, algae and slime.

RELEASE INFORMATION

The origin of the cooling water for each discharge point in building TA-48-1 is not known, and it is possible for leaks to have occurred that would have resulted in contamination of the cooling water and, hence, of the surface impoundment 48-010.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
48-010	**			EAST OF TA-48-1

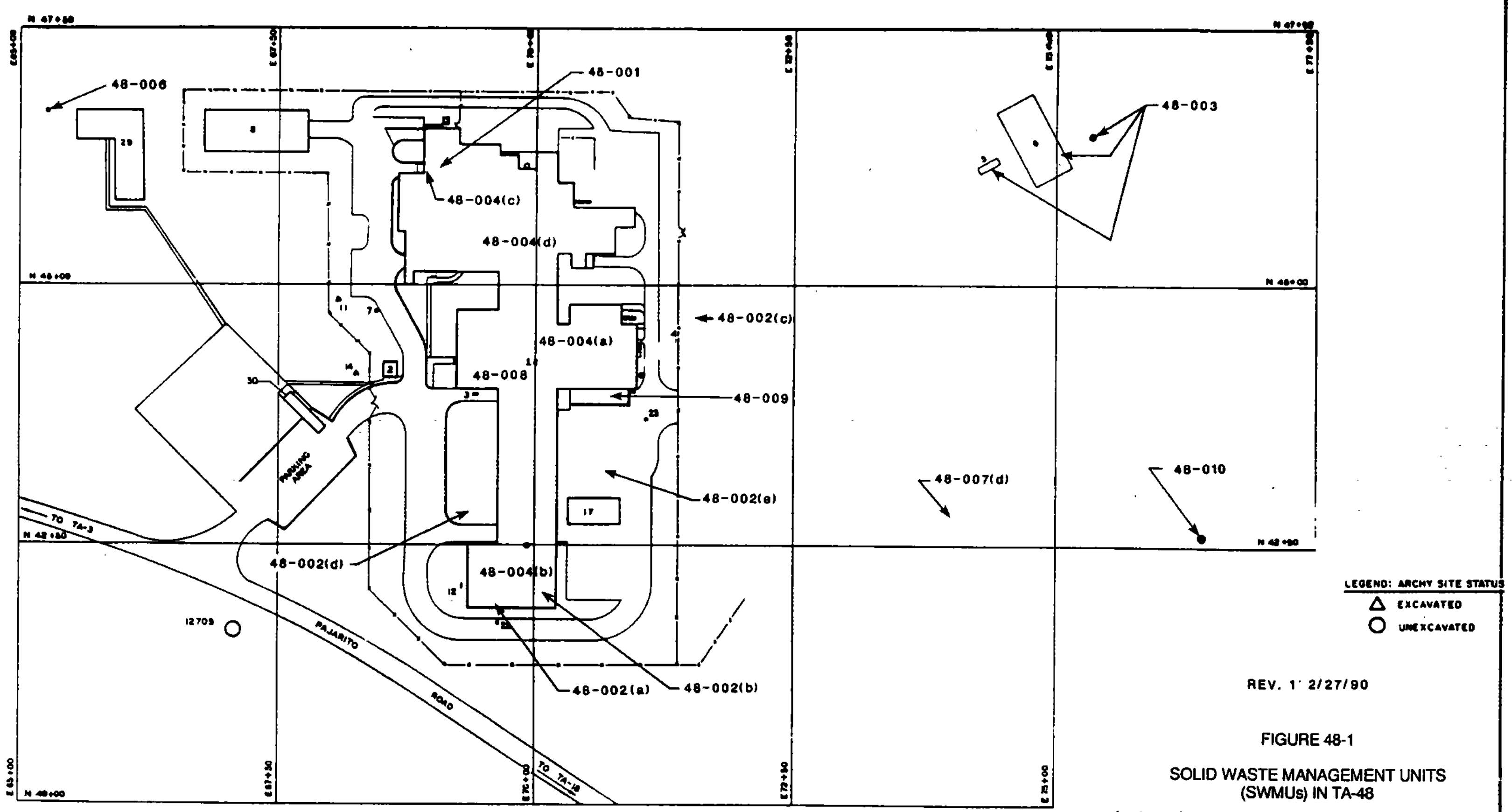
** No corresponding E. R. Program unit.

TA-48 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
48-001	48-1
48-002(a)	48-1
48-002(b)	48-1
48-002(c)	48-1
48-002(d)	48-1
48-002(e)	48-1
48-003	48-1, 48-2
48-004(a)	48-1
48-004(b)	48-1
48-004(c)	48-1
48-004(d)	48-1
48-005	48-3
48-006	48-1
48-007(a)	48-2
48-007(b)	48-2
48-007(c)	48-2
48-007(d)	48-1
48-007(e)	48-2
48-007(f)	48-2
48-008	Not Shown
48-009	48-1
48-010	48-1

NOTE: Some structure locations may contain more than one SWMU.

301215 02 01 B76



REV. 1 2/27/90

FIGURE 48-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-48

EXPLANATION

48-001 SWMU LOCATION

NOTES

48-008 UNIT IS LOCATED NORTHEAST OF TA-48

GRAPHIC SCALE

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Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN

TA-48 RADIOCHEMISTRY SITE

7-20-89

ENG-R5125

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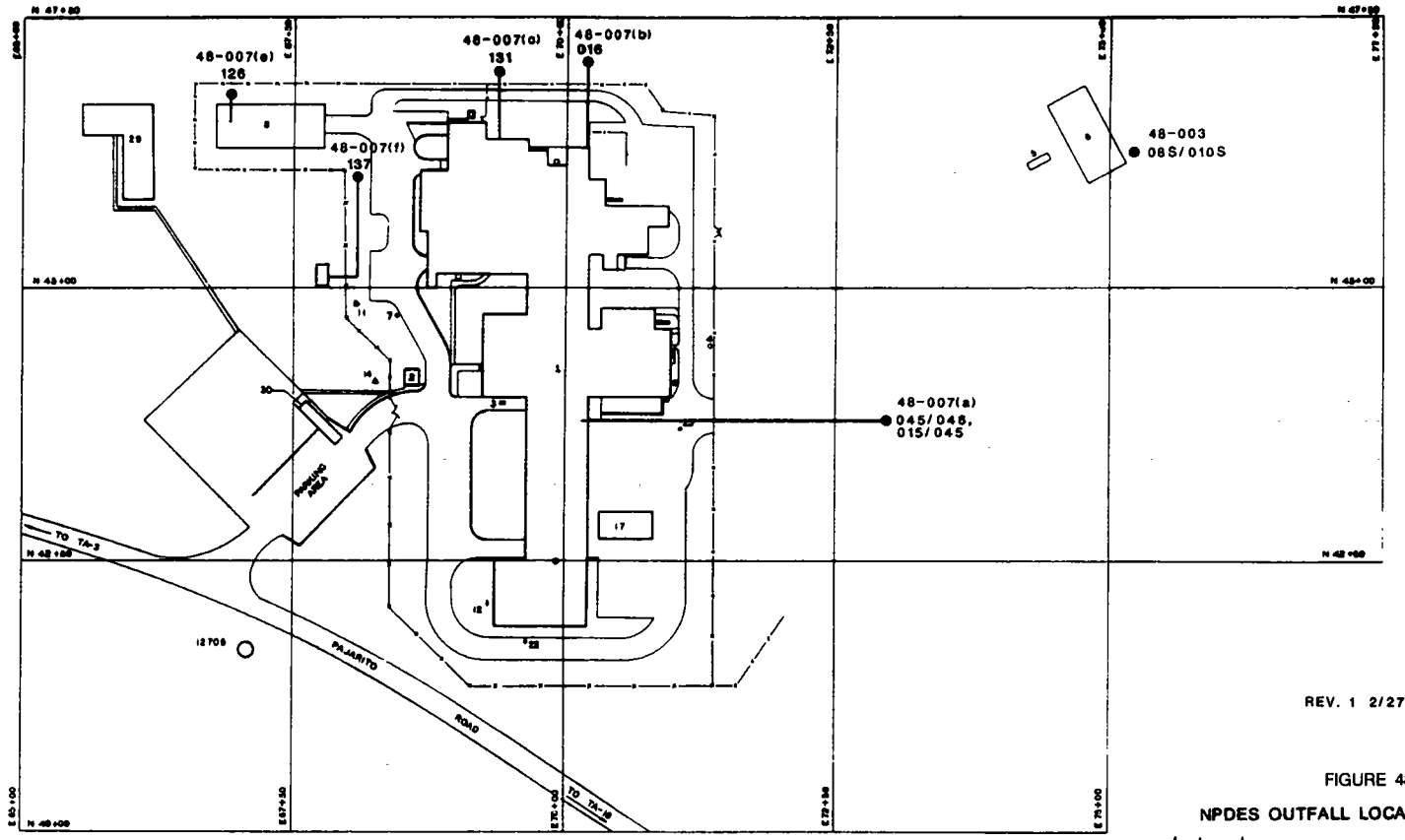
301215 02 61 877



LEGEND: ARCHY SITE STATUS
△ EXCAVATED
○ UNEXCAVATED

REV. 1 2/27/90

FIGURE 48-2

NPDES OUTFALL LOCATIONS IN TA-48

EXPLANATION

48-001 SWMU LOCATION

010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBERS (SEE APPENDIX A)

GRAPHIC SCALE

NOTES

Location of NPDES outfall number 08S/010S is approximate

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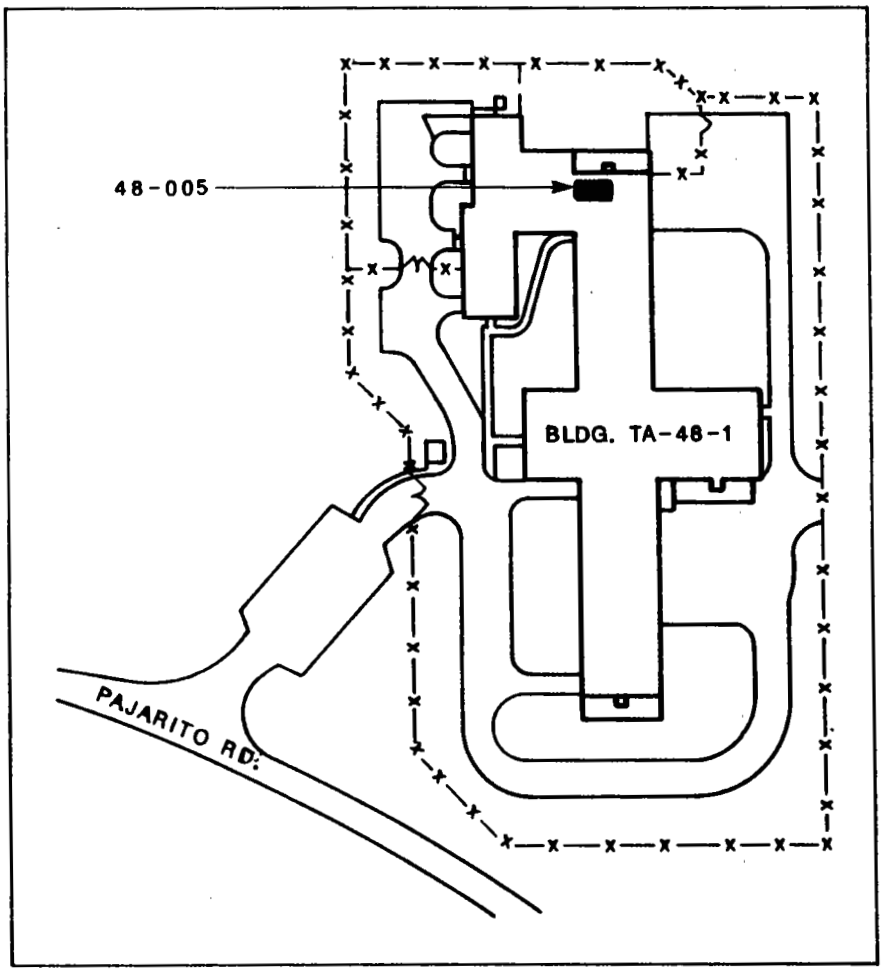
STRUCTURE LOCATION PLAN

TA-48 RADIOCHEMISTRY SITE

DRAWING NO. ENG-R5125

DRAWING NUMBER 301215 02 01 A1			
CHECKED BY			
APPROVED BY			
SR 11/10/88			
DRAWN BY			



From Los Alamos Scientific Laboratory Engineering Department. Drawing No. Eng-C 34595

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EXPLANATION

48-001 SWMU LOCATION

NOTES

UNIT 48-005: DRAWING SHOWS LOCATION OF ACID WASTE SYSTEM INSTALLED IN 1957

FIGURE 48-3

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-48

PREPARED FOR

LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO

INTERNATIONAL TECHNOLOGY CORPORATION

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301215 02 01 838

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-48-1	RC-1	LABORATORY BUILDING		N45+00 E72+50
TA-48-2	RC-2	GUARD HOUSE		N45+00 E70+00
TA-48-3	RC-3	MANHOLE, STORM		N45+00 E72+50
TA-48-4	RC-4	MANHOLE, SANITARY		N43+00 E72+00
TA-48-5	RC-5	SEPTIC TANK, SANITARY		N47+50 E77+50
TA-48-6	RC-6	FILTER BED, SANITARY		N47+50 E77+50
TA-48-7	RC-7	MANHOLE, ELECTRICAL		N42+00 E67+50
TA-48-8	RC-8	GENERAL STORAGE BUILDING		N47+50 E67+50
TA-48-9	RC-9	WEIGHING RACK	REMOVED 1981	
TA-48-10	RC-10	MANHOLE, ACID	NOT SHOWN	
TA-48-11	RC-11	TRANSFORMER STATION		N45+00 E67+50
TA-48-12	RC-12	GAS METERING STATION		N42+50 E70+00
TA-48-13	RC-13		CANCELLED	
TA-48-14	RC-14	TRANSFORMER STATION		N45+00 E67+50
TA-48-15	RC-15	LAWN BUILDING		
TA-48-16	RC-16		CANCELLED	
TA-48-17	RC-17	ASSEMBLY & CHECKOUT BLDG		N42+50 E70+00
TA-48-18	RC-18	ACID MANHOLE	NOT SHOWN	
TA-48-19	RC-19	ACID MANHOLE	NOT SHOWN	
TA-48-20	RC-20	ACID MANHOLE	NOT SHOWN	
TA-48-21	RC-21	ACID MANHOLE	NOT SHOWN	
TA-48-22	RC-22	ACID MANHOLE		N42+50 E70+00
TA-48-23	RC-23	ACID MANHOLE		N42+50 E70+00
TA-48-26	RC-26	STORAGE BLDG.		
TA-48-27	RC-27		CANCELLED	
TA-48-28	RC-28	INSTRUMENT BLDG		
TA-48-29	RC-29	TRANSPORTABLE OFFICE BLDG	FORMERLY TA-0-120	N41+00 E67+50
TA-48-30	RC-30	TRAILER, OFFICE	FORMERLY TA-0-535	N43+00 E67+50

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

FIGURE 48-4

UNCLASSIFIED TA-48 STRUCTURE LOCATION INDEX

REV	DATE	REVISION	BY	CHK	APP
8	7-20-83	REVISED TITLE BLOCK & DWG TO STATUS OF 7-20-83	HS		

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FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-48 RADIOCHEMISTRY SITE

SEC CLASSIFICATION: CLASS. U; REVIEWER; DATE 10-28-83

SUBMITTED	RECOMMENDED	APPROVED

DRAWN	CHECKED	DATE	SHEET NO.	DRAWING NO.
		7-20-83	1 of 2	ENG-R5125

TA-49
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 49 has served primarily as a buffer zone for the explosives testing at TA-15. Early experiments using fissile material, high explosives, and small quantities of radioactive tracers were performed here (DOE, 1987a). Other types of small experiments (including one presently on-site) have been conducted at TA-49.

TA-49 lies at elevations between about 6,460 feet asl at its eastern edge and 7,240 at its western edge. It is located on Frijoles Mesa, which is a broad mesa between Water Canyon on the north and Frijoles Canyon on the south. Ancho Canyon dissects the area. Canyon walls are steep slopes or cliffs in this area. TA-49 lies on welded Bandelier Tuff, in the Ponderosa Pine/Pinon-Juniper and Pinon-Juniper overstory vegetation zones. Soil in the technical area consists of fine-loamy Typic Eutroboralfs, Hackroy-Rock outcrop complex, Seaby loam, Frijoles very fine sandy loam, Hackroy sandy loam, Nyjack loam, and rock outcrop (Nyhan et al., 1978).

At TA-49, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 5,900 to 6,110 feet asl. Several hundred feet of unsaturated tuff and volcanic rock separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-49

49-001	MATERIAL DISPOSAL AREA AB
49-002	UNDERGROUND EXPERIMENTAL CHAMBER
49-003	RADIOCHEMISTRY LAB LEACH FIELD
49-004	TRASH BURNING AREA AND LANDFILL
49-005	LANDFILL
49-006	SUMPS
49-007	SEPTIC TANKS
49-008	SURFACE CONTAMINATION AT AREA 12
49-009	DECOMMISSIONED UNDERGROUND STORAGE TANK

SUMMARY

LOCATION	: TA-49	MATERIALS MANAGED	: MIXED WASTE
TYPE OF UNIT(s)	: MATERIAL DISPOSAL AREA		HAZARDOUS WASTE
UNIT USE	: TESTING/DISPOSAL		RADIOACTIVE WASTE
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: 1959 - 1961		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

Six separate areas, collectively known as Material Disposal Area AB, contain the remains of 35 hydronuclear and nine related types of experiments. These experiments were usually conducted in 3 or 6 ft. diameter holes at depths of 31 to 108 ft. The experimental configurations were placed near the bottom of each hole and the associated high explosive was subsequently detonated. After the completion of measurements and samples, each hole was usually backfilled with sand and sealed with concrete, with the exception of Area 3, which does not have concrete caps. Holes in Areas 1 [49-001(a)], 2 [49-001(b)], and 3 [49-001(e)] were bored on 25 ft. centers in 100 ft. square grid patterns. Areas 2A [49-001(c)], 2B [49-001(d)], and 4 [49-001(f)] were irregularly shaped. Experiments with fissile material were conducted in experimental areas 1, 2, 2A, 2B, and 4, but not in Area 3, which was used for high explosive confinement tests, possibly involving radioactive tracers. Contaminated materials were left in the experimental areas. One or more holes in each experimental area were used to permit confined expansion of gases, including particulates containing some radionuclide contamination, passing through the sample collection devices. Some of the 6-ft-diameter holes were used to dispose of pipes and other equipment contaminated during the experiments. Steel boxes buried adjacent to the experimental holes were used to contain sample collection equipment and became contaminated. These boxes were usually filled with concrete and left in place. Migrant contamination has been documented in the natural drainage occurring northeast of Area 11 and Area 2 and trending toward Water Canyon [49-001(g)]. LANL personnel estimate that approximately 0.8 acres downgradient from the TA-49 exclusionary fence may be contaminated with low levels of radionuclides which could have migrated there before Area 2 was asphalted.

WASTE INFORMATION

Waste in MDA-AB consisted of the radionuclides uranium-235 and -238, plutonium, fission products, and a small amount of tritium (which has now greatly decayed). Beryllium, large quantities of lead, aluminum, steel, iron, cables, rock debris and trace amounts organics are also present. One of the areas contains a small quantity of barium. Plutonium and americium contamination have been found in the soil downgradient from Area 2 and Area 11.

RELEASE INFORMATION

Above-background levels of gross alpha were measured at the surface in Experimental Area 2 in December 1960 and were traced to cuttings from Experimental Hole 2-M. Radioactive material had apparently been dispersed through fractures in the tuff by detonation of an experiment in an adjacent experimental hole. All surface soil contamination measurable by standard procedures and instruments was collected and placed back in Experimental Hole 2-M. The experimental hole was then filled with clean sand and capped with concrete. The entire surface of Area 2 was covered with compacted aggregate in January 1961 and sealed with a 4- to 6-in.-thick asphalt pad in September 1961. This inadvertent contamination incident left some remaining trace amounts of radionuclides on the surface in the vicinity of TA-49. The experimental area to the west (Area 2A) and south (Area 2B) were not covered and sealed. Occasionally, sample recovery resulted in some slight surface contamination in Areas 2 and 4. Analytical studies have confirmed contamination in the natural drainage downgradient from Material Disposal Area AB, trending toward Water Canyon. Waste residues from the experiments remain in situ; residual materials dispersed by detonation remain in the shafts. Samples collected from wells completed in the main aquifer show no groundwater contamination.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
49-001(a)	**			MDA-AB, Area 1
49-001(b)	**			MDA-AB, Area 2
49-001(c)	**			MDA-AB, Area 2A
49-001(d)	**			MDA-AB, Area 2B

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
49-001(e)	**			MDA-AB, Area 3
49-001(f)	**			MDA-AB, Area 4
49-001(g)	**			MDA-AB
49-001(misc)	MDA-AB	49.001	Tsk 51 : 1-13	MDA-AB
	TA49-3-CA-I-HW/RW	49.005		

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-49	MATERIALS MANAGED	: SUSPECTED HAZARDOUS WASTE
TYPE OF UNIT(s)	: CHAMBER		RADIOACTIVE WASTE
UNIT USE	: OTHER: CALIBRATION		SUSPECTED MIXED WASTE
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: EST. 1960s		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

This unit, located at TA-49-62, consisted of two shafts, an elevator shaft and a calibration shaft 64'3" deep and 6' in diameter connected at the bottom by a gallery 4' wide, 7' long and 7' high with a 14' diameter x 10'(max. height) calibration room. The room was lined with 8" reinforced concrete faced with 1" steel plate.

WASTE INFORMATION

At one time the calibration room contained a lead-containing canister and lead bricks used as shielding. Radioactive materials were handled in the complex. Beryllium pieces may have been utilized also.

RELEASE INFORMATION

It is believed that all lead and other possible contaminants have been removed, although written documentation is lacking.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
49-002	TA49-3-CA-1-HW/RW		Tsk 52 : 27	AREA 10, TA-49-62

SUMMARY

LOCATION : TA-49
TYPE OF UNIT(s) : LEACH FIELD
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1960 - 1961
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : SUSPECTED RADIOACTIVE WASTE
SUSPECTED MIXED WASTE
HAZARDOUS WASTE

UNIT INFORMATION

This leach field, located at Area 11, once served the sink drain for the radiochemistry facility which has since been removed. The leach field and associated pipes remain in place.

WASTE INFORMATION

Wastes include acids, organics and other laboratory chemicals in addition to plutonium, uranium, fission fragments, lead, and possibly very small amounts of beryllium.

RELEASE INFORMATION

Alpha contamination has been detected in the pipes that lead to the leach field. In addition, samples taken from the leach field during the DOE Environmental Survey in 1988 were found to contain above background levels of plutonium, americium and alpha activity. The area was identified as Environmental Problem No. 3; it is now being addressed under the implementation plan developed to respond to the Survey.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
49-003	TA49-1-CA-1-HW/RW TA49-3-CA-1-HW/RW	49.003 49.004	Tsk 52 : 14	AREA 11, SERVED TA-49-15

SUMMARY

LOCATION : TA-49
TYPE OF UNIT(s) : OPEN BURNING/LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1959 - 1984
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

The landfill which included open burning was used for disposal of residues from TA-49 during 1959 to 1961. This area was located in the north part of the site. During the 1971 cleanup operations, a pit was excavated in this same area and was used for disposal of uncontaminated material from Area 11. In 1984, the area was reopened by digging a region approximately 15' x 30' x 100' for burial of debris collected from the 1984 cleanup of TA-49.

WASTE INFORMATION

The wastes reportedly contained ash and solid wastes free of radionuclides. Although only radiation was checked for during decommissioning, the presence of hazardous materials is unlikely.

RELEASE INFORMATION

There have been no known releases other than combustion products associated with this unit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
49-004	TA49-2-L-I-HW/RW	49.006	Tsk 52 : 24	NORTHEAST PART OF TA-49

SUMMARY

LOCATION : TA-49
TYPE OF UNIT(s) : LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1984
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

In addition to reopening the old landfill area in 1984 (see 49-004), two small disposal areas were created. One is described as a small pit north of the road and to the east of Area 10 [49-005(a)]. The other is described as utilizing an existing sump or pit in Area 5 [49-005(b)].

WASTE INFORMATION

The waste consisted mainly of noncontaminated debris removed from the site during 1984 cleanup operations.

RELEASE INFORMATION

There are no known releases associated with these units.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
49-005(a)	**		Tsk 52 : 26	EAST OF AREA 10
49-005(b)	**		Tsk 52 : 25	IN AREA 5

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-49
TYPE OF UNIT(s) : SUMP
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1959 - 1960s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Structural information and total number of units is unavailable. The sumps were located in TA-49, Area 5.

WASTE INFORMATION

Liquids were collected in the sumps. In one case, these probably included spent photo solutions. One of the sumps was used only for emergency collection of water to prevent room flooding.

RELEASE INFORMATION

There are no known hazardous releases associated with these units.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
49-006	**		Tsk 52 : 17	AREA 5

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-49
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : EST. 1985 - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SANITARY WASTE

UNIT INFORMATION

Septic Tank TA-49-118 [49-007(a)] has a volume of 1,000 gallons and EID Registration Number LA-50. Septic Tank TA-49-119 [49-007(b)] has a volume of 1,500 gallons and EID Registration Number LA-49. The systems were designed to use an evapotranspiration mound, but the mounds were not completed and no outlets were constructed from the tanks. The tanks are pumped periodically as a result. It is believed that the two septic tanks served the Blast Overpressure Test Facility, which was never used. Neither system is used extensively. Two open ponds remain on site as the uncompleted mounds.

WASTE INFORMATION

The tanks receive only sanitary wastes.

RELEASE INFORMATION

The tanks are periodically pumped. There are no hazardous releases associated with these units.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
49-007(a)	TA49-5-ST-A-HW		Tsk 52 : 15	TA-49-118
49-007(b)	TA49-5-ST-A-HW		Tsk 52 : 16	TA-49-119

SUMMARY

LOCATION	: TA-49	MATERIALS MANAGED	: RADIOACTIVE WASTE
TYPE OF UNIT(s)	: SOIL CONTAMINATION		SUSPECTED HAZARDOUS WASTE
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: 1959 - 1961		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

Subsurface soil contamination may have occurred beneath buildings and structures, many now decommissioned, which were located within four separate areas of TA-49. Various operations were conducted inside the buildings during the 1959-61 period in which hydronuclear experiments were conducted at TA-49. There is a possibility of soil contamination from small-scale radiochemistry operations in Area 5 [49-008(a)]. A photo processing trailer was present in the area, along with a photo tower, a timing and firing building, and several sheds. All structures in Area 5 were removed in 1984. Unknown operations were conducted in Area 6 [49-008(b)] during 1959-61. Two craft shacks and two sheds were located in the area during that time. All of the structures have been decommissioned with the exception of shed TA-49-83. Structures located in Area 11 of TA-49 [49-008(c)] were used for radiochemistry operations. Experiments were performed in a trailer during the early period of operations from which spent solutions were drained to containers that were later taken for disposal. The change house/radiochemistry building TA-49-15 replaced the trailer and contained hoods and sinks for performing chemical operations. In September, 1971 all the surface structures in Area 11 were decontaminated, demolished and removed. High explosive confinement experiments were conducted in steel vessels placed in one or more 10-ft diameter, 30-ft deep shafts in Area 12 [49-008(d)]. The tests involved use of depleted uranium, and most of the energy absorbant for the experiments was salt. The salt was removed after each experiment and disposed of off-site. Multiple tons of salt were used during the experiments. In addition, a building in Area 12 was converted to a control room with hydraulic equipment, making hydraulic oils a potential contaminant. By 1983, the bottle house TA-49-23 was the only structure remaining in Area 12.

WASTE INFORMATION

Waste consisted of the radionuclides plutonium, americium, uranium, cesium-137, and gross gamma, alpha, and beta emitters. Beryllium, lead, and silver may have been present, as well as acids, organics, volatiles, hydraulic oil, and grease. High explosive residues may have been present at Area 12.

RELEASE INFORMATION

A 1987 DOE field survey found above-background levels of plutonium-238, -239, and -240 and americium in the soil to the north of the radiochemistry laboratory TA-49-15 and its associated leach field in Area 11. Beryllium was also found at above background levels in the same area. The field survey at Area 12 discovered gross beta and gamma activity, as well as lead and beryllium, in the soil. Depleted uranium and HE residues are potentially present at the site. Sampling of soil in Areas 5 and 6 has not been conducted; it is not known whether contamination has occurred in these areas.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
49-008(a)	**		Tsk 52 : 19	TA-49-3, -6, -8, -20, -96, -104, -105, -106, AREA 5
49-008(b)	**		Tsk 52 : 23	TA-49-5, -82, -83, -86, AREA 6
49-008(c)	**		Tsk 52 : 18	TA-49-4, -15, -55, AREA 11
49-008(d)	**		Tsk 52 : 22 31	TA-49-22, -23, -35, AREA 12

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-49
TYPE OF UNIT(s) : UNDERGROUND TANK
UNIT USE : STORAGE
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : ? - 1971
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : PRODUCT

UNIT INFORMATION

According to engineering drawings, an underground fuel storage tank was relocated from TA-15-192 to TA-49-56. The exact date of relocation is unknown; however, it was sometime between 1954 and 1963. In 1971, the tank was removed from TA-49, according to engineering drawing ENG-R5126. No information regarding the size, construction, removal, and disposal of this tank is available.

WASTE INFORMATION

The tank stored fuel.

RELEASE INFORMATION

No information on releases from this tank is available. However, until site characterization information is acquired which indicates that there were no releases, it must be assumed, based on past tank removals at the Laboratory, that the tank may have leaked.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
49-009	**		Tsk 52 : 30	TA-49-56

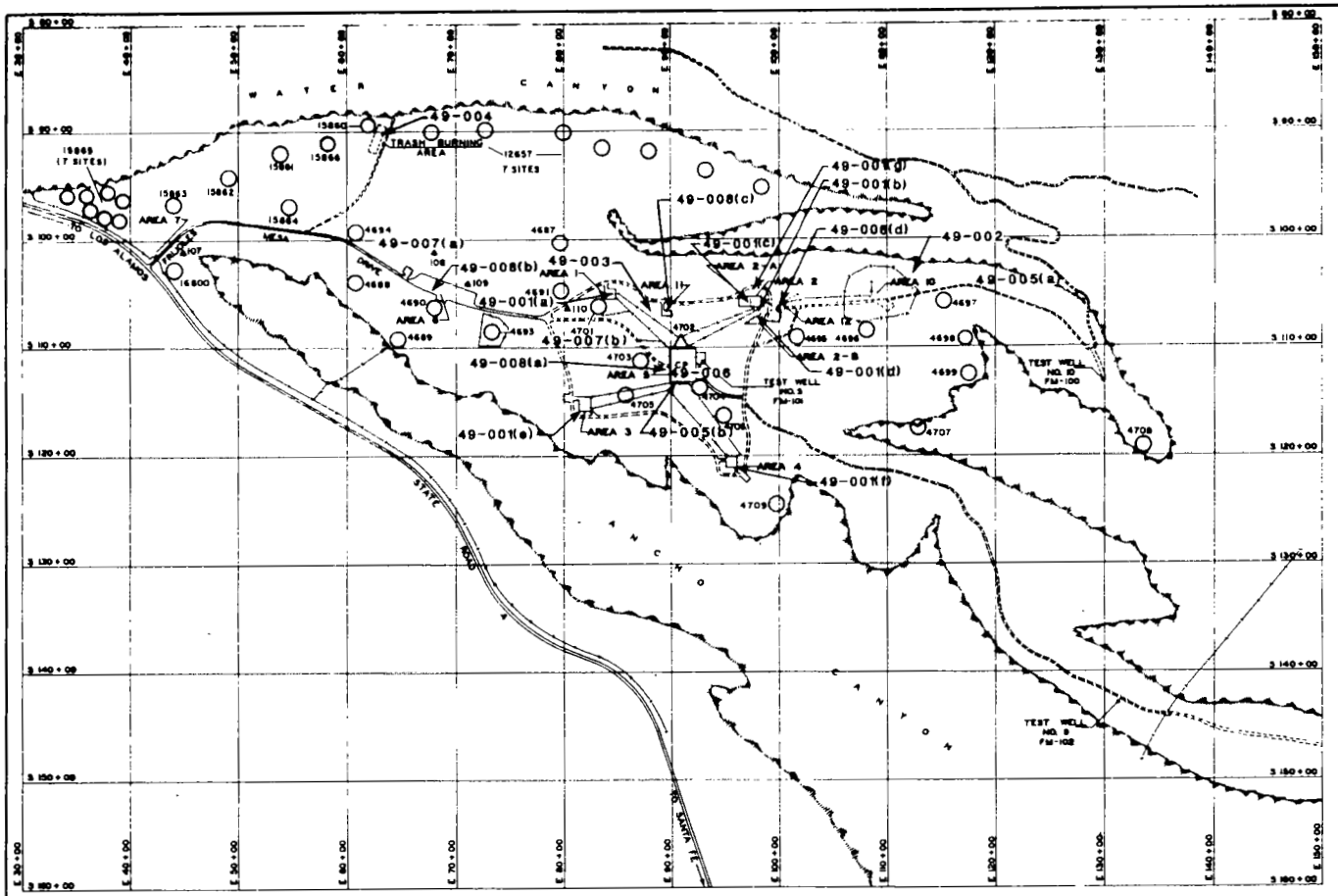
** No corresponding E. R. Program unit.

TA-49 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
49-001(a)	49-1
49-001(b)	49-1
49-001(c)	49-1
49-001(d)	49-1
49-001(e)	49-1
49-001(f)	49-1
49-001(g)	49-1
49-002	49-1
49-003	49-1
49-004	49-1
49-005(a)	49-1
49-005(b)	49-1
49-006	49-1
49-007(a)	49-1
49-007(b)	49-1
49-008(a)	49-1
49-008(b)	49-1
49-008(c)	49-1
49-008(d)	49-1
49-009	Not Shown

NOTE: Some structure locations may contain more than one SWMU.

301215 02 01 8119



LEGEND: ARCHY SITE STATUS

△ EXCAVATED

○ UNEXCAVATED

NOTE:

FOR DETAILED LAYOUT OF AREAS 1, 3, 4, 7, 10, AND 11, SEE SHEET 3, DWG. NO. ENG.-R5126

FOR DETAILED LAYOUT OF AREAS 2, 2-A, 2-B, 5, 6, AND 12, SEE SHEET 4, DWG. NO. ENG.-R5126

EXPLANATION

49-001 SWMU LOCATION

Rev.1 4/3/90

FIGURE 49-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-49

1" = 500'

GRAPHIC SCALE

UNCLASSIFIED

NOTES

UNIT 49-007(a) AND (b) : EXACT UNIT LOCATION IS UNAVAILABLE.

UNIVERSITY OF CALIFORNIA
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Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-49 FRIJOLES MESA SITE

DRAWING NO. ENG-R 5126

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS
TA-49-1	FM-1	GUARD HOUSE	AREA 7
TA-49-2	FM-2	OFFICE BUILDING RELOCATED	TO TA-53, NOW TA-0-149
TA-49-3	FM-3	CRAFT SHACK	RELOCATED TO TA-33-9
TA-49-4	FM-4		REMOVED 1971
TA-49-5	FM-5	CRAFT SHACK	RELOCATED TO TA-52-27
TA-49-6	FM-6	CRAFT SHACK	RELOCATED TO TA-8-73
TA-49-7	FM-7		REMOVED 1970
TA-49-8	FM-8	THE SHED	AREA 5
TA-49-9	FM-9		REMOVED 1970
TA-49-10	FM-10		REMOVED 1970
TA-49-11	FM-11		REMOVED 1970
TA-49-12	FM-12		REMOVED 1970
TA-49-13	FM-13		REMOVED 1970
TA-49-14	FM-14	TRANSFORMER STATION	AREA 5
TA-49-15	FM-15		REMOVED 1971
TA-49-16	FM-16		REMOVED 1971
TA-49-17	FM-17		REMOVED 1970
TA-49-18	FM-18		AREA 1 ELECTRICAL
TA-49-19	FM-19		REMOVED 1970
TA-49-20	FM-20	GRAY HOUSE NO. 1	AREA 5
TA-49-21	FM-21	LATRINE	AREA 12
TA-49-22	FM-22		REMOVED 1970
TA-49-23	FM-23	BOTTLE HOUSE	AREA 12
TA-49-24	FM-24	MANHOLE	AREA 12 ELECTRICAL
TA-49-25	FM-25	TRANSFORMER	AREA 12
TA-49-26	FM-26	POWER PANEL	AREA 12 ELECTRICAL
TA-49-27	FM-27	MANHOLE	AREA 12 ELECTRICAL
TA-49-28	FM-28		REMOVED 1970
TA-49-29	FM-29		REMOVED 1969
TA-49-30	FM-30		REMOVED 1969
TA-49-31	FM-31		REMOVED 1970
TA-49-32	FM-32		REMOVED 1969
TA-49-33	FM-33	PORTABLE SHIELD	AREA 2-A
TA-49-34	FM-34	PORTABLE GENERATOR	REMOVED 1979
TA-49-35	FM-35		REMOVED 1970
TA-49-36	FM-36	SIGNAL PANEL	AREA 3 ELECTRICAL
TA-49-37	FM-37	SIGNAL PANEL	AREA 2 ELECTRICAL
TA-49-38	FM-38	MANHOLE	AREA 2-B ELECTRICAL
TA-49-39	FM-39	MANHOLE	AREA 2 ELECTRICAL
TA-49-40	FM-40		DESTROYED 1960
TA-49-41	FM-41		REMOVED 1970
TA-49-42	FM-42		REMOVED 1969
TA-49-43	FM-43		REMOVED 1969
TA-49-44	FM-44		REMOVED 1970
TA-49-45	FM-45	SIGNAL PANEL	AREA 3 ELECTRICAL
TA-49-46	FM-46		REMOVED 1970
TA-49-47	FM-47	CABLE BUILDING	AREA 4
TA-49-48	FM-48	SIGNAL PANEL	AREA 4 ELECTRICAL
TA-49-49	FM-49		REMOVED 1969
TA-49-50	FM-50		REMOVED 1969
TA-49-51	FM-51		REMOVED 1964
TA-49-52	FM-52		REMOVED 1970
TA-49-53	FM-53		REMOVED 1971
TA-49-54	FM-54		REMOVED 1971
TA-49-55	FM-55	STORAGE BUILDING	AREA 11
TA-49-56	FM-56		REMOVED 1971
TA-49-57	FM-57	LATRINE	AREA 10
TA-49-58	FM-58		REMOVED 1970
TA-49-59	FM-59	POWER & SIGNAL PANEL	REMOVED 1979
TA-49-60	FM-60	MANHOLE	REMOVED 1979
TA-49-61	FM-61	PORTABLE SHIELD	AREA 10
TA-49-62	FM-62	ELEVATOR BUILDING	REMOVED 1979
TA-49-63	FM-63		REMOVED 1970
TA-49-64	FM-64	LATRINE	AREA 7
TA-49-65	FM-65	TANK	AREA 5 FUEL
TA-49-66	FM-66	TANK, WATER	RELOCATED TO TA-3-178
TA-49-67	FM-67		REMOVED 1970
TA-49-68	FM-68		REMOVED 1969
TA-49-69	FM-69	LATRINE	Transferred to Zia 9-1-71
TA-49-70	FM-70	LATRINE	AREA 5
TA-49-71	FM-71	MANHOLE (PORTABLE)	AREA 5 ELECTRICAL
TA-49-72	FM-72	MANHOLE (PORTABLE)	AREA 5 ELECTRICAL
TA-49-73	FM-73	MANHOLE (PORTABLE)	AREA 5 ELECTRICAL
TA-49-74	FM-74	MANHOLE (PORTABLE)	AREA 5 ELECTRICAL
TA-49-75	FM-75	MANHOLE (PORTABLE)	AREA 5 ELECTRICAL
TA-49-76	FM-76	MANHOLE (PORTABLE)	AREA 5 ELECTRICAL
TA-49-77	FM-77	MANHOLE (PORTABLE)	AREA 5 ELECTRICAL
TA-49-78	FM-78	MANHOLE (PORTABLE)	AREA 5 ELECTRICAL
TA-49-79	FM-79	MANHOLE (PORTABLE)	AREA 5 ELECTRICAL
TA-49-80	FM-80	MANHOLE (PORTABLE)	AREA 5 ELECTRICAL
TA-49-81	FM-81	MANHOLE (PORTABLE)	AREA 5 ELECTRICAL
TA-49-82	FM-82		REMOVED 1970
TA-49-83	FM-83	CARPENTRY & ELECTRICIAN SHED	AREA 6
TA-49-84	FM-84	TOOL BUILDING	RELOCATED TO TA-3-179
TA-49-85	FM-85		REMOVED 1970
TA-49-86	FM-86		REMOVED 1970
TA-49-87	FM-87		REMOVED 1970
TA-49-88	FM-88	POWER PANEL A	AREA 5 ELECTRICAL
TA-49-89	FM-89	POWER PANEL B	AREA 5 ELECTRICAL
TA-49-90	FM-90	POWER PANEL C	AREA 5 ELECTRICAL
TA-49-91	FM-91	POWER PANEL D	AREA 5 ELECTRICAL
TA-49-92	FM-92	SIGNAL PANEL W	AREA 5 ELECTRICAL
TA-49-93	FM-93	SIGNAL PANEL X	AREA 5 ELECTRICAL
TA-49-94	FM-94	SIGNAL PANEL Y	AREA 5 ELECTRICAL
TA-49-95	FM-95	SIGNAL PANEL Z	AREA 5 ELECTRICAL
TA-49-96	FM-96	PHOTO TOWER	AREA 5 FORMERLY TA-20-3
TA-49-97	FM-97	PORTABLE SHIELD	AREA 2-B

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS
TA-49-98	FM-98	PORTABLE SHIELD	AREA 2-B
TA-49-99	FM-99		REMOVED 1970
TA-49-100	FM-100	TEST WELL NO. 10	
TA-49-101	FM-101	TEST WELL NO 3	AREA 5
TA-49-102	FM-102	TEST WELL NO. 9	
TA-49-103	FM-103		REMOVED 1970
TA-49-104	FM-104		REMOVED 1970
TA-49-105	FM-105		REMOVED 1970
TA-49-106	FM-106	RECORDING BUILDING	AREA 5
TA-49-107	FM-107	TRANSFORMER STATION	S100+00 E40+00
TA-49-108	FM-108	TRANSFORMER STATION	S100+00 E70+00
TA-49-109	FM-109	TRANSFORMER STATION	Relocated TA-35-83
TA-49-110	FM-110	TRANSFORMER STATION	E 60+00 S110+00
TA-49-111	FM-111	TRANSFORMER STATION	AREA 5

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS

UNCLASSIFIED

FIGURE 49-2

TA-49 STRUCTURE LOCATION INDEX

REV	DATE	REVISION	BY	CKD	APP
6	9-22-83	REVISED TITLE BLOCK AND DWG. TO STATUS OF 8-1-83	VM		

UNIVERSITY OF CALIFORNIA
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Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-49 FRIJOLES MESA SITE

SEC. CLASSIFICATION: CLASS. U
REVIEWER:
DATE: 10-3-83

SUBMITTED / RECOMMENDED / APPROVED
DRAWN / CHECKED
DATE: 9-22-83 SHEET NO. 1 OF 1
DRAWING NO. ENG-R5126

301215 02 01 B58

TA-50
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 50 serves as the waste treatment plant for radioactive liquid wastes from Laboratory facilities including TA-2, -3, -43 and several technical areas along Pajarito Road. Operations began in 1963 and have continued to the present time. The industrial waste line coming into TA-50 from outlying sites is double-encased, with lead monitors in the manholes to which the outer line drains. In addition to collecting radioactive wastes via the industrial waste line network and by truck pick-up, certain hazardous chemical wastes are collected in batches and trucked to TA-50 for treatment onsite. Other chemical wastes and oils are trucked directly to storage at Material Disposal Area L, at TA-54, for eventual disposal by off-site organizations (DOE, 1987a).

The Treatment Development Facility, located at TA-50-37, contains a controlled-air incinerator (CAI) that was designed to develop methods to reduce volume, stabilize chemical composition, and eliminate combustibility of defense transuranic (TRU) wastes. The TRU program was successfully completed and the CAI has been subsequently modified to process other wastes, including beta-gamma radioactive waste, ion exchange resins, carcinogens, and other hazardous chemical wastes in both liquid and solid form. Building TA-50-69 houses the TRU Waste Size Reduction Facility, which is a production-oriented prototype designed to reduce the volume and repackage various types of metallic waste items such as glove boxes, process equipment, and ductwork. A radioactive decontamination facility for the Laboratory is located in the lower level at the south end of Building TA-50-1. (DOE, 1987a)

TA-50 lies at elevations between about 7,000 and 7,280 feet asl. It is located on the narrow mesa formed between Mortandad Canyon on the north, Ten Site Canyon (a branch of Mortandad Canyon to the east), and Two Mile Canyon, a branch of Pajarito Canyon, on the south. Canyon walls are steep slopes or cliffs in this area. TA-50 lies on welded Bandelier Tuff, in the Ponderosa Pine/Pinon-Juniper overstory vegetation zone. Soil in the area consists of Nyjack loam, Seaby loam, Tocal very fine sandy loam, Hackroy-Rock outcrop complex, Carjo loam, and rock outcrop (Nyhan et al., 1978).

At TA-50, the potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,010 to 6,050 feet asl. Over 900 feet of unsaturated tuff and volcanic rock

separate the surface from the aquifer. There is little potential for downward flow from the surface because of the low moisture conditions of the tuff (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-50

50-001	RADIOACTIVE WASTE TREATMENT FACILITY
50-002	TANKS AND DRAINLINES
50-003	WASTE STORAGE AREAS
50-004	DECOMMISSIONED TANKS AND WASTE LINES
50-005	NONRADIOACTIVE WASTE TREATMENT PLANT
50-006	OPERATIONAL RELEASES / OUTFALLS
50-007	INCINERATOR COMPLEX
50-008	SIZE REDUCTION FACILITY
50-009	MATERIAL DISPOSAL AREA C
50-010	RADIOACTIVE DECONTAMINATION FACILITY
50-011	SEPTIC SYSTEMS

SUMMARY

LOCATION : TA-50
TYPE OF UNIT(s) : TREATMENT PLANT
UNIT USE : TREATMENT
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1963 - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
HAZARDOUS WASTE
SUSPECTED MIXED WASTE

UNIT INFORMATION

The radioactive liquid waste treatment facility [50-001(a)] at TA-50 covers 37,000 square feet (60,000 square feet total floor space) and is designed primarily to remove transuranics. Its design capacity is 250 gpm. The facility provides neutralization, flocculation/clarification, pH control, ion exchange and filtration. The facility includes a wiped film evaporator (not yet operational), located in Room 71, Building 1; two clariflocculators, located in Room 116; a pH adjustment tank, located in Room 16; a horizontal evaporator storage tank, located in Room 70A; a decant storage tank (used as an auxiliary sludge storage tank), located in Room 61; a rotary drum vacuum filter, located in Room 116B; two gravity filtration devices, located in Room 116; a 100,000 gallon steel emergency holding tank, TA-50-90, added in 1982; and two waste mixers where chemicals are mixed with waste for treatment, located in Room 116. A drum-tumbler operation in Room 60A is used for cementation of TRU sludge prior to shipment to the Waste Isolation Pilot Plant. The facility has an outfall to Mortandad Canyon regulated under an NPDES permit (see "Operational Releases"). Liquid waste is transferred to the radioactive waste treatment facility from many of the active technical areas. Drainlines [50-001(b)] that transport liquid waste to the treatment facility are identified below.

FROM	STATUS	WASTES MANAGED
TA-55 to TA-50-66	Active	Acidic and caustic waste
Collector manhole TA-50-72 to grit chamber in TA-50-1	Active	LL radioactive industrial waste
TA-50-69 and TA-50-37	Active	LL radioactive industrial waste
TA-2, -3, -35, -43, -48 and -52, via manhole TA-50-72	Active	LL radioactive industrial waste
Manhole TA-50-7	Active	LL radioactive industrial waste
TA-55,via monitor pit TA-50-57 and manhole TA-50-72	Active	LL radioactive industrial waste

The majority of waste flows to TA-50 through double-encased polyethylene and stainless steel piping. There was a low-level radioactive industrial waste line from TA-50-3 until 1989, when the structure was removed.

LL : low-level

WASTE INFORMATION

The waste treated at this facility is radioactive waste. It is suspected that some waste streams entering the plant contain hazardous constituents.

RELEASE INFORMATION

Releases from the treatment facility are described in 50-006.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
50-001(a)	TA50-3-CA-A-RW	50.006-50.011 50.019 50.022-50.024		TA-50-1, -90
50-001(b)	TA50-1-UST-A-HW/RW		Tsk 5 : 11-17	TA-50-1, -2, -7, -35, -37, -43, -48, -52, -57, -66, -69, -72

SUMMARY

LOCATION	: TA-50	MATERIALS MANAGED	: RADIOACTIVE WASTE
TYPE OF UNIT(s)	: UNDERGROUND TANK		SUSEPCTED MIXED WASTE
UNIT USE	: TREATMENT/STORAGE		
OPERATIONAL STATUS	: ACTIVE/INACTIVE		
PERIOD OF USE	: 1963 - PRESENT		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

The Radioactive Waste Treatment Facility includes three sets of underground storage tanks. The first set of tanks is a tank farm known collectively as TA-50-2 [50-002(a)] and includes six flow-through process tanks, the largest having a volume of 75,000 gallons. Two of the tanks handle the incoming waste, one is for sludge, and the other two are for treated liquid waste storage. The sixth tank receives liquid from decontamination and decommissioning activities. The wastes are transported from TA-50-1 to TA-50-2 via a system of waste transfer lines. Six buried cast-iron lines transport liquid wastes and sludges from treatment and holding tanks in TA-50-1 to their associated tanks in TA-50-2. Four buried steel lines transport wastes from Room 61 in TA-50-1 to holding tanks in TA-50-2. Three additional cast-iron lines transport waste from drains in TA-50-1 to a tank in TA-50-2. In addition, two tanks TA-50-67 and TA-50-68 [50-002(b) and 50-002(c)] in an underground vault, TA-50-66, handle the caustic and acid liquid wastes respectively from two underground lines from the Plutonium Facility at TA-55. From TA-50-66 these wastes are transported via two double encased stainless steel lines to Room 60 in the TA-50-1 treatment plant. These liquids contain significant amounts of transuranics and are monitored carefully for criticality control before treatment. An outdoor, aboveground storage tank, TA-50-5 [50-002(d)], is located adjacent to the north wall of TA-50-1. The tank is used to store nitric acid and is associated with a concrete containment structure. TA-50-12 was used to hold limestone chips to neutralize nitric acid vapors. The limestone chips were removed when the containment wall was built around TA-50-5 in 1988. TA-50-5 does not handle waste but stores nitric acid for ion exchange column regeneration.

WASTE INFORMATION

The waste treated or stored as a part of the radioactive waste treatment facility is identified as radioactive. It is suspected that some waste streams contain hazardous constituents.

RELEASE INFORMATION

In July, 1990, the Laboratory initiated drilling activities to test the integrity of the waste tanks. Cuttings from some of the boreholes around the grit chamber were wet and, upon surveying, found to be radioactively contaminated. Results of further investigation suggest that the pipeline connecting to the grit chamber was the source of a leak. Samples of the wet soil were collected and submitted to the HSE-9 analytical laboratory for analysis. Analytical results are pending.

NOTES

Three stainless steel tanks that were formerly 50-002(b) have been decommissioned and are described as 50-004(b).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
50-002(a)	TA50-1-UST-A-HW/RW	50.029-	Tsk 5 : 3-5	TA-50-2
	TA50-3-CA-A-RW	50.032		
50-002(b)	TA50-3-CA-A-RW		Tsk 5 : 7 8	TA-50-67
50-002(c)	TA50-3-CA-A-RW	? 50.014	Tsk 5 : 7 8	TA-50-68
50-002(d)	TA50-3-CA-A-RW	? 50.014	Tsk 5 : 18 23	TA-50-5, -12

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-50
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1963 - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SUSPECTED MIXED WASTE
HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

There are five drum storage areas in conjunction with the Radioactive Waste Treatment Facility. The primary storage area is located in Building 1, Room 600 [50-003(a)]. The source of the waste is the cementing unit in Room 60A. A second container storage area is located in Room 130 of building TA-50-1 [50-003(b)]. The area is a satellite storage area for the analytical laboratory. The waste stored is samples from the laboratory. There is a temporary storage (less than 90 days) area at TA-50-2 [50-003(c)] that has been active since 1985. It consists of polyethylene 200 or 300 gallon tanks and numerous 55 gallon drums. The drums are stored on asphalt. The source of the waste is the isotope processing unit and the waste goes either into the radioactive waste tank or the neutralization tank. The polyethylene "tuff" tanks are enclosed within a steel cage. Recently a modular shed [50-003(d)] has been constructed behind TA-50-1 in which acidic wastes picked up from the ICON facility (TA-46) are stored. There is also an inflatable berm in this area which is also used for storage. A November 1988 field survey found four barrels under a tarp near TA-50-125 [50-003(e)].

WASTE INFORMATION

The waste in Room 600 is transuranic. The waste in Room 130 and TA-50-2 is low level, transuranic, and/or hazardous. The waste in the shed and berm is acidic waste. The contents of the four barrels is unknown.

RELEASE INFORMATION

There are no known releases from these container storage areas.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
50-003(a)	**	50.025	Tsk 5 : 28	IN TA-50-1
50-003(b)	**		Tsk 5 : 29	IN TA-50-1
50-003(c)	**	50.033	Tsk 5 : 30	AT TA-50-2
50-003(d)	**		Tsk 5 : 31	BEHIND TA-50-1
50-003(e)	TA50-11-CA-A-HW/RW			NEAR TA-50-125

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-50
TYPE OF UNIT(s) : WASTE LINE
UNIT USE : TRANSPORT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1963 - 1989
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : SUSPECTED MIXED WASTE
RADIOACTIVE WASTE
HAZARDOUS WASTE

UNIT INFORMATION

In 1975, 520 feet of radioactive contaminated waste line [50-004(a)] was removed at TA-50 in the region where the incinerator is now located, TA-50-37. Contaminated soil and the vitrified clay pipe were taken to Area G and buried. In 1989, the underground concrete vault and three tanks that made up the TA-50-3 Tank Farm [50-004(b)] were removed. These were stainless steel underground storage tanks, ranging in volume from 1,000 to 4,500 gallons. The tanks were used to store waste from the Omega West reactor and could be used in an emergency for the storage of other wastes. The tank vault also received waste from undefined experiments in TA-50-1, via inactive waste line no. 50. Several other drainlines and associated manholes [50-004(c)] have been removed in TA-50.

STRUCTURE NO.	SIZE/MATERIAL	YEAR REMOVED	DESCRIPTION
Waste line no. 44	28', 6" dia, vitrified clay	1984	Connected waste line no. 45 to waste line no. 46 at manhole no. 6
Waste line no. 45	588', 5" dia, PVC	1984	Connected waste line no. 43 at Pecos Dr. to waste line no. 44 near manhole no. 6
Waste line no. 45a, manhole no. 55, manhole no. 56	67', 6" dia, PVC	1984	Drained from manhole no. 73 to manhole no. 56 via manhole no. 55. Manhole nos. 55 and no. 56 were also removed.
Waste line no. 46	41', 6" dia, cast iron	1984	Influent line connecting manhole no. 6 to TA-50-1
Waste line no. 47	14', 4" dia, cast iron	1984	Connected the soil lab in TA-50-1 to manhole no. 6.
Waste line no. 48	95', 6" dia, cast iron	1984	From tank TA-50-3 to manhole no. 6 via manhole no. 7.
Waste line no. 48a	44', 3" dia, cast iron	1984	Connected manhole no. 78 to manhole no. 6.
Waste line no. 49	305', 3" dia, cast iron	1981	Connected TA-35 with TA-50-3.
Waste line no. 54	65', 3" dia, cast iron	1981	Connected waste line no. 49 to overflow tank at TA-50-2.
Waste line no. 55	6" dia, 244' of cast iron, 165' of vitrified clay pipe	1981	Connected TA-50-1 and TA-50-2 to outfall in Ten Site Canyon
Waste line no. 56	29', 4" dia, cast iron	1983	Connected TA-50-1 to waste line no. 58
Waste line no. 65	3150', 3" dia, cast iron	1989	Connected TA-52 to a waste line junction at TA-50-3 Tank Farm.
Waste line no. 67	6" dia, 26' of cast iron, 250' of vitrified clay pipe	1981	Connected an emergency drain in TA-50-2 to an outfall in Ten Site Canyon
Waste line manhole no. 6		1984	Main collector manhole for influent waste lines 42, 44, 45, 46, 47, and 65.

WASTE INFORMATION

The waste consisted of constituents in an acidic matrix. It is suspected that some waste streams contained hazardous constituents.

RELEASE INFORMATION

The lines in the vicinity of TA-50-37 [50-004(a)] were known to have leaked occasionally. Generally, soil contamination by radionuclides, if discovered during waste line decommissioning activities [50-004(c)], was cleaned up to as low as reasonably achievable by removing affected soil and pipe. Chemical constituents which may have been present were usually not sampled for at the time of decommissioning. During excavation of the TA-50-3 vault and tanks [50-004(b)], soil surrounding and beneath the vault were screened for both radioactive and chemical contamination. Levels of contamination were found to be below cleanup levels; the trench was backfilled with soil.

(continued)

NOTES

SWMU No. 50-004(b) was formerly SWMU No. 50-002(b).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
50-004(a)	TA50-12-CA-I-HW/RW		Tsk 5 : 53	NEAR TA-50-37
50-004(b)	TA50-2-UST-I-HW/RW		Tsk 5 : 10 54	TA-50-3
50-004(c)	**		Tsk 5 : 49 51 52 55-57 59-65	TA-50-1, -2, -3; MANHOLES 6, 7, 55, 56, 73, 78

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-50
TYPE OF UNIT(s) : TREATMENT PLANT
UNIT USE : TREATMENT
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1983 - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

A liquid waste batch treatment system is located in Building 1, Room 24, at TA-50. Wastes that have been treated include cyanide, chromate plating solutions and solutions of acids and bases, and heavy metals. The unit is underlain by concrete and includes a Kynar-lined tank and associated Kynar-lined and stainless steel pipeline. The tank is used to treat electroplating waste containing copper and lead. It was put into use in May 1988. The plant also has a Kynar-lined blowdown tank in Room 24. This tank had not been used at the time of the VSI. Mercury reclamation is done on an intermittent basis in Room 34. Mercury is washed in acid and/or solvents and double distilled. The capacity has been estimated at 35 pounds per day. The process is not operated regularly because of the current lack of personnel. The area is estimated to be 60 square feet.

WASTE INFORMATION

The wastes handled at the Room 24 unit are cyanide, chromate plating solutions, acids, bases, and heavy metals including lead. Mercury is handled by the unit in Room 34.

RELEASE INFORMATION

There is no evidence of release from this facility.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
50-005	TA50-7-CA-1/A-HW	50.026 50.027	Tsk 5 : 24 25	TA-50-1

SUMMARY

LOCATION : TA-50
TYPE OF UNIT(s) : OPERATIONAL RELEASE
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1963 - PRESENT
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : SUSPECTED MIXED WASTE
RADIOACTIVE WASTE
HAZARDOUS WASTE
SOLID WASTE

UNIT INFORMATION

There have been several releases of radioactive wastes and unknown chemicals at TA-50 over the years. Upper Ten Site Canyon is reported to have contamination [50-006(a)] from overflow of a sump. Stained, potentially contaminated soil [50-006(b)] is present directly beneath an active radiator that is part of the west wall of building TA-50-37. Routine airborne releases of plutonium from the radioactive liquid waste treatment plant have deposited on the surrounding soils [50-006(c)]. Treated liquid effluent from the treatment plant has discharged to Mortandad Canyon since 1963 [50-006(d)]; the discharge is now regulated under an NPDES permit. More recently, the liquid effluent from the TA-21 Treatment Plant has been piped to TA-50 for discharge to Mortandad Canyon as well. The area surrounding an aboveground tank for diesel fuel [50-006(e)] was contaminated by releases from the tank. It was located south of TA-50-37. Underground lines extended from the tank to TA-50-37. The tank and the lines were removed in May, 1990.

WASTE INFORMATION

The spill into upper Ten Site Canyon [50-006(a)] consisted of liquid from the TA-50 Waste Treatment Facility (see 50-001); it was primarily radioactive waste, but may have contained hazardous constituents. The stained soil beneath the radiator at TA-50-37 [50-006(b)] contains hydraulic oil. Airborne releases [50-006(c)] included plutonium; other constituents, if present, are unknown. Outfall of effluent from the treatment plant at TA-50 [50-006(d)] is currently monitored under the routine environmental surveillance program. Analysis of effluent in the early 1980s indicated the presence of radionuclides and metals. The area around the diesel tanks [50-006(e)] received diesel fuel.

RELEASE INFORMATION

Releases through the outfall have caused an inventory of chemicals, heavy metals, and radionuclides to be present in Mortandad Canyon. Sampling near the outfall will continue in response to the 1988 DOE Environmental Survey Report, which cited the stream channel as Environmental Problem 9. In addition, elevated plutonium is present in surface soil at TA-50 from airborne stack emissions. The hydraulic oil beneath the fan at TA-50-37 is unlikely to have caused hazardous releases. Contaminated soil from around the diesel tank was removed and landfarmed.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
50-006(a)	TA50-5-CA-I-HW/RW		Tsk 5 : 21	SOUTHEAST OF TA-50-1
50-006(b)	**		Tsk 5 : 20 22	WEST WALL OF TA-50-37
50-006(c)	TA50-6-CA-A-RW		Tsk 5 : 19	AROUND TA-50-1
50-006(d)	TA50-4-O/CA-A-HW/RW		Tsk 5 : 1 6	FROM TA-50-1
50-006(e)	TA50-3-CA-A-RW		Tsk 5 : 48	SOUTH OF TA-50-37

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-50
TYPE OF UNIT(s) : INCINERATOR
UNIT USE : TREATMENT/STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1975 - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : MIXED WASTE
HAZARDOUS WASTE

UNIT INFORMATION

The incinerator complex (TA-50-37) was designed and constructed to develop incineration methods for wastes containing transuranics. The design matrix feed rate of this facility is 50 kg/hr. Upgrades are under way to convert the unit from a research and development facility to a production facility. These changes should be on line by the end of 1991. The incinerator is located in Room 112 and the feed system is located in Room 115 of Building 37. The liquid feed system prep room is bermed and contains no floor drains. The inventory permitted in this room is 600 gallons and release containment is designed to hold 110 percent of the maximum inventory. Containers are opened and handled under a barrel hood with an exhaust blower capacity of about 1000 cfm. An off-gas treatment unit is associated with the incinerator complex. The exhaust air system from the room includes two HEPA filters. Room 115 of TA-50-37 is permitted to store radioactive waste for the indoor feed system for the incinerator. At one time, Room 115 was used to empty glass vials containing scintillation liquid. The liquid is stored at TA-54, Area L awaiting startup of the incinerator. The solids were disposed of at TA-54, MDA-G as empty containers. The waste comes from throughout the facility.

WASTE INFORMATION

The wastes incinerated include organic liquids; chlorinated, fluorinated hydrocarbons; carcinogenic materials; and transuranic waste from the plutonium processing facility. Liquid effluent generated by the off-gas aqueous scrub system is filtered for solids removal prior to transfer via a double contained instrumented pipeline to the TA-50 Building 1 Industrial Waste Treatment Facility. Ash will be immobilized in concrete prior to shipment to the Waste Isolation Pilot Plant.

RELEASE INFORMATION

The unit has many release controls associated with it.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
50-007	TA50-9-IN-A-HW/RW	50.035 50.036	Tsk 5 : 26	TA-50-37

SUMMARY

LOCATION : TA-50
TYPE OF UNIT(s) : VOLUME REDUCTION
UNIT USE : OTHER: VOLUME REDUCTION
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1983 - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : MIXED WASTE

UNIT INFORMATION

The Size Reduction Facility in Building TA-50-69 is a prototype facility designed to reduce the volume of and repackage various types of metallic waste contaminated with transuranics. Operations were initiated in August of 1983. Through FY85, a total volume of 3,106 cubic feet of transuranic waste had been reduced by a factor of 3.7 to 1. This facility is moderately contaminated with transuranics and associated radionuclides.

WASTE INFORMATION

The waste consists of transuranic and metallic waste, including lead.

RELEASE INFORMATION

There is no evidence of release at this facility. There are no outfalls associated with this unit; all liquid wastes are processed at the radioactive waste treatment facility. Stack emissions also are monitored.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
50-008	TA50-8-CA-A-RW		Tsk 5 : 27	IN TA-50-69

SUMMARY

LOCATION	: TA-50	MATERIALS MANAGED	: MIXED WASTE
TYPE OF UNIT(s)	: MATERIAL DISPOSAL AREA		HAZARDOUS WASTE
UNIT USE	: DISPOSAL		SOLID WASTE
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: 1948 - 1969		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

MDA-C is located on the north side of Pajarito Rd adjacent to TA-50. There is approximately 3,650,000 cubic feet of waste at MDA-C within an area of 11.8 acres. MDA-C is composed of six radioactive pits, one chemical pit and 107 shafts. Pits 1 through 4 were approximately 185.9 m x 12.2 m in area. Pit 5 was approximately 214.9 m long x 33.5 m wide x 5.5 m deep. Pit 6 was approximately 153.9 m long x 30.5 m wide x 7.0 m deep. The chemical pit was approximately 54.9 m long x 7.6 m wide and may have been 3.7 m deep. The shafts vary in diameter and depth, and many are lined with corrugated metal pipe. Pit 1 was used from 1948-1951; Pit 2 was used from 1950-1951; Pit 3 was used from 1951-1953; Pit 4 was used from 1951-1955; Pit 5 was used from 1948-1951; and Pit 6 was used from 1956-1959. The chemical pit was active from 1960-1964. Pit disposal ended in 1964 and shaft disposal ended in 1969. Studies in the late 1970s indicated animal intrusion into the waste and other problems. The surface was improved in 1984 by adding soil cover at a depth greater or equal to six inches with an average cover of approximately two feet, recontouring, and seeding with native grasses. The new surface cover was applied to the eastern half and the extreme western end of the site and consisted of an additional 0.15 meter of topsoil over 0.5 meter of crushed tuff. The new cover was not applied to the extreme southwest corner of Area C because this area does not include any of the waste trenches.

WASTE INFORMATION

The types of radioactive waste buried in Area C include building debris from the demolition of TA-1 and TA-10, routine contaminated trash, sludge from waste treatment plants and depleted uranium chips. Plutonium-contaminated sodium loops from TA-35 were buried in shafts. Noncombustible waste was put in the west end of pit 5 in 1957. The chemical pit contained, according to reports, a variety of chemicals, pyrophoric metals, hydrides and powders, sealed vessels containing sodium potassium alloys or compressed gases, and equipment not suitable for salvage. No high explosives have ever been disposed of in the pit. Natural uranium contaminated objects were placed in the pit, according to reports. Before closing Area C, the safety office placed approximately 200 gas cylinders which were full or partially full and covered them with approximately ten feet of compact fill. The record indicates that warnings were made that some full nickel carbonyl cylinders may have been put into the chemical pit. Carboys of di- or triethylbenzene from the whole body counter at TA-43 were deposited on the ground where the solar panels were located (the solar panels have since been removed). Parts of the Clementine Reactor (see SWMU No. 2-003) are buried in MDA-C.

RELEASE INFORMATION

During the 1986 DOE Environmental Survey (Environmental Problem 22), above background levels of radioactivity were found adjacent to the site. The source of elevated radioactivity has not been determined.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
50-009	MDA-C	50.034	Tsk 5 : 32-42	MDA-C

SUMMARY

LOCATION : TA-50
TYPE OF UNIT(s) : DECONTAMINATION FACILITY
UNIT USE : TREATMENT
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1963 - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : RADIOACTIVE WASTE

UNIT INFORMATION

A radioactive decontamination facility for the laboratory is located in the lower level at the south end of TA-50-1. The facility is used to clean radioactive contamination from vehicles and other objects. Liquid wastes produced during decontamination go to the tank farm at TA-50, via floor drain and drainline, and solid wastes go to TA-54 for storage (TRU) or burial (LL). The decontamination takes place at the facility in hoods, gloveboxes, and open areas.

WASTE INFORMATION

The wastes generated are generally radioactive.

RELEASE INFORMATION

There is no evidence of routine or systematic releases at this facility.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
50-010	TA50-10-CA-A-RW		Tsk 5 : 9	IN TA-50-1

SUMMARY

LOCATION : TA-50
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : INACTIVE/ACTIVE
PERIOD OF USE : 1963 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SANITARY WASTE

UNIT INFORMATION

A decommissioned septic system [50-011(a)] included a septic tank, TA-50-10, a manhole, TA-50-9, and a sanitary distribution box, TA-50-11. In addition, Zia Company engineering drawing Z-4856 indicates that a seepage pit was installed on the east side of the sanitary distribution box in 1978. All components of the septic system were removed in 1983. An active sanitary waste system of drainlines [50-011(b)] was installed in 1983 to discharge sanitary sewage from TA-50 to the treatment lagoons at TA-35. The lines are 6-inch ductile iron pipe and were installed to replace the earlier septic tank system. The drainlines are operational and subject to monitoring.

WASTE INFORMATION

The septic systems managed sanitary waste only.

RELEASE INFORMATION

The septic system was removed in 1983; it is unknown if there were hazardous releases. No known releases have occurred from the active sanitary waste system.

NOTES

Former SWMU Nos. 50-011(b) and (c) were contiguous parts of the septic system and have been included within 50-011(a).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
50-011(a)	**		Tsk 5 : 50	TA-50-10, -9, -11
50-011(b)	**		Tsk 5 : 2	
50-011(misc)			Tsk 5 : 58	

** No corresponding E. R. Program unit.

TA-50 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

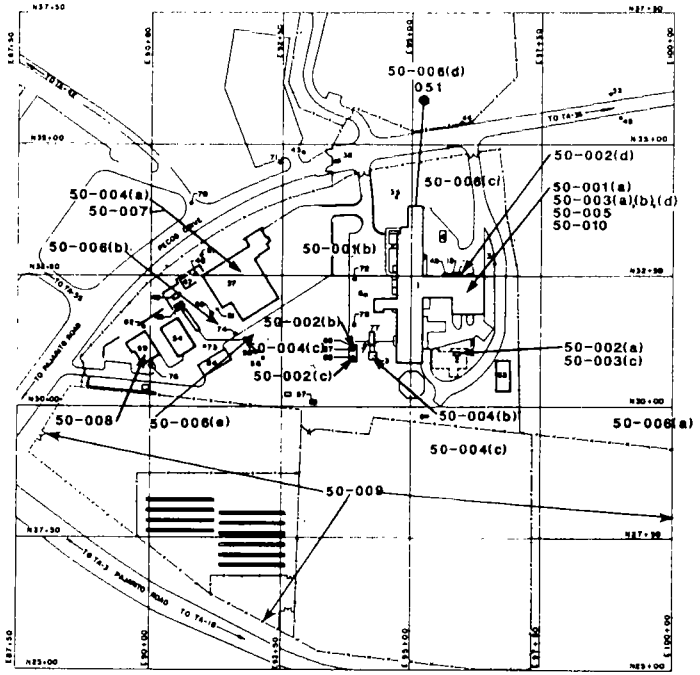
SWMU	FIGURE NUMBER
50-001(a)	50-1
50-001(b)	50-1
50-002(a)	50-1
50-002(b)	50-1
50-002(c)	50-1
50-002(d)	50-1
50-003(a)	50-1
50-003(b)	50-1
50-003(c)	50-1
50-003(d)	50-1
50-003(e)	Not shown
50-004(a)	50-1
50-004(b)	50-1
50-004(c)	50-1
50-005	50-1
50-006(a)	50-1
50-006(b)	50-1
50-006(c)	50-1
50-006(d)	50-1
50-006(e)	50-1
50-007	50-1
50-008	50-1
50-009	50-1
50-010	50-1
50-011(a)	50-2
50-011(b)	50-2

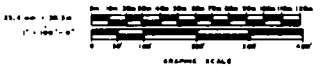
NOTE: Some structure locations may contain more than one SWMU.

Rev. 1; 3/1/90

LAN:TA-Units/66

*U.S. GOVERNMENT PRINTING OFFICE: 1990-0-573-036/20121





EXPLANATION

50-001 SWMU LOCATION

010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBERS (SEE APPENDIX A)

FIGURE 50-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-50

REV. 1 3/1/90

NOTES

Location of NPDES outfall number 051 is approximate

50-009 Unit includes all of the fenced area.

UNCLASSIFIED

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

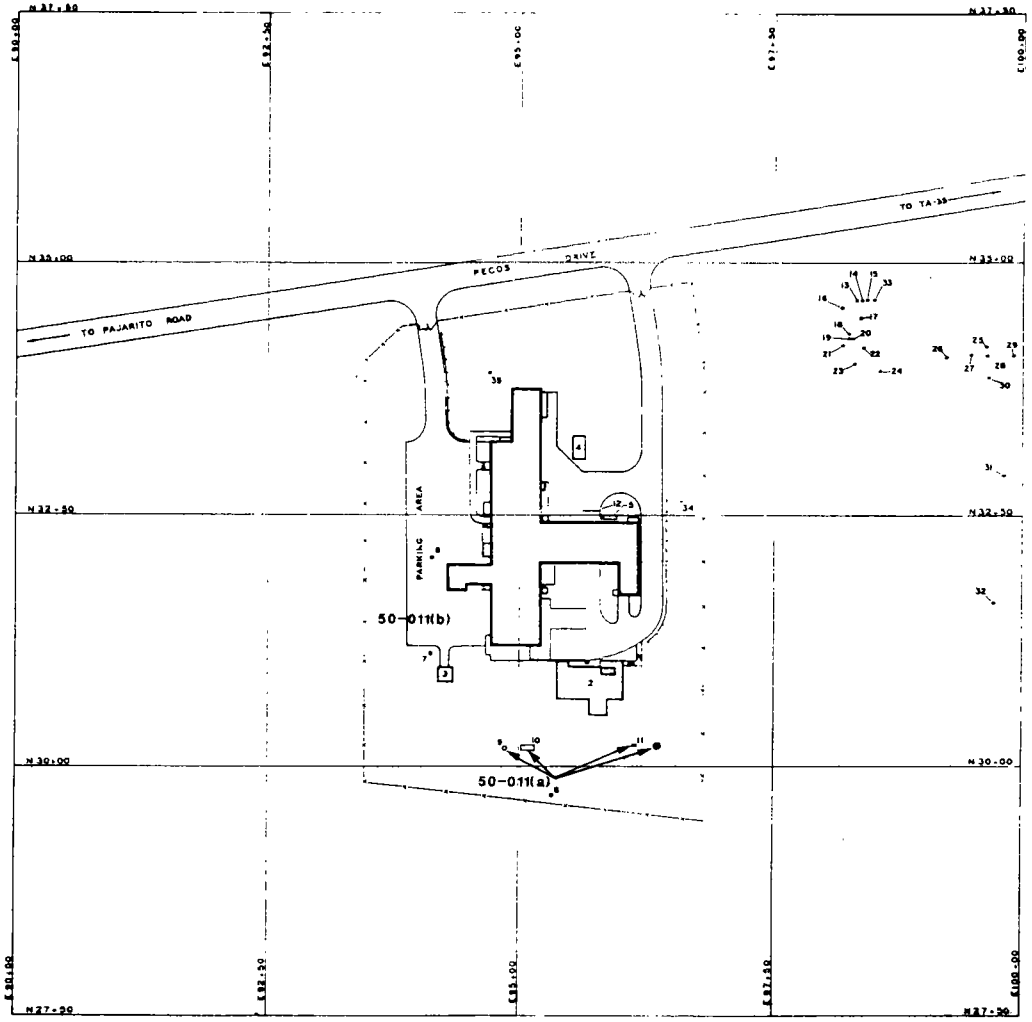
FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN

TA-50 WM-SITE

ENG-RS187

301215 02 01 B104



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EXPLANATION

50-001 ,SWMU LOCATION

SCALE

REV. 1 3/1/90

FIGURE 50-2

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-50

LOS ALAMOS SCIENTIFIC LABORATORY

STRUCTURE LOCATION PLAN

TA-50 LIQUID DISPOSAL SITE

ENG-R 2493

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-50-1	WM-1	LIQUID DISPOSAL PLANT		N32+50 E95+00
TA-50-2	WM-2	PUMPING STATION, ACID		N30+00 E95+00
TA-50-3	WM-3	TANK, HOLDING ACID		N30+00 E95+00
TA-50-4	WM-4	SUBSTATION		N32+50 E95+00
TA-50-5	WM-5	TANK, ACID		N32+50 E95+00
TA-50-6	WM-6	MANHOLE, ACID		N32+50 E95+00
TA-50-7	WM-7	MANHOLE, ACID		N30+00 E95+00
TA-50-8	WM-8	MANHOLE, ACID		N30+00 E95+00
TA-50-9	WM-9	MANHOLE, SANITARY	REMOVED 1983	
TA-50-10	WM-10	TANK, SEPTIC	REMOVED 1983	
TA-50-11	WM-11	DISTRIBUTION BOX, SANITARY	REMOVED 1983	
TA-50-12	WM-12	PIT, ACID NEUTRALIZING		N32+50 E95+00
TA-50-13	WM-13	CALIBRATION HOLE	REMOVED 1977	
TA-50-14	WM-14	CALIBRATION HOLE	REMOVED 1977	
TA-50-15	WM-15	CALIBRATION HOLE	REMOVED 1977	
TA-50-16	WM-16	TEST HOLE	REMOVED 1977	
TA-50-17	WM-17	TEST HOLE	REMOVED 1977	
TA-50-18	WM-18	TEST HOLE	REMOVED 1977	
TA-50-19	WM-19	TEST HOLE	REMOVED 1977	
TA-50-20	WM-20	TEST HOLE	REMOVED 1977	
TA-50-21	WM-21	TEST WELL	REMOVED 1977	
TA-50-22	WM-22	TEST WELL	REMOVED 1977	
TA-50-23	WM-23	TEST HOLE	REMOVED 1977	
TA-50-24	WM-24	TEST HOLE	REMOVED 1977	
TA-50-25	WM-25	TEST HOLE	REMOVED 1977	
TA-50-26	WM-26	TEST HOLE	REMOVED 1977	
TA-50-27	WM-27	TEST HOLE	REMOVED 1977	
TA-50-28	WM-28	TEST HOLE	REMOVED 1977	
TA-50-29	WM-29	TEST WELL	REMOVED 1977	
TA-50-30	WM-30	TEST WELL	REMOVED 1977	
TA-50-31	WM-31	TEST WELL	REMOVED 1977	
TA-50-32	WM-32	TEST WELL	REMOVED 1977	
TA-50-33	WM-33	TEST HOLE	REMOVED 1977	
TA-50-34	WM-34	MANHOLE, WATER METER		N32+50 E97+50
TA-50-35	WM-35	MANHOLE, TELEPHONE		N35+00 E95+00
TA-50-36	WM-36	TRANSFORMER STATION	RENUMBERED TA-0-481	
TA-50-37	WM-37	TRANSURANIC BUILDING		N32+50 E92+50
TA-50-38	WM-38	INSPECTION STATION		N33+00 E92+50
TA-50-39	WM-39	CONCRETE PAD	REMOVED 1980	
TA-50-40	WM-40	GAS METERING STATION	RENUMBERED TA-35-220	
TA-50-41	WM-41	TRANSFORMER STATION	RENUMBERED TA-35-23	
TA-50-42	WM-42	LIQUID CO_2 TANK		N32+50 E95+00
TA-50-43	WM-43	MANHOLE, SANITARY		N35+00 E92+50
TA-50-44	WM-44	MANHOLE, SANITARY		N35+00 E95+00
TA-50-45	WM-45	MANHOLE, SANITARY		N35+00 E100+00
TA-50-46	WM-46	TRANSFORMER PAD		N32+50 E90+00
TA-50-47	WM-47	TRAILER SLAB		N32+50 E90+00
TA-50-48	WM-48	COOLING TOWER SLAB		N32+50 E90+00
TA-50-49	WM-49	COOLING TOWER RESERVOIR		N32+50 E90+00
TA-50-50	WM-50	BLOWER PAD		N32+50 E90+00
TA-50-51	WM-51	STACK FOUNDATION		N32+50 E90+00
TA-50-52	WM-52	TRANSFORMER STATION	NOT SHOWN	
TA-50-53	WM-53	MANHOLE, SANITARY		N35+00 E100+00
TA-50-54	WM-54	TDF WAREHOUSE		N30+00 E90+00
TA-50-55	WM-55	MANHOLE, ACID		N30+00 E92+50
TA-50-56	WM-56	MONITORING PIT, ACID		N30+00 E92+50
TA-50-57	WM-57	MONITORING PIT, ACID		N30+00 E92+50
TA-50-58	WM-58	BUTTERFLY VALVE FOUNDATION	NOT SHOWN	N32+50 E90+00
TA-50-59	WM-59	BUTTERFLY VALVE FOUNDATION	NOT SHOWN	N32+50 E90+00
TA-50-60	WM-60	EXTERIOR DUCT	NOT SHOWN	N32+50 E90+00
TA-50-61	WM-61	EXTERIOR DUCT	NOT SHOWN	N32+50 E90+00
TA-50-62	WM-62	EXTERIOR DUCT	NOT SHOWN	N32+50 E90+00
TA-50-63	WM-63	EXTERIOR DUCT	NOT SHOWN	N32+50 E90+00
TA-50-64	WM-64	EXTERIOR DUCT	NOT SHOWN	N32+50 E90+00
TA-50-65	WM-65	EXTERIOR DUCT	NOT SHOWN	N32+50 E90+00
TA-50-66	WM-66	PIT, ACID AND CAUSTIC		N30+00 E90+00
TA-50-67	WM-67	TANK, PROCESS		N30+00 E90+00
TA-50-68	WM-68	TANK, PROCESS		N30+00 E95+00
TA-50-69	WM-69	SIZE REDUCTION FACILITIES		N30+00 E90+00
TA-50-70	WM-70	MANHOLE, ACID		N35+00 E90+00
TA-50-71	WM 71	MANHOLE, ACID		N35+00 E92+50
TA-50-72	WM-72	MANHOLE, ACID		N32+50 E95+00
TA-50-73	WM-73	MANHOLE, INDUSTRIAL WASTE		N30+00 E90+00
TA-50-74	WM-74	MANHOLE, ACID		N32+50 E92+50
TA-50-76	WM-76	MANHOLE, ACID		N30+00 E90+00
TA-50-77	WM-77	UNLOADING STATION		N30+00 E95+00
TA-50-78	WM-78	MANHOLE, ACID		N32+50 E95+00
TA-50-81	WM-81	MANHOLE, SANITARY		N32+50 E90+00
TA-50-82	WM-82	TRANSFORMER STATION		N32+50 E90+00
TA-50-83	WM-83	STORAGE BUILDING		N30+00 E97+00
TA-50-84	WM-84	TRANSPORTABLE OFF BLDG		N30+00 E90+00
TA-50-85	WM-85	OIL STORAGE	NOT SHOWN	
TA-50-86	WM-86	PUMP HOUSE	NOT SHOWN	
TA-50-87	WM-87	MANHOLE SANITARY	NOT SHOWN	
TA-50-88	WM-88	MANHOLE SANITARY	NOT SHOWN	
TA-50-89	WM-89	WIG WAG	NOT SHOWN	
TA-50-90	WM-90	HOLDING TANK	NOT SHOWN	
TA-50-91	WM-91	LIFT STATION	NOT SHOWN	
TA-50-92	WM-92	LIFT STATION	NOT SHOWN	
TA-50-94	WM-94	TRAILER, OFFICE	FORMERLY TA-665	N30+00 E92+50

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-0-326	ULR-326	CONSTRUCTION SHACK	REMOVED	N35+00 E95+00
TA-0-465	ULR-465	OFFICE TRAILER	REMOVED	N32+50 E90+00

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FIGURE 50-3

TA-50 STRUCTURE LOCATION INDEX

7 | 2-28-85 | REVISED TITLE BLOCK & DWG. TO STATUS OF 7-10-85

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-50 WM-SITE

DATE 7-10-85 SHEET 1 OF 1
ENG-R5127

301215 02 01 B39

301216 02 01 840

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-50-1	L0-1	LIQUID DISPOSAL PLANT		N 33-10 E 99-00
TA-50-2	L0-2	PUMPING STATION	ACID	N 30-00 E 91-00
TA-50-3	L0-3	TANK	HOLDING, ACID	N 30-00 E 91-00
TA-50-4	L0-4	SUBSTATION		N 33-50 E 99-00
TA-50-5	L0-5	TANK	ACID	N 32-50 E 91-00
TA-50-6	L0-6	MANHOLE	ACID	N 32-50 E 91-00
TA-50-7	L0-7	MANHOLE	ACID	N 30-00 E 91-00
TA-50-8	L0-8	MANHOLE	ACID	N 30-00 E 91-00
TA-50-9	L0-9	MANHOLE	SANITARY	N 30-00 E 91-00
TA-50-10	L0-10	TANK	SEPTIC	N 30-00 E 91-00
TA-50-11	L0-11	DISTRIBUTION BOX	SANITARY	N 30-00 E 91-00
TA-50-12	L0-12	PIT	ACID NEUTRALIZING	N 34-50 E 98-00
TA-50-13	L0-13	CALIBRATION HOLE		N 34-50 E 98-00
TA-50-14	L0-14	CALIBRATION HOLE		N 34-50 E 98-00
TA-50-15	L0-15	CALIBRATION HOLE		N 34-50 E 98-00
TA-50-4	L0-4	TEST HOLE		N 34-50 E 98-00
TA-50-16	L0-16	TEST HOLE		N 34-50 E 98-00
TA-50-17	L0-17	TEST HOLE		N 34-50 E 98-00
TA-50-18	L0-18	TEST HOLE		N 34-50 E 98-00
TA-50-19	L0-19	TEST HOLE		N 34-00 E 98-00
TA-50-20	L0-20	TEST HOLE		N 34-00 E 98-00
TA-50-21	L0-21	TEST WELL		N 34-00 E 98-00
TA-50-22	L0-22	TEST HOLE		N 34-00 E 98-00
TA-50-23	L0-23	TEST HOLE		N 34-00 E 98-00
TA-50-24	L0-24	TEST HOLE		N 34-00 E 98-00
TA-50-25	L0-25	TEST HOLE		N 34-00 E 98-00
TA-50-26	L0-26	TEST HOLE		N 34-00 E 98-00
TA-50-27	L0-27	TEST HOLE		N 34-00 E 98-00
TA-50-28	L0-28	TEST HOLE		N 34-00 E 98-00
TA-50-29	L0-29	TEST HOLE		N 34-00 E 98-00
TA-50-30	L0-30	TEST WELL		N 34-00 E 98-00
TA-50-31	L0-31	TEST WELL		N 33-00 E 98-00
TA-50-32	L0-32	TEST WELL		N 31-50 E 98-00
TA-50-33	L0-33	TEST HOLE		N 34-50 E 98-00
TA-50-1	L0-34	MANHOLE	WATER METER	N 32-50 E 98-00
TA-50-35	L0-35	MANHOLE	TELEPHONE	N 30-00 E 94-00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

FIGURE 50-4

TA-50 STRUCTURE LOCATION INDEX

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2 12-6-49 REVISED TO STATUS OF 2-1-49

1 10-13-49 REVISED TO STATUS OF 9-1-49

NO. DATE REVISIONS BY

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ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-50 LIQUID DISPOSAL SITE

DRAWN FRANK
SCALE NONE
DATE 1-7-50
SHEET 1 OF 2
ENG-R 2492