LAUR 90-3400

Control Number 0025

ESHID-603326-02

Los Alamos National Laboratory

Environmental Restoration

A Department of Energy environmental clean-up program

SOLID WASTE MANAGEMENT UNITS

REPORT

Los Alamos National Laboratory

Revised November 1990

VOL II of IV
(TA-10 through TA-25)

LAUR 90-3400

Control Number _____

Los Alamos National Laboratory

Environmental Restoration

A Department of Energy environmental clean-up program

SOLID WASTE MANAGEMENT UNITS REPORT

Los Alamos National Laboratory

Revised November 1990

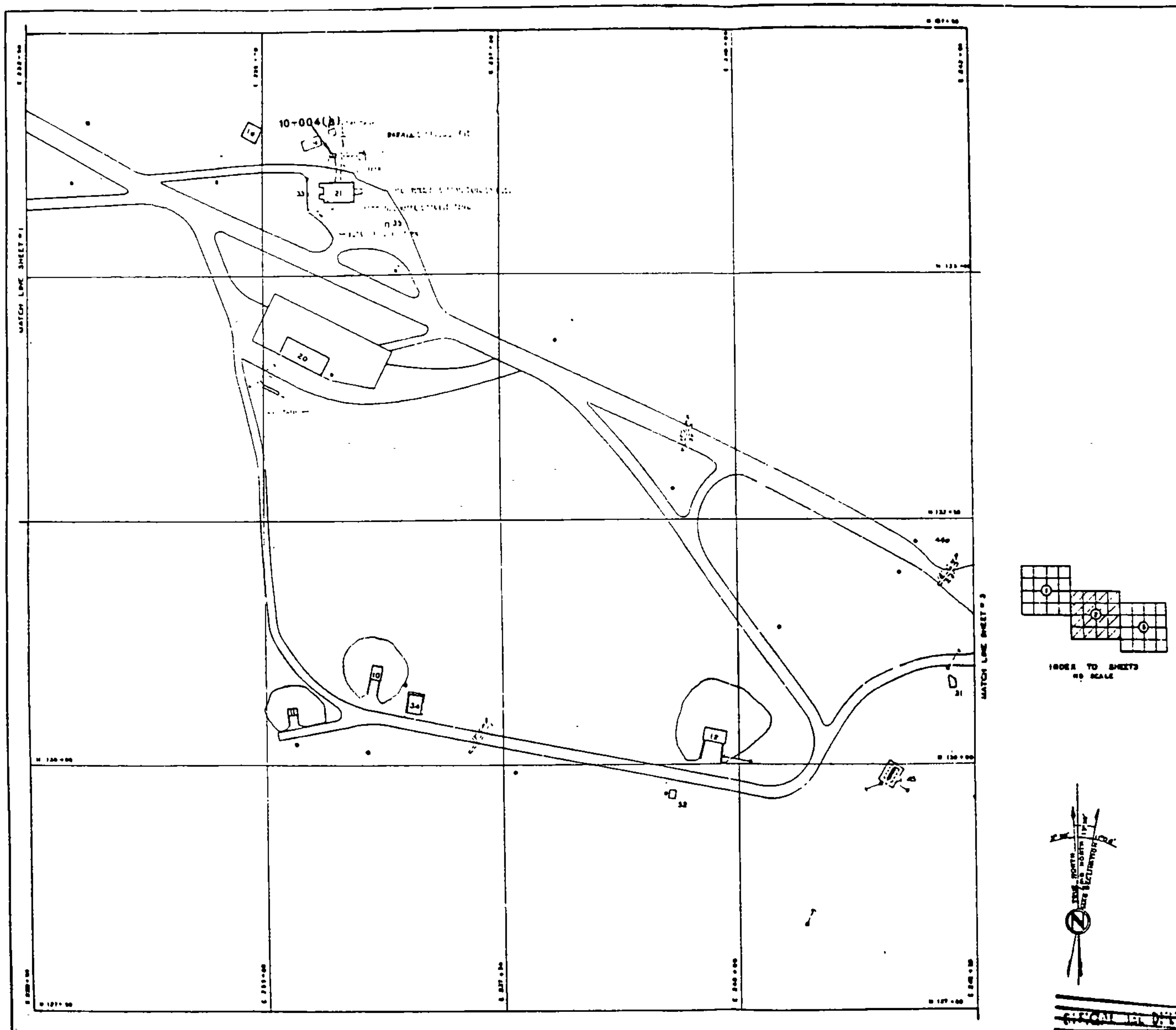
VOL II of IV
(TA-10 through TA-25)

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



EXPLANATION
10-001 SWMU LOCATION

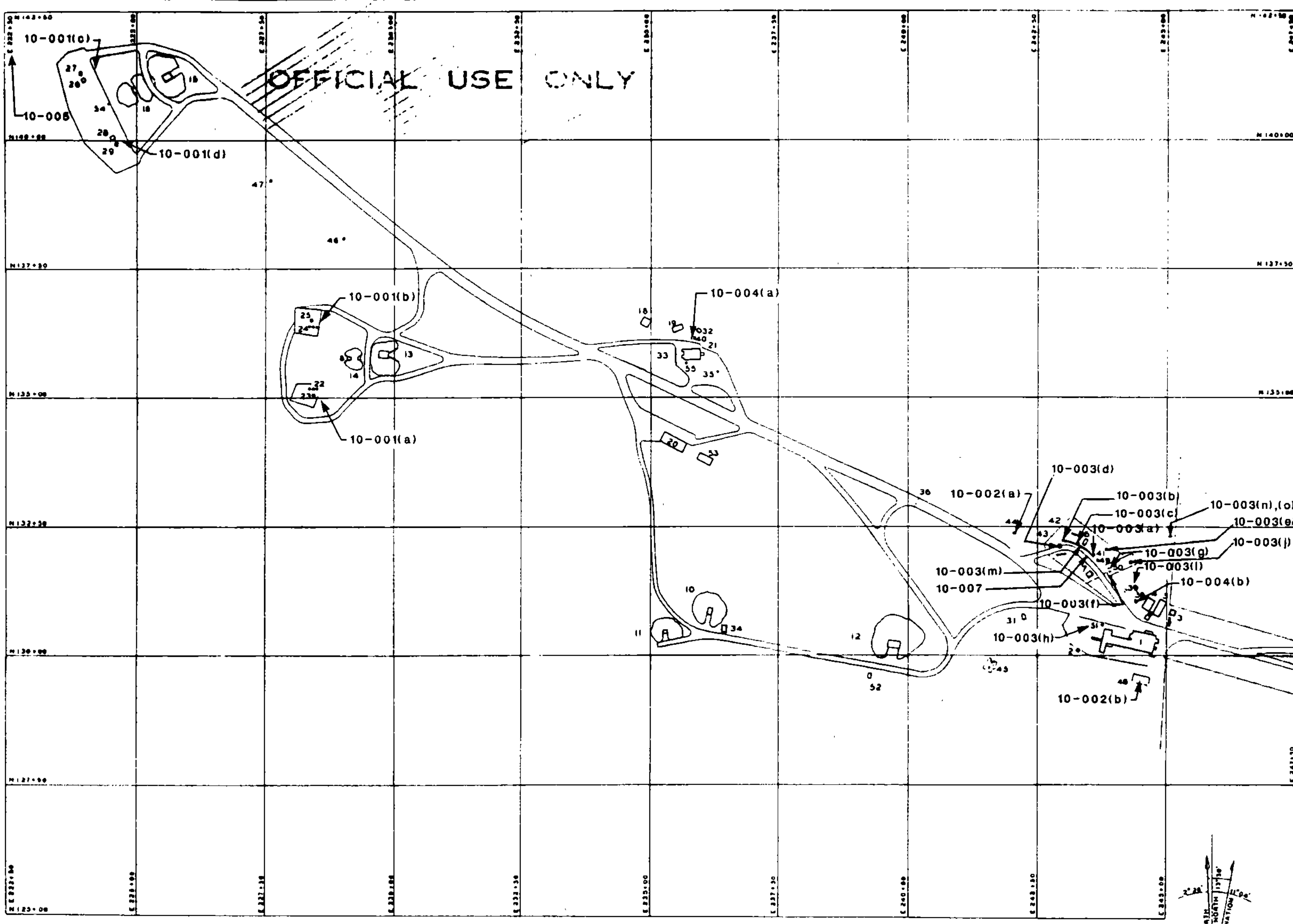
UNCLASSIFIED

LEGEND
WATER
SANITARY SEWER
ACID SEWER
FUEL

FIGURE 10-2
SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-10
REV. 1 4/30/90

LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
ENGINEERING DEPARTMENT LOS ALAMOS, N. M.
UTILITY LOCATION PLAN
TA-10 BAYO CANYON SITE
WATER, SEWER and FUEL
AUTHORIZED FOR
ENG-R637
INFO. SHOWN CURRENT AS OF 8-1-58

301215 02 01 8177



STRUCTURE NUMBER	DESIGNATION	REMARKS
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	" "
[illegible]	[illegible]	" "
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
TA-10-7	BAYO-7	TRACTOR BUILDING
TA-10-8	BAYO-8	INSPECTION BLDG.
TA-10-9	BAYO-9	" " (REMOVED)
TA-10-10	BAYO-10	MAGAZINE
TA-10-11	BAYO-11	"
TA-10-12	BAYO-12	LABORATORY
TA-10-13	BAYO-13	CONTROL BUILDING FIR PT 1&2
TA-10-14	BAYO-14	BATTERY BUILDING FIR PT 1&2
TA-10-15	BAYO-15	CONTROL BUILDING FIR PT 3&4
TA-10-16	BAYO-16	BATTERY BUILDING FIR PT 3&4
TA-10-17	BAYO-17	LATRINE (REMOVED)
TA-10-18	BAYO-18	STORAGE BUILDING
TA-10-19	BAYO-19	" "
TA-10-20	BAYO-20	WAREHOUSE BUILDING
TA-10-21	BAYO-21	PERSONNEL BUILDING
TA-10-22	BAYO-22	X-UNIT CHAMBER, FIR PT 1
TA-10-23	BAYO-23	ELECTRONICS CHAMBER, FIR PT 1
TA-10-24	BAYO-24	X-UNIT CHAMBER, FIR PT 2
TA-10-25	BAYO-25	ELECTRONICS CHAMBER, FIR PT 2
TA-10-26	BAYO-26	X-UNIT CHAMBER, FIR PT 3
TA-10-27	BAYO-27	ELECTRONICS CHAMBER, FIR PT 3
TA-10-28	BAYO-28	X-UNIT CHAMBER, FIR PT 4
TA-10-29	BAYO-29	ELECTRONICS CHAMBER, FIR PT 4
TA-10-30	BAYO-30	GUARD BUILDING STATION 103
TA-10-31	BAYO-31	CELL BUILDING
TA-10-32	BAYO-32	WELDING SHOP
TA-10-33	BAYO-33	BARRICADE
TA-10-34	BAYO-34	STATIC TEST BUILDING
TA-10-35	BAYO-35	SIREN PLATFORM
TA-10-36	BAYO-36	ROAD BLOCK
TA-10-37	BAYO-37	ROAD BLOCK
TA-10-38	BAYO-38	SEPTIC TANK
TA-10-39	BAYO-39	SEPTIC TANK (ACID)
TA-10-40	BAYO-40	SEPTIC TANK
TA-10-41	BAYO-41	CONTAMINATED MATERIAL PIT
TA-10-42	BAYO-42	" " "
TA-10-43	BAYO-43	" " "
TA-10-44	BAYO-44	" " "
TA-10-45	BAYO-45	TRANSFORMER STATION
TA-10-46	BAYO-46	PULL BOX
TA-10-47	BAYO-47	PULL BOX
TA-10-48	BAYO-48	CONTAMINATED MATERIAL PIT
TA-10-49	BAYO-49	DRUM STORAGE
TA-10-50	BAYO-50	MANHOLE (ACID SEWER)
TA-10-51	BAYO-51	" " "
TA-10-52	BAYO-52	PLATFORM
TA-10-53	BAYO-53	STORAGE BUILDING
TA-10-54	BAYO-54	PULL BOX
TA-10-55	BAYO-55	WATER TANK (UNDERGROUND)

REV. 1 4/30/90

FIGURE 10-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-10

No.	DATE	REVISIONS	BY	CHKD
7	[illegible]	GENERAL REVISION TO STATUS OF JULY 1, 1953	HOB	JAS
6	[illegible]	REDRAWN TO STATUS OF 1-1-54	LCW	JAS

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

STRUCTURE LOCATION PLAN
TA-10 BAYO CANYON SITE

AUTHORIZED FOR

L.G. WINNS
1" = 100'
ENG-R 180

EXPLANATION

10-001 SWMU LOCATION

UNCLASSIFIED

OFFICIAL USE ONLY

301215 02 01.B116

TA-10 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
10-001(a)	10-1
10-001(b)	10-1
10-001(c)	10-1
10-001(d)	10-1
10-001(e)	Not shown, location unknown
10-002(a)	10-1
10-002(b)	10-1
10-003(a)	10-1
10-003(b)	10-1
10-003(c)	10-1
10-003(d)	10-1
10-003(e)	10-1
10-003(f)	10-1
10-003(g)	10-1
10-003(h)	10-1
10-003(i)	10-1
10-003(j)	10-1
10-003(k)	10-1
10-003(l)	10-1
10-003(m)	10-1
10-003(n)	10-1
10-003(o)	10-1
10-004(a)	10-1, 10-2
10-004(b)	10-1
10-005	10-1
10-006	Not shown
10-007	10-1

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

SUMMARY

LOCATION : TA-10
TYPE OF UNIT(s) : LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1963
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

The landfill, located in the arroyo at TA-10, was used to dispose of building debris from the decommissioning of TA-10. The size of the landfill is not known; however, because it is located in the excavation created by the removal of the liquid disposal complex, it is probably about 20 feet deep. This site has been transferred to Los Alamos County.

WASTE INFORMATION

The waste is nonhazardous, consisting of uncontaminated building debris, most of which is believed to be concrete.

RELEASE INFORMATION

There have been no known hazardous releases associated with this unit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
10-007	TA10-3-L-I-HW/RW		Tsk 15 : 8	NEAR TA-10-41

SUMMARY

LOCATION : TA-10
TYPE OF UNIT(s) : OPEN BURNING
UNIT USE : TREATMENT
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1944 - 1963
HAZARDOUS RELEASE : NONE KNOWN
RADIOACTIVE RELEASE : NONE KNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
RADIOACTIVE WASTE
SOLID WASTE
UNKNOWN

UNIT INFORMATION

Various burning operations were conducted at TA-10. These included two burns using drums. Other operations used temporary burn pits, or burned the items in place. In 1955, there were two burns of uranium solutions. In 1956, radioactively contaminated combustibles were burned (the ashes were taken to MDA-G). In 1960 and 1963, buildings were burned. This site has been transferred to Los Alamos County.

WASTE INFORMATION

The uranium solutions contained uranium-238. The structures burned may have contained uranium-238, strontium-90, and HE.

RELEASE INFORMATION

It was possible that during the burns releases of radionuclides and other unknown combustion products occurred; however, there is currently no evidence of residual contamination.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
10-006	TA10-4-CA-I-RW		Tsk 15 : 7	

SUMMARY

LOCATION : TA-10
TYPE OF UNIT(s) : SURFACE DISPOSAL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1940s - 1957
HAZARDOUS RELEASE : NONE KNOWN
RADIOACTIVE RELEASE : NONE KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
HAZARDOUS WASTE

UNIT INFORMATION

This surface disposal site is located up-canyon from the TA-10 firing sites on the south side of the road. There is no information on the size of the area; it is believed to have been small. This disposal area was excavated in 1957. During an E.R. site reconnaissance visit in 1988, the remaining depression of this excavation was observed 100 ft west of Firing Point 3. This site has been transferred to Los Alamos County.

WASTE INFORMATION

The site received residuals swept from the firing pads after each shot. Small quantities of uranium, lead, possibly beryllium, and strontium-90 may have been present.

RELEASE INFORMATION

In 1957, the wastes from the disposal area were burned and the ash taken to MDA-C. No additional wastes are believed to have been disposed of at the site. In 1961, radioactivity at the site ranged from background to 0.6 mR/h.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
10-005	TA10-3-L-I-HW/RW		Tsk 15 : 27	NEAR TA-10-26

SUMMARY

LOCATION	: TA-10	MATERIALS MANAGED	: SANITARY WASTE
TYPE OF UNIT(s)	: SEPTIC SYSTEM		SUSPECTED HAZARDOUS WASTE
UNIT USE	: TREATMENT/DISPOSAL		RADIOACTIVE WASTE
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: SEE BELOW		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

Two septic tanks handled sanitary wastes and other liquids. Tank TA-10-40 [10-004(a)] served personnel in Building TA-10-21, had a capacity of 550 gallons, and discharged to a pit measuring 8' x 8' x 12' deep. An engineering drawing, ENG R-637, indicates that the TA-10-40 septic system discharged to a drainline and outfall located in a stream channel, 200 ft north-northeast of TA-10-40. Tank TA-10-38 [10-004(b)], of reinforced concrete, 4' x 10' x 4' deep, handled sanitary waste, but is suspected to have also received liquid wastes from the lab at TA-10-1. Its overflow drained through a 4" vitrified clay open-joint drain pipe to the arroyo. TA-10-38 was used from 1944 to 1963. TA-10-40 was used to serve the personnel building from 1949 to 1963. This site has been transferred to Los Alamos County.

WASTE INFORMATION

The septic systems handled primarily sanitary waste, but may have potentially received laboratory liquids. The materials used in the laboratory included strontium-90, barium, cadmium, platinum, benzene, carbon tetrachloride, acids, and organics. A long-time LANL employee reports that there is very little possibility that contaminants were discharged to the TA-10-40 septic system as it served the personnel building where workers ate meals.

RELEASE INFORMATION

Both tanks were removed and were taken to TA-54, MDA-G, according to engineering records. No information is available concerning the fate of the disposal pit associated with TA-10-40. It is not clear whether the 4-inch tile pipe to this outfall or soil around the outfall was removed during decommissioning. The outfall area from TA-10-38 was located in a stream channel about 100 ft north-northeast of TA-10-38. In 1974, the outfall area was noted to have above background levels for gross beta.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
10-004(a)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 2 4 23	TA-10-40
10-004(b)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 1 24	TA-10-38

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
10-003(k)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 28	NEAR TA-10-50
10-003(l)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 28	NEAR TA-10-50
10-003(m)	TA10-2-S/ST/CA/O-I-HW/RW	10.001	Tsk 15 : 21	NEAR TA-10-41, -42, -43
10-003(n)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 29	NEAR TA-10-50
10-003(o)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 3	NEAR TA-10-1

SUMMARY

LOCATION : TA-10
TYPE OF UNIT(s) : DISPOSAL SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1944 - 1950
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : KNOWN
MATERIALS MANAGED : MIXED WASTE

UNIT INFORMATION

A liquid disposal complex served the Radiochemistry Laboratory, TA-10-1. The laboratory was used to separate, precipitate, and encapsulate lanthanum-140 into sources. Radiochemical separation generated liquid and solid radioactive and chemical wastes that discharged to the liquid disposal complex. The complex consisted of six pits, three identified as TA-10-41, -42, -43 [10-003(a), (b), and (c)] and three unidentified [10-003(d), (e), and (f)]; two manholes, TA-10-50 and -51 [10-003(g) and (h)]; one tank, TA-10-39 [10-003(i)]; and three stainless steel tanks [10-003(j), (k), and (l)]. The entire complex, along with associated drain lines, ultimately discharged to leach fields and other areas. The system has been decommissioned. One of the unidentified pits [10-003(d)] was 1 ft in diameter and was located 2 ft south of TA-10-42. Another of the unidentified pits [10-003(e)] was a 2-ft square pit located 40 ft north of TA-10-41. The third unidentified pit [10-003(f)] was located 6 ft south of TA-10-50. During decommissioning, a common clay drain pipe [10-003(m)] connecting pits TA-10-41, -42, and -43 was discovered. The drain was 10 ft deep. A leach field was found beneath TA-10-43. A drain pipe from manhole TA-10-40 discharged to a leach field [10-003(n)] in the stream channel approximately 125 ft north of TA-10-50. TA-10-41, -42, -43 were constructed of reinforced concrete, measured 2' x 2' x 5' deep, and had steel covers. TA-10-50 and -51 were constructed of reinforced concrete 4' x 5' x 5' deep. The three stainless steel tanks had capacities of 200 gallons each. In addition, a chemist who worked at the Radiochemistry Laboratory remembers decontamination holes [10-003(o)] located near the stream bed leach field. It is possible that the decontamination holes were part of the stream bed leach field. This site has been transferred to Los Alamos County.

WASTE INFORMATION

The liquid wastes included nitric acid, hydrochloric acid, hydrofluoric acid, sulfuric acid, strontium-90, as well as lanthanum-140 (now decayed to below detection levels), small amounts of barium, cadmium, platinum, benzene, carbon tetrachloride, other organics, and inorganics.

RELEASE INFORMATION

The ultimate disposition of the liquids was discharge to the arroyo. In 1963, the pits, tanks, drain lines, and large amounts of contaminated soil were removed. Low levels of radionuclide contamination remain at depth with a maximum of 24,000 pCi/g gross beta detected at 430-440 cm below the surface in 1974. The area is today posted to prohibit excavation prior to 2142 A.D. The area around the liquid waste disposal complex was investigated during the DOE environmental survey as part of Environmental Problem 24. Soil samples collected from borings were analyzed for metals, radionuclides, volatiles, and semivolatiles. Metals and radionuclides (uranium-235, cadmium-109, and strontium-90) were detected. Volatiles and semivolatiles were not detected.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
10-003(a)	TA10-2-S/ST/CA/O-I-HW/RW	10.001	Tsk 15 : 15	TA-10-41
10-003(b)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 16	TA-10-42
10-003(c)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 17	TA-10-43
10-003(d)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 18	NEAR TA-10-42
10-003(e)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 19	NEAR TA-10-41
10-003(f)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 20	NEAR TA-10-50
10-003(g)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 22	TA-10-50
10-003(h)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 22	TA-10-51
10-003(i)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 22	TA-10-39
10-003(j)	TA10-2-S/ST/CA/O-I-HW/RW		Tsk 15 : 28	NEAR TA-10-50

(continued)

SUMMARY

LOCATION : TA-10
TYPE OF UNIT(s) : PIT
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1945 - 1950
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
MIXED WASTE

UNIT INFORMATION

Two pits were dug for the disposal of spent chemicals and laboratory equipment. TA-10-44 [10-002(a)] measured 8' x 5' x 12' deep (2' x 2' x 5' deep, according to engineering records). TA-10-48 [10-002(b)] was divided into two sections, each 5' x 5' x 10' deep (6'6" x 5'4" x 10' deep according to engineering records). This site has been transferred to Los Alamos County.

WASTE INFORMATION

TA-10-48 received gloves, bottles, laboratory equipment, and at least some of the liquid residuals from the lanthanum extraction process which contained an estimated 117 Ci of strontium-90. TA-10-44 received gloves, rags, acid bottles, and similar items.

RELEASE INFORMATION

In 1963, all solid wastes were removed from TA-10-48 and soil was removed to a depth of 26 feet. Excavated material was taken to MDA-G at TA-54. At a depth of 26 feet, slight strontium contamination remained; because gross beta levels were approaching background, the pit was filled. TA-10-48 is included in the area with posts recommending no excavation before 2142 A.D. TA-10-44 was also decommissioned; waste items were removed and soil excavated to a depth of 15 feet. At that depth, the bottom of the pit indicated 1.5 mR/h beta/gamma. The pit was then refilled.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
10-002(a)	TA10-3-L-I-MW/RW		Tsk 15 : 26	TA-10-44
10-002(b)	TA10-3-L-I-MW/RW		Tsk 15 : 25	TA-10-48

SUMMARY

LOCATION	: TA-10	MATERIALS MANAGED	: HAZARDOUS WASTE
TYPE OF UNIT(s)	: FIRING SITE		RADIOACTIVE WASTE
UNIT USE	: TESTING/DISPOSAL		
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: 1944 - 1963		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

Four firing sites were located in Bayo Canyon at TA-10. Firing Point 1 [10-001(a)] was near TA-10-22 (X-unit chamber) and TA-10-23 (electronics chamber). Firing Point 2 [10-001(b)] was near TA-10-24 (X-unit chamber) and TA-10-25 (electronics chamber). Firing Point 3 [10-001(c)] was near TA-10-26 (X-unit chamber) and TA-10-27 (electronics chamber). Firing Point 4 [10-001(d)] was near TA-10-28 (X-unit chamber) and TA-10-29 (electronics chamber). The firing sites were used for experiments using HE as an explosive driving force impacting on metals. Shots usually contained a radioactive source, lanthanum-140, for diagnostic purposes. The same firing areas were used many times. They were decommissioned in 1963. Additionally, TA-10 may have been the area in which sand pile detonation experiments were conducted [10-001(e)]. A 6/8/44 photograph shows a sand pile with an estimated height of 24 inches and a base diameter of 68 inches. There has been no verification that the photo was taken in TA-10. The sand pile detonation program objective was to determine the ratio of sand to explosive to determine 1) how to retain active material in the sand, 2) probable recovery, and 3) mechanism of explosion. This site has been transferred to Los Alamos County.

WASTE INFORMATION

According to the CEARP, a total of about 2,000 kg of natural uranium, 3,380 kg of uranium-238, 39.6 Ci of strontium-90, lead, and possibly beryllium were included in the shots. Other materials included aluminum, steel, cable, and electronics components. The lanthanum-140 used in diagnostics has since decayed to below detection levels. Sand pile detonation experiments used non-radioactive cobalt nitrate as a tracer and HE.

RELEASE INFORMATION

Deposition of residuals around the firing point depended on the amount of HE and the configuration of the shot. Much of the residual material was deposited near the firing area. Fine particulates were dispersed further, up to several miles. In 1963, the area surrounding the firing sites to a radius of about 760 meters was swept and 90 truck loads of debris, including asphalt and soil, was transported to MDA-G for disposal. The firing pads were washed with water and swept after each shot. Wash water flowed into natural surface drainages and the natural stream channel to the north of the firing sites. Further surface cleanup has been undertaken at periodic intervals in the years since. Today, small amounts of residuals such as firing cable and shrapnel remain at the site. Radiation levels slightly above background are occasionally measured there, particularly in soils surrounding the firing areas.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
10-001(a)	TA10-1-CA-I-HW/RW	10.002	Tsk 15 : 5 10 14	TA-10-22, -23
10-001(b)	TA10-1-CA-I-HW/RW	10.002	Tsk 15 : 5 11 14	TA-10-24, -25
10-001(c)	TA10-1-CA-I-HW/RW	10.002	Tsk 15 : 5 12 14	TA-10-26, -27
10-001(d)	TA10-1-CA-I-HW/RW	10.002	Tsk 15 : 5 13 14	TA-10-28, -29
10-001(e)	TA10-1-CA-I-HW/RW		Tsk 15 : 9	

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-10

10-001	FIRING SITES
10-002	DISPOSAL PITS
10-003	LIQUID DISPOSAL COMPLEX
10-004	SEPTIC SYSTEMS
10-005	SURFACE DISPOSAL AREA
10-006	BURN SITES
10-007	LANDFILL

TA-10
OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 10 was decommissioned and decontaminated in the early 1960's. Its location lies outside the northeastern corner of the Laboratory and is presently owned by Los Alamos County with restricted use provisions suggested by DOE. The area was used as a firing site and, for a period of years, included a chemical laboratory (DOE, 1987a). Radioactive materials, acids, metals, and laboratory wastes were disposed of or released.

TA-10 was decommissioned from 1960 to 1963. It was recognized at the time of decommissioning that some radioactive materials probably remained in the canyon. Consequently, several follow-up surveys were conducted over the years. In 1976, TA-10 was reevaluated as part of the Formerly Utilized Sites Remedial Action Program (FUSRAP). Investigations and subsequent excavation during this program left unacceptable levels of a radioactivity between 10 and 40 feet below the pits (see 10-003), but acceptable radioactivity levels at depths less than 10 feet. In 1983, concrete monuments were installed delineating a "Designated Restricted Area."

The site of former TA-10 lies along the streamed of Bayo Canyon at about 6,600 to 6,800 feet asl. The bedrock in the area is a non-welded member of the Bandelier Tuff. The site lies in the Pinon-Juniper overstory vegetation zone. Soils have not been surveyed in this area.

The potentiometric surface of the main aquifer in the Los Alamos area is at 5,850 feet asl at the site of TA-10. Over 700 feet of unsaturated tuff, basalt, other volcanic rocks, and conglomerate separate the surface from the ground water table. There is little potential for downward flow of surface water through the unsaturated zone to the aquifer (IT, 1987a). However, because a stream runs in Bayo Canyon occasionally, surface water presents a transport mode for any contamination that may be present at the site.

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-11-1	K-1	STORAGE BUILDING		S37+50 E17+50
TA-11-2	K-2	CONTROL BUILDING		S37+50 E20+00
TA-11-3	K-3	CONTROL BUILDING		S37+50 E20+00
TA-11-4	K-4	CONTROL BUILDING		S37+50 E17+50
TA-11-5	K-5		REMOVED 1950	
TA-11-6	K-6		DEMOLISHED 1977	
TA-11-7	K-7		REMOVED 1980	
TA-11-8	K-8		REMOVED 1980	
TA-11-9	K-9		REMOVED 1980	
TA-11-10	K-10		REMOVED 1980	
TA-11-11	K-11		REMOVED 1949	
TA-11-12	K-12		REMOVED 1959	
TA-11-13	K-13	MANHOLE	ELECTRICAL	S37+50 E20+00
TA-11-14	K-14		REMOVED 1950	
TA-11-15	K-15		REMOVED 1952	
TA-11-16	K-16		REMOVED 1967	
TA-11-17	K-17		REMOVED 1967	
TA-11-18	K-18		REMOVED 1967	
TA-11-19	K-19		REMOVED 1950	
TA-11-20	K-20	TANK, SEPTIC		S37+50 E17+50
TA-11-21	K-21	SUBSTATION		S37+50 E15+00
TA-11-22	K-22	MANHOLE, ELECTRICAL		S37+50 E17+50
TA-11-23	K-23		REMOVED 1950	
TA-11-24	K-24	AIR-GUN BUILDING		S37+50 E20+00
TA-11-25	K-25	DROP TOWER		S37+50 E20+00
TA-11-26	K-26	CONCRETE PAD		S37+50 E20+00
TA-11-27	K-27	HOIST & FOUNDATION		S37+50 E20+00
TA-11-28	K-28	HOIST & FOUNDATION		S37+50 E20+00
TA-11-29	K-29	MANHOLE, ELECTRICAL		S37+50 E20+00
TA-11-30	K-30	VIBRATION TEST BUILDING		S37+50 E15+00
TA-11-31	K-31	SUBSTATION		S37+50 E15+00
TA-11-32	K-32	MANHOLE, ELECTRICAL		S37+50 E15+00
TA-11-33	K-33	EQUIPMENT SHELTER		S37+50 E17+00
TA-11-35	K-35		REMOVED 1970	
TA-11-36	K-36	MAGAZINE		S60+00 E12+00
TA-11-37	K-37	CAMERA SHIELD		S37+50 E20+00
TA-11-38	K-38	CAMERA SHIELD		S37+50 E20+00
TA-11-39	K-39	SUMP PIT		S37+50 E20+00
TA-11-40	K-40	INSTRUMENTATION SHIELD		S37+50 E20+00
TA-11-41	K-41	DROP PAD		S37+50 E20+00
TA-11-42	K-42	DROP PAD		S37+50 E20+00
TA-11-43	K-43	TANK, SEPTIC		S37+50 E17+50
TA-11-44	K-44	MANHOLE, WATER		S37+50 E20+00
TA-11-45	K-45	INSTRUMENTATION ENCLOSURE		S37+50 E20+00
TA-11-46	K-46	PERSONNEL BARRIER		S37+50 E20+00
TA-11-47	K-47	PERSONNEL BARRIER		S35+00 E15+00
TA-11-48	K-48	PERSONNEL BARRIER		S35+00 E15+00
TA-11-49	K-49	TRANSFORMER STATION		S60+00 E12+50
TA-11-50	K-50	CATCH BASIN		S37+50 E22+50
TA-11-51	K-51	CATCH BASIN		S60+00 E22+50
TA-11-52	K-52	CATCH BASIN		S60+00 E22+50
TA-11-53	K-53	SPHERE IMPACT TARGET		S60+00 E17+50

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

UNCLASSIFIED

FIGURE 11-3

TA-11 STRUCTURE LOCATION INDEX

REV	DATE	REVISION	BY	CHK	APP
1	8-22-83	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

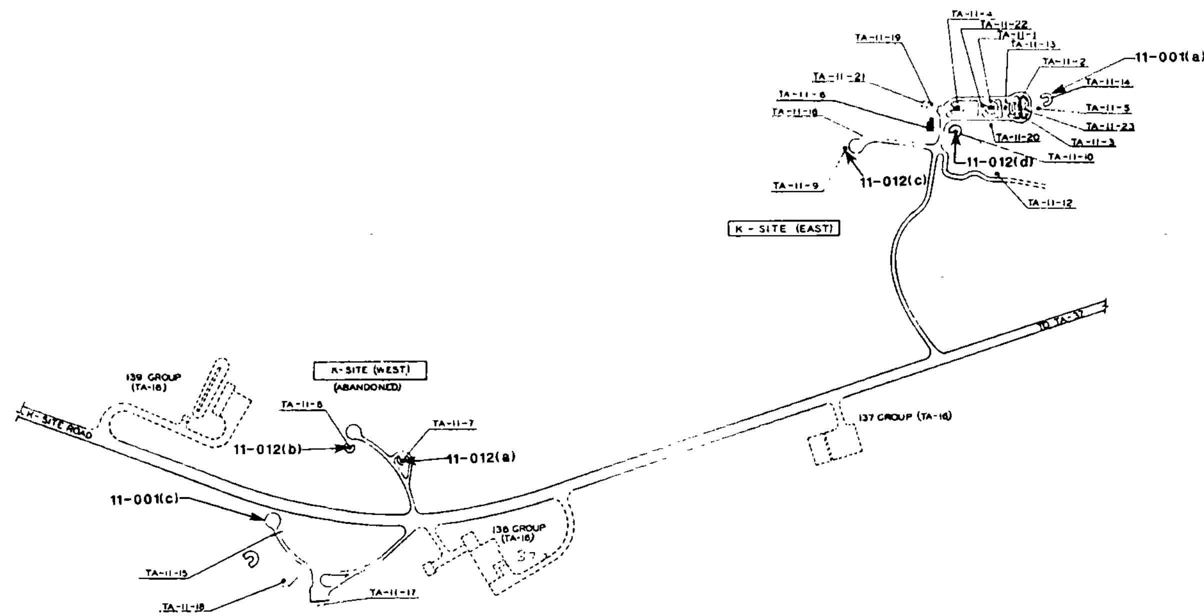
FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-11 K-SITE

SEC. CLASSIFICATION — CLASS: U

DRAWN · CHECKED · SUBMITTED · RECOMMENDED · APPROVED

DATE 8-22-83 · SHEET NO. 1 of 2 · DRAWING NO. ENG-R 5108



STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-11-1	K-1	CONTROL BUILDING
TA-11-2	K-2	BETATRON BUILDING
TA-11-3	K-3	CLOUD CHAMBER BUILDING
TA-11-4	K-4	MACHINE SHOP
TA-11-5	K-5	LABORATORY BUILDING, (RELOCATED)
TA-11-6	K-6	ASSEMBLY BUILDING (RELOCATED)
TA-11-7	K-7	MAGAZINE STORAGE
TA-11-8	K-8	MAGAZINE STORAGE
TA-11-9	K-9	STORAGE BUILDING
TA-11-10	K-10	SHELTER
TA-11-11	K-11	TRIMMING BUILDING (REMOVED)
TA-11-12	K-12	LABORATORY BUILDING
TA-11-13	K-13	MANHOLE
TA-11-14	K-14	FIRING PIT, (ABANDONED)
TA-11-15	K-15	ROAD BLOCK, (ABANDONED)
TA-11-16	K-16	STORAGE TANK
TA-11-17	K-17	STORAGE TANK (ABANDONED)
TA-11-18	K-18	LATRINE (ABANDONED)
TA-11-19	K-19	LABORATORY BLDG.
TA-11-20	K-20	SEPTIC TANK
TA-11-21	K-21	SUBSTATION
TA-11-22	K-22	MANHOLE
TA-11-23	K-23	LABORATORY BLDG.

EXPLANATION

11-001 SWMU LOCATION

REV.1 6/20/90

FIGURE 11-2

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-11

OFFICIAL USE ONLY 640

UNCLASSIFIED

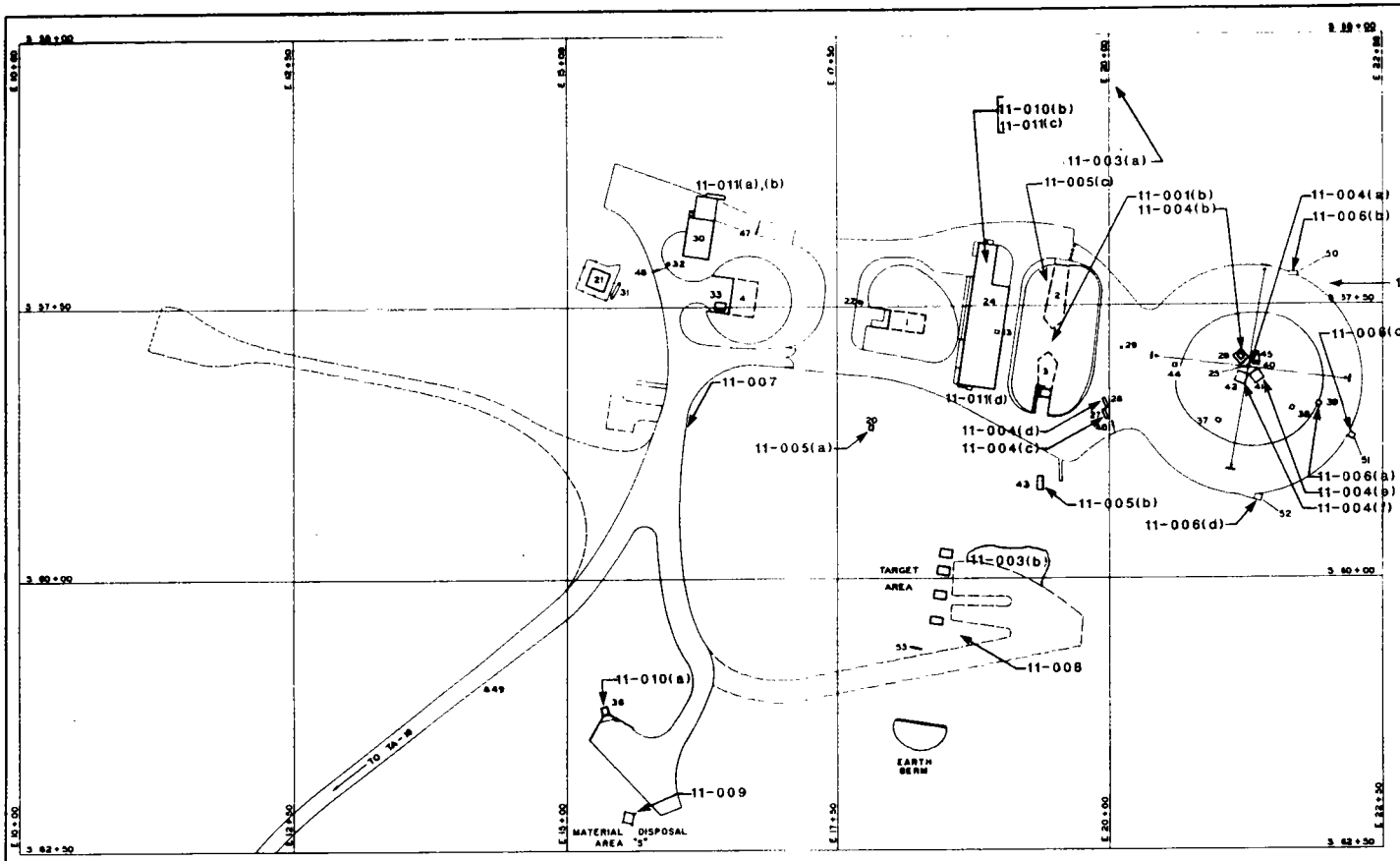
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT

STRUCTURE LOCATION PLAN
TA-11 K-SITE

SCALE 1" = 200'
DRAWN BY: CRS

ENG R 88

301215 02 01 B162



UNCLASSIFIED

EXPLANATION

11-001 SWMU LOCATION

REV.1 6/20/90

FIGURE 11-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-11

NOTES

UNIT 11-010(b): UNITS IS NEAR TA-11-24; SPECIFIC LOCATION IS UNAVAILABLE.

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

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-11 K-SITE

DRAWING NO. ENG-R 5108

TA-11 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
11-001(a)	11-2
11-001(b)	11-1
11-001(c)	11-2
11-002	11-1
11-003(a)	11-1
11-003(b)	11-1
11-004(a)	11-1
11-004(b)	11-1
11-004(c)	11-1
11-004(d)	11-1
11-004(e)	11-1
11-004(f)	11-1
11-005(a)	11-1
11-005(b)	11-1
11-005(c)	11-1
11-006(a)	11-1
11-006(b)	11-1
11-006(c)	11-1
11-006(d)	11-1
11-007	11-1
11-008	11-1
11-009	11-1
11-010(a)	11-1
11-010(b)	11-1
11-011(a)	11-1
11-011(b)	11-1
11-011(c)	11-1
11-011(d)	11-1
11-012(a)	11-2
11-012(b)	11-2
11-012(c)	11-2
11-012(d)	11-2

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

SUMMARY

LOCATION : TA-11
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1944 - 1960
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

Soil contamination may have occurred beneath buildings and structures in TA-11. Several structures were destroyed as a result of a fire in the area in 1960.

SWMU NO.	STRUCTURE	TYPE	LOCATION
11-012(a)	TA-11-7	storage magazine	formerly located near buildings TA-16-360 and -370
11-012(b)	TA-11-8	storage magazine	formerly located near buildings TA-16-360 and -370
11-012(c)	TA-11-9	storage magazine	formerly located southwest of TA-11-4
11-012(d)	TA-11-10	personnel shelter	formerly located south of TA-11-4

WASTE INFORMATION

The structures that burned in the 1960 fire were all surveyed in the 1950s and found to be contaminated with high explosive material.

RELEASE INFORMATION

It is not known whether releases to the soil beneath these structures have occurred.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
11-012(a)	TA11-3-CA-I-HW/RW		Tsk 12 : 21	TA-11-7
11-012(b)	TA11-3-CA-I-HW/RW		Tsk 12 : 22	TA-11-8
11-012(c)	TA11-3-CA-I-HW/RW		Tsk 12 : 15	TA-11-9
11-012(d)	TA11-3-CA-I-HW/RW		Tsk 12 : 35	TA-11-10

SUMMARY

LOCATION : TA-11
TYPE OF UNIT(s) : DRAINLINES/OUTFALLS
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Several buildings in TA-11 have drainlines that discharge to outfalls. TA-11-30 contained an electrodynamic vibration facility in which electrical equipment was water-cooled. The blowdown from the associated wet cooling tower was discharged northward to a tributary of Water Canyon [11-011(a)]. The outfall is NPDES permitted with serial number 130. It became inactive following the removal of the water-cooled equipment. A non-sanitary sewer line has been observed originating from TA-11-30 and extending north from the building to an outfall [11-011(b)]. The drainline is believed to have discharged waste from floor drains in TA-11-30. A boiler located in TA-11-24 has a discharge pipe that outfalls onto the pavement outside the building [11-011(c)]. Another drainline extends south of TA-11-24 [11-011(d)]. The original purpose of this pipe is unknown, although it is thought to be connected to a sink in the building.

WASTE INFORMATION

Blowdown from the cooling tower was treated prior to release. It is thought that the floor drains in TA-11-30 received only condensate from compressors located within the building. It is unlikely that hazardous constituents were present in the water discharged from the boiler. The types of waste discharged through the sink in TA-11-24 are not known.

RELEASE INFORMATION

It is not known whether any hazardous constituents have been released through discharge from the outfalls.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
11-011(a)	**		Tsk 12 : 6	TA-11-30
11-011(b)	**		Tsk 12 : 7	TA-11-30
11-011(c)	**		Tsk 12 : 4	TA-11-24
11-011(d)	**		Tsk 12 : 5	TA-11-24

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-11
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : LATE 1950s - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

There are two container storage areas at TA-11. Magazine TA-11-36 [11-010(a)] is a concrete building that has an area of approximately 200 square feet. This building is used to store HE fragments picked up from the pad of the drop tower on the few occasions when there are HE residuals. The HE material is stored for a short period awaiting transport to the burning ground. The second container storage area consisted of a wooden pallet near the air gun building, TA-11-24 [11-010(b)]. The pallet was used for satellite storage of suspected hazardous waste. During a 1989 E.R. Program site reconnaissance survey, the storage area was found to be inactive and the location was serving as office space.

WASTE INFORMATION

The waste stored at the magazine is HE. The pallet storage area near the air gun building was used to store waste suspected of being hazardous.

RELEASE INFORMATION

There have been no known releases from these storage areas. These areas are inspected regularly by LANL staff. 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
11-010(a)	**	11.006	Tsk 12 : 23	TA-11-36
11-010(b)	**		Tsk 12 : 26	TA-11-24

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-11
TYPE OF UNIT(s) : MATERIAL DISPOSAL AREA
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1965 - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

MDA-S is a landfill that is 10' x 10', located approximately 80 feet southeast of TA-11-36. The area is used for an experiment to determine the decomposition rate of buried HE material. In 1965, different types of high explosives were deliberately buried at designated locations in Area S. Periodically, samples are excavated and analyzed to evaluate the rates of decomposition of HE in soil.

WASTE INFORMATION

Twelve different types of HE were buried in cylinders in a soil matrix for this experiment.

RELEASE INFORMATION

The cylinders have been removed, and presently, no more than 3 ounces of HE remain in the soil matrix. There are no known releases of any HE beyond the boundaries of the experimental area.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
11-009	MDA-S	11.007	Tsk 12 : 27	NEAR TA-11-36

SUMMARY

LOCATION : TA-11
TYPE OF UNIT(s) : SURFACE DISPOSAL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1960s - 1970s
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

A boneyard is located south of the old air gun target area. A 1989 E.R. field reconnaissance survey noted, however, that other materials are stored at this site.

WASTE INFORMATION

The material consists of scrap concrete, iron, equipment, and other nonhazardous debris.

RELEASE INFORMATION

There are no known hazardous releases associated with this unit. Monitoring data is unavailable.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
11-008	TA11-10-CA-I-MW		Tsk 12 : 25	

SUMMARY

LOCATION : TA-11
TYPE OF UNIT(s) : SURFACE DISPOSAL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1960s
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

This surface disposal area is located at the head of the canyon south of TA-11-4, and is approximately 10' x 25' x 15' deep. The area contains large concrete slabs which may have served as targets for the air gun or for mortars. Building demolition debris also appears to be present.

WASTE INFORMATION

The waste consists of building and target debris.

RELEASE INFORMATION

There are no known hazardous releases associated with this unit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
11-007	TA11-9-OL-I-HW		Tsk 12 : 24	SOUTH OF TA-11-4

SUMMARY

LOCATION : TA-11
TYPE OF UNIT(s) : SUMP
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1961 - PRESENT
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : SUSPECTED

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

Sump TA-11-39 [11-006(a)] was put into service in 1961 to separate liquid wastes from entrained HE. According to engineering records, it measures 4'6" x 5'4" x 4'3" deep and is constructed of reinforced concrete. Three reinforced concrete catch basins TA-11-50, -51, and -52 [11-006(b), (c), and (d)] were added in 1970. Each catch basin measures 4' x 6' x 2' and has overflow drains. These units are associated with the drop tower complex (11-004). After a drop occurs, the large pieces of HE are removed and the pads are hosed down. The residues are washed into the sump and catch basins. All decant liquids are discharged from the sumps through NPDES-permitted outfalls (see Appendix A). The outfalls from catch basins TA-11-50, -51 and -52 have NPDES serial numbers 069, 096, and 097, respectively. The catch basins and sump are cleaned regularly, and the HE is taken to TA-16 for burning.

WASTE INFORMATION

The liquids discharged to the sump and catch basins may contain HE. Depleted uranium, beryllium, and barium have also been used at the drop tower facility.

RELEASE INFORMATION

It is suspected that HE containing barium has been discharged from the sump and catch basins.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
11-006(a)	TA11-7-O/S/CA-A-HW	11.003-11.005	Tsk 12 : 50	TA-11-39
11-006(b)	TA11-7-O/S/CA-A-HW/RW	11.003-11.005	Tsk 12 : 51 8	TA-11-50
11-006(c)	TA11-7-O/S/CA-A-HW/RW	11.003-11.005	Tsk 12 : 52 9	TA-11-51
11-006(d)	TA11-7-O/S/CA-A-HW/RW	11.003-11.005	Tsk 12 : 53 10	TA-11-52

SUMMARY

LOCATION	: TA-11	MATERIALS MANAGED	: SANITARY WASTE
TYPE OF UNIT(s)	: SEPTIC SYSTEM		SUSPECTED HAZARDOUS WASTE
UNIT USE	: TREATMENT/DISPOSAL		
OPERATIONAL STATUS	: ACTIVE		
PERIOD OF USE	: SEE BELOW		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: NONE		

UNIT INFORMATION

Two active septic tanks are located in TA-11. Septic tank TA-11-20 [11-005(a)] has been in use since 1944. It has a capacity of 500 gallons, with the overflow going to a drainline that allows seepage into the soil. The septic tank serves both the TA-11-4 Control Building and the TA-11-1 Storage Building. Septic tank TA-11-43 [11-005(b)] has been in use since 1963 and has a capacity of 300 gallons, with overflow also going to a drainline and an outfall that discharges to the canyon to the south. The tank serves Control Building TA-11-3. Engineering drawing R646 indicates that a 2" steel sanitary sewer line [11-005(c)] may have served building TA-11-2. The drawing shows the drainline originating on the west side of TA-11-2 and discharging to the north without an associated septic tank. It is believed that the drainline served a sink in the building. These septic systems are registered with the EID as Unpermitted Individual Liquid Waste Systems; TA-11-20 has EID Registration Number LA-07, and TA-11-43 has EID Registration Number LA-13.

WASTE INFORMATION

TA-11-20 possibly received photographic chemical wastes in the past. It is not known whether HE contamination is present, or whether any other chemicals were discharged to the tanks, but the tanks most likely connect only to sinks and sanitary facilities.

RELEASE INFORMATION

Hazardous wastes may have been discharged through the tank drains. Documentation of releases is unavailable.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
11-005(a)	TA11-6-ST-A-HW	11.009	Tsk 12 : 11 3	TA-11-20
11-005(b)	TA11-6-ST-A-HW		Tsk 12 : 12 2	TA-11-43
11-005(c)	**		Tsk 12 : 1	TA-11-2

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-11	MATERIALS MANAGED	: HAZARDOUS WASTE
TYPE OF UNIT(s)	: DROP TOWER		MIXED WASTE
UNIT USE	: TESTING		RADIOACTIVE WASTE
OPERATIONAL STATUS	: ACTIVE		
PERIOD OF USE	: 1956 - PRESENT		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: SUSPECTED		

UNIT INFORMATION

The drop tower complex consists of a hoist, tower, pads and associated equipment that have been used for drop experiments since the 1950s. After a drop, materials used in the tests may scatter from the pad into the surrounding environment in a radius of up to 350 feet. The drop tower complex consists of: a drop tower which is 165 ft high, TA-11-25 [11-004(a)]; a concrete pad, TA-11-26 [11-004(b)]; two hoists, TA-11-27 and -28 [11-004(c) and (d)]; and two drop pads, TA-11-41 and -42 [11-004(e) and (f)].

WASTE INFORMATION

Drop tests over the years at this site have included experiments containing various types of HE, depleted uranium, and possibly small amounts of beryllium.

RELEASE INFORMATION

Large pieces of HE which have not detonated on impact are picked up from the pad area at the drop tower. Data sufficient to describe any potential release from the unit is unavailable; however, HE and uranium contamination are suspected.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
11-004(a)	TA11-5-CA-A-HW/RW		Tsk 12 : 42	TA-11-25
11-004(b)	TA11-5-CA-A-HW/RW		Tsk 12 : 43	TA-11-26
11-004(c)	TA11-5-CA-A-HW/RW		Tsk 12 : 46	TA-11-27
11-004(d)	TA11-5-CA-A-HW/RW		Tsk 12 : 47	TA-11-28
11-004(e)	TA11-5-CA-A-HW/RW		Tsk 12 : 45	TA-11-41
11-004(f)	TA11-5-CA-A-HW/RW		Tsk 12 : 44	TA-11-42

SUMMARY

LOCATION : TA-11
TYPE OF UNIT(s) : MORTAR IMPACT AREA
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1950s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

K Site's activities in the 1950s included acceleration and impact tests of explosive systems contained in impact-resistant vehicles. Large mortars such as 155-mm launchers have been used. A 1973 drawing (ENG-13Y102392) shows an impact area to the north of TA-11-2 and -3 [11-003(a)]. No documentation on possible contamination in the launch impact area has been found. For another experiment, an air-gun building, TA-11-24, was constructed. Using compressed gases, projectiles were shot from the air gun toward concrete blocks (the target area) [11-003(b)] located to the south of the gun. Apparently, no detonations of explosives occurred in the acceleration and impact tests. The projectiles may have been inert. Some of the targets for the air gun remain at the site and were observed to be in a state of disrepair during the 1986 CEARP field survey. The former air gun building is now used as an office and shop.

WASTE INFORMATION

The waste consists of projectiles.

RELEASE INFORMATION

Because of dense vegetation in the area, it is unknown whether any projectiles remain.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
11-003(a)	TA11-4-CA-I-HW/RW		Tsk 12 : 39	NORTH OF TA-11-2 AND -3
11-003(b)	TA11-4-CA-I-HW/RW		Tsk 12 : 40 41	SOUTH OF TA-11-24

SUMMARY

LOCATION	: TA-11	MATERIALS MANAGED	: HAZARDOUS WASTE
TYPE OF UNIT(s)	: PIT		RADIOACTIVE WASTE
UNIT USE	: TREATMENT/DISPOSAL		SOLID WASTE
OPERATIONAL STATUS	: ACTIVE		
PERIOD OF USE	: 1948 - PRESENT		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

A burning area is located northeast of TA-11-41 and contains two sand pads in an area approximately 10' x 10' in size. The pads have been used to burn propellant, HE residues, and damaged units. Infrequent burns have occurred in the 1980s.

WASTE INFORMATION

Wastes which have been burned include uranium-238 and HE-contaminated materials. In 1975, a burn test involving thorium was performed at the burning area. Earlier, undocumented burns may have contained other materials.

RELEASE INFORMATION

Solid residues were observed during the VSI in the vicinity of the sand pads. No monitoring data exists to characterize the residues.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
11-002	TA11-2-CA-I-HW/RW	11.001 11.002	Tsk 12 : 49	NORTHEAST OF TA-11-41

SUMMARY

LOCATION : TA-11
TYPE OF UNIT(s) : FIRING SITE
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1940s - 1950s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

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

UNIT INFORMATION

Three firing pits or chambers were used for the test firing of shots at TA-11. TA-11-14 [11-001(a)] and the chamber between TA-11-2 and -3 [11-001(b)] were first used in 1945, and the site near TA-11-15 [11-001(c)] was first used in 1944. It has been reported that shots up to 200 lbs. were fired in TA-11 in 1945. The total number of shots fired at each firing area is not known. TA-11-14 is described as a semicircular concrete wall 12'6" x 37' x 4'6" deep. The site near TA-11-15 appears to have been similar in construction. Early memos indicate that the firing chamber was between the "steel noses" of TA-11-2 and -3. TA-11-14 was either next to or under the present drop tower pad.

WASTE INFORMATION

Shots fired at these sites reportedly contained natural uranium and aluminum and may have included hazardous constituents, including HE and barium.

RELEASE INFORMATION

The areas have been covered with soil and a layer of concrete. Data on any residuals is lacking.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
11-001(a)	TA11-1-CA-I-HW/RW	11.008	Tsk 12 : 33	TA-11-14
11-001(b)	TA11-1-CA-I-HW/RW	11.008	Tsk 12 : 31	BETWEEN TA-11-2 AND -3
11-001(c)	TA11-1-CA-I-HW/RW	11.008	Tsk 12 : 32	TA-11-15

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-11

11-001	FIRING PITS
11-002	BURN SITE
11-003	MORTAR IMPACT AREAS
11-004	DROP TOWER COMPLEX
11-005	SEPTIC SYSTEMS
11-006	SUMPS AND CATCH BASIN SYSTEMS
11-007	SURFACE DISPOSAL
11-008	BONEYARD
11-009	MATERIAL DISPOSAL AREA S
11-010	CONTAINER STORAGE
11-011	DRAINLINES AND OUTFALLS
11-012	SOIL CONTAMINATION AT FORMER BUILDING SITES

TA-11
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 11, known as K site, is the location of a drop tower and other equipment used to perform tests on explosive systems and components. High explosives may fracture or detonate during drop tests. The resulting scattered debris in the immediate vicinity of the drop tower is picked up and removed. In addition to explosives, radioactive materials have been used at the area. A test of explosive decomposition has included burial of a series of high explosives at the site. In addition, the area has housed a betatron, a burning area, laboratory facilities, gun firing area, sumps, a landfill, and storage buildings (DOE, 1987a).

TA-11 lies at an elevation ranging from about 7,280 to 7,420 feet asl. It is located on a broad mesa bounded on the north by Canon de Valle and on the south by Water Canyon. TA-11 is bordered by TA-16 to the north, west and south; and by TA-37 on the east. The canyon walls are steep sided or cliffs in this area. The technical area lies on welded Bandelier Tuff in the Ponderosa Pine/Pinon-Juniper overstory vegetation zone. The soil consists primarily of Tocal very fine sandy loam and Frijoles very fine sandy loam, with a small area of rock outcrop (Nyhan et al., 1978).

At TA-11, the potentiometric surface of the main aquifer in the Los Alamos area lies at about 6,150 to 6,200 feet asl. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the ground water table. Studies indicate that there is very low potential for downward flow of water or water-borne contaminants from the surface to the aquifer (IT, 1987a).

TA-12
OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 12, known as L Site, was constructed in 1945. Most of the structures were decontaminated and decommissioned in 1960. TA-12 was an old firing site that was also used in conjunction with several other types of experiments. Structures at the former site included a generator building, a junction shelter, and a steel-lined pit. Materials used included explosives, lead, aluminum, copper, and uranium-238 (DOE, 1987a). As a result of the 1989 Laboratory redefinition of the technical area boundaries, former TA-12 was incorporated into the new boundaries of TA-14 and TA-67.

The former site of TA-12 lies at an elevation of 7,300 feet asl. It is located on Pajarito Mesa, which narrows to less than 1,000 feet width between steep-walled Pajarito Canyon on the north and a steep-sided branch of Pajarito Canyon on the south. TA-12 lies on welded Bandelier Tuff in the Ponderosa Pine/Pinon-Juniper overstory vegetation zone. The soil is primarily Nyjack loam and Frijoles very fine sandy loam (Nyhan et al., 1978).

At TA-12, the potentiometric surface of the main aquifer in the Los Alamos are lies at about 6,100 to 6,200 feet asl. There are over 1,000 feet of unsaturated tuff and volcanic rock between the surface and the ground water table. Studies indicate that there is very low potential for downward flow of water or water-borne contaminants from the surface to the aquifer (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-12

12-001	FIRING SITES
12-002	BURN SITE
12-003	GAS CYLINDER STORAGE AREA
12-004	SOURCE EXPERIMENT

SUMMARY

LOCATION	: TA-12	MATERIALS MANAGED	: HAZARDOUS WASTE
TYPE OF UNIT(s)	: FIRING SITE		RADIOACTIVE WASTE
UNIT USE	: TESTING/DISPOSAL		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: 1945 - 1953		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

A large steel-lined and steel-covered pit, TA-12-4 [12-001(a)], was once used in firing experiments at TA-12. It measures (according to the RFA) 30' x 40' x 20' deep. Another smaller open pit is located east of TA-12-4 [12-001(b)]. It measures approximately 5' x 5' and is also inactive. It is suspected to have been used in firing experiments using uranium. The firing pits were used from 1945 until the mid-1950s.

WASTE INFORMATION

The waste remaining at the site consists of firing residues potentially containing uranium and lead. A 1959 survey of vacated LASL structures indicated that the firing pit was contaminated with HE; however, the presence of undetonated HE is unlikely.

RELEASE INFORMATION

There are no residues presently remaining in the covered pit based on visual observations in 1987. It is unknown whether releases of hazardous wastes have occurred from the smaller pit, although radiation has been measured at levels greater than background.

NOTES

The location of this SWMU is within the current boundaries of TA-67.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
12-001(a)	TA12-1-CA-I-HW/RW	12.002		TA-12-4
12-001(b)	TA12-1-CA-I-HW/RW	12.005		NEAR TA-12-4

SUMMARY

LOCATION : TA-12
TYPE OF UNIT(s) : BURN SITE
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1962
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

This unit, located about 200' from TA-12-4, measures a few square feet at most and was used on one occasion in 1962 to burn residual HE found around the site.

WASTE INFORMATION

The unit was originally used to burn HE material. The RFA reports that depleted uranium may also have been disposed of here. Residuals are not expected to remain at the site.

RELEASE INFORMATION

There are no known releases of hazardous wastes from this unit.

NOTES

The location of this SWMU is within the current boundaries of TA-67.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
12-002	TA12-4-CA-1-HW	12.004		NEAR TA-12-4

SUMMARY

LOCATION : TA-12
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1968 - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : UNKNOWN
SOLID WASTE

UNIT INFORMATION

This unit is a former gas cylinder storage area located on the south side of the road about 1 mile east of TA-12-4. Two gas cylinders were located here; the unit is no longer in active use. This area was used in 1968 for mortar locator experiments using an acetylene-gas gun. The cylinders were removed by HSE-7 in the summer of 1989.

WASTE INFORMATION

One of the cylinders was marked "acetylene". Information on the contents of the other cylinder was unavailable.

RELEASE INFORMATION

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

NOTES

The location of this SWMU is within the current boundaries of TA-67.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
12-003	TA12-3-CA-1-HW			NEAR TA-12-4

SUMMARY

LOCATION : TA-12
TYPE OF UNIT(s) : EXPERIMENT
UNIT USE : TESTING
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1950
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

In 1950, TA-12 was the site of a radiation experiment on animals. A radiation shelter, a telephone pole, and a lead pot [12-004(a)] were used for the tests. The radiation shelter and pole are still present at this site. The shelter has dimensions of 50' x 30' x 6' high. During the 1987 CEARP field survey, an aluminum pipe [12-004(b)], approximately 18 inches in diameter and unknown length, was observed at ground level. The pipe was filled with liquid.

WASTE INFORMATION

The source for the experiment was radioactive lanthanum. A 1959 survey reported the shelter and pole to be contaminated with HE and strontium-90. The constituents of the liquid in the pipe are unknown. The liquid will be sampled for HE and radioactivity during Supplemental Phase I.

RELEASE INFORMATION

In 1966, the area was surveyed and all remaining structures and equipment were found to be contaminated. It is unknown if the pipe has released hazardous waste.

NOTES

The location of this SWMU is within the current boundaries of TA-67.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
12-004(a)	TA12-2-CA-1-HW/RW	12.003		
12-004(b)	TA12-5-CA-1-HW/RW	12.003		

TA-12 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
12-001(a)	12-1
12-001(b)	12-1
12-002	Not shown
12-003	12-1
12-004(a)	12-1
12-004(b)	12-1

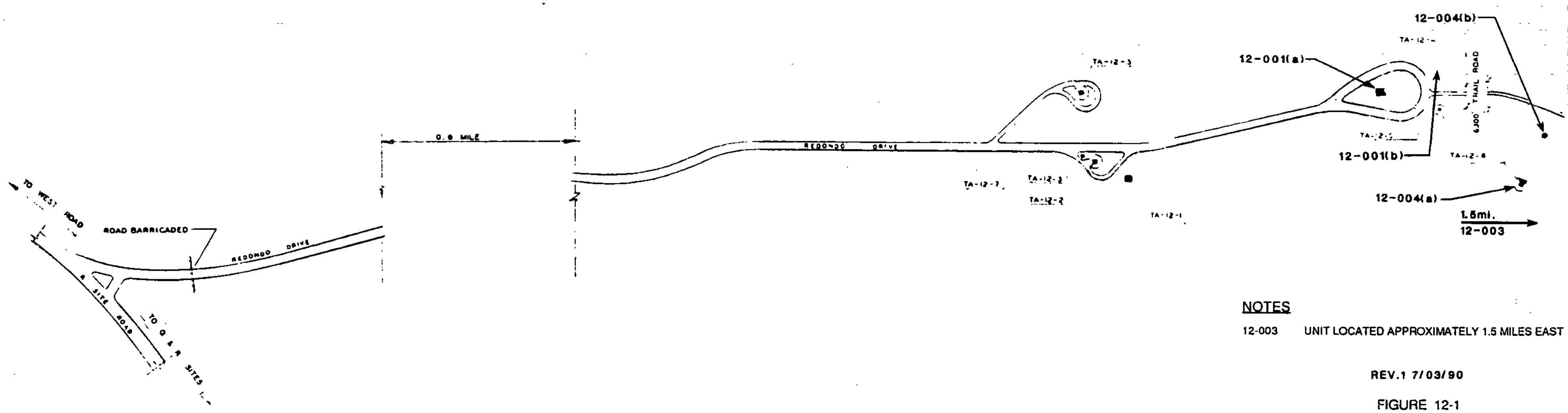
NOTE: Some structure locations may contain more than one SWMU.

Rev. 1, 7/3/90

LAN:TA-Units/21

OFFICIAL USE ONLY

STRUCTURE NUMBER	DESIGNATION	REMARKS	
TA-12-1	L-1	TRIMMING BUILDING	(ABANDONED)
TA-12-2	L-2	CONTROL CHAMBER	"
TA-12-3	L-3	STORAGE MAGAZINE	"
TA-12-4	L-4	FIRING PIT	"
TA-12-5	L-5	GENERATOR BUILDING	"
TA-12-6	L-6	JUNCTION BUILDING	"
TA-12-7	L-7	ROAD [illegible]	"
TA-12-8	L-8	RADIATION TEST STRUCTURE	"



EXPLANATION

12-001 SWMU LOCATION

NOTES

12-003 UNIT LOCATED APPROXIMATELY 1.5 MILES EAST

REV.1 7/03/90

FIGURE 12-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-12

UNCLASSIFIED

LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT

STRUCTURE LOCATION PLAN
TA - 12 L - SITE

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

SCALE | DRAWN BY | CHKD BY | APPVD BY | DATE | DATE | DATE | DWG NO.

OFFICIAL USE ONLY

TA-13
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 13, called P Site, is no longer operational. It was constructed in 1944 for x-ray work in connection with explosives experiments. It consisted of an office and shop building, laboratory and test buildings, and experimental chamber, a magazine, and a storage building. By the 1950's, most of the buildings were removed. The remaining buildings were absorbed into the S Site complex, TA-16, and were renumbered TA-16-476, -477, and -478. These buildings are now used during remote machining, in which "overtests" are conducted on new processes to ensure that the machining can be safely performed during routine operations (DOE, 1987a). The entire site is now part of TA-16 and the SWMUs identified in this area are discussed under TA-16.

The elevation of the site of former TA-13 is 7,500 feet asl. It is located on a broad mesa that is bounded on the north by Canon de Valle and on the south by Water Canyon. Canyon walls are steep in this area. The site lies on welded Bandelier Tuff in the Ponderosa Pine/Pinon-Juniper overstory vegetation zone. Soil consists of Pogna fine sandy loam and fine Typic Eutroboralfs (Nyhan et al., 1978).

The potentiometric surface of the main aquifer in the Los Alamos area lies at about 6,275 feet asl at TA-13. Over 1,000 feet of unsaturated tuff and volcanic rock separate the surface from the ground water. Studies indicate that there is very low potential for downward flow of water or water-borne contaminants from the surface to the aquifer (IT, 1987a).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-13

13-001	FIRING SITE
13-002	LANDFILLS
13-003	SEPTIC SYSTEM
13-004	BURN SITES

SUMMARY

LOCATION : TA-13
TYPE OF UNIT(s) : FIRING SITE
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1944 - 1949
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED RADIOACTIVE WASTE
HAZARDOUS WASTE

UNIT INFORMATION

This firing site was located between TA-13-3 and TA-13-4, two battleship bunker buildings that have been renumbered to TA-16-477 and -478, respectively. It was used for firing explosive experiments. Because the size of the shots fired is not known, the impacted area is not well delineated. (One shot has been reported as 203 lbs.) Some shot areas were reportedly covered with soil by bulldozers. Two ditches, which have since been backfilled, were reportedly located in the firing site area. Their function is not known.

WASTE INFORMATION

The debris from firing experiments probably included steel, iron, polonium (now decayed), and possibly uranium. No records exist as to whether any of the shots went low order.

RELEASE INFORMATION

There is no documentation on any possible residual contamination.

NOTES

The location of this SWMU is within the current boundaries of TA-16.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
13-001	TA13-1-CA-I-MW/RW TA13-4-ST-I-MW/RW		Tsk 12 : 62 64 54 55	BETWEEN TA-16-477 AND -478, formerly TA-13-3 AND -4

SUMMARY

LOCATION : TA-13
TYPE OF UNIT(s) : LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : LATE 1940s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
HAZARDOUS WASTE

UNIT INFORMATION

Miscellaneous experiments which had taken place resulted in radioactive contamination scattered on the shelf area leading down into the canyon on the southeast side of the firing area. A 1948 memo mentions that contaminated items in the canyon at TA-13 had been removed and disposed of in the disposal area for contaminated material. Whether all the contamination on the shelf area was removed is not clear.

WASTE INFORMATION

Possible wastes included radionuclides and HE.

RELEASE INFORMATION

The area has been at least partially or perhaps completely decommissioned. It is not known whether all contaminated materials were removed at the time of decommissioning.

NOTES

The location of this SWMU is within the current boundaries of TA-16.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
13-002	TA13-2-CA/L/OL-I-HW/RW	13.001	Tsk 12 : 56 61	TA-13

SUMMARY

LOCATION	: TA-13	MATERIALS MANAGED	: SANITARY WASTE
TYPE OF UNIT(s)	: SEPTIC SYSTEM		SUSPECTED HAZARDOUS WASTE
UNIT USE	: TREATMENT/DISPOSAL		
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: EST. 1940s		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

An engineering drawing indicates that TA-13-12 [13-003(a)] was a septic tank removed in 1951. Details on its removal and possible contamination, as well as possible contamination from its overflowing, are unavailable. A U.S. Engineer's Office construction drawing of TA-13 shows the septic tank to have a drain field [13-003(b)] to the northwest of the tank.

WASTE INFORMATION

The type of liquid wastes discharged to the septic tank is not known.

RELEASE INFORMATION

Information on possible releases from the septic tank and drain fields is unavailable.

NOTES

The location of this SWMU is within the current boundaries of TA-16.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
13-003(a)	TA13-4-ST-I-NW/RW			TA-13-12
13-003(b)	TA13-4-ST-I-NW/RW		Tsk 12 : 106	NW OF TA-13-12

SUMMARY

LOCATION : TA-13
TYPE OF UNIT(s) : PIT
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1940s - 1950
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

According to CEARP, a 1951 memo mentions burning pits at TA-13. The number of pits and the locations are unknown.

WASTE INFORMATION

The type of waste burned in the pits is unknown.

RELEASE INFORMATION

It is unknown if a hazardous release has occurred from these pits.

NOTES

The location of this SWMU is within the current boundaries of TA-16.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
13-004	TA13-3-CA-I-HW/RW		Tsk 12 : 65	TA-13

TA-13 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

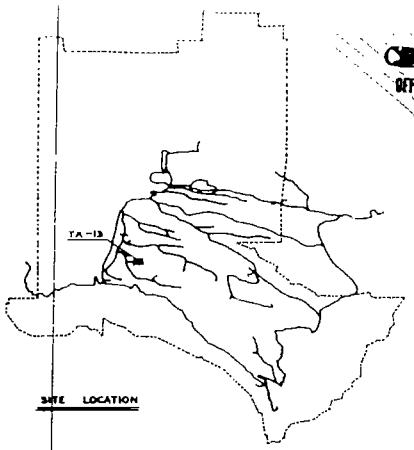
SWMU	FIGURE NUMBER
13-001	13-1
13-002	13-1
13-003(a)	Not shown
13-003(b)	Not shown
13-004	Not shown

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

301215 02 01 B121

CONFIDENTIAL

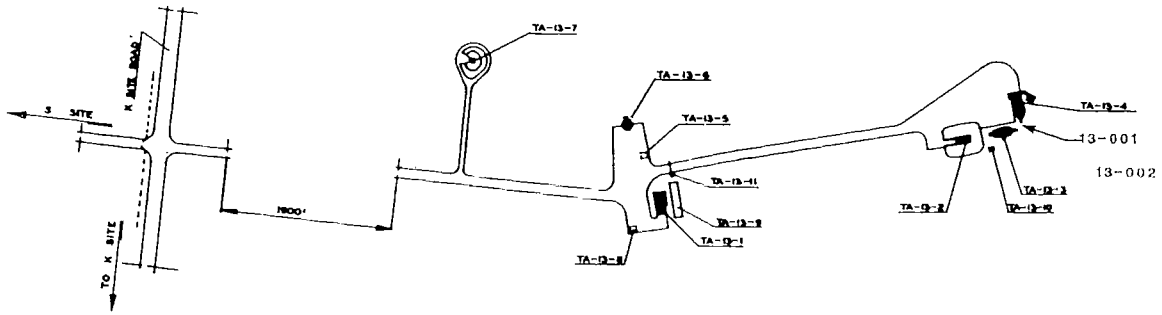
OFFICIAL USE ONLY



STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-13-1	P-1	OFFICE & SHOP BUILDING
TA-13-2	P-2	LABORATORY BUILDING
TA-13-3	P-3	LABORATORY BUILDING
TA-13-4	P-4	LABORATORY & MAGAZINE TEST BLDG
TA-13-5	P-5	STORAGE BUILDING, REMOVED
TA-13-6	P-6	EXPERIMENTAL CHAMBER
TA-13-7	P-7	MAGAZINE
TA-13-8	P-8	STORAGE BUILDING, REMOVED
TA-13-9	P-9	BARRICADE
TA-13-10	P-10	MANHOLE
TA-13-11	P-11	ROAD BLOCK

NOTES

UNIT 13-002: LOCATION IS APPROXIMATE

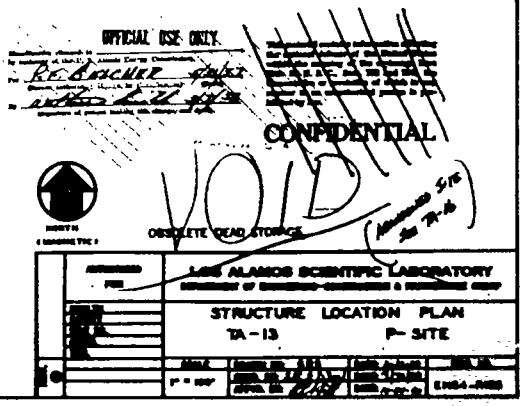


EXPLANATION

13-001 SWMU LOCATION

FIGURE 13-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-13



UNCLASSIFIED

TA-14
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 14, called Q Site, is occupied by the Explosives Technology and the Explosives Application Groups. The technical area has been used for the same purpose since construction in 1944: the development and testing of explosives, many involving radioactive materials. When the site was renovated in 1952, a number of structures were removed and a new firing complex and gun firing site were built. These structures are still being used (DOE, 1987a). Future plans for TA-14 are continued use in high explosives research, development, and testing.

The elevation of TA-14 ranges from 7,200 to 7,400 feet asl. It is located on a broad mesa that is bounded on the north by a branch of Pajarito Canyon and on the south by Canon de Valle. The canyon walls range from steep to moderate slopes in the area. TA-14 is underlain by welded Bandelier Tuff. Plant life consists of vegetation from the Ponderosa Pine/Pinon-Juniper and Ponderosa Pine-fir overstory vegetation zones. Soil types include Frijoles very fine sandy loam, Seaby loam, Carjo loam, Pogna fine sandy loam, fine Typic Eutroboralfs, and rock outcrop (Nyhan et al., 1978).

The potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,100 to 6,275 feet asl at TA-14. 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-14

14-001	FIRING SITES
14-002	DECOMMISSIONED FIRING SITES
14-003	TRASH BURNING AREA
14-004	WASTE STORAGE AREAS
14-005	INCINERATOR
14-006	SUMP AND OUTFALL
14-007	SEPTIC SYSTEM
14-008	LANDFILL / SURFACE DISPOSAL
14-009	SURFACE DISPOSAL
14-010	DECOMMISSIONED SUMPS AND DRAINS

SUMMARY

LOCATION : TA-14
TYPE OF UNIT(s) : FIRING SITE
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : 1944 - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

Several active and inactive firing sites are present in TA-14:

SWMU NO.	STRUCTURE	DESCRIPTION
14-001(a)	TA-14-25	pull box structure
14-001(b)	TA-14-26	pull box structure
14-001(c)	TA-14-27	pull box structure
14-001(d)	TA-14-28	pull box structure
14-001(e)	TA-14-29	pull box structure
14-001(f)	TA-14-34	bullet test facility, reinforced concrete, 13'4" x 13'8" x 8' high
14-001(g)	TA-14-35	firing pad, reinforced concrete, 5' x 5' x 2' thick

The CEARP describes some of these sites as open and closed chambers and firing pads. Of the original firing sites, several were removed during the renovation in 1952 (see 14-002) and new firing sites were added. These latter structures remain active today. Active areas are shown on engineering drawing ENG-R5109. The following pull box structures are associated with firing areas: TA-14-25 [14-001(a)]; TA-14-26 [14-001(b)]; TA-14-27 [14-001(c)]; TA-14-28 [14-001(d)]; TA-14-29 [14-001(e)]. No information on shots fired from the 1950s to the present has been collected, but the records are available from Group M-1, according to the CEARP. TA-14-35 [14-001(g)] is a firing pad that was completed in 1964. To safely dispose of the scrap HE, the pieces are detonated at TA-14-35. A gun firing site was constructed in 1957. This facility, TA-14-34 [14-001(f)], is referred to as a bullet test facility. Apparently, some uranium-238 from some of these shots flew into the nearby woods.

WASTE INFORMATION

Explosives used in shots at this site included pentolite, torpex, tamped tetryl, Composition B, baratol, and TNT. Lead was involved in at least the early shots. Several shots involving radioactive lanthanum, which has now decayed, were also made. The extent of strontium contamination in these shots is not known. Records indicate that uranium and beryllium were used in shots.

RELEASE INFORMATION

The testing sometimes results in high explosives being scattered. Although larger pieces are collected, smaller pieces are left in the surrounding area. It is not known how much residual high explosive may be in the surrounding area. No comprehensive field studies of this area are currently available; however, uranium has been detected.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
14-001(a)	TA14-1-CA-A/I-HW/RW			TA-14-25
14-001(b)	TA14-1-CA-A/I-HW/RW			TA-14-26
14-001(c)	TA14-1-CA-A/I-HW/RW			TA-14-27
14-001(d)	TA14-1-CA-A/I-HW/RW			TA-14-28
14-001(e)	TA14-1-CA-A/I-HW/RW			TA-14-29
14-001(f)	TA14-1-CA-A/I-HW/RW			TA-14-34
14-001(g)	TA14-1-CA-A/I-HW/RW			TA-14-35

SUMMARY

LOCATION : TA-14
TYPE OF UNIT(s) : FIRING SITE
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1940s - 1950s
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : SUSPECTED

MATERIALS MANAGED : HAZARDOUS WASTE
SUSPECTED MIXED WASTE

UNIT INFORMATION

Since its construction in 1944, TA-14 has had many firing sites. The following sites have been decommissioned: a closed chamber in TA-14-2 [14-002(a)]; a firing pedestal, TA-14-17 [14-002(b)]; the area around TA-14-5, TA-14-14, TA-14-15 and TA-14-12 [14-002(c), (d), (e), and (f), respectively]. In 1952, TA-14 was completely renovated and TA-14-12 and -17 were removed. TA-14-2 was removed in 1973, and TA-14-14 and -15 were removed in 1957.

WASTE INFORMATION

The wastes consisted of residues from firing experiments. Explosives probably included pentolite, torpex, tamped tetryl, composition B (65% TNT / 35% HMX), baratol and TNT. Lead, uranium and beryllium were used in some shots and others contained radioactive lanthanum and strontium-90. Records indicate that TA-14-2 was heavily contaminated with radionuclides and HE, and TA-14-5 was contaminated with HE.

RELEASE INFORMATION

Although very little sampling has been undertaken to determine if releases occurred, LANL staff with knowledge of the area believe hazardous releases may have occurred.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
14-002(a)	TA14-1-CA-A/I-HW/RW	14.006		TA-14-2
14-002(b)	TA14-1-CA-A/I-HW/RW			TA-14-17
14-002(c)	TA14-1-CA-A/I-HW/RW			TA-14-5
14-002(d)	TA14-1-CA-A/I-HW/RW			TA-14-14
14-002(e)	TA14-1-CA-A/I-HW/RW			TA-14-15
14-002(f)	TA14-1-CA-A/I-HW/RW			TA-14-12

SUMMARY

LOCATION : TA-14
TYPE OF UNIT(s) : BURN SITE
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1950s - 1960s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

In the 1950s, a trash burning area was located to the east of TA-14-23, near the eastern site boundary, as shown on drawing ENG-R129 (Figure 14-2). The site appears to have been a semi-circular enclosure.

WASTE INFORMATION

The waste is believed to have consisted of HE contaminated items. Residuals from trash burning may have included barium, lead, uranium, and other contaminants.

RELEASE INFORMATION

The TA-14 burning areas were sampled as part of the DOE Environmental Survey (Problem #2). Soil samples were collected and analyzed for metals, HE compounds, and radionuclides. Results showed elevated levels of several metals, including barium and beryllium. A gamma screen on the samples showed elevated Cs-137 activity. It is not known whether any contamination from the burn areas is present beyond the locations sampled during the DOE Environmental Survey.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
14-003	TA14-2-CA-I-HW/RW			NEAR TA-14-23

SUMMARY

LOCATION : TA-14
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1950s - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE
MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

According to the RFA, there are approximately 20 to 30 55-gallon drums on a 40' square concrete pad in Building TA-14-23. The drums contained experimental material and have been removed. TA-14-22 and -23 [14-004(a) and (b)] are used for satellite storage of scrap HE. Another satellite storage area is located adjacent to TA-14-35 [14-004(c)].

WASTE INFORMATION

The drums at TA-14-23 that were removed contained waste experimental material and product fuel oil. According to the CEARP, the scrap HE is stored at TA-14-22 and -23 in less than 5 gallon amounts and is removed from the area at frequent intervals. The material stored near TA-14-35 was contaminated with HE. TA-14-23 also contains paper and small noncombustible laboratory items potentially contaminated with HE.

RELEASE INFORMATION

There is no evidence of 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
14-004(a)	TA14-7-CA-A-HW			IN TA-14-22
14-004(b)	TA14-7-CA-A-HW			IN TA-14-23
14-004(c)	TA14-7-CA-A-HW			NEAR TA-14-35

SUMMARY

LOCATION : TA-14
TYPE OF UNIT(s) : INCINERATOR
UNIT USE : DISPOSAL/TREATMENT
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : EST. 1950s - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

This unit is an incinerator made of a 55-gallon drum with approximately 3 cubic feet burn capacity set on a steel tray. It is used to burn paper contaminated with explosives as well as small pieces of laboratory equipment potentially contaminated with HE. The incinerator is located near TA-14-35. The RFA incorrectly describes this area as two thermal treatment units containing metal canisters used to burn HE waste.

WASTE INFORMATION

The waste consists of paper and small equipment contaminated with HE.

RELEASE INFORMATION

Ash samples were collected from the incinerator during the DOE Environmental Survey (Environmental Problem #2). The samples were analyzed for metals, semivolatile organics, and radionuclides. Results indicated the presence of numerous metals, PAHs, and radionuclides (Cs-137). It is unknown whether a hazardous release has occurred beyond the area sampled.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
14-005	TA14-3-IN-A-HW/RW	14.001 14.002 14.004		NEAR TA-14-35

SUMMARY

LOCATION : TA-14
TYPE OF UNIT(s) : SUMP
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1952 - PRESENT
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

This unit consists of a sump and associated plumbing. The sump is structure number TA-14-31 and is a steel and concrete unit used to separate small HE pieces from liquid. The decant discharges to an outfall. Sludge in the sump is picked up for burning. A drain in Control Building 23 is connected to the sump, TA-14-31, as shown on ENG-R109. The sump is 4'6" x 8'4" x 4'9.5" deep.

WASTE INFORMATION

The waste consists of sludge from HE-contaminated wash water. The sump, filter, and drain are therefore probably contaminated with HE.

RELEASE INFORMATION

The extent of HE contamination of the soil around the sump, associated plumbing, and in the outfall receiving area is unknown.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
14-006	TA14-5-CA/ST-A-HW/RW	14.005		TA-14-31

SUMMARY

LOCATION	: TA-14	MATERIALS MANAGED	: SANITARY WASTE
TYPE OF UNIT(s)	: SEPTIC SYSTEM		SUSPECTED HAZARDOUS WASTE
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: ACTIVE		
PERIOD OF USE	: 1955 - PRESENT		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

The CEARP states that according to engineering drawings R635 and R636, Building TA-14-6 is served by septic tank TA-14-19, which has an overflow to a drain line. This building was used as a shop and darkroom. The tank is constructed of reinforced concrete, is 4' x 6'8" x 6' deep and has a capacity of 640 gallons. The system discharges to a leach field; a new leach field was installed in 1988. The EID Registration Number assigned to the septic system is LA-14.

WASTE INFORMATION

The system currently manages sanitary waste. There is some possibility that in past years wastes other than sanitary may have been discharged to this tank.

RELEASE INFORMATION

It is unknown whether a hazardous release has occurred from previous discharges.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
14-007	TA14-5-CA/ST-A-HW/RW			TA-14-19, -6

SUMMARY

LOCATION : TA-14
TYPE OF UNIT(s) : LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1950 - ?
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

One possible landfill at TA-14 was described by a long-time employee. The employee recalls placing some classified waste in a drainage system and covering it. The employee does not remember the exact location of the burial and does not believe that the material contained hazardous substances.

WASTE INFORMATION

There is no known hazardous waste in the landfill.

RELEASE INFORMATION

There have been no known releases of hazardous materials from this landfill.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
14-008	TA14-8-L-I-HW TA14-4-OL-A-HW/RW			

SUMMARY

LOCATION : TA-14
TYPE OF UNIT(s) : SURFACE DISPOSAL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

This surface area is a waste pile that consists of ruptured sandbags. During explosives testing activities, a common practice is to place sandbags around a firing site to contain the detonation. When the sandbags rupture, the sand is then used for erosion control around the firing site. The sand has been placed over a slope with an area of approximately 45' x 50'; the sand is generally about 1 ft deep.

WASTE INFORMATION

Sandbags used at firing sites could be contaminated with uranium, lead, possibly beryllium, and HE compounds.

RELEASE INFORMATION

Some uranium has been noted in soils in some areas at TA-14. Whether the source of the uranium was the surface disposal of sandbags, storage, or firing activities is not known. The waste pile was surveyed for radioactivity as part of the DOE Environmental Survey in 1987. The survey indicated detectable radioactivity at the site.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
14-009	TA14-4-OL-A-HW/RW			

SUMMARY

LOCATION : TA-14
TYPE OF UNIT(s) : SUMP
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1940s - 1970s
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

In the early 1970s, a floor drain was discovered in TA-14-2, the closed firing chamber. In 1973, the contaminated sections of TA-14-2 were removed and disposed of at TA-54. The rest of the building was then burned. The sump and associated drainlines were also removed at this time. The sump was located outside of TA-14-2, and the drainlines ran across the road from TA-14-2 to an unknown release point.

WASTE INFORMATION

TA-14-2 was heavily contaminated with HE and radionuclides. A 1973 memo stated that the floor drain "must be assumed contaminated for removal purposes".

RELEASE INFORMATION

There is no information on the extent of contamination resulting from the TA-14-2 sump and drainlines.

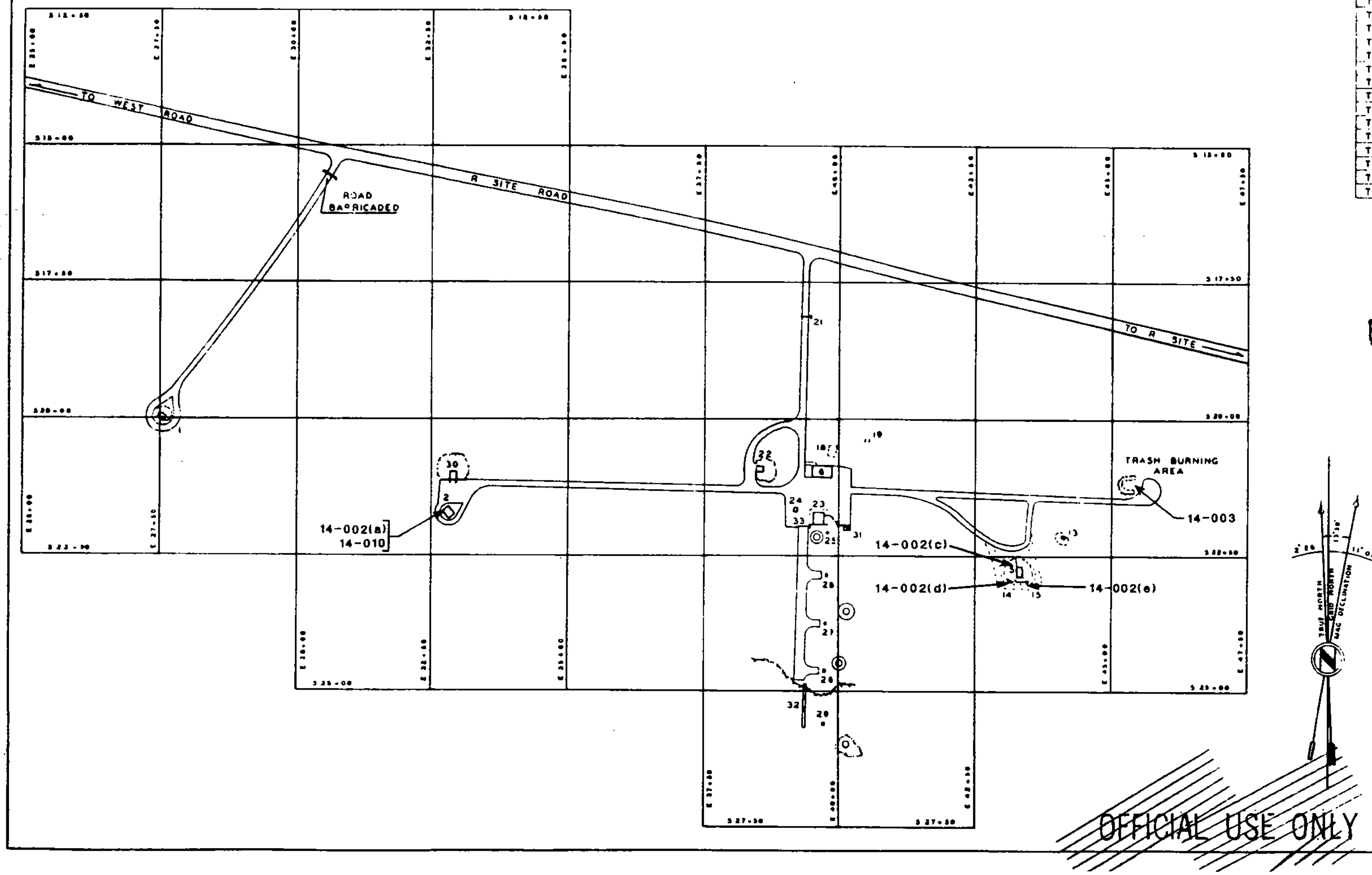
SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
14-010	TA14-1-CA-A/I-HW/RW			TA-14-2

TA-14 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
14-001(a)	14-1
14-001(b)	14-1
14-001(c)	14-1
14-001(d)	14-1
14-001(e)	14-1
14-001(f)	14-1
14-001(g)	14-1
14-002(a)	14-2
14-002(b)	Not shown
14-002(c)	14-2
14-002(d)	14-2
14-002(e)	14-2
14-002(f)	Not shown
14-003	14-2
14-004(a)	14-1
14-004(b)	14-1
14-004(c)	14-1
14-005	14-1
14-006	14-1
14-007	14-1
14-008	14-1
14-009	14-1
14-010	14-2

NOTE: Some structure locations contain more than one SWMU.



STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-14-1	Q-1	MAGAZINE
TA-14-2	Q-2	CLOSED CHAMBER
TA-14-3	Q-3	CONTROL ROOM (REMOVED)
TA-14-4	Q-4	EXPL PREP BLDG (REMOVED)
TA-14-5	Q-5	CONTROL BLDG
TA-14-6	Q-6	SHOP & DARK ROOM
TA-14-7	Q-7	ELECTRIC SHOP (REMOVED)
TA-14-8	Q-8	STORAGE BLDG (REMOVED)
TA-14-9	Q-9	MAGAZINE (REMOVED)
TA-14-10	Q-10	STORAGE (REMOVED)
TA-14-11	Q-11	MAGAZINE (REMOVED)
TA-14-12	Q-12	JUNCTION BOX SHELTER (REMOVED)
TA-14-13	Q-13	MAGAZINE
TA-14-14	Q-14	EQUIPMENT BOX NO 1
TA-14-15	Q-15	EQUIPMENT BOX NO 2
TA-14-16	Q-16	ROAD BLOCK (REMOVED)
TA-14-17	Q-17	FIRING PEDESTAL (REMOVED)
TA-14-18	Q-18	SUBSTATION
TA-14-19	Q-19	SEPTIC TANK
TA-14-20	Q-20	RESERVE
TA-14-21	Q-21	BARRICADE GATE
TA-14-22	Q-22	MAGAZINE
TA-14-23	Q-23	CONTROL BLDG.
TA-14-24	Q-24	MAGAZINE
TA-14-25	Q-25	PULL BOX
TA-14-26	Q-26	PULL BOX
TA-14-27	Q-27	PULL BOX
TA-14-28	Q-28	PULL BOX
TA-14-29	Q-29	PULL BOX
TA-14-30	Q-30	MAGAZINE
TA-14-31	Q-31	FILTER BOX
TA-14-32	Q-32	STAIRWAY
TA-14-33	Q-33	BARRICADE GATE

UNCLASSIFIED

EXPLANATION

14-002 SWMU LOCATION

REV.1 6/22/90

FIGURE 14-2

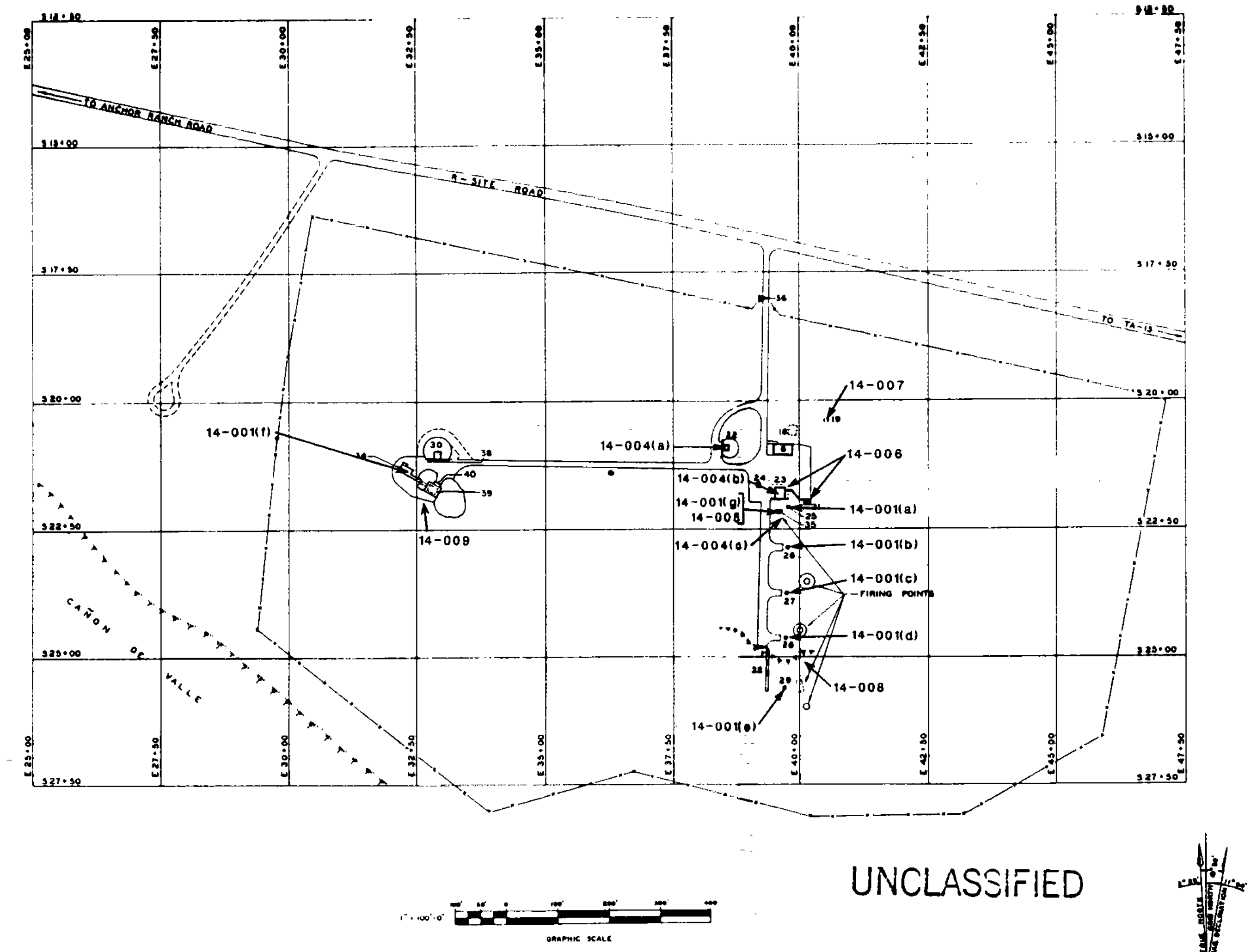
SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-14

REDRAWN TO STATUS OF JULY 1, 1956

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

STRUCTURE LOCATION PLAN
TA-14 Q SITE

DRAWN N BYERS DATE 9/30/55 SCALE 1" = 100' SHEET 1 of 1 ENG-R 129



EXPLANATION

14-001 SWMU LOCATION

NOTES

UNIT 14-004(c): EXACT LOCATION IS UNKNOWN.
UNIT 14-008: EXACT LOCATION IS UNKNOWN.

REV.1 6/22/90

FIGURE 14-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-14

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

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-14 Q-SITE

REVISED TITLE BLOCK & DWG. TO STATUS OF 7-26-83

ENG-R 5109

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-14-1	Q-1		REMOVED 1960	
TA-14-2	Q-2		REMOVED 1973	
TA-14-3	Q-3		REMOVED 1973	
TA-14-4	Q-4		REMOVED 1952	
TA-14-5	Q-5		REMOVED 1952	
TA-14-6	Q-6	STORAGE BUILDING		S20-00 E40-00
TA-14-7	Q-7		REMOVED 1952	
TA-14-8	Q-8		REMOVED 1952	
TA-14-9	Q-9		REMOVED 1952	
TA-14-10	Q-10		REMOVED 1952	
TA-14-11	Q-11		REMOVED 1952	
TA-14-12	Q-12		REMOVED 1952	
TA-14-13	Q-13		REMOVED 1960	
TA-14-14	Q-14		REMOVED 1967	
TA-14-15	Q-15		REMOVED 1967	
TA-14-16	Q-16		REMOVED 1952	
TA-14-17	Q-17		REMOVED 1952	
TA-14-18	Q-18	TRANSFORMER STATION		S20-00 E40-00
TA-14-19	Q-19	SEPTIC TANK, SANITARY		S20-00 E40-00
TA-14-20	Q-20		CANCELLED	
TA-14-21	Q-21		REMOVED 1984	
TA-14-22	Q-22	MAGAZINE		S20-00 E37-50
TA-14-23	Q-23	CONTROL BUILDING		S22-50 E40-00
TA-14-24	Q-24	EQUIP BLDG		S22-50 E40-00
TA-14-25	Q-25	PULLBOX	CONTROL	S22-50 E40-00
TA-14-26	Q-26	PULLBOX	CONTROL	S22-50 E40-00
TA-14-27	Q-27	PULLBOX	CONTROL	S25-00 E40-00
TA-14-28	Q-28	PULLBOX	CONTROL	S25-00 E40-00
TA-14-29	Q-29	PULLBOX	CONTROL	S25-00 E40-00
TA-14-30	Q-30	EXPLOSIVES PREP BLDG		S20-00 E32-50
TA-14-31	Q-31	FILTER BOX		S22-50 E40-00
TA-14-32	Q-32	STAIRWAY		S25-00 E40-00
TA-14-33	Q-33		RELOCATED TO TA-40-38	
TA-14-34	Q-34	BULLET TEST FACILITY		S22-50 E32-50
TA-14-35	Q-35	FIRING PAD		S23-50 E40-00
TA-14-36	Q-36	ROAD BLOCK	FORMERLY TA-8-167	S22-50 E40-00
TA-14-37	Q-37		CANCELLED	
TA-14-38	Q-38	CAMERA BUILDING		S22-50 E32-50
TA-14-39	Q-39	HIGH EXPLOSIVE TEST FACILITY		S22-50 E32-50
TA-14-40	Q-40	INSTRUMENTATION BUILDING		S22-50 E32-50
TA-14-41	Q-41	BARRICADE		S22-50 E32-50
TA-14-42	Q-42	BARRICADE		S22-50 E32-50
TA-14-43	Q-43		CANCELLED	

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

UNC[illegible]

FIGURE 14-3

TA-14 STRUCTURE LOCATION INDEX

REV	DATE	REVISION	BY	CHK	APP
17	8-3-83	REVISED TITLE BLOCK & DWG TO STATUS OF 7-26-83			

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

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-14 Q - SITE

SEC CLASSIFICATION: CLASS U; REVIEWER; DATE 7-26-83

SUBMITTED	RECOMMENDED	APPROVED
GROUP	DATE	DRAWING NO
CHECKED	8-3-83	ENG-R 5109

SUMMARY

LOCATION : TA-15
TYPE OF UNIT(s) : OPEN DETONATION
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1960s - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

The unit is an open detonation area at TA-15-184. It is permitted for disposal of waste HE scraps by detonation, but, to date, has not been used for this purpose. The unit is a steel pad approximately 12' x 24' and 6" thick. Two bunkers are used to store scrap HE for short periods of time until it is detonated. A closure and sampling plan for this unit has been submitted as part of the Part B Permit Application.

WASTE INFORMATION

The waste managed by this unit is scrap HE. LANL staff believe the only toxic compound at the site from detonations is barium, present only when barium-containing HE is detonated. The detonation products will be oxides of carbon and nitrogen.

RELEASE INFORMATION

It is known that barium has been released. The extent of barium contamination in the environment is unknown.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-003	TA15-12-CA-A-HW/RW	15.003	Tsk 23 : 1645	TA-15-184

SUMMARY

LOCATION	: TA-15	MATERIALS MANAGED	: MIXED WASTE
TYPE OF UNIT(s)	: FIRING SITE		HAZARDOUS WASTE
UNIT USE	: TESTING/DISPOSAL		
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: SEE BELOW		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

Several firing areas were used in the 1940s: 1) Two unnamed firing points [15-004(a)] were built in 1944 and removed in 1947. 2) Firing Point A [15-004(b)] was probably in use by late 1944 and was used only a short time. Three personnel shelters were also associated with this firing point. 3) Firing Point B [15-004(c)] was used in the mid-1940's and is believed to have not been used after 1947. 4) Firing Point C [15-004(d)] was built in 1947 and is believed to have been abandoned in 1949. It was removed in 1969. 5) Firing Point D [15-004(e)] was built in about 1946, abandoned in 1949, and removed in 1967. 6) Firing Point E was built between 1944 and 1947. Firing Point E and Firing Point F were later combined to make the E-F Firing Area [15-004(f)]. The E-F Area was used extensively and was probably in use until the 1970s. The E-F site was probably used for larger shots, requiring a 4000-ft free-and-clear zone. It was used for a full-scale test of "Mike", which used 5,500 lbs. of TNT. One memo indicates that over its operating history, tests at the E-F site included 39 times more uranium than all other TA-15 firing sites combined. 7) Firing Point G [15-004(g)] was built in 1948 and was probably used until 1953. Several of the structures were removed in 1967. 8) Firing Point H [15-004(h)] was built in 1948 and was also probably used until 1953. 9) Firing Point I-J was in TA-15 until TA-36 was expanded to include this area. The I-J site is discussed under TA-36 as 36-004(e). Possible soil contamination associated with the former I-J site is described in 15-006(e). Decommissioned components of firing areas at TA-15 include:

SWMU NO.	STRUCTURE	FIRING PT./TYPE	BUILT-REMOVED	DIMENSIONS
15-004(a)	TA-15-176	unnamed/platform	1944-1947	12' x 12' x 2'/concrete
15-004(a)	TA-15-177	unnamed/platform	1944-1947	12' x 12' x 2'/concrete
15-004(b)	TA-15-6	A/control chamber	1944-1959	10' x 10' x 9'/wood frame
15-004(b)	TA-15-14	A/x-unit chamber	1947-1967	4' x 4' x 8'/concrete
15-004(c)	TA-15-73	B/plate barricade	1944-1967	5' x 4' x 2'/concrete
15-004(c)	TA-15-74	B/x-unit chamber	1944-?	4' x 8' x 2'/concrete
15-004(d)	TA-15-35	C/control chamber	1947-1969	4'9" x 4' x 8'/wood
15-004(e)	TA-15-34	D/control chamber	1946-1967	9' x 9' x 8'/concrete
15-004(f)	TA-15-26	E/x-unit chamber	1944-1952	
15-004(f)	TA-15-27	E/control chamber	1947-?	14' x 40' x 9'/wood
15-004(g)	TA-15-16	G/barricade	1948-1967	40' x 6' x 12'
15-004(g)	TA-15-28	G/x-unit chamber	1948-1967	concrete and steel
15-004(g)	TA-15-9	G/control chamber	1948-present	11' x 27' x 11'2"/concrete
15-004(h)	TA-15-17	H/instrument chamber	1948-1967	
15-004(h)	TA-15-92	H/camera chamber	?-present	unknown

According to engineering records, the non-radioactively contaminated buildings associated with some of the firing areas were burned and the noncombustible residuals were placed in the canyon adjacent to TA-40-5 and TA-40-15. The CEARP indicates that a 1944 blast test was conducted in "the Gulch" [15-004(i)], 1 mile below TA-15. Charges of up to 300 lbs of composition B and 500 lbs of ammonium picrate were used. Apparently this site was not used in further testing. According to engineering drawing ENG-R5110 (1983), the Firing Point H camera chamber was removed in 1967; however, this information is incorrect as the presence of this structure has been verified.

WASTE INFORMATION

Extensive documentation on the quantities of materials used in experiments in these firing areas is not publicly available, but uranium, lead, beryllium, thorium, barium, mercury, boron, cadmium, and other hazardous materials are potential waste residues. More information can be potentially obtained from classified records.

(continued)

RELEASE INFORMATION

Firing Points A, B, C, and D were thought to have left few residues. However, a firebreak was constructed between Firing Points A and B after the firing points were inactivated. Soil within the firebreak was sampled at 9 grid points. Analysis of the soil samples indicated the presence of barium, beryllium, lead, and uranium at concentrations above detection limits; concentrations of cadmium, mercury, and explosives were detected at detection limits. The firebreak forms a surface water channel that drains into Water Canyon [see 15-014(c)]. Further sampling during ER-TSO site reconnaissance was conducted within the hazard radius of firing sites A and B, at the proposed site of the DARHT support lab. Barium, beryllium, lead, mercury, and total uranium were present in concentrations above their detection limits. Cadmium, mercury, and explosives were present in concentrations at their detection limits. These data were reported in Record 1534, Task 22 of the Site Release Database. Firing Points E and F continued operating and have extensive contamination of uranium, lead and other toxic materials. Water seepage was observed in the control chamber, TA-15-27, during the E.R. site reconnaissance visit. Visual yellow uranium oxide residuals are present in small amounts at Firing Points G and H. Firing Point G was investigated during the DOE Environmental Survey as Environmental Problem 26. Twelve samples were collected from around the firing point, principally from the pad and the from southwest corner of building TA-15-233. The samples were analyzed for HE, metals, radionuclides, and volatile organic compounds. HE was not detected. Several metals were detected and one volatile organic was detected in one sample. Uranium-234, -235, -238, thorium-230, potassium-40, cobalt-60, and cesium-37 were the radionuclides detected. Soil sampling in and near the E-F site indicated the following: 1) beryllium is present at slightly elevated levels in surface soils, but not in soluble form, 2) lead is present in levels bordering on phototoxic levels, and 3) uranium is present at the several thousand ppm level in the surface soil and is of concern as a toxic metal. Analysis of soil samples from the hazard radius of firing points G and H indicated the presence of barium, beryllium, lead, and total uranium at concentrations above detection limits. Concentrations of cadmium, mercury, and explosives were at detection limits.

NOTES

Units were reorganized so that firing areas are addressed as single units inclusive of the structures within the area and the hazard radius of the area.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-004(a)	TA15-1-CA-I-HW/RW	15.014	Tsk 23 : 1632 1633	TA-15-176, -177
15-004(b)	TA15-1-CA-I-HW/RW	15.014	Tsk 22 : 1534 1536 1537 1544 1549	NEAR TA-15-285, TA-15-6, TA-15-14
15-004(c)	TA15-1-CA-I-HW/RW	15.014	Tsk 22 : 1534 1550	NEAR TA-15-285, TA-15-73, -74
15-004(d)	TA15-1-CA-I-HW/RW	15.014	Tsk 23 : 1635	TA-15-73
15-004(e)	TA15-1-CA-I-HW/RW	15.014	Tsk 23 : 1636	TA-15-34
15-004(f)	TA15-1-CA-I-HW/RW	15.017	Tsk 23 : 1637	TA-15-26, -27
15-004(g)	TA15-1-CA-I-HW/RW	15.014	Tsk 22 : 1538 1551 1552	TA-15-16, -9
15-004(h)	TA15-1-CA-I-HW/RW	15.014	Tsk 23 : 1641	TA-15-17, -92
15-004(i)	TA15-1-CA-I-HW/RW	15.014	Tsk 23 : 1634	SOUTH TA-15

SUMMARY

LOCATION : TA-15
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

A satellite storage area [15-005(a)] in Room SH27, TA-15-20, is used to store lead for the Bench Shop and Laboratory Building. A second container storage area [15-005(b)] is located in Bunker TA-15-242, the Make-Up Building. The material stored in this area is scrap HE. A third satellite storage area [15-005(c)] is located in Bunker TA-15-41. Lead bricks [15-005(d)] stacked by the guard station, TA-15-30, were noted during the 1988 E.R. site reconnaissance visit.

WASTE INFORMATION

The storage areas at TA-15-20 and -30 manage lead. The material stored in storage areas at TA-15-242 and TA-15-41 is scrap HE. The satellite storage area at TA-15-41 also stores chem-wipes contaminated with acetone, ethanol, and mineral oil.

RELEASE INFORMATION

Information on releases from these units is lacking, however, releases are unlikely because the storage areas, except for the lead bricks, are inside buildings.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-005(a)	**		Tsk 24 : 1592	TA-15-20
15-005(b)	TA15-13-CA-A-HW	15.014		TA-15-242
15-005(c)	TA15-13-CA-A-HW	15.014	Tsk 23 : 1629	TA-15-41
15-005(d)	**		Tsk 24 : 1591	NEAR TA-15-30

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-15
TYPE OF UNIT(s) : FIRING SITE
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1960s - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : MIXED WASTE

UNIT INFORMATION

Active firing sites at TA-15 include the following. 1) PHERMEX consists of chamber TA-15-184 [15-006(a)], related equipment in a building complex, and a firing pad. PHERMEX is an acronym for Pulsed High Energy Radiographic Machine Emitting X-rays. This facility was built in the early 1960s. The firing pad at PHERMEX is permitted for treatment and disposal of scrap HE by detonation; to date, however, it has not been used for this purpose (see 15-003). 2) Ector facility [15-006(b)] was built in the early 1980s and consists of a firing pad and related structures TA-15-276 and -280. Ector is a machine that makes radiographs of shots. 3) The R-44 firing site control building, TA-15-44 [15-006(c)], was completed in 1951. In 1964, the R-44 site was recommended for a 4000-ft free-and-clear zone. It was used for larger shots, in the 200-300 lb range. 4) The R-45 firing site control building, TA-15-45 [15-006(d)], was also built in 1951. It was used for smaller shots, in the 50-lb range. The two sites, R-44 and R-45, have had heavy use. The R-45 site has undergone extensive changes including large soil disturbances in the firing area. 5) A 120-mm gun site [15-006(e)] is located below the former I-J site [see 36-004(e) for I-J site description]. Bullets containing depleted uranium are fired into a cliff face. Some of the bullet material is recovered, but much of it remains in the cliff and in the rubble pile at the base of the cliff.

WASTE INFORMATION

Materials fired at the PHERMEX and Ector facilities include uranium, lead, mercury, thorium, beryllium, gallium, and other hazardous materials. Uranium and lead have been used in large quantities. Some barium-containing explosives have also been fired. Firing Areas R-44 and R-45 both have uranium, beryllium, lead, other hazardous materials, and tritium. Waste materials at the 120-mm gun site include depleted uranium, tungsten, and steel.

RELEASE INFORMATION

Residues of the shots are present in the soil surrounding the PHERMEX and Ector sites. LANL staff indicated that uranium appears to be rapidly oxidizing into mobile uranium oxide. The firing pad at R-44 has been extended to the canyon. R-44 was used for shots containing tritium. A layer of oiled sand was placed over the site to prevent tritium from mobilizing. In 1965, the oiled sand layer was removed because is was concentrating tritium. Uranium concentration in the soil was up to 0.28 gm/sq ft, measured in 1965. Yellow uranium oxide has been observed on the R-44 pad and in erosion channels to the canyon. It is expected that the pad at R-45 would have similar releases. During the 1988 E.R. site reconnaissance visit, uranium, lead shot, and aluminum and plastic scintillation material were observed littering both the R-44 and R-45 sites. The extent of releases at the 120-mm gun firing site is unknown. Gamma radiation above background was measured at the site during the E.R. site reconnaissance visit. The R-44 firing site was investigated in the DOE Environmental Survey as part of Environmental Problem 1. Samples that were composites of several subsamples collected at different distances from the center of the firing site were analyzed for gamma emitters, alpha emitters, total uranium, and HE. Analytical results indicate the presence of cesium-137, uranium-234, -235, and -238, cobalt-56, and thorium-230. No HE was detected.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-006(a)	TA15-2-CA-A-HW/RW	15.013	Tsk 23 : 1643	TA-15-184
15-006(b)	TA15-2-CA-A-HW/RW	15.007	Tsk 23 : 1642	TA-15-276, -280
15-006(c)	TA15-1-CA-I-HW/RW	15.006	Tsk 23 : 1639	TA-15-44
15-006(d)	TA15-1-CA-I-HW/RW	15.014	Tsk 23 : 1640	TA-15-45
15-006(e)	**		Tsk 23 : 1628	SOUTH OF TA-15-58

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-15	MATERIALS MANAGED	: MIXED WASTE
TYPE OF UNIT(s)	: LANDFILL		HAZARDOUS WASTE
UNIT USE	: DISPOSAL/TESTING		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: SEE BELOW		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

Three inactive landfills are present at TA-15. 1) Material Disposal Area N (MDA-N) [15-007(a)] is located southeast of TA-15-23. The area consisted of a trench that occupied an area of about 0.10 acre. The trench was used prior to 1965. 2) Material Disposal Area Z (MDA-Z) [15-007(b)] is located near the road turn-off for TA-15-233. It consists of an open surface disposal area on a bench constructed on the side of the canyon and has been estimated to cover an area of one acre or less. It was used to dispose of PHERMEX and perhaps other waste between 1965 and the 1980's. 3) Two shafts located near the south rim of a branch of Pajarito Canyon at structure locations TA-15-264 [15-007(c)] and TA-15-265 [15-007(d)]. The shafts are 6' in diameter and 125' - 130' deep (engineering records note shaft depth as 120'). The shafts were used for experiments in 1970 and the residues remain in place. Shaft TA-15-264 was involved in an experiment involving detonation of 4,000 lbs. of TNT. There are two other shafts in the same area, however, these shafts are empty and no waste was ever placed in them.

WASTE INFORMATION

The wastes in MDA-N are reported to be remnants of several structures from TA-15 which had been exposed to explosive or chemical contamination. The wastes in MDA-Z contain sand bags and firing debris contaminated with uranium, lead, beryllium, and potentially mercury and barium. The waste in TA-15-264 may contain lead and reaction products from TNT detonation. Shaft TA-15-265 contains a small amount of beryllium, tritium, lead and HE reaction products.

RELEASE INFORMATION

No releases from the MDA-N landfill are known to have occurred. The surface of MDA-N has been reclaimed and is covered with vegetation. Natural mobilization may be occurring at MDA-Z. Uranium shrapnel was observed at MDA-Z during the 1988 E.R. site reconnaissance visit. MDA-Z was investigated during the DOE Environmental Survey as part of Environmental Problem 23. Samples were collected from 8 locations within the landfill and from 8 points adjacent to the landfill. The samples were analyzed for radionuclides, HE, metals, and volatile organics. Aluminum-26, uranium-234, -235, and -236, cobalt-56, thorium-230, and cesium-137 were detected in the samples. Several metals and some volatile organic compounds were also detected. HE was not detected in the samples. Tritium in shaft TA-15-265 may have undergone some migration in the gaseous phase; however, much of the tritium has decayed.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-007(a)	MDA-N	15.001	Tsk 24 : 1595 1597	NEAR TA-15-23
15-007(b)	MDA-Z	15.012	Tsk 24 : 1596 1598	NEAR TA-15-233
		? 15.004		
15-007(c)	TA15-3-CA-I-MW/RW		Tsk 23 : 1644	TA-15-264
15-007(d)	TA15-3-CA-I-MW/RW		Tsk 23 : 1644	TA-15-265

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION	: TA-15	MATERIALS MANAGED	: RADIOACTIVE WASTE
TYPE OF UNIT(s)	: SURFACE DISPOSAL		SUSPECTED HAZARDOUS WASTE
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: SEE BELOW		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

Nondesignated inactive surface disposal areas present at TA-15 include the following. 1) Some material from Firing Point E-F was reportedly dumped at the canyon edge south of the firing area [15-008(a)] between 1950s - 1970s (estimated). In 1965, a large concrete chamber was reported to have exploded on the edge of the canyon, approximately 500 ft south of E Point. The debris from this chamber may be part of this surface disposal area. 2) A bench of waste material from firing area TA-15-44 [15-008(b)] was constructed adjacent to the north side of the firing site. It was used most heavily from 1950s - 1970s (estimated). During an E.R. site reconnaissance visit, a soil pile approximately 100' x 25' x 12' was observed at this site. 3) Residues from several experiments were disposed of in one area which consisted of several small areas near TA-15-233 [15-008(c)], west of TA-15-233 and south of the road. The E.R. site reconnaissance noted stained soil in this area in 1988. 4) Building debris is disposed of in a small area to the south of TA-15-22 [15-008(d)]. Another dirt mound [15-008(e)] is present within the leach field of septic system TA-15-195 [see 15-009(f)]. The E.R. site reconnaissance describes the mound as 10' x 10' x 4' with concrete and pipe debris. Two soil mounds [15-008(f)] that include old sand bags were observed west of TA-15-29 during an E.R. site reconnaissance visit. Another sand bag pile [15-008(g)] was present near manhole TA-15-116 and on top of barrier TA-15-142 at the R-45 site.

WASTE INFORMATION

The wastes contained in the Firing Point E-F, TA-15-44, and TA-15-233 may include uranium, lead, beryllium, barium, and with the exception of TA-15-233, tritium. Metal scraps and plastic chunks have been observed at the TA-15-44 disposal area. The area south of TA-15-22 appears to contain only rubble; however, extensive monitoring or sampling has not taken place. The areas near TA-15-195 and -29 had soil mounds with sand bags. No further information on the contents of these mounds is available.

RELEASE INFORMATION

The dispersion and migration of yellow uranium oxide has been observed at several of the surface disposal sites. It is expected that other non-visible contaminants are similarly moving in the soil surrounding the contaminated sites. The likelihood of both the presence of contaminants and of possible releases from the soil mounds is unknown.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-008(a)	TA15-5-CA/OL-1-HW/RW		Tsk 23 : 1621	SOUTH OF TA-15-27
15-008(b)	TA15-1-CA-I-HW/RW		Tsk 23 : 1623	NORTH OF TA-15-44
15-008(c)	TA15-7-CA-I-HW/RW		Tsk 22 : 1531	NEAR TA-15-233
15-008(d)	TA15-5-CA/OL-I-HW/RW		Tsk 24 : 1594	NEAR TA-15-22
15-008(e)	**		Tsk 22 : 1533	NEAR TA-15-195
15-008(f)	**		Tsk 23 : 1625	WEST OF TA-15-29
15-008(g)	**		Tsk 23 : 1626 1627	TA-15-116, -142

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-15
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED HAZARDOUS WASTE
SUSPECTED MIXED WASTE

UNIT INFORMATION

Active septic systems at TA-15 include:

SWMU NO.	STRUCTURE	BUILT	CAPACITY (gal.)	EID REGISTRATION NO.	OVERFLOW	BUILDING SERVED	OUTFALL AREA
15-009(a)	TA-15-51	1949	505	LA-15	seepage pit	TA-15-20	none
15-009(b)	TA-15-61	1951	540	LA-16	seepage pit	TA-15-45	none
15-009(c)	TA-15-62	1951	540	LA-17	drainline	TA-15-44	Potrillo Canyon trib.
15-009(d)	TA-15-63	1951	2,060	LA-18	seepage pit	TA-15-40	none
15-009(e)	TA-15-72	1947	1,200		drainline	TA-15-27	Potrillo Canyon
15-009(f)	TA-15-195	1961	4,000	LA-20	seepage pit	TA-15-183	none
15-009(g)	TA-15-205	1961	605	LA-21	leach field	PHERMEX facility	none
15-009(h)	TA-15-282	late '70s	975	LA-22	leach field	ECTOR facility	none
15-009(i)	TA-15-284	1979	750	LA-23	drainline	TA-15-233	Water Canyon
15-009(j)	TA-15-286	1981	1,500	LA-37	seepage pit	TA-15-285	none
15-009(k)	TA-15-00	unknown	1,000		leach field	Hydrotest Site Radiographic Lab	

Septic tanks TA-15-51 and TA-15-72 are constructed of reinforced concrete. TA-15-72 is 3' x 4' x 5' deep; TA-15-282 is 6' x 4' x 5' deep; TA-15-284 is 7' x 4' x 5' deep. Septic tank TA-15-72 is presently semi-active. Another tank, TA-15-293, was planned, but was canceled before construction. Interviews with LANL personnel during the E.R. site reconnaissance confirmed that the TA-15-293 tank was never built. However, a field survey noted a tank marked as TA-15-293. It is probable that tanks TA-15-286 and TA-15-293 are the same tank. There are discrepancies in the size and shape of the TA-15-284 septic tank; one engineering drawing (ENG-RF110) shows a round tank, 3.6 ft in diameter and 28 ft deep. The tanks are registered with the New Mexico Environmental Improvement Division (EID) as "unpermitted individual liquid waste systems"; their registration numbers are shown in the table above. Septic system TA-15-72 may have previously drained to a canyon outfall. Septic system TA-15-195 was upgraded in 1976 from a 1,280-gallon tank, distribution box, and leach field to a 4,000-gallon tank and a seepage pit.

WASTE INFORMATION

Tanks TA-15-61, -62, -72, -282 receive primarily sanitary waste. It is unknown whether hazardous constituents have been discharged to these tanks. Tank TA-15-51 serves an assembly shop. It was sampled for HE in 1981 and none was detected; no analyses were performed for other chemicals. Tank TA-15-63 serves an office and may have received photo processing waste. Tank TA-15-195 serves a laboratory and office building; this tank had required pumping due to scum development which might have indicated the presence of chemicals. Tank TA-15-205 serves the PHERMEX complex and could possibly receive mixed waste; however, LANL staff consider this unlikely. Septic system TA-15-284 served the Betatron building; however, it was installed after the Betatron equipment had been removed. It is possible that this septic system received solvents such as kerosene and acetone. More information is needed for tanks TA-15-286 and -293, which serve the confinement and test facility. Recently TA-15-62 and -195 were sampled and no volatiles were detected.

RELEASE INFORMATION

The tanks generally overflow to seepage pits and outfalls; the extent of contamination surrounding the pits and outfalls, if any, is unknown. Aluminum shards were found in the area of tank TA-15-62 during an E.R. site reconnaissance visit.

NOTES

Septic system TA-15-293 [15-009(k)] has been deleted as an individual unit because the system was never constructed.

(continued)

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-009(a)	TA15-9-S/ST/O-A-HW/RW	? 15.005	Tsk 24 : 1554 1571 1572	TA-15-51
15-009(b)	TA15-9-S/ST/O-A-HW/RW		Tsk 23 : 1613	TA-15-61
15-009(c)	TA15-9-S/ST/O-A-HW/RW		Tsk 23 : 1609 1614	TA-15-62
15-009(d)	TA15-9-S/ST/O-A-HW/RW		Tsk 24 : 1555 1567 1573	TA-15-63
15-009(e)	TA15-8-S/ST/O-A-HW/RW		Tsk 23 : 1608 1612	TA-15-72
15-009(f)	TA15-9-S/ST/O-A-HW/RW		Tsk 22 : 1526	TA-15-195
15-009(g)	TA15-9-S/ST/O-A-HW/RW		Tsk 23 : 1615	TA-15-205
15-009(h)	TA15-9-S/ST/O-A-HW/RW		Tsk 23 : 1616	TA-15-282
15-009(i)	TA15-9-S/ST/O-A-HW/RW		Tsk 22 : 1527	TA-15-284
15-009(j)	TA15-9-S/ST/O-A-HW/RW		Tsk 22 : 1528	TA-15-286
15-009(k)	**			TA-15-00

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

SUMMARY

LOCATION	: TA-15	MATERIALS MANAGED	: SANITARY WASTE
TYPE OF UNIT(s)	: SEPTIC SYSTEM		SUSPECTED HAZARDOUS WASTE
UNIT USE	: TREATMENT/DISPOSAL		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: SEE BELOW		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: NONE		

UNIT INFORMATION

Septic tank TA-15-80 [15-010(a)] was built in 1944 of reinforced concrete. The dimensions of the tank were 3' x 5' x 4' deep. Overflow from the tank probably went to a seepage pit or similar unit. It was abandoned in 1961. Septic tank TA-15-147 [15-010(b)] served Building TA-15-8, a shop building. The tank was built in 1947. In a 1972 survey, this tank was noted to have possible HE contamination. The tank was used between the 1940's and 1950's. There is conflicting data on this tank. Some engineering records indicate it was a 5' x 5' x 5'6" reinforced concrete industrial waste settling tank. Other records indicate it was a septic tank. However, since HE machining took place in the shop, it would be expected that TA-15-147 may have been used as an HE sump. The CEARP, based on engineering drawing ENG-R716, described a sanitary sewer which served the camera firing point, Building TA-15-92 [15-010(c)]. The sewer drained to a seepage field or an outfall at the edge of the canyon. It is not known whether the sewer line has been removed. However, this information appears to be incorrect, based on interviews with operating group members. The drain may have been a storm drain.

WASTE INFORMATION

Tank TA-15-80 served some of the early facilities; information on the type of waste that was handled by this tank is unavailable. Tank TA-15-147 may have HE contamination. The composition of the materials in the TA-15-92 sewer line is not available.

RELEASE INFORMATION

Information on location of overflow, possible contaminants, and releases from these units is unavailable.

NOTES

New information on SWMU No. 15-010(c), a drain from building TA-15-92, suggests that this unit is actually a storm drain and therefore should not be considered a SWMU. This unit includes an outfall formerly addressed as SWMU No. 15-012(b).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-010(a)	TA15-8-S/ST/O-I-HW/RW		Tsk 24 : 1569	TA-15-80
15-010(b)	TA15-8-S/ST/O-I-HW/RW		Tsk 24 : 1570	TA-15-147
15-010(c)	TA15-8-S/ST/O-I-HW/RW		Tsk 23 : 1607 1611	TA-15-92

SUMMARY

LOCATION : TA-15
TYPE OF UNIT(s) : SUMP
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

1) A sump [15-011(a)] was located on the west side of TA-15-20. Manhole TA-15-150 is associated with this sump. Manhole TA-15-151 is located in this same area and may also be associated with the sump. The sump was constructed in 1949 and is believed to have been used into the 1950s. The sump was 6' x 3' x 2'4" deep. Its current status is unknown. 2) A dry well [15-011(b)] is located west of TA-15-194, near the edge of the canyon. The dry well was connected to an existing drain at TA-15-194 that received liquids from a vapor degreaser. The well is 4' in diameter, 50' deep and it was used to dispose of liquids from TA-15-194. The well is covered with soil and is difficult to locate. The well was constructed in 1978; when it was put out of service is unknown. 3) A sump may have been located at the edge of the canyon [15-011(c)] and received acid waste from drains in Building TA-15-50. This sump may have been used in the 1960s. There is conflicting data as to whether there was a sump that received these wastes or whether they discharged directly to the canyon.

WASTE INFORMATION

The sump near TA-15-20 handled waste liquid that possibly contained HE. The dry well received liquids from industrial lines that probably contained degreaser solutions, sulfuric and hydrochloric acid, and chromate solutions. The sump for TA-15-50, if it received any waste, would have handled acid waste and perhaps other industrial waste.

RELEASE INFORMATION

The decant from sump near TA-15-20 is believed to have gone to manhole TA-15-150 and then to an outfall. Release information from the dry well is lacking. Available information suggests that the sump for TA-15-50 may have discharged into the canyon.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-011(a)	TA15-8-S/ST/O-I-HW/RW		Tsk 24 : 1579 1580 1582	WEST OF TA-15-20
15-011(b)	TA15-8-S/ST/O-I-HW/RW	15.011	Tsk 24 : 1577 1581	WEST OF TA-15-194
15-011(c)	TA15-8-S/ST/O-I-HW/RW	? 15.002	Tsk 24 : 1556 1578	NEAR TA-15-50

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-15
TYPE OF UNIT(s) : OPERATIONAL RELEASE
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : ?
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

The RFA notes a vacuum pump oil disposal area [15-012(a)]. A location is not given. During containment experiments, vessels were washed out in a bermed area near TA-15-285 [15-012(b)]. One employee remembered uranium contamination of the soil in this area and the soil being removed from the area. The exact location is unknown.

WASTE INFORMATION

The pump oil disposal area is suspected to contain mercury and tritium. Containment experiment shots contained uranium, beryllium, lead, boron, cadmium, gold, aluminum, and tungsten.

RELEASE INFORMATION

Lateral and vertical extent of any contamination is unknown. During a 1988 E.R. site reconnaissance, the containment vessel washing area was 22 microRem/hour and 300 to 700 cpm beta-gamma above background.

NOTES

Unit 15-012(b) was an outfall from a septic system described in 15-010(c). Units 15-012(c), (d), (e), (f), and (g) were outfalls from drainlines that are described as 15-014(m), (k), (l), (i), and (j), respectively.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-012(a)	**	15.008	Tsk 24 : 1589	UNKNOWN
15-012(b)	TA15-5-CA/OL-I-HW/RW		Tsk 22 : 1529	NEAR TA-15-285

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-15
TYPE OF UNIT(s) : UNDERGROUND TANK
UNIT USE : STORAGE
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : ?
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : PRODUCT

UNIT INFORMATION

The following underground storage tanks have been removed. No documentation is available on whether the tanks or lines had leaked.

SWMU NO.	STRUCTURE	SUBSTANCE STORED	CAPACITY	STATUS
15-013(a)	TA-15-192	unknown	unknown	removed, renumbered TA-49-56
15-013(b)	TA-15-266	dielectric oil	unknown	removed

According to engineering drawing ENG-R5110, tank TA-15-192 was removed and taken to TA-49.

WASTE INFORMATION

The substances stored in tank TA-15-192 before its removal to TA-49 are unknown. Tank TA-15-266 stored dielectric oil.

RELEASE INFORMATION

The integrity of these tanks was not tested and examination of the soil around them at the time of removal was not documented. It is unknown whether releases have occurred. 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 tanks may have leaked.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-013(a)	**		Tsk 24 : 1605	TA-15-192
15-013(b)	TA15-10-UST-A-PP	15.019		TA-15-266

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-15
TYPE OF UNIT(s) : OUTFALL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

The following are drainlines and their associated outfalls in TA-15:

SWMU NO.	BUILDING SERVED	USE	PERIOD OF USE	DRAINLINE TYPE	EPA PERMIT NO.	OUTFALL LOCATION
15-014(a)	TA-15-183	photographic wastes	1961-prs.	vitrified clay	EPA06A123	Water Canyon
15-014(b)	TA-15-183	1) storm drain	1) 1961-prs.	1) 16"-dia corr. metal	1) none	1) Water Canyon
		2) building drain	2) 1961-prs.	2) 2" PVC	2) none	2) Water Canyon
15-014(c)	TA-15-242	sink drain	1961-prs.	unknown	none	area behind building
15-014(d)	TA-15-185	unknown	1961-prs.	unknown	none	Water Canyon
15-014(e)	TA-15-184	floor drains & cooling water	?-prs.	ditch	EPA04A139	Water Canyon
15-014(f)	TA-15-263	cooling water	?-prs.	ditch	EPA04A121	Three Mile Canyon
15-014(g)	TA-15-203	cooling water	?-?	ditch	none	Water Canyon
15-014(h)	TA-15-40	1) noncontact cooling water	1) ?-prs.	1) 8"-dia vitr. clay	1) EPA04A013	1) Three Mile Canyon
		2) noncontact cooling water	2) ?-prs.	2) 8"-dia vitr. clay	2) EPA04A102	2) Three Mile Canyon
		3) storm drains	3) ?-prs.	3) 12"-dia corr. metal	3) none	3) Three Mile Canyon
15-014(i)	TA-15-194	1) industrial wastes	1) ?-prs.	1) unknown	1) none	1) Water Canyon
		2) noncontact cooling water	2) ?-prs.	2) unknown	2) EPA04A093	2) Water Canyon
15-014(j)	TA-15-50	1) sink drain	1) ?-?	1) ditch	1) none	1) Water Canyon
		2) floor drains	2) ?-prs.	2) unknown	2) none	2) Water Canyon
		3) diffusion pumps	3) ?-prs.	3) unknown	3) none	3) Water Canyon
15-014(k)	TA-15-20	floor drains	?-?	3"-dia cast iron & 4"-dia vitr. clay	none	Water Canyon
15-014(l)	TA-15-202	treated cooling water		unknown	EPA03A028	Water Canyon
15-014(m)	TA-15-306	noncontact cooling water		unknown	EPA04A143	Potrillo Canyon tributary

Approximately six channels were observed draining the parking lot of TA-15-40 during the E.R. site reconnaissance visit. These storm drainage ditches are in addition to storm drains noted around TA-15-40 [15-014(h)].

prs. - present

WASTE INFORMATION

Potential wastes from the photographic waste outfall at TA-15-183 are silver, lead, and organics. Waste from the other two TA-15-183 outfalls and the storm drains could include barium, beryllium, cadmium, lead, mercury, uranium, and HE. The outfall from buildings TA-15-242 and -20 could contain HE and barium. Organics could be anticipated in the TA-15-184 outfall and beryllium may be present in the TA-15-50 outfall. Potential wastes in the remaining outfalls are unknown, but may contain metals and HE.

RELEASE INFORMATION

The extent of releases to outfall receiving areas is unknown.

NOTES

Drainlines 15-014(i), (j), (k), (l), and (m) include outfalls formerly addressed as SWMU Nos. 15-012(f), (g), (d), (e), and (c), respectively.

(continued)

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-014(a)	TA15-9-S/ST/O-A-HW/RW		Tsk 22 : 1524	TA-15-183
15-014(b)	**		Tsk 22 : 1525	TA-15-183
15-014(c)	**		Tsk 22 : 1553	TA-15-242
15-014(d)	**		Tsk 23 : 1610	TA-15-185
15-014(e)	TA15-9-S/ST/O-A-HW/RW		Tsk 23 : 1619	TA-15-184
15-014(f)	TA15-9-S/ST/O-A-HW/RW		Tsk 23 : 1620	TA-15-263
15-014(g)	TA15-8-S/ST/O-I-HW/RW TA15-9-S/ST/O-A-HW/RW		Tsk 23 : 1557 1586	TA-15-203
15-014(h)	TA15-8-S/ST/O-I-HW/RW		Tsk 24 : 1558 1559 1564 1565 1566 1568	TA-15-40
15-014(i)	**		Tsk 24 : 1560 1563	TA-15-194
15-014(j)	**		Tsk 24 : 1561 1562 1574	TA-15-50
15-014(k)	TA15-8-S/ST/O-I-HW/RW		Tsk 24 : 1575 1576	TA-15-20
15-014(l)	**			TA-15-202
15-014(m)	**			TA-15-306

** No corresponding E. R. Program unit.

TA-15 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
15-001	15-1
15-002	15-1
15-003	15-1
15-004(a)	Not shown, location unknown
15-004(b)	15-2
15-004(c)	15-2
15-004(d)	15-2
15-004(e)	15-2
15-004(f)	15-2
15-004(g)	15-2
15-004(h)	15-2
15-004(i)	Not shown, location unknown
15-005(a)	15-1
15-005(b)	15-1
15-005(c)	15-1
15-005(d)	15-2
15-006(a)	15-1
15-006(b)	15-1
15-006(c)	15-1,15-2
15-006(d)	15-1, 15-2
15-006(e)	15-2
15-007(a)	15-1, 15-6
15-007(b)	15-1, 15-7
15-007(c)	15-1
15-007(d)	15-1
15-008(a)	15-1
15-008(b)	15-1
15-008(c)	15-1
15-008(d)	15-1
15-008(e)	15-1
15-008(f)	15-2
15-008(g)	15-2
15-009(a)	15-1
15-009(b)	15-1
15-009(c)	15-1
15-009(d)	15-1
15-009(e)	15-1
15-009(f)	15-1
15-009(g)	15-1
15-009(h)	15-1
15-009(i)	15-1
15-009(j)	15-1
15-009(k)	Not shown

TA-15 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX (CONTINUED)

SWMU	FIGURE NUMBER
15-010(a)	15-2
15-010(b)	15-2
15-010(c)	15-2
15-011(a)	15-2
15-011(b)	15-1
15-011(c)	15-2
15-012(a)	Not shown, location unknown
15-012(b)	15-1
15-013(a)	Not shown, moved to TA-49
15-013(b)	15-1
15-014(a)	15-3
15-014(b)	15-3
15-014(c)	15-3
15-014(d)	15-5
15-014(e)	15-5
15-014(f)	15-4
15-014(g)	15-3
15-014(h)	15-3
15-014(i)	15-3
15-014(j)	15-3
15-014(k)	15-3
15-014(l)	15-5
15-014(m)	15-4

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

TA-15
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 15 is principally a firing site that has been active almost from the beginning of Laboratory operations. Activities center around two facilities: the Pulse High Energy Radiographic Machine Emitting X-Rays (PHERMEX) and Ector, which make radiographs of exploding or imploding systems. The primary work proceeding in TA-15 is detonator development for high explosives (DOE, 1987a). TA-15 is a large area that incorporates several separate units connected by roads.

TA-15 lies at elevations between 6,800 and 7,280 feet asl. It is located on a mesa that is bifurcated by Potrillo Canyon. The mesa is bounded on the north by unnamed branches of Pajarito Canyon and on the south by Canon de Valle and Water Canyon. Canyon walls are steep slopes or cliffs in this area. TA-15 lies on welded Bandelier Tuff. This technical area includes vegetation from the Ponderosa Pine/Pinon-Juniper, Pinon-Juniper, Ponderosa Pine-fir, and Shrub-Grass-Forb overstory vegetation zones. Soil types include Carjo loam, Seaby loam, Pogna fine sandy loam, Nyjack loam, Hackroy sandy loam, Hackroy-Rock outcrop complex, Tocal very fine sandy loam, fine Typic Eutroboralfs, Frijoles very fine sandy loam, Totavi gravelly loamy sand, and rock outcrop (Nyhan et al., 1978).

The potentiometric surface of the main aquifer in the Los Alamos region lies at about 5,950 to 6,140 feet asl at TA-15. 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-15

15-001	BONEYARD
15-002	BURN SITE
15-003	OPEN DETONATION AREA
15-004	DECOMMISSIONED FIRING SITES
15-005	CONTAINER STORAGE AREAS
15-006	ACTIVE FIRING SITES
15-007	LANDFILLS
15-008	SURFACE DISPOSAL
15-009	ACTIVE SEPTIC SYSTEMS
15-010	INACTIVE SEPTIC SYSTEMS
15-011	SUMPS, DRY WELL
15-012	OPERATIONAL RELEASES
15-013	UNDERGROUND STORAGE TANKS
15-014	DRAINLINES AND OUTFALLS

SUMMARY

LOCATION : TA-15
TYPE OF UNIT(s) : BONEYARD
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : EST. 1960s - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED MIXED WASTE

UNIT INFORMATION

The unit is a boneyard, an area used to store equipment, to the east of TA-15-233. The unit stores steel, equipment, and experimental vessels.

WASTE INFORMATION

Some of the experimental vessels are labeled with radioactive signs. The vessels are suspected of containing mixed waste when they were used in experiments.

RELEASE INFORMATION

It is unknown whether releases from this unit have occurred. LANL staff consider releases unlikely, because there is no visible residual contamination on the vessels; however, no soil sampling has been done.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-001	**			NEAR TA-15-233

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-15
TYPE OF UNIT(s) : PIT
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1950s - 1970s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

On a few occasions, depleted uranium and/or natural uranium turnings were burned with gasoline and HE or mixed with oil and burned near or at the E-F site. The CEARP states that an employee reported one site to be located 100-150 yds. west of E-F site.

WASTE INFORMATION

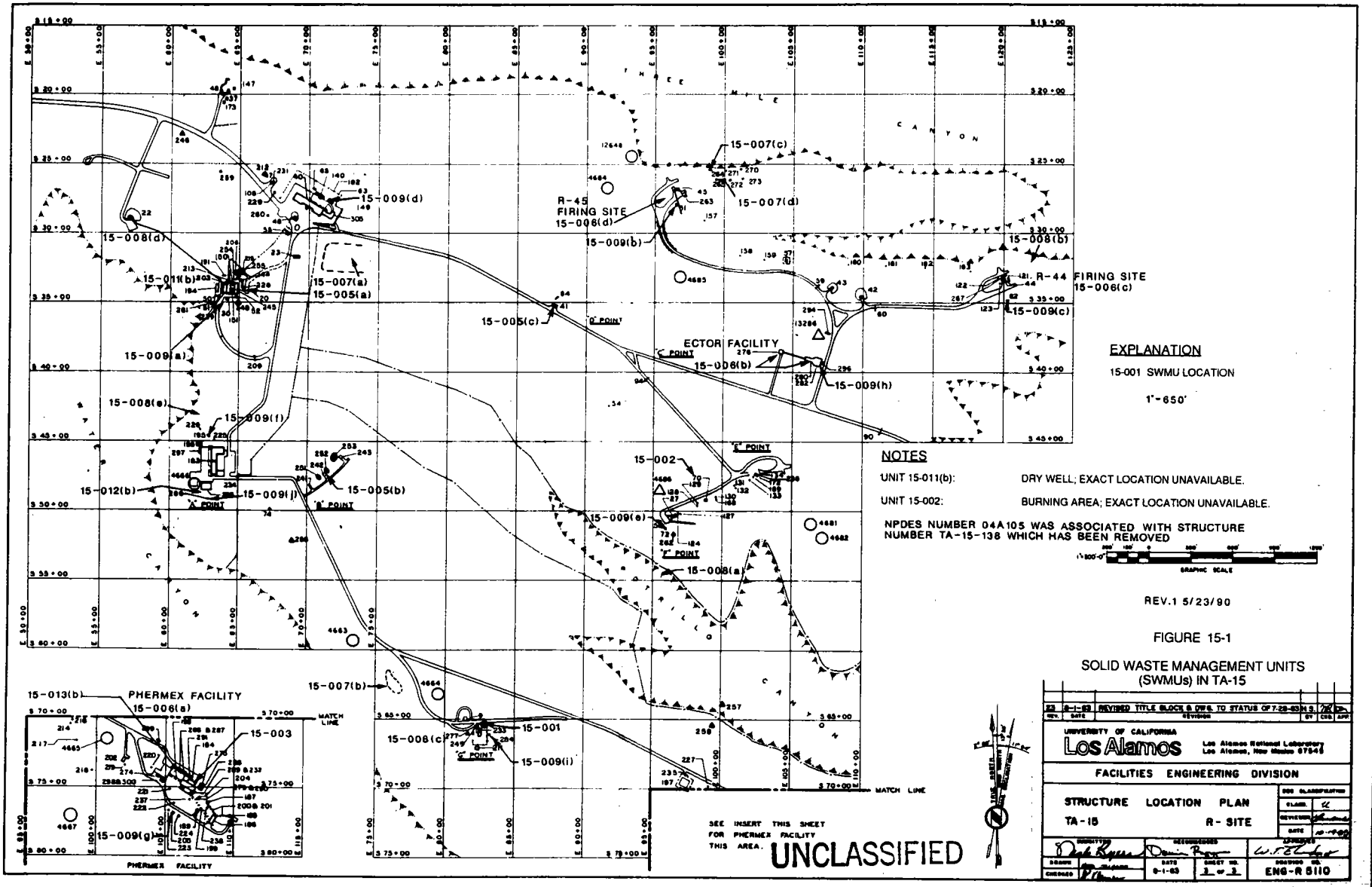
Waste still present might include uranium. The RFA reports suspected hazardous waste that may include barium and nitrates from the HE. However, LANL staff believe the amount of HE mixed with the uranium to have been very small.

RELEASE INFORMATION

Releases of combustion products to the air are known to have occurred. Uranium from detonations at the E-F site and from burning is anticipated to remain in the soil.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
15-002	TA15-4-CA-1-HW/RW	15.009		NEAR TA-15-26



EXPLANATION

15-001 SWMU LOCATION

1"=650'

NOTES

UNIT 15-011(b): DRY WELL; EXACT LOCATION UNAVAILABLE.

UNIT 15-002: BURNING AREA; EXACT LOCATION UNAVAILABLE.

NPDES NUMBER 04A105 WAS ASSOCIATED WITH STRUCTURE NUMBER TA-15-138 WHICH HAS BEEN REMOVED

GRAPHIC SCALE

REV.1 5/23/90

FIGURE 15-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-15

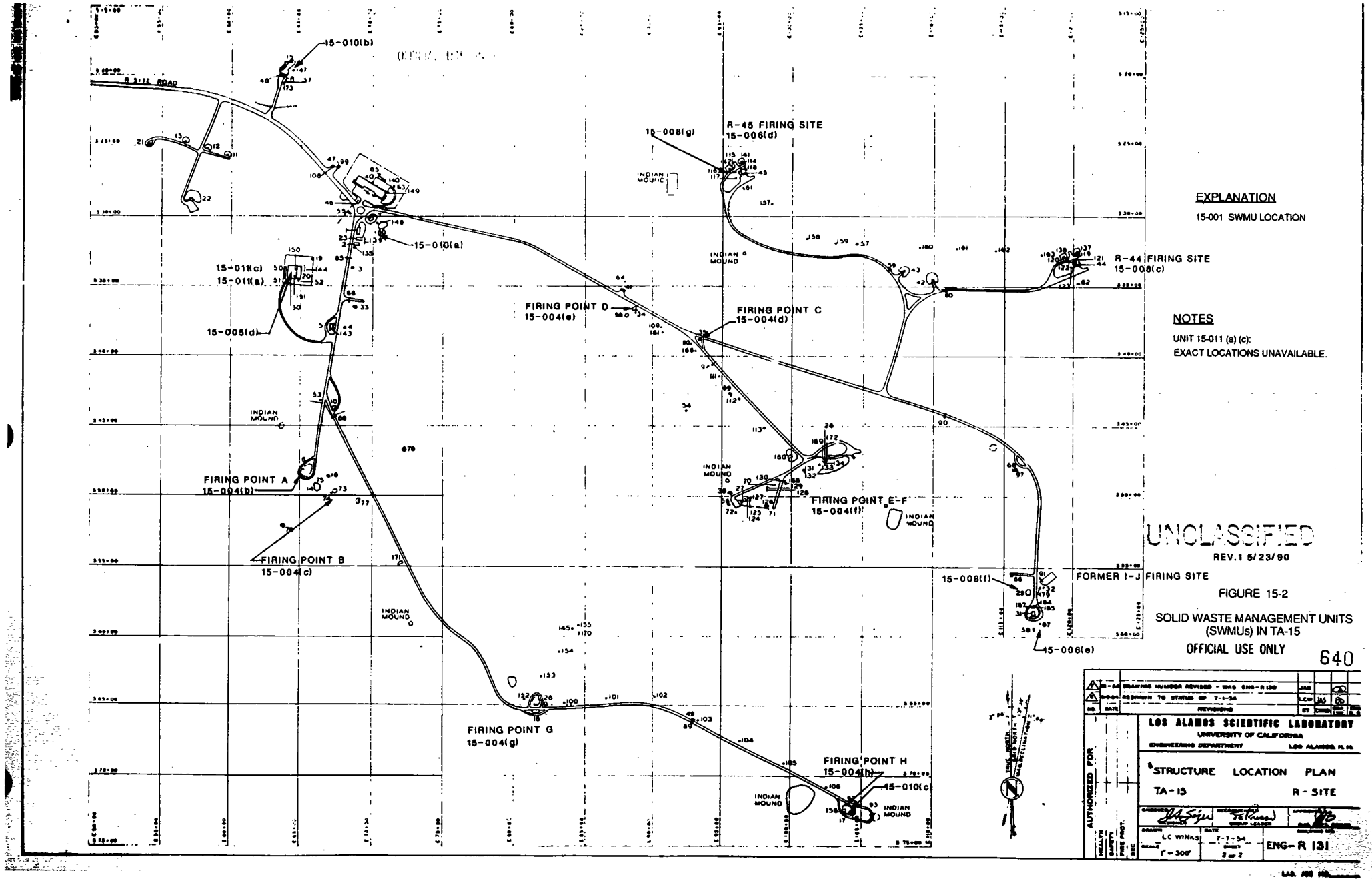
REV.	DATE	REVISION	BY	CHK	APP
23	8-1-93	REVISED TITLE BLOCK & DWG TO STATUS OF 7-28-93	N.S.		

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

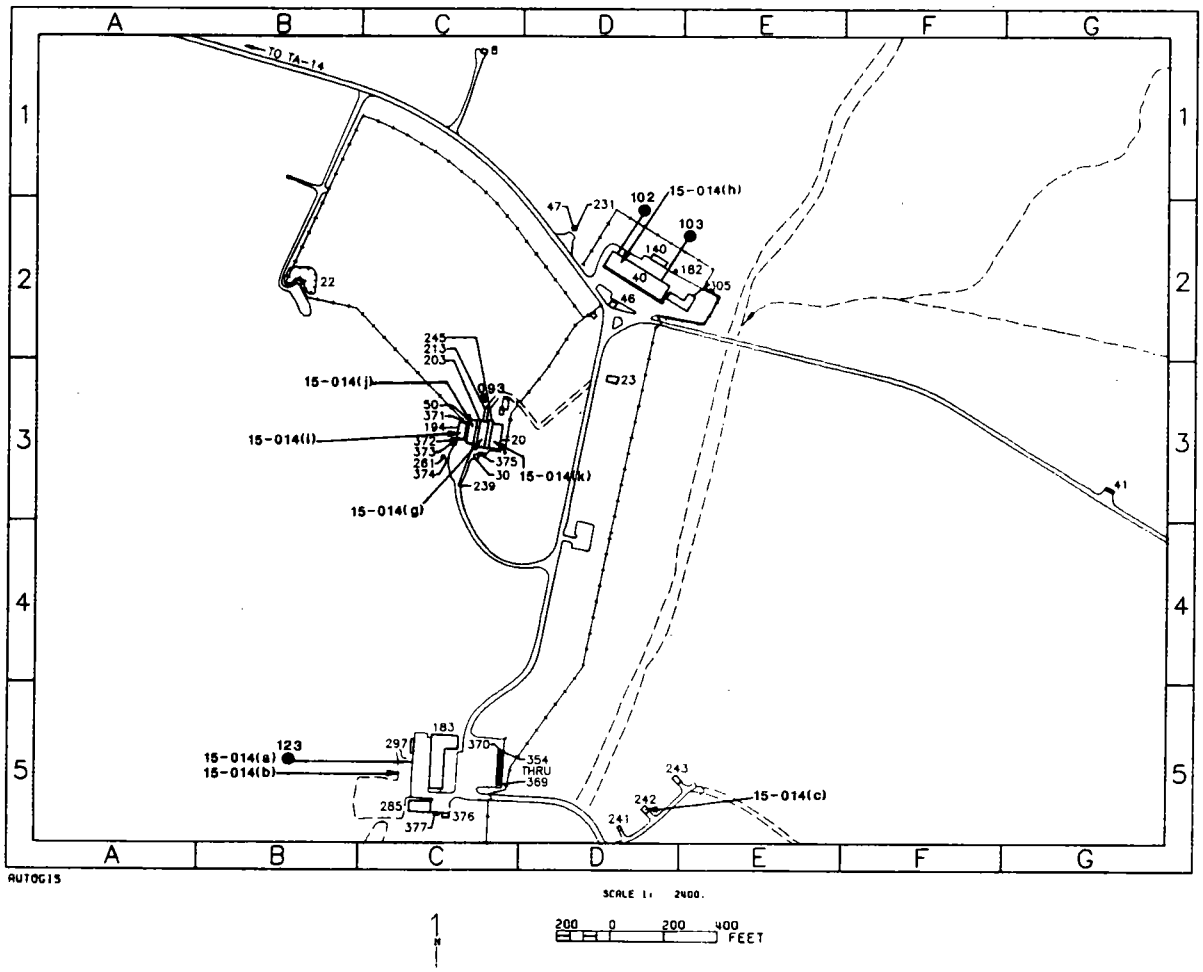
FACILITIES ENGINEERING DIVISION

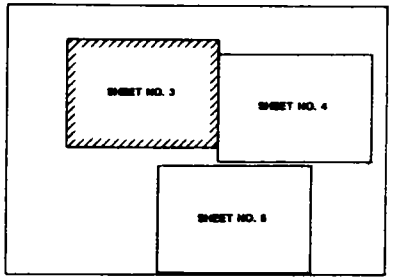
STRUCTURE LOCATION PLAN
TA-15 R-SITE

DESIGNED	RECOMMENDED	APPROVED
DRAWN	DATE	DRAWING NO.
CHECKED	8-1-93	ENG-R 5110


15-010(b)
R-45 FIRING SITE
15-006(d)
15-008(g)
EXPLANATION
15-001 SWMU LOCATION
15-010(a)
R-44 FIRING SITE
15-008(c)
15-011(c)
15-011(a)
NOTES
UNIT 15-011 (a) (c):
EXACT LOCATIONS UNAVAILABLE.
FIRING POINT D
15-004(e)
FIRING POINT C
15-004(d)
15-005(d)
INDIAN MOUND
FIRING POINT A
15-004(b)
FIRING POINT E-F
15-004(f)
UNCLASSIFIED
REV.1 5/23/90
FIRING POINT B
15-004(c)
15-008(f)
FORMER I-J FIRING SITE
FIGURE 15-2
SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-15
OFFICIAL USE ONLY
640
15-006(e)
FIRING POINT G
15-004(g)
FIRING POINT H
15-004(h)
15-010(c)
LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
STRUCTURE LOCATION PLAN
TA-15
R-SITE
AUTHORIZED FOR
ENG-R 131

TA-15





TA-15 MAP GUIDE

EXPLANATION

15-001 SWMU LOCATION

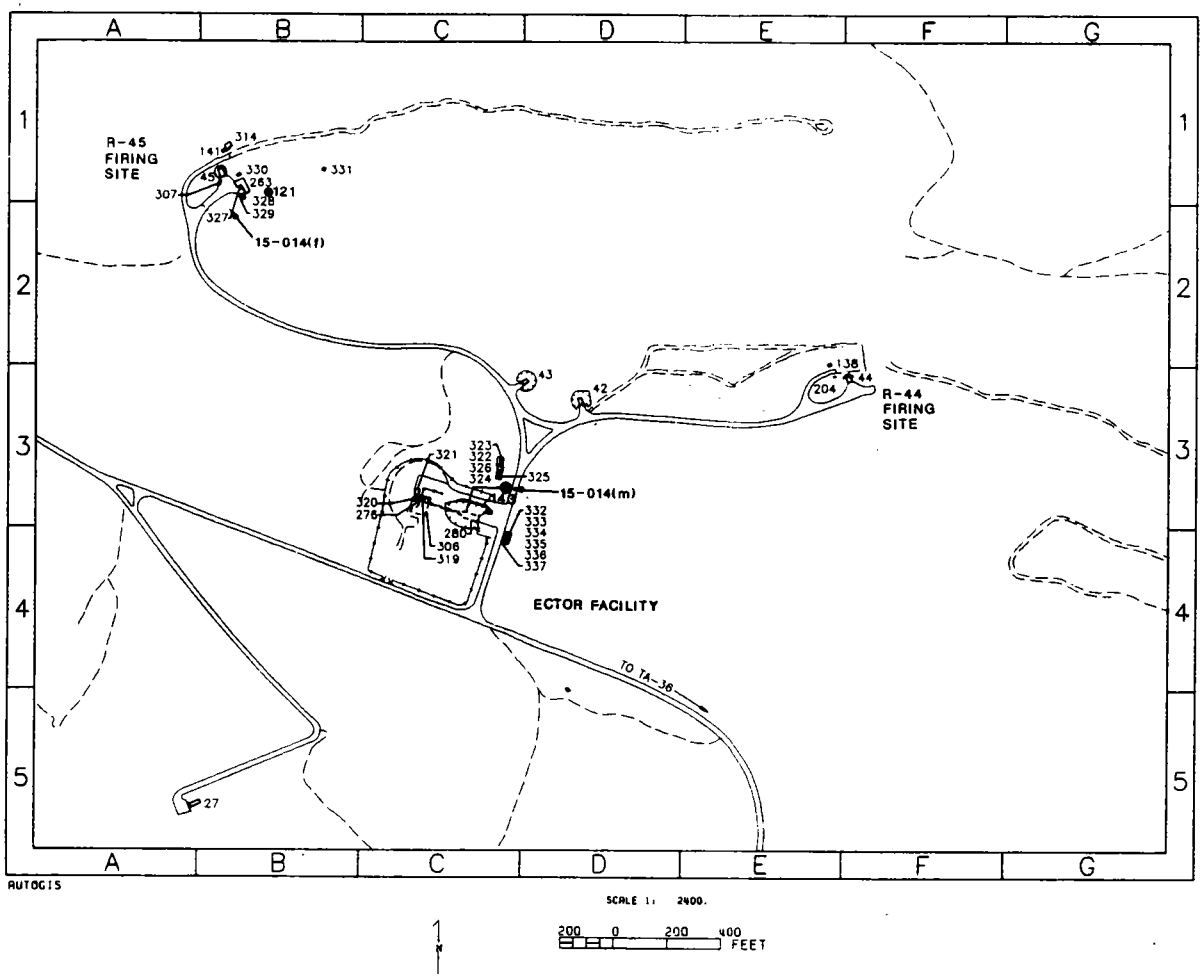
010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBER (SEE APPENDIX A)

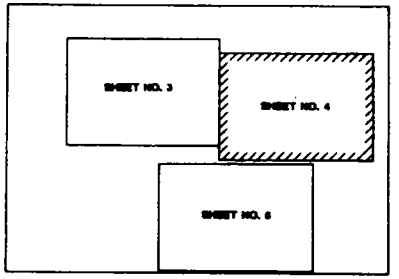
REV.1 5/23/90

FIGURE 15-3

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-15

UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION MAP
TA-15 R-SITE
ENG-R 5110





TA-15 MAP GUIDE

EXPLANATION

15-001 SWMU LOCATION

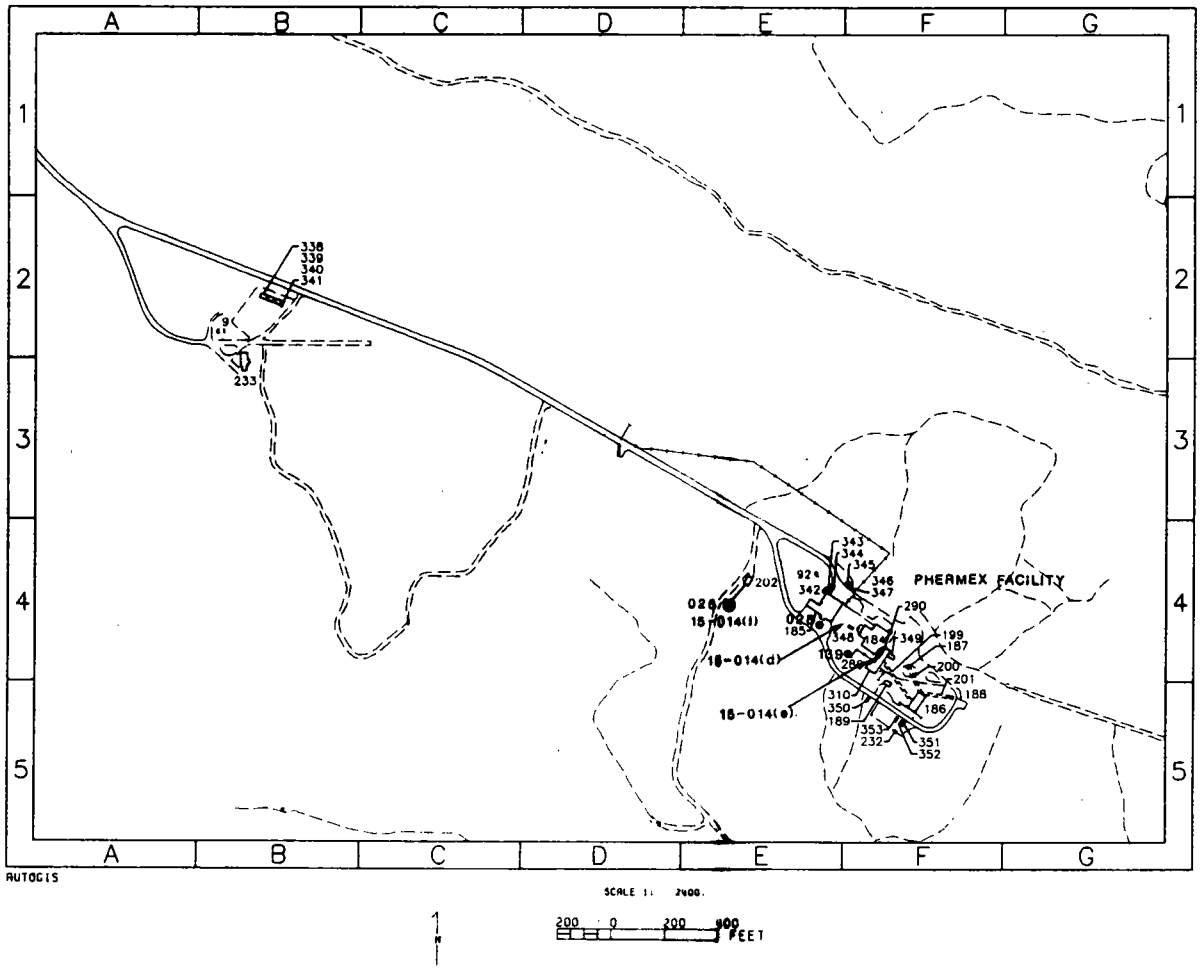
010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBER (SEE APPENDIX A)

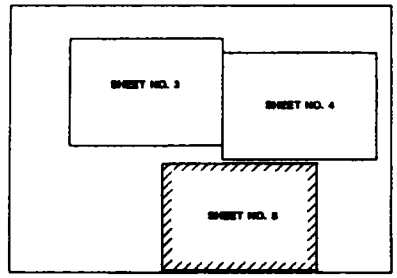
REV.1 5/23/90

FIGURE 15-4

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-15

UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION MAP
TA-15
R-SITE
ENG-R 5110





TA-15 MAP GUIDE

EXPLANATION

15-001 SWMU LOCATION

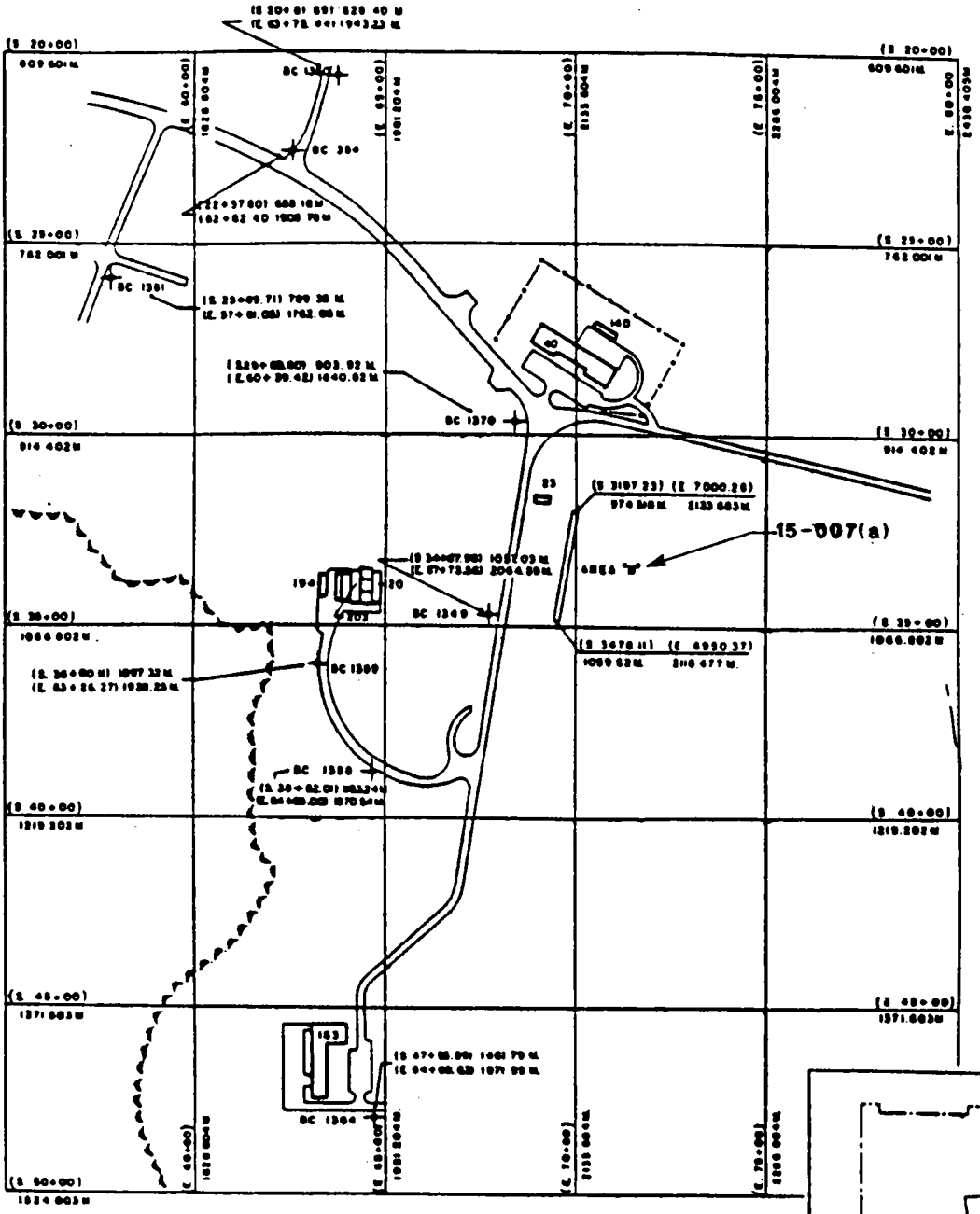
010 LOCATION OF OUTFALL INDICATING ASSOCIATED PIPING AND NPDES SERIAL NUMBER (SEE APPENDIX A)

REV.1 5/23/90

FIGURE 15-5

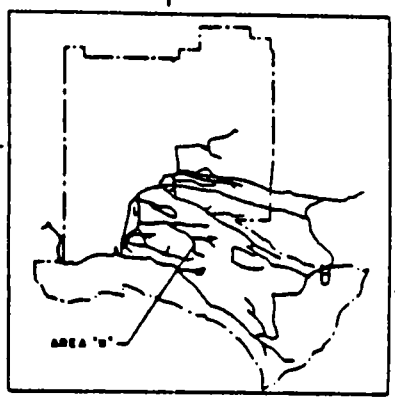
SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-15

UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION MAP
TA-16 R-SITE
ENG-R 5110



EXPLANATION

15-001 SWMU LOCATION



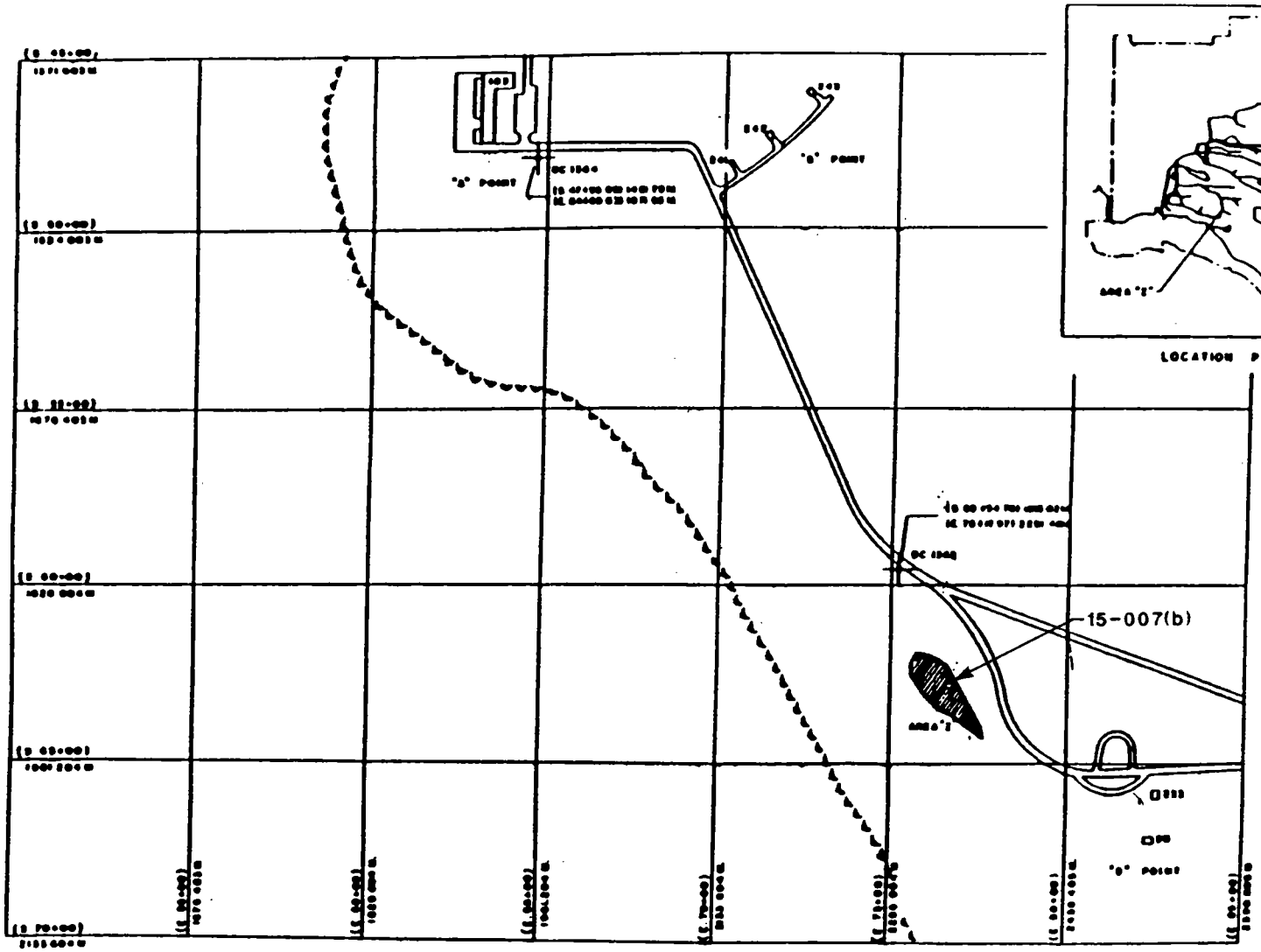
LOCATION PLAN

REV.1 5/23/90

FIGURE 15-6

MATERIAL DISPOSAL AREA N, TA-15

301215 02 01 A18



EXPLANATION

15-001 SWMU LOCATION

REV.1 5/23/90

FIGURE 15-7

MATERIAL DISPOSAL AREA Z, TA-15

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-15-1	R-1	LABORATORY & SHOP
TA-15-2	R-2	WAREHOUSE
TA-15-3	R-3	STORAGE BUILDING
TA-15-4	R-4	STORAGE BUILDING
TA-15-5	R-5	TRIMMING BUILDING
TA-15-6	R-6	CONTROL CHAMBER FIRING POINT 'K'
TA-15-7	R-7	OFFICE & DARK ROOM
TA-15-8	R-8	BUILDING
TA-15-9	R-9	CONTROL CHAMBER FIRING POINT 'G'
TA-15-10	R-10	DETONATOR MAGAZINE
TA-15-11	R-11	MAGAZINE
TA-15-12	R-12	MAGAZINE
TA-15-13	R-13	MAGAZINE
TA-15-14	R-14	X-UNIT CHAMBER FIRING POINT 'A'
TA-15-15	R-15	CONTROL ROOM FOR BUILDING R-8
TA-15-16	R-16	BARRICADE FIRING POINT 'G'
TA-15-17	R-17	INSTRUMENT CHAMBER FIRING POINT 'H'
TA-15-18	R-18	MAGAZINE FIRING POINT 'A'
TA-15-19	R-19	GUARD TOWER 'K' AT ASSEMBLY BLDG.
TA-15-20	R-20	ASSEMBLY BUILDING
TA-15-21	R-21	MAGAZINE
TA-15-22	R-22	MAGAZINE
TA-15-23	R-23	OWL MANOR
TA-15-24	R-24	STORAGE (REMOVED)
TA-15-25	R-25	WATER TANK (REMOVED)
TA-15-26	R-26	X-UNIT CHAMBER FIRING POINT 'K'
TA-15-27	R-27	CONTROL BUILDING FIRING POINT 'K-A'
TA-15-28	R-28	Y-UNIT CHAMBER FIRING POINT 'A'
TA-15-29	R-29	A-UNIT CHAMBER FIRING POINT 'A'
TA-15-30	R-30	GUARD STATION AT ASSEMBLY BLDG.
TA-15-31	R-31	CONTROL BUILDING FIRING POINT 'K-B'
TA-15-32	R-32	X-UNIT CHAMBER FIRING POINT 'J'
TA-15-33	R-33	RADIOACTIVE SOURCE BUILDING
TA-15-34	R-34	CONTROL CHAMBER FIRING POINT 'D' (ABANDONED)
TA-15-35	R-35	CONTROL CHAMBER FIRING POINT 'C' (ABANDONED)
TA-15-36	R-36	X-UNIT CHAMBER (REMOVED)
TA-15-37	R-37	AIR COMPRESSOR BUILDING FOR BLDG. R-8
TA-15-38	R-38	MAGAZINE
TA-15-39	R-39	ROAD BLOCK (REMOVED)
TA-15-40	R-40	OFFICE BUILDING
TA-15-41	R-41	STORAGE BUILDING
TA-15-42	R-42	MAGAZINE
TA-15-43	R-43	MAGAZINE
TA-15-44	R-44	CONTROL BUILDING
TA-15-45	R-45	CONTROL BUILDING
TA-15-46	R-46	GUARD HOUSE (STATION 3301)
TA-15-47	R-47	WATER TOWER
TA-15-48	R-48	BUTANE TANK
TA-15-49	R-49	ROAD BLOCK
TA-15-50	R-50	STORAGE SHELTER
TA-15-51	R-51	SEPTIC TANK
TA-15-52	R-52	UNDERGROUND TANK
TA-15-53	R-53	SIREN POLE
TA-15-54	R-54	SIREN POLE
TA-15-55	R-55	TRANSFORMER STATION
TA-15-56	R-56	TRANSFORMER STATION
TA-15-57	R-57	TRANSFORMER STATION
TA-15-58	R-58	TRANSFORMER STATION
TA-15-59	R-59	WIGWAG
TA-15-60	R-60	WIGWAG
TA-15-61	R-61	SEPTIC TANK
TA-15-62	R-62	SEPTIC TANK
TA-15-63	R-63	SEPTIC TANK
TA-15-64	R-64	TRANSFORMER STATION
TA-15-65	R-65	TRANSFORMER STATION
TA-15-66	R-66	WATER TANK
TA-15-67	R-67	SEPTIC TANK
TA-15-68	R-68	DAY MAGAZINE
TA-15-69	R-69	CAP MAGAZINE
TA-15-70	R-70	WATER TANK
TA-15-71	R-71	PLATE BARRICADE
TA-15-72	R-72	SEPTIC TANK
TA-15-73	R-73	PLATE BARRICADE FIRING POINT 'B' (ABANDONED)
TA-15-74	R-74	X-UNIT CHAMBER FIRING POINT 'B' (ABANDONED)
TA-15-75	R-75	ELECTRIC MANHOLE FIRING POINT 'A'
TA-15-76	R-76	PERSONNEL SHELTER FIRING POINT 'A'
TA-15-77	R-77	PERSONNEL SHELTER FIRING POINT 'A'
TA-15-78	R-78	PERSONNEL SHELTER FIRING POINT 'A'
TA-15-79	R-79	UNDERGROUND TANK (REMOVED)
TA-15-80	R-80	SEPTIC TANK
TA-15-81	R-81	GUARD BLDG (REMOVED) NOW 16-1000 AT TA-16
TA-15-82	R-82	TELEPHONE BOOTH
TA-15-83	R-83	ROAD BLOCK
TA-15-84	R-84	ROAD BLOCK (REMOVED)
TA-15-85	R-85	ROAD BLOCK
TA-15-86	R-86	ROAD BLOCK
TA-15-87	R-87	ROAD BLOCK (REMOVED) NOW HP-109, TA-33
TA-15-88	R-88	ROAD BLOCK
TA-15-89	R-89	ROAD BLOCK
TA-15-90	R-90	WIGWAG
TA-15-91	R-91	BARRICADE
TA-15-92	R-92	CAMERA CHAMBER FIRING POINT 'H'
TA-15-93	R-93	BARRICADE FIRING POINT 'H'
TA-15-94	R-94	WIGWAG
TA-15-95	R-95	MAGAZINE (CANCELLED)
TA-15-96	R-96	BARRICADE (REMOVED)
TA-15-97	R-97	BARRICADE
TA-15-98	R-98	CONTROL CHAMBER
TA-15-99	R-99	PROPANE TANK
TA-15-100	R-100	MANHOLE (ELECTRICAL)
TA-15-101	R-101	MANHOLE (ELECTRICAL)
TA-15-102	R-102	MANHOLE (ELECTRICAL)
TA-15-103	R-103	MANHOLE (ELECTRICAL)
TA-15-104	R-104	MANHOLE (ELECTRICAL)
TA-15-105	R-105	MANHOLE (ELECTRICAL)
TA-15-106	R-106	MANHOLE (ELECTRICAL)
TA-15-107	R-107	STORAGE BUILDING (REMOVED) NOW KAPPA-44, TA-16
TA-15-108	R-108	SUMP PIT (MANHOLE)
TA-15-109	R-109	MANHOLE (ELECTRICAL)
TA-15-110	R-110	MANHOLE (ELECTRICAL)
TA-15-111	R-111	MANHOLE (ELECTRICAL)
TA-15-112	R-112	MANHOLE (ELECTRICAL)
TA-15-113	R-113	MANHOLE (ELECTRICAL)
TA-15-114	R-114	MANHOLE (ELECTRICAL)
TA-15-115	R-115	MANHOLE (ELECTRICAL)
TA-15-116	R-116	MANHOLE (ELECTRICAL)
TA-15-117	R-117	MANHOLE (SEWER)
TA-15-118	R-118	MANHOLE (ELECTRICAL)
TA-15-119	R-119	MANHOLE (ELECTRICAL)

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-15-122	R-122	MANHOLE (ELECTRICAL)
TA-15-123	R-123	MANHOLE (SEWER)
TA-15-124	R-124	MANHOLE (ELECTRICAL)
TA-15-125	R-125	MANHOLE (ELECTRICAL)
TA-15-126	R-126	MANHOLE (ELECTRICAL)
TA-15-127	R-127	MANHOLE (ELECTRICAL)
TA-15-128	R-128	MANHOLE (ELECTRICAL)
TA-15-129	R-129	MANHOLE (ELECTRICAL)
TA-15-130	R-130	MANHOLE (ELECTRICAL)
TA-15-131	R-131	MANHOLE (ELECTRICAL)
TA-15-132	R-132	MANHOLE (ELECTRICAL)
TA-15-133	R-133	MANHOLE (ELECTRICAL)
TA-15-134	R-134	BARRICADE, X-UNIT
TA-15-135	R-135	STORAGE BUILDING
TA-15-136	R-136	SHOP BUILDING (REMOVED) NOW KAPPA-43 AT TA-16
TA-15-137	R-137	BARRICADE
TA-15-138	R-138	BARRICADE
TA-15-139	R-139	BARRICADE
TA-15-140	R-140	STORAGE BUILDING
TA-15-141	R-141	BARRICADE
TA-15-142	R-142	BARRICADE
TA-15-143	R-143	BARRICADE
TA-15-144	R-144	RETAINING WALL
TA-15-145	R-145	SIREN POLE
TA-15-146	R-146	WIGWAG (REMOVED)
TA-15-147	R-147	SEPTIC TANK
TA-15-148	R-148	MANHOLE (ELECTRICAL)
TA-15-149	R-149	MANHOLE (SEWER)
TA-15-150	R-150	MANHOLE (SEWER)
TA-15-151	R-151	MANHOLE (SEWER)
TA-15-152	R-152	MANHOLE (ELECTRICAL)
TA-15-153	R-153	MANHOLE (ELECTRICAL)
TA-15-154	R-154	MANHOLE (ELECTRICAL)
TA-15-155	R-155	MANHOLE (ELECTRICAL)
TA-15-156	R-156	MANHOLE (ELECTRICAL)
TA-15-157	R-157	MANHOLE (ELECTRICAL)
TA-15-158	R-158	MANHOLE (ELECTRICAL)
TA-15-159	R-159	MANHOLE (ELECTRICAL)
TA-15-160	R-160	MANHOLE (ELECTRICAL)
TA-15-161	R-161	MANHOLE (ELECTRICAL)
TA-15-162	R-162	MANHOLE (ELECTRICAL)
TA-15-163	R-163	MANHOLE (ELECTRICAL)
TA-15-164	R-164	MANHOLE (ELECTRICAL)
TA-15-165	R-165	MANHOLE (ELECTRICAL)
TA-15-166	R-166	MANHOLE (ELECTRICAL)
TA-15-167	R-167	MANHOLE (ELECTRICAL)
TA-15-168	R-168	MANHOLE (ELECTRICAL)
TA-15-169	R-169	MANHOLE (ELECTRICAL)
TA-15-170	R-170	TRANSFORMER STATION
TA-15-171	R-171	PERSONNEL SHELTER
TA-15-172	R-172	BARRICADE, X-UNIT
TA-15-173	R-173	UNDERGROUND TANK
TA-15-174	R-174	BARRICADE (REMOVED)
TA-15-175	R-175	EQUIPMENT PLATFORM (REMOVED)
TA-15-176	R-176	FIRING PLATFORM
TA-15-177	R-177	FIRING PLATFORM (REMOVED)
TA-15-178	R-178	BARRICADE (REMOVED)
TA-15-179	R-179	MANHOLE (ELECTRICAL)
TA-15-180	R-180	EXPERIMENTAL CONCRETE SLAB
TA-15-181	R-181	MANHOLE (ELECTRICAL)

UNCLASSIFIED

REV.1 5/23/90

FIGURE 15-8

TA-15 STRUCTURE LOCATION INDEX

OFFICIAL USE ONLY

640

NO.	DATE	REVISIONS	BY	CHKD	ORIG LOS ALA.	ENG LOS ALA.
①	8-9-54	REDRAWN TO STATUS OF 7-1-54	L.C.W.	JAS		

AUTHORIZED FOR HEALTH SAFETY FIRE PROT. SEC.

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

STRUCTURE LOCATION PLAN
TA-15 R-SITE

CHECKED	RECOMMENDED	APPROVED
DESIGNER	GROUP LEADER	DIV. CHIEF SUPERV.

DRAWN	DATE	DRAWING NO.
LC WINKS	7-7-54	ENG-R 130
SCALE NONE	SHEET 1 OF 2	

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-1- •	A- •		REMOVED 1988	
TA-1- •	A- •		REMOVED 1987	
TA-1- •	A- •		REMOVED 1988	
TA-1- •	A- •		REMOVED 1988	
TA-1- •	A- •		REMOVED 1988	
TA-1- •	A- •		REMOVED 1988	
TA-1- 7	A-7	SHOP BUILDING		886+00 E 65-00
TA-1- 8	A-8	CONTROL CHAMBER	FIRING POINT G	881+00 E 80-00
TA-1-10	A-10		REMOVED 1987	
TA-1-11	A-11		REMOVED 1987	
TA-1-12	A-12		REMOVED 1987	
TA-1-13	A-13		REMOVED 1987	
TA-1-14	A-14		REMOVED 1987	
TA-1-15	A-15		REMOVED 1987	
TA-1-16	A-16		REMOVED 1987	
TA-1-17	A-17		REMOVED 1987	
TA-1-18	A-18		REMOVED 1987	
TA-1-19	A-19		REMOVED 1960	
TA-15-20	A-20	BRANCH SHOP & LAB BLDG		333-00 E 65-00
TA-15-21	A-21		REMOVED 1987	
TA-15-22	A-22	EXPLOSIVES PREPARATION BLDG		330-00 E 33-00
TA-15-23	A-23	LABORATORY BUILDING	FORMERLY TA-20-1	330-00 E 70-00
TA-15-24	A-24		REMOVED 1951	
TA-15-25	A-25		REMOVED 1951	
TA-15-26	A-26		REMOVED 1952	
TA-15-27	A-27	CONTROL BUILDING	FIRING POINTS E & F	330-00 E 93-00
TA-15-28	A-28		REMOVED 1967	
TA-15-29	A-29		REMOVED 1987	
TA-15-30	A-30	GUARD STATION		333-00 E 83-00
TA-15-31	A-31	CONTROL BUILDING	RENUMBERED TA-36-58	
TA-15-32	A-32		REMOVED 1967	
TA-15-33	A-33		REMOVED 1967	
TA-15-34	A-34		REMOVED 1967	
TA-15-35	A-35		REMOVED 1967	
TA-15-36	A-36		REMOVED 1954	
TA-15-37	A-37	AIR COMPRESSOR BUILDING		320-00 E 93-00
TA-15-38	A-38		REMOVED 1967	
TA-15-39	A-39		REMOVED 1951	
TA-15-40	A-40	OFFICE BUILDING		330-00 E 70-00
TA-15-41	A-41	STORAGE BUILDING		333-00 E 40-00
TA-15-42	A-42	MAGAZINE		333-00 E 110-00
TA-15-43	A-43	MAGAZINE		333-00 E 110-00
TA-15-44	A-44	CONTROL BUILDING		330-00 E 120-00
TA-15-45	A-45	CONTROL BUILDING		325-00 E 93-00
TA-15-46	A-46	LABORATORY BUILDING		330-00 E 70-00
TA-15-47	A-47	WATER TOWER		321-00 E 83-00
TA-15-48	A-48	TANK, FUEL U.G.		320-00 E 93-00
TA-15-49	A-49		REMOVED 1959	
TA-15-50	A-50	SHOP & LABORATORY BLDG.		333-00 E 85-00
TA-15-51	A-51	TANK, SEPTIC		333-00 E 83-00
TA-15-52	A-52	TANK, FUEL U.G		333-00 E 83-00
TA-15-53	A-53		REMOVED 1958	
TA-15-54	A-54	TRANSFORMER STATION		343-00 E 90-00
TA-15-55	A-55	TRANSFORMER STATION		330-00 E 70-00
TA-15-56	A-56	TRANSFORMER STATION		330-00 E 93-00
TA-15-57	A-57	TRANSFORMER STATION		330-00 E 103-00
TA-15-58	A-58	TRANSFORMER STATION	RENUMBERED TA-36-59	
TA-15-59	A-59	WIGWAG		333-00 E 105-00
TA-15-60	A-60	WIGWAG		333-00 E 110-00
TA-15-61	A-61	TANK, SEPTIC		330-00 E 83-00
TA-15-62	A-62	TANK, SEPTIC		330-00 E 100-00
TA-15-63	A-63	TANK, SEPTIC		330-00 E 70-00
TA-15-64	A-64	TRANSFORMER STATION		333-00 E 90-00
TA-15-65	A-65	TRANSFORMER STATION		325-00 E 70-00
TA-15-66	A-66	TANK, WATER U.G.	RENUMBERED TA-36-60	
TA-15-67	A-67	TANK, SEPTIC	RENUMBERED TA-36-61	
TA-15-68	A-68		REMOVED 1967	
TA-15-69	A-69		REMOVED 1967	
TA-15-70	A-70	TANK, WATER U.G.		330-00 E 100-00
TA-15-71	A-71		REMOVED 1967	
TA-15-72	A-72	TANK, SEPTIC		330-00 E 93-00
TA-15-73	A-73		REMOVED 1967	
TA-15-74	A-74	FIRING UNIT CHAMBER	ABANDONED 1982	330-00 E 83-00
TA-15-75	A-75		REMOVED 1967	
TA-15-76	A-76		REMOVED 1967	
TA-15-77	A-77		REMOVED 1967	
TA-15-78	A-78		REMOVED 1967	
TA-15-79	A-79		REMOVED 1952	
TA-15-80	A-80	TANK, SEPTIC	ABANDONED 1961	330-00 E 70-00
TA-15-81	A-81	GUARD HOUSE	RELOCATED TO TA-16-1000	
TA-15-82	A-82		REMOVED 1985	
TA-15-83	A-83		REMOVED 1950	
TA-15-84	A-84		REMOVED 1951	
TA-15-85	A-85		REMOVED 1962	
TA-15-86	A-86		REMOVED 1958	
TA-15-87	A-87	ROAD BLOCK	RELOCATED TO TA-33-109	
TA-15-88	A-88	ROAD BLOCK	RELOCATED TO TA-33-115	
TA-15-89	A-89		REMOVED 1959	
TA-15-90	A-90	WIGWAG		343-00 E 110-00
TA-15-91	A-91		REMOVED 1967	
TA-15-92	A-92		REMOVED 1967	
TA-15-93	A-93		REMOVED 1958	
TA-15-94	A-94	WIGWAG		340-00 E 93-00
TA-15-95	A-95		CANCELLED	
TA-15-96	A-96		REMOVED 1951	
TA-15-97	A-97		REMOVED 1967	

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-15-98	R-98		REMOVED 1987	
TA-15-99	R-99	TANK, FUEL	RELOCATED TO TA-33-137	
TA-15-100	R-100		REMOVED 1987	
TA-15-101	R-101		REMOVED 1987	
TA-15-102	R-102		REMOVED 1987	
TA-15-103	R-103		REMOVED 1987	
TA-15-104	R-104		REMOVED 1987	
TA-15-105	R-105		REMOVED 1987	
TA-15-106	R-106		REMOVED 1987	
TA-15-107	R-107	STORAGE BUILDING	RELOCATED TO TA-36-44	
TA-15-108	R-108	MANHOLE, PUMP PIT		325-00 E 83-00
TA-15-109	R-109		REMOVED 1987	
TA-15-110	R-110		REMOVED 1987	
TA-15-111	R-111		REMOVED 1987	
TA-15-112	R-112		REMOVED 1987	
TA-15-113	R-113		REMOVED 1987	
TA-15-114	R-114		DESTROYED	
TA-15-115	R-115		DESTROYED	
TA-15-116	R-116		DESTROYED	
TA-15-117	R-117		DESTROYED	
TA-15-118	R-118		DESTROYED	
TA-15-119	R-119		DESTROYED	
TA-15-120	R-120		DESTROYED	
TA-15-121	R-121	MANHOLE, ELECTRICAL		335+00 E 120+00
TA-15-122	R-122	MANHOLE, ELECTRICAL		333-00 E 120-00
TA-15-123	R-123	MANHOLE, SANITARY		335-00 E 120-00
TA-15-124	R-124	MANHOLE, ELECTRICAL		330-00 E 93-00
TA-15-125	R-125		REMOVED 1967	
TA-15-126	R-126		REMOVED 1967	
TA-15-127	R-127	MANHOLE, ELECTRICAL		330-00 E 93-00
TA-15-128	R-128	MANHOLE, ELECTRICAL		330-00 E 100-00
TA-15-129	R-129	MANHOLE, ELECTRICAL		330+00 E 100+00
TA-15-130	R-130	MANHOLE, ELECTRICAL		330-00 E 100-00
TA-15-131	R-131	MANHOLE, ELECTRICAL		330-00 E 100-00
TA-15-132	R-132	MANHOLE, ELECTRICAL		330-00 E 100-00
TA-15-133	R-133	MANHOLE, ELECTRICAL		330-00 E 100-00
TA-15-134	R-134	FIRING UNIT CHAMBER	REPLACED TA-15-28	345-00 E 100-00
TA-15-135	R-135		REMOVED 1987	
TA-15-136	R-136	SHOP BUILDING	RELOCATED TO TA-36-45	
TA-15-137	R-137		REMOVED 1967	
TA-15-138	R-138		DESTROYED	
TA-15-139	R-139		REMOVED 1985	
TA-15-140	R-140	STORAGE BUILDING		325-00 E 70-00
TA-15-141	R-141		DESTROYED	
TA-15-142	R-142		DESTROYED	
TA-15-143	R-143		REMOVED 1982	
TA-15-144	R-144	RETAINING WALL		335-00 E 83-00
TA-15-145	R-145		REMOVED 1959	
TA-15-146	R-146		UNASSIGNED	
TA-15-147	R-147	TANK, SEPTIC		320-00 E 83-00
TA-15-148	R 148		REMOVED 1967	
TA-15-149	R-149	MANHOLE, SANITARY		330-00 E 70-00
TA-15-150	R-150	MANHOLE, INDUSTRIAL WASTE		335-00 E 83-00
TA-15-151	R-151	MANHOLE, INDUSTRIAL WASTE		335-00 E 83-00
TA-15-152	R-152		REMOVED 1987	
TA-15-153	R-153		REMOVED 1987	
TA-15-154	R-154		REMOVED 1987	
TA-15-155	R-155		REMOVED 1987	
TA-15-156	R-156		REMOVED 1987	
TA-15-157	R-157	MANHOLE, TELEPHONE		330-00 E 100-00
TA-15-158	R-158	MANHOLE, TELEPHONE		330-00 E 103-00
TA-15-159	R-159	MANHOLE, TELEPHONE		330-00 E 103-00
TA-15-160	R-160	MANHOLE, TELEPHONE		330-00 E 110-00
TA-15-161	R-161	MANHOLE, TELEPHONE		330-00 E 110-00
TA-15-162	R-162	MANHOLE, TELEPHONE		330-00 E 113-00
TA-15-163	R-163	MANHOLE, TELEPHONE		330-00 E 113-00
TA-15-164	R-164	MANHOLE, ELECTRICAL	RENUMBERED TA-36-62	
TA-15-165	R-165	MANHOLE, ELECTRICAL	RENUMBERED TA-36-63	
TA-15-166	R-166		REMOVED 1967	
TA-15-167	R-167	MANHOLE, ELECTRICAL	RENUMBERED TA-36-64	
TA-15-168	R-168	MANHOLE, ELECTRICAL		350+00 E 100+00
TA-15-169	R-169	MANHOLE, ELECTRICAL		343+00 E 100+00
TA-15-170	R-170		REMOVED 1980	
TA-15-171	R-171		REMOVED 1959	
TA-15-172	R-172	FIRING UNIT BARRICADE		345-00 E 100-00
TA-15-173	R-173	TANK, WATER U.G.		320-00 E 83-00
TA-15-174	R-174		REMOVED 1945	
TA-15-175	R-175		REMOVED 1945	
TA-15-176	R-176		REMOVED 1947	
TA-15-177	R-177		REMOVED 1947	
TA-15-178	R-178		REMOVED 1947	
TA-15-179	R-179		REMOVED 1967	
TA-15-180	R-180		REMOVED 1987	
TA-15-181	R-181		REMOVED 1987	
TA-15-182	R-182	SOLVENT STORAGE SHED		330-00 E 70-00
TA-15-183	R-183	LABORATORY & OFFICE BUILDING		340-00 E 83-00
TA-15-184	R-184	PHERMEX CHAMBER		375-00 E 103-00
TA-15-185	R-185	POWER CONTROL BUILDING		375-00 E 103-00
TA-15-186	R-186	DETECTION CHAMBER		375-00 E 110-00
TA-15-187	R-187	MANHOLE, ELECTRICAL		375-00 E 110-00
TA-15-188	R-188	MANHOLE, ELECTRICAL		375-00 E 110-00
TA-15-189	R-189	FIRING POINT SUBSTATION		375-00 E 103-00
TA-15-190	R-190		DESTROYED	
TA-15-191	R-191	SUBSTATION		335-00 E 85-00
TA-15-192	R-192	TANK, FUEL	RELOCATED TO TA-49-38	
TA-15-193	R-193		REMOVED 1983	
TA-15-194	R-194	ELECTRON GUN BUILDING		333-00 E 83-00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-15-195	R-195	TANK, SEPTIC		345+00 E 83+00
TA-15-196	R-196	TRANSFORMER STATION		343-00 E 83-00
TA-15-197	R-197	SUBSTATION		343-00 E 83-00
TA-15-198	R-198	TUNNEL		371+00 E 101+00
TA-15-199	R-199	TUNNEL		371+00 E 101+00
TA-15-200	R-200	TUNNEL		371+00 E 110+00
TA-15-201	R-201	TUNNEL		371+00 E 110+00
TA-15-202	R-202	COOLING TOWER		371+00 E 100+00
TA-15-203	R-203	PHERMEX CAVITY SHELTER		371+00 E 83+00
TA-15-204	R-204	CRO CHAMBER		371+00 E 103+00
TA-15-205	R-205	TANK, SEPTIC		371+00 E 103+00
TA-15-209	R-209	SUBSTATION	FORMERLY TA-16-570	333+00 E 83+00
TA-15-207	R-207	GUN EMPLACEMENT	RENUMBERED TA-36-56	
TA-15-208	R-208		REMOVED 1961	
TA-15-209	R-209	ROAD BLOCK	FORMERLY TA-3-88	340+00 E 83+00
TA-15-211	R-211	PLATFORM		385+00 E 83+00
TA-15-212	R-212	TRANSFORMER STATION		325+00 E 70+00
TA-15-213	R-213	PLATFORM		335+00 E 83+00
TA-15-214	R-214	SIREN		370+00 E 100+00
TA-15-215	R-215	ROAD BLOCK	FORMERLY TA-16-212	338+00 E 85+00
TA-15-216	R-216	MANHOLE, ELECTRICAL		370+00 E 100+00
TA-15-217	R-217	MANHOLE, ELECTRICAL		370+00 E 100+00
TA-15-218	R-218	MANHOLE, ELECTRICAL		375+00 E 100+00
TA-15-219	R-219	MANHOLE, ELECTRICAL		375+00 E 100-00
TA-15-220	R-220	MANHOLE, ELECTRICAL		375+00 E 103+00
TA-15-221	R-221	MANHOLE, ELECTRICAL		375+00 E 105+00
TA-15-222	R-222	MANHOLE, SANITARY		375+00 E 103+00
TA-15-223	R-223	MANHOLE, SANITARY		375+00 E 105-00
TA-15-224	R-224	DISTRIBUTION BOX, SANITARY		375+00 E 105-00
TA-15-225	R-225	MANHOLE, SANITARY		345+00 E 83+00
TA-15-226	R-226	DISTRIBUTION BOX, SANITARY		345+00 E 85+00
TA-15-227	R-227	MANHOLE, WATER		370+00 E 100+00
TA-15-228	R-228	MOTOR GENERATOR PAD		333+00 E 85+00
TA-10-229	R-229	MANHOLE, WATER		330+00 E 85+00
TA-15-230	R-230		DESTROYED	
TA-15-231	R-231	RADIO STATION		323+00 E 83+00
TA-15-232	R-232	GAS CHAMBER		375+00 E 105+00
TA-0-233	R-233	BETATRON BUILDING	REPLACES R-193	385+00 E 85+00
TA-15-234	R-234	ROAD BLOCK		350+00 E 85+00
TA-15-235	R-235	SIREN CONTROL PANEL		370+00 E 100+00
TA-15-236	R-236	BARRICADE		350+00 E 100+00
TA-15-237	R-237	MONITOR CONDUIT PAD		375+00 E 105+00
TA-15-238	R-238	MONITOR CONDUIT PAD		375+00 E 110+00
TA-15-239	R-239	PASSAGEWAY		335+00 E 65-00
TA-15-241	R-241	READY MAGAZINE		350+00 E 70+00
TA-15-242	R-242	MAKE UP BUILDING		345+00 E 70+00
TA-15-243	R-243	MAIN MAGAZINE		345+00 E 70+00
TA-15-245	R-245	PASSAGEWAY		335+00 E 65+00
TA-15-246	R-246	TRANSFORMER STATION		325+00 E 60+00
TA-15-247	R-247	TRANSFORMER STATION	RENUMBERED TA-0-472	
TA-15-248	R-248	TRANSFORMER STATION		335+00 E 65+00
TA-15-249	R-249	TRANSFORMER STATION		360+00 E 80+00
TA-15-250	R-250	EXTERNAL SHOT ALIGNMENT MOUNT		375+00 E 110+00
TA-15-251	R-251	BARRICADE		350+00 E 70+00
TA-15-252	R-252	BARRICADE		345+00 E 70+00
TA-15-253	R-253	BARRICADE		345+00 E 70-00
TA-15-254	R-254	VOLTAGE REGULATOR STATION		335+00 E 85+00
TA-15-255	R-255	RETAINING WALL		335+00 E 65+00
TA-15-256	R-256	TRANSFORMER STATION		330+00 E 70-00
TA-15-257	R-257	TRANSFORMER STATION		360+00 E 100+00
TA-15-258	R-258	CAPACITOR STATION		360+00 E 105-00
TA-15-259	R-259	METERING STATION		325+00 E 85+00
TA-15-260	R-260	METERING STATION		330+00 E 85+00
TA-15-261	R-261	TANK, OIL STORAGE		335+00 E 65+00
TA-15-262	R-262	TRANSFORMER STATION		330+00 E 95+00
TA-15-263	R-263	LABORATORY BLDG.		325+00 E 95+00
TA-15-264	R-264	TEST HOLE		325+00 E100+00
TA-15-265	R-265	TEST HOLE		325+00 E100+00
TA-15-266	R-266	TANK, STORAGE U.G		375+00 E105-00

REV.1 5/23/90

FIGURE 15-9
TA-15 STRUCTURE LOCATION INDEX
(1 OF 2)

REV	DATE	REVISION	BY	CKD	APP
18	9-19-83	REVISED TITLE BLOCK & DWG. TO STATUS OF 7-26-83	HS	JJC	

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

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-15
R-SITE

SEC CLASSIFICATION: CLASS. U.
REVIEWED: [signature]
DATE: 10-19-83

	SUBMITTED	RECOMMENDED	APPROVED
	[signature]	[signature]	[signature]
DRAWN	[signature]	DATE 9-19-83	SHEET NO. 1 of 2
CHECKED	[signature]		DRAWING NO. ENG-R5110

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-15-267	R-267	MANHOLE, ELECTRICAL		
TA-15-268	R-268	TRANSFORMER STATION		S38+00 E120+00
TA-15-269	R-269		NOT SHOWN	
TA-15-270	R-270		CANCELLED	
TA-15-271	R-271	TEST HOLE		S33+00 E100+00
TA-15-272	R-272	TEST HOLE		S33+00 E100+00
TA-15-273	R-273	TEST HOLE		[illegible] E100+00
TA-15-274	R-274	TEST HOLE		[illegible] E100+00
TA-15-275	R-275	TANK		[illegible] E105+00
TA-15-276	R-276	CONTAINMENT VESSEL	"JUMBO"	S75+00 E110+00
TA-15-277	R-277	FIRING POINT CHAMBER		S40+00 E105+00
TA-15-278	R-278	TRANSFORMER STATION		S65+00 E80+00
TA-15-279	R-279	TRANSFORMER STATION		S60+00 E120+00
TA-15-280	R-280	CABLE TERMINAL BOX AND CONDUIT RUNS		S75+00 E110+00
TA-15-281	R-281	CONTROL BLDG		S40+00 E105+00
TA-15-282	R-282	BARRICADE	NOT SHOWN	
TA-15-283	R-283	TANK, SEPTIC		S40+00 E105+00
TA-15-284	R-284	TANK, SEPTIC	CANCELLED	
TA-15-285	R-285	CONFINEMENT & TEST FAC.		S45+00 E85+00
TA-15-286	R-286	TANK, SEPTIC		S50+00 E60+00
TA-15-287	R-287	TANK, STORAGE U.G.		S30+00 E80+00
TA-15-288	R-288	"JUMBO" CONC. PAD		S75+00 E105+00
TA-15-289	R-289	CAMERA BUNKER		S75+00 E110+00
TA-15-290	R-290	SIGNAL CHAMBER		S75+00 E110+00
TA-15-291	R-291	TANK, FUEL 15,000 GAL.		S75+00 E110+00
TA-15-292	R-292	TRANSFORMER STATION		S75+00 E105+00
TA-15-293	R-293		NOT SHOWN	
TA-15-294	R-294	PUMP SHED	CANCELLED	
TA-15-295	R-295	GATE		S40+00 E105+00
TA-15-296	R-296	TRANSFORMER STATION	NOT SHOWN	
TA-15-297	R-297	TRAILER, SHOP	FORMERLY TA-0-307	S40+00 E105+00
TA-15-298	R-298	TRAILER, STORAGE	FORMERLY TA-0-922	S45+00 E80+00
TA-15-299	R-299	TRAILER, STORAGE	FORMERLY TA-0-543	S70+00 E105+00
TA-15-300	R-300	TRAILER, LABORATORY	FORMERLY TA-0-544	S75+00 E105+00
				S75+00 E105+00
TA-15-305	R-305	TRANSPORTABLE OFFICE BLDG	FORMERLY TA-0-1200	S30+00 E70+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

FIGURE 15-9
TA-15 STRUCTURE LOCATION INDEX
(2 OF 2)

6 | 9-16-83 | REVISED TITLE BLOCK & DWG TO STATUS OF 7-26-83 | HS

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

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-15 R-SITE

DATE 9 16 83 SHEET NO. 2 of 3
CLASS U
DATE 10-17-85
DRAWING NO. ENG-R 5110

REV.1 5/23/90

TA-16
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 16 operations center around the production of high explosives for weapons and non-weapons research and development. TA-16 is a large complex, with a total of over 200 buildings and structures, divided into separate operational units connected by roads. Operations include explosive pressing, assembly, casting, coating, machining, development of new materials, and non-destructive testing (DOE, 1987a). Storage is available in the area, and administration and shop facilities are included at TA-16. TA-16 includes the locations of former Technical Areas 13, 24, 25 and 29.

TA-16 lies at elevations between about 7,100 and 7,700 feet asl. It is located mostly on a broad mesa that is bounded on the north by Canon de Valle and on the south by Water Canyon. The southern boundary of TA-16 is south of Water Canyon at the Laboratory's edge at State Highway 4. The mesa also slopes eastward toward branches of Water Canyon and Canon de Valle. Canyon walls are steep in this area. The technical area lies on welded Bandelier Tuff. Vegetation in this technical area is from the Ponderosa Pine/Pinon-Juniper, Pinon-Juniper, Ponderosa Pine-fir, and Shrub-Grass-Forb overstory vegetation zones. Soil in the area consists of clayey-skeletal and fine Typic Eutroboralfs, Tocal very fine sandy loam, Pogna fine sandy loam, Frijoles very fine sandy loam, Carjo loam, Totavi gravelly loamy sand, Sanjue-Arribe complex, and rock outcrop (Nyhan et al., 1978).

The potentiometric surface of the main aquifer in the Los Alamos area lies at about 6,085 to 6,400 feet asl at TA-16. 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-16

16-001	DRY WELLS / TANK
16-002	TRITIUM TANK (deleted)
16-003	ACTIVE HE SUMPS
16-004	SANITARY WASTE TREATMENT PLANT
16-005	DECOMMISSIONED SEPTIC SYSTEMS
16-006	ACTIVE / INACTIVE SEPTIC SYSTEMS
16-007	DECOMMISSIONED WASTE PONDS
16-008	INACTIVE SURFACE IMPOUNDMENTS
16-009	DECOMMISSIONED BURN AREA
16-010	ACTIVE / INACTIVE BURN AND TREATMENT AREAS
16-011	INCINERATORS
16-012	WASTE STORAGE AREAS
16-013	DECOMMISSIONED WASTE STORAGE AREAS
16-014	OFF-GAS PROCESS (deleted)
16-015	LAUNDRY AND STEAM WASHING
16-016	LANDFILL / SURFACE DISPOSAL
16-017	WORLD WAR II HE COMPLEX
16-018	MATERIAL DISPOSAL AREA P
16-019	MATERIAL DISPOSAL AREA R
16-020	SILVER RECOVERY / OUTFALL REGION
16-021	OPERATIONAL RELEASES
16-022	SOIL CONTAMINATION FROM LEAKING USTs
16-023	DECOMMISSIONED INCINERATORS
16-024	SOIL CONTAMINATION FROM DECOMMISSIONED MAGAZINES
16-025	SOIL CONTAMINATION AT DECOMMISSIONED HE FACILITIES
16-026	INACTIVE OUTFALLS FROM BUILDING DRAINS
16-027	LEAKAGE FROM PCB TRANSFORMERS
16-028	ACTIVE OUTFALLS FROM COOLING TOWERS AND TANKS
16-029	INACTIVE HE SUMPS
16-030	ACTIVE OUTFALLS FROM BUILDING DRAINS
16-031	INACTIVE OUTFALLS: COOLING TOWERS/INDUSTRIAL LINES
16-032	DECOMMISSIONED HE SUMPS
16-033	DECOMMISSIONED FUEL TANKS
16-034	SOIL CONTAMINATION FROM MISCELLANEOUS BUILDINGS
16-035	SOIL CONTAMINATION FROM FORMER CONTROL BUNKER
16-036	SOIL CONTAMINATION FROM BATTLESHIP BUNKERS
16-037	INDUSTRIAL WASTE TANK

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : WELL
UNIT USE : DISPOSAL/TREATMENT
OPERATIONAL STATUS : INACTIVE/ACTIVE
PERIOD OF USE : EST. 1950s - ?
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

Several dry wells and tanks were constructed for the disposal of blowdown from the steam plant and wastewater from HE operations at the 300 complex: 1) A field survey found that the blowdown from the steam plant, TA-16-540, is routed to a blowdown tank, TA-16-456 [16-001(a)]. The tank is constructed of steel and has an inside diameter of 6'. It is 7' long and has 2000 gallon capacity. After exiting the blowdown tank, the liquid goes through two dry wells [16-001(b)] that discharge to outfall no. EPA 02A007 (see Appendix A). Tank TA-16-456 was installed in 1968 and replaced tank TA-16-541 [16-001(c)] which was installed in 1962. Tank TA-16-541 was filled with dirt and abandoned. The two dry wells are located just east of the steam plant. 2) A 1959 engineering drawing (ENG-R867) shows a 3' x 5' dry well located to the east of TA-16-208 [16-001(d)]. The wells have not been located in field surveys. 3) A dry well [16-001(e)] was constructed at the outfall area of the Building 300 series process line. The dry well was installed in nonpermeable rock and did not function properly. A "T" pipe was added which allowed liquids to discharge from this dry well to a NPDES outfall (EPA 05A058, see Appendix A).

WASTE INFORMATION

The blowdown tank and the two dry wells received only steam plant blowdown. Corrosion inhibitors and algicides were present in the blowdown liquid. It is unknown whether blowdown contained chromates in the early days of operation. The waste discharged to the dry wells east of TA-16-540 and east of TA-16-208 is unknown. The liquids received by the 300 series process line may have contained solvents.

RELEASE INFORMATION

It is unknown whether any of the wells or the blowdown tank have caused a hazardous release.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-001(a)	TA16-7-CA-I-HW TA16-2-S-A/I-HW		Tsk 14 : 401 470 467	TA-16-456, -540, -541; EAST OF TA-16-208
16-001(b)	TA16-2-S-A/I-HW TA16-7-CA-I-HW		Tsk 14 : 568	TA-16-568
16-001(c)	**	16.047	Tsk 14 : 566 567	TA-16-541
16-001(d)	TA16-7-CA-I-HW		Tsk 14 : 565	TA-16-208
16-001(e)	TA16-7-CA-I-HW		Tsk 14 : 564	TA-16-300

** No corresponding E. R. Program unit.

NOTES

This SWMU has been deleted because the facility has not become operational and does not generate waste.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : SUMP
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : EST. 1950s - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

For many years it has been the practice at TA-16 to route any industrial process water containing HE through catchment baffle-filter sumps before discharge. Open floor drains in each room also connect with these collecting sumps. The baffle-filters or settling areas have been regularly cleaned since they were put into use. The following table describes these sumps.

SUMU NO.	STRUCTURE	DIMENSIONS	OUTFALL LOCATION	SUMU NO.	STRUCTURE	DIMENSIONS	OUTFALL LOCATION
16-003(a)	TA-16-410	111"x41"x31"	EPA05A053	16-003(j)	TA-16-267	76"x41"x31"	EPA05A057
16-003(b)	TA-16-400	172"x41"x31"	EPA05A063	16-003(k)	TA-16-260	90"x36"x31"	EPA05A056
16-003(c)	TA-16-460	90"x41"x31"	EPA05A072	16-003(k)	TA-16-260(12)	176"x36"x31"	EPA05A056
16-003(d)	TA-16-300	123"x41"x31"	EPA05A058	16-003(l)	TA-16-430(2)	88"x41"x31"	SOUTH OF BUILDING
16-003(d)	TA-16-300	203"x41"x31"	EPA05A058	16-003(l)	TA-16-430	114"x41"x31"	SOUTH OF BUILDING
16-003(e)	TA-16-302	123"x41"x31"	EPA05A058	16-003(m)	TA-16-380	192"x41"x31"	EPA05A052
16-003(e)	TA-16-302	203"x41"x31"	EPA05A058	16-003(m)	TA-16-380		EPA05A057
16-003(f)	TA-16-304	123"x41"x31"	EPA05A058*	16-003(n)	TA-16-342	88"x41"x31"	EPA05A062
16-003(f)	TA-16-304	203"x41"x31"	EPA05A058	16-003(o)	TA-16-340(3)	81"x41"x31"	EPA05A062
16-003(g)	TA-16-306	123"x41"x31"	EPA05A058	16-003(o)	TA-16-340(3)	124"x41"x31"	EPA05A062
16-003(g)	TA-16-306	203"x41"x31"	EPA05A058	16-003(p)	TA-16-478		
16-003(h)	TA-16-280	117"x41"x31"	NORTH OF BUILDING	16-003(q)	TA-16-450		
16-003(i)	TA-16-265	76"x41"x31"	EPA05A057				

(12): number of sumps at that location; if not specified, the number is one (1).

Sumps in TA-16-304 and -306 do not currently handle HE waste. In addition, the sump in the truck washing facility, TA-16-400, receives truck washwater. It was constructed in 1952. The following HE sumps receive barium precipitation treatment:

STRUCTURE	BAY #s	# OF SUMPS	STRUCTURE	BAY #s	# OF SUMPS
TA-16-260	22,23	1	TA-16-300		2
TA-16-260	24,25	1	TA-16-302		2

Residual HE in these sumps is removed by a vacuum system and destroyed by burning. Barium sulfate residues are filtered to collect barium. The filters are dried and buried. It is possible that other inactive or decommissioned sumps exist for which information is not available.

WASTE INFORMATION

The waste consists primarily of HE. Solvents are discharged to the following: TA-16-400, and -260. Sumps TA-16-460, -342, -340 and -300 used to discharge solvents; currently the solvents from these buildings are drummed before reaching the sumps. The entrapped HE is picked up for burning. The sumps that receive barium precipitation treatment initially receive liquids from wash down of baratol machining operations. After pH adjustment, all barium is precipitated as insoluble barium sulfate by adding sodium sulfite to the sump solution. Radioactive wastes are also present in some of the sumps.

(continued)

RELEASE INFORMATION

The sumps have discharged hazardous waste from outfalls. There was an attempt made to eliminate volatile organic compounds from the TA-16-340 outfall by installing a fish ladder weir that functioned as an air stripper. This structure caused outfall liquid to be disseminated over a larger area due to splash. All material from sumps that receive barium precipitation treatment is taken to the TA-16 burn site (16-010) for treatment. There is no decant or outfall from the sumps when barium precipitation operations take place. Known releases of acetone and methyl ethyl ketone solubles have occurred from sumps TA-16-300, -302, -304, -306, and -430. The outfall in which residual HE is of particular concern TA-16-478. TA-16-306 also contains numerous plastics. Barium, TNT, RDX, and HMX have been identified in soil samples in the vicinity of the TA-16-260 outfalls. Outfalls from TA-16-340 and -300 were investigated as part of Environmental Problem 10 in the DOE Environmental Survey. Thirteen water and three soil samples were collected from the TA-16-340 outfall (NPDES 54). Of six water samples analyzed for gamma radioactivity, one sample had a detection of U-235, and one sample contained natural U-238 chain. Of the seven water samples analyzed for gross alpha and beta, the nonzero values ranged from 2.4 to 19 pCi/l. One water sample was analyzed for Sr-90, Th-230, U-235, U-238, Pu-238, Pu-239+240, Am-241 and total uranium. Of these analyses, only U-235 (32 pCi/l) and total uranium (1.5 micrograms/l) were detected. At the TA-16-300 outfall (NPDES 58), three water samples were screened for gamma, gross alpha, and beta radioactivity. No radioactivity was detected. Three soil samples were collected and screened for gamma radioactivity. Cs-137 was present in one sample (166 pCi/Kg) and natural activities were detected in all three samples. The pipe outlet from TA-16-478 was plugged in July, 1987.

NOTES

SWMU Nos. 16-003(p) through (v) have been renumbered to 16-029(a) through (g).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-003(a)	**	16.050	Tsk 14 : 456 650	TA-16-410
		? 16.012		
16-003(b)	TA16-5-O/CA-A/I-HW/RW	16.054	Tsk 14 : 417 628	TA-16-400
		? 16.022		
16-003(c)	**	16.060	Tsk 14 : 629	TA-16-460
		? 16.013		
16-003(d)	TA16-5-O/CA-A/I-HW/RW	16.056	Tsk 13 : 190 339 340	TA-16-300
		? 16.026		
16-003(e)	**	16.038	Tsk 13 : 190 337 338	TA-16-302
		? 16.027		
16-003(f)	TA16-5-O/CA-A/I-HW/RW	16.038	Tsk 13 : 190 335 336	TA-16-304
16-003(g)	TA16-5-O/CA-A/I-HW/RW	16.038	Tsk 13 : 190 333 334	TA-16-306
16-003(h)	**	16.057	Tsk 13 : 349	TA-16-280
16-003(i)	**	16.055	Tsk 13 : 209 372	TA-16-265
16-003(j)	**	16.038	Tsk 13 : 208 348	TA-16-267
16-003(k)	TA16-5-O/CA-A/I-HW/RW	16.053	Tsk 12 : 77 174 175	TA-16-260
		? 16.023		
16-003(l)	TA16-5-O/CA-A/I-HW/RW	16.059	Tsk 14 : 442-450	TA-16-430
		? 16.013		
16-003(m)	TA16-5-O/CA-A/I-HW/RW	16.049	Tsk 12 : 100 168 101	TA-16-380
16-003(n)	**	16.058	Tsk 12 : 71 171	TA-16-342
		? 16.024		
16-003(o)	TA16-5-O/CA-A/I-HW/RW	16.052	Tsk 12 : 69 172 173	TA-16-340
		? 16.025		
16-003(p)	TA16-5-O/CA-A/I-HW/RW	16.038	Tsk 12 : 68	TA-16-478
16-003(q)	**		Tsk 14 : 436 437 439	TA-16-450

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

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : WASTE TREATMENT PLANT
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1952 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SANITARY WASTE
HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

A sanitary wastewater treatment plant is operating at TA-16. Components of the plant include:

SWMU NO.	STRUCTURE	STRUCTURE TYPE
16-004(a)	TA-16-530	Imhoff Tank
16-004(b)	TA-16-531	trickling filter
16-004(c)	TA-16-532	final tank
16-004(d)	TA-16-533	sludge drying bed
16-004(e)	TA-16-534	screen
16-004(f)	TA-16-535	sludge drying bed

The wastewater treatment plant has an outfall (EPASSS03S; see Appendix A). The sanitary sewer system consists of thousands of feet of line, including numerous manholes and lift stations. Manholes and lift stations are numbered TA-16-700 through -792 and TA-16-813 through -817. Possibly manholes TA-16-27 and -1339 are associated with the system.

WASTE INFORMATION

The waste is sanitary, radioactive, and industrial waste.

RELEASE INFORMATION

It is unknown whether hazardous releases have occurred from the plant structures. A leaky sewer line was observed between manholes TA-16-710 and -711 during the E.R. site reconnaissance. Three soil samples from the NPDES 03s outfall region were screened for gamma as part of Environmental Problem #10 of the DOE Environmental Survey. Cs-137 and natural activities were present in all three samples. The Cs-137 activity increased with distance from the discharge point. Soil samples collected from the drying beds indicate the presence of Cs-137 and natural activities. Alpha spectral analyses showed the presence of Pu-239, Pu-238, and Pu-240 in all three samples.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-004(a)	**		Tsk 12 : 116 76	TA-16-530
16-004(b)	**	16.048	Tsk 12 : 112	TA-16-531
16-004(c)	**		Tsk 12 : 117	TA-16-532
16-004(d)	**	16.048	Tsk 12 : 113	TA-16-533
16-004(e)	**	16.048	Tsk 12 : 114	TA-16-534
16-004(f)	**	16.048	Tsk 12 : 115 75	TA-16-535
16-004(misc)			Tsk 12 : 74 118 119	

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SANITARY WASTE
HAZARDOUS WASTE

UNIT INFORMATION

SWMU NO.	STRUCTURE	STRUCTURE TYPE	BUILT	REMOVED	CAPACITY/DIMENSIONS	BUILDINGS SERVED	OUTFALL LOCATION
16-005(a)	TA-16-161	septic tank	1945		11'6" x 13'6" x 9'7"	TA-16-42 thru -45	Water Canyon
16-005(b)	TA-16-174	septic tank	1945		4' x 8' x 4'6"	TA-16-502	Valle Canyon
16-005(c)	TA-16-176	septic tank	1945		8' x 6' x 4'		Water Canyon
16-005(d)	TA-16-177	septic tank	1945	1968	10' x 6' x 4'6"	TA-16-141	Valle Canyon
16-005(e)	TA-16-179	septic tank	1948			TA-16-37	Water Canyon
16-005(f)	TA-16-272	septic tank	1951		1500 gallons	TA-16-260	Valle Canyon
16-005(g)	TA-16-393	filter bed		1965			Valle Canyon
16-005(h)	TA-16-431	septic tank	1952	1968		TA-16-430	Water Canyon
16-005(i)	TA-16-486	septic tank	1951	1951	7' x 4' x 4'		unknown
16-005(j)	TA-16-504	septic tank	1948	1963	4' x 5' x 3'		Valle Canyon
16-005(k)	TA-16-1132	septic tank		1956			unknown
16-005(l)	TA-16-1137	grease trap					Water Canyon
16-005(m)	TA-16-507	chemical pit	1944	1960	8'6" x 4'6" x 5		
16-005(n)	TA-16-173	septic tank	1949	1971	600 gallons		
16-005(o)	TA-16-420		1952	1962	unknown		

Septic tank TA-16-260 was associated with dosing chamber TA-16-273 and distribution box TA-16-274. Septic tank TA-16-431 was associated with manholes TA-16-764 and -763. Tanks TA-16-161, -174, -176, -177 were constructed of reinforced concrete. Construction details on the other tanks is lacking. In addition to these systems, engineering drawings indicate several unmarked tanks that were also decommissioned including an unmarked tank south of TA-16-515. It is unknown whether septic tanks TA-16-174 and TA-16-504 have been removed. Outfalls were associated with tanks TA-16-272, -177, -431, -1132, -174, -179, and -1137.

WASTE INFORMATION

The waste consisted of domestic and, for some systems, industrial sewage. It is possible that TA-16-272 received TNT, HMX, RDX, boron, and barium. Tank TA-16-504 received solvents and possibly photographic solutions. Tank TA-16-431 may have received solvents and HE.

RELEASE INFORMATION

Information on possible residuals in the associated drain fields and outfall areas is lacking.

NOTES

SWMU No. 16-005(m) has been renumbered to 16-029(h2) because it is part of an inactive HE sump system. SWMU Nos. 16-005(g) and (h) are the dosing chamber and distribution box for the TA-16-272 septic system; all three are considered one system and are addressed as 16-005(f).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-005(a)	TA16-1-CA-I-HW		Tsk 14 : 460	TA-16-161
16-005(b)	TA16-1-CA-I-HW		Tsk 14 : 458 399	TA-16-174
16-005(c)	TA16-1-CA-I-HW		Tsk 14 : 461	TA-16-176
16-005(d)	TA16-1-CA-I-HW		Tsk 13 : 238 246	TA-16-177
16-005(e)	TA16-1-CA-I-HW		Tsk 14 : 462	TA-16-179

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-005(f)	TA16-1-CA-I-HW		Tsk 12 : 80 104	TA-16-272
16-005(g)	TA16-1-CA-I-HW		Tsk 12 : 178-180	TA-16-393
16-005(h)	**		Tsk 14 : 463 451	TA-16-431
16-005(i)	TA16-1-CA-I-HW		Tsk 12 : 105 106	TA-16-486
16-005(j)	TA16-1-CA-I-HW TA24-2-S/UST-I-HW/RW		Tsk 13 : 376 377	TA-16-504
16-005(k)	TA16-1-CA-I-HW		Tsk 14 : 411 464	TA-16-1132
16-005(l)	TA16-1-CA-I-HW		Tsk 14 : 407 468	TA-16-1137
16-005(m)	TA24-2-S/UST-I-HW/RW TA16-2-S-A/I-HW TA16-1-CA-I-HW		Tsk 13 : 389	TA-16-507
16-005(n)	**	16.030	Tsk 13 : 245	TA-16-173
16-005(o)	**		Tsk 14 : 452 465	TA-16-420

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-16
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

The following are active and inactive septic systems in TA-16:

SWMU NO.	STRUCTURE	CONSTRUCTED	STATUS	CAPACITY	DIMENSIONS/CONSTRUCTION	EID NO.
16-006(a)	TA-16-175	1946	active	500 gal	10' x 6' x 4'6"/reinforced concrete	LA-38
16-006(b)	TA-16-178	1952	active	380 gal		LA-39
16-006(c)	TA-16-371	1953	active	1,216 gal		LA-24
16-006(d)	TA-16-381	1952	active	540 gal		LA-25
16-006(e)	TA-16-385	1963	active	385 gal	steel	LA-26
16-006(f)	TA-16-1153	1987	active	1,000 gal		
16-006(g)	TA-16-527	1944	inactive	1,500 gal	10' x 6' x 4'6"	
16-006(h)	TA-16-526	1945	unknown	unknown	6' x 6' x 6'6"	
16-006(i)	TA-16-00	?	active	1,000 gal		

Of the active septic systems, TA-16-178, -371, and -381 overflow to leach fields and TA-16-175 and -385 overflow to drain lines. The active systems appear to be operating properly. The Environmental Restoration Release Site Database indicates that a septic system and drainage system may have served TA-16-24 and -490. It also indicates that the capacity of TA-16-381 is 450 gallons. TA-16-00 serves Building 370 and overflows to a seepage bed.

WASTE INFORMATION

The waste consists of domestic sewage and industrial waste. In November 1988, TA-16-175 and -385 were sampled. The results of the analyses indicated that volatiles were present and EP Toxic metals were below detection limits. Tank TA-16-527 may have handled liquids containing HE residues. There is no information on TA-16-526.

RELEASE INFORMATION

It is unknown whether any of these septic systems have caused a hazardous waste release. Outfalls are asociated with tanks TA-16-175, -178, -385, and -371.

NOTES

SWMU Nos. 16-006(a) and (g) are decommissioned and are now addressed as SWMU Nos. 16-005(n) and (o), respectively.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-006(a)	TA16-8-ST/UST-A/I-HW/RW	? 16.030	Tsk 14 : 400 459	TA-16-175
16-006(b)	**	? 16.030	Tsk 14 : 398 457	TA-16-178
16-006(c)	TA16-8-ST/UST-A/I-HW/RW	? 16.030	Tsk 12 : 98 108	TA-16-371
16-006(d)	TA16-8-ST/UST-A/I-HW/RW	? 16.030	Tsk 12 : 111 110	TA-16-381
16-006(e)	**		Tsk 12 : 89 107	TA-16-385
16-006(f)	**		Tsk 12 : 99 109	TA-16-1153
16-006(g)	TA16-8-ST/UST-A/I-HW/RW	? 16.030	Tsk 13 : 392	TA-16-527
16-006(h)	TA25-2-CA/ST-1-HW	? 16.030	Tsk 13 : 396	TA-16-526
16-006(i)	**			TA-16-00
16-006(misc)	**	16.062	Tsk 13 : 374 375	

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

SUMMARY

LOCATION	: TA-16	MATERIALS MANAGED	: HAZARDOUS WASTE
TYPE OF UNIT(s)	: SURFACE IMPOUNDMENT		SUSPECTED RADIOACTIVE WASTE
UNIT USE	: STORAGE/DISPOSAL		
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: LATE 1940s - 1970s		
HAZARDOUS RELEASE	: NONE		
RADIOACTIVE RELEASE	: NONE		

UNIT INFORMATION

There were four ponds [16-007(a)] to the northeast of explosives machining buildings TA-16-30, -31, -32, -33, and -34. Aerial photos from the 1940's show the ponds full of liquid. The drains from the explosives machining buildings connected to the ponds. The HE was removed before the ponds were filled and the area was graded. The buildings have also been decommissioned. The Environmental Restoration Release Site Database indicates that in 1970, floor drains in TA-16-89 through -93 emptied into a small earth pond [16-007(b)] west of the buildings. The pond is no longer in place.

WASTE INFORMATION

The ponds are believed to have received HE contaminated liquid and radioactive materials.

RELEASE INFORMATION

The pond contents were removed before the ponds were filled and graded. There is no evidence that a hazardous waste release occurred while the ponds were active. Eight sediment and three water samples were collected from the four ponds northeast of TA-16-30 through -34 as part of Environmental Problem #24 of the DOE Environmental Survey. Of the eight sediment samples that were screened for gamma radiation, four indicated the presence of Cs-137 and all samples had natural activities. No gamma, gross alpha or gross beta activities were detected.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-007(a)	TA16-3-SI-A/I-HW	16.006 16.001- 16.004	Tsk 13 : 248-251	TA-16-30, -31, -32, -33, -34
16-007(b)	**		Tsk 13 : 252	NEAR TA-16-89 THROUGH -93

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-16	MATERIALS MANAGED	: HAZARDOUS WASTE
TYPE OF UNIT(s)	: SURFACE IMPOUNDMENT		RADIOACTIVE WASTE
UNIT USE	: STORAGE/DISPOSAL/TREATMENT		MIXED WASTE
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: EST. 1940s - 1980s		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: NONE		

UNIT INFORMATION

An inactive, unlined pond [16-008(a)] received liquid waste from process buildings TA-16-89, -90, -91. The pond was approximately 100′ x 250′. Remains of the pond were documented in the RFA. There was a hypalon-lined pond [16-008(b)] at the TA-16 burning ground. According to the RFA, the pond was 60′ x 35′ x 4′. The pond received liquid from two filtration beds to the south of the pond. To reduce the barium nitrate level in the pond, liquid sodium sulfate was added on one occasion to precipitate barium as barium sulfate. When barium nitrate levels had been reduced to less than 100 ppm, the liquid was discharged to an outfall. A closure plan has been approved by the state and closure will be completed in June, 1990 in accordance with the approved plan.

WASTE INFORMATION

The waste in the unlined pond may have consisted of HE, including barium and chemicals used in electroplating operations. Samples of the unlined pond sludge did not contain high levels of HE. The sludge in the lined pond contained barium sulfate, barium nitrate, and HE residue.

RELEASE INFORMATION

There is no evidence of hazardous releases from the inactive process building pond. Sampling indicates that there has been no release below the liner. The lined pond discharged to an outfall. The receiving canyon below the outfall was sampled for barium on February 11, 1987. Analytical results indicate barium concentrations in the soil of 26 mg/l at 3 feet below the outfall, 6.6 mg/l at 10 feet below the outfall, and 2.7 mg/l at 40 feet below the outfall. The background for barium in soil near the outfall is 0.8 mg/l. As part of Environmental Problem #24 of the DOE Environmental Survey, three soil samples were collected from the unlined drainage pond below the TA-16-93 plating shop. Gamma screens indicated the presence of Cs-137 and natural activities in all three samples.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-008(a)	TA16-3-SI-A/I-HW	16.005	Tsk 13 : 247 252	TA-16-89, -90, -91
16-008(b)	TA16-3-SI-A/I-HW	16.019	Tsk 12 : 120	TA-16-392

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : OPEN BURNING
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1940s - 1960s
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

A 1948 engineering drawing (ENG-R134) indicates a burn area at S25+50, W62+50. The decommissioned burn area was located approximately 200' northwest of TA-16-54. No information regarding the decommissioning of the area is available.

WASTE INFORMATION

The waste consisted of HE, some of which contained barium.

RELEASE INFORMATION

It is suspected that barium was released.

NOTES

SWMU No. 16-009(b) was a burn area that was part of MDA-R; this unit is addressed as SWMU No. 16-019.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-009(a)	TA16-4-CA-A/I-HW/RW	16.031	Tsk 12 : 159	NEAR TA-16-54
16-009(b)	TA16-4-CA-A/I-HW/RW	? 16.033	Tsk 12 : 160 161 167	NEAR TA-16-260

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : OPEN BURNING
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : 1940s - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

TA-16 appears to have had a HE burning ground at the present location since the beginning of operations in the technical area. A 1948 topographic map shows what appears to be a burning ground with two burn pads located at the present burn site. Equipment contaminated with HE and waste HE are burned at this area. The following table includes many of the structures associated with this burning ground:

SWMU NO.	STRUCTURE	TYPE	BUILT	DIMENSIONS	CURRENT USE
16-010(a)	TA-16-386	burning area	1951	100' x 100'	storage area
16-010(b)	TA-16-387	burning area	1951	100' x 100'	flash pad
16-010(c)	TA-16-388	burning slab	1951	12' x 20'	burn table (4' x 16')
16-010(d)	TA-16-399	burning slab	1951	20' x 20'	burn table (4' x 16')
16-010(e)	TA-16-401	pressure filter tank	1961	8' dia x 10' high, steel	same
16-010(f)	TA-16-406	pressure filter tank	1965	8' dia x 10' high, steel	same
16-010(g)	TA-16-228	filter/treatment unit	1988		wastewater treatment
16-010(h)	TA-16-390	basket wash facility	1951		equipment storage
16-010(i)	TA-16-392	filter bed	1951		burning pad (inactive)
16-010(j)	TA-16-394	filter bed	1951	12' x 12' x 1'	open burning tray
16-010(k)	TA-16-1129	trough	1951		inactive
16-010(l)	TA-16-1134	trough	1951		inactive
16-010(m)	TA-16-1135	trough	1951		inactive
16-010(n)	TA-16-1136	trough			inactive

Several processes for HE treatment and disposal are conducted at the burning grounds: 1) Equipment contaminated with HE is flashed at the flash pad, TA-16-387. The pad consists of a layer of sand several inches thick over a soil surface. In the past, the items that required disposal by flashing were disposed of at MDA-P. 2) Waste HE is disposed of at burn tables, TA-16-388 and -399. These tables, which were constructed near former burning slabs, are about 2' above the ground and hold burn trays that are about 4' x 16' in size. 3) HE sludge is processed through pressure filter tanks TA-16-401 and -406. These tanks are cone shaped steel containers with a surface layer of sand overlying layers of fine and coarse gravel. The sludge is dried and then burned in the tanks. Approximately 750 pounds of sludge can be burned at one time. Recently (1988) a carbon filter treatment unit, TA-16-228, was installed to treat wastewater draining from the tanks. 4) Oil contaminated with solvents is burned at TA-16-394. This structure was modified from a filter bed and now consists of a 12' x 12' x 1' metal tray filled with 6 to 8 inches of sand. This tray contains four shallow steel pans that are lined with fire bricks onto which the contaminated oil is poured and ignited. The following disposal units were used in the past in the burning grounds, but are not currently active: 1) The basket washing facility, TA-16-390, was operated from 1951-1961. The HE residues in the washwater went into floor drains in this building to filter beds TA-16-392, -393, and -394 via troughs TA-16-1129, -1134, -1135, and -1136. After drying in the filter beds, the sludge was burned. About 400 pounds of HE could be burned in one day. The filter bed sand was raked after the initial burning and the raked material was taken to the scrap HE burning pit and reburned. Filter bed TA-16-393 was taken to TA-54 for disposal in 1965. 2) Uranium contaminated objects were also burned at this area at one time. Filter bed TA-16-392 was modified to a pad for this purpose.

WASTE INFORMATION

The waste consists of HE residues containing barium and a small amount of uranium that was used in some of the burns conducted in the past.

RELEASE INFORMATION

It is unknown the extent to which these areas may have caused a release of hazardous waste.

(continued)

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-010(a)	TA16-4-CA-A/I-HW/RW	16.015 16.009	Tsk 12 : 163	TA-16-386
16-010(b)	TA16-4-CA-A/I-HW/RW	16.032 16.008	Tsk 12 : 164	TA-16-387
16-010(c)	TA16-4-CA-A/I-HW/RW	16.016	Tsk 12 : 165 84	TA-16-388
16-010(d)	TA16-4-CA-A/I-HW/RW	16.033	Tsk 12 : 166	TA-16-399
16-010(e)	**	16.017 16.051	Tsk 12 : 187 87	TA-16-401
16-010(f)	**	16.018	Tsk 12 : 188	TA-16-406
16-010(g)	**		Tsk 12 : 182	TA-16-228
16-010(h)	TA16-4-CA-A/I-HW/RW	? 16.037	Tsk 12 : 176	TA-16-390
16-010(i)	TA16-4-CA-A/I-HW/RW	16.031	Tsk 12 : 177 85	TA-16-392
16-010(j)	TA16-4-CA-A/I-HW/RW	16.020 16.021 ? 16.032	Tsk 12 : 181 86 177	TA-16-394
16-010(k)	TA16-4-CA-A/I-HW/RW		Tsk 12 : 183	TA-16-1129
16-010(l)	TA16-4-CA-A/I-HW/RW		Tsk 12 : 184	TA-16-1134
16-010(m)	TA16-4-CA-A/I-HW/RW		Tsk 12 : 185	TA-16-1135
16-010(n)	TA16-4-CA-A/I-HW/RW		Tsk 12 : 186	TA-16-1136

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

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : INCINERATOR
UNIT USE : TREATMENT
OPERATIONAL STATUS : INACTIVE/ACTIVE
PERIOD OF USE : 1950s - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

An incinerator, TA-16-412, was used to burn HE-contaminated paper and rags at TA-16. It was built in 1962. It is a cage-type unit with a basement pit and measures approximately 20' x 20'. This incinerator replaced TA-16-403, a decommissioned incinerator (see 16-023). Incinerator TA-16-412 has been replaced by incinerator TA-16-1409 at the burning ground, which is currently active. The active incinerator consists of primary and secondary combustion chambers and a settling chamber. Trash is loaded into the primary chamber by a front-end loader, and the burn cycle is initiated. After two to three weeks of burning, the ash is removed, placed on the scrap metal pile and transferred by HSE-7. Each 810-pound burn produces approximately two cubic feet of ash. Up to four burns may occur each day.

WASTE INFORMATION

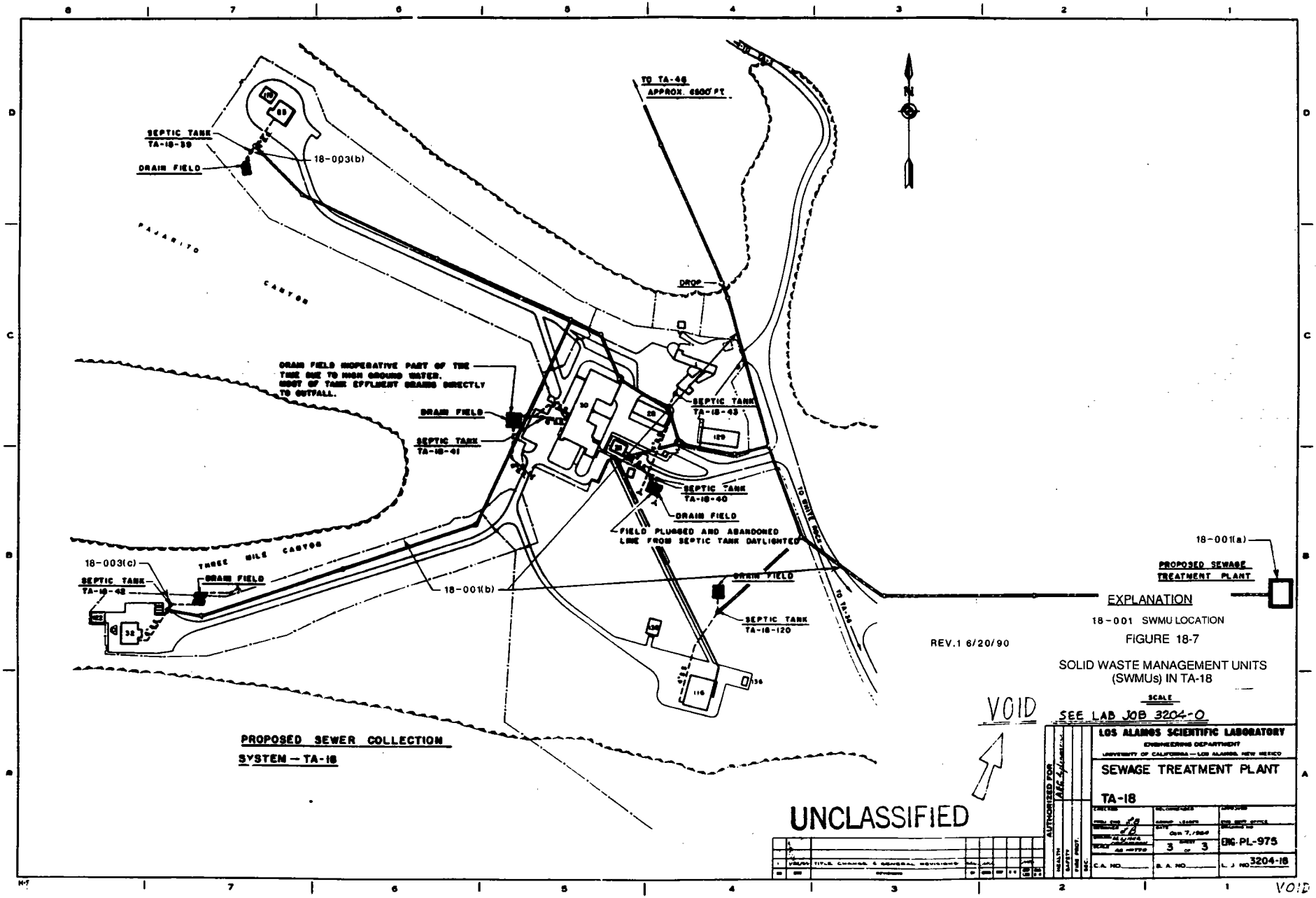
The waste presently incinerated is paper and rags contaminated with HE. Barium is not suspected to be present. HE contaminated oil/solvents may be burned in TA-16-1409 with approval; however, they are currently open-burned at TA-16-293 and -294.

RELEASE INFORMATION

Emissions from the present incinerator conform to federal and state standards when operated at manufacturer-specified conditions, and consist of combustion products.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-011	TA16-6-IN-A-HW	16.011	Tsk 14 : 624 627	TA-16-412, -1409



REV.1 6/20/90

FIGURE 18-7

SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-18

SCALE

VOID

SEE LAB JOB 3204-0

UNCLASSIFIED

LOS ALAMOS SCIENTIFIC LABORATORY	
ENGINEERING DEPARTMENT	
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO	
SEWAGE TREATMENT PLANT	
TA-18	
DRAWN	
CHECKED	
DESIGNED	
TRACED	
SCALE	
DATE	Oct 7, 1959
SHEET	3 OF 3
ENG-PL-975	
C.A. NO.	B. A. NO.
L. J. NO.	3204-18

AUTHORIZED FOR ARC Systems
HEALTH
SAFETY
FIRE PROT.
SEC.

VOID

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-18-1	PL-1	LABORATORY BUILDING		S 49-50 E187-50
TA-18-2	PL-2	BATTLESHIP BUILDING		S 37-50 E187-50
TA-18-3	PL-3		REMOVED 1943	
TA-18-4	PL-4		REMOVED 1943	
TA-18-5	PL-5	BATTLESHIP BUILDING		S 50-00 E182-50
TA-18-6	PL-6		REMOVED 1932	
TA-18-7	PL-7	SUBMARINE BUILDING	RELOCATED TO TA-27-1	
TA-18-8	PL-8	SUBMARINE BUILDING	RELOCATED TO TA-27-2	
TA-18-9	PL-9	INSTRUMENT CHAMBER	RELOCATED TO TA-27-3	
TA-18-10	PL-10	ASSEMBLY BUILDING	RELOCATED TO TA-5-1	
TA-18-11	PL-11		REMOVED 1950	
TA-18-12	PL-12		REMOVED 1950	
TA-18-13	PL-13		REMOVED 1950	
TA-18-14	PL-14		REMOVED 1944	
TA-18-15	PL-15	MAGAZINE	DEMOLISHED 1977	
TA-18-16	PL-16		REMOVED 1952	
TA-18-17	PL-17	WAREHOUSE	RELOCATED TO TA-20-46	
TA-18-18	PL-18		REMOVED 1943	
TA-18-19	PL-19		REMOVED 1953	
TA-18-20	PL-20		REMOVED 1952	
TA-18-21	PL-21	STORAGE BUILDING	RELOCATED TO TA-2-14	
TA-18-22	PL-22		REMOVED 1950	
TA-18-23	PL-23	ASSEMBLY BUILDING	KIVA NO. 1	S 35-00 E187-50
TA-18-24	PL-24		REMOVED 1928	
TA-18-25	PL-25		REMOVED 1950	
TA-18-26	PL-26	VAULT		S 42-50 E197-50
TA-18-27	PL-27	GUARD HOUSE	DEMOLISHED 1977	
TA-18-28	PL-28	WAREHOUSE		S 42-50 E197-50
TA-18-29	PL-29	LOG CABIN		S 45-00 E195-00
TA-18-30	PL-30	LABORATORY & OFFICE BLDG		S 42-50 E195-00
TA-18-31	PL-31	UTILITY BUILDING		S 45-00 E195-00
TA-18-32	PL-32	ASSEMBLY BUILDING	KIVA NO. 2	S 30-00 E182-50
TA-18-33	PL-33	TANK	WATER, UNDERGROUND	S 25-00 E187-50
TA-18-34	PL-34	TANK	WATER, UNDERGROUND	S 35-00 E185-00
TA-18-35	PL-35		REMOVED 1953	
TA-18-36	PL-36		REMOVED 1953	
TA-18-37	PL-37	GUARD HOUSE		S 45-00 E197-50
TA-18-38	PL-38	WASTE PIT & HOIST	DEMOLISHED 1977	
TA-18-39	PL-39	TANK	SEPTIC	S 37-50 E185-00
TA-18-40	PL-40	TANK	SEPTIC	S 43-00 E197-50
TA-18-41	PL-41	TANK	SEPTIC	S 43-00 E192-50
TA-18-42	PL-42	TANK	SEPTIC	S 30-00 E182-50
TA-18-43	PL-43	TANK	SEPTIC	S 42-50 E197-50
TA-18-44	PL-44	SWITCHGEAR STATION		S 45-00 E197-50
TA-18-45	PL-45	TRANSFORMER STATION		S 42-50 E197-50
TA-18-46	PL-46	TRANSFORMER STATION		S 37-50 E185-00
TA-18-47	PL-47	MANHOLE	SANITARY	S 45-00 E197-50
TA-18-48	PL-48	MANHOLE	SANITARY	S 43-00 E197-50
TA-18-49	PL-49	MANHOLE	ELECTRICAL	S 42-50 E192-00
TA-18-50	PL-50		REMOVED 1968	
TA-18-51	PL-51		REMOVED 1957	
TA-18-52	PL-52		REMOVED 1957	
TA-18-53	PL-53	MANHOLE	ELECTRICAL	S 40-00 E188-50
TA-18-54	PL-54	MANHOLE	ELECTRICAL	S 37-50 E180-00
TA-18-55	PL-55	MANHOLE	ELECTRICAL	S 37-50 E190-00
TA-18-56	PL-56	MANHOLE	ELECTRICAL	S 37-50 E187-50
TA-18-57	PL-57	MANHOLE	ELECTRICAL	S 35-00 E187-50
TA-18-58	PL-58	MANHOLE	ELECTRICAL	S 40-00 E187-50
TA-18-59	PL-59	MANHOLE	ELECTRICAL	S 42-50 E192-50
TA-18-60	PL-60	MANHOLE	ELECTRICAL	S 42-50 E192-50
TA-18-61	PL-61	MANHOLE	ELECTRICAL	S 42-50 E188-50
TA-18-62	PL-62	MANHOLE	ELECTRICAL	S 42-50 E190-00
TA-18-63	PL-63	MANHOLE	TELEPHONE	S 42-50 E192-50
TA-18-64	PL-64	MANHOLE	ELECTRICAL	S 42-50 E192-50
TA-18-65	PL-65	MANHOLE	TELEPHONE	S 42-50 E192-50
TA-18-66	PL-66	MANHOLE	ELECTRICAL	S 40-00 E192-50
TA-18-67	PL-67	MANHOLE	TELEPHONE	S 40-00 E192-50
TA-18-68	PL-68	MANHOLE	ELECTRICAL	S 40-00 E190-00
TA-18-69	PL-69	MANHOLE	TELEPHONE	S 40-00 E190-00
TA-18-70	PL-70	MANHOLE	ELECTRICAL	S 40-00 E187-50
TA-18-71	PL-71	MANHOLE	TELEPHONE	S 40-00 E187-50
TA-18-72	PL-72	MANHOLE	ELECTRICAL	S 40-00 E187-50
TA-18-73	PL-73	MANHOLE	TELEPHONE	S 37-50 E187-50
TA-18-74	PL-74	MANHOLE	ELECTRICAL	S 37-50 E185-00
TA-18-75	PL-75	MANHOLE	TELEPHONE	S 37-50 E185-00
TA-18-76	PL-76	MANHOLE	ELECTRICAL	S 45-00 E195-00
TA-18-77	PL-77	MANHOLE	ELECTRICAL	S 45-00 E192-50
TA-18-78	PL-78	MANHOLE	ELECTRICAL	S 45-00 E192-50
TA-18-79	PL-79	MANHOLE	ELECTRICAL	S 47-50 E192-50
TA-18-80	PL-80	MANHOLE	ELECTRICAL	S 47-50 E192-50
TA-18-81	PL-81	MANHOLE	ELECTRICAL	S 47-50 E190-00
TA-18-82	PL-82	MANHOLE	ELECTRICAL	S 47-50 E190-00
TA-18-83	PL-83	MANHOLE	ELECTRICAL	S 47-50 E187-50
TA-18-84	PL-84	MANHOLE	ELECTRICAL	S 47-50 E187-50
TA-18-85	PL-85	MANHOLE	ELECTRICAL	S 47-50 E187-50
TA-18-86	PL-86	MANHOLE	ELECTRICAL	S 47-50 E185-00
TA-18-87	PL-87	MANHOLE	ELECTRICAL	S 47-50 E185-00
TA-18-88	PL-88	MANHOLE	ELECTRICAL	S 50-00 E195-00
TA-18-89	PL-89	MANHOLE	ELECTRICAL	S 50-00 E192-50
TA-18-90	PL-90	MANHOLE	ELECTRICAL	S 50-00 E192-50
TA-18-91	PL-91	MANHOLE	ELECTRICAL	S 50-00 E188-20
TA-18-92	PL-92	HOSE HOUSE	TRANSFERRED TO ZIA 1957	S 42-50 E195-00
TA-18-93	PL-93	MANHOLE	SANITARY	S 42-50 E192-50
TA-18-94	PL-94	MANHOLE	ABANDONED 1953	S 45-00 E182-50
TA-18-95	PL-95	MANHOLE	ELECTRICAL	S 42-50 E195-00
TA-18-96	PL-96	MANHOLE	ELECTRICAL	S 50-00 E182-50
TA-18-97	PL-97	MANHOLE	ELECTRICAL	S 50-00 E182-50

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-18-98	PL-98	MANHOLE	SANITARY	S 45-00 E188-00
TA-18-99	PL-99		REMOVED 1960	
TA-18-100	PL-100	MANHOLE	WATER, RAW	S 42-50 E181-00
TA-18-101	PL-101	MANHOLE	WATER, RAW	S 42-50 E180-00
TA-18-102	PL-102		REMOVED 1948	
TA-18-103	PL-103		REMOVED 1948	
TA-18-104	PL-104	TANK, FUEL UNDERGROUND	ABANDONED JUNE 1986	S 42-50 E197-50
TA-18-105	PL-105	MANHOLE	ACID SETTLING PIT	S 37-50 E185-00
TA-18-106	PL-106		REMOVED 1932	
TA-18-107	PL-107		REMOVED 1948	
TA-18-108	PL-108		REMOVED 1953	
TA-18-109	PL-109		REMOVED 1947	
TA-18-110	PL-110	DRUM STORAGE PLATFORM		S 42-50 E195-00
TA-18-111	PL-111		REMOVED 1981	
TA-18-112	PL-112		REMOVED 1941	
TA-18-113	PL-113	DISTRIBUTION BOX	SANITARY	S 42-50 E192-50
TA-18-114	PL-114		CANCELLED	
TA-18-115	PL-115	EXPERIMENTAL SLAB		S 50-00 E182-50
TA-18-116	PL-116	ASSEMBLY BUILDING	KIVA NO. 3	S 30-00 E197-50
TA-18-117	PL-117		CANCELLED	
TA-18-118	PL-118		CANCELLED	
TA-18-119	PL-119	STORAGE BUILDING		S 35-00 E185-00
TA-18-120	PL-120	TANK	SEPTIC	S 30-00 E197-50
TA-18-121	PL-121	MANHOLE	SANITARY	S 32-50 E197-50
TA-18-122	PL-122	STORAGE BUILDING		S 30-00 E182-50
TA-18-123	PL-123	ROAD BLOCK		S 47-50 E192-50
TA-18-124	PL-124	ROAD BLOCK		S 47-50 E192-50
TA-18-125	PL-125	ROAD BLOCK		S 42-50 E195-00
TA-18-126	PL-126	POWER PEDESTAL		S 43-00 E192-50
TA-18-127	PL-127	PULSED ACCEL. BUILDING		S 42-50 E186-00
TA-18-128	PL-128	ASSEMBLY COVER		S 30-00 E182-50
TA-18-129	PL-129	REACTOR ASSEMBLY BLDG.		S 43-00 E197-50
TA-18-130	PL-130	MANHOLE	ELECTRICAL	S 42-50 E192-00
TA-18-131	PL-131	TANK	SHIELD	S 30-00 E182-50
TA-18-132	PL-132	CONTROL BOX	ELECTRICAL	S 47-50 E192-50
TA-18-133	PL-133	CONTROL BOX	ELECTRICAL	S 47-50 E192-50
TA-18-134	PL-134	CONTROL BOX	ELECTRICAL	S 47-50 E182-50
TA-18-135	PL-135	DISTRIBUTION BOX	SANITARY	S 47-50 E197-50
TA-18-136	PL-136	UNIT SUBSTATION		S 50-00 E200-00
TA-18-137	PL-137	BRIDGE		S 45-00 E182-50
TA-18-138	PL-138	WAREHOUSE		S 50-00 E197-50
TA-18-139	PL-139	CONTROL BOX	ELECTRICAL	S 43-00 E182-50
TA-18-140	PL-140	TRANSFORMER STATION		S 42-50 E185-00
TA-18-141	PL-141	ULTRA-SONIC CLEANING BLDG		S 42-50 E197-50
TA-18-142	PL-142	SUBSTATION		S 42-50 E195-00
TA-18-143	PL-143	MANHOLE	ELECTRICAL	S 42-50 E195-00
TA-18-144	PL-144	MANHOLE	ELECTRICAL	S 42-50 E197-50
TA-18-145	PL-145	MANHOLE	TELEPHONE	S 42-50 E197-50
TA-18-146	PL-146			
TA-18-147	PL-147	OFFICE BUILDING		S 42-50 E197-50
TA-18-148	PL-148	TRANSFORMER STATION		S 42-50 E197-50
TA-18-149	PL-149	TRANSFORMER STATION		S 42-50 E197-50
TA-18-150	PL-150	TRANSFORMER STATION		S 50-00 E197-50
TA-18-151	PL-151		CANCELLED	
TA-18-152	PL-152	TANK	SEPTIC	S 42-50 E197-00
TA-18-153	PL-153	MANHOLE	SANITARY	S 42-50 E195-00
TA-18-154	PL-154	MANHOLE	SANITARY	S 45-00 E195-00
TA-18-155	PL-155	MANHOLE	SANITARY	S 45-00 E195-00
TA-18-156	PL-156	MANHOLE	SANITARY	S 45-00 E197-50
TA-18-157	PL-157	MANHOLE	SANITARY	S 45-00 E195-00
TA-18-158	PL-158	MANHOLE	SANITARY	S 47-50 E200-00
TA-18-159	PL-159	MANHOLE	SANITARY	S 47-50 E200-50
TA-18-160	PL-160	MANHOLE, SANITARY	610' SE OF STRUCT. 159	
TA-18-161	PL-161	MANHOLE, SANITARY	460' SE OF STRUCT. 160	
TA-18-162	PL-162	LAGOON, SANITARY	40' N PL-161, N OF PAJARITO RD.	
TA-18-163	PL-163		REMOVED 1968	
TA-18-164	PL-164		REMOVED 1968	
TA-18-165	PL-165		CANCELLED	
TA-18-166	PL-166		CANCELLED	
TA-18-167	PL-167		CANCELLED	
TA-18-168	PL-168	DYNAMIC CRITICAL ASSAY FAC.	BLDG.	S 37+50 E185+00
TA-18-169	PL-169	MANHOLE, SANITARY	423' SE OF PL-161	
TA-18-170	PL-170	MANHOLE, SANITARY	318' SE OF PL-169	
TA-18-171	PL-171	MANHOLE, SANITARY	203' SE OF PL-170	
TA-18-172	PL-172	MANHOLE, SANITARY	333' SE OF PL-171	
TA-18-173	PL-173	MANHOLE, SANITARY	425' SE OF PL-172	
TA-18-174	PL-174	MANHOLE, SANITARY	425' SE OF PL-173	
TA-18-175	PL-175	MANHOLE, SANITARY	380' SE OF PL-174	
TA-18-176	PL-176	MANHOLE, SANITARY	360' SE OF PL-175	
TA-18-177	PL-177	MANHOLE, SANITARY	360' SE OF PL-176	
TA-18-178	PL-178	MANIFOLD		S 50+00 E197+50
TA-18-179	PL-179	TRANSFORMER STATION		S 37+50 E183+00
TA-18-180	PL-180	DISTRIBUTION BOX	60' SE OF PL-177	
TA-18-181	PL-181	FLOW CONTROL BOX, SANITARY	65' SE OF PL-180	
TA-18-182	PL-182	MANHOLE, WATER		S 25+00 E190+00
TA-18-183	PL-183		CANCELLED	

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

UNCLASSIFIED

FIGURE 18-8

TA-18 STRUCTURE LOCATION INDEX

REV.	DATE	REVISION	BY	CHK	APP
18	9-21-93	REVISED TITLE BLOCK & DWG. TO STATUS OF 7-22-93	MS	TP	TP

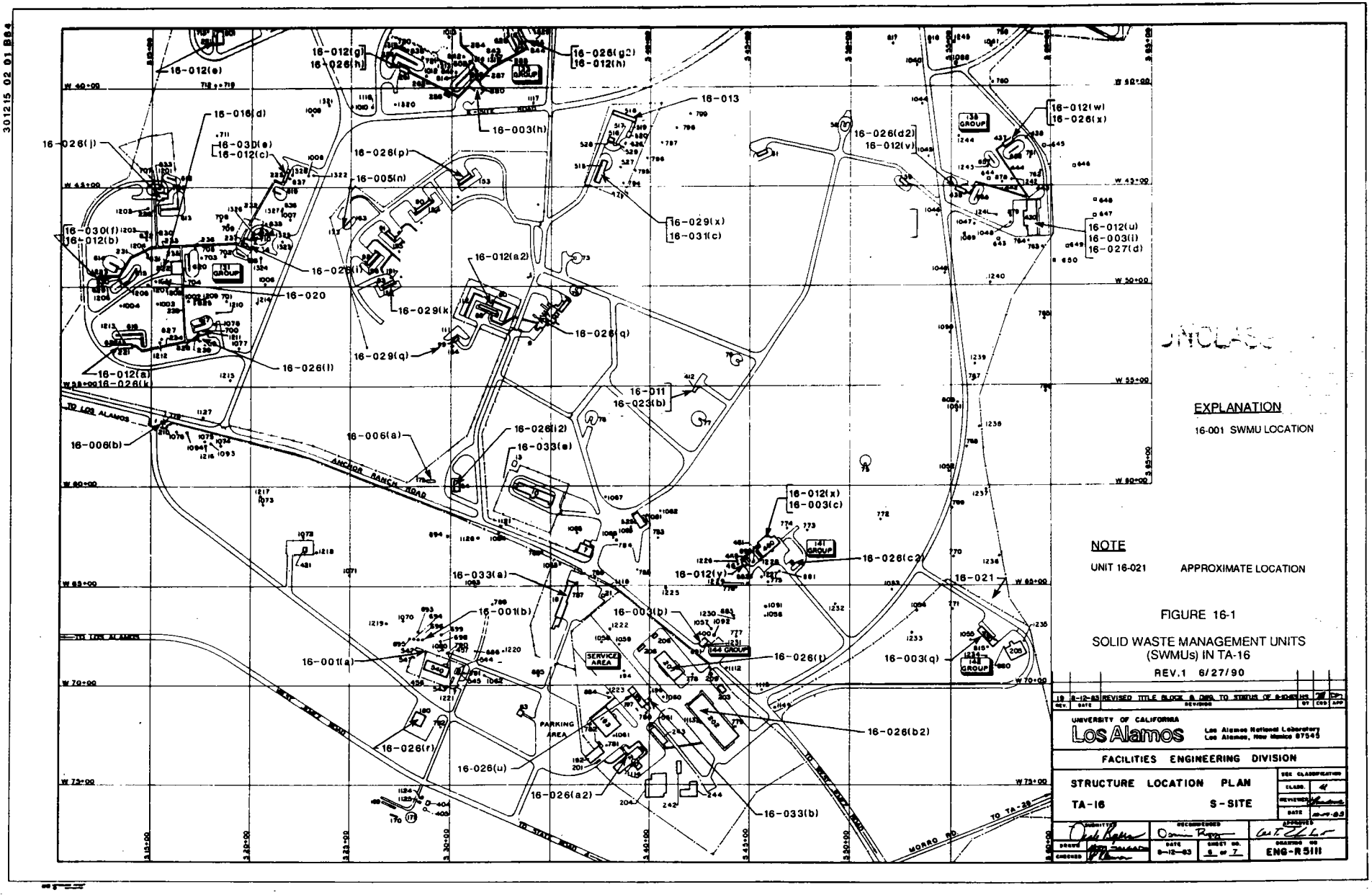
UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-18 PAJARITO LABORATORY

SEC CLASSIFICATION: CLASS. U
REVIEWED
DATE 11-9-93

DRAWN	RECOMMENDED	APPROVED
	DATE 9-21-93	DRAWING NO. ENG-R 5112
	SHEET NO. 1 OF 1	



UNCLASS

EXPLANATION

16-001 SWMU LOCATION

NOTE

UNIT 16-021 APPROXIMATE LOCATION

FIGURE 16-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-16

REV.1 6/27/90

NO.	DATE	REVISIONS	BY	CHK	APP
1	8-12-93	REVISED TITLE BLOCK & DATA TO STATUS OF 8-30-93	MS	JW	DP

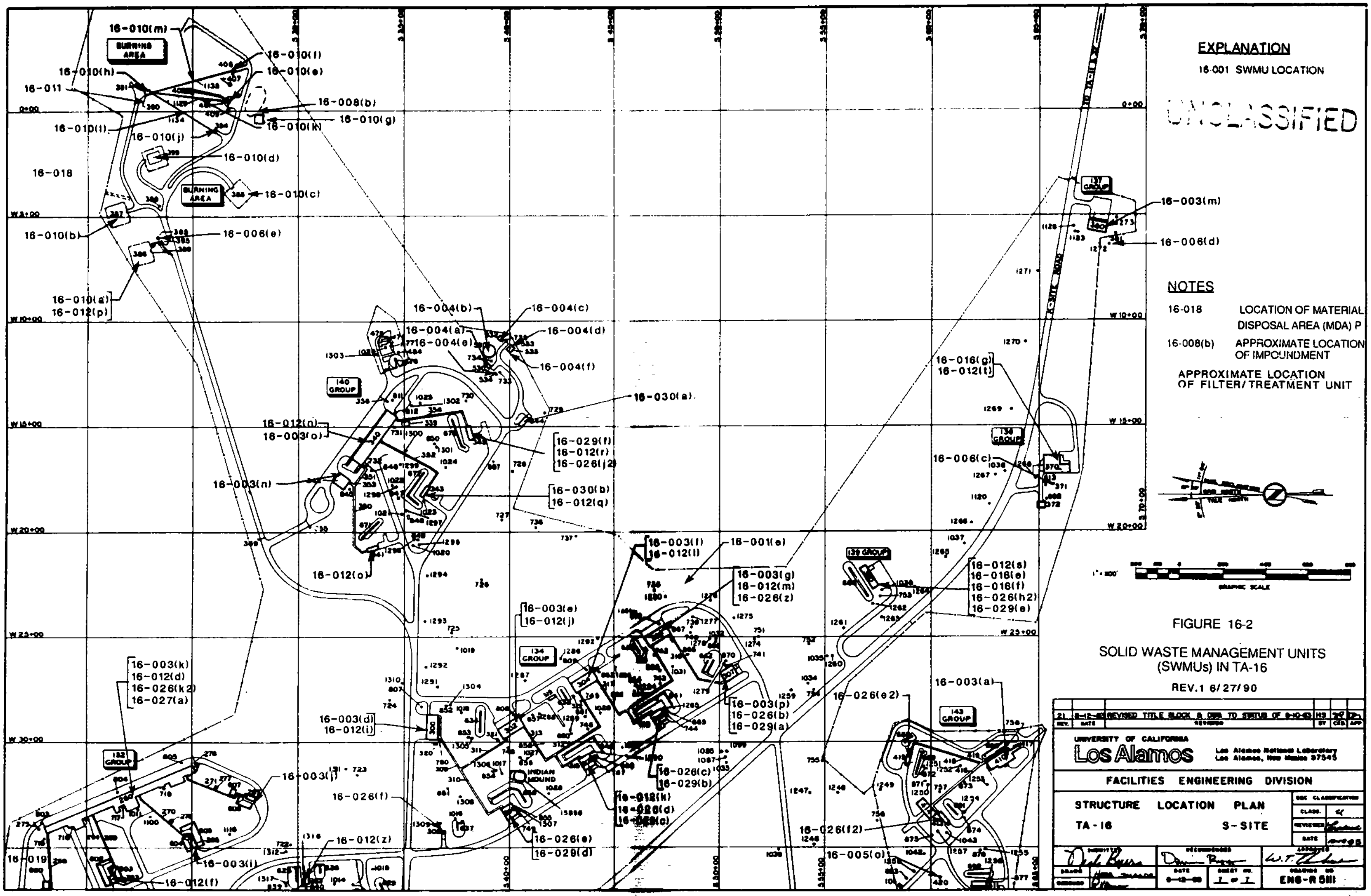
UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-16 S-SITE

SUBMITTED	RECOMMENDED	APPROVED
DRAWN	DATE 8-12-93	SHEET NO. 6 OF 7
CHECKED		DRAWING NO. ENG-R5111

SEC CLASSIFICATION: CLASS. U
REVIEWED
DATE 8-19-93



EXPLANATION

16-001 SWMU LOCATION

UNCLASSIFIED

NOTES

16-018 LOCATION OF MATERIAL DISPOSAL AREA (MDA) P

16-008(b) APPROXIMATE LOCATION OF IMPOUNDMENT

APPROXIMATE LOCATION OF FILTER/TREATMENT UNIT

FIGURE 16-2

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-16

REV.1 6/27/90

21	8-12-93	REVISED TITLE BLOCK & DWG TO STATUS OF 9-10-93		
REV.	DATE	REVISION	BY	APP

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

FACILITIES ENGINEERING DIVISION

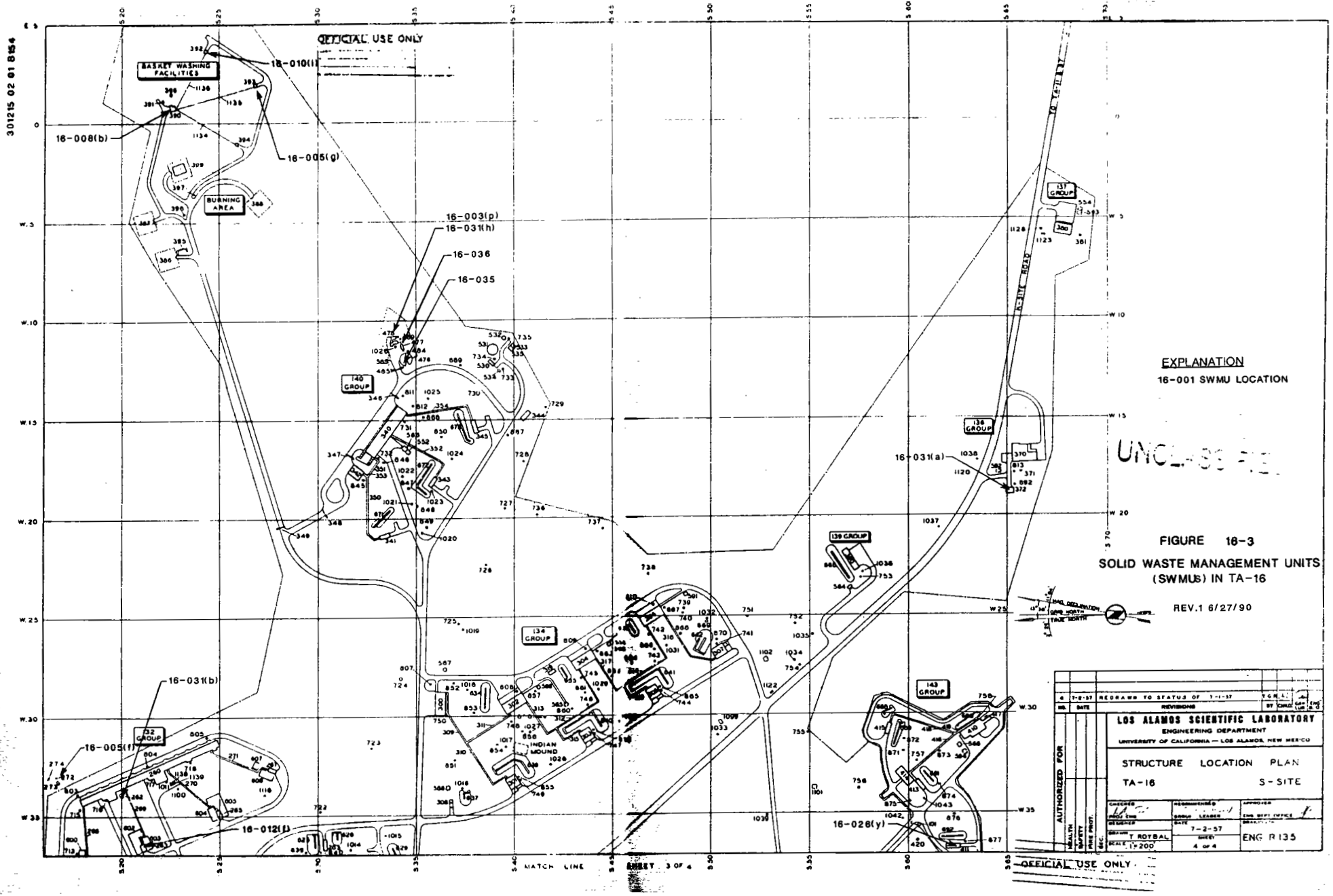
STRUCTURE LOCATION PLAN

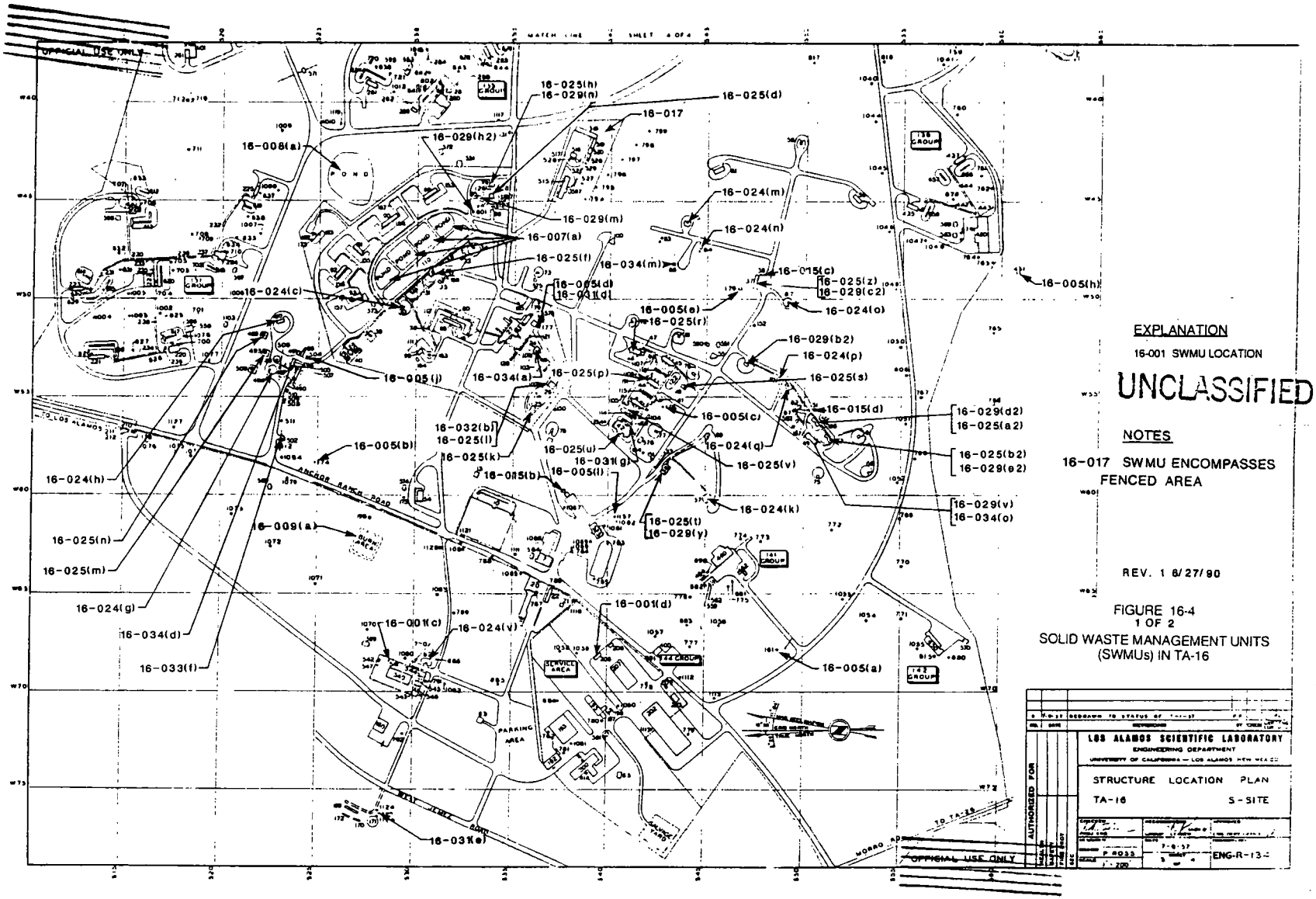
TA-16 S-SITE

DRAWING NO. ENG-R 5111

SHEET NO. 1 of 1

DATE 8-12-93


OFFICIAL USE ONLY
BASKET WASHING FACILITIES
BURNING AREA
16-010(i)
16-008(b)
16-005(g)
16-003(p)
16-031(h)
16-036
16-035
16-031(a)
16-031(b)
16-005(f)
16-012(f)
16-028(y)
INDIAN MOUND
132 GROUP
134 GROUP
136 GROUP
137 GROUP
139 GROUP
140 GROUP
143 GROUP
EXPLANATION
16-001 SWMU LOCATION
UNCLASSIFIED
FIGURE 16-3
SOLID WASTE MANAGEMENT UNITS (SWMUS) IN TA-16
REV.1 6/27/90
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO
STRUCTURE LOCATION PLAN
TA-16
S-SITE
7-2-57
ENG R135
4 OF 4
MATCH LINE
SHEET 3 OF 4
OFFICIAL USE ONLY



EXPLANATION

16-001 SWMU LOCATION

UNCLASSIFIED

NOTES

16-017 SWMU ENCOMPASSES FENCED AREA

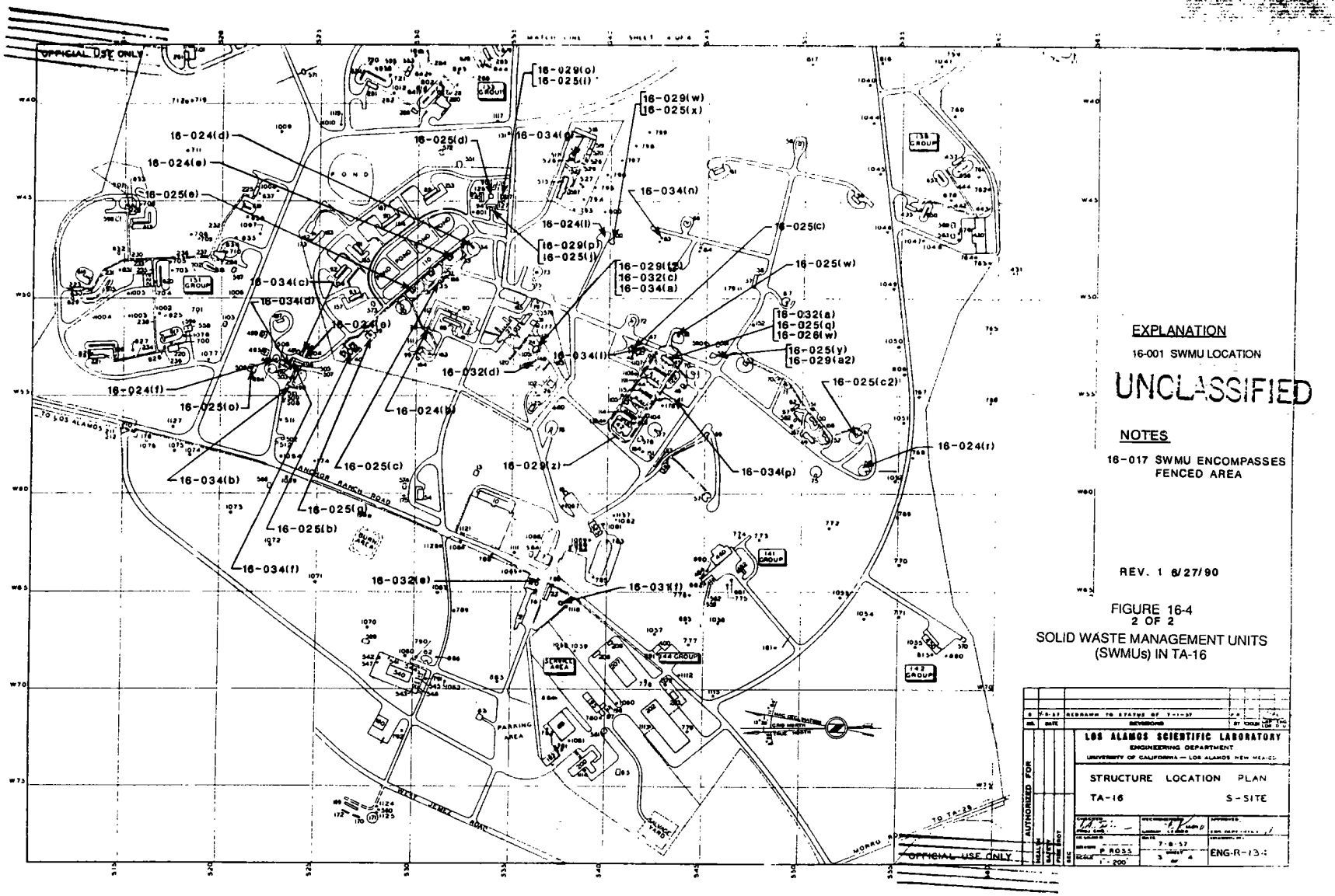
REV. 1 6/27/90

FIGURE 16-4
1 OF 2
SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-16

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

STRUCTURE LOCATION PLAN
TA-16 S-SITE

ENG-R-13-



EXPLANATION

16-001 SWMU LOCATION

UNCLASSIFIED

NOTES

16-017 SWMU ENCOMPASSES FENCED AREA

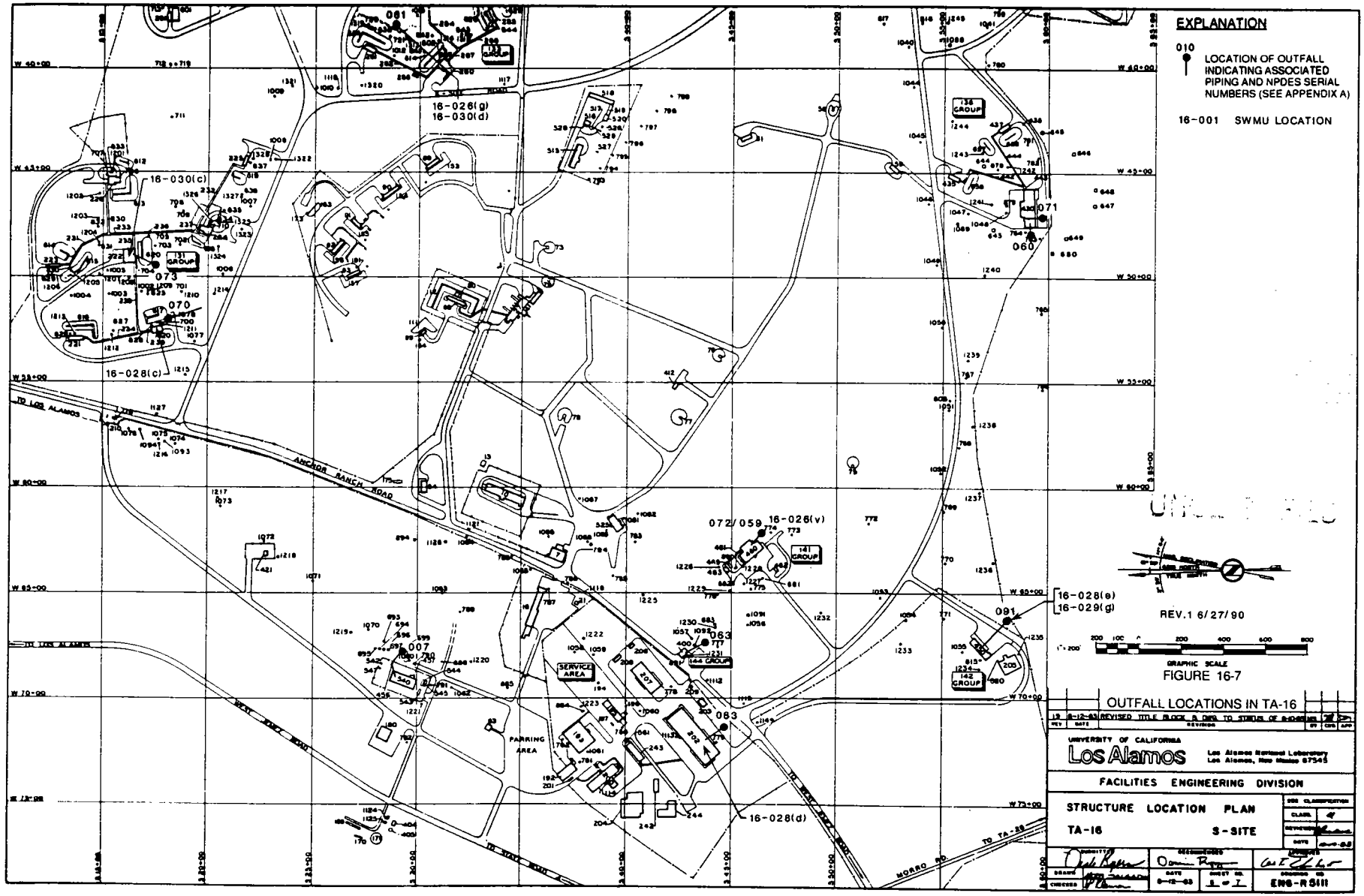
REV. 1 6/27/90

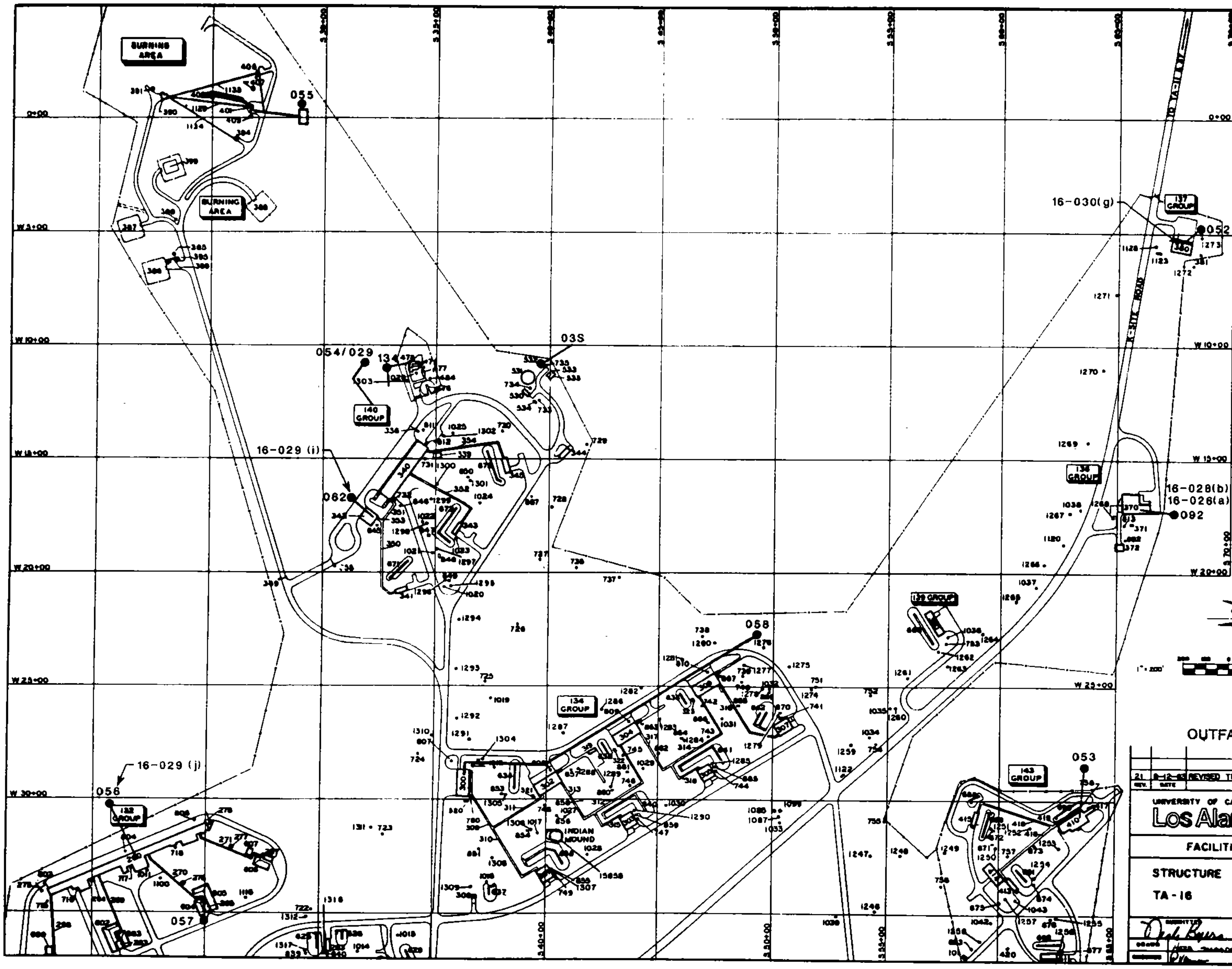
FIGURE 16-4
2 OF 2
SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-16

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

STRUCTURE LOCATION PLAN
TA-16 S-SITE

P. ROSS
7-8-87
1" = 200'
ENG-R-134





EXPLANATION

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

16-001 SWMU LOCATION

1" = 200' GRAPHIC SCALE

FIGURE 16-8

OUTFALL LOCATIONS IN TA-16

REV.1 6/27/90

21 | 8-12-83 | REVISED TITLE BLOCK & DWG TO STATUS OF 8-10-83

UNIVERSITY OF CALIFORNIA

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN

TA-16 S-SITE

DATE 8-12-83 SHEET 1 of 1

ENG-R 5111

301215 02 01 B48

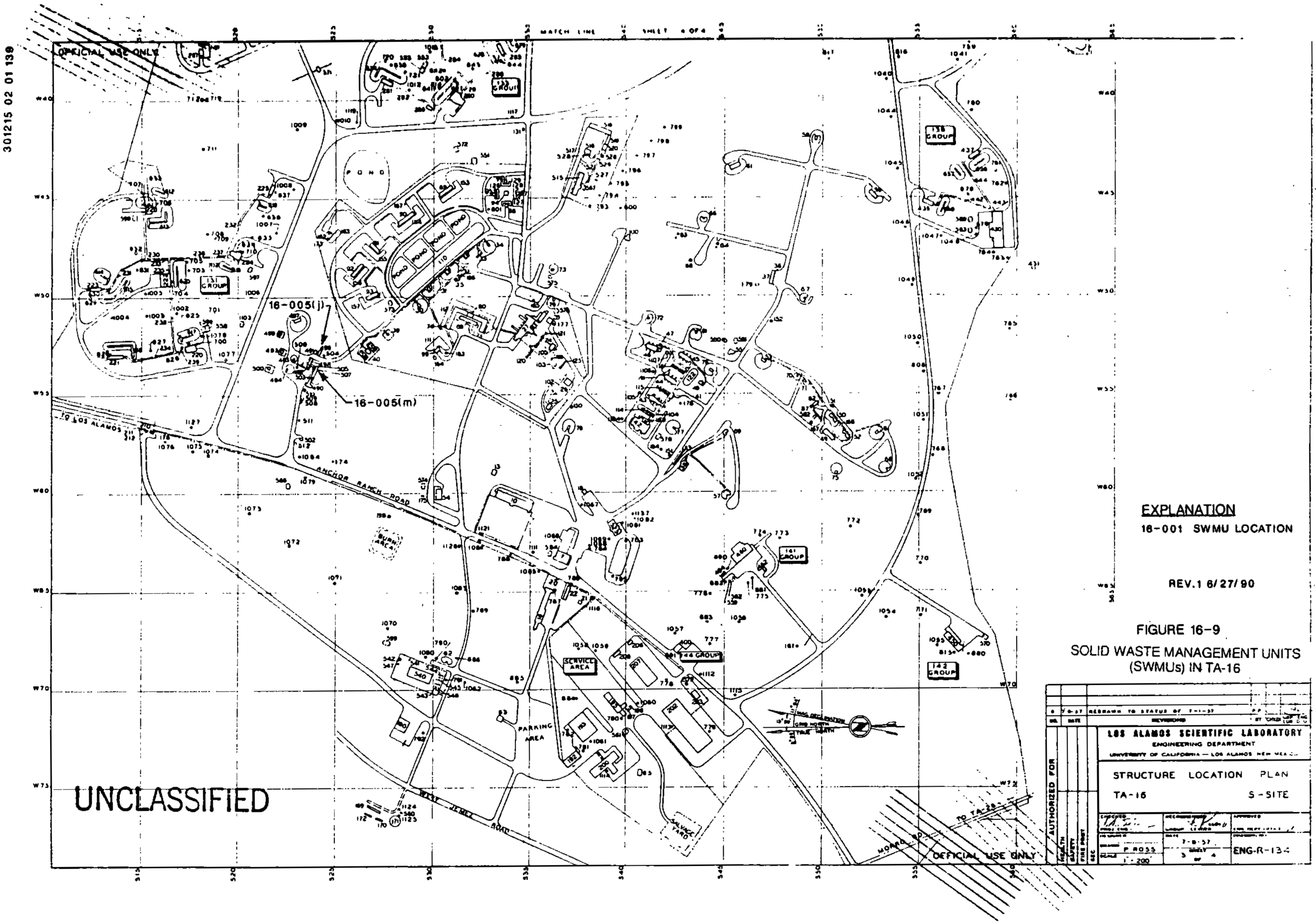
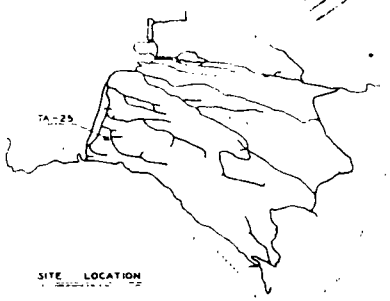
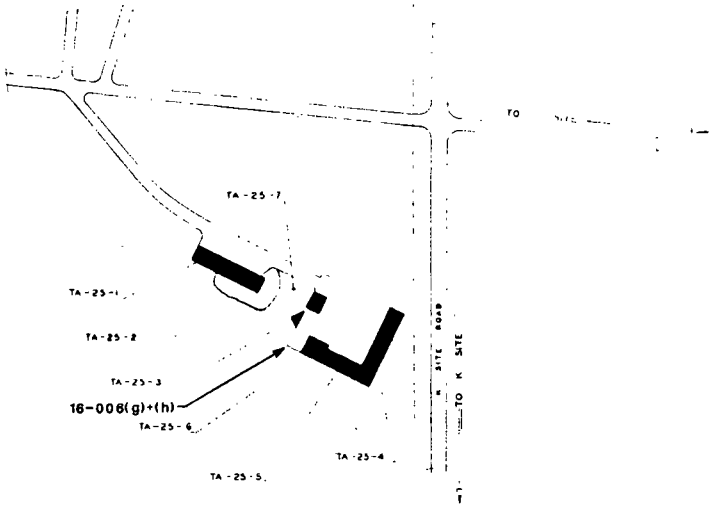


FIGURE 16-9
SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-16

301215 02 01 139



STRUCTURE NUMBER			
TA-25-	V	1	
TA-25-	V	2	
TA-25-	V	3	EQUIPMENT
TA-25-	V	4	WAREHOUSE
TA-25-	V	5	
TA-25-	V	6	
TA-25-	V	7	TANK STAND



NOTES: Former TA-25 is within the current boundaries of TA-16

EXPLANATION

16-001 SWMU LOCATION

REV.1 6/27/90

FIGURE 16-10

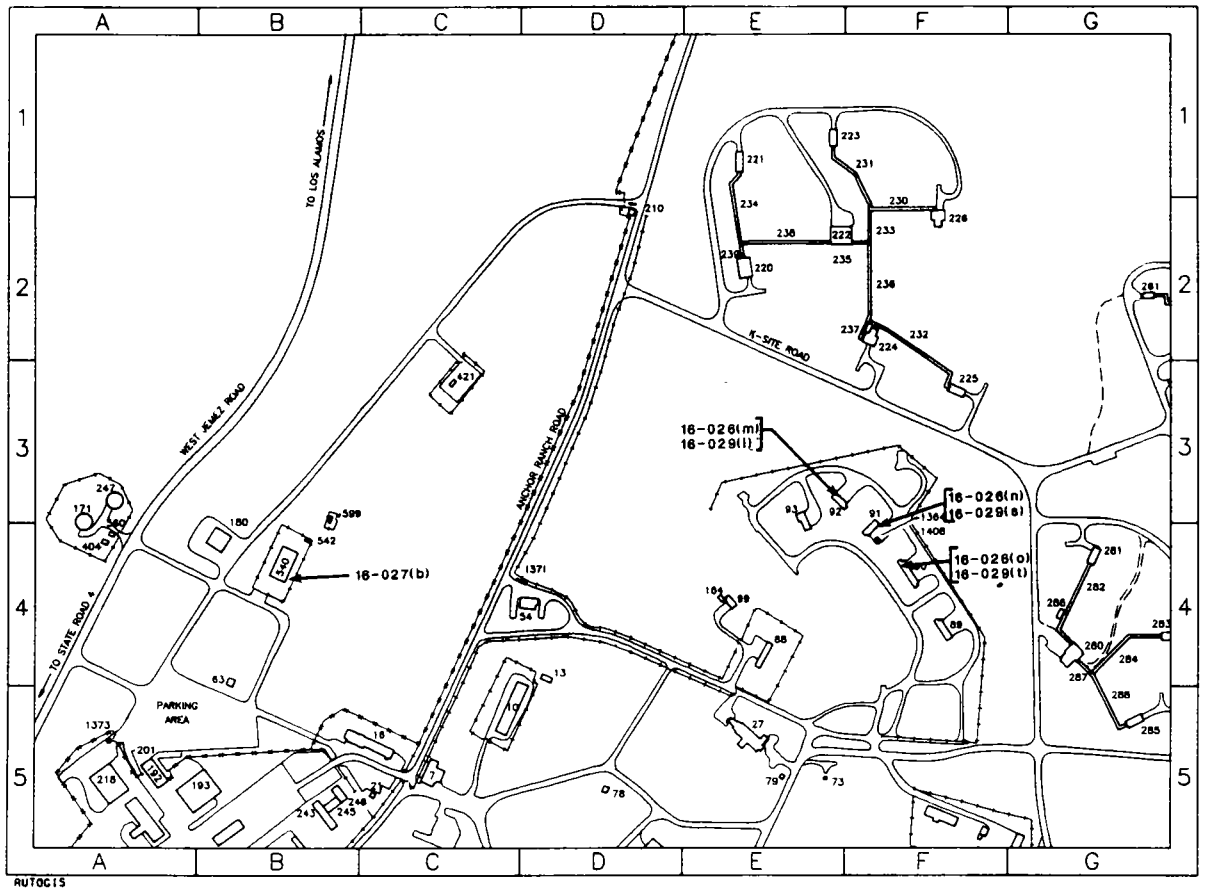
SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-16

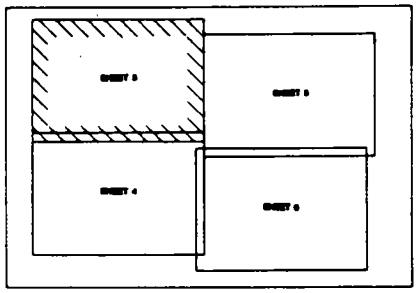
NORTH (MAGNETIC)

AUTHORIZED FOR	LOS ALAMOS SCIENTIFIC LABOR[illegible] DEPARTMENT OF ENGINEERING—CONSTRUCTION & MAINT[illegible]	
HEALTH SAFETY FIRE PR. CLEAN SEC.	STRUCTURE LOCATION PL[illegible] TA - 25 V-[illegible]	
REV. 0	SCALE 1" = 100	DRAWN BY [illegible] DATE CHKD BY [illegible] DATE APPVD BY [illegible] DATE

1-0106279

TA-16





TA-16 MAP GUIDE

SCALE 1: 2520.

200 0 200 400 FEET

EXPLANATION

16-001 SWMU LOCATION

REV.1 6/27/90

FIGURE 16-11

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-16

UNIVERSITY OF CALIFORNIA

Los Alamos

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION MAP

TA-16 S-SITE

ENG-R 6111

STRUCTURE NUMBER INDEX

STRUCTURE TA-NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	STRUCTURE LOCATOR SHEET MAP NO.	KEY
16- 7	16- 7	STORAGE BUILDING	3	C-5
16- 10	16- 10	WAREHOUSE	3	C-5
16- 13	16- 13	DOCK	3	D-4
16- 16	16- 16	OFFICE BUILDING	3	C-5
16- 21	16- 21	PUMPING STATION	3	C-5
16- 27	16- 27	STORAGE BUILDING	3	E-5
16- 54	16- 54	GRINDING BUILDING	3	D-4
16- 58	16- 58	MAGAZINE	4	F-8
16- 59	16- 59	MAGAZINE	4	F-8
16- 61	16- 61	MAGAZINE	4	F-7
16- 63	16- 63	STORAGE BUILDING	3	B-4
16- 73	16- 73	PERSONNEL SHELTER	3	E-5
16- 75	16- 75	PERSONNEL SHELTER	4	D-8
16- 76	16- 76	PERSONNEL SHELTER	4	D-7
16- 77	16- 77	PERSONNEL SHELTER	4	D-6
16- 78	16- 78	PERSONNEL SHELTER	3	D-5
16- 79	16- 79	PERSONNEL SHELTER	3	E-5
16- 88	16- 88	CASTING REST HOUSE	3	E-4
16- 89	16- 89	PROCESS BUILDING	3	F-4
16- 90	16- 90	PROCESS BUILDING	3	F-4
16- 91	16- 91	PROCESS BUILDING	3	F-4
16- 92	16- 92	INSPECTION BUILDING	3	E-3
16- 93	16- 93	PROCESS BUILDING	3	E-3
16- 99	16- 99	STORAGE BUILDING	3	E-4
16- 101	16- 101	GUARD HOUSE	4	G-9
16- 164	16- 164	STORAGE BUILDING	3	E-4
16- 171	16- 171	WATER TANK	3	A-3
16- 180	16- 180	FIRE STATION #5	3	B-4
16- 192	16- 192	CAFETERIA	3	A-5
16- 193	16- 193	CHANGE HOUSE	3	B-5
16- 195	16- 195	SERVICE STATION	4	B-6
16- 200	16- 200	ADMINISTRATION BUILDING	4	A-6
16- 201	16- 201	GUARD STATION	3	A-5
16- 202	16- 202	SHOPS BUILDING	4	A-6
16- 203	16- 203	LUMBER STORAGE	4	B-6
16- 204	16- 204	PROGRAM SUPPORT FACILITY	4	A-6
16- 205	16- 205	TRITIUM PROCESSING FAC.	4	B-9
16- 206	16- 206	PAINT & BOTTLE STORAGE	4	B-6
16- 207	16- 207	WAREHOUSE	4	B-6
16- 208	16- 208	STORAGE BUILDING	4	B-6
16- 209	16- 209	SAFETY OFFICE	4	B-6
16- 210	16- 210	GUARD HOUSE	3	D-2
16- 218	16- 218	OFFICE BUILDING	3	A-5
16- 220	16- 220	X-RAY BUILDING	3	E-2
16- 221	16- 221	REST HOUSE	3	E-1
16- 222	16- 222	DARK ROOM BUILDING	3	E-2
16- 223	16- 223	REST HOUSE	3	E-1
16- 224	16- 224	X-RAY BUILDING	3	F-2
16- 225	16- 225	REST HOUSE	3	F-3
16- 226	16- 226	X-RAY BUILDING	3	F-2
16- 230	16- 230	PASSAGEWAY	3	F-2
16- 231	16- 231	PASSAGEWAY	3	F-1
16- 232	16- 232	PASSAGEWAY	3	F-2
16- 233	16- 233	PASSAGEWAY	3	F-2
16- 234	16- 234	PASSAGEWAY	3	E-2
16- 235	16- 235	PASSAGEWAY	3	F-2
16- 236	16- 236	PASSAGEWAY	3	F-2
16- 237	16- 237	PASSAGEWAY	3	F-2
16- 238	16- 238	PASSAGEWAY	3	E-2
16- 239	16- 239	PASSAGEWAY	3	E-2
16- 242	16- 242	TRANSPORTABLE OFFICE BLDG.	4	A-6
16- 243	16- 243	TRANSPORTABLE OFFICE BLDG.	3	B-5
16- 244	16- 244	TRANSPORTABLE OFFICE BLDG.	4	A-6
16- 245	16- 245	TRANSPORTABLE OFFICE BLDG.	3	B-5
16- 246	16- 246	TRANSPORTABLE OFFICE BLDG.	3	B-5
16- 247	16- 247	WATER TANK	3	A-3
16- 248	16- 248	TRAILER, OFFICE	4	B-9
16- 260	16- 260	PROCESS BUILDING	5	H-2
16- 261	16- 261	REST HOUSE	3	G-2
16- 263	16- 263	REST HOUSE	5	H-2
16- 265	16- 265	REST HOUSE	5	H-3
16- 267	16- 267	REST HOUSE	5	H-3
16- 268	16- 268	PASSAGEWAY	5	H-1
16- 269	16- 269	PASSAGEWAY	5	H-2
16- 270	16- 270	PASSAGEWAY	5	H-2
16- 271	16- 271	PASSAGEWAY	5	H-3
16- 277	16- 277	EQUIPMENT STORAGE BLDG.	5	H-3
16- 278	16- 278	EQUIPMENT STORAGE BLDG.	5	H-2
16- 280	16- 280	INSPECTION BUILDING	3	G-4
16- 281	16- 281	REST HOUSE	3	G-4
16- 282	16- 282	PASSAGEWAY	3	G-4
16- 283	16- 283	REST HOUSE	3	G-4
16- 284	16- 284	PASSAGEWAY	3	G-4
16- 285	16- 285	REST HOUSE	3	G-5
16- 286	16- 286	COFFEE HOUSE	3	G-4
16- 287	16- 287	PASSAGEWAY	3	G-4
16- 288	16- 288	PASSAGEWAY	3	G-5
16- 300	16- 300	PROCESS BUILDING	5	J-5
16- 301	16- 301	REST HOUSE	5	H-5
16- 302	16- 302	PROCESS BUILDING	5	J-5
16- 303	16- 303	REST HOUSE	6	J-6
16- 304	16- 304	PROCESS BUILDING	6	J-6
16- 305	16- 305	REST HOUSE	6	J-7
16- 306	16- 306	PROCESS BUILDING	6	K-7
16- 307	16- 307	REST HOUSE	6	J-7
16- 308	16- 308	PROCESS BUILDING	5	H-5
16- 309	16- 309	PASSAGEWAY	5	H-5
16- 310	16- 310	PASSAGEWAY	5	H-5
16- 311	16- 311	PASSAGEWAY	5	H-5
16- 312	16- 312	PASSAGEWAY	6	J-6
16- 313	16- 313	PASSAGEWAY	6	J-6
16- 314	16- 314	PASSAGEWAY	6	J-7
16- 315	16- 315	PASSAGEWAY	6	J-6
16- 316	16- 316	PASSAGEWAY	6	J-7
16- 317	16- 317	PASSAGEWAY	6	J-6
16- 318	16- 318	PASSAGEWAY	6	J-7
16- 319	16- 319	COFFEE HOUSE	6	J-6
16- 332	16- 332	STORAGE BUILDING	4	D-6
16- 339	16- 339	STORAGE BUILDING	5	L-4
16- 340	16- 340	PROCESS BUILDING	5	L-4
16- 341	16- 341	REST HOUSE	5	K-4
16- 342	16- 342	BLENDING BUILDING	5	L-4
16- 343	16- 343	REST HOUSE	5	K-5
16- 344	16- 344	DRUM STORAGE	5	L-5
16- 345	16- 345	REST HOUSE	5	L-5
16- 350	16- 350	PASSAGEWAY	5	K-4
16- 351	16- 351	PASSAGEWAY	5	L-4
16- 352	16- 352	PASSAGEWAY	5	L-5
16- 353	16- 353	PASSAGEWAY	5	L-4
16- 354	16- 354	PASSAGEWAY	5	L-5
16- 360	16- 360	PROCESS BUILDING	6	K-8
16- 362	16- 362	TRANSPORTAINER	5	P-2
16- 363	16- 363	TRANSPORTAINER	5	P-3
16- 370	16- 370	PROCESS BUILDING	6	L-10
16- 372	16- 372	COOLING TOWER	6	L-10
16- 380	16- 380	PROCESS BUILDING	6	N-10
16- 386	16- 386	BURNING AREA	5	M-2
16- 387	16- 387	BURNING AREA	5	N-2
16- 388	16- 388	BURNING AREA	5	N-3
16- 389	16- 389	CONTROL SHELTER	5	N-3
16- 390	16- 390	BASKET WASHING BUILDING	5	P-2
16- 392	16- 392	FILTER BEDS	5	P-3
16- 394	16- 394	FILTER BED	5	N-3
16- 399	16- 399	BURNING AREA	5	N-3
16- 400	16- 400	TRUCK WASHING BUILDING	4	B-6
16- 401	16- 401	PRESSURE TANK	5	P-3
16- 402	16- 402	AIR HEATER	5	P-3
16- 404	16- 404	MICROSTRAINER BUILDING	3	A-4
16- 410	16- 410	ASSEMBLY BUILDING	6	J-9
16- 411	16- 411	REST HOUSE	4	G-10
16- 412	16- 412	INCINERATOR	4	D-6
16- 413	16- 413	REST HOUSE	6	H-9
16- 414	16- 414	STORAGE BUILDING	6	H-9
16- 415	16- 415	REST HOUSE	6	J-9
16- 416	16- 416	PASSAGEWAY	6	H-9
16- 418	16- 418	PASSAGEWAY	6	J-9
16- 419	16- 419	PASSAGEWAY	6	J-9
16- 421	16- 421	F.D. TRAINING FACILITY	3	C-3
16- 430	16- 430	PROCESS BUILDING	4	F-9
16- 435	16- 435	REST HOUSE	4	F-9
16- 437	16- 437	REST HOUSE	4	F-9
16- 442	16- 442	PASSAGEWAY	4	F-9
16- 443	16- 443	PASSAGEWAY	4	F-9
16- 444	16- 444	PASSAGEWAY	4	F-9
16- 450	16- 450	PROCESS BUILDING	4	B-9
16- 459	16- 459	TRAILER, OFFICE	4	B-9
16- 460	16- 460	LABORATORY BUILDING	4	C-7
16- 461	16- 461	PASSAGEWAY	4	C-7
16- 462	16- 462	STORAGE BUILDING	4	C-7
16- 463	16- 463	REST HOUSE	4	C-7
16- 476	16- 476	LABORATORY BUILDING	5	M-4
16- 477	16- 477	LABORATORY BUILDING	5	M-4
16- 478	16- 478	PROCESS BUILDING	5	M-4
16- 515	16- 515	PROCESS BUILDING	4	F-6
16- 516	16- 516	PROCESS BUILDING	4	F-6
16- 517	16- 517	EQUIPMENT BUILDING	4	F-6
16- 518	16- 518	STORAGE BUILDING	4	G-6
16- 519	16- 519	STORAGE BUILDING	4	F-6
16- 520	16- 520	TEST BUILDING	4	F-6
16- 530	16- 530	IMHOFF TANK	5	L-5
16- 531	16- 531	TRICKLING FILTER	5	M-5
16- 532	16- 532	FINAL SETTLING TANK	5	M-5
16- 533	16- 533	SLUDGE DRYING BED	5	M-5
16- 540	16- 540	STEAM PLANT	3	B-4
16- 542	16- 542	GAS REGULATOR BUILDING	3	B-4
16- 560	16- 560	CHLORINATION STATION	3	A-4
16- 599	16- 599	SWITCHGEAR STATION	3	B-3
16-1362	16-1362	TRANSPORTAINER	5	J-5
16-1363	16-1363	TRANSPORTAINER	6	J-7
16-1364	16-1364	TRANSPORTAINER	3	F-4
16-1365	16-1365	TRANSPORTAINER	6	L-10
16-1367	16-1367	TRANSPORTAINER	6	K-8
16-1368	16-1368	TRANSPORTAINER	6	K-8
16-1371	16-1371	TRANSPORTAINER	3	C-4
16-1373	16-1373	SATELLITE DISH	3	A-5
16-1380	16-1380	TRANSPORTAINER	4	B-9
16-1381	16-1381	TRANSPORTAINER	4	B-9
16-1382	16-1382	TRANSPORTAINER	6	J-7
16-1385	16-1385	TRANSPORTAINER	4	B-7
16-1408	16-1408	TRANSPORTAINER	3	F-4
16-1409	16-1409	INCINERATOR	5	P-2
16-1410	16-1410	STORAGE BUILDING	5	J-4

REV.1 6/27/90

FIGURE 16-12

TA-16 STRUCTURE LOCATION INDEX

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

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION MAP

TA-16 S-SITE

SEC. CLASSIFICATION — CLASS: U — DATE: 5/10/89

SUBMITTED / RECOMMENDED / APPROVED

SHEET NO. 1 of 8 — DRAWING NO. ENG-R 5111

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-1	16-1		REMOVED 1958	
TA-16-2	16-2		REMOVED 1958	
TA-16-3	16-3		REMOVED 1958	
TA-16-4	16-4		REMOVED 1958	
TA-16-5	16-5		REMOVED 1950	
TA-16-6	16-6		REMOVED 1960	
TA-16-7	16-7	STORAGE BUILDING		535+00 W65+00
TA-16-8	16-8		REMOVED 1958	
TA-16-9	16-9		REMOVED 1958	
TA-16-10	16-10	WAREHOUSE		535+00 W60+00
TA-16-11	16-11		REMOVED 1950	
TA-16-12	16-12		REMOVED 1958	
TA-16-13	16-13	DOCK	FORMERLY S-10 F	533+00 W60+00
TA-16-14	16-14		REMOVED 1958	
TA-16-15	16-15		REMOVED 1956	
TA-16-16	16-16	CAFETERIA	FORMERLY S-13	535+00 W65+00
TA-16-17	16-17		REMOVED 1950	
TA-16-18	16-18		REMOVED 1960	
TA-16-19	16-19		REMOVED 1958	
TA-16-20	16-20		REMOVED 1953	
TA-16-21	16-21	PUMPING STATION	FORMERLY S-17 A	535+00 W65-00
TA-16-22	16-22		REMOVED 1961	
TA-16-23	16-23		REMOVED 1951	
TA-16-24	16-24		REMOVED 1968	
TA-16-25	16-25		REMOVED 1968	
TA-16-26	16-26		REMOVED 1968	
TA-16-27	16-27	STORAGE BUILDING	ABANDONED 1970	535+00 W50+00
TA-16-28	16-28		REMOVED 1968	
TA-16-29	16-29		REMOVED 1956	
TA-16-30	16-30		REMOVED 1960	
TA-16-31	16-31		REMOVED 1960	
TA-16-32	16-32		REMOVED 1960	
TA-16-33	16-33		REMOVED 1960	
TA-16-34	16-34		REMOVED 1960	
TA-16-35	16-35		REMOVED 1960	
TA-16-36	16-36		REMOVED 1960	
TA-16-37	16-37		REMOVED 1960	
TA-16-38	16-38		REMOVED 1960	
TA-16-39	16-39		REMOVED 1960	
TA-16-40	16-40		REMOVED 1960	
TA-16-41	16-41		REMOVED 1960	
TA-16-42	16-42		REMOVED 1960	
TA-16-43	16-43		REMOVED 1960	
TA-16-44	16-44		REMOVED 1960	
TA-16-45	16-45		REMOVED 1960	
TA-16-46	16-46		REMOVED 1960	
TA-16-47	16-47		REMOVED 1960	
TA-16-48	16-48		REMOVED 1960	
TA-16-49	16-49		REMOVED 1960	
TA-16-50	16-50		REMOVED 1960	
TA-16-51	16-51		REMOVED 1960	
TA-16-52	16-52		REMOVED 1960	
TA-16-53	16-53		REMOVED 1960	
TA-16-54	16-54	GRINDING BUILDING	FORMERLY S-46	530+00 W60+00
TA-16-55	16-55		REMOVED 1960	
TA-16-56	16-56		REMOVED 1960	
TA-16-57	16-57		REMOVED 1960	
TA-16-58	16-58	MAGAZINE	FORMERLY S-57	530+00 W40+00
TA-16-59	16-59	MAGAZINE	FORMERLY S-58	535-00 W48-00
TA-16-60	16-60		REMOVED 1950	
TA-16-61	16-61	MAGAZINE	FORMERLY S-60	545+00 W45-00
TA-16-62	16-62		REMOVED 1968	
TA-16-63	16-63	STORAGE BUILDING	ABANDONED 1951	535+00 W70+00
TA-16-64	16-64		REMOVED 1961	
TA-16-65	16-65		REMOVED 1951	
TA-16-66	16-66		REMOVED 1960	
TA-16-67	16-67		REMOVED 1960	
TA-16-68	16-68		REMOVED 1960	
TA-16-69	16-69		REMOVED 1960	
TA-16-70	16-70		REMOVED 1960	
TA-16-71	16-71		REMOVED 1960	
TA-16-72	16-72		REMOVED 1960	
TA-16-73	16-73	PERSONNEL SHELTER	FORMERLY S-77	535+00 W50+00
TA-16-74	16-74		REMOVED 1960	
TA-16-75	16-75	PERSONNEL SHELTER	FORMERLY S-80	550+00 W60+00
TA-16-76	16-76	PERSONNEL SHELTER	FORMERLY S-81	545+00 W55+00
TA-16-77	16-77	PERSONNEL SHELTER	FORMERLY S-82	545+00 W55+00
TA-16-78	16-78	PERSONNEL SHELTER	FORMERLY S-83	535+00 W55+00
TA-16-79	16-79	PERSONNEL SHELTER	FORMERLY S-84	535+00 W50+00
TA-16-80	16-80	STORAGE BUILDING	FORMERLY S-85	530+00 W50+00
TA-16-81	16-81		REMOVED 1960	
TA-16-82	16-82		REMOVED 1968	
TA-16-83	16-83		REMOVED 1960	
TA-16-84	16-84		REMOVED 1960	
TA-16-85	16-85		REMOVED 1947	
TA-16-86	16-86		REMOVED 1970	
TA-16-87	16-87		REMOVED	
TA-16-88	16-88	CASTING REST HOUSE	FORMERLY S-100	530+00 W50+00
TA-16-89	16-89	PROCESS BUILDING	FORMERLY S-104	530+00 W45+00
TA-16-90	16-90	PROCESS BUILDING	FORMERLY S-102	530+00 W45+00
TA-16-91	16-91	PROCESS BUILDING	FORMERLY S-103	525+00 W50+00
TA-16-92	16-92	INSPECTION BUILDING	FORMERLY S-101	525+00 W50+00
TA-16-93	16-93	PROCESS BUILDING	ABANDONED 1970	525+00 W50+00
TA-16-94	16-94		REMOVED 1960	
TA-16-95	16-95		REMOVED 1960	
TA-16-96	16-96		REMOVED 1960	
TA-16-97	16-97		REMOVED 1960	
TA-16-98	16-98		REMOVED 1960	
TA-16-99	16-99	STORAGE BUILDING	FORMERLY S-107	530+00 W33+00
TA-16-100	16-100		REMOVED 1960	
TA-16-101	16-101	GUARD HOUSE		560+00 W35+00
TA-16-102	16-102		REMOVED 1968	
TA-16-103	16-103		REMOVED 1968	
TA-16-104	16-104		REMOVED 1960	
TA-16-105	16-105		REMOVED 1948	
TA-16-106	16-106		REMOVED 1949	
TA-16-107	16-107		REMOVED 1960	
TA-16-108	16-108		REMOVED 1950	
TA-16-109	16-109		REMOVED 1950	
TA-16-110	16-110		REMOVED 1968	
TA-16-111	16-111	BARRICADE	ABANDONED 1955	530+00 W50+00
TA-16-112	16-112	BARRICADE	ABANDONED 1959	530+00 W50+00
TA-16-113	16-113		REMOVED 1960	
TA-16-114	16-114		REMOVED 1960	
TA-16-115	16-115		REMOVED 1960	
TA-16-116	16-116		REMOVED 1960	
TA-16-117	16-117		REMOVED 1951	
TA-16-118	16-118		REMOVED 1950	
TA-16-119	16-119		REMOVED 1948	
TA-16-120	16-120		REMOVED 1968	
TA-16-121	16-121		REMOVED 1968	
TA-16-122	16-122		REMOVED 1962	
TA-16-123	16-123		REMOVED 1955	
TA-16-124	16-124		REMOVED 1949	
TA-16-125	16-125		REMOVED 1960	
TA-16-126	16-126		REMOVED 1960	
TA-16-127	16-127		REMOVED 1960	
TA-16-128	16-128		REMOVED 1960	
TA-16-129	16-129		REMOVED 1960	
TA-16-130	16-130		REMOVED 1958	
TA-16-131	16-131		REMOVED 1960	
TA-16-132	16-132		REMOVED 1955	
TA-16-133	16-133		REMOVED 1955	
TA-16-134	16-134		REMOVED 1955	
TA-16-135	16-135		REMOVED 1953	
TA-16-136	16-136		REMOVED 1955	
TA-16-137	16-137		REMOVED 1955	
TA-16-138	16-138		REMOVED 1955	
TA-16-139	16-139		REMOVED 1955	
TA-16-140	16-140		REMOVED 1955	
TA-16-141	16-141		REMOVED 1953	
TA-16-142	16-142		REMOVED 1955	
TA-16-143	16-143		REMOVED 1955	
TA-16-144	16-144		REMOVED 1955	
TA-16-145	16-145		REMOVED 1958	
TA-16-146	16-146		REMOVED 1955	
TA-16-147	16-147		REMOVED 1954	
TA-16-148	16-148		REMOVED 1968	
TA-16-149	16-149		REMOVED 1950	
TA-16-150	16-150		REMOVED 1959	
TA-16-151	16-151		REMOVED 1958	
TA-16-152	16-152		REMOVED 1958	
TA-16-153	16-153	BARRICADE		530+00 W45+00
TA-16-154	16-154	BARRICADE		530+00 W48+00
TA-16-155	16-155	BARRICADE		525+00 W50+00
TA-16-156	16-156	BARRICADE		525+00 W50+00
TA-16-157	16-157	BARRICADE		525+00 W80+00
TA-16-158	16-158		REMOVED	
TA-16-159	16-159		REMOVED	
TA-16-160	16-160		REMOVED 1966	
TA-16-161	16-161		REMOVED	
TA-16-162	16-162		REMOVED 1971	
TA-16-163	16-163	BARRICADE	ABANDONED 1972	525+00 W45+00
TA-16-164	16-164	STORAGE BUILDING		530+00 W55+00
TA-16-165	16-165		REMOVED 1956	
TA-16-166	16-166		REMOVED 1960	
TA-16-167	16-167		REMOVED 1958	
TA-16-168	16-168		REMOVED 1952	
TA-16-169	16-169	TANK	WATER	525+00 W75+00
TA-16-170	16-170	TANK	WATER	525+00 W75+00
TA-16-171	16-171	TANK	WATER	530+00 W75+00
TA-16-172	16-172	TANK, WATER	RELOCATED TO TA-49-66	
TA-16-173	16-173	TANK, SEPTIC	ABANDONED 1971	525+00 W45+00
TA-16-174	16-174		REMOVED	
TA-16-175	16-175	TANK	SEPTIC	530+00 W60+00
TA-16-176	16-176		REMOVED	
TA-16-177	16-177		REMOVED 1968	
TA-16-178	16-178	TANK	SEPTIC	515+00 W55+00
TA-16-179	16-179		REMOVED	
TA-16-180	16-180	FIRE STATION NO. 3		530+00 W70+00
TA-16-181	16-181		REMOVED 1956	
TA-16-182	16-182		REMOVED 1966	
TA-16-183	16-183		REMOVED 1968	
TA-16-184	16-184		REMOVED	
TA-16-185	16-185		REMOVED	
TA-16-186	16-186		REMOVED	
TA-16-187	16-187		REMOVED	
TA-16-188	16-188		REMOVED 1954	
TA-16-189	16-189		REMOVED 1960	
TA-16-190	16-190		REMOVED 1955	
TA-16-191	16-191	STORAGE BUILDING		525+00 W50-00
TA-16-192	16-192	GUARD HOUSE		535+00 W75+00
TA-16-193	16-193	CHANGE HOUSE		540+00 W70-00
TA-16-194	16-194	JIB CRANE		540+00 W70-00
TA-16-195	16-195	SERVICE STATION		540+00 W70+00
TA-16-196	16-196	TANK	FUEL, UNDERGROUND	540+00 W70+00
TA-16-197	16-197	TANK	FUEL, UNDERGROUND	540+00 W70+00
TA-16-198	16-198		REMOVED	
TA-16-199	16-199		REMOVED	
TA-16-200	16-200	ADMINISTRATION BUILDING		540+00 W75+00
TA-16-201	16-201	PROTECTIVE FORCE STA NO. 560		535+00 W75+00
TA-16-202	16-202	SHOPS BUILDING		545-00 W70+00
TA-16-203	16-203	LUMBER STORAGE		545+00 W70+00
TA-16-204	16-204	PROGRAM SUPPORT FACILITY		540-00 W75-00
TA-16-205	16-205	TRITIUM PROCESSING FACILITY		560+00 W70-00
TA-16-206	16-206	PAINT & BOTTLE STORAGE		540+00 W70+00
TA-16-207	16-207	WAREHOUSE		540-00 W70-00
TA-16-208	16-208	STORAGE BUILDING		540-00 W70+00
TA-16-209	16-209	SAFETY OFFICE		545-00 W70+00
TA-16-210	16-210	GUARD HOUSE		515+00 W55+00
TA-16-211	16-211			
TA-16-212	16-212			
TA-16-213	16-213	MANHOLE, WATER	NOT SHOWN	
TA-16-214	16-214	EXHAUST STACK	NOT SHOWN	
TA-16-215	16-215	TANK, INDUSTRIAL WASTE	NOT SHOWN	
TA-16-216	16-216	TANK, FUEL	NOT SHOWN	
TA-16-217	16-217	MANHOLE, SANITARY	NOT SHOWN	
TA-16-218	16-218		UNASSIGNED	
TA-16-219	16-219		UNASSIGNED	
TA-16-220	16-220	X-RAY BUILDING	CONST. NO. 131-1	520+00 W55+00
TA-16-221	16-221	REST HOUSE	CONST. NO. 131-A	515+00 W55+00
TA-16-222	16-222	DARK ROOM BUILDING	CONST. NO. 131-2	515+00 W50+00
TA-16-223	16-223	REST HOUSE	CONST. NO. 131-B	515+00 W50+00
TA-16-224	16-224	X-RAY BUILDING	CONST. NO. 131-4	520+00 W50+00
TA-16-225	16-225	REST HOUSE	CONST. NO. 131-C	520+00 W45+00
TA-16-226	16-226	X-RAY BUILDING	CONST. NO. 131-3	515+00 W45+00
TA-16-227	16-227			
TA-16-228	16-228	TREATMENT FACILITY		
TA-16-229	16-229			
TA-16-230	16-230	PASSAGEWAY	BLDG. 226 TO PASS. 233	515+00 W45+00
TA-16-231	16-231	PASSAGEWAY	BLDG. 223 TO PASS. 233	515+00 W50+00
TA-16-232	16-232	PASSAGEWAY	BLDG. 225 TO PASS. 236	520+00 W45+00
TA-16-233	16-233	PASSAGEWAY	PASS. 231 TO PASS. 236	515+00 W50+00
TA-16-234	16-234	PASSAGEWAY	BLDG. 221 TO BLDG. 220	515+00 W55+00
TA-16-235	16-235	PASSAGEWAY	BLDG. 222 TO PASS. 236	515+00 W50+00
TA-16-236	16-236	PASSAGEWAY	PASS. 233 TO PASS. 237	520+00 W50+00
TA-16-237	16-237	PASSAGEWAY	BLDG. 224 TO PASS. 236	520+00 W50+00
TA-16-238	16-238	PASSAGEWAY	BLDG. 222 TO PASS. 234	515+00 W50+00
TA-16-239	16-239	PASSAGEWAY	BLDG. 220 TO PASS. 234	515+00 W55+00
TA-16-240	16-240	TRANSFORMER STATION	NOT SHOWN	
TA-16-241	16-241	MANHOLE, STEAM	NOT SHOWN	
TA-16-242	16-242	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1041	540+00 W75+00
TA-16-243	16-243	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1192	540+00 W75-00
TA-16-244	16-244	TRANSPORTABLE OFFICE BLDG.	FORMERLY TA-0-1199	540+00 W75-00
TA-16-245	16-245		UNASSIGNED	
TA-16-246	16-246		UNASSIGNED	
TA-16-247	16-247		UNASSIGNED	
TA-16-248	16-248		UNASSIGNED	
TA-16-249	16-249		UNASSIGNED	
TA-16-250	16-250		UNASSIGNED	
TA-16-251	16-251		UNASSIGNED	
TA-16-252	16-252		UNASSIGNED	
TA-16-253	16-253		UNASSIGNED	
TA-16-254	16-254		UNASSIGNED	
TA-16-255	16-255		UNASSIGNED	
TA-16-256	16-256		UNASSIGNED	
TA-16-257	16-257		UNASSIGNED	
TA-16-258	16-258		UNASSIGNED	
TA-16-259	16-259		UNASSIGNED	
TA-16-260	16-260	PROCESS BUILDING	CONST. NO. 132-5	520+00 W35+00
TA-16-261	16-261	REST HOUSE	CONST. NO. 132-A	520+00 W40+00

FIGURE 16-13

TA-16 STRUCTURE LOCATION INDEX
(1 OF 5)

REV.1 6/27/90

REV	DATE	REVISION	BY	CKD	APP
20	9-22-83	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-16 S-SITE

SEC. CLASSIFICATION — CLASS. U — REVIEWER — DATE

SUBMITTED — RECOMMENDED — APPROVED
DRAWN — CHECKED — DATE 9-22-83 — SHEET NO. 1 of 7 — DRAWING NO. ENG-R 5111

301215 02 01 B19

30125 02 01 820

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-[illegible]	16 - [illegible]		REMOVED 1957	
TA-16-283	16 - 283	REST HOUSE	CONST NO. 133 - B	330-00 W35-00
TA-16-284	16 - 284	TANK, AIR		315-00 W33-00
TA-16-285	16 - 285	REST HOUSE	CONST. NO. 133 - C	330-00 W38-00
TA-16-286	16 - 286			
TA-16-287	16 - 287	REST HOUSE	CONST. NO. 132 - D	330-00 W35-00
TA-16-288	16 - 288	PASSAGEWAY	BLDG. 280 TO BLDG. 281	330-00 W35-00
TA-16-289	16 - 289	PASSAGEWAY	BLDG. 280 TO BLDG. 283	340-00 W35-00
TA-16-290	16 - 290	PASSAGEWAY	BLDG. 280 TO BLDG. 295	325-00 W33-00
TA-16-291	16 - 291	PASSAGEWAY	BLDG. 280 TO BLDG. 297	325-00 W30-00
TA-16-292	16 - 292		REMOVED	
TA-16-293	16 - 293		REMOVED	
TA-16-294	16 - 294		REMOVED	
TA-16-295	16 - 295	ROAD BLOCK		320-00 W33-00
TA-16-296	16 - 296	ROAD BLOCK		325-00 W30-00
TA-16-297	16 - 297	EQUIPMENT STORAGE BUILDING		325-00 W30-00
TA-16-298	16 - 298	EQUIPMENT STORAGE BUILDING		325-00 W35-00
TA-16-299	16 - 299		UNASSIGNED	
TA-16-300	16 - 300	INSPECTION BUILDING	CONST. NO. 133 - I	330-00 W40-00
TA-16-301	16 - 301	REST HOUSE	CONST. NO. 133 - A	330-00 W40-00
TA-16-302	16 - 302	PASSAGEWAY	BLDG. 280 TO BLDG. 281	330-00 W40-00
TA-16-303	16 - 303	REST HOUSE	CONST. NO. 133 - B	330-00 W35-00
TA-16-304	16 - 304	PASSAGEWAY	BLDG. 283 TO PASS. 288	330-00 W40-00
TA-16-305	16 - 305	REST HOUSE	CONST. NO. 133 - C	335-00 W40-00
TA-16-306	16 - 306	COFFEE HOUSE		330-00 W40-00
TA-16-307	16 - 307	PASSAGEWAY	BLDG. 280 TO PASS. 288	330-00 W40-00
TA-16-308	16 - 308	PASSAGEWAY	BLDG. 295 TO PASS. 297	335-00 W40-00
TA-16-309	16 - 309		UNASSIGNED	
TA-16-310	16 - 310		UNASSIGNED	
TA-16-311	16 - 311		UNASSIGNED	
TA-16-312	16 - 312		UNASSIGNED	
TA-16-313	16 - 313		UNASSIGNED	
TA-16-314	16 - 314		UNASSIGNED	
TA-16-315	16 - 315		UNASSIGNED	
TA-16-316	16 - 316		UNASSIGNED	
TA-16-317	16 - 317		UNASSIGNED	
TA-16-318	16 - 318		UNASSIGNED	
TA-16-319	16 - 319	COFFEE HOUSE		340-00 W30-00
TA-16-320	16 - 320	CONDENSER	REFRIGERANT	335-00 W30-00
TA-16-321	16 - 321	CONDENSER	REFRIGERANT	340-00 W30-00
TA-16-322	16 - 322	CONDENSER	REFRIGERANT	340-00 W25-00
TA-16-323	16 - 323	CONDENSER	REFRIGERANT	345-00 W25-00
TA-16-324	16 - 324		UNASSIGNED	
TA-16-325	16 - 325		UNASSIGNED	
TA-16-326	16 - 326		UNASSIGNED	
TA-16-327	16 - 327		UNASSIGNED	
TA-16-328	16 - 328		UNASSIGNED	
TA-16-329	16 - 329		UNASSIGNED	
TA-16-330	16 - 330		UNASSIGNED	
TA-16-331	16 - 331		UNASSIGNED	
TA-16-332	16 - 332		UNASSIGNED	
TA-16-333	16 - 333		UNASSIGNED	
TA-16-334	16 - 334		UNASSIGNED	
TA-16-335	16 - 335		UNASSIGNED	
TA-16-336	16 - 336		UNASSIGNED	
TA-16-337	16 - 337		UNASSIGNED	
TA-16-338	16 - 338		UNASSIGNED	
TA-16-339	16 - 339	STORAGE BLDG		335-00 W15-00
TA-16-340	16 - 340	PROCESS BUILDING	CONST. NO. 140 - I	335-00 W15-00
TA-16-341	16 - 341	REST HOUSE	CONST. NO. 140 - A	335-00 W20-00
TA-16-342	16 - 342	BLENDING BUILDING	CONST. NO. 140 - 2	330-00 W20-00
TA-16-343	16 - 343	REST HOUSE	CONST. NO. 140 - B	335-00 W20-00
TA-16-344	16 - 344	DRUM STORAGE		340-00 W15-00
TA-16-345	16 - 345	REST HOUSE	CONST NO. 140 - C	340-00 W15-00
TA-16-346	16 - 346		REMOVED 1962	
TA-16-347	16 - 347		REMOVED 1962	
TA-16-348	16 - 348		REMOVED 1962	
TA-16-349	16 - 349	ROAD BLOCK		330-00 W20-00
TA-16-350	16 - 350	PASSAGEWAY	BLDG. 341 TO PASS. 351	335-00 W20-00
TA-16-351	16 - 351	PASSAGEWAY	BLDG. 340 TO PASS. 350	335-00 W15-00
TA-16-352	16 - 352	PASSAGEWAY	BLDG. 340 TO PASS. 343	335-00 W15-00
TA-16-353	16 - 353	PASSAGEWAY	BLDG. 342 TO PASS. 350	330-00 W20-00
TA-16-354	16 - 354	PASSAGEWAY	BLDG. 340 TO BLDG. 345	335-00 W15-00
TA-16-355	16 - 355	ROAD BLOCK		330-00 W20-00
TA-16-356	16 - 356	ROAD BLOCK		335-00 W15-00
TA-16-357	16 - 357		UNASSIGNED	
TA-16-358	16 - 358		UNASSIGNED	

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-359	16 - 359		UNASSIGNED	
TA-16-360	16 - 360	PROCESS BUILDING	CONST. NO 139 - I	355-00 W20-00
TA-16-361	16 - 361		UNASSIGNED	
TA-16-362	16 - 362		UNASSIGNED	
TA-16-363	16 - 363		UNASSIGNED	
TA-16-364	16 - 364		UNASSIGNED	
TA-16-365	16 - 365		UNASSIGNED	
TA-16-366	16 - 366		UNASSIGNED	
TA-16-367	16 - 367		UNASSIGNED	
TA-16-368	16 - 368		UNASSIGNED	
TA-16-369	16 - 369		UNASSIGNED	
TA-16-370	16 - 370	PROCESS BUILDING	CONST. NO 136 - I	365-00 W15-00
TA-16-371	16 - 371	TANK, SEPTIC		365-00 W20-00
TA-16-372	16 - 372	COOLING TOWER		365-00 W20-00
TA-16-373	16 - 373		UNASSIGNED	
TA-16-374	16 - 374		UNASSIGNED	
TA-16-375	16 - 375		UNASSIGNED	
TA-16-376	16 - 376		UNASSIGNED	
TA-16-377	16 - 377		UNASSIGNED	
TA-16-378	16 - 378		UNASSIGNED	
TA-16-379	16 - 379		UNASSIGNED	
TA-16-380	16 - 380	PROCESS BUILDING	CONST. NO. 137 - I	370-00 W 5-00
TA-16-381	16 - 381	TANK, SEPTIC		370-00 W 5-00
TA-16-382	13 - 382		UNASSIGNED	
TA-16-383	16 - 383			
TA-16-384	16 - 384		REMOVED 1970	
TA-16-385	16 - 385	TANK, SEPTIC		325-00 W 5-00
TA-16-386	16 - 386	BURNING AREA		320-00 W 5-00
TA-16-387	16 - 387	BURNING AREA		320-00 W 5-00
TA-16-388	16 - 388	BURNING AREA		325-00 W 5-00
TA-16-389	16 - 389	CONTROL SHELTER		325-00 W 5-00
TA-16-390	16 - 390	BASKET WASHING BUILDING	ABANDONED 1970	320-00 0-00
TA-16-391	16 - 391	TANK, FUEL	ABANDONED 1970	340-00 0-00
TA-16-392	16 - 392	FILTER BEDS		325-00 E 5-00
TA-16-393	16 - 393		REMOVED 1964	
TA-16-394	16 - 394	FILTER BED		325-00 0-00
TA-16-395	16 - 395	BARRICADE		325-00 W 2-00
TA-16-396	16 - 396		REMOVED 1968	
TA-16-397	16 - 397		REMOVED 1980	
TA-16-398	16 - 398	MANHOLE, WATER		325-00 W 2-00
TA-16-399	16 - 399	BURNING AREA		325-00 0-00
TA-16-400	16 - 400	TRUCK WASHING BUILDING	ABANDONED 1970	345-00 W 70-00
TA-16-401	16 - 401	TANK, PRESSURE		0 - 325-00 0-00
TA-16-402	16 - 402	AIR HEATER		325-00 0-00
TA-16-403	16 - 403		REMOVED 1968	
TA-16-404	16 - 404	MICROSTRAINER BUILDING		330-00 W 75-00
TA-16-405	16 - 405	TANK, SURGE		330-00 W 75-00
TA-16-406	16 - 406	TANK, PRESSURE		325-00 0-00
TA-16-407	16 - 407	MANHOLE, AIR VENT		325-00 0-00
TA-16-408	16 - 408			
TA-16-409	16 - 409	MANHOLE, AIR VENT		325 .00 W 00 00
TA-16-410	16 - 410	ASSEMBLY BUILDING	CONST. NO. 143 - I	395-00 W 30-00
TA-16-411	16 - 411	REST HOUSE	CONST. NO. 143 - C	390-00 W 33-00
TA-16-412	16 - 412	INCINERATOR		340-00 W 55-00
TA-16-413	16 - 413	REST HOUSE	CONST. NO. 143 - A	390-00 W 33-00
TA-16-414	16 - 414	STORAGE BUILDING		390-00 W 33-00
TA-16-415	16 - 415	REST HOUSE	CONST NO. 142 - B	390-00 W 30-00
TA-16-416	16 - 416	PASSAGEWAY	BLDG. 413 TO PASS. 419	390-00 W 30-00
TA-16-417	16 - 417	DRUM STORAGE		395-00 W 30-00
TA-16-418	16 - 418	PASSAGEWAY	BLDG. 415 TO PASS. 418	390-00 W 30-00
TA-16-419	16 - 419	PASSAGEWAY	BLDG. 410 TO PASS. 418	395-00 W 30-00
TA-16-420	16 - 420	TANK, JET	ABANDONED 1962	390-00 W 33-00
TA-16-421	16 - 421	F3 TRAINING FACILITY		365-00 W 25-00
TA-16-422	16 - 422		UNASSIGNED	
TA-16-423	16 - 423		UNASSIGNED	
TA-16-424	16 - 424		UNASSIGNED	
TA-16-425	16 - 425		UNASSIGNED	
TA-16-426	16 - 426		UNASSIGNED	
TA-16-427	16 - 427		UNASSIGNED	
TA-16-428	16 - 428		UNASSIGNED	
TA-16-429	16 - 429		UNASSIGNED	
TA-16-430	16 - 430	PROCESS BUILDING	CONST. NO. 138 - I	380-00 W 43-00
TA-16-431	16 - 431		REMOVED 1988	
TA-16-432	16 - 432		UNASSIGNED	
TA-16-433	16 - 433		UNASSIGNED	
TA-16-434	16 - 434		UNASSIGNED	
TA-16-435	16 - 435	REST HOUSE	CONST NO. 136 - B	355-00 W 45-00
TA-16-436	16 - 436		UNASSIGNED	
TA-16-437	16 - 437	REST HOUSE	CONST NO. 138 - A	360-00 W 45-00
TA-16-438	16 - 438	ROAD BLOCK	FORMERLY TA-33-88	360-00 W 45-00
TA-16-439	16 - 439		UNASSIGNED	
TA-16-440	16 - 440		UNASSIGNED	
TA-16-441	16 - 441		UNASSIGNED	
TA-16-442	16 - 442	PASSAGEWAY	BLDG. 435 TO PASS. 443	355-00 W 45-00
TA-16-443	16 - 443	PASSAGEWAY	BLDG. 430 TO PASS. 442	380-00 W 45-00
TA-16-444	16 - 444	PASSAGEWAY	BLDG. 437 TO PASS. 443	390-00 W 45-00
TA-16-445	16 - 445		UNASSIGNED	
TA-16-446	16 - 446		UNASSIGNED	
TA-16-447	16 - 447		UNASSIGNED	
TA-16-448	16 - 448		UNASSIGNED	
TA-16-449	16 - 449		UNASSIGNED	
TA-16-450	16 - 450	PROCESS BUILDING	CONST NO 142 - I	355-00 W 70-00
TA-16-451	16 - 451		UNASSIGNED	
TA-16-453	16 - 453		UNASSIGNED	
TA-16-454	16 - 454		UNASSIGNED	

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-455	16 - 455	TANK, BLOWDOWN STEAM		330-00 W 70-00
TA-16-457	16 - 457	VALVEHOUSE, WATER		330-00 W 70-00
TA-16-458	16 - 458		UNASSIGNED	
TA-16-459	16 - 459		UNASSIGNED	
TA-16-460	16 - 460	LABORATORY BUILDING	CONST. NO. 141 - I	345-00 W 85-00
TA-16-461	16 - 461	PASSAGEWAY		345-00 W 85-00
TA-16-462	16 - 462	STORAGE BUILDING	CONST. NO. 141 - 2	345-00 W 85-00
TA-16-463	16 - 463	REST HOUSE		345-00 W 85-00
TA-16-464	16 - 464		REMOVED 1964	
TA-16-465	16 - 465	BARRICADE		
TA-16-466	16 - 466		UNASSIGNED	
TA-16-467	16 - 467		UNASSIGNED	
TA-16-468	16 - 468		UNASSIGNED	
TA-16-469	16 - 469		UNASSIGNED	
TA-16-470	16 - 470		UNASSIGNED	
TA-16-471	16 - 471		UNASSIGNED	
TA-16-472	16 - 472		UNASSIGNED	
TA-16-473	16 - 473		UNASSIGNED	
TA-16-474	16 - 474	CONCRETE PAD		335-00 W 10 -00
TA-16-475	16 - 475		REMOVED 1951	
TA-16-476	16 - 476	LABORATORY BUILDING	FORMERLY P-2	335-00 W 10-00
TA-16-477	16 - 477	LABORATORY BUILDING	FORMERLY P-3	335-00 W 10-00
TA-16-478	16 - 478	PROCESS BUILDING	FORMERLY P-4	335-00 W 10-00
TA-16-479	16 - 479		REMOVED 1349	
TA-16-480	16 - 480		REMOVED 1951	
TA-16-481	16 - 481		REMOVED 1951	
TA-16-482	16 - 482		REMOVED 1949	
TA-16-483	16 - 483		REMOVED 1951	
TA-16-484	16 - 484	MANHOLE	FORMERLY P-10 CONTROL	335-00 W 10-00
TA-16-485	16 - 485		REMOVED 1963	
TA-16-486	16 - 486		REMOVED 1951	
TA-16-487	16 - 487		REMOVED 1951	
TA-16-488	16 - 488		REMOVED 1951	
TA-16-489	16 - 489	CHARGE STATION	FORMERLY P-15	335-00 W 10-00
TA-16-490	16 - 490		REMOVED 1960	
TA-16-491	16 - 491		REMOVED 1960	
TA-16-492	16 - 492		REMOVED 1960	
TA-16-493	16 - 493		REMOVED 1960	
TA-16-494	16 - 494		REMOVED 1960	
TA-16-495	16 - 495		REMOVED 1960	
TA-16-496	16 - 496		REMOVED 1960	
TA-16-497	16 - 497		REMOVED 1960	
TA-16-498	16 - 498		REMOVED 1960	
TA-16-499	16 - 499		REMOVED 1960	
TA-16-500	16 - 500		REMOVED 1960	
TA-16-501	16 - 501		REMOVED 1950	
TA-16-502	16 - 502		REMOVED 1960	
TA-16-503	16 - 503		REMOVED 1960	
TA-16-504	16 - 504		REMOVED	
TA-16-505	16 - 505		REMOVED 1980	
TA-16-506	16 - 506		REMOVED	
TA-16-507	16 - 507		REMOVED	
TA-16-508	16 - 508		REMOVED	
TA-16-509	16 - 509		REMOVED	
TA-16-510	16 - 510		REMOVED	
TA-16-511	16 - 511		REMOVED	
TA-16-512	16 - 512		REMOVED	
TA-16-513	16 - 513		REMOVED 1931	
TA-16-514	16 - 514	TRANSFORMER STATION		335-00 W 45-00
TA-16-515	16 - 515	PROCESS BUILDING	FORMERLY V-1 LV-2	335-00 W 65-00
TA-16-516	16 - 516	PROCESS BUILDING	FORMERLY V-4	340-00 W 63-00
TA-16-517	16 - 517	EQUIPMENT BUILDING	FORMERLY V-5	340-00 W 43-00
TA-16-518	16 - 518	STORAGE BUILDING	FORMERLY V-8	340-00 W 40-00
TA-16-519	16 - 519	STORAGE BUILDING	FORMERLY V-7	340-00 W 40-00
TA-16-520	16 - 520	TEST BUILDING	FORMERLY V-6	340-00 W 40-00
TA-16-521	16 - 521		REMOVED 1968	
TA-16-522	16 - 522		REMOVED 1943	

FIGURE 16-13

TA-16 STRUCTURE LOCATION INDEX
(2 OF 5)

REV.1 6/27/90

REV.	DATE	REVISION	BY	CHKD	APP
19	9-22-83	REVISED TITLE BLOCK & DWG TO STATUS OF 7-27-83	MS	[illegible]	DA

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

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-16 S-SITE

SEC CLASSIFICATION: CLASS U; REVIEWER; DATE 10-17-83

SUBMITTED	RECOMMENDED	APPROVED
[signature]	[signature]	[signature]
DRAWN [signature]	DATE 9-22-83	SHEET NO. 2 of 7
CHECKED [signature]		DRAWING NO. ENG-R 5111

301215 02 01 B21

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-321	16-321		REMOVED 1949	
TA-16-324	16-324		REMOVED 1949	
TA-16-325	16-325	STORAGE BUILDING		540+00 W60+00
TA-16-326	16-326	PUMP PIT	FORMERLY V-11	540+00 W45+00
TA-16-327	16-327	TANK	SEPTIC FORMERLY V-12	540+00 W45+00
TA-16-328	16-328	BARRICADE	FORMERLY V-13	540+00 W45+00
TA-16-329	16-329	RETAINING WALL	FORMERLY V-14	540+00 W45+00
TA-16-330	16-330	TANK	IMHOFF, SEWAGE PLANT	540+00 W10+00
TA-16-331	16-331	TRICKLING FILTER	SEWAGE PLANT	540+00 W10+00
TA-16-332	16-332	TANK	FINAL, SEWAGE PLANT	540+00 W10+00
TA-16-333	16-333	SLUDGE DRYING BED	SEWAGE PLANT	540+00 W10+00
TA-16-334	16-334	SCREEN	SEWAGE PLANT	540+00 W10+00
TA-16-335	16-335	SLUDGE DRYING BED	SEWAGE PLANT	540+00 W10+00
TA-16-336	16-336	TRANSFORMER STATION		520+00 W45+00
TA-16-337	16-337	TRANSFORMER STATION		530+00 W30+00
TA-16-338	16-338	TRANSFORMER STATION		535+00 W65+00
TA-16-339	16-339	TRANSFORMER STATION		525+00 W70+00
TA-16-340	16-340	STEAM PLANT		530+00 W70+00
TA-16-341	16-341	TANK	ABANDONED	530+00 W70+00
TA-16-342	16-342	GAS REGULATOR BUILDING		530+00 W70+00
TA-16-343	16-343	TANK	FUEL, UNDERGROUND	530+00 W70+00
TA-16-344	16-344	TANK	FUEL, UNDERGROUND	530+00 W70+00
TA-16-345	16-345	TANK	FUEL, UNDERGROUND	530+00 W70+00
TA-16-346	16-346	TANK	FUEL, UNDERGROUND	530+00 W70+00
TA-16-347	16-347	MANHOLE	GAS P.R.V.	530+00 W70+00
TA-16-348	16-348	TRANSFORMER STATION		520+00 W40+00
TA-16-349	16-349	TRANSFORMER STATION		520+00 W 10+00
TA-16-350	16-350	TRANSFORMER STATION		525+00 W 5+00
TA-16-351	16-351	TRANSFORMER STATION	SERIES LIGHTING	530+00 W60+00
TA-16-352	16-352	TRANSFORMER STATION	SERIES LIGHTING	535+00 W15+00
TA-16-353	16-353	TRANSFORMER STATION	SERIES LIGHTING	530+00 W40+00
TA-16-354	16-354	TRANSFORMER STATION	SERIES LIGHTING	570+00 W 5+00
TA-16-355	16-355	TRANSFORMER STATION	SERIES LIGHTING	545+00 W25+00
TA-16-356	16-356		REMOVED 1931	
TA-16-357	16-357		REMOVED 1956	
TA-16-358	16-358	TRANSFORMER STATION	SERIES LIGHTING	520+00 W30+00
TA-16-359	16-359	TRANSFORMER STATION	SERIES LIGHTING	543+00 W65+00
TA-16-360	16-360	CHLORINATION STATION		530+00 W75+00
TA-16-361	16-361	TRANSFORMER STATION	SERIES LIGHTING	540+00 W70+00
TA-16-362	16-362	UNIT SUBSTATION		545+00 W65+00
TA-16-363	16-363	UNIT SUBSTATION		580+00 W45+00
TA-16-364	16-364	UNIT SUBSTATION		535+00 W25+00
TA-16-365	16-365	UNIT SUBSTATION		545+00 W30+00
TA-16-366	16-366		REMOVED 1959	
TA-16-367	16-367		REMOVED 1966	540+00 W45+00
TA-16-368	16-368	TRANSFORMER STATION	SERIES LIGHTING	563+00 W30+00
TA-16-369	16-369	TRANSFORMER STATION	SERIES LIGHTING	560+00 W45+00
TA-16-370	16-370	UNIT SUBSTATION		560+00 W65+00
TA-16-371	16-371	TRANSFORMER STATION	SERIES LIGHTING	525+00 W40+00
TA-16-372	16-372	UNIT SUBSTATION		530+00 W45+00
TA-16-373	16-373	UNIT SUBSTATION		550+00 W10+00
TA-16-374	16-374		REMOVED 1986	
TA-16-375	16-375		REMOVED 1968	
TA-16-376	16-376	TRANSFORMER STATION	RELOCATED TO TA-16-299	
TA-16-377	16-377		REMOVED 1990	
TA-16-378	16-378		REMOVED 1960	
TA-16-379	16-379		REMOVED 1960	
TA-16-380	16-380		REMOVED 1966	
TA-16-381	16-381		REMOVED 1966	
TA-16-382	16-382		REMOVED 1960	
TA-16-383	16-383		REMOVED 1960	
TA-16-384	16-384		REMOVED 1968	
TA-16-385	16-385	UNIT SUBSTATION		530+00 W10+00
TA-16-386	16-386	UNIT SUBSTATION		535+00 W15+00
TA-16-387	16-387	UNIT SUBSTATION		535+00 W30+00
TA-16-388	16-388	TRANSFORMER STATION	SERIES LIGHTING	535+00 W35+00
TA-16-389	16-389	UNIT SUBSTATION		540+00 W30+00
TA-16-390	16-390	UNIT SUBSTATION		545+00 W25+00
TA-16-391	16-391	UNIT SUBSTATION		520+00 W50+00
TA-16-392	16-392	UNIT SUBSTATION		520+00 W25+00
TA-16-393	16-393	UNIT SUBSTATION		563+00 W20+00
TA-16-394	16-394	UNIT SUBSTATION		570+00 W 5+00
TA-16-395	16-395	UNIT SUBSTATION		583+00 W30+00
TA-16-396	16-396	UNIT SUBSTATION		530+00 W40+00
TA-16-397	16-397	UNIT SUBSTATION		520+00 W50+00
TA-16-398	16-398	UNIT SUBSTATION		515+00 W45+00
TA-16-399	16-399	SWITCHGEAR		525+00 W65+00
TA-16-400	16-400	BARRICADE		520+00 W35+00
TA-16-401	16-401	BARRICADE		520+00 W40+00
TA-16-402	16-402	BARRICADE		520+00 W35+00
TA-16-403	16-403	BARRICADE		520+00 W35+00
TA-16-404	16-404	BARRICADE		525+00 W35+00
TA-16-405	16-405	BARRICADE		525+00 W35+00
TA-16-406	16-406	BARRICADE		525+00 W35+00
TA-16-407	16-407	BARRICADE		525+00 W35+00
TA-16-408	16-408	TRANSFORMER STATION		540+00 W45+00
TA-16-409	16-409	TRANSFORMER STATION		540+00 W45+00
TA-16-410	16-410	TRANSFORMER STATION		535+00 W45+00
TA-16-411	16-411	TRANSFORMER STATION		535+00 W50+00
TA-16-412	16-412	BARRICADE		515+00 W45+00
TA-16-413	16-413	BARRICADE		515+00 W45+00
TA-16-414	16-414	BARRICADE		515+00 W50+00
TA-16-415	16-415	BARRICADE		515+00 W50+00
TA-16-416	16-416	BARRICADE		515+00 W55+00
TA-16-417	16-417	BARRICADE		515+00 W50+00
TA-16-418	16-418	BARRICADE		520+00 W50+00
TA-16-419	16-419	BARRICADE		520+00 W45+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-420	16-420	BARRICADE		515+00 W30+00
TA-16-421	16-421	TRANSFORMER STATION		530+00 W75+00
TA-16-422	16-422	TRANSFORMER STATION		525+00 W35+00
TA-16-423	16-423	TRANSFORMER STATION		515+00 W55+00
TA-16-424	16-424	BARRICADE		535+00 W40+00
TA-16-425	16-425	BARRICADE		530+00 W35+00
TA-16-426	16-426	BARRICADE		530+00 W30+00
TA-16-427	16-427	BARRICADE		530+00 W40+00
TA-16-428	16-428	BARRICADE		525+00 W40+00
TA-16-429	16-429	BARRICADE		535+00 W40+00
TA-16-430	16-430	TRANSFORMER STATION		525+00 0+00
TA-16-431	16-431	TRANSFORMER STATION		535+00 W65+00
TA-16-432	16-432		UNASSIGNED	
TA-16-433	16-433		UNASSIGNED	
TA-16-434	16-434	BARRICADE		540+00 W30+00
TA-16-435	16-435	BARRICADE		540+00 W30+00
TA-16-436	16-436	BARRICADE		545+00 W25+00
TA-16-437	16-437	BARRICADE		540+00 W35+00
TA-16-438	16-438	BARRICADE		540+00 W30+00
TA-16-440	16-440	BARRICADE		545+00 W30+00
TA-16-441	16-441	BARRICADE		545+00 W30+00
TA-16-442	16-442	BARRICADE		550+00 W25+00
TA-16-443	16-443	DEADMAN		555+00 W30+00
TA-16-444	16-444	DEADMAN		535+00 W45+00
TA-16-445	16-445	DEADMAN		560+00 W45+00
TA-16-446	16-446	DEADMAN		560+00 W45+00
TA-16-447	16-447	DEADMAN		560+00 W45+00
TA-16-448	16-448	DEADMAN		560+00 W45+00
TA-16-449	16-449	DEADMAN		560+00 W50+00
TA-16-450	16-450	DEADMAN		560+00 W50+00
TA-16-451	16-451		UNASSIGNED	
TA-16-452	16-452		UNASSIGNED	
TA-16-453	16-453		UNASSIGNED	
TA-16-454	16-454		UNASSIGNED	
TA-16-455	16-455		UNASSIGNED	
TA-16-456	16-456	BARRICADE		560+00 W45+00
TA-16-457	16-457	BARRICADE		555+00 W45+00
TA-16-458	16-458	BARRICADE		555+00 W45+00
TA-16-459	16-459		UNASSIGNED	
TA-16-460	16-460		UNASSIGNED	
TA-16-461	16-461		UNASSIGNED	
TA-16-462	16-462		UNASSIGNED	
TA-16-463	16-463		UNASSIGNED	
TA-16-464	16-464		UNASSIGNED	
TA-16-465	16-465		UNASSIGNED	
TA-16-466	16-466	BARRICADE		555+00 W25+00
TA-16-467	16-467		UNASSIGNED	
TA-16-468	16-468		UNASSIGNED	
TA-16-469	16-469		UNASSIGNED	
TA-16-470	16-470		UNASSIGNED	
TA-16-471	16-471	BARRICADE		535+00 W20+00
TA-16-472	16-472	BARRICADE		535+00 W20+00
TA-16-473	16-473	BARRICADE		535+00 W15+00
TA-16-474	16-474		UNASSIGNED	
TA-16-475	16-475		UNASSIGNED	
TA-16-476	16-476		UNASSIGNED	
TA-16-477	16-477		UNASSIGNED	
TA-16-478	16-478		UNASSIGNED	
TA-16-479	16-479		UNASSIGNED	
TA-16-480	16-480		UNASSIGNED	
TA-16-481	16-481		UNASSIGNED	
TA-16-482	16-482		UNASSIGNED	
TA-16-483	16-483		UNASSIGNED	
TA-16-484	16-484		UNASSIGNED	
TA-16-485	16-485		UNASSIGNED	
TA-16-486	16-486		UNASSIGNED	
TA-16-487	16-487		UNASSIGNED	
TA-16-488	16-488	BARRICADE		560+00 W30+00
TA-16-489	16-489	BARRICADE		560+00 W30+00
TA-16-490	16-490	BARRICADE		595+00 W30+00
TA-16-491	16-491	BARRICADE		560+00 W35+00
TA-16-492	16-492	BARRICADE		560+00 W35+00
TA-16-493	16-493	MANHOLE	STEAM	530+00 W65+00
TA-16-494	16-494	MANHOLE	STEAM	530+00 W65+00
TA-16-495	16-495	MANHOLE	STEAM	530+00 W65+00
TA-16-496	16-496	MANHOLE	STEAM	530+00 W65+00
TA-16-497	16-497	MANHOLE	STEAM	530+00 W65+00
TA-16-498	16-498	MANHOLE	STEAM	530+00 W65+00
TA-16-499	16-499	MANHOLE	STEAM	530+00 W65+00
TA-16-700	16-700	MANHOLE	SANITARY	520+00 W50+00
TA-16-701	16-701	MANHOLE	SANITARY	520+00 W50+00
TA-16-702	16-702	MANHOLE	SANITARY	520+00 W50+00
TA-16-703	16-703	MANHOLE	SANITARY	520+00 W50+00
TA-16-704	16-704	MANHOLE	SANITARY	515+00 W50+00
TA-16-705	16-705	MANHOLE	SANITARY	515+00 W50+00
TA-16-706	16-706	MANHOLE	SANITARY	515+00 W45+00
TA-16-707	16-707	MANHOLE	SANITARY	515+00 W45+00
TA-16-708	16-708	MANHOLE	SANITARY	520+00 W45+00
TA-16-709	16-709	MANHOLE	SANITARY	520+00 W45+00
TA-16-710	16-710	MANHOLE	SANITARY	520+00 W45+00
TA-16-711	16-711	MANHOLE	SANITARY	520+00 W45+00
TA-16-712	16-712	MANHOLE	SANITARY	520+00 W40+00
TA-16-713	16-713	MANHOLE	SANITARY	520+00 W35+00
TA-16-715	16-715	MANHOLE	SANITARY	520+00 W35+00
TA-16-716	16-716	MANHOLE	SANITARY	520+00 W35+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-717	16-717	MANHOLE	SANITARY	530+00 W15+00
TA-16-718	16-718	MANHOLE	SANITARY	530+00 W20+00
TA-16-719	16-719	SEWAGE LIFT STATION		530+00 W40+00
TA-16-720	16-720	MANHOLE	SANITARY	530+00 W45+00
TA-16-721	16-721	MANHOLE	SANITARY	530+00 W45+00
TA-16-722	16-722	MANHOLE	SANITARY	535+00 W30+00
TA-16-723	16-723	MANHOLE	SANITARY	535+00 W30+00
TA-16-724	16-724	MANHOLE	SANITARY	535+00 W30+00
TA-16-725	16-725	MANHOLE	SANITARY	535+00 W25+00
TA-16-726	16-726	MANHOLE	SANITARY	540+00 W20+00
TA-16-727	16-727	MANHOLE	SANITARY	540+00 W20+00
TA-16-728	16-728	MANHOLE	SANITARY	540+00 W15+00
TA-16-729	16-729	MANHOLE	SANITARY	540+00 W15+00
TA-16-730	16-730	MANHOLE	SANITARY	540+00 W15+00
TA-16-731	16-731	MANHOLE	SANITARY	535+00 W15+00
TA-16-732	16-732	MANHOLE	SANITARY	535+00 W15+00
TA-16-733	16-733	MANHOLE	SANITARY	540+00 W10+00
TA-16-734	16-734	MANHOLE	SANITARY	540+00 W10+00
TA-16-735	16-735	MANHOLE	SANITARY	540+00 W10+00
TA-16-736	16-736	MANHOLE	SANITARY	540+00 W20+00
TA-16-738	16-738	MANHOLE	SANITARY	545+00 W20+00
TA-16-739	16-739	MANHOLE	SANITARY	545+00 W25+00
TA-16-740	16-740	MANHOLE	SANITARY	550+00 W25+00
TA-16-741	16-741	MANHOLE	SANITARY	550+00 W25+00
TA-16-742	16-742	MANHOLE	SANITARY	545+00 W25+00
TA-16-743	16-743	MANHOLE	SANITARY	545+00 W25+00
TA-16-744	16-744	MANHOLE	SANITARY	550+00 W30+00
TA-16-745	16-745	MANHOLE	SANITARY	545+00 W30+00
TA-16-746	16-746	MANHOLE	SANITARY	545+00 W30+00
TA-16-747	16-747	MANHOLE	SANITARY	545+00 W30+00
TA-16-748	16-748	MANHOLE	SANITARY	545+00 W30+00
TA-16-749	16-749	MANHOLE	SANITARY	540+00 W35+00
TA-16-750	16-750	MANHOLE	SANITARY	535+00 W30+00
TA-16-751	16-751	MANHOLE	SANITARY	550+00 W25+00
TA-16-752	16-752	MANHOLE	SANITARY	555+00 W25+00
TA-16-753	16-753	MANHOLE	SANITARY	555+00 W25+00
TA-16-754	16-754	MANHOLE	SANITARY	555+00 W30+00
TA-16-755	16-755	MANHOLE	SANITARY	555+00 W30+00
TA-16-756	16-756	MANHOLE	SANITARY	560+00 W35+00
TA-16-757	16-757	MANHOLE	SANITARY	560+00 W30+00
TA-16-758	16-758	MANHOLE	SANITARY	565+00 W30+00
TA-16-759	16-759	MANHOLE	SANITARY	560+00 W40+00
TA-16-760	16-760	MANHOLE	SANITARY	560+00 W40+00
TA-16-761	16-761	MANHOLE	SANITARY	560+00 W45+00
TA-16-762	16-762	MANHOLE	SANITARY	560+00 W45+00
TA-16-763	16-763	MANHOLE	SANITARY	560+00 W50+00
TA-16-764	16-764	MANHOLE	SANITARY	560+00 W50+00
TA-16-765	16-765	MANHOLE	SANITARY	560+00 W50+00
TA-16-766	16-766	MANHOLE	SANITARY	560+00 W55+00
TA-16-767	16-767	MANHOLE	SANITARY	555+00 W55+00
TA-16-768	16-768	MANHOLE	SANITARY	555+00 W60+00
TA-16-769	16-769	MANHOLE	SANITARY	555+00 W60+00
TA-16-770	16-770	MANHOLE	SANITARY	555+00 W65+00
TA-16-771	16-771	MANHOLE	SANITARY	555+00 W65+00
TA-16-772	16-772	MANHOLE	SANITARY	545+00 W65+00
TA-16-773	16-773	MANHOLE	SANITARY	550+00 W60+00
TA-16-774	16-774	MANHOLE	SANITARY	545+00 W60+00
TA-16-775	16-775	MANHOLE	SANITARY	545+00 W65+00
TA-16-776	16-776	MANHOLE	SANITARY	545+00 W65+00
TA-16-777	16-777	MANHOLE	SANITARY	545+00 W70+00
TA-16-778	16-778	MANHOLE	SANITARY	540+00 W70+00
TA-16-779	16-779	MANHOLE	SANITARY	545+00 W70+00
TA-16-780	16-780	MANHOLE	SANITARY	540+00 W70+00
TA-16-781	16-781	MANHOLE	SANITARY	540+00 W75+00
TA-16-782	16-782	MANHOLE	SANITARY	535+00 W70+00
TA-16-783	16-783	MANHOLE	SANITARY	540+00 W60+00

UNCLASSIFIED

FIGURE 16-13

TA-16 STRUCTURE LOCATION INDEX
(3 OF 5)

REV.1 6/27/90

REV	DATE	REVISION	BY	CAD	APP
0	9-23-83	REVISED TITLE BLOCK & DWG. TO STATUS OF 7-27-83	HS	AZ	DR

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

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-16
S-SITE

SUBMITTED	RECOMMENDED	APPROVED
DRAWN	DATE	SHEET NO	DRAWING NO
CHECKED	9-23-83	3 OF 7	ENG-R511

SEC CLASSIFICATION: CLASS U
REVIEWED
DATE 10-19-83

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-784	16 - 784		REMOVED	
TA-16-785	16 - 785	MANHOLE	SANITARY	340+00 W85+00
TA-16-786	16 - 786	MANHOLE	SANITARY	335+00 W85+00
TA-16-787	16 - 787	MANHOLE	SANITARY	330+00 W80+00
TA-16-788	16 - 788	MANHOLE	SANITARY	335+00 W80+00
TA-16-789	16 - 789	MANHOLE	SANITARY	330+00 W75+00
TA-16-790	16 - 790	MANHOLE	SANITARY	330+00 W70+00
TA-16-791	16 - 791	MANHOLE	SANITARY	330+00 W70+00
TA-16-792	16 - 792	MANHOLE	SANITARY	330+00 W70+00
TA-16-793	16 - 793	MANHOLE	INDUSTRIAL WASTE	340+00 W45+00
TA-16-794	16 - 794	MANHOLE	INDUSTRIAL WASTE	340+00 W45+00
TA-16-795	16 - 795	MANHOLE	INDUSTRIAL WASTE	340+00 W45+00
TA-16-796	16 - 796	MANHOLE	INDUSTRIAL WASTE	340+00 W45+00
TA-16-797	16 - 797	MANHOLE	INDUSTRIAL WASTE	340+00 W40+00
TA-16-798	16 - 798	MANHOLE	INDUSTRIAL WASTE	340+00 W40+00
TA-16-799	16 - 799	MANHOLE	INDUSTRIAL WASTE	342+00 W40+00
TA-16-800	16 - 800		REMOVED	
TA-16-801	16 - 801		REMOVED	
TA-16-802	16 - 802	MANHOLE	STORM DRAINAGE	330+00 W40+00
TA-16-803	16 - 803	MANHOLE	STORM DRAINAGE	320+00 W35+00
TA-16-804	16 - 804	MANHOLE	STORM DRAINAGE	320+00 W30+00
TA-16-805	16 - 805	MANHOLE	STORM DRAINAGE	325+00 W30+00
TA-16-806	16 - 806	MANHOLE	STORM DRAINAGE	335+00 W35+00
TA-16-807	16 - 807	MANHOLE	INDUSTRIAL WASTE	335+00 W30+00
TA-16-808	16 - 808	MANHOLE	INDUSTRIAL WASTE	340+00 W30+00
TA-16-809	16 - 809	MANHOLE	INDUSTRIAL WASTE	345+00 W25+00
TA-16-810	16 - 810	MANHOLE	INDUSTRIAL WASTE	345+00 W25+00
TA-16-811	16 - 811	MANHOLE	INDUSTRIAL WASTE	335+00 W15+00
TA-16-812	16 - 812	MANHOLE	INDUSTRIAL WASTE	335+00 W15+00
TA-16-813	16 - 813	MANHOLE	SANITARY	385+00 W20+00
TA-16-814	16 - 814	MANHOLE	SANITARY	330+00 W40+00
TA-16-815	16 - 815	MANHOLE	SANITARY	335+00 W70+00
TA-16-816	16 - 816	MANHOLE	SANITARY	355+00 W40+00
TA-16-817	16 - 817	MANHOLE	SANITARY	350+00 W40+00
TA-16-818	16 - 818		UNASSIGNED	
TA-16-819	16 - 819		UNASSIGNED	
TA-16-820	16 - 820		UNASSIGNED	
TA-16-821	16 - 821		UNASSIGNED	
TA-16-822	16 - 822		UNASSIGNED	
TA-16-823	16 - 823		UNASSIGNED	
TA-16-824	16 - 824		UNASSIGNED	
TA-16-825	16 - 825	MANHOLE	ELECTRICAL	315+00 W50+00
TA-16-826	16 - 826	MANHOLE	ELECTRICAL	315+00 W55+00
TA-16-827	16 - 827	MANHOLE	ELECTRICAL	315+00 W55+00
TA-16-828	16 - 828	MANHOLE	ELECTRICAL	315+00 W55+00
TA-16-829	16 - 829	MANHOLE	ELECTRICAL	310+00 W50+00
TA-16-830	16 - 830	MANHOLE	ELECTRICAL	315+00 W50+00
TA-16-831	16 - 831	MANHOLE	ELECTRICAL	315+00 W50+00
TA-16-832	16 - 832	MANHOLE	ELECTRICAL	315+00 W50+00
TA-16-833	16 - 833	MANHOLE	ELECTRICAL	315+00 W45+00
TA-16-834	16 - 834	MANHOLE	ELECTRICAL	320+00 W45+00
TA-16-835	16 - 835	MANHOLE	ELECTRICAL	320+00 W45+00
TA-16-836	16 - 836	MANHOLE	ELECTRICAL	320+00 W45+00
TA-16-837	16 - 837	MANHOLE	ELECTRICAL	325+00 W45+00
TA-16-838	16 - 838	MANHOLE	ELECTRICAL	330+00 W40+00
TA-16-839	16 - 839	MANHOLE	ELECTRICAL	330+00 W35+00
TA-16-840	16 - 840	MANHOLE	ELECTRICAL	330+00 W35+00
TA-16-841	16 - 841	MANHOLE	ELECTRICAL	330+00 W40+00
TA-16-842	16 - 842	MANHOLE	ELECTRICAL	330+00 W40+00
TA-16-843	16 - 843	MANHOLE	ELECTRICAL	340+00 W40+00
TA-16-844	16 - 844	MANHOLE	ELECTRICAL	338+00 W40+00
TA-16-845	16 - 845	MANHOLE	ELECTRICAL	330+00 W20+00
TA-16-846	16 - 846	MANHOLE	ELECTRICAL	335+00 W15+00
TA-16-847	16 - 847	MANHOLE	ELECTRICAL	335+00 W20+00
TA-16-848	16 - 848	MANHOLE	ELECTRICAL	335+00 W20+00
TA-16-849	16 - 849	MANHOLE	ELECTRICAL	335+00 W20+00
TA-16-850	16 - 850	MANHOLE	ELECTRICAL	335+00 W15+00
TA-16-851	16 - 851	MANHOLE	ELECTRICAL	335+00 W30+00
TA-16-852	16 - 852	MANHOLE	ELECTRICAL	335+00 W30+00
TA-16-853	16 - 853	MANHOLE	ELECTRICAL	340+00 W30+00
TA-16-854	16 - 854	MANHOLE	ELECTRICAL	340+00 W30+00
TA-16-855	16 - 855	MANHOLE	ELECTRICAL	340+00 W35+00
TA-16-856	16 - 856	MANHOLE	ELECTRICAL	340+00 W30+00
TA-16-857	16 - 857	MANHOLE	ELECTRICAL	340+00 W30+00
TA-16-858	16 - 858	MANHOLE	ELECTRICAL	340+00 W30+00
TA-16-859	16 - 859	MANHOLE	ELECTRICAL	345+00 W30+00
TA-16-860	16 - 860	MANHOLE	ELECTRICAL	345+00 W30+00
TA-16-861	16 - 861	MANHOLE	ELECTRICAL	345+00 W30+00
TA-16-862	16 - 862	MANHOLE	ELECTRICAL	345+00 W30+00
TA-16-863	16 - 863	MANHOLE	ELECTRICAL	345+00 W25+00
TA-16-864	16 - 864	MANHOLE	ELECTRICAL	345+00 W25+00
TA-16-865	16 - 865	MANHOLE	ELECTRICAL	350+00 W30+00
TA-16-866	16 - 866	MANHOLE	ELECTRICAL	345+00 W25+00
TA-16-867	16 - 867	MANHOLE	ELECTRICAL	350+00 W25+00
TA-16-868	16 - 868	MANHOLE	ELECTRICAL	350+00 W25+00
TA-16-869	16 - 869	MANHOLE	ELECTRICAL	350+00 W25+00
TA-16-870	16 - 870	MANHOLE	ELECTRICAL	350+00 W25+00
TA-16-871	16 - 871	MANHOLE	ELECTRICAL	360+00 W30+00
TA-16-872	16 - 872	MANHOLE	ELECTRICAL	360+00 W30+00
TA-16-873	16 - 873	MANHOLE	ELECTRICAL	360+00 W30+00
TA-16-874	16 - 874	MANHOLE	ELECTRICAL	360+00 W35+00
TA-16-875	16 - 875	MANHOLE	ELECTRICAL	360+00 W35+00
TA-16-876	16 - 876	MANHOLE	ELECTRICAL	360+00 W35+00
TA-16-877	16 - 877	MANHOLE	ELECTRICAL	365+00 W35+00
TA-16-878	16 - 878	MANHOLE	ELECTRICAL	360+00 W45+00
TA-16-879	16 - 879	MANHOLE	ELECTRICAL	360+00 W45+00
TA-16-880	16 - 880	MANHOLE	ELECTRICAL	355+00 W70+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-881	16 - 881	MANHOLE	ELECTRICAL	348+00 W88+00
TA-16-882	16 - 882	MANHOLE	ELECTRICAL	343+00 W80+00
TA-16-883	16 - 883	MANHOLE	ELECTRICAL	345+00 W82+00
TA-16-884	16 - 884	MANHOLE	ABANDONED 1966	340+00 W70+00
TA-16-885	16 - 885	MANHOLE	ABANDONED 1966	335+00 W70+00
TA-16-886	16 - 886	MANHOLE	ABANDONED 1966	330+00 W70+00
TA-16-887	16 - 887		ELECTRICAL	340+00 W93+00
TA-16-888	16 - 888		REMOVED 1972	
TA-16-889	16 - 889		REMOVED 1972	
TA-16-890	16 - 890	MANHOLE	ELECTRICAL	343+00 W85+00
TA-16-891	16 - 891	MANHOLE	ELECTRICAL	343+00 W70+00
TA-16-892	16 - 892	MANHOLE	ELECTRICAL	389+00 W80+00
TA-16-893	16 - 893	MANHOLE	ELECTRICAL	380+00 W33+00
TA-16-894	16 - 894	MANHOLE	ELECTRICAL	330+00 W85+00
TA-16-895	16 - 895		UNASSIGNED	
TA-16-896	16 - 896		UNASSIGNED	
TA-16-897	16 - 897		UNASSIGNED	
TA-16-898	16 - 898		UNASSIGNED	
TA-16-899	16 - 899		UNASSIGNED	
NOTE. TA-16-900 THRU TA-16-999 CANNOT BE USED FOR STR NO. ASSIGNMENT				
TA-16-1000	16 - 1000		RELOCATED TO TA-18-112	
TA-16-1001	16 - 1001		RELOCATED TO TA-1-288	
TA-16-1002	16 - 1002	MANHOLE	STEAM	315+00 W50+00
TA-16-1003	16 - 1003	MANHOLE	STEAM	315+00 W50+00
TA-16-1004	16 - 1004	MANHOLE	STEAM	315+00 W50+00
TA-16-1005	16 - 1005	MANHOLE	STEAM	315+00 W50+00
TA-16-1006	16 - 1006	MANHOLE	STEAM	320+00 W50+00
TA-16-1007	16 - 1007	MANHOLE	STEAM	320+00 W45+00
TA-16-1008	16 - 1008	MANHOLE	STEAM	325+00 W45+00
TA-16-1009	16 - 1009	MANHOLE	STEAM	325+00 W40+00
TA-16-1010	16 - 1010	MANHOLE	STEAM	325+00 W40+00
TA-16-1011	16 - 1011	MANHOLE	STEAM	340+00 W35+00
TA-16-1012	16 - 1012	MANHOLE	STEAM	330+00 W40+00
TA-16-1013	16 - 1013	MANHOLE	STEAM	330+00 W40+00
TA-16-1014	16 - 1014	MANHOLE	STEAM	330+00 W35+00
TA-16-1015	16 - 1015	MANHOLE	STEAM	335+00 W35+00
TA-16-1016	16 - 1016	MANHOLE	STEAM	335+00 W35+00
TA-16-1017	16 - 1017	MANHOLE	STEAM	340+00 W30+00
TA-16-1018	16 - 1018	MANHOLE	STEAM	335+00 W30+00
TA-16-1019	16 - 1019	MANHOLE	STEAM	335+00 W25+00
TA-16-1020	16 - 1020	MANHOLE	STEAM	335+00 W20+00
TA-16-1021	16 - 1021	MANHOLE	STEAM	335+00 W20+00
TA-16-1022	16 - 1022	MANHOLE	STEAM	335+00 W20+00
TA-16-1023	16 - 1023	MANHOLE	STEAM	335+00 W20+00
TA-16-1024	16 - 1024	MANHOLE	STEAM	335+00 W15+00
TA-16-1025	16 - 1025	MANHOLE	STEAM	335+00 W15+00
TA-16-1026	16 - 1026	MANHOLE	STEAM	335+00 W10+00
TA-16-1027	16 - 1027	MANHOLE	STEAM	340+00 W30+00
TA-16-1028	16 - 1028	MANHOLE	STEAM	340+00 W30+00
TA-16-1029	16 - 1029	MANHOLE	STEAM	345+00 W30+00
TA-16-1030	16 - 1030	MANHOLE	STEAM	345+00 W30+00
TA-16-1031	16 - 1031	MANHOLE	STEAM	350+00 W25+00
TA-16-1032	16 - 1032	MANHOLE	STEAM	350+00 W25+00
TA-16-1033	16 - 1033	MANHOLE	STEAM	330+00 W30+00
TA-16-1034	16 - 1034	MANHOLE	STEAM	338+00 W25+00
TA-16-1035	16 - 1035	MANHOLE	STEAM	333+00 W25+00
TA-16-1036	16 - 1036	MANHOLE	STEAM	340+00 W15+00
TA-16-1037	16 - 1037	MANHOLE	STEAM	380+00 W20+00
TA-16-1038	16 - 1038	MANHOLE	STEAM	385+00 W15+00
TA-16-1039	16 - 1039	MANHOLE	STEAM	355+00 W35+00
TA-16-1040	16 - 1040	MANHOLE	STEAM	355+00 W40+00
TA-16-1041	16 - 1041	MANHOLE	STEAM	355+00 W40+00
TA-16-1042	16 - 1042	MANHOLE	STEAM	360+00 W35+00
TA-16-1043	16 - 1043	MANHOLE	STEAM	360+00 W35+00
TA-16-1044	16 - 1044	MANHOLE	STEAM	355+00 W40+00
TA-16-1045	16 - 1045	MANHOLE	STEAM	355+00 W45+00
TA-16-1046	16 - 1046	MANHOLE	STEAM	355+00 W45+00
TA-16-1047	16 - 1047	MANHOLE	STEAM	355+00 W45+00
TA-16-1048	16 - 1048	MANHOLE	STEAM	360+00 W45+00
TA-16-1049	16 - 1049	MANHOLE	STEAM	355+00 W50+00
TA-16-1050	16 - 1050	MANHOLE	STEAM	355+00 W50+00
TA-16-1051	16 - 1051	MANHOLE	STEAM	355+00 W55+00
TA-16-1052	16 - 1052	MANHOLE	STEAM	355+00 W60+00
TA-16-1053	16 - 1053	MANHOLE	STEAM	350+00 W65+00
TA-16-1054	16 - 1054	MANHOLE	STEAM	355+00 W60+00
TA-16-1055	16 - 1055	MANHOLE	STEAM	355+00 W70+00
TA-16-1056	16 - 1056	MANHOLE	STEAM	345+00 W65+00
TA-16-1057	16 - 1057	MANHOLE	STEAM	345+00 W65+00
TA-16-1058	16 - 1058	MANHOLE	STEAM	340+00 W70+00
TA-16-1059	16 - 1059	MANHOLE	STEAM	340+00 W70+00
TA-16-1060	16 - 1060	MANHOLE	STEAM	340+00 W70+00
TA-16-1061	16 - 1061	MANHOLE	STEAM	340+00 W75+00
TA-16-1062	16 - 1062	MANHOLE	STEAM	330+00 W70+00
TA-16-1063	16 - 1063	MANHOLE	STEAM	330+00 W65+00
TA-16-1064	16 - 1064	MANHOLE	STEAM	330+00 W60+00
TA-16-1065	16 - 1065	MANHOLE	STEAM	335+00 W65+00
TA-16-1066	16 - 1066	MANHOLE	STEAM	335+00 W60+00
TA-16-1067	16 - 1067	MANHOLE	STEAM	340+00 W60+00
TA-16-1068	16 - 1068	MANHOLE	STEAM	340+00 W65+00
TA-16-1069	16 - 1069	MANHOLE	STEAM	340+00 W65+00
TA-16-1070	16 - 1070	MANHOLE	STEAM	330+00 W65+00
TA-16-1071	16 - 1071	MANHOLE	STEAM	325+00 W65+00
TA-16-1072	16 - 1072	MANHOLE	STEAM	323+00 W63+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-1073	16-1073	MANHOLE	STEAM	320+00 W80+00
TA-16-1074	16-1074	MANHOLE	STEAM	330+00 W77+00
TA-16-1075	16-1075	MANHOLE	STEAM	330+00 W80+00
TA-16-1076	16-1076	MANHOLE	STEAM	315+00 W35+00
TA-16-1077	16-1077	MANHOLE	STEAM	320+00 W33+00
TA-16-1078	16-1078	MANHOLE	STEAM	320+00 W30+00
TA-16-1079	16-1079		REMOVED	
TA-16-1080	16-1080	MANHOLE	STEAM	330+00 W78+00
TA-16-1081	16-1081	MANHOLE	STEAM	340+00 W60+00
TA-16-1082	16-1082	MANHOLE	STEAM	340+00 W80+00
TA-16-1083	16-1083	MANHOLE	ABANDONED 1958	335+00 W80+00
TA-16-1084	16-1084		REMOVED	
TA-16-1085	16-1085	MANHOLE	STEAM	350+00 W50+00
TA-16-1086	16-1086		REMOVED 1970	
TA-16-1087	16-1087		REMOVED 1970	
TA-16-1088	16-1088	MANHOLE	STEAM	335+00 W40+00
TA-16-1089	16-1089	MANHOLE	STEAM	335+00 W30+00
TA-16-1090	16-1090		REMOVED 1970	
TA-16-1091	16-1091	MANHOLE	STEAM	345+00 W65+00
TA-16-1092	16-1092	MANHOLE	STEAM	345+00 W65+00
TA-16-1093	16-1093	MANHOLE	STEAM	320+00 W60+00
TA-16-1094	16-1094	MANHOLE	STEAM	320+00 W55+00
TA-16-1095	16-1095		UNASSIGNED	
TA-16-1096	16-1096		UNASSIGNED	
TA-16-1097	16-1097		UNASSIGNED	
TA-16-1098	16-1098		UNASSIGNED	
TA-16-1099	16-1099	CONDENSATE PUMP	STEAM	350+00 W30+00
TA-16-1100	16-1100	MANHOLE	ABANDONED 1937	325+00 W35+00
TA-16-1101	16-1101		REMOVED 1966	
TA-16-1102	16-1102		REMOVED 1966	
TA-16-1103	16-1103		REMOVED 1966	
TA-16-1104	16-1104		REMOVED	
TA-16-1105	16-1105		REMOVED	
TA-16-1106	16-1106		REMOVED	
TA-16-1107	16-1107		REMOVED	
TA-16-1108	16-1108		REMOVED 1956	
TA-16-1109	16-1109		REMOVED 1958	
TA-16-1110	16-1110		REMOVED 1958	
TA-16-1111	16-1111		REMOVED 1968	
TA-16-1112	16-1112	MANHOLE	GAS DRIP POT	345+00 W70+00
TA-16-1113	16-1113	MANHOLE	GAS DRIP POT	340+00 W75+00
TA-16-1114	16-1114	MANHOLE	GAS DRIP POT	340+00 W75+00
TA-16-1115	16-1115	MANHOLE	WATER PRV	345+00 W70+00
TA-16-1116	16-1116	MANHOLE	WATER PRV	325+00 W35+00
TA-16-1117	16-1117	MANHOLE	WATER PRV	335+00 W40+00
TA-16-1118	16-1118	MANHOLE	WATER	340+00 W65+00
TA-16-1119	16-1119	MANHOLE	WATER	325+00 W40+00
TA-16-1120	16-1120	MANHOLE	WATER	365+00 W20+00
TA-16-1121	16-1121	MANHOLE	AIR RELIEF VALVE	330+00 W80+00
TA-16-1122	16-1122	MANHOLE	WATER PRV	355+00 W30+00
TA-16-1123	16-1123	MANHOLE	GAS PRV	365+00 W 3+00
TA-16-1124	16-1124	MANHOLE	WATER	330+00 W75+00
TA-16-1125	16-1125	MANHOLE	WATER	330+00 W75+00
TA-16-1126	16-1126	MANHOLE	WATER	330+00 W65+00
TA-16-1127	16-1127	MANHOLE	WATER	320+00 W55+00
TA-16-1128	16-1128	MANHOLE	GAS PRV	365+00 W 3+00
TA-16-1129	16-1129	TROUGH		342+09 0+00
TA-16-1130	16-1130		REMOVED 1949	
TA-16-1131	16-1131		REMOVED 1949	
TA-16-1132	16-1132		REMOVED 1958	
TA-16-1133	16-1133	GUARD HOUSE	RELOCATED TO TA-21-168	
TA-16-1134	16-1134	TROUGH	BASKET WASHING FAC.	325+00 0+00
TA-16-1135	16-1135	TROUGH	BASKET WASHING FAC.	325+00 0+00
TA-16-1136	16-1136		REMOVED	
TA-16-1137	16-1137		REMOVED	
TA-16-1138	16-1138		REMOVED	
TA-16-1139	16-1139		REMOVED	

UNCLASSIFIED

FIGURE 16-13

TA-16 STRUCTURE LOCATION INDEX

(4 OF 5)

REV.1 6/27/90

REV	DATE	REVISION	BY	COD	APP
17	9-23-83	REVISED TITLE BLOCK & ORG. 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-16
S-SITE

SEC CLASSIFICATION: U
CLASS:
REVIEWED BY:
DATE: 10-17-88

SUBMITTED	RECOMMENDED	APPROVED
DRAWN	DATE 9-23-83	SHEET NO. 4 OF 1
CHECKED		DRAWING NO. ENG-R 5111

301215 02 01 B23

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-1140	16-1140		REMOVED 1935	
TA-16-1141	16-1141		REMOVED 1944	
			CANCELLED	
			CANCELLED	
			CANCELLED	
			CANCELLED	
			CANCELLED	
			CANCELLED	
			CANCELLED	
TA-16-1149	16-1149	MANHOLE	WATER, ARV	S45-00 W70-00
TA-16-1150	16-1150	INCINERATOR	UNASSIGNED	
TA-16-1151	16-1151	"	"	
TA-16-1152	16-1152	"	"	
TA-16-1153	16-1153	"	"	
TA-16-1154	16-1154	"	"	
TA-16-1155	16-1155	"	"	
TA-16-1156	16-1156	"	"	
TA-16-1157	16-1157	"	"	
TA-16-1158	16-1158	"	"	
TA-16-1159	16-1159	"	"	
TA-16-1160	16-1160	"	"	
TA-16-1161	16-1161	"	"	
TA-16-1162	16-1162	"	"	
TA-16-1163	16-1163	"	"	
TA-16-1164	16-1164	"	"	
TA-16-1165	16-1165	"	"	
TA-16-1166	16-1166	"	"	
TA-16-1167	16-1167	"	"	
TA-16-1168	16-1168	"	"	
TA-16-1169	16-1169	"	"	
TA-16-1170	16-1170	"	"	
TA-16-1171	16-1171	"	"	
TA-16-1172	16-1172	"	"	
TA-16-1173	16-1173	"	"	
TA-16-1174	16-174	"	"	
TA-16-1175	16-1175	"	"	
TA-16-1176	16-1176	"	"	
TA-16-1177	16-1177	"	"	
TA-16-1178	16-1178	"	"	
TA-16-1179	16-1179	"	"	
TA-16-1180	16-1180	"	"	
TA-16-1181	16-1181	"	"	
TA-16-1182	16-1182	"	"	
TA-16-1183	16-1183	"	"	
TA-16-1184	16-1184	"	"	
TA-16-1185	16-1185	"	"	
TA-16-1186	16-1186	"	"	
TA-16-1187	16-1187	"	"	
TA-16-1188	16-1188	"	"	
TA-16-1189	16-1189	"	"	
TA-16-1190	16-1190	"	"	
TA-16-1191	16-1191	"	"	
TA-16-1192	16-1192	"	"	
TA-16-1193	16-1193	"	"	
TA-16-1194	16-1194	"	"	
TA-16-1195	16-1195	"	"	
TA-16-1196	16-1196	"	"	
TA-16-1197	16-1197	"	"	
TA-16-1198	16-1198	"	"	
TA-16-1199	16-1199	"	"	
TA-16-1200	16-1200	"	"	
TA-16-1201	16-1201	MANHOLE	TELEPHONE	S 15+00 W45+00
TA-16-1202	16-1202	MANHOLE	TELEPHONE	S 15+00 W45+00
TA-16-1203	16-1203	MANHOLE	TELEPHONE	S 15+00 W45+00
TA-16-1204	16-1204	JUNCTION BOX	TELEPHONE	S 15+00 W50+00
TA-16-1205	16-1205	MANHOLE	TELEPHONE	S 15+00 W50+00
TA-16-1206	16-1206	MANHOLE	TELEPHONE	S 10+00 W50+00
TA-16-1207	16-1207	MANHOLE	TELEPHONE	S 15+00 W50+00
TA-16-1208	16-1208	MANHOLE	TELEPHONE	S 15+00 W50+00
TA-16-1209	16-1209	MANHOLE	TELEPHONE	S 15+00 W50+00
TA-16-1210	16-1210	MANHOLE	TELEPHONE	S 20+00 W50+00
TA-16-1211	16-1211	JUNCTION BOX	TELEPHONE	S20+00 W50+00
TA-16-1212	16-1212	MANHOLE	TELEPHONE	S 15+00 W55+00
TA-16-1213	16-1213	MANHOLE	TELEPHONE	S 15+00 W55+00
TA-16-1214	16-1214	JUNCTION BOX	TELEPHONE	S 20+00 W50+00
TA-16-1215	16-1215	MANHOLE	TELEPHONE	S 20+00 W55+00
TA-16-1216	16-1216	JUNCTION BOX	TELEPHONE	S 20+00 W60+00
TA-16-1217	16-1217	MANHOLE	TELEPHONE	S 20+00 W60+00
TA-16-1218	16-1218	MANHOLE	TELEPHONE	S 25+00 W65+00
TA-16-1219	16-1219	MANHOLE	TELEPHONE	S 25+00 W65+00
TA-16-1220	16-1220	MANHOLE	TELEPHONE	S 35+00 W70+00
TA-16-1221	16-1221	MANHOLE	TELEPHONE	S 35+00 W70+00
TA-16-1222	16-1222	MANHOLE	TELEPHONE	S 40+00 W65+00
TA-16-1223	16-1223	MANHOLE	TELEPHONE	S 40+00 W70+00
TA-16-1224	16-1224	MANHOLE	TELEPHONE	S 40+00 W75+00
TA-16-1225	16-1225	MANHOLE	TELEPHONE	S 40+00 W65+00
TA-16-1226	16-1226	MANHOLE	TELEPHONE	S 45+00 W65+00
TA-16-1227	16-1227	JUNCTION BOX	TELEPHONE	S 45+00 W65+00
TA-16-1228	16-1228	JUNCTION BOX	TELEPHONE	S 45+00 W65+00
TA-16-1229	16-1229	MANHOLE	TELEPHONE	S 45+00 W65+00
TA-16-1230	16-1230	MANHOLE	TELEPHONE	S 45+00 W65+00
TA-16-1231	16-1231	MANHOLE	TELEPHONE	S 45+00 W70+00
TA-16-1232	16-1232	MANHOLE	TELEPHONE	S 50+00 W65+00
TA-16-1233	16-1233	MANHOLE	TELEPHONE	S 55+00 W65+00
TA-16-1234	16-1234	MANHOLE	TELEPHONE	S 55+00 W70+00
TA-16-1235	16-1235	JUNCTION BOX	TELEPHONE	S 60+00 W70+00
TA-16-1236	16-1236	MANHOLE	TELEPHONE	S 55+00 W65+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-1237	16-1237	MANHOLE	TELEPHONE	S55-00 W60-00
TA-16-1238	16-1238	MANHOLE	TELEPHONE	S55+00 W35+00
TA-16-1239	16-1239	MANHOLE	TELEPHONE	S55-00 W35-00
TA-16-1240	16-1240	MANHOLE	TELEPHONE	S55-00 W35-00
TA-16-1241	16-1241	JUNCTION BOX	TELEPHONE	S55+00 W45+00
TA-16-1242	16-1242	MANHOLE	TELEPHONE	S60+00 W45+00
TA-16-1243	16-1243	MANHOLE	TELEPHONE	S55+00 W45+00
TA-16-1244	16-1244	MANHOLE	TELEPHONE	S55+00 W45+00
TA-16-1245	16-1245	MANHOLE	TELEPHONE	S55-00 W45-00
TA-16-1246	16-1246	MANHOLE	TELEPHONE	S55+00 W35+00
TA-16-1247	16-1247	JUNCTION BOX	TELEPHONE	S55+00 W35+00
TA-16-1248	16-1248	MANHOLE	TELEPHONE	S56+00 W35+00
TA-16-1249	16-1249	MANHOLE	TELEPHONE	S60+00 W35+00
TA-16-1250	16-1250	JUNCTION BOX	TELEPHONE	S60+00 W30+00
TA-16-1251	16-1251	MANHOLE	TELEPHONE	S60+00 W30+00
TA-16-1252	16-1252	MANHOLE	TELEPHONE	S60+00 W30+00
TA-16-1253	16-1253	JUNCTION BOX	TELEPHONE	S60+00 W30+00
TA-16-1254	16-1254	JUNCTION BOX	TELEPHONE	S60+00 W35+00
TA-16-1255	16-1255	MANHOLE	TELEPHONE	S65+00 W35+00
TA-16-1256	16-1256	MANHOLE	TELEPHONE	S65+00 W35+00
TA-16-1257	16-1257	MANHOLE	TELEPHONE	S60+00 W35+00
TA-16-1258	16-1258	MANHOLE	TELEPHONE	S60+00 W35+00
TA-16-1259	16-1259	JUNCTION BOX	TELEPHONE	S55+00 W25+00
TA-16-1260	16-1260	MANHOLE	TELEPHONE	S55+00 W25+00
TA-16-1261	16-1261	MANHOLE	TELEPHONE	S55+00 W25+00
TA-16-1262	16-1262	JUNCTION BOX	TELEPHONE	S55+00 W25+00
TA-16-1263	16-1263	MANHOLE	TELEPHONE	S60+00 W25+00
TA-16-1264	16-1264	MANHOLE	TELEPHONE	S60+00 W25+00
TA-16-1265	16-1265	MANHOLE	TELEPHONE	S60+00 W20+00
TA-16-1266	16-1266	MANHOLE	TELEPHONE	S60+00 W20+00
TA-16-1267	16-1267	MANHOLE	TELEPHONE	S65+00 W20+00
TA-16-1268	16-1268	JUNCTION BOX	TELEPHONE	S65+00 W20+00
TA-16-1269	16-1269	MANHOLE	TELEPHONE	S65+00 W10+00
TA-16-1270	16-1270	MANHOLE	TELEPHONE	S65+00 W10+00
TA-16-1271	16-1271	MANHOLE	TELEPHONE	S65+00 W10+00
TA-16-1272	16-1272	MANHOLE	TELEPHONE	S70+00 W 5+00
TA-16-1273	16-1273	JUNCTION BOX	TELEPHONE	S70+00 W 5+00
TA-16-1274	16-1274	MANHOLE	TELEPHONE	S50+00 W25+00
TA-16-1275	16-1275	JUNCTION BOX	TELEPHONE	S50+00 W25+00
TA-16-1276	16-1276	MANHOLE	TELEPHONE	S50+00 W25+00
TA-16-1277	16-1277	JUNCTION BOX	TELEPHONE	S50+00 W25+00
TA-16-1278	16-1278	MANHOLE	TELEPHONE	S50+00 W25+00
TA-16-1279	16-1279	MANHOLE	TELEPHONE	S50+00 W25+00
TA-16-1280	16-1280	MANHOLE	TELEPHONE	S50+00 W25+00
TA-16-1281	16-1281	MANHOLE	TELEPHONE	S45+00 W25+00
TA-16-1282	16-1282	JUNCTION BOX	TELEPHONE	S45+00 W25+00
TA-16-1283	16-1283	JUNCTION BOX	TELEPHONE	S45+00 W25+00
TA-16-1284	16-1284	MANHOLE	TELEPHONE	S45+00 W25+00
TA-16-1285	16-1285	MANHOLE	TELEPHONE	S45+00 W20+00
TA-16-1286	16-1286	MANHOLE	TELEPHONE	S45+00 W25+00
TA-16-1287	16-1287	MANHOLE	TELEPHONE	S40+00 W25+00
TA-16-1288	16-1288	JUNCTION BOX	TELEPHONE	S40+00 W30+00
TA-16-1289	16-1289	MANHOLE	TELEPHONE	S45+00 W30+00
TA-16-1290	16-1290	MANHOLE	TELEPHONE	S45+00 W30+00
TA-16-1291	16-1291	JUNCTION BOX	TELEPHONE	S35+00 W25+00
TA-16-1292	16-1292	MANHOLE	TELEPHONE	S35+00 W25+00
TA-16-1293	16-1293	MANHOLE	TELEPHONE	S35+00 W25+00
TA-16-1294	16-1294	JUNCTION BOX	TELEPHONE	S35+00 W25+00
TA-16-1295	16-1295	MANHOLE	TELEPHONE	S35+00 W20+00
TA-16-1296	16-1296	JUNCTION BOX	TELEPHONE	S35+00 W20+00
TA-16-1297	16-1297	MANHOLE	TELEPHONE	S35+00 W20+00
TA-16-1298	16-1298	MANHOLE	TELEPHONE	S35+00 W20+00
TA-16-1299	16-1299	JUNCTION BOX	TELEPHONE	S35+00 W15+00
TA-16-1300	16-1300	MANHOLE	TELEPHONE	S35+00 W15+00
TA-16-1301	16-1301	MANHOLE	TELEPHONE	S35+00 W15+00
TA-16-1302	16-1302	MANHOLE	TELEPHONE	S35+00 W15+00
TA-16-1303	16-1303	JUNCTION BOX	TELEPHONE	S35+00 W10+00
TA-16-1304	16-1304	MANHOLE	TELEPHONE	S35+00 W30+00
TA-16-1305	16-1305	MANHOLE	TELEPHONE	S40+00 W30+00
TA-16-1306	16-1306	JUNCTION BOX	TELEPHONE	S40+00 W30+00
TA-16-1307	16-1307	MANHOLE	TELEPHONE	S40+00 W35+00
TA-16-1308	16-1308	MANHOLE	TELEPHONE	S40+00 W35+00
TA-16-1309	16-1309	JUNCTION BOX	TELEPHONE	S35+00 W35+00
TA-16-1310	16-1310	MANHOLE	TELEPHONE	S35+00 W35+00
TA-16-1311	16-1311	MANHOLE	TELEPHONE	S30+00 W30+00
TA-16-1312	16-1312	MANHOLE	TELEPHONE	S30+00 W25+00
TA-16-1313	16-1313	JUNCTION BOX	TELEPHONE	S30+00 W40+00
TA-16-1314	16-1314	MANHOLE	TELEPHONE	S30+00 W40+00
TA-16-1315	16-1315	MANHOLE	TELEPHONE	S30+00 W40+00
TA-16-1316	16-1316	MANHOLE	TELEPHONE	S35+00 W40+00
TA-16-1317	16-1317	MANHOLE	TELEPHONE	S30+00 W35+00
TA-16-1318	16-1318	MANHOLE	TELEPHONE	S30+00 W35+00
TA-16-1319	16-1319	MANHOLE	TELEPHONE	S30+00 W40+00
TA-16-1320	16-1320	MANHOLE	TELEPHONE	S25+00 W40+00
TA-16-1321	16-1321	MANHOLE	TELEPHONE	S23+00 W40+00
TA-16-1322	16-1322	MANHOLE	TELEPHONE	S25+00 W45+00
TA-16-1323	16-1323	MANHOLE	TELEPHONE	S20+00 W50+00
TA-16-1324	16-1324	MANHOLE	TELEPHONE	S20+00 W50+00
TA-16-1325	16-1325	JUNCTION BOX	TELEPHONE	S20+00 W45+00
TA-16-1326	16-1326	MANHOLE	TELEPHONE	S20+00 W45+00
TA-16-1327	16-1327	MANHOLE	TELEPHONE	S20+00 W45+00
TA-16-1328	16-1328	MANHOLE	TELEPHONE	S20+00 W45+00
TA-16-1329	16-1329		CANCELLED	
TA-16-1330	16-1330	CAPACITOR STATION		S30-00 W50-00
TA-16-1331	16-1331	VALVE HOUSE	NOT SHOWN	
TA-16-1332	16-1332	VALVE HOUSE	NOT SHOWN	

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-16-1334	16-1334	TRANSFORMER STATION	NOT SHOWN	
TA-16-1335	16-1335	TRANSFORMER STATION	NOT SHOWN	
TA-16-1337	16-1337	MANHOLE, STEAM	NOT SHOWN	
TA-16-1338	16-1338	MANHOLE, STEAM	NOT SHOWN	
TA-16-1339	16-1339	MANHOLE, SEWER	NOT SHOWN	
TA-16-1340	16-1340	WIND TUNNEL	NOT SHOWN	
TA-16-1341	16-1341	TANK, FUEL, U/G	NOT SHOWN	
TA-16-1342	16-1342	TANK, FUEL, U/G	NOT SHOWN	
TA-16-1343	16-1343	VALVE PIT	NOT SHOWN	

FIGURE 16-13

UNCLASSIFIED

TA-16 STRUCTURE LOCATION INDEX
(5 OF 5)

REV.1 6/27/90

REV	DATE	REVISION	BY	CAG	APP
1	9-23-83	REVISED TITLE BLOCK & DWG TO STATUS OF 7-27-83	MS		

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

FACILITIES ENGINEERING DIVISION

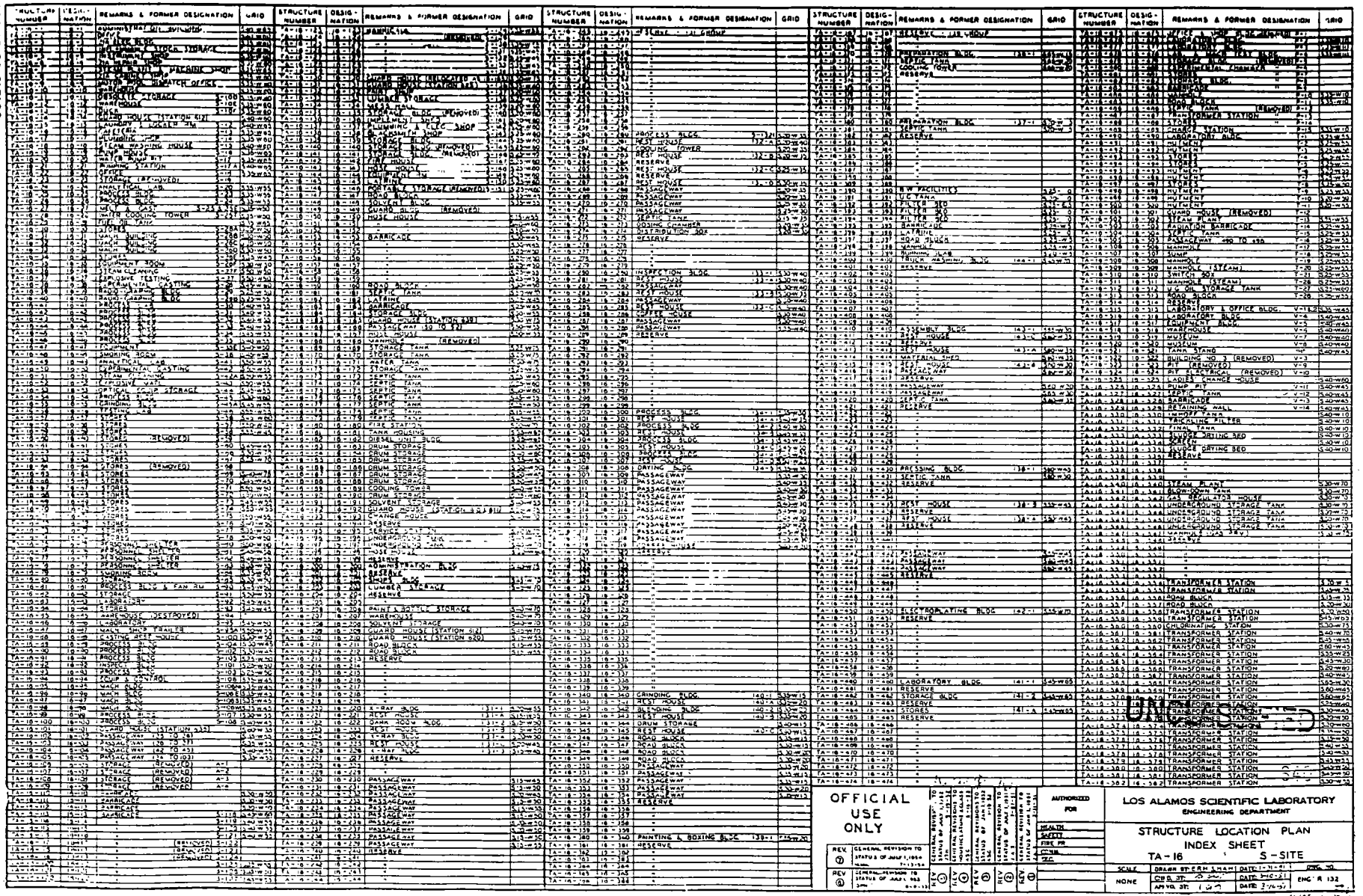
INDEX SHEET
STRUCTURE LOCATION PLAN
TA-16 S-SITE

SEC CLASSIFICATION	
CLASS.	U
REVIEWER	
DATE	9-23-83

SUBMITTED	RECOMMENDED	APPROVED
DRAWN	DATE	SHEET NO.
CHECKED	9-23-83	3 of 7

DRAWING NO. ENG-R 5111

30121 02 01 85



REV.1 6/27/90

FIGURE 16-14

TA-16 STRUCTURE LOCATION INDEX

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

The following table includes active container storage areas at TA-16.

STRUCTURE	SWMU NO.	TYPE OF STORAGE	STRUCTURE	SWMU NO.	TYPE OF STORAGE
TA-16-221	16-012(a)	rest house	TA-16-341	16-012(o)	rest house
TA-16-223	16-012(b)	rest house	TA-16-386	16-012(p)	<90 day
TA-16-225	16-012(c)	rest house	TA-16-343	16-012(q)	rest house
TA-16-260	16-012(d)	satellite	TA-16-345	16-012(r)	rest house
TA-16-261	16-012(e)	rest house	TA-16-360	16-012(s)	rest house
TA-16-263	16-012(f)	rest house	TA-16-370	16-012(t)	satellite
TA-16-281	16-012(g)	rest house	TA-16-430	16-012(u)	satellite
TA-16-285	16-012(h)	rest house	TA-16-435	16-012(v)	rest house
TA-16-300	16-012(i)	satellite	TA-16-437	16-012(w)	rest house
TA-16-302	16-012(j)	satellite	TA-16-460	16-012(x)	satellite
TA-16-303	16-012(k)	rest house	TA-16-463	16-012(y)	rest house
TA-16-304	16-012(l)	satellite	TA-16-283	16-012(z)	rest house
TA-16-306	16-012(m)	satellite	TA-16-88	16-012(a2)	<90 day
TA-16-340	16-012(n)	satellite			

A rest house is a transfer and temporary storage area for HE materials in between operations; most material in the rest houses is product.

WASTE INFORMATION

The containers, depending on the location, store spent solvents, HE-contaminated materials, scrap HE, barium nitrate, floor sweepings, and unknown wastes.

RELEASE INFORMATION

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

NOTES

SWMU No. 16-012(z) was formerly SWMU No. 16-013(b).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-012(a)	**		Tsk 13 : 279	TA-16-221
16-012(a2)	**			TA-16-88
16-012(b)	**		Tsk 13 : 280	TA-16-223
16-012(c)	**		Tsk 13 : 281	TA-16-225
16-012(d)	**		Tsk 12 : 132	TA-16-260
16-012(e)	**		Tsk 13 : 268	TA-16-261
16-012(f)	**		Tsk 13 : 269	TA-16-263
16-012(g)	**		Tsk 13 : 272	TA-16-281
16-012(h)	**		Tsk 13 : 274	TA-16-285
16-012(i)	**	? 16.007	Tsk 13 : 278	TA-16-300

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-012(j)	**		Tsk 13 : 270	TA-16-302
16-012(k)	**		Tsk 13 : 271	TA-16-303
16-012(l)	**		Tsk 13 : 286	TA-16-304
16-012(m)	**		Tsk 13 : 285	TA-16-306
16-012(n)	**		Tsk 12 : 126	TA-16-340
16-012(o)	**		Tsk 12 : 127	TA-16-341
16-012(p)	**	16.014		TA-16-386
16-012(q)	**		Tsk 12 : 129	TA-16-343
16-012(r)	**		Tsk 12 : 130	TA-16-345
16-012(s)	**		Tsk 12 : 125	TA-16-360
16-012(t)	**		Tsk 12 : 124	TA-16-370
16-012(u)	**		Tsk 14 : 562	TA-16-430
16-012(v)	**		Tsk 14 : 561	TA-16-435
16-012(w)	**		Tsk 14 : 563	TA-16-437
16-012(x)	**		Tsk 14 : 560	TA-16-460
16-012(y)	**		Tsk 14 : 559	TA-16-463
16-012(z)	**		Tsk 13 : 273	TA-16-283

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

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : ?
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE
SOLID WASTE

UNIT INFORMATION

The courtyard by TA-16-518, -519, -520 was a container storage area [16-013(a)] that was noted in the CEARP. The drums have been removed and the area is reported to have been cleaned up according to a recent field survey. TA-16-342 was listed in a 1988 printout of the Active Container Storage Area database. It was a satellite storage area for hazardous waste. The storage area is not listed in the 1990 update of the database.

WASTE INFORMATION

The areas near TA-16-518, -519, and -520 stored used solvent, hydraulic fluids, and unknown waste.

RELEASE INFORMATION

The 1987 CEARP field survey noted that a few of the drums at TA-16-518, -519, and -520 were leaking. The areas have been cleaned up and it is unknown whether hazardous materials remain. However, past operations at most container storage areas have resulted in systematic releases of solid wastes, including RCRA-regulated constituents.

NOTES

Active waste storage area 16-013(b) has been renumbered to 16-012(z).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-013	TA16-11-CA-A-HW/RW	16.034	Tsk 13 : 282 283 284	TA-16-518, -519, -520

NOTES

This SWMU has been deleted because, according to LANL staff, the Tritium Facility is not currently operational and does not generate waste.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : LAUNDRY
UNIT USE : TREATMENT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Structure TA-16-15 [16-015(a)] is listed as a laundry and locker room built in 1945 and removed in 1956. A steam washing house, TA-16-18 [16-015(b)], was also built in 1945, and it was destroyed by burning in 1960. An outfall originated from a drain on the north corner of TA-16-18. It is unknown whether the drainlines were removed with the building. Steam cleaning building TA-16-36 [16-015(c)] was built in 1944 and burned in 1960. Steam cleaning building TA-16-51 [16-015(d)] was built in 1944 and destroyed by burning in 1960. Other cleaning operations may have been present in the early days.

WASTE INFORMATION

Specific waste information is lacking. The waste may have contained HE residues and/or oils and grease.

RELEASE INFORMATION

It is unknown whether hazardous constituents were released. The buildings have been decommissioned.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-015(a)	TA16-1-CA-I-HW		Tsk 14 : 496	TA-16-15
16-015(b)	TA16-1-CA-I-HW		Tsk 14 : 406 649	TA-16-18
16-015(c)	TA16-1-CA-I-HW		Tsk 14 : 647	TA-16-36
16-015(d)	TA16-1-CA-I-HW		Tsk 14 : 648	TA-16-51

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED/INACTIVE
PERIOD OF USE : 1960s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

There are several landfills or surface disposal areas in TA-16. 1) In 1965, a magnetometer survey indicated an area where metal material had been buried [16-016(a)]. The material was located in the old exclusion area of TA-16. The area was excavated and the material was taken to MDA-P. It is possible that other buried material still exists in the area. 2) The 1987 CEARP field survey noted a surface disposal area consisting of broken concrete and debris with an illegible sign posted in front of the disposal area [16-016(b)]. The area is located in an area east of West Jemez Road and northwest of TA-16-540. 3) In the late 1940s, a possible landfill or storage area for barium nitrate may have been located at the site of the present TA-3-386 [16-016(c)]. The Environmental Restoration Release Site Database indicates that the barium nitrate stockpile is located near TA-16-386 on the edge of Del Valle Canyon, and rain has washed barium into the canyon. 4) A debris area is located near TA-16-222 [16-016(d)]. 5) A white, fibrous mass, ash, and firebrick are located southeast of TA-16-360 [16-016(e)]. 6) An area south of TA-16-360 contains construction debris [16-016(f)]. 7) Scattered debris is located in the canyon south of TA-16-370 [16-016(g)].

WASTE INFORMATION

The waste in the old exclusion area is metal. The CEARP field survey noted concrete and other debris possibly contaminated with HE in a surface disposal area. The possible landfill beneath the present TA-3-386 contains barium nitrate. The waste near TA-16-222 contains general trash, CMPs, and paint cans. The waste near TA-16-360 may contain asbestos. The debris south of TA-16-370 contains cans, pipes, and buckets. According to the Environmental Restoration Release Site Database, all of the surface disposals have the potential to be contaminated with HE.

RELEASE INFORMATION

It is unknown whether any of these areas have caused a release of hazardous waste.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-016(a)	TA16-10-L-1-HW		Tsk 12 : 139	
16-016(b)	TA16-10-L-1-HW		Tsk 12 : 133	NEAR TA-16-540
16-016(c)	**		Tsk 12 : 138	TA-16-386, NEAR TA-16-389
16-016(d)	**		Tsk 12 : 134	NEAR TA-16-222
16-016(e)	**		Tsk 12 : 135	NEAR TA-16-360
16-016(f)	**		Tsk 12 : 136	NEAR TA-16-360
16-016(g)	**		Tsk 12 : 137	NEAR TA-16-370

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : BUILDING/STRUCTURE
UNIT USE : STORAGE/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1940s - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

Approximately 30 buildings in the central portion of TA-16 were part of the World War II HE operations. Most of the buildings are in poor repair and many have been abandoned. None are work areas, although several of the more structurally sound buildings are used as storage facilities. Some of the buildings are contaminated to the extent that recrystallized HE has formed stalactites under the floors. There is a continual threat that detonation will occur as the buildings continue to deteriorate and collapse. Stabilization of the structures is not practical as the operation could endanger workers. A few of these buildings are on the historical preservation list. Any liquid waste handling facilities associated with the structures are believed to be contaminated with HE.

WASTE INFORMATION

The buildings are contaminated with HE.

RELEASE INFORMATION

It is unknown whether the structures have caused a release to the environment.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-017	TA16-12-CA-1-HW	16.036	Tsk 14 : 623	

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : LATE 1940s - 1985
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

MDA-P is a 6.71 acre landfill at the edge of Canon de Valle. Materials disposed in MDA-P are the noncombustible debris remaining from burned structures that were HE contaminated. A former detonator burning area is indicated as having been located within MDA-P. The debris consists of residuals of old magazines and explosives buildings from TA-6-9, -11, and -16. Other waste includes ashes from the incinerator, items suspected of being HE contaminated, chemical bottles and buckets, and general trash. Although a major portion of MDA-P has been covered with soil and leveled, some debris has fallen into the canyon bottom and the material on the edge of the filled area is still uncovered. A closure plan has been submitted to NMEID for MDA-P.

WASTE INFORMATION

The waste consists of HE-contaminated building debris containing barium, lead, and chemicals. The Environmental Restoration Release Site Database suggests that radioactive waste may also have been disposed.

RELEASE INFORMATION

Debris from MDA-P has fallen into the canyon. A culvert draining runoff water from a waste explosive burning pad was directed across the top of the site and caused erosion and subsidence in 1985. It is currently directed around the edge. The Environmental Restoration Release Site Database and DOE Environmental Survey indicate that soil samples collected from MDA-P contained EP toxic barium. The samples analysis was a a result of DOE Environmental Survey Environmental Problem #22.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-018	MDA-P	16.028	Tsk 12 : 140 162	MDA-P

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1940s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE
SUSPECTED MIXED WASTE

UNIT INFORMATION

In the 1940s, an area in the northern part of TA-16 was used as a burning ground for waste explosives prior to the construction of the present burn site. The Environmental Restoration Release Site Database indicates that two pits are visible on a 1948 topographical map, and that the burning ground was bulldozed into the canyon in the 1950s. The site was abandoned and during the construction of the 132-group buildings, grading of the surface caused soil to be pushed into the canyon. This area is known as MDA-R. It is about 2.27 acres in extent. Information regarding this area is lacking, but there is no evidence that the site was ever used for the disposal of objects or debris. The surface has not been disturbed for many years.

WASTE INFORMATION

The waste consists of HE burn residues, possibly containing barium. During early years of operation, uranium and lead were suspected to have been used.

RELEASE INFORMATION

It is unknown whether there has been a release from this site.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-019	MDA-R		Tsk 12 : 141	MDA-R

SUMMARY

LOCATION	: TA-16	MATERIALS MANAGED	: SOLID WASTE
TYPE OF UNIT(s)	: SILVER RECOVERY		HAZARDOUS WASTE
UNIT USE	: RECYCLING/DISPOSAL		
OPERATIONAL STATUS	: ACTIVE		
PERIOD OF USE	: 1960s - PRESENT		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: NONE		

UNIT INFORMATION

For many years, an X-ray film processing laboratory has been operating in TA-16-222. Currently, liquids are treated for silver recovery before being released to an outfall (EPA06A073; see Appendix A). Prior to 1979, the liquids were discharged directly to the environment.

WASTE INFORMATION

The waste discharged prior to 1979 was spent photo processing solutions and associated silver. Currently, the solutions are treated by the silver recovery unit prior to discharge.

RELEASE INFORMATION

Hazardous releases occurred to the outfall region before the silver recovery unit was put into service. A LANL report indicates the presence of silver concentrations up to 45,000 ppm in the soil at the outfall and above-background concentrations up to 450 meters from the outfall.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-020	TA16-5-O/CA-A/I-HW/RW	16.039	Tsk 12 : 81	TA-16-222

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : OPERATIONAL RELEASE
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE/ACTIVE
PERIOD OF USE : 1950s - PRESENT
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

A plating operation was located at TA-16-450 [16-021(a)]. The building was constructed between 1951 and 1953. Spent liquids are believed to have been discharged to a drainage east of the facility. A hydraulic press located in an equipment pit 5' below the floor in TA-16-430 leaks oil through the pit drain [16-021(b)]. For over 30 years, TA-16-260 [16-021(c)] was used for machining explosives, some of which contained barium nitrate. An outfall discharged wastewater from floor drains.

WASTE INFORMATION

The wastewater from the plating operation probably contained cyanide and sodium hydroxide. The TA-16-430 pit drain receives hydraulic oil. Wastewater from TA-16-260 contained barium nitrate.

RELEASE INFORMATION

It is suspected that the TA-16-450 discharge contained hazardous constituents. The pit drain at TA-16-430 discharges directly to an outfall south of the building. The soil around the TA-16-260 outfall is bleached and the vegetation in the area appears stressed.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-021(a)	**			TA-16-450
16-021(b)	**			TA-16-430

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1984 - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : FUEL

UNIT INFORMATION

Two underground storage tanks were found to have leaks during a volumetric testing program. TA-16-205 [16-022(a)] is a steel tank with a capacity of 560 gallons, a diameter of 4', and a length of 6'. It was installed in 1984. When tested, the tank had a loss rate of >10 gallons/hour. The second tank, TA-16-197 [16-022(b)], is listed as having a capacity of 4,000 gallons. It also failed a volumetric test. Tank TA-16-197 is schedule to be removed in 1990. Both tanks were excavated, repaired, and passed a second volumetric test.

WASTE INFORMATION

TA-16-205 stores diesel, and TA-16-197 stores unleaded gasoline. Previously, TA-16-197 stored leaded gasoline.

RELEASE INFORMATION

The tanks have released diesel and gasoline to the surrounding soil.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-022(a)	**		Tsk 14 : 665	TA-16-205
16-022(b)	**		Tsk 14 : 658	TA-16-197

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : INCINERATOR
UNIT USE : TREATMENT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

An incinerator, TA-16-199 [16-023(a)], was apparently used in the late 1950s. It had been removed by 1961. The Environmental Restoration Release Site Database indicates that the incinerator operated from 1961 to 1967 and was removed in 1968. It gives dimensions of 9' x 10' x 17'2" and describes the incinerator as a cage attached to the east wall of TA-16-43. The incinerator was replaced by TA-16-412 (see 16-011). Another incinerator, TA-16-403 [16-023(b)] was constructed of steel wire cloth on a steel frame. It was used from 1961 to 1962. This incinerator was removed in 1967.

WASTE INFORMATION

The waste consisted of HE-contaminated paper and rags.

RELEASE INFORMATION

There is no evidence that hazardous releases occurred from these incinerators.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-023(a)	TA16-1-CA-I-MW		Tsk 14 : 625	TA-16-199
16-023(b)	TA16-1-CA-I-MW		Tsk 14 : 626	TA-16-403

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1940s - 1960s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

It is possible that during the operation and decommissioning of the following magazines, the soil beneath them became contaminated. The magazines were flash-burned prior to demolition, due to health and safety concerns.

SWMU NO.	STRUCTURE	DATE OF REMOVAL	SWMU NO.	STRUCTURE	DATE OF REMOVAL
16-024(a)	TA-16-488	1951	16-024(l)	TA-16-72	1960
16-024(b)	TA-16-74	1960	16-024(m)	TA-16-66	1960
16-024(c)	TA-16-30	1960	16-024(n)	TA-16-84	1960
16-024(d)	TA-16-34	1960	16-024(o)	TA-16-67	1960
16-024(e)	TA-16-33	1960	16-024(p)	TA-16-70	1960
16-024(f)	TA-16-493	1960	16-024(q)	TA-16-71	1960
16-024(g)	TA-16-494	1960	16-024(r)	TA-16-68	1960
16-024(h)	TA-16-497	1960	16-024(s)	TA-16-60	1960
16-024(i)	TA-16-64	1951	16-024(t)	TA-16-424	1966
16-024(j)	TA-16-65	1951	16-024(u)	TA-16-481	1951
16-024(k)	TA-16-57	1960	16-024(v)	TA-16-62	1968

WASTE INFORMATION

The waste consists primarily of HE. TA-16-497 may have had depleted uranium, Strontium-90, and barium.

RELEASE INFORMATION

It is unknown whether the contaminated magazines released hazardous waste to the soil.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-024(a)	TA16-1-CA-I-HW		Tsk 12 : 131	TA-16-488
16-024(b)	TA16-1-CA-I-HW		Tsk 13 : 275	TA-16-74
16-024(c)	TA16-1-CA-I-HW		Tsk 13 : 276	TA-16-30
16-024(d)	TA16-1-CA-I-HW		Tsk 13 : 277	TA-16-34
16-024(e)	TA16-1-CA-I-HW		Tsk 13 : 326	TA-16-33
16-024(f)	TA16-1-CA-I-HW TA24-1-CA-I-HW/RW		Tsk 13 : 384	TA-16-493
16-024(g)	TA16-1-CA-I-HW TA24-1-CA-I-HW/RW		Tsk 13 : 385	TA-16-494
16-024(h)	TA16-1-CA-I-HW TA24-1-CA-I-HW/RW		Tsk 13 : 387	TA-16-497
16-024(i)	TA16-1-CA-I-HW		Tsk 13 : 547	TA-16-64
16-024(j)	TA16-1-CA-I-HW		Tsk 14 : 548	TA-16-65
16-024(k)	TA16-1-CA-I-HW		Tsk 14 : 549	TA-16-57
16-024(l)	TA16-1-CA-I-HW		Tsk 14 : 550	TA-16-72
16-024(m)	TA16-1-CA-I-HW		Tsk 14 : 551	TA-16-66
16-024(n)	TA16-1-CA-I-HW		Tsk 14 : 552	TA-16-84
16-024(o)	TA16-1-CA-I-HW		Tsk 14 : 553	TA-16-67
16-024(p)	TA16-1-CA-I-HW		Tsk 14 : 554	TA-16-70
16-024(q)	TA16-1-CA-I-HW		Tsk 14 : 555	TA-16-71

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-024(r)	TA16-1-CA-I-HW		Tsk 14 : 556	TA-16-68
16-024(s)	TA16-1-CA-I-HW		Tsk 14 : 557	TA-16-60
16-024(t)	**		Tsk 14 : 558	TA-16-424
16-024(u)	TA16-1-CA-I-HW		Tsk 12 : 60	TA-16-481
16-024(v)	TA16-1-CA-I-HW		Tsk 14 : 542	TA-16-62

** No corresponding E. R. Program unit.

16-025 SOIL CONTAMINATION AT DECOMMISSIONED HE FACILITIES 10/31/90

SUMMARY

LOCATION	: TA-16	MATERIALS MANAGED	: HAZARDOUS WASTE
TYPE OF UNIT(s)	: SOIL CONTAMINATION		MIXED WASTE
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: 1940s - 1960s		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

It is possible that, during the operation and decommissioning of the following HE facilities, the soil beneath the buildings became contaminated. The facilities were flash-burned prior to demolition due to health and safety concerns.

SWMU NO.	STRUCTURE NO.	REMOVED	BUILDING OPERATION
16-025(a)	TA-16-39	1966	radiograph
16-025(b)	TA-16-40	1966	radiograph
16-025(c)	TA-16-35	1960	equipment room
16-025(d)	TA-16-94	1960	equipment and control
16-025(e)	TA-16-31	1961	HE machining
16-025(f)	TA-16-32	1960	HE machining
16-025(g)	TA-16-95	1960	HE machining
16-025(h)	TA-16-96	1960	HE machining
16-025(i)	TA-16-97	1960	HE machining
16-025(j)	TA-16-98	1960	HE machining
16-025(k)	TA-16-25	1961	HE casting and electroplating
16-025(l)	TA-16-26	1968	HE casting
16-025(m)	TA-16-495	1960	X-ray hutment
16-025(n)	TA-16-499	1960	X-ray hutment
16-025(o)	TA-16-500	1960	X-ray hutment
16-025(p)	TA-16-44	1960	physical inspection
16-025(q)	TA-16-45	1960	X-ray building
16-025(r)	TA-16-46	1960	in-process storage
16-025(s)	TA-16-48	1960	smoking room
16-025(t)	TA-16-38	1960	equipment casting
16-025(u)	TA-16-42	1960	melting and casting
16-025(v)	TA-16-43	1960	casting
16-025(w)	TA-16-81	1960	nitrocellulose drying
16-025(x)	TA-16-100	1960	HE process
16-025(y)	TA-16-55	1960	HE grinding
16-025(z)	TA-16-37	1960	explosives testing
16-025(a2)	TA-16-50	1960	experimental casting
16-025(b2)	TA-16-52	1960	HE casting
16-025(c2)	TA-16-56	1960	HE testing lab
16-025(d2)	TA-16-480	1951	firing chamber
16-025(e2)	TA-16-106	1949	HE storage
16-025(f2)	TA-16-107	1950	HE storage
16-025(g2)	TA-16-108	1950	HE storage
16-025(h2)	TA-16-109	1950	HE storage

WASTE INFORMATION

The waste consists primarily of HE. TA-16-495 and -39 may have used radioactive materials in addition to HE.

RELEASE INFORMATION

It is unknown whether the buildings have caused a release to the soil. LANL personnel indicated that soils were excavated and removed until a concentration of 0.5% HE was reached.

(continued)

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-025(a)	TA16-1-CA-I-HW		Tsk 13 : 255	TA-16-39
16-025(a2)	TA16-1-CA-I-HW		Tsk 14 : 619	TA-16-50
16-025(b)	TA16-1-CA-I-HW		Tsk 13 : 256	TA-16-40
16-025(b2)	TA16-1-CA-I-HW		Tsk 14 : 620	TA-16-52
16-025(c)	TA16-1-CA-I-HW		Tsk 13 : 257	TA-16-35
16-025(c2)	TA16-1-CA-I-HW		Tsk 14 : 621	TA-16-56
16-025(d)	TA16-1-CA-I-HW		Tsk 13 : 258	TA-16-94
16-025(d2)	TA16-1-CA-I-HW		Tsk 12 : 63	TA-16-480
16-025(e)	TA16-1-CA-I-HW		Tsk 13 : 324	TA-16-31
16-025(e2)	TA16-1-CA-I-HW		Tsk 14 : 543	TA-16-106
16-025(f)	TA16-1-CA-I-HW		Tsk 13 : 325	TA-16-32
16-025(f2)	TA16-1-CA-I-HW		Tsk 14 : 544	TA-16-107
16-025(g)	TA16-1-CA-I-HW		Tsk 13 : 327	TA-16-95
16-025(g2)	TA16-1-CA-I-HW		Tsk 14 : 545	TA-16-108
16-025(h)	TA16-1-CA-I-HW		Tsk 13 : 328	TA-16-96
16-025(h2)	TA16-1-CA-I-HW		Tsk 14 : 546	TA-16-109
16-025(i)	TA16-1-CA-I-HW		Tsk 13 : 329	TA-16-97
16-025(j)	TA16-1-CA-I-HW		Tsk 13 : 330	TA-16-98
16-025(k)	TA16-1-CA-I-HW		Tsk 13 : 331	TA-16-25
16-025(l)	TA16-1-CA-I-HW		Tsk 13 : 332	TA-16-26
16-025(m)	TA16-1-CA-I-HW TA24-1-CA-I-HW/RW		Tsk 13 : 379	TA-16-495
16-025(n)	TA16-1-CA-I-HW TA24-1-CA-I-HW/RW		Tsk 13 : 380	TA-16-499
16-025(o)	TA16-1-CA-I-HW TA24-1-CA-I-HW/RW		Tsk 13 : 381	TA-16-500
16-025(p)	TA16-1-CA-I-HW		Tsk 14 : 507	TA-16-44
16-025(q)	TA16-1-CA-I-HW		Tsk 14 : 508	TA-16-45
16-025(r)	TA16-1-CA-I-HW		Tsk 14 : 537	TA-16-46
16-025(s)	TA16-1-CA-I-HW		Tsk 14 : 538	TA-16-48
16-025(t)	TA16-1-CA-I-HW		Tsk 14 : 612	TA-16-38
16-025(u)	TA16-1-CA-I-HW		Tsk 14 : 613	TA-16-42
16-025(v)	TA16-1-CA-I-HW		Tsk 14 : 614	TA-16-43
16-025(w)	TA16-1-CA-I-HW		Tsk 14 : 615	TA-16-81
16-025(x)	TA16-1-CA-I-HW		Tsk 14 : 616	TA-16-100
16-025(y)	TA16-1-CA-I-HW		Tsk 14 : 617	TA-16-55
16-025(z)	TA16-1-CA-I-HW		Tsk 14 : 618	TA-16-37

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : OUTFALL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1940s - 1980s
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
MIXED WASTE
SOLID WASTE

UNIT INFORMATION

The following table lists inactive outfalls resulting from building drains in TA-16.

SWMU NO.	STRUCTURE NO.	BUILDING DRAIN LOCATION	OUTFALL LOCATION
16-026(a)	TA-16-370	east/south sides	Water Canyon
16-026(b)	TA-16-307	north side	Water Canyon
16-026(c)	TA-16-305	northeast side	Water Canyon
16-026(d)	TA-16-303	south side	Water Canyon
16-026(e)	TA-16-301	south side	Water Canyon
16-026(f)	TA-16-308	northeast/east sides	Valle Canyon
16-026(g)	TA-16-280	northeast side	Valle Canyon
16-026(h)	TA-16-281	northeast side	Valle Canyon
16-026(i)	TA-16-224	northeast/northwest sides	Valle Canyon
16-026(j)	TA-16-226	south/southwest sides	Valle Canyon
16-026(k)	TA-16-221	northeast side	Valle Canyon
16-026(l)	TA-16-220	northeast/southeast/south sides	Valle Canyon
16-026(m)	TA-16-92	east side	Valle Canyon
16-026(n)	TA-16-91	east/southeast sides	Valle Canyon
16-026(o)	TA-16-90	northeast side	Valle Canyon
16-026(p)	TA-16-89	southeast/northeast sides	Valle Canyon
16-026(q)	TA-16-27	north/south sides	Valle Canyon
16-026(r)	TA-16-180	south side	Valle Canyon
16-026(s)	TA-16-5	northeast side	unknown
16-026(t)	TA-16-207	east side	Water Canyon
16-026(u)	TA-16-195	southeast side	Valle Canyon
16-026(v)	TA-16-460	EPA05A072	Water Canyon
16-026(w)	TA-16-45	unknown	Water Canyon
16-026(x)	TA-16-437	south side	Water Canyon
16-026(y)	TA-16-411	east side	Water Canyon
16-026(z)	TA-16-306	south side	Water Canyon
16-026(a2)	TA-16-200	southeast side	Valle Canyon
16-026(b2)	TA-16-202	northeast side	Water Canyon
16-026(c2)	TA-16-462	southeast side	Water Canyon
16-026(d2)	TA-16-435	northeast side	Water Canyon
16-026(e2)	TA-16-415	north side	Water Canyon
16-026(f2)	TA-16-413	north side	Water Canyon
16-026(g2)	TA-16-285	southeast side	Valle Canyon
16-026(h2)	TA-16-360	west/east/north/south sides	Water Canyon
16-026(i2)	TA-16-54	unknown	Valle Canyon
16-026(j2)	TA-16-345	north side	Water Canyon
16-026(k2)	TA-16-260	north/south sides	Water Canyon

(continued)

WASTE INFORMATION

The building drains from TA-16-437, -411, -415, -285, -435, -221, and -281 received compressor condensate. Building drains from TA-16-303, -308, -345, -260, and -27 received HE and barium. Outfalls from TA-16-224, -226, and -220 may have contained HE and radionuclides. Outfalls from TA-16-92, -90, -91, and -89 may have contained barium in addition to HE and radionuclides. The following table summarizes waste constituents in the remaining outfalls:

BUILDING	WASTE TYPE
TA-16-370	barium, metals, solvents
TA-16-307	solvents, HE
TA-16-5	oils, solvents
TA-16-305	HE, barium, solvents
TA-16-301	solvents, HE, barium
TA-16-180	oil, grease, unknown
TA-16-207	uranium
TA-16-460	HE, barium, mercury, solvents
TA-16-360	possible HE, unknown
TA-16-45	HE, silver, barium, lead, Radium-226, -228
TA-16-462	solvents
TA-16-200	unknown
TA-16-54	barium nitrate

RELEASE INFORMATION

The extent to which the outfalls may have caused a release of hazardous waste is unknown.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-026(a)	**		Tsk 12 : 95 96 97	TA-16-370
16-026(a2)	**		Tsk 14 : 414	TA-16-200
16-026(b)	TA16-5-O/CA-A/I-HW/RW		Tsk 13 : 193 194 192	TA-16-307
16-026(b2)	**		Tsk 14 : 416	TA-16-202
16-026(c)	TA16-5-O/CA-A/I-HW/RW		Tsk 13 : 195 197	TA-16-305
16-026(c2)	**		Tsk 14 : 423	TA-16-462
16-026(d)	TA16-5-O/CA-A/I-HW/RW		Tsk 13 : 198 200	TA-16-303
16-026(d2)	**		Tsk 14 : 440	TA-16-435
16-026(e)	TA16-5-O/CA-A/I-HW/RW		Tsk 13 : 201 203	TA-16-301
16-026(e2)	**		Tsk 14 : 453	TA-16-415
16-026(f)	**		Tsk 13 : 204 205	TA-16-308
16-026(f2)	**		Tsk 14 : 454	TA-16-413
16-026(g)	**	16.057	Tsk 13 : 210 211	TA-16-280
16-026(g2)	**		Tsk 13 : 206	TA-16-285
16-026(h)	**		Tsk 13 : 207 212	TA-16-281
16-026(h2)	**		Tsk 12 : 91 92 93	TA-16-360
16-026(i)	**		Tsk 13 : 214 215	TA-16-224
16-026(i2)	**		Tsk 13 : 207	TA-16-283
16-026(j)	**		Tsk 13 : 216 217	TA-16-226
16-026(j2)	**		Tsk 12 : 73	TA-16-345
16-026(k)	**		Tsk 13 : 219	TA-16-221
16-026(k2)	**		Tsk 12 : 78	TA-16-260
16-026(l)	**		Tsk 13 : 220 221 222	TA-16-220
16-026(m)	**		Tsk 13 : 227	TA-16-92
16-026(n)	**		Tsk 13 : 228	TA-16-91
16-026(o)	**		Tsk 13 : 229 230	TA-16-90
16-026(p)	**		Tsk 13 : 231 232	TA-16-89
16-026(q)	**		Tsk 13 : 235 236 237	TA-16-27
16-026(r)	**		Tsk 14 : 402 403	TA-16-180
16-026(s)	**		Tsk 14 : 405	TA-16-5
16-026(t)	**		Tsk 14 : 410	TA-16-207
16-026(u)	**		Tsk 14 : 412 413	TA-16-195
16-026(v)	**	16.060	Tsk 14 : 418-422	TA-16-460

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-026(w)	**		Tsk 14 : 425	TA-16-45
16-026(x)	**		Tsk 14 : 441	TA-16-437
16-026(y)	**		Tsk 14 : 455	TA-16-411
16-026(z)	TA16-5-O/CA-A/I-HW/RW		Tsk 13 : 191 192	TA-16-306

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : OPERATIONAL RELEASE
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1950s - PRESENT
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SOLID WASTE
PCBs
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

The following is a list of transformers with a documented history of leaks.

SWMU NO.	LOCATION	DESCRIPTION
16-027(a)	TA-16-260, Rm 110	This transformer is listed as having a moderate leak. It contains 100-500 gallons of PCB dielectric oil. PCB ID #5608. It is 31-35 years old.
16-027(b)	TA-16-540	The transformer is located on the second floor of the building. It contains 100-500 gallons of PCB dielectric oil and vents to the inside of the building. It is listed as having a moderate leak. PCB ID #5020. It is 31-35 years old.
16-027(c)	TA-16-563	The transformer contains 100-500 gallons of 25,000 ppm PCB oil. It is listed as having a moderate leak. It is located 100' from the building. The pad has a drain, cracks, and open spaces around conduit and ground wire. PCB ID #4997. The spill containment is listed as <10% of total volume. It is a pad-mounted transformer.
16-027(d)	TA-16-430	A slowly leaking transformer was discovered in July, 1987. The oil contained approximately 25,000 ppm PCBs.

WASTE INFORMATION

The waste consists primarily of PCB-containing oil. Other oil constituents are unknown.

RELEASE INFORMATION

There have been documented releases of PCBs to concrete and soil. The TA-16-430 transformer has been repaired and contaminated soil and concrete removed.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-027(a)	**		Tsk 12 : 152	TA-16-260
16-027(b)	**		Tsk 14 : 573	TA-16-540
16-027(c)	**		Tsk 14 : 590	TA-16-563
16-027(d)	**		Tsk 14 : 591	TA-16-430

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : OUTFALL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1940s - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE
SOLID WASTE

UNIT INFORMATION

The following table lists outfalls resulting from cooling towers, blowdown tanks, and noncontact cooling water.

SWMU NO.	STRUCTURE	DESCRIPTION
16-028(a)	TA-16-228	A drainage system discharges to the canyon between TA-16-228 and the closed liquid impoundment
16-028(a)	TA-16-228	Outfall discharges water from the treatment of HE sludge through an activated charcoal treatment facility (EPA05A055; see Appendix A)
16-028(b)	TA-16-370	Outfall from west side of building discharges treated cooling water (EPA03A092; see Appendix A)
16-028(c)	TA-16-220	Outfall discharges noncontact cooling water (EPA04A070; see Appendix A)
16-028(d)	TA-16-202	An outfall originating at the southeast side of the machine discharges noncontact cooling water
16-028(e)	TA-16-450	Outfall originates from the southeast side of TA-16-450 (EPA04A091; see Appendix A)

WASTE INFORMATION

The outfall between TA-16-228 and the impoundment may discharge HE and, in the past, may have discharged barium. The TA-16-228 outfall discharges hazardous waste. The outfalls from TA-16-220, -202, and -450 discharge noncontact cooling water. The outfall from TA-16-370 possibly discharges solvents and, in the past, possibly discharged barium.

RELEASE INFORMATION

It is unknown whether hazardous releases have occurred from outfalls TA-16-228, -220, and -202. The Environmental Restoration Release Site Database indicates that barium has been identified in soil samples collected 50 yards south of TA-16-370.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-028(a)	**		Tsk 12 : 102 88	TA-16-228
16-028(b)	**		Tsk 12 : 94	TA-16-370
16-028(c)	**		Tsk 12 : 223 224 225	TA-16-220
16-028(d)	**		Tsk 14 : 415	TA-16-202
16-028(e)	**		Tsk 14 : 438	TA-16-450

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : SUMP
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1950s - 1980s
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

For many years, it has been the practice at TA-16 to route any industrial process water containing HE through catchment baffle-filter sumps before discharge. Open floor drains in each room also connect with the sumps. The baffle-filters and settling areas were cleaned regularly when in use. The following table describes the inactive HE sumps in TA-16.

SWMU NO.	STRUCTURE	DIMENSIONS	OUTFALL LOCATION	SWMU NO.	STRUCTURE	DIMENSIONS	OUTFALL LOCATION
16-029(a)	TA-16-307	84x41x31	east of building	16-029(p)	TA-16-98	unknown	unknown
16-029(a)	TA-16-307	160x41x31	east of building	16-029(q)	TA-16-99	unknown	unknown
16-029(b)	TA-16-305	84x41x31	north of building	16-029(q)	TA-16-99	unknown	unknown
16-029(b)	TA-16-305	16x41x31	north of building	16-029(q)	TA-16-99	unknown	unknown
16-029(c)	TA-16-303	84x41x31	north of building	16-029(r)	TA-16-25	unknown	unknown
16-029(c)	TA-16-303	160x41x31	north of building	16-029(r)	TA-16-25	unknown	unknown
16-029(d)	TA-16-301	84x41x31	north of building	16-029(s)	TA-16-91	unknown	unknown
16-029(d)	TA-16-301	160x41x31	north of building	16-029(t)	TA-16-90	unknown	unknown
16-029(e)	TA-16-360	160x41x31	west of building	16-029(t)	TA-16-90	unknown	unknown
16-029(f)	TA-16-345	88x41x31	west of building	16-029(u)	TA-16-89	unknown	unknown
16-029(g)	TA-16-450	159x41x31	east of building	16-029(u)	TA-16-89	unknown	unknown
16-029(h)	TA-16-487	unknown	SE of building	16-029(v)	TA-16-49	unknown	unknown
16-029(i)	TA-16-342	unknown	NW of building	16-029(w)	TA-16-100	unknown	unknown
16-029(j)	TA-16-260	unknown	south of building	16-029(x)	TA-16-515	unknown	unknown
16-029(k)	TA-16-93	unknown	SE of building	16-029(y)	TA-16-38	unknown	unknown
16-029(k)	TA-16-93	unknown	NW of building	16-029(z)	TA-16-42 thru TA-16-45	unknown	unknown
16-029(l)	TA-16-92	unknown	west of building				
16-029(m)	TA-16-95	unknown	unknown	16-029(a2)	TA-16-55	unknown	unknown
16-029(m)	TA-16-95	unknown	north of building	16-029(b2)	TA-16-53	unknown	unknown
16-029(n)	TA-16-96	unknown	unknown	16-029(c2)	TA-16-37	unknown	unknown
16-029(n)	TA-16-96	unknown	east of building	16-029(d2)	TA-16-50	unknown	unknown
16-029(o)	TA-16-97	unknown	unknown	16-029(e2)	TA-16-52	unknown	unknown
16-029(o)	TA-16-97	unknown	unknown	16-029(f2)	TA-16-24	unknown	unknown
16-029(p)	TA-16-98	unknown	unknown	16-029(g2)	TA-16-523	1920x132x51	unknown

All dimensions are given in inches.

A manhole, TA-16-801 [16-029(h2)] is associated with sumps from TA-16-95, -96, -97, and -98. It is not known whether 16-029(h2) is the same pit that is designated TA-25-9 in SWMU No. 25-001.

WASTE INFORMATION

The waste consists primarily of HE. The outfall from TA-16-92 may have received untreated plating shop wastes.

RELEASE INFORMATION

The sumps have discharged hazardous waste from outfalls. HE and barium have been identified in the drainage ways around the buildings.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-029(a)	TA16-5-O/CA-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 196 347	TA-16-307

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-029(a2)	TA16-8-ST/UST-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 427 635	TA-16-55
16-029(b)	TA16-5-O/CA-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 345 346 196	TA-16-305
16-029(b2)	TA16-8-ST/UST-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 428 637	TA-15-53
16-029(c)	TA16-5-O/CA-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 199 343 344	TA-16-303
16-029(c2)	TA16-8-ST/UST-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 429 636	TA-16-37
16-029(d)	TA16-5-O/CA-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 202 341 342	TA-16-301
16-029(d2)	TA16-8-ST/UST-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 430 431 638 639	TA-16-50
16-029(e)	** TA16-1-CA-I-HW		Tsk 13 : 90 169	TA-16-360
16-029(e2)	TA16-8-ST/UST-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 433-435 641-643	TA-16-52
16-029(f)	** TA16-1-CA-I-HW		Tsk 13 : 170	TA-16-345
16-029(f2)	TA16-1-CA-I-HW		Tsk 13 : 242	TA-16-24
16-029(g)	** TA16-1-CA-I-HW		Tsk 13 : 630	TA-16-450
16-029(g2)	TA16-1-CA-I-HW TA25-1-CA-I-HW/RW		Tsk 13 : 395	TA-16-801
16-029(h)	TA16-1-CA-I-HW TA16-5-O/CA-A/I-HW/RW	16.012	Tsk 12 : 189	TA-16-478
16-029(h2)	TA16-1-CA-I-HW		Tsk 13 : 373	TA-16-523
16-029(i)	** TA16-1-CA-I-HW		Tsk 13 : 70	TA-16-342
16-029(j)	** TA16-1-CA-I-HW		Tsk 13 : 79	TA-16-260
16-029(k)	** TA16-1-CA-I-HW		Tsk 13 : 350 351 226	TA-16-93
16-029(l)	** TA16-1-CA-I-HW		Tsk 13 : 227 352 353	TA-16-92
16-029(m)	TA16-1-CA-I-HW		Tsk 13 : 373 233 362	TA-16-95
16-029(n)	TA16-1-CA-I-HW		Tsk 13 : 233 363 373	TA-16-96
16-029(o)	TA16-1-CA-I-HW		Tsk 13 : 233 364 373	TA-16-97
16-029(p)	TA16-1-CA-I-HW		Tsk 13 : 233 365 373	TA-16-98
16-029(q)	**		Tsk 13 : 234 360 361	TA-16-99
16-029(r)	TA16-1-CA-I-HW		Tsk 13 : 241 366	TA-16-25
16-029(s)	**		Tsk 13 : 354 355	TA-16-91
16-029(t)	**		Tsk 13 : 356 357	TA-16-90
16-029(u)	**		Tsk 13 : 358 359	TA-16-89
16-029(v)	TA16-8-ST/UST-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 432 640	TA-16-49
16-029(w)	TA16-1-CA-I-HW		Tsk 13 : 371	TA-16-100
16-029(x)	TA16-8-ST/UST-A/I-HW/RW		Tsk 13 : 397	TA-16-515
16-029(y)	TA16-8-ST/UST-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 408 631	TA-16-38
16-029(z)	TA16-8-ST/UST-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 426 632-634 651	TA-16-42 through -45

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : OUTFALL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE
SOLID WASTE

UNIT INFORMATION

The following table is a list of active outfalls originating from building drains.

SWMU NO.	STRUCTURE	BUILDING DRAIN LOCATION
16-030(a)	TA-16-344	back wall of building
16-030(b)	TA-16-343	north side
16-030(c)	TA-16-222	northwest side
16-030(c)	TA-16-222	northeast side
16-030(d)	TA-16-280	EPA05A061
16-030(e)	TA-16-225	south side
16-030(f)	TA-16-223	north side
16-030(g)	TA-16-380	south side
16-030(h)	TA-16-430(10)	south side

(10) : number of outfalls

WASTE INFORMATION

TA-16-225, -343, -380, and -223 building drains receive compressor condensate. The outfalls from TA-16-22 originate from roof drains. The building drain in TA-16-344 may receive solvents. The outfall from TA-16-280 contains HE. One outfall from TA-16-430 receives steam condensate. The other outfalls received washwater and treated water.

RELEASE INFORMATION

It is unknown whether hazardous waste has been released through the outfalls.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-030(a)	**		Tsk 12 : 66	TA-16-344
16-030(b)	**		Tsk 12 : 72	TA-16-343
16-030(c)	TA16-5-O/CA-A/I-HW/RW		Tsk 12 : 82 83	TA-16-222
16-030(d)	**		Tsk 13 : 210	TA-16-280
16-030(e)	**		Tsk 13 : 213	TA-16-225
16-030(f)	**		Tsk 13 : 218	TA-16-223
16-030(g)	TA16-5-O/CA-A/I-HW/RW			TA-16-380
16-030(h)	TA16-5-O/CA-A/I-HW/RW			TA-16-430

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : OUTFALL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1940s - 1970s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE
SOLID WASTE
SANITARY WASTE

UNIT INFORMATION

The following table lists inactive outfalls that originated from cooling towers and industrial lines.

SWMU NO.	STRUCTURE	DESCRIPTION
16-031(a)	TA-16-372	cooling tower discharged to an outfall approximately 10 years ago
16-031(b)	TA-16-262	cooling tower removed in 1957 discharged to an outfall
16-031(c)	TA-16-515	drainline received both sanitary and industrial waste and discharged to an outfall
16-031(d)	TA-16-28	outfall discharged through a sump from a cooling tower; tower, sump, and drainline removed in 1968
16-031(e)	TA-16-560	industrial drain from a chlorination station discharged to an outfall
16-031(f)	TA-16-21	outfall discharged from the southeast side of the pumping station
16-031(g)	TA-16-189	outfall discharged blowdown from a cooling tower
16-031(h)	TA-16-478	outfall discharged noncontact cooling water

WASTE INFORMATION

The outfalls from TA-16-372, -262, -28, and -189 may have contained chromium. The outfall from TA-16-515 contained HE and sanitary waste, and the outfall from TA-16-560 contained chlorine. The outfall from TA-16-478 discharged noncontact cooling water, and it is unknown what was discharged through the TA-16-21 outfall.

RELEASE INFORMATION

It is unknown whether hazardous waste was released from the outfalls.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-031(a)	**		Tsk 12 : 103	TA-16-372
16-031(b)	TA16-5-O/CA-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 244	TA-16-262
16-031(c)	TA25-1-CA-I-HW	16.062	Tsk 13 : 390 391	TA-16-515
16-031(d)	TA16-5-O/CA-A/I-HW/RW TA16-1-CA-I-HW		Tsk 13 : 240 370 260	TA-16-28
16-031(e)	**		Tsk 14 : 404	TA-16-560
16-031(f)	**		Tsk 14 : 409	TA-16-21
16-031(g)	TA16-5-O/CA-A/I-HW/RW		Tsk 14 : 509 424	TA-16-189
16-031(h)	TA16-5-O/CA-A/I-HW/RW		Tsk 12 : 67	TA-16-478

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : SUMP
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1940s - 1960s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
HAZARDOUS WASTE
MIXED WASTE

UNIT INFORMATION

Four decommissioned HE sumps are identified in the Environmental Restoration Release Site Database. An industrial drain system that included a sump and drainline served former X-ray inspection building TA-16-45 [16-032(a)], former HE machining building TA-16-26 [16-032(b)], former analytical laboratory TA-16-24 [16-032(c)], and former HE storage building TA-16-148 [16-032(d)]. A water pump pit was located at TA-16-20 [16-032(e)]. A manhole for the pit remains in place.

WASTE INFORMATION

The waste consisted of HE. The drainline at TA-16-45 may have received lead and radium, in addition to HE.

RELEASE INFORMATION

It is unknown whether there has been a release of hazardous waste from the drainlines or sumps.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-032(a)	TA16-1-CA-I-HW		Tsk 14 : 651	TA-16-45
16-032(b)	TA16-1-CA-I-HW		Tsk 13 : 369 243	TA-16-148
16-032(c)	TA16-1-CA-I-HW		Tsk 13 : 367 239	TA-16-26
16-032(d)	TA16-1-CA-I-HW		Tsk 13 : 368	TA-16-24
16-032(e)	TA16-1-CA-I-HW		Tsk 14 : 610	TA-16-20

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : UNDERGROUND TANK
UNIT USE : STORAGE
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1950s - 1987
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : PETROLEUM PRODUCT

UNIT INFORMATION

The following table lists underground storage tanks that have been removed.

SWMU NO.	STRUCTURE	CAPACITY	REMOVAL DATE
16-033(a)	TA-16-16	1,000 gal.	1987
16-033(b)	TA-16-196	4,000 gal.	1987
16-033(c)	TA-16-29	52,000 gal.	1956
16-033(d)	TA-16-1140	unknown	1956
16-033(e)	NW of TA-16-10 (2)	unknown	unknown
16-033(f)	TA-16-512	1,000 gal.	1968
16-033(g)	TA-16-1138	unknown	unknown
16-033(h)	TA-16-1139	unknown	early 1960s
16-033(i)	TA-16-1341	5,000 gal.	1980
16-033(j)	TA-16-1342	5,000 gal.	1980

Soil removed from the TA-16-16 and -196 land excavations was taken to Area G and landfarmed.

WASTE INFORMATION

The following table lists products stored in underground storage tanks that have been removed.

TANK	PRODUCT
TA-16-16	diesel
TA-16-196	leaded gasoline
TA-16-29	fuel oil
TA-16-1140	propane
TA-16-10	gasoline
TA-16-512	oil
TA-16-1138	fuel
TA-16-1139	fuel
TA-16-1341	leaded gasoline
TA-16-1342	leaded gasoline

RELEASE INFORMATION

There were documented releases from tanks TA-16-16, -1341, -1342, and -196. Contaminated soil was removed from TA-16-16 and replaced with clean backfill. Attempts were made to remove contaminated soil from around TA-16-196 but further excavation would have threatened overlying building integrity. The excavation was backfilled with clean fill. It is unknown if the other tanks leaked. 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 tanks may have leaked.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-033(a)			Tsk 14 : 476	TA-16-16
16-033(b)				TA-16-196
16-033(c)	TA16-9-UST/SST-A/I-PP		Tsk 14 : 471	TA-16-29

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-033(d)	TA16-9-UST/SST-A/I-PP		Tsk 14 : 472	TA-16-1140
16-033(e)			Tsk 14 : 473 474	
16-033(f)	TA16-9-UST/SST-A/I-PP		Tsk 14 : 653	TA-16-512
16-033(g)	TA16-9-UST/SST-A/I-PP		Tsk 14 : 654	TA-16-1138
16-033(h)	TA16-9-UST/SST-A/I-PP		Tsk 14 : 655	TA-16-1139
16-033(i)	TA16-9-UST/SST-A/I-PP		Tsk 14 : 656	TA-16-1341
16-033(j)	TA16-9-UST/SST-A/I-PP		Tsk 14 : 657	TA-16-1342

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1940s - 1981
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

It is possible that during the operation and decommissioning of the following buildings the soil beneath the buildings became contaminated. These structures were flash-burned prior to demolition due to health and safety concerns.

SWMU NO.	STRUCTURE	REMOVED	BUILDING TYPE
16-034(a)	TA-16-24	1961	laboratory
16-034(b)	TA-16-490	1960	laboratory
16-034(c)	TA-16-491	1960	hutment
16-034(d)	TA-16-492	1960	hutment
16-034(e)	TA-16-496	1960	hutment
16-034(f)	TA-16-498	1960	hutment
16-034(g)	TA-16-517	1981	equipment
16-034(h)	TA-16-137	1955	plumbing & electrical shop
16-034(i)	TA-16-141	1955	storage
16-034(j)	TA-16-139	1955	storage
16-034(k)	TA-16-140	1955	storage
16-034(l)	TA-16-47	1960	equipment storage
16-034(m)	TA-16-86	1960	laboratory
16-034(n)	TA-16-83	1960	laboratory
16-034(o)	TA-16-49	1960	laboratory
16-034(p)	TA-16-41	1960	process laboratory

WASTE INFORMATION

The waste consists primarily of HE. Other constituents that may have been present are unknown.

RELEASE INFORMATION

It is unknown whether the buildings released hazardous waste to the soil.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-034(a)	TA16-1-CA-HW		Tsk 13 : 261	TA-16-24
16-034(b)	TA16-1-CA-HW TA24-1-CA-I-HW/RW		Tsk 13 : 378	TA-16-490
16-034(c)	TA16-1-CA-HW TA24-1-CA-I-HW/RW		Tsk 13 : 382	TA-16-491
16-034(d)	TA16-1-CA-HW TA24-1-CA-I-HW/RW		Tsk 13 : 383	TA-16-492
16-034(e)	TA16-1-CA-HW TA24-1-CA-I-HW/RW		Tsk 13 : 386	TA-16-496
16-034(f)	TA16-1-CA-HW TA24-1-CA-I-HW/RW		Tsk 13 : 388	TA-16-498
16-034(g)	TA25-1-CA-I-HW/RW		Tsk 13 : 394	TA-16-517
16-034(h)	TA16-1-CA-HW		Tsk 14 : 481	TA-16-137
16-034(i)	TA16-1-CA-HW		Tsk 14 : 483	TA-16-141
16-034(j)	TA16-1-CA-HW		Tsk 14 : 484	TA-16-139

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-034(k)	TA16-1-CA-HW		Tsk 14 : 486	TA-16-140
16-034(l)	TA16-1-CA-HW		Tsk 14 : 506	TA-16-47
16-034(m)	TA16-1-CA-HW		Tsk 14 : 510	TA-16-86
16-034(n)	TA16-1-CA-HW		Tsk 14 : 511	TA-16-83
16-034(o)	TA16-1-CA-HW		Tsk 14 : 536	TA-16-49
16-034(p)	TA16-1-CA-HW		Tsk 14 : 622	TA-16-41

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1944 - 1948
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
UNKNOWN

UNIT INFORMATION

Storage bunker TA-16-476 (formerly TA-13-2) was used as a control bunker and laboratory from 1944 to 1948. It is possible that radioactive contamination was released to the soil beneath the building during this time.

WASTE INFORMATION

Polonium is the primary waste constituent. Other waste constituents are unknown.

RELEASE INFORMATION

It is unknown whether hazardous waste was released from the building to the soil.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-035	TA13-1-CA-HW/RW		Tsk 12 : 59	TA-16-476

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE/ACTIVE
PERIOD OF USE : 1940s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

It is possible that residual soil contamination could be present beneath TA-16-477 and -478 (formerly TA-13-3 and -4, respectively), "battleship bunkers" from explosives experiments conducted in the 1940s. TA-16-478 currently houses hazardous machining operations performed on new HE products.

WASTE INFORMATION

The waste consists primarily of HE.

RELEASE INFORMATION

It is unknown whether the operations and the buildings caused a hazardous release to the soil.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-036	TA13-1-CA-HW/RW		Tsk 12 : 62	TA-16-477, -478

SUMMARY

LOCATION : TA-16
TYPE OF UNIT(s) : TANK
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : UNKNOWN
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : UNKNOWN

UNIT INFORMATION

An industrial waste tank, TA-16-215, is listed on the 1983 Engineering Drawing R511 Structure Index. No other information is available. It is not included on the 1989 update of the ENG-R511 Structure Index.

WASTE INFORMATION

The tank stores industrial waste. Specific constituents are unknown.

RELEASE INFORMATION

It is unknown whether the tank has released hazardous waste.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
16-037	APPENDIX V		Tsk 14 : 466	TA-16-215

TA-16 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
16-001(a)	16-1
16-001(b)	16-1
16-001(c)	16-4
16-001(d)	16-4
16-001(e)	16-2
16-003(a)	16-2
16-003(b)	16-1
16-003(c)	16-1
16-003(d)	16-2
16-003(e)	16-2
16-003(f)	16-2
16-003(g)	16-2
16-003(h)	16-1
16-003(i)	16-2
16-003(j)	16-2
16-003(k)	16-2
16-003(l)	16-1
16-003(m)	16-2
16-003(n)	16-2
16-003(o)	16-2
16-003(p)	16-3
16-003(q)	16-1
16-004(a)	16-2
16-004(b)	16-2
16-004(c)	16-2
16-004(d)	16-2
16-004(e)	16-2
16-004(f)	16-2
16-005(a)	16-4
16-005(b)	16-4
16-005(c)	16-4
16-005(d)	16-4
16-005(e)	16-4
16-005(f)	16-3
16-005(g)	16-3
16-005(h)	16-4
16-005(i)	Not shown, location unknown
16-005(j)	16-9
16-005(k)	Not shown, location unknown
16-005(l)	16-4
16-005(m)	16-9

TA-16 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX (CONTINUED)

SWMU	FIGURE NUMBER
16-005(n)	16-1
16-005(o)	16-2
16-006(a)	16-1
16-006(b)	16-1
16-006(c)	16-2
16-006(d)	16-2
16-006(e)	16-2
16-006(f)	Not shown, location unknown
16-006(g)	16-10
16-006(h)	16-10
16-007(a)	16-4
16-007(b)	Not shown, location unknown
16-008(a)	16-4
16-008(b)	16-3
16-009(a)	16-4
16-010(a)	16-2
16-010(b)	16-2
16-010(c)	16-2
16-010(d)	16-2
16-010(e)	16-2
16-010(f)	16-2
16-010(g)	16-2
16-010(h)	16-2
16-010(i)	16-3
16-010(j)	16-2
16-010(k)	16-2
16-010(l)	16-2
16-010(m)	16-2
16-010(n)	Not shown, location unknown
16-011	16-1, 16-2
16-012(a)	16-1
16-012(b)	16-1
16-012(c)	16-1
16-012(d)	16-2
16-012(e)	16-1
16-012(f)	16-2, 16-3
16-012(g)	16-1
16-012(h)	16-1, 16-2
16-012(i)	16-2
16-012(j)	16-2
16-012(k)	16-2

TA-16 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX (CONTINUED)

SWMU	FIGURE NUMBER
16-012(l)	16-2
16-012(m)	16-2
16-012(n)	16-2
16-012(o)	16-2
16-012(p)	16-2
16-012(q)	16-2
16-012(r)	16-2
16-012(s)	16-2
16-012(t)	16-2
16-012(u)	16-1
16-012(v)	16-1
16-012(w)	16-1
16-012(x)	16-1
16-012(y)	16-1
16-012(z)	16-2
16-012(a2)	16-1
16-013	16-1
16-015(a)	Not shown
16-015(b)	16-4
16-015(c)	16-4
16-015(d)	16-4
16-016(a)	Not shown
16-016(b)	Not shown
16-016(c)	Not shown
16-016(d)	16-1
16-016(e)	16-2
16-016(f)	16-2
16-016(g)	16-2
16-017	16-4
16-018	16-2, 16-5
16-019	16-2 16-6
16-020	16-1
16-021	16-1
16-022(a)	Not shown
16-022(b)	Not shown
16-023(a)	Not shown
16-023(b)	16-1
16-024(a)	Not shown
16-024(b)	16-4
16-024(c)	16-4
16-024(d)	16-4
16-024(e)	16-4

TA-16 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX (CONTINUED)

SWMU	FIGURE NUMBER
16-024(f)	16-4
16-024(g)	16-4
16-024(h)	16-4
16-024(i)	Not shown
16-024(j)	Not shown
16-024(k)	16-4
16-024(l)	16-4
16-024(m)	16-4
16-024(n)	16-4
16-024(o)	16-4
16-024(p)	16-4
16-024(q)	16-4
16-024(r)	16-4
16-024(s)	Not shown
16-024(t)	Not shown
16-024(u)	Not shown
16-024(v)	16-4
16-025(a)	16-4
16-025(b)	16-4
16-025(c)	16-4
16-025(d)	16-4
16-025(e)	16-4
16-025(f)	16-4
16-025(g)	16-4
16-025(h)	16-4
16-025(i)	16-4
16-025(j)	16-4
16-025(k)	16-4
16-025(l)	16-4
16-025(m)	16-4
16-025(n)	16-4
16-025(o)	16-4
16-025(p)	16-4
16-025(q)	16-4
16-025(r)	16-4
16-025(s)	16-4
16-025(t)	16-4
16-025(u)	16-4
16-025(v)	16-4
16-025(w)	16-4
16-025(x)	16-4
16-025(y)	16-4

TA-16 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX (CONTINUED)

SWMU	FIGURE NUMBER
16-025(z)	16-4
16-025(a2)	16-4
16-025(b2)	16-4
16-025(c2)	16-4
16-025(d2)	Not shown
16-025(e2)	Not shown
16-026(a)	16-8
16-026(b)	16-2
16-026(c)	16-2
16-026(d)	16-2
16-026(e)	16-2
16-026(f)	16-2
16-026(g)	16-7
16-026(h)	16-1
16-026(i)	16-1
16-026(j)	16-1
16-026(k)	16-1
16-026(l)	16-1
16-026(m)	16-11
16-026(n)	16-11
16-026(o)	16-11
16-026(p)	16-1
16-026(q)	16-1
16-026(r)	16-1
16-026(s)	Not shown
16-026(t)	16-1
16-026(u)	16-1
16-026(v)	16-7
16-026(w)	16-4
16-026(x)	16-1
16-026(y)	16-3
16-026(z)	16-2
16-026(a2)	16-1
16-026(b2)	16-1
16-026(c2)	16-1
16-026(d2)	16-1
16-026(e2)	16-2
16-026(f2)	16-2
16-026(g2)	16-1
16-026(h2)	16-2
16-026(i2)	16-1
16-026(j2)	16-2
16-026(k2)	16-2

TA-16 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX (CONTINUED)

SWMU	FIGURE NUMBER
16-027(a)	16-2
16-027(b)	16-11
16-027(c)	Not shown
16-027(d)	16-1
16-028(a)	Not shown
16-028(b)	16-8
16-028(c)	16-7
16-028(d)	16-7
16-028(e)	16-7
16-029(a)	16-2
16-029(b)	16-2
16-029(c)	16-2
16-029(d)	16-2
16-029(e)	16-2
16-029(f)	16-2
16-029(g)	16-7
16-029(h)	Not shown
16-029(i)	16-8
16-029(j)	16-8
16-029(k)	16-1
16-029(l)	16-12
16-029(m)	16-4
16-029(n)	16-4
16-029(o)	16-4
16-029(p)	16-4
16-029(q)	16-1
16-029(r)	16-4
16-029(s)	16-11
16-029(t)	16-11
16-029(u)	16-1
16-029(v)	16-4
16-029(w)	16-4
16-029(x)	16-1
16-029(y)	16-4
16-029(z)	16-4
16-029(a2)	16-4
16-029(b2)	16-4
16-029(c2)	16-4
16-029(d2)	16-4
16-029(e2)	16-4
16-029(f2)	16-4
16-029(g2)	Not shown

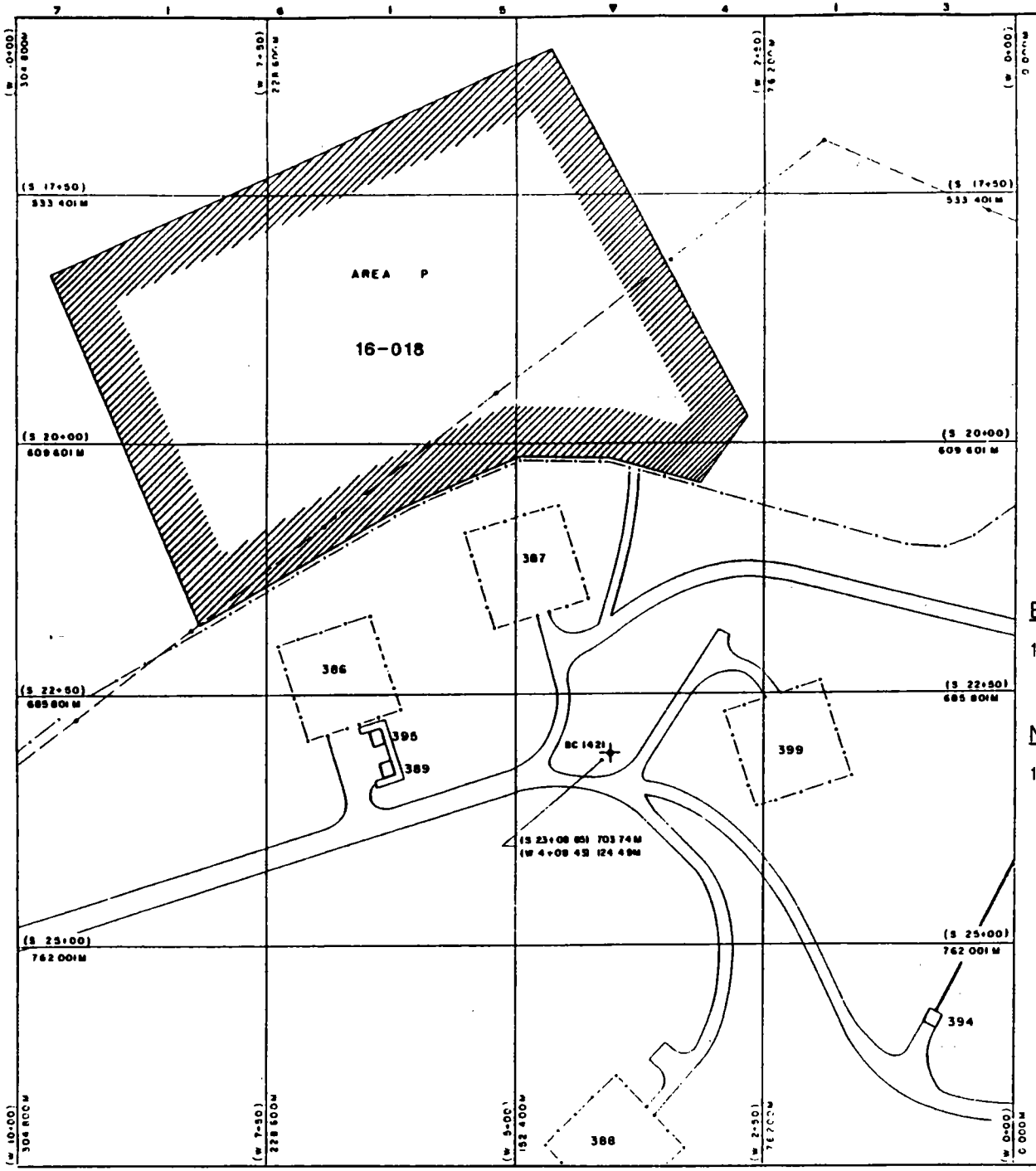
TA-16 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX (CONTINUED)

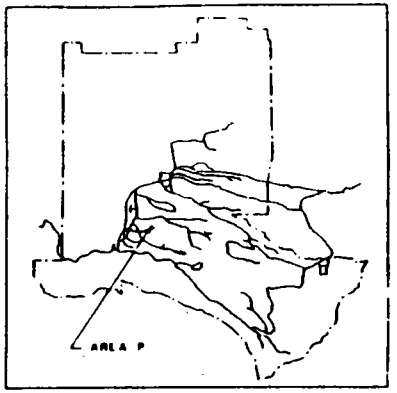
SWMU	FIGURE NUMBER
16-029(h2)	16-4
16-030(a)	16-2
16-030(b)	16-2
16-030(c)	16-7
16-030(d)	16-7
16-030(e)	16-1
16-030(f)	16-1
16-030(g)	16-8
16-031(a)	16-3
16-031(b)	16-3
16-031(c)	16-1
16-031(d)	16-4
16-031(e)	16-4
16-031(f)	16-4
16-031(g)	16-4
16-031(h)	16-3
16-032(a)	16-4
16-032(b)	16-4
16-032(c)	16-4
16-032(d)	16-4
16-032(e)	16-4
16-033(a)	16-1
16-033(b)	16-1
16-033(c)	Not shown
16-033(d)	Not shown
16-033(e)	16-1
16-033(f)	16-4
16-033(g)	Not shown
16-033(h)	Not shown
16-033(i)	Not shown
16-033(j)	Not shown
16-034(a)	16-4
16-034(b)	16-4
16-034(c)	16-4
16-034(d)	16-4
16-034(e)	16-4
16-034(f)	16-4
16-034(g)	16-4
16-034(h)	Not shown
16-034(i)	Not shown
16-034(j)	Not shown
16-034(k)	Not shown

TA-16 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX (CONTINUED)

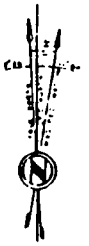
SWMU	FIGURE NUMBER
16-034(l)	16-4
16-034(m)	16-4
16-034(n)	16-4
16-034(o)	16-4
16-034(p)	16-4
16-035	16-3
16-036	16-3
16-037	Not shown

NOTE: Some structure locations contain more than one SWMU.





LOCATION PLAN



EXPLANATION

16-001 SWMU LOCATION

NOTES

16-018 SWMU ENCOMPASSES SHADED AREA

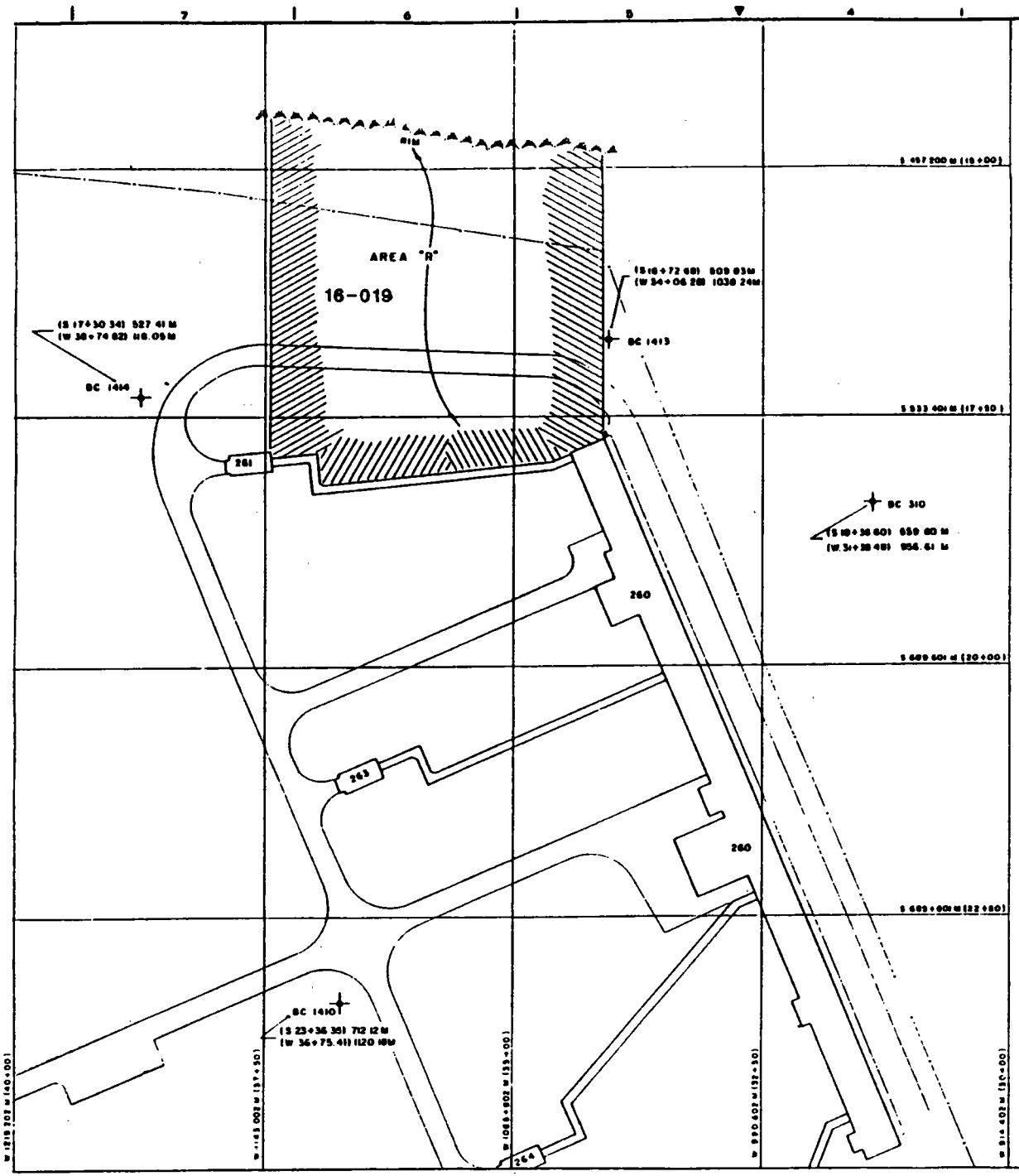
FIGURE 16-5

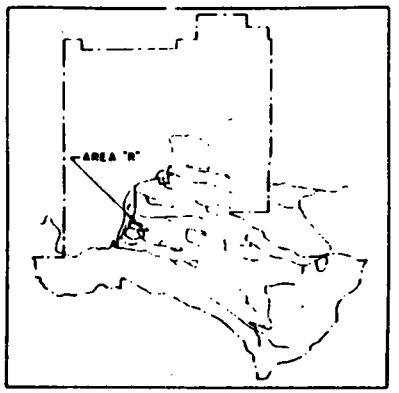
MATERIALS DISPOSAL AREA P, TA-16

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

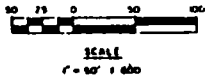
MATERIALS DISPOSAL AREAS
AREA P
S - SITE TA - 16

ENG. H 4471





LOCATION PLAN



EXPLANATION

16-001 SWMU LOCATION

NOTES

16-009(b), 16-019 SWMU ENCOMPASSES SHADED AREA

REV.1 6/27/90

FIGURE 16-6

MATERIALS DISPOSAL AREA R, TA-16

LOS ALAMOS SCIENTIFIC LABORATORY

ENGINEERING DEPARTMENT

UNIVERSITY OF CALIFORNIA – LOS ALAMOS, NEW MEXICO

AUTHORIZED FOR

MATERIALS DISPOSAL AREAS

AREA "R"

S-SITE TA-16

ENG-H4473

TA-18
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 18 is occupied by the Advanced Nuclear Technology Group, responsible for critical assembly research and for nuclear emergency operations. Hazardous materials utilized at TA-18 include special nuclear materials and supporting materials for nuclear criticality studies. The site was originally used as a firing site, and hazardous and radioactive materials may possibly be present as contaminants from these activities (DOE, 1987a). Plans for TA-18 include further development as the focus of criticality research.

TA-18 lies at elevations ranging between 6,780 and 6,900 feet asl. It is located in Pajarito Canyon at the intersection of the main canyon with a large branch of the canyon, Three Mile Canyon. 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 1,000 to 2,000 feet downstream of TA-18 encountered 8 to 11 feet of alluvium in the center of the channel, thinning toward the canyon walls (Apt and Lee, 1975).

The area is in the Ponderosa Pine/Pinon-Juniper and Ponderosa Pine-fir overstory vegetation zones. Soil types include Typic Ustorthents-Rock outcrop complex, Hackroy sandy loam, and rock outcrop (Nyhan et al., 1978). At TA-18, the potentiometric surface of the main aquifer in the Los Alamos area lies at about 5,870 to 5,900 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 TA-18 is ephemeral, flowing only in response to storm runoff and snow melt (IT, 1987a). Perched ground water occurs in the alluvium of Pajarito Canyon at TA-18, 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 TA-18. 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 (Apt and Lee, 1975). No routinely analyzed volatile organic compounds have been detected in the water.

TA-18 is 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).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-18

18-001	LAGOONS AND DRAINLINES
18-002	FIRING SITES / DROP TOWER
18-003	SEPTIC SYSTEMS
18-004	TANKS / LINES
18-005	SOIL CONTAMINATION AT FORMER MAGAZINE SITES
18-006	URANIUM SOLUTION PIPE
18-007	SUSPECTED BURIAL SITE
18-008	UNDERGROUND STORAGE TANK
18-009	LEAKAGE FROM PCB TRANSFORMERS
18-010	STORM SEWER OUTFALLS
18-011	POTENTIAL CONTAMINATION BENEATH FORMER STRUCTURE
18-012	SUMPS, ACID DRAINLINES, OUTFALLS

SUMMARY

LOCATION	: TA-18	MATERIALS MANAGED	: SOLID WASTE
TYPE OF UNIT(s)	: LAGOON		SUSPECTED HAZARDOUS WASTE
UNIT USE	: TREATMENT/DISPOSAL		SUSPECTED RADIOACTIVE WASTE
OPERATIONAL STATUS	: ACTIVE		
PERIOD OF USE	: 1975 - PRESENT		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: SUSPECTED		

UNIT INFORMATION

Two 60' x 120' lagoons [18-001(a)] are constructed of Gunite, are enclosed by an 8' chain link fence, and have 6' high earth berms. The lagoons are identified by structure number TA-18-162 and serve the sanitary system of TA-18, except kivas 1-3 (TA-18-23, -32, and -116), all of which are served by septic systems (see SWMU No. 18-003). There are an estimated 12,000 ft of sanitary sewer lines in TA-18 [18-001(b)] connecting most of the buildings to the lagoons. TA-18-30 is identified as having a sump with a gravity drain [18-001(c)] that empties into the sanitary sewer lines and lagoons.

WASTE INFORMATION

The sump and gravity drain [18-001(c)] potentially contained uranium-235, beryllium, and photographic chemicals. The lagoons [18-001(a)] and sanitary sewer lines [18-001(b)] contain sanitary sewage, and possibly uranium-235, beryllium, and photographic chemicals from TA-18-30. The lagoons contain sanitary sewage and possibly photographic waste solutions, according to the RFA. At one time the lagoon received liquids pumped and transported by truck from septic tanks at other technical areas. The lagoons have been sampled and analyzed for volatile organics, semi-volatile organics (samples from the south lagoon) and EP toxic metals (samples from the north lagoon). The results of the analyses indicate all constituents are below detection limits.

RELEASE INFORMATION

The lagoons [18-001(a)] discharge to Pajarito Canyon via an NPDES outfall (serial no. 04S) (see Appendix A). Presently, there are no releases of hazardous wastes, although residues from past discharges may potentially be found at the discharge point.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
18-001(a)	TA18-4-CA/ST/O-A/I-HW/RW	18.001 18.002	Tsk 16 : 2 4	TA-18-162
18-001(b)	TA18-4-CA/ST/O-A/I-HW/RW		Tsk 16 : 3	
18-001(c)	TA18-4-CA/ST/O-A/I-HW/RW		Tsk 18 : 54	TA-18-30

SUMMARY

LOCATION : TA-18
TYPE OF UNIT(s) : FIRING SITE/DROP TOWER
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED/INACTIVE
PERIOD OF USE : 1944 - EARLY 1950s
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

According to the CEARP, two firing sites were present in this technical area. The first site [18-002(a)], located at the west end of Pajarito Canyon, was used for small charges of several hundred lbs and included a firing chamber, TA-18-3, constructed of 1-inch thick steel and measuring 2' x 2' x 2'2" deep. The chamber has been removed. The first firing site also includes a battleship building, TA-18-2. Instruments recording experimental data were located in this building during the experimental firings. The battleship building has not been removed. The second site [18-002(b)], located at the south end of the canyon, was used for charges of a few lbs each. This firing chamber, TA-18-4, was similar to TA-18-3, was constructed of 1-inch thick steel, and measured 2' x 2' x 2' deep. This chamber has also been removed. The second firing site also includes a battleship building, TA-18-5, which is still present. A drop tower [18-002(c)] was used in tests involving inert, HE, and ballistic objects. The location of the drop tower is not known.

WASTE INFORMATION

Suspected contaminants include uranium, possibly barium from HE, cadmium, beryllium, and lead.

RELEASE INFORMATION

Information on decommissioning of these sites is not available, however, LANL staff indicate the possibility that residuals remain is small.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
18-002(a)	TA18-1-CA-I-HW/RW	? 18.003	Tsk 18 : 64 74	TA-18-2, -3
	TA18-2-CA-I-HW/RW	? 18.004		
		18.078-		
		18.080		
18-002(b)	TA18-1-CA-I-HW/RW	? 18.003	Tsk 18 : 65 75	TA-18-4, -5
	TA18-2-CA-I-HW/RW	? 18.004		
		18.078-		
		18.080		
18-002(c)	TA18-1-CA-I-HW/RW			

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-18
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : DISPOSAL/TREATMENT
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : 1944 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

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

UNIT INFORMATION

Four active septic systems and four inactive septic systems are present in TA-18.

SWMU NO.	STRUCTURE	PERIOD OF USE	CAPACITY	DIMENSIONS	CONSTRUCTION	DISCHARGE	BUILDING
18-003(a)	TA-18-105	1946-present	2500 gal.	5'4"x 5'4"x 12'deep	rein. concrete	leach field	TA-18-23
18-003(b)	TA-18-39	1947-present	524 gal.	4'x 7'x 5'6" deep	rein. concrete	leach field/outfall	TA-18-105
18-003(c)	TA-18-42	1952-present	587 gal.	6' dia. x 7' deep	rein. concrete	leach field/outfall	TA-18-32
18-003(d)	TA-18-120	1960-present	500 gal.	unknown	unknown	leach field/outfall	TA-18-116
18-003(e)	TA-18-40	1952-?	unknown	6' dia. x 6' deep	rein. concrete	leach field/outfall	TA-18-31, -37
18-003(f)	TA-18-41	1952-?	unknown	9' x 5' x 5' deep	rein. concrete	drain field/outfall	TA-18-30
18-003(g)	TA-18-43	1944-?	unknown	3' x 5' x 5' deep	concrete	outfall	TA-18-1, -47
18-003(h)	TA-18-152	? - ?	500 gal.	4'4"dia x 5' long	steel	unknown	TA-18-28

Inactive outfalls into Pajarito Canyon associated with TA-18-40 and -43 do not have NPDES serial numbers. TA-18-41 is associated with an inactive outfall into Pajarito Canyon with NPDES number 104. TA-18-39, -42, and -120 are Unpermitted Individual Liquid Waste Systems (numbers LA-27, -28, and -29, respectively). TA-18-40, -41, and -43 were reportedly removed before March, 1980. SWMU Nos. 18-003(a), (b), (c), and (d) are active. SWMU Nos. 18-003(e), (f), (g), and (h) are inactive. Building TA-18-23 is Kiva 1; Building TA-18-32 is Kiva 2; Building TA-18-116 is Kiva 3. TA-18-152 may have been removed. TA-18-105 is a settling pit that is a component of the septic system that includes TA-18-39 and serves Kiva 1, TA-18-23.

WASTE INFORMATION

Septic tanks TA-18-39, TA-18-42, and TA-18-120 received wash water from their respective Kiva drains; this water potentially contains radionuclides. Additionally, high oil content has been reported in TA-18-120. The inactive systems (TA-18-40, -41, -43, and -152) received primarily sanitary waste. It is possible that small quantities of solvents and other chemicals may have been included in the waste. Waste in TA-18-40, -41, and -43 may have included beryllium, uranium-235, and photo processing chemicals. Waste in TA-18-152 may have included uranium-235 and beryllium. TA-18-40, -41, and -43 are potentially contaminated with beryllium, U-235, and hazardous chemicals.

RELEASE INFORMATION

The septic systems associated with the kivas discharge to leach/drain fields, and to the outfalls associated with TA-18-39, -42, and -120. These fields are probably contaminated with uranium, plutonium, and perhaps hazardous materials. The extent of contamination and possible mobilization from the leach fields and outfalls is not known. TA-18-40, -41, and -43 discharged waste to outfalls or drain fields, and TA-18-152 may have as well.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
18-003(a)	TA18-4-CA/ST/O-A/I-HW/RW		Tsk 17 : 13	TA-18-105, SERVES TA-18-23
18-003(b)	TA18-4-CA/ST/O-A/I-HW/RW		Tsk 18 : 46	TA-18-39, -105
18-003(c)	TA18-4-CA/ST/O-A/I-HW/RW		Tsk 17 : 10 11	TA-18-42, SERVES TA-18-32
18-003(d)	TA18-4-CA/ST/O-A/I-HW/RW		Tsk 18 : 47	TA-18-120, SERVES TA-18-116
18-003(e)	TA18-4-CA/ST/O-A/I-HW/RW	? 18.077 ? 18.081	Tsk 18 : 44 50	TA-18-40, SERVES TA-18-31
18-003(f)	TA18-4-CA/ST/O-A/I-HW/RW TA18-11-CA-I-HW/RW	? 18.077 ? 18.081	Tsk 18 : 42 48	TA-18-41, SERVES TA-18-30

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
18-003(g)	TA18-4-CA/ST/O-A/I-HW/RW TA18-11-CA-I-HW/RW	? 18.077 ? 18.081	Tsk 18 : 41 49	TA-18-43, SERVES TA-18-1
18-003(h)	TA18-4-CA/ST/O-A/I-HW/RW	? 18.077 ? 18.081	Tsk 18 : 45	TA-18-153, SERVES TA-18-28

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-18
TYPE OF UNIT(s) : TANK
UNIT USE : STORAGE
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1950s - 1977
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

This unit consisted of tanks in a containment pit used for storing liquid waste. Acid waste lines [18-004(a)] from the sinks on the west side of Building 30 connected to a pit, TA-18-38 [18-004(b)], which was a subsurface concrete pit (4' x 9' x 8') that contained two small stainless steel tanks that stored the waste until a tank was full. These tanks received radioactively contaminated liquid waste from Building 30. The full tank was then removed for waste collection and for cleaning and was then returned. In 1977, these tanks were removed and the inlet lines capped. The walls of the pit were knocked down and left in place, and the area was then backfilled to grade. A segment of the feed line is still buried under TA-18-30.

WASTE INFORMATION

The tanks and pit at TA-18-38 managed liquids suspected to contain radionuclides, solvents and other chemicals.

RELEASE INFORMATION

No releases of hazardous materials from this unit are known. 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
18-004(a)	TA18-5-CA/UST-I-HW/RW		Tsk 17 : 14	SERVES TA-18-30
18-004(b)	TA18-5-CA/UST-I-HW/RW		Tsk 18 : 56	TA-18-38

SUMMARY

LOCATION : TA-18
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1950s - 1978
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

Building TA-18-15 [18-005(a)] was used first as a magazine for the firing group and later as a storage area for contaminated materials. The building was demolished in 1978. TA-18-11 [18-005(b)] and TA-18-12 [18-005(c)] were high explosives storage magazines. They were located at the far north end of TA-18. Both were removed in 1960.

WASTE INFORMATION

The materials stored at 18-005(a) contained uranium and beryllium oxide and, according to LANL staff, there is a slight possibility that residues may be present in the area surrounding this former building. Storage magazines 18-005(b) and (c) stored high explosives.

RELEASE INFORMATION

The CEARP does not state evidence of any releases from 18-005(a) either during its operational lifetime or during decommissioning. It is not known if any sampling was undertaken to verify the absence of contamination. HE contamination was reported in 18-005(b) and (c) in 1959. A 1988 E.R. program site visit showed slightly elevated beta/gamma and gamma readings.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
18-005(a)	TA18-1-CA-I-HW/RW TA18-6-CA-I-HW/RW		Tsk 17 : 19	TA-18-15
18-005(b)	TA18-1-CA-I-HW/RW		Tsk 16 : 5	TA-18-11
18-005(c)	TA18-1-CA-I-HW/RW		Tsk 16 : 6	TA-18-12

SUMMARY

LOCATION : TA-18
TYPE OF UNIT(s) : UNDERGROUND PIPE
UNIT USE : STORAGE
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1969 - 1970s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
SUSPECTED MIXED WASTE

UNIT INFORMATION

This unit is described by CEARP as an underground pipe used for storage of uranium solution associated with the Kinglet reactor. The solution is believed to have been removed. However, the piping and pump remain in place. The pipe apparently runs from Building 168 southwesterly toward the fence.

WASTE INFORMATION

Uranium solution was stored in this pipe. Residuals may be present in the pipe and pump.

RELEASE INFORMATION

There have been no known releases to the environment from the pipe and associated equipment. Decommissioning information on the pipe and pump is currently not available.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
18-006	TA18-7-UST-1-RW		Tsk 17 : 15	TA-18-168

SUMMARY

LOCATION : TA-18
TYPE OF UNIT(s) : LANDFILL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1949
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

A memo in engineering file 1757 indicates the possibility of material buried beyond the old Kiva at TA-18. An employee remembers burying a tank in this suspected site about 1.25 miles up the canyon from Kiva 2 (TA-18-32) in 1949.

WASTE INFORMATION

The tank may have been contaminated with radionuclides or HE residues.

RELEASE INFORMATION

The site has not been investigated. No releases are known.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
18-007	TA18-8-L-1-HW/RW		Tsk 17 : 30 31	WEST OF TA-18-32

SUMMARY

LOCATION : TA-18
TYPE OF UNIT(s) : UNDERGROUND TANK
UNIT USE : STORAGE
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1950s - 1966
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

Underground storage tank TA-18-104 was located approximately where TA-18-250 is presently located, according to a 1957 engineering drawing (ENG-R 136). It was abandoned in 1966 and subsequently removed.

WASTE INFORMATION

The tank contained fuel oil.

RELEASE INFORMATION

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
18-008	TA18-9-UST-I-PP	? 18.082	Tsk 18 : 76	TA-18-104

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION	: TA-18	MATERIALS MANAGED	: SOLID WASTE
TYPE OF UNIT(s)	: SOIL CONTAMINATION		PCBs
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: ? - 1988		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

A transformer located at TA-18-136 [18-009(a)] leaked in 1982. Transformers at stations TA-18-46 [18-009(b)] and TA-18-48 [18-009(c)] were both removed in 1988. A transformer at TA-18-142 [18-009(d)] leaked in 1988. Transformers removed since 1985 are visually inspected before removal. If stains are observed on the soil or concrete, the soil is analyzed for PCBs and appropriate cleanup procedures are implemented. A 1983 capacitor fire in the Pajarito Mesa Well No. 2, TA-18-252, resulted in the PCB contamination of walls, ceiling, floor and installed equipment [18-009(e)]. Firefighters used extinguishers and water to douse the blaze, resulting in contamintion of the floor drain pipe and soil surrounding the door. The soil was reportedly removed to MDA-G after removal operations reached soil depths at which PCBs were no longer detected. The building was cleaned with Fantastic brand cleaner and repainted. The equipment was not cleaned and may be releasing PCBs each time it is started up.

WASTE INFORMATION

All the transformers [18-009(a) through (d)] contained <50 ppm PCBs. The equipment in the pumphouse contained PCBs.

RELEASE INFORMATION

Approximately 50 cubic meters of soil contaminated by the leak at 18-009(a) were removed in 1982. No information is available on the extent of the PCB-contaminated oil leaks at 18-009(b), (c), and (d), nor if residual contamination remains. It is not known whether residual PCB contamination remains at 18-009(e).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
18-009(a)	TA18-9-UST-I-PP			TA-18-136 (NE OF TA-18-116)
18-009(b)	**		Tsk 18 : 57	TA-18-46
18-009(c)	**		Tsk 18 : 62	TA-18-148
18-009(d)	**		Tsk 18 : 68	TA-18-142
18-009(e)	**			TA-18-252

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-18
TYPE OF UNIT(s) : OUTFALL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

Storm sewer outfalls are associated with the main building complex at TA-18, buildings TA-18-28, -30, -31, -37, and -147. One storm sewer outfall [18-010(a)] is located along the west side of the main complex. A second storm sewer outfall [18-010(b)] is located on the west side of TA-18-30. A third storm sewer outfall [18-010(c)] is located south of TA-18-30, and it receives drainage from the area east of TA-18-30 and around TA-18-31. A fourth storm sewer outfall [18-010(d)] receives drainage from the paved area near TA-18-37. A final outfall [18-010(e)] receives drainage from the area between TA-18-28 and TA-18-147. There is a storm sewer [18-010(f)] leading from Kiva 2, TA-18-32.

WASTE INFORMATION

These units manage storm water. Radioactive source and waste material, lead bricks, and flammable liquids are stored on paved areas around 18-010(a) through (e) and contamination from this storage could have reached the storm sewers and outfalls. There is no waste information available for 18-010(f).

RELEASE INFORMATION

It is unknown whether releases have occurred from these areas.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
18-010(a)	**		Tsk 18 : 39	WEST OF TA-18-30
18-010(b)	**		Tsk 18 : 39	WEST OF TA-18-30
18-010(c)	**		Tsk 18 : 39	SOUTH OF TA-18-30
18-010(d)	**		Tsk 18 : 39	NEAR TA-18-37
18-010(e)	**		Tsk 18 : 39	BETWEEN TA-18-28 AND -147
18-010(f)	**		Tsk 18 : 51	SERVES TA-18-32

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-18
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED(?)
PERIOD OF USE : 1940s - 1950
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : UNKNOWN
MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

Generator building TA-18-22 was reportedly contaminated with mercury in the mid-1950s. Engineering drawings ENG-R5112 (9/21/83) and ENG-R136 (7/30/57) indicate the building was removed in 1950.

WASTE INFORMATION

Mercury was handled in TA-18-22.

RELEASE INFORMATION

Generator building TA-18-22 has been removed. No information is available concerning the decommissioning efforts and contamination at time of removal, nor is any available on any residual contamination.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
18-011	**		Tsk 17 : 16	TA-18-22

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-18
TYPE OF UNIT(s) : DRAINS
UNIT USE : DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : SUSPECTED

MATERIALS MANAGED : RADIOACTIVE WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

A combined acid/storm sewer [18-012(a)] serves Kiva 3, TA-18-116. Two sumps in the basement of TA-18-30 have pumped water through an outfall into Pajarito Canyon [18-012(b)]. A sump and two drains of unknown origin [18-012(c)] are located northeast of TA-18-141. Drains of unknown origin and purpose [18-012(d)] are located behind building TA-18-129 and are marked with a cement post.

WASTE INFORMATION

Acid/storm sewer 18-012(a) may have handled radioactive waste and acids. Building TA-18-30 [18-012(b)] is known to have handled polonium, and also possibly handled photographic chemicals, uranium-235, and beryllium. Possible wastes handled by 18-012(c) include uranium-235, plutonium-238, and photo processing chemicals. No information is available concerning the waste material handled by 18-012(d).

RELEASE INFORMATION

In early 1965, acid/storm sewer 18-012(a) overflowed, possible releasing uranium-235 and plutonium-238. At least one major contamination event involving polonium occurred at TA-18-30; the possibility of contamination of sump water and the outfall area [18-012(b)] by polonium or by photographic chemicals, uranium-235, or beryllium is unknown. There are no known releases from 18-012(c) or (d). Beta and gamma readings taken in the vicinity of 18-012(d) during an E.R. program site visit in 1988 indicated slightly elevated gamma exposures.

SWMU CROSS-REFERENCE LIST

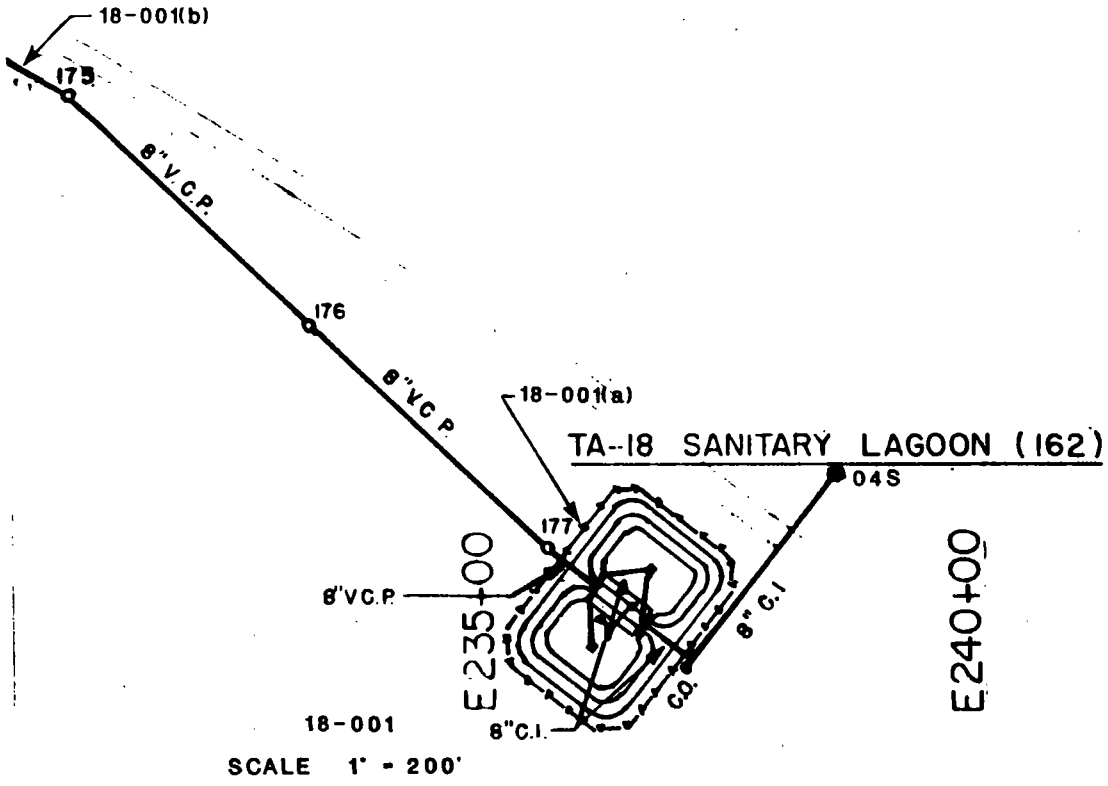
SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
18-012(a)	**		Tsk 17 : 12	SERVES TA-18-116
18-012(b)	TA18-4-CA/ST/O-A/I-HW/RW		Tsk 18 : 40 43 55	IN TA-18-30
18-012(c)	**		Tsk 18 : 53	NEAR TA-18-141
18-012(d)	**		Tsk 18 : 52	BEHIND TA-18-129

** No corresponding E. R. Program unit.

TA-18 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
18-001(a)	18-1, 18-2, 18-5, 18-7
18-001(b)	18-2, 18-7
18-001(c)	18-1
18-002(a)	18-3
18-002(b)	18-3
18-002(c)	Not shown
18-003(a)	18-1
18-003(b)	18-1, 18-7
18-003(c)	18-1, 18-7
18-003(d)	18-1
18-003(e)	18-1
18-003(f)	18-1
18-003(g)	18-1
18-003(h)	18-1
18-004(a)	18-1, 18-4
18-004(b)	18-4
18-005(a)	18-3, 18-4
18-005(b)	18-3, 18-4
18-005(c)	18-3, 18-4
18-006	18-1
18-007	18-1, 18-6
18-008	18-1, 18-4
18-009(a)	18-1
18-009(b)	18-1
18-009(c)	18-1
18-009(d)	18-1
18-009(e)	18-5
18-010(a)	18-1
18-010(b)	18-1
18-010(c)	18-1
18-010(d)	18-1
18-010(e)	18-1
18-010(f)	18-1
18-011	18-1
18-012(a)	18-1
18-012(b)	18-1
18-012(c)	18-1
18-012(d)	18-1

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



EXPLANATION

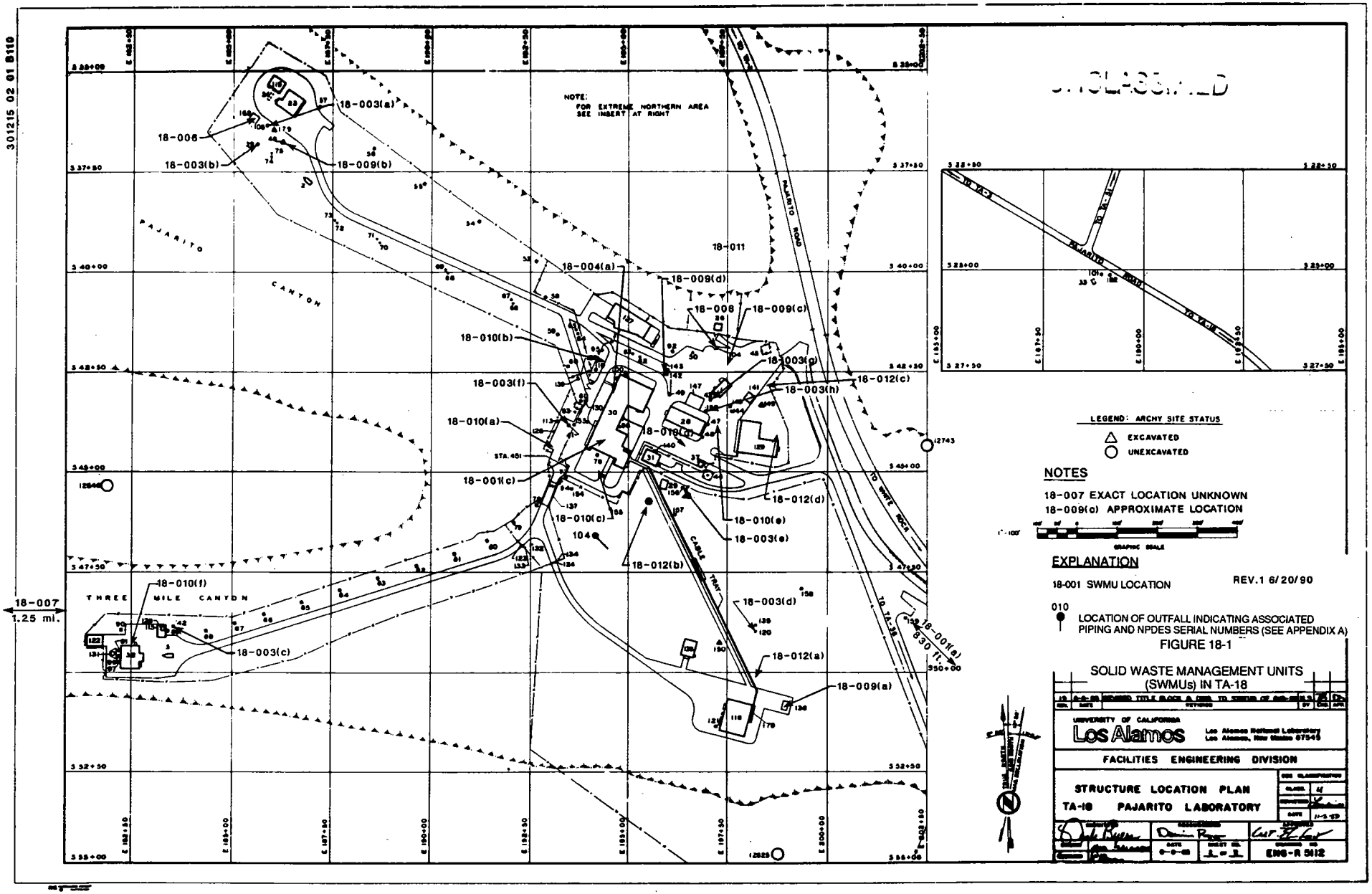
18-001 SWMU LOCATION

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

REV.1 6/20/90

FIGURE 18-2

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-18



UNCLASSIFIED

LEGEND: ARCHY SITE STATUS

△ EXCAVATED

○ UNEXCAVATED

NOTES

18-007 EXACT LOCATION UNKNOWN

18-009(c) APPROXIMATE LOCATION

GRAPHIC SCALE

EXPLANATION

18-001 SWMU LOCATION

REV.1 6/20/90

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

FIGURE 18-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-18

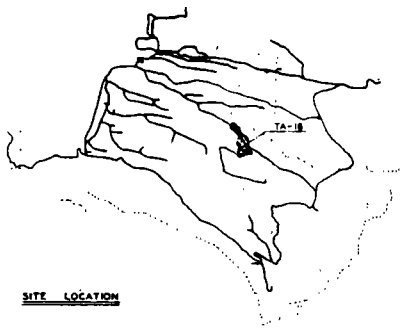
UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

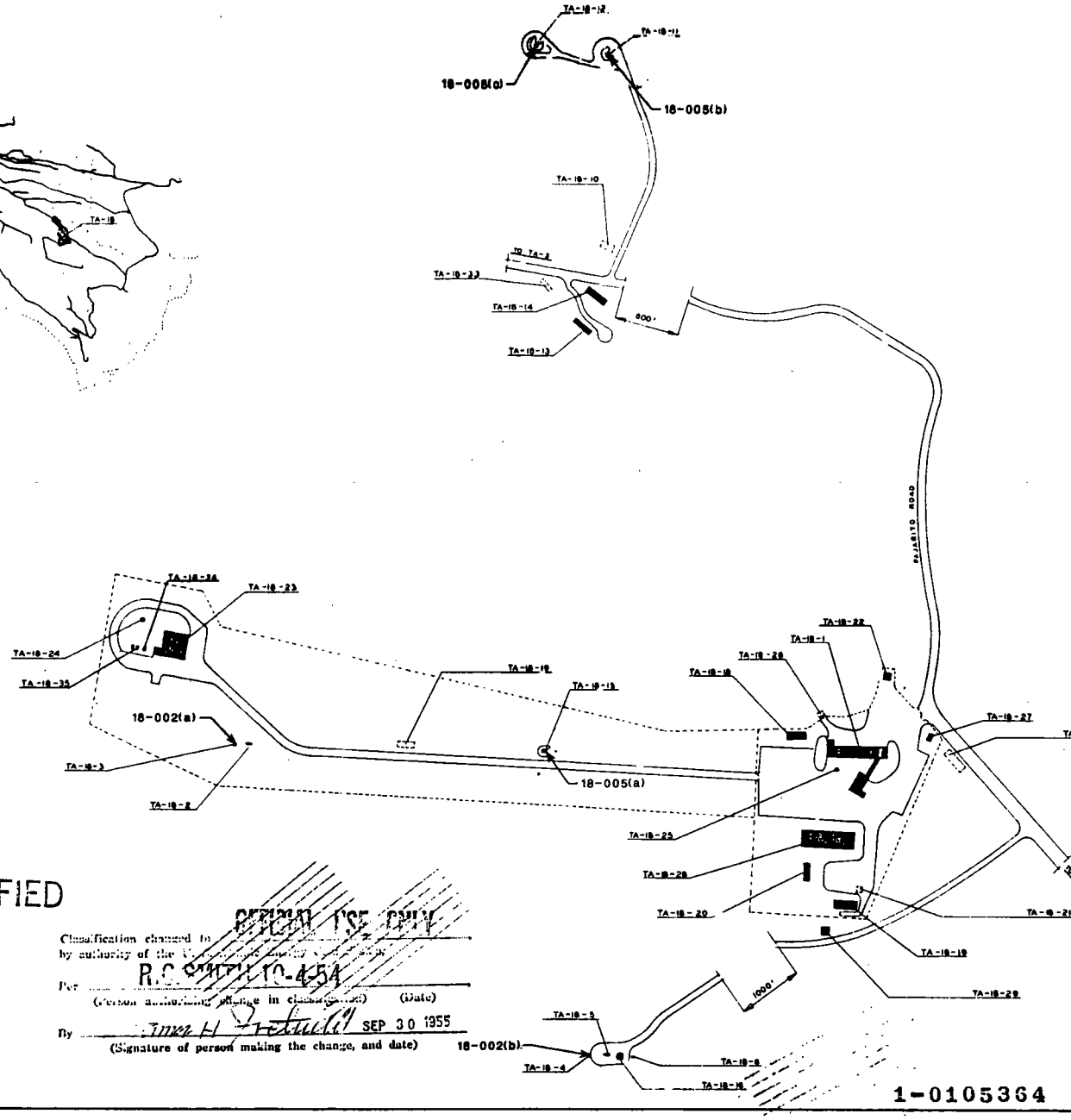
FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-18 PAJARITO LABORATORY

ENG-R 5412

301215 02 01 B110





STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-18-1	PL - 1	LABORATORY BUILDING
TA-18-2	PL - 2	BATTLESHIP BUILDING
TA-18-3	PL - 3	CHAMBER REMOVED 1945
TA-18-4	PL - 4	CHAMBER REMOVED 1945
TA-18-5	PL - 5	BATTLESHIP BUILDING
TA-18-6	PL - 6	SUBMARINE BUILDING
TA-18-7	PL - 7	SUBMARINE BUILDING TRANSFERRED T
TA-18-8	PL - 8	SUBMARINE BUILDING TRANSFERRED
TA-18-9	PL - 9	INSTRUMENT CHAMBER TRANSFERRED TO T
TA-18-10	PL - 10	ASSEMBLY BUILDING REMOVED 1947
TA-18-11	PL - 11	MAGAZINE
TA-18-12	PL - 12	MAGAZINE
TA-18-13	PL - 13	LUMBER STORAGE
TA-18-14	PL - 14	CARPENTER SHOP
TA-18-15	PL - 15	MAGAZINE
TA-18-16	PL - 16	BATTERY BUILDING & CONDUIT SYSTEM
TA-18-17	PL - 17	WAREHOUSE BUILDING REMOVED
TA-18-18	PL - 18	COUNTING BUILDING
TA-18-19	PL - 19	LABORATORY BUILDING RELOCATED JUL
TA-18-20	PL - 20	CARPENTER SHOP
TA-18-21	PL - 21	STORAGE BUILDING REMOVED JULY 19
TA-18-22	PL - 22	GENERATOR BUILDING
TA-18-23	PL - 23	ASSEMBLY BUILDING "KIVA"
TA-18-24	PL - 24	GUARD TOWER "A" (WEST)
TA-18-25	PL - 25	GUARD TOWER "B" (EAST)
TA-18-26	PL - 26	VAULT, FORMERLY BLDG 17
TA-18-27	PL - 27	GUARD BUILDING
TA-18-28	PL - 28	WAREHOUSE FORMERLY BLDG 19
TA-18-29	PL - 29	LOG CABIN
TA-18-30	PL - 30	LABORATORY & OFFICE BUILDING FUTURE CONST
TA-18-31	PL - 31	UTILITY BLDG FUTURE CONST
TA-18-32	PL - 32	ASSEMBLY BLDG. FUTURE CONST
TA-18-33	PL - 33	UNDERGROUND TANK
TA-18-34	PL - 34	WATER TANK
TA-18-35	PL - 35	PROPANE TANKS ✓

EXPLANATION

18-001 SWMU LOCATION

REV.1 6/20/90

FIGURE 18-3

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-18

UNCLASSIFIED

Classification changed to OFFICIAL USE ONLY
by authority of the [illegible]
Per R.C. SMITH 10-4-54
(Person authorizing change in classification) (Date)
By [signature] SEP 30 1955
(Signature of person making the change, and date)

1-0105364

AUTHORIZED FOR	LOS ALAMOS SCIENTIFIC LABORATORY DEPARTMENT OF ENGINEERING-CONSTRUCTION & MAINTENANCE GROUP
HEALTH SAFETY FIRE PR. CONST. SEC.	STRUCTURE LOCATION PLAN TA-18 PAJARITO LABORATORY
REV.	SCALE: 1" = 100' · DRAWN BY: G.R.S. · DATE: 7-11-53 · CHKD. BY: [illegible] · DATE: [illegible] · APPVD. BY: [illegible] · DATE: [illegible] · DWG. NO. ENG 4-R-1c

STRUCTURE NUMBER	DESIGNATION	REMARKS
[illegible]	[illegible]	LABORATORY BLDG.
[illegible]	[illegible]	BATTLESHIP BLDG.
[illegible]	[illegible]	CHAMBER (REMOVED [illegible])
[illegible]	[illegible]	CHAMBER (REMOVED [illegible])
[illegible]	[illegible]	BATTLESHIP BLDG.
[illegible]	[illegible]	SUBMARINE BLDG. (REMOVED)
[illegible]	[illegible]	SUBMARINE BLDG. (TRANSFERRED TO TA-[illegible])
[illegible]	[illegible]	SUBMARINE BLDG. (TRANSFERRED TO TA-[illegible])
[illegible]	[illegible]	INSTRUMENT CHAMBER (TRANSFERRED TO TA-[illegible])
TA-18-10	PL-10	ASSEMBLY BLDG. (REMOVED)
TA-18-11	PL-11	MAGAZINE
TA-18-12	PL-12	MAGAZINE
TA-18-13	PL-13	LUMBER STORAGE (REMOVED)
TA-18-14	PL-14	CARPENTER SHOP
TA-18-15	PL-15	MAGAZINE
TA-18-16	PL-16	BATTERY BLDG. & CONDUIT SYSTEM (REMOVED)
TA-18-17	PL-17	WAREHOUSE (REMOVED)
TA-18-18	PL-18	COUNTING BLDG.
TA-18-19	PL-19	LABORATORY BLDG. (RELOCATED JULY 1949)
TA-18-20	PL-20	CARPENTER SHOP (REMOVED)
TA-18-21	PL-21	STORAGE BLDG. (REMOVED)
TA-18-22	PL-22	GENERATOR BLDG. (REMOVED)
TA-18-23	PL-23	ASSEMBLY BLDG. "KIVA"
TA-18-24	PL-24	GUARD TOWER "A" (WEST)
TA-18-25	PL-25	GUARD TOWER "B" (EAST)
TA-18-26	PL-26	VAULT (FORMERLY BLDG. 17)
TA-18-27	PL-27	GUARD BLDG. (ABANDONED)
TA-18-28	PL-28	WAREHOUSE (FORMERLY BLDG. 19)
TA-18-29	PL-29	LOG CABIN
TA-18-30	PL-30	LABORATORY & OFFICE BLDG.
TA-18-31	PL-31	UTILITY BLDG.
TA-18-32	PL-32	ASSEMBLY BLDG.
TA-18-33	PL-33	UNDERGROUND TANK
TA-18-34	PL-34	WATER TANK
TA-18-35	PL-35	PROPANE TANK
TA-18-36	PL-36	PROPANE TANK
TA-18-37	PL-37	GUARD HOUSE (STATION 450)
TA-18-38	PL-38	WASTE PIT & HOIST
TA-18-39	PL-39	SEPTIC TANK
TA-18-40	PL-40	SEPTIC TANK
TA-18-41	PL-41	SEPTIC TANK
TA-18-42	PL-42	SEPTIC TANK
TA-18-43	PL-43	SEPTIC TANK
TA-18-44	PL-44	TRANSFORMER STATION
TA-18-45	PL-45	TRANSFORMER STATION
TA-18-46	PL-46	TRANSFORMER STATION
TA-18-47	PL-47	MANHOLE (SEWER)
TA-18-48	PL-48	MANHOLE (SEWER)
TA-18-49	PL-49	MANHOLE (ELECTRIC - PULL BOX)
TA-18-50	PL-50	MANHOLE (CONTROL)
TA-18-51	PL-51	MANHOLE " "
TA-18-52	PL-52	MANHOLE " "
TA-18-53	PL-53	MANHOLE " "
TA-18-54	PL-54	MANHOLE " "
TA-18-55	PL-55	MANHOLE " "
[illegible]	PL-56	MANHOLE " "
[illegible]	PL-57	MANHOLE " "
[illegible]	PL-58	MANHOLE (ELECTRIC)
[illegible]	PL-59	MANHOLE (ELECTRIC)
[illegible]	PL-60	MANHOLE (SEWER)
[illegible]	PL-61	MANHOLE (SEWER)
[illegible]	PL-62	MANHOLE (CONTROL)
[illegible]	PL-63	MANHOLE (TELEPHONE)
[illegible]	PL-64	MANHOLE (CONTROL)
[illegible]	PL-65	MANHOLE (TELEPHONE)
[illegible]	PL-66	MANHOLE (CONTROL)
[illegible]	PL-67	MANHOLE (TELEPHONE)
[illegible]	PL-68	MANHOLE (CONTROL)
[illegible]	PL-69	MANHOLE (TELEPHONE)
[illegible]	PL-70	MANHOLE (CONTROL)
[illegible]	PL-71	MANHOLE (TELEPHONE)
[illegible]	PL-72	MANHOLE (CONTROL)
[illegible]	PL-73	MANHOLE (TELEPHONE)
[illegible]	PL-74	MANHOLE (CONTROL)
[illegible]	PL-75	MANHOLE (TELEPHONE)
[illegible]	PL-76	MANHOLE (ELECTRIC)
[illegible]	PL-77	MANHOLE " "
[illegible]	PL-78	MANHOLE " "
[illegible]	PL-79	MANHOLE " "
[illegible]	PL-80	MANHOLE " "
[illegible]	PL-81	MANHOLE " "
[illegible]	PL-82	MANHOLE " "
[illegible]	PL-83	MANHOLE " "
[illegible]	PL-84	MANHOLE " "
[illegible]	PL-85	MANHOLE " "
[illegible]	[illegible]	MANHOLE " "
[illegible]	[illegible]	MANHOLE " "
[illegible]	[illegible]	MANHOLE " "
[illegible]	[illegible]	MANHOLE " "
[illegible]	[illegible]	MANHOLE " "
[illegible]	[illegible]	MANHOLE " "
[illegible]	[illegible]	HOSEHOUSE
[illegible]	[illegible]	MANHOLE (HANDHOLE)
[illegible]	[illegible]	MANHOLE (HANDHOLE)
[illegible]	[illegible]	MANHOLE (HANDHOLE)
[illegible]	[illegible]	MANHOLE (ELECTRIC)
[illegible]	[illegible]	MANHOLE (ELECTRIC)
[illegible]	[illegible]	MANHOLE (SEWER)
[illegible]	[illegible]	MANHOLE (ELECTRIC)
[illegible]	[illegible]	MANHOLE (WATER)
[illegible]	[illegible]	MANHOLE (ELECTRIC)
[illegible]	[illegible]	WATER TANK (REMOVED)
[illegible]	[illegible]	WATER TANK (REMOVED)
[illegible]	[illegible]	OIL TANK - UNDERGROUND
[illegible]	[illegible]	MANHOLE (SETTLING PIT)
[illegible]	[illegible]	TRANSFORMER STATION (REMOVED)
[illegible]	[illegible]	SENTRY BLDG. (REMOVED)
[illegible]	[illegible]	SIREN
[illegible]	[illegible]	TRANSFORMER STATION (REMOVED)
[illegible]	[illegible]	DRUM STORAGE PLATFORM
[illegible]	[illegible]	GUARD HOUSE (WAS TA-27-4)
[illegible]	[illegible]	GUARD HOUSE (WAS TA-16-1000)

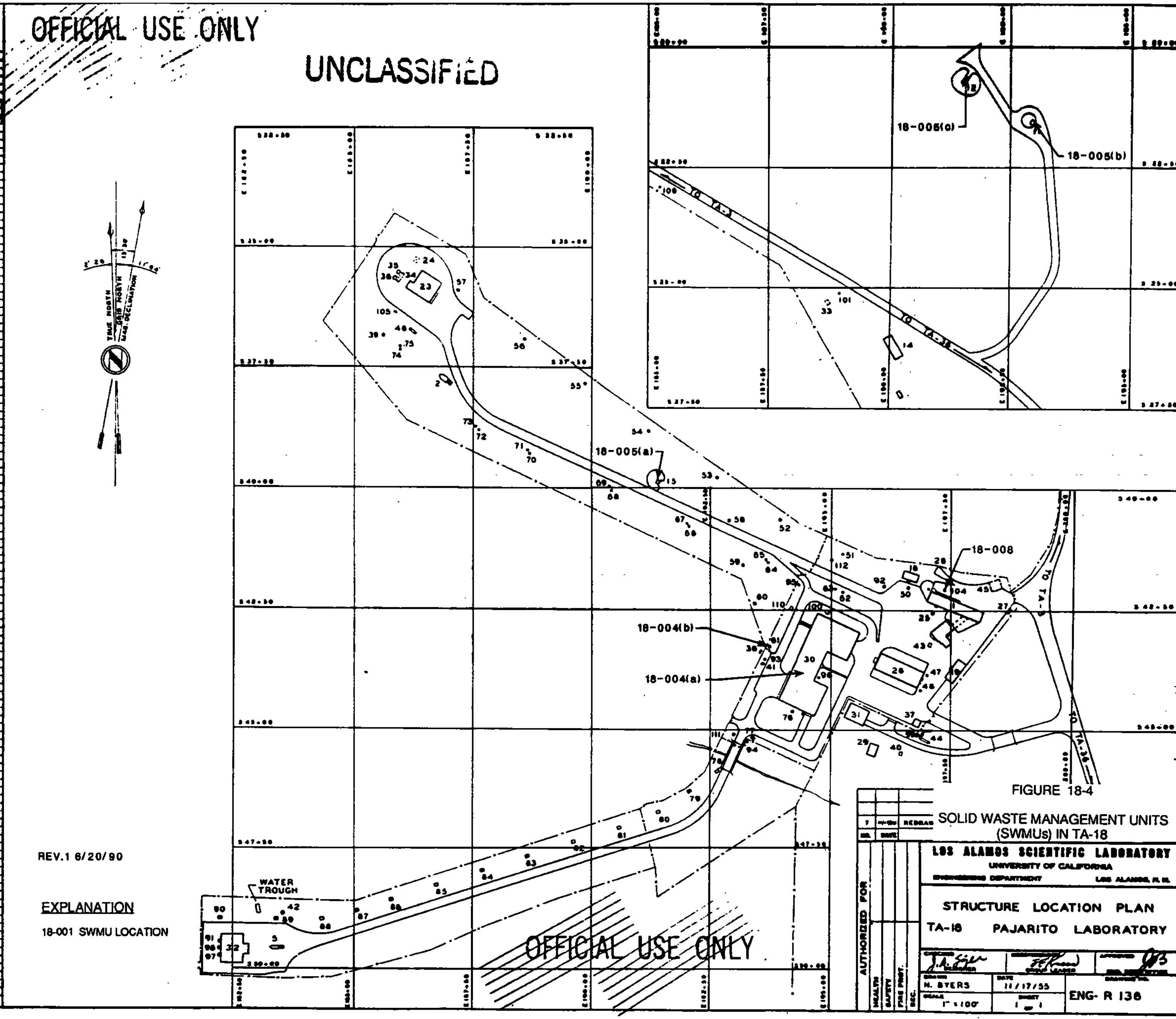


FIGURE 18-4

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-18

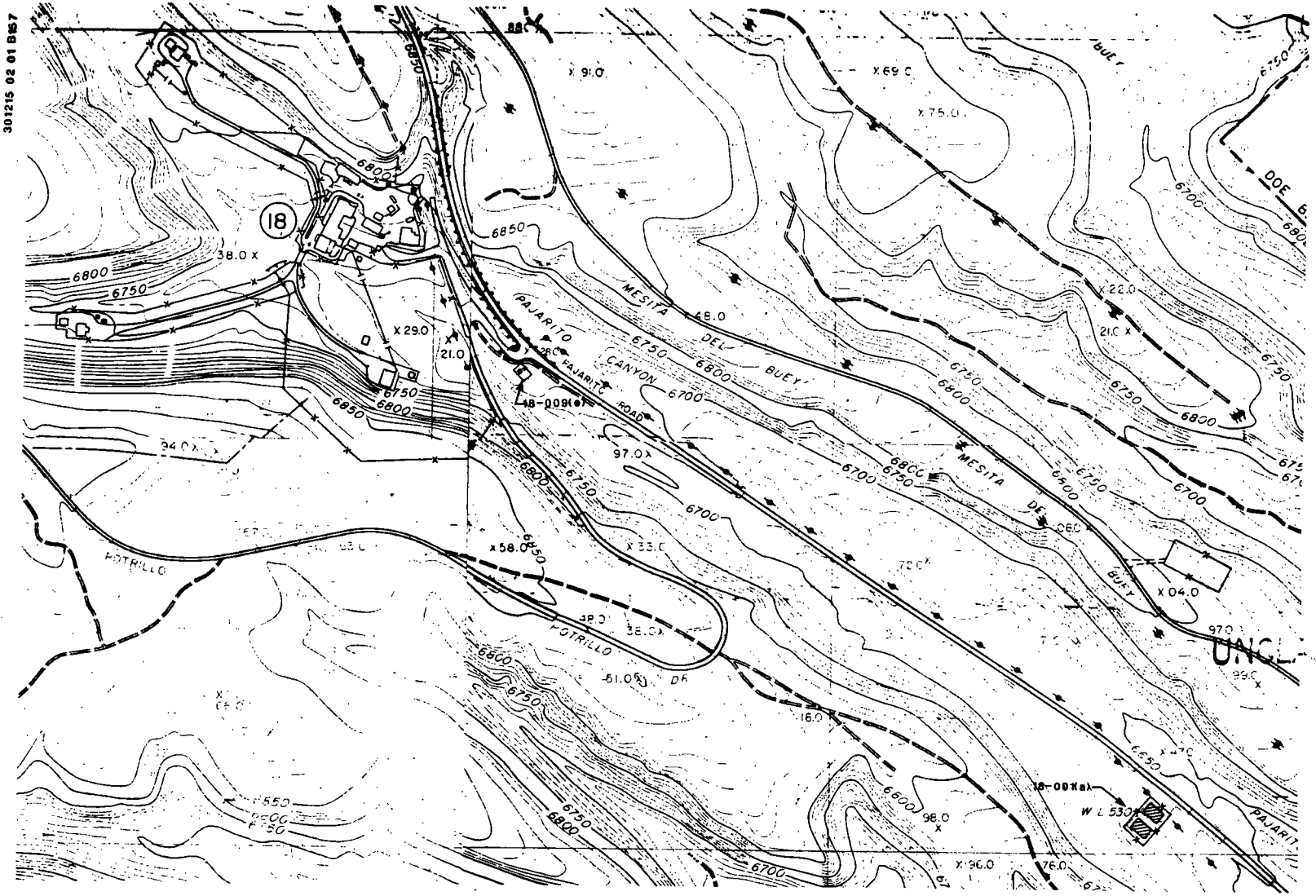
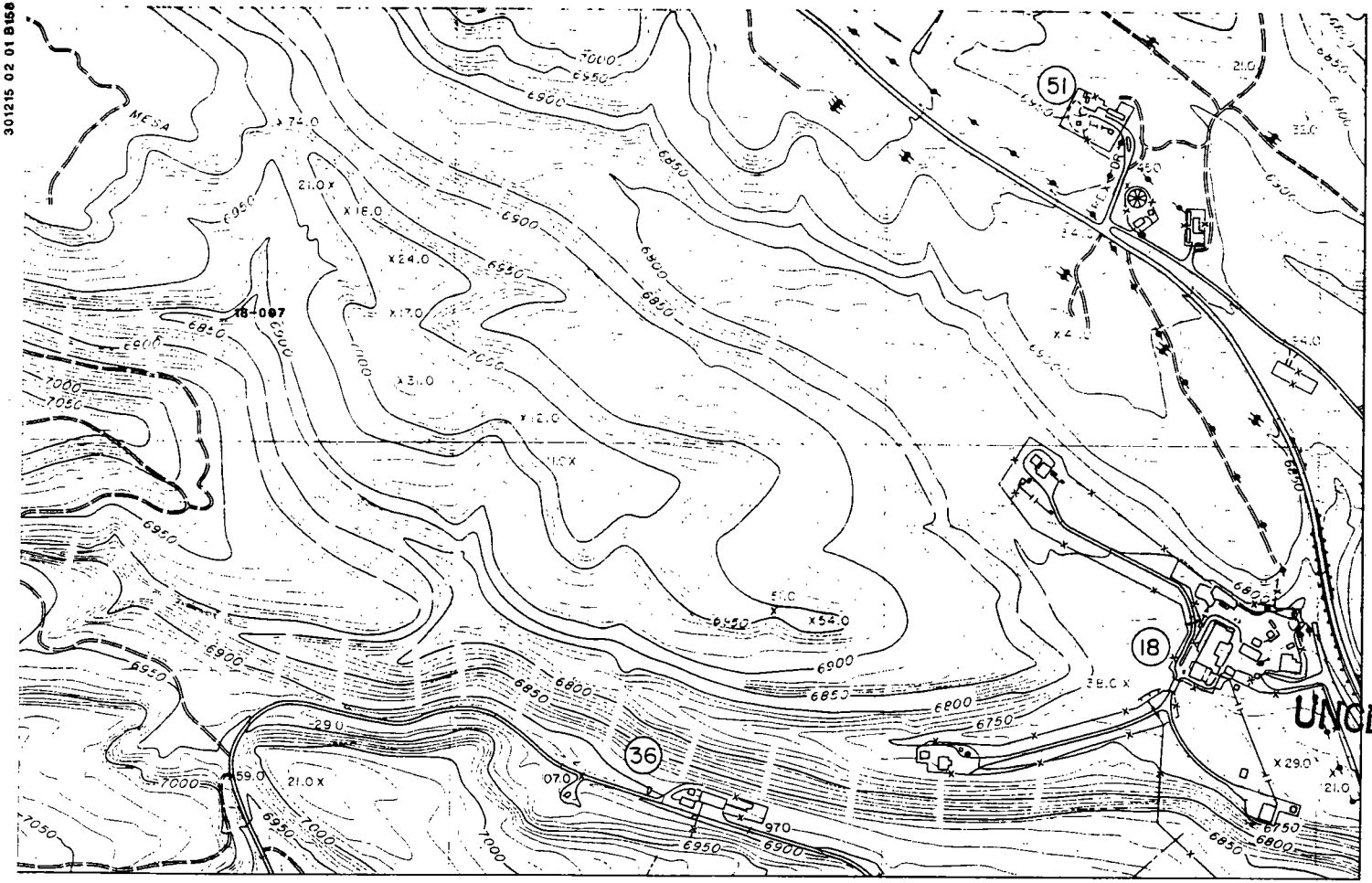


FIGURE 18-5

SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-18



EXPLANATION

18-004 SWMU LOCATION

From Los Alamos Scientific Laboratory Plan/Topo Lab Job No. 5682

NOTES

18-007 EXACT LOCATION UNKNOWN

REV.1 6/20/90

FIGURE 18-6

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-18

TA-19
OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 19 was known as the East Gate Laboratory. The site was used for a variety of experiments, some of which utilized radioactive sources and chemicals. Several buildings were removed in 1956. The remaining structures were transferred to the DOE Los Alamos Area Office (LAAO) in 1962 for Civil Defense purposes. LAAO later authorized the Los Alamos Radio Club to use the site. All buildings at the site have been removed (DOE, 1987a). The former site of TA-19 lies within the current boundaries of TA-72. The eastern end of this former technical area is within Santa Fe County.

The property on which TA-19 was located is about 6,910 feet asl. It is located on the eastern end of East Mesa, east of the Los Alamos Airport. The mesa is bounded on the north by Pueblo Canyon and on the south by a small tributary of Pueblo Canyon. Canyon walls are steep in this area. TA-19 lies on welded Bandelier Tuff. The area is in the Pinon-Juniper overstory vegetation zone. Soils have not been surveyed in this area.

At TA-19, the potentiometric surface of the main aquifer in the Los Alamos area lies between about 5,860 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-19

19-001	SEPTIC SYSTEM
19-002	SURFACE DISPOSAL
19-003	DRAINLINE AND OUTFALL

SUMMARY

LOCATION : TA-19
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1944 - 1962
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SANITARY WASTE

UNIT INFORMATION

This septic tank, TA-19-6, which remains on site, is believed to have served only the guard house. The tank drained to an outfall in Pueblo Canyon.

WASTE INFORMATION

The septic tank is believed to have received only sanitary waste; detailed information, however, is lacking.

RELEASE INFORMATION

There are no known releases of hazardous waste associated with this unit. Analysis of a soil sample from this outfall area indicated no radioactive contamination.

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
19-001	TA19-1-ST-I-HW/RW	19.001	Tsk 45 : 18 19	TA-19-6

SUMMARY

LOCATION : TA-19
TYPE OF UNIT(s) : SURFACE DISPOSAL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : UNKNOWN
HAZARDOUS RELEASE : NONE KNOWN
RADIOACTIVE RELEASE : NONE KNOWN

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

This site is located on the canyon floor at the north end of TA-19. It appears to have received building debris that was pushed over the edge of the mesa. A 1990 field survey noted approximately eight piles of debris scattered in this area.

WASTE INFORMATION

The debris appears to consist of concrete and other rubble generated during decommissioning of TA-19.

RELEASE INFORMATION

There are no known releases associated with this unit.

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
19-002	TA19-2-CA-I-HW		Tsk 45 : 20	NORTH OF TA-19-1

SUMMARY

LOCATION : TA-19
TYPE OF UNIT(s) : OUTFALL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1944 - 1962
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED RADIOACTIVE WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

A 1947 technical management group report indicated that a sewer line from the laboratory building, TA-19-1, discharged to an outfall in Pueblo Canyon.

WASTE INFORMATION

The sewer line and outfall probably managed sanitary waste. However, since radioactive and hazardous materials were in use at this laboratory, they could have been discharged to the outfall.

RELEASE INFORMATION

Soil samples collected from the outfall had no radioactive contamination. It is unknown whether releases of hazardous materials 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
19-003	**		Tsk 45 : 17	TA-19-1

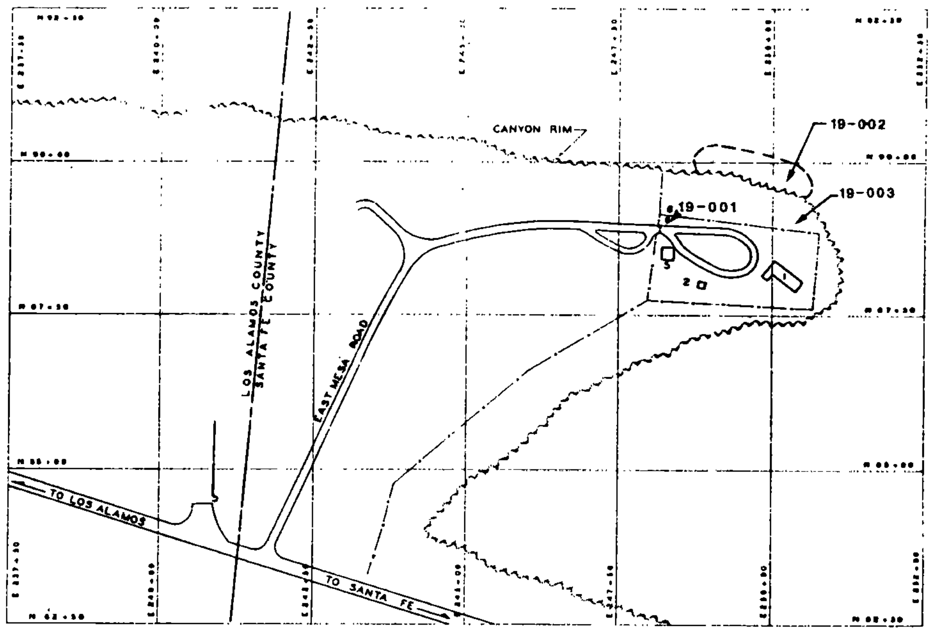
** No corresponding E. R. Program unit.

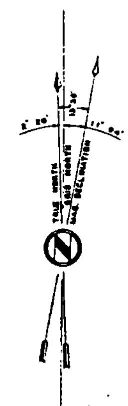
TA-19 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
19-001	19-1
19-002	19-1
19-003	19-1

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

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-19-1	EGL-1	LABORATORY BLDG
TA-19-2	EGL-2	BATTERY BLDG
TA-19-3	EGL-3	GUARD BLDG (REMOVED)
TA-19-4	EGL-4	LATRINE (REMOVED)
TA-19-5	EGL-5	RETREAT BLDG
TA-19-6	EGL-6	SEPTIC TANK (SANITARY)





UNCLASSIFIED

REV. 1 4/27/90

EXPLANATION

19-001 SWMU LOCATION

FIGURE 19-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-19

8		REVISED TO STATUS OF 7-1-57
7		REDRAWN TO STATUS OF JULY 1, 1955
NO.	DATE	REVISIONS

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

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

STRUCTURE LOCATION PLAN
TA-19 EAST GATE LABORATORY

DRAWN: N. BYERS
SCALE: 1" = 100'
DATE: 10/3/55
SHEET 1 OF 1
ENG- R 137

TA-20
OPERATIONS AND ENVIRONMENTAL SETTING

Former Technical Area (TA) 20, situated in Sandia Canyon, was abandoned in the late 1940's so that East Jemez Road could be built. The remaining buildings in the area are used a firing range for Laboratory security forces. The area had been used to test initiators, devices used to add neutrons to nuclear explosions. High explosives, metals, possibly short-lived radioactive materials, and uranium were used at the site. Some disposal pits associated with TA-20 may be present in the canyon (DOE, 1987a). The former site of TA-20 lies within the current boundaries of TA-72 and TA-53.

The former site of TA-20 lies at an elevation ranging from 6,600 to 6,850 feet asl. The potentiometric surface of the main aquifer in the Los Alamos region lies at about 5,840 to 5,900 feet asl. The streamed at the bottom of the canyon is underlain by a layer of alluvium, ranging in thickness from thin to about 36 feet. This layer is underlain by Bandelier Tuff. The technical area is located in the Ponderosa Pine/Pinon-Juniper overstory vegetative zone. The soil consists of Totavi gravelly loamy sand and rock outcrop (Nyhan et al., 1978).

Sandia Canyon receives cooling tower discharges from the TA-3 power plant and some treated sanitary effluents from TA-3 facilities. Treated effluents from a sanitary treatment plant form a perennial stream in a short reach of the upper canyon. Only during heavy summer thundershowers in the Sandia Canyon drainage area does stream flow reach the Laboratory's eastern boundary (Environmental Surveillance Group, 1986).

The potentiometric surface of the main aquifer in the Los Alamos region lies at about 5,850 to 5,875 feet asl. Over 700 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-20

20-001	LANDFILLS
20-002	DETONATION PIT AND FIRING AREAS
20-003	GUN FIRING SITES
20-004	SEPTIC SYSTEM
20-005	DECOMMISSIONED SEPTIC SYSTEM

SUMMARY

LOCATION	: TA-20
TYPE OF UNIT(s)	: LANDFILL
UNIT USE	: DISPOSAL
OPERATIONAL STATUS	: INACTIVE
PERIOD OF USE	: 1945
HAZARDOUS RELEASE	: UNKNOWN
RADIOACTIVE RELEASE	: UNKNOWN

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

As many as three landfills may have been created for the disposal of contaminated metal scrap, gun barrels, and other gun pieces. Their exact locations are not known, although the general areas have been identified. Area 1 [20-001(a)] is thought to contain a pit not more than 5 feet deep, whereas Areas 2 and 3 [20-001(b) and (c) respectively] were excavated by a bulldozer in a trench configuration. Preliminary data obtained from a geophysical survey provide no indication of Area 1 but did find anomalies in the suspected areas of 2 and 3. Results from the geophysical survey have not been obtained.

WASTE INFORMATION

Possible waste constituents in these disposal areas include depleted uranium, HE, and beryllium. Polonium (now decayed) and strontium are additional possible contaminants. Any polonium initially present has since decayed.

RELEASE INFORMATION

A 1948 memo stated that three burial grounds at the Sandia Canyon site were excavated and that the ground was checked for radioactivity and was found to be free of radioactivity. As part of the DOE Environmental Survey (Problem 20), samples were collected at one of the suspected landfill locations near the Sandia Canyon truck route. Results indicated above-background radionuclide activity, as well as the presence of beryllium, chromium, and zinc in the soil.

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
20-001(a)	TA20-1-L-I-HW/RW	20.001-20.003		
20-001(b)	TA20-1-L-I-HW/RW	20.001-20.003		
20-001(c)	TA20-1-L-I-HW/RW	20.001-20.003		

SUMMARY

LOCATION	: TA-20	MATERIALS MANAGED	: HAZARDOUS WASTE
TYPE OF UNIT(s)	: FIRING SITE		MIXED WASTE
UNIT USE	: TESTING/DISPOSAL		
OPERATIONAL STATUS	: DECOMMISSIONED		
PERIOD OF USE	: EST. 1944 - 1947		
HAZARDOUS RELEASE	: NONE		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

Structure TA-20-6 was a steel-lined pit 20' x 20' x 20' used for contained shots using 25 lbs or 200 lbs of HE. The pit was removed by 1955, and was possibly buried in Area 3 (see 20-001). Apparently at least a few other shots were done in the open. One of these shots, involving 500 lbs of HE, went low order, scattering the explosives.

WASTE INFORMATION

HE, polonium (now decayed), strontium-90, beryllium, and nickel were used in the initiator development tests. Uranium may also have been used in some of the experiments.

RELEASE INFORMATION

Slightly elevated levels of radioactivity have been measured in the area of TA-20-6. The pieces of HE from a low order shot were removed during several survey sweeps.

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
20-002	TA20-2-CA-I-HW/RW	20.005		TA-20-6

SUMMARY

LOCATION : TA-20
TYPE OF UNIT(s) : FIRING SITE
UNIT USE : TESTING/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : EST. 1944 - 1945
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
MIXED WASTE

UNIT INFORMATION

Testing initiators involved the firing of Navy guns against steel plates along the cliffs. Structures associated with the site (TA-20-2 [20-003(a)], TA-20-13 [20-003(b)], TA-20-16 [20-003(c)], and TA-20-29 [20-003(d)]) were removed by 1955.

WASTE INFORMATION

Components may have included beryllium, nickel, strontium, uranium, tungsten, and HE.

RELEASE INFORMATION

One former LANL employee indicated possible contamination on the sloughed material from the cliffs. A recent survey found levels of radioactivity to be slightly above background at TA-20-29.

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
20-003(a)	TA20-2-CA-I-HW/RW	20.004		TA-20-2
20-003(b)	TA20-2-CA-I-HW/RW			TA-20-13
20-003(c)	TA20-2-CA-I-HW/RW			TA-20-16
20-003(d)	TA20-2-CA-I-HW/RW			TA-20-29

SUMMARY

LOCATION	: TA-20	MATERIALS MANAGED	: SANITARY WASTE
TYPE OF UNIT(s)	: SEPTIC SYSTEM		SUSPECTED HAZARDOUS WASTE
UNIT USE	: TREATMENT/DISPOSAL		
OPERATIONAL STATUS	: ACTIVE		
PERIOD OF USE	: SEE BELOW		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

Tank TA-20-49 is now numbered TA-0-276. It serves up to 30 people for a few hours per day and has a capacity of 540 gallons. Its overflow goes to a 100'-long drainline. Its EID Registration Number is LA-10.

WASTE INFORMATION

The septic tank receives sanitary waste. It may have received chemicals and solvents in the past.

RELEASE INFORMATION

Data on possible hazardous releases are not available.

NOTES

Septic tank TA-20-27 [20-004(a)] has been removed and is now discussed as SWMU No. 20-005. 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
20-004	**			TA-0-276, formerly TA-20-49

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-20
TYPE OF UNIT(s) : SEPTIC SYSEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1944 - 1947
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SOLID WASTE

UNIT INFORMATION

Septic tank TA-20-27 has been removed. There are no structural data available on this tank.

WASTE INFORMATION

The septic tank received sanitary waste. It may have received chemicals and solvents in the past.

RELEASE INFORMATION

Data on possible hazardous releases are not available.

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
20-005	**			TA-20-27

** No corresponding E. R. Program unit.

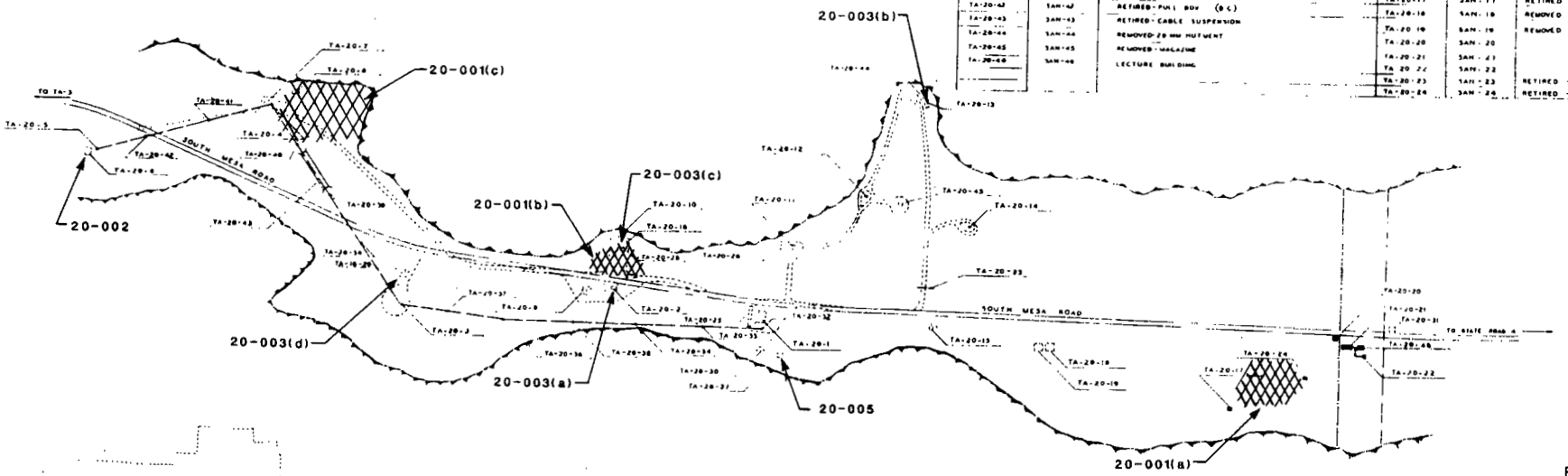
TA-20 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

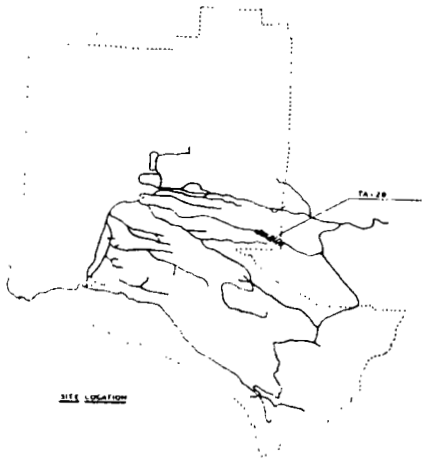
SWMU	FIGURE NUMBER
20-001(a)	
20-001(b)	20-1
20-001(c)	20-1
20-002	20-1
20-003(a)	20-1
20-003(b)	20-1
20-003(c)	20-1
20-003(d)	20-1
20-004	20-2
20-005	20-1

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

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-20-25	SAN 25	REMOVED BARRICADE
TA-20-26	SAN-26	REMOVED BARRICADE
TA-20-27	SAN 27	RETIRED - SEPTIC TANK
TA-20-28	SAN 28	RETIRED - CEMENT MANHOLE
TA-20-29	SAN 29	REMOVED - PLATFORM & TORE
TA-20-30	SAN-30	REMOVED - SUBSTATION (3-10 KVA)
TA-20-31	SAN-31	REMOVED - GUARD HOUSE
TA-20-32	SAN-32	RETIRED - PULL BOX (D C)
TA-20-33	SAN-33	RETIRED - PULL BOX (D C)
TA-20-34	SAN-34	RETIRED - PULL BOX (D C)
TA-20-35	SAN-35	RETIRED - PULL BOX (D C)
TA-20-36	SAN-36	RETIRED - PULL BOX (D C)
TA-20-37	SAN-37	RETIRED - PULL BOX (D C)
TA-20-38	SAN-38	RETIRED - PULL BOX (D C)
TA-20-39	SAN-39	RETIRED - PULL BOX (D C)
TA-20-40	SAN-40	RETIRED - PULL BOX (D C)
TA-20-41	SAN-41	RETIRED - PULL BOX (D C)
TA-20-42	SAN-42	RETIRED - CABLE SUSPENSION
TA-20-43	SAN-43	REMOVED 20 MM HUTMENT
TA-20-44	SAN-44	REMOVED - MAGAZINE
TA-20-45	SAN-45	LECTURE BUILDING
TA-20-46	SAN-46	

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-20-1	SAN 1	REMOVED LABORATORY
TA-20-2	SAN 2	REMOVED CONTROL GUN DIRE
TA-20-3	SAN-3	RETIRED MANHOLE
TA-20-4	SAN 4	RETIRED MANHOLE
TA-20-5	SAN 5	RETIRED MANHOLE
TA-20-6	SAN 6	REMOVED RECOVERY PIT
TA-20-7	SAN-7	REMOVED DUMBO & MOUNT
TA-20-8	SAN 8	REMOVED PLATFORM & HOIST
TA-20-9	SAN-9	REMOVED FOUNDATION, RAMP & BIN
TA-20-10	SAN-10	REMOVED BARRICADE
TA-20-11	SAN-11	REMOVED HOT STORAGE
TA-20-12	SAN-12	RETIRED STORAGE
TA-20-13	SAN-13	REMOVED 20 MM GUN BUILDING
TA-20-14	SAN-14	RETIRED MAGAZINE
TA-20-15	SAN 15	REMOVED WATER TANK
TA-20-16	SAN-16	REMOVED OLD GUN SITE INSTALLATION
TA-20-17	SAN-17	RETIRED CUT-OFF SHACK
TA-20-18	SAN-18	REMOVED STORAGE BUILDING
TA-20-19	SAN-19	REMOVED STORAGE BUILDING
TA-20-20	SAN-20	GUARD HOUSE STATION 104
TA-20-21	SAN-21	PASS OFFICE
TA-20-22	SAN-22	LATRINE
TA-20-23	SAN-23	RETIRED - ROAD BLOCK
TA-20-24	SAN-24	RETIRED - LATRINE





EXPLANATION

20-001 SWMU LOCATION

REV. 1 6/22/90

FIGURE 20-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-20

NORTH (MAGNETIC)

REV	GENERAL REVISION TO STATUS OF AUTHORITY	AUTHORIZED FOR	LOS ALAMOS SCIENTIFIC LABORATORY
0	NOB	HEALTH	DEPARTMENT OF ENGINEERING CONSTRUCTION & MAINTENANCE
1	GENERAL REVISION TO STATUS OF JAN 1991	SAFETY	STRUCTURE LOCATION PLAN
		FIRE PR	TA-20 SANDIA CANYON SITE
		COMM	
		PROC	
		SEC	

SCALE 1" = 200'

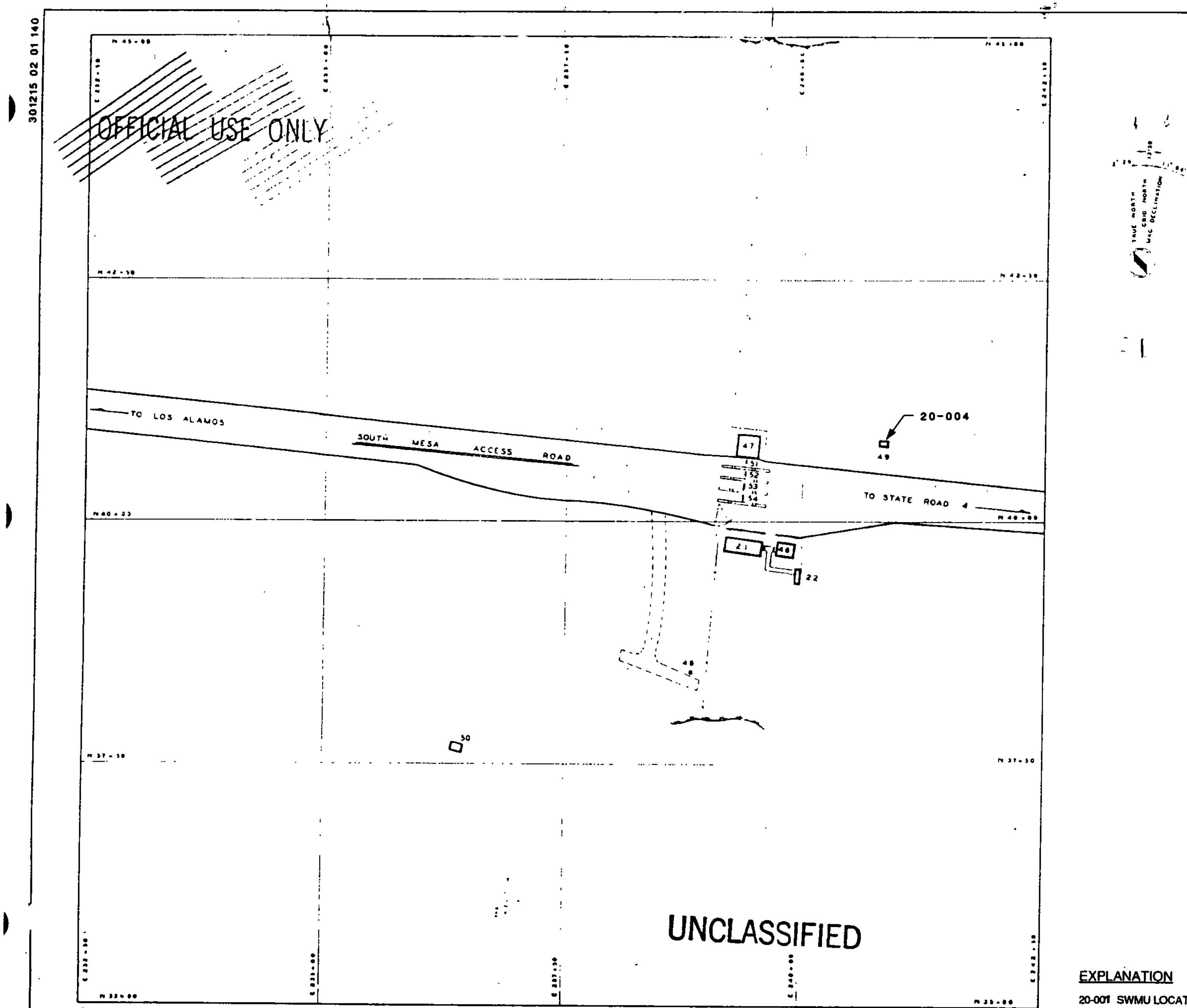
DRAWN BY ROMERO DATE 2-21-90

CHKD BY DATE 2-21-90

APPVD BY DATE

DWG NO

ENG



STRUCTURE NUMBER	DESIGNATIC	REMARKS
TA-20-1	SAN-1	LABORATORY (REM…)
TA-20-2	SAN-2	CONTROL BUILDING (REMOVE…)
TA-20-3	SAN-3	MANHOLE (ABANDONE…)
TA-20-4	SAN-4	MANHOLE (ABAN…)
TA-20-5	SAN-5	MANHOLE (ABAN…)
TA-20-6	SAN-6	RECOVERY PIT (REMOVED)
TA-20-7	SAN-7	DUMBO & MOUNT (REMOVE…)
TA-20-8	SAN-8	PLATFORM & HOIST (REMOVE…)
TA-20-9	SAN-9	FOUNDATION RAMP & BIN (… …ED)
TA-20-10	SAN-10	BARRICADE (REMOVED)
TA-20-11	SAN-11	HOT STORAGE (REMOVED)
TA-20-12	SAN-12	STORAGE (ABANDONE…)
TA-20-13	SAN-13	20 MM GUN BUILDING (REMOVE…)
TA-20-14	SAN-14	MAGAZINE (ABANDONE…)
TA-20-15	SAN-15	WATER TANK (REMOVED)
TA-20-16	SAN-16	OLD GUNSIGHT INSTALLATION (… …VED)
TA-20-17	SAN-17	CUT OFF SHACK (REMOVED)
TA-20-18	SAN-18	STORAGE BUILDING (REMOVED)
TA-20-19	SAN-19	STORAGE BUILDING (REMOVED)
TA-20-20	SAN-20	GUARD HOUSE (REMOVED)
TA-20-21	SAN-21	PASS OFFICE
TA-20-22	SAN-22	LATRINE
TA-20-23	SAN-23	ROAD BLOCK (ABANDONE…)
TA-20-24	SAN-24	LATRINE (REMOVED)
TA-20-25	SAN-25	BARRICADE (REMOVED)
TA-20-26	SAN-26	BARRICADE (REMOVED)
TA-20-27	SAN-27	SEPTIC TANK (ABANDONE…)
TA-20-28	SAN-28	CONDUIT MANHOLE (ABANDONE…)
TA-20-29	SAN-29	PLATFORM & YOKE (REMOVED)
TA-20-30	SAN-30	SUBSTATION (REMOVED)
TA-20-31	SAN-31	GUARD HOUSE (REMOVED)
TA-20-32	SAN-32	PULL BOX DC (ABANDONE…)
TA-20-33	SAN-33	PULL BOX DC (ABANDONE…)
TA-20-34	SAN-34	PULL BOX DC (ABANDONE…)
TA-20-35	SAN-35	PULL BOX DC (ABANDONE…)
TA-20-36	SAN-36	PULL BOX DC (ABANDONE…)
TA-20-37	SAN-37	PULL BOX DC (ABANDONE…)
TA-20-38	SAN-38	PULL BOX DC (ABANDONE…)
TA-20-39	SAN-39	PULL BOX DC (ABANDONE…)
TA-20-40	SAN-40	PULL BOX DC (ABANDONE…)
TA-20-41	SAN-41	PULL BOX DC (ABANDONE…)
TA-20-42	SAN-42	PULL BOX DC (ABANDONE…)
TA-20-43	SAN-43	CABLE SUSPENSION (ABANDON…)
TA-20-44	SAN-44	20 MM HUTMENT (REMOVED)
TA-20-45	SAN-45	MAGAZINE (REMOVED)
TA-20-46	SAN-46	LECTURE BUILDING
TA-20-47	SAN-47	GUARD HOUSE (NEW STATION …)
TA-20-48	SAN-48	WATER TANK (UNDERGROUND)
TA-20-49	SAN-49	SEPTIC TANK
TA-20-50	SAN-50	WATER TANK HOUSE (ABANDONED)
TA-20-51	SAN-51	ROAD BLOCK
TA-20-52	SAN-52	ROAD BLOCK
TA-20-53	SAN-53	ROAD BLOCK
TA-20-54	SAN-54	ROAD BLOCK

REV. 1 6/22/90

FIGURE 20-2

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-20

EXPLANATION

20-001 SWMU LOCATION

REDRAWN TO STATUS OF JULY 1, 1955

REVISIONS

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

STRUCTURE LOCATION PLAN
TA-20 SANDIA CANYON SITE

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

DRAWN: N. BYERS — DATE: 9/14/55 — SCALE: 1" = 50' — SHEET 1 OF 1 — ENG- R 138

TA-21

OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 21 is a complex facility incorporating many varied activities in separate buildings. These activities include (DOE, 1987a):

- Plumbing and electrical repair
- Preparation of cold salts for plutonium metal production
- Electronic equipment repair
- Geophysical research
- Labeled compounds preparation for biological/health research and biological studies
- Radioactive waste treatment
- Waste capacitors, transformers, and oils storage
- Tritium handling, storage, and usage research
- Basic research
- TRU chemistry
- Storage

Several laboratory material disposal areas exist at TA-21. The area is not slated for development because of the problems associated with its location. Several structures are currently being decontaminated and destroyed.

TA-21 lies at elevations between 6,680 and 7,220 feet asl. It is located on the eastern end of South Mesa, which is bifurcated by DP Canyon, a branch canyon of Los Alamos Canyon, separating TA-21 from the Los Alamos Airport to the north. The mesa is bounded on the south by Los Alamos Canyon. Canyon walls are steep or cliffs in this area. TA-21 lies on welded Bandelier Tuff in the Ponderosa Pine/Pinon-Juniper and Pinon-Juniper overstory vegetative zones. Soil is comprised of Hackroy sandy loam, Totavi gravelly loam sand, and rock outcrop (Nyhan et al., 1978).

At TA-21, the potentiometric surface of the main aquifer in the Los Alamos are lies at about 5,870 to 5,990 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; Purtymun, 1974).

LIST OF SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-21

21-001	RADIOACTIVE WASTE CONTAINER STORAGE AREA
21-002	INACTIVE CONTAINER STORAGE AREAS
21-003	PCB STORAGE AREA
21-004	ABOVEGROUND TANKS AND DRAINLINES
21-005	ACID PIT
21-006	UNDERGROUND SEEPAGE PITS
21-007	SALAMANDERS
21-008	INCINERATOR
21-009	WASTE TREATMENT LABORATORY
21-010	INDUSTRIAL LIQUID WASTE TREATMENT FACILITY
21-011	NEW INDUSTRIAL WASTE TREATMENT PLANT
21-012	DRY WELLS
21-013	SURFACE DISPOSAL
21-014	MATERIAL DISPOSAL AREA A
21-015	MATERIAL DISPOSAL AREA B
21-016	MATERIAL DISPOSAL AREA T
21-017	MATERIAL DISPOSAL AREA U
21-018	MATERIAL DISPOSAL AREA V
21-019	FILTER HOUSES/EXHAUST STACKS SOIL CONTAMINATION
21-020	DECOMMISSIONED FILTER HOUSES
21-021	STACK EMISSIONS
21-022	ACID WASTE LINES AND SUMPS
21-023	DECOMMISSIONED SEPTIC SYSTEMS
21-024	INACTIVE SEPTIC SYSTEMS / OUTFALLS
21-025	OFF-GAS SYSTEM
21-026	WASTEWATER TREATMENT PLANT AND OUTFALL
21-027	SURFACE DISCHARGE
21-028	ACTIVE CONTAINER STORAGE AREAS
21-029	DP TANK FARM

SUMMARY

LOCATION	: TA-21	MATERIALS MANAGED	: RADIOACTIVE WASTE
TYPE OF UNIT(s)	: CONTAINER STORAGE AREA		SUSPECTED HAZARDOUS WASTE
UNIT USE	: STORAGE		
OPERATIONAL STATUS	: ACTIVE		
PERIOD OF USE	: 1950s - PRESENT		
HAZARDOUS RELEASE	: NONE		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

This unit is described in the RFA as a drum storage area used to hold sludge from the TA-21 industrial wastewater treatment plant. There was a tarp covering the drums during the VSI. These drums are stored here prior to transfer to TA-54. A November 1988 field survey found 57 drums southwest of TA-21-257. The drums southwest of Building 257 are empty.

WASTE INFORMATION

The waste consists of radioactive sludges. LANL staff with knowledge of the area believe that hazardous constituents may be present.

RELEASE INFORMATION

No known releases of hazardous wastes from this unit have 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
21-001	**	21.018		SOUTHWEST OF TA-21-257

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : ? - 1988
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

These container storage areas were observed during the VSI and by CEARP. Abandoned drums [21-002(a)] were identified during the VSI. There were several old 55-gallon drums of undefined purpose lying on their sides on the ground inside a fenced area. The drums are believed to be empty. The CEARP notes that additional drums and gas cylinders are stored in several locations throughout TA-21, some of which are leaking. One of these was noted in the CEARP: it was a barrel storage area located southeast of TA-21-38; it was removed in 1966 [21-002(b)]. A recent field survey found that most of the drums have been removed. Based on the LANL container storage area database, these areas are no longer active.

WASTE INFORMATION

The removed containers were sampled and then disposed of or stored at another area.

RELEASE INFORMATION

Some of the drums were observed to be leaking in the past.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-002(a)	TA21-13-CA-A-HW	21.020 21.021 21.029		TA-21
21-002(b)	TA21-1-CA-I/A-RW/HW		Tsk 10 : 174	SOUTHEAST OF TA-21-31

SUMMARY

LOCATION	: TA-21	MATERIALS MANAGED	: SUSPECTED HAZARDOUS WASTE
TYPE OF UNIT(s)	: CONTAINER STORAGE AREA		SOLID WASTE
UNIT USE	: STORAGE		PCBs
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: 1981 - PRESENT		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: SUSPECTED		

UNIT INFORMATION

This unit consists of drum storage at Building 61 and at a nearby bermed asphalt pad. Up to 20 boxes of capacitors, 5 drain-type transformers and 30 drums of PCB-contaminated oil may be held here. Bulk storage consists of (1) 4000 gallon tank and (1) 2000 gallon tank that contain >50 ppb PCBs. The oil from the bulk storage and capacitors is shipped to Enseco in Eldorado, AK for incineration and the transformer oil is shipped to GNL Recovery (Unison) in Ashtabula, Ohio. The PCB storage was moved to TA-54, Area L in August, 1989.

WASTE INFORMATION

The waste consists of oil containing PCBs.

RELEASE INFORMATION

Soil around the storage pad is stained and has a sheen.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-003	TA21-14-CA-A-HW	21.016		TA-21-61

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : ABOVEGROUND TANK
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

Aboveground tank TA-21-335 [21-004(a)] is a 6,000-gallon tank designed to receive any liquids discharged from TA-21-21 in the event of an emergency release, i.e. if the fire sprinklers in the building are used. To date, no liquid has been discharged to this tank. The tank is 8' in diameter and 16' long. It was installed in 1974. In addition to this tank, there are two tanks [21-004(b) and (c)] located in a bermed area north of structures TA-21-223 and TA-21-213. These tanks receive liquid from TA-21-223 if the pump is inoperative or there is s similar problem. These tanks were installed in the 1970s. Prior to the installation of these tanks, sump/pump TA-21-223 discharged, if necessary, into DP Canyon via a 61' long, 6"-diameter drain line [21-004(d)]. They are surrounded by an asphalt berm.

WASTE INFORMATION

Currently, no waste has been discharged to Tank TA-21-335. When the tank is used, the waste may contain radionuclides. The waste discharged to the tanks from TA-21-223 is industrial waste from DP East. It may contain tritium. Chemical contaminants to these tanks have not been documented.

RELEASE INFORMATION

There has been no release of any kind from any of these tanks.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-004(a)	TA21-5-S-I-HW/RW		Tsk 9 : 27	TA-21-335
21-004(b)	TA21-5-S-I-HW/RW	? 21.022	Tsk 9 : 114	NORTH OF TA-21-223, -213
21-004(c)	TA21-5-S-I-HW/RW	? 21.022	Tsk 9 : 114	NORTH OF TA-21-223, -213
21-004(d)	TA21-5-S-I-HW/RW		Tsk 10 : 134 Tsk 9 : 81	TA-21-223

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : PIT
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1946 - 1967
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

Structure TA-21-70, an acid pit, was used to dispose of classified correspondence by digesting the paper in concentrated acid. The pit was southeast of existing Building TA-21-30 shown on a 1957 engineering drawing. It was built of reinforced concrete and was 3' x 3' x 4' deep with a sheet-iron cover. The pit and contents were removed in 1967 and taken to the contaminated waste disposal site at TA-54. This area is currently occupied by the west end of trailer TA-21-363.

WASTE INFORMATION

The waste disposed of in this unit consisted of paper dissolved in acid.

RELEASE INFORMATION

There are no known releases.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-005	TA21-5-S-I-HW/RW		Tsk 9 : 21	TA-21-70

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : PIT
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1940s - 1950s
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

The following seepage pits were used in TA-21. 1) An underground seepage pit for liquid disposal between TA-21-2 and -3 [21-006(a)] received liquids from the Hanford container washing operations. The LANL "Radioactive Waste Management Site Plan" of 1978 indicates that estimated radioactivity was high and plutonium is the principal radionuclide. 2) A seepage pit [21-006(b)] on the south side of the complex, possibly TA-21-118, discharged to Los Alamos Canyon. TA-21-118 was built in 1945 and was constructed of brick. It was 13' x 4' x 6' deep with a wood cover. A 200-ft long, 3"-diameter jennite-coated cast iron ether waste line connected building TA-21-2 to pit TA-21-118 and discharged to an outfall on the north rim of Los Alamos Canyon. 3) A third pit [21-006(c)], was believed to have been located 15 feet outside the door of room 322 of Building 3. It was reported that the pit received plutonium, ethylene glycol, and "phosphourous acid". 4) A stone pit [21-006(d)], possibly near TA-21-272, was reported to be contaminated. It is possible that pits 21-006(a), (c), and (d) are all the same pit based on reported locations in the same area. 5) A seepage pit [21-006(e)] was located south of Building 4. 6) A seepage pit [21-006(f)] adjacent to room 413 of Building TA-21-4 received fluorine waste contaminated with plutonium. This pit has been paved over.

WASTE INFORMATION

Wastewater discharged to the pits contained plutonium and is suspected to have contained solvents, hydrofluoric acid and nitric acid with specific chemicals and concentrations probably varying in the different pits. Waste discharged to the stone pit probably contained radionuclides. The waste discharged to the seepage pit south of Building 4 is unknown. The waste discharged to the gravel pit adjacent room 413 was reported to have received up to 4000 l/day of fluorine waste which had 0.18 microgram/l plutonium.

RELEASE INFORMATION

It is unknown whether release of hazardous wastes have occurred from the pit between TA-21-2 and -3. Although there is no documentation that hazardous constituents have been released from this pit, LANL staff with knowledge of these facilities believe that hazardous constituents could have been released. There are reports of discharges from at least some of the pits to the north side of Los Alamos Canyon and the south side of DP Canyon.

NOTES

The gravel seepage pit north of DP West Complex, formerly SWMU No. 21-006(b), is interpreted to be MDA-T (21-016); the description of the pit was therefore deleted and the remaining SWMU Numbers were renumbered accordingly.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-006(a)	TA21-2-SI-1-HW/RW	? 21.019	Tsk 9 : 15	TA-21-3, -2
21-006(b)	TA21-2-SI-1-HW/RW	? 21.019	Tsk 9 : 59 38 Tsk 10 : 141	TA-21-118, -2
	(see Notes)			
21-006(c)	TA21-2-SI-1-HW/RW	? 21.019	Tsk 9 : 15	TA-21-3
21-006(d)	TA21-2-SI-1-HW/RW	? 21.019	Tsk 9 : 37	TA-21-272
21-006(e)	TA21-2-SI-1-HW/RW	? 21.019	Tsk 9 : 16	TA-21-4
21-006(f)	TA21-2-SI-1-HW/RW	? 21.019	Tsk 9 : 19	TA-21-4

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : INCINERATOR
UNIT USE : TREATMENT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1960s - 1970s
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

In the 1960s and 1970s, several incinerators called salamanders located at DP West were used to burn various types of oils contaminated with radionuclides. The salamanders were associated with the radioactive waste treatment facility. According to LANL staff, the units were long trays used for open burning of waste. These incinerators have been removed.

WASTE INFORMATION

The incinerated waste consisted of oils contaminated with radionuclides.

RELEASE INFORMATION

Oil spills from the salamanders are known to have occurred.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-007	TA21-4-IN-I-HW/RW		Tsk 10 : 175	NEAR TA-21-35

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : INCINERATOR
UNIT USE : TREATMENT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : ? - 1977
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : MIXED WASTE

UNIT INFORMATION

The plutonium facility at DP West, TA-21-2, operated a small incinerator to recover certain elements. During operation the ash was leached for recovery. Spent solutions went to the liquid waste treatment facility. Off-gases were treated for radionuclide removal before they were released to the environment. The incinerator was removed during the building decommissioning.

WASTE INFORMATION

The waste was mixed radioactive and hazardous materials.

RELEASE INFORMATION

A small amount of radioactivity and oxides of nitrogen were released as off-gases and particulates from the stack.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-008	TA21-4-IN-1-HW/RW	21.044	Tsk 10 : 175	

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : WASTE TREATMENT PLANT
UNIT USE : TREATMENT/TESTING
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1948 - 1965
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : MIXED WASTE

UNIT INFORMATION

The old waste treatment lab, TA-21-33, was a wood frame building, 16' x 48' x 12' high ceiling. It was found to be free of contamination except for two pipes under the building. An engineering document shows that the building was removed by controlled burning, and the remains were taken for burial in 1965 to MDA-G but does not indicate whether the pipes were removed.

WASTE INFORMATION

The only known residual waste is associated with the pipes which may remain. The waste has not been characterized in detail.

RELEASE INFORMATION

It is unknown whether hazardous wastes have been discharged through the pipes.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-009	TA21-1-CA-I/A-RW/HW		Tsk 10 : 156	TA-21-33

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : WASTE TREATMENT PLANT
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1952 - 1967
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
MIXED WASTE

UNIT INFORMATION

The liquid waste treatment facility, TA-21-35, and its associated tanks, piping, etc. [21-010(a)] began operation in 1952. A new facility was put in operation in 1967. A 1,445-ft long, 3"-diameter drainline connected the treatment plant to a sump/pump at TA-21-223. The TA-21-223 sump/pump pumped waste from buildings TA-21-152, -155, and -209 in DP-East to the treatment plant in DP-West. Buildings TA-21-152, -155, and -209 were connected to the sump/pump (TA-21-223) via a 6"-diameter drainline. The old plant was found to have loose alpha contamination and its waste storage tanks and waste processing tank were highly contaminated. The old building, tanks and piping were removed. This included TA-21-93, -145, -147, -185, -192, -255, and -271 [21-010(b), (c), (d), (e), (f), (g), and (h), respectively]. TA-21-93 and -271 were manholes on the southwest corner of building TA-21-35. No evidence of these sites was seen during an ER Program site visit on 3/13/89. TA-21-145 and -147 were 500 gallon steel tanks installed in 1959; TA-21-185 was a 390 gallon septic tank that was installed in 1956. A sewage disposal field was associated with this septic tank, according to engineering drawing ENG-C18171; the tank and field were connected by a 2"-diameter drainline. No evidence of this sewage disposal field was observed during the ER Program site visit on 3/13/89. TA-21-192 was a grit chamber, 8' x 3' x 7', constructed of reinforced concrete with an insulated built-up cover. All material and tanks removed from the decommissioning of the old facility were hauled to the radioactive disposal site at MDA-G. The raw waste storage tanks and cement silo were moved to the new plant, DP-257, and incorporated into its operation. The old facility had a raw holding tank which was connected to a series of acid waste lines and a septic tank. The treatment plant, TA-21-35, had an outfall to the east rim of DP canyon.

WASTE INFORMATION

The facility treated liquid radioactive wastes generated at DP-West. The waste contained fluorine, iodine, cadmium, beryllium, lead, mercury, sodium, nitrates, chlorine, in addition to radionuclides. The liquid probably contained solvents and other organics from the various laboratory operations including solvent extraction.

RELEASE INFORMATION

Most equipment and the building have been removed, although the tanks and silos are in use at the new facility. The area had spills and leaks associated with it and radioactivity in the downhill area below the facility is reported to be above background. LANL staff believe that chemical and radioactive contamination below the tanks is likely. There is no report of soil removal below these tanks. The outfall was into the canyon to the north of the site. This canyon outfall and the downstream areas contain residual radionuclides and chemicals discharged during operation.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-010(a)	TA21-1-CA-I/A-RW/HW		Tsk 10 : 168 Tsk 9 : 80 95 100	TA-21-35
21-010(b)	TA21-1-CA-I/A-RW/HW		Tsk 9 : 33	TA-21-93
21-010(c)	TA21-1-CA-I/A-RW/HW		Tsk 9 : 109	TA-21-145
21-010(d)	TA21-1-CA-I/A-RW/HW		Tsk 9 : 110	TA-21-147
21-010(e)	TA21-1-CA-I/A-RW/HW		Tsk 9 : 48 35 111	TA-21-185
21-010(f)	TA21-1-CA-I/A-RW/HW		Tsk 9 : 30	TA-21-192
21-010(g)	TA21-1-CA-I/A-RW/HW		Tsk 9 : 112	TA-21-255
21-010(h)	TA21-1-CA-I/A-RW/HW		Tsk 9 : 34	TA-21-271

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : WASTE TREATMENT PLANT
UNIT USE : TREATMENT
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1967 - PRESENT
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : MIXED WASTE

UNIT INFORMATION

After the waste treatment plant at TA-21-35 was closed in 1967, a new waste treatment facility began operation at TA-21-257 [21-011(a)]. Waste lines link DP East with DP West, which ties to the new waste treatment facility. Sump TA-21-223 [21-011(b)], built in 1965, serves as the pump house for transporting DP East waste to the treatment plant. A 3"-diameter drainline connects sump/pump TA-21-223 with the TA-21-257 treatment facility. Before TA-21-257 was built, this same line connected the TA-21-223 sump/pump with the old treatment facility (TA-21-35, 21-010). The sump/pump is connected to buildings TA-21-152, -155, and -209 via a 6"-diameter drainline. The plant includes a clarifier, a flocculator tank, four vertical storage tanks, a pumping station, several sumps that are part of MDA-T, tank TA-21-120 [21-011(c)], several aboveground acid tanks TA-21-110, -111, -112, -113, -256, -288, -289 [21-011(d), (e), (f), (g), (h), (i), and (j), respectively], and several chemical holding tanks. Raw waste storage tanks and a cement silo were moved from the old waste treatment plant (see 21-009). Tanks TA-21-110, -111, -112, and -113 were acid holding tanks that were installed in 1952 at old waste treatment plant and moved to TA-21-257 in 1967. Tank TA-21-120 had a 4000 gallon capacity. Tanks TA-21-288 (1000 gallon) and -289 (1600 gallon) were installed in 1968. Drainlines that connect buildings TA-21-2 and -3 to the TA-21-257 treatment plant are 1.5"-diameter stainless steel pipe. The drainline from building TA-21-3 was previously split and also discharged to acid tank TA-21-256, until the tank was relocated in 1967-1968. Presently the liquids are piped to TA-50 for release; however, an outfall from the plant can discharge to the canyon. The outfall is under a NPDES permit and is designated 050.

WASTE INFORMATION

The treatment plant handles radioactive-mixed waste.

RELEASE INFORMATION

Before TA-50 began operating, an outfall into the canyon north of the site discharged the liquids from the plant. The receiving canyon contains a radionuclide and chemical inventory from this practice. Sump TA-21-223 may have discharged to the canyon on occasion through a drain pipe before the holding tanks were installed.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-011(a)	TA21-10-UST-A/I-RW/HW		Tsk 9 : 95 96 97	TA-21-257
21-011(b)	TA21-5-S-I-HW/RW		Tsk 9 : 31	TA-21-223
21-011(c)	**	21.006 21.009 21.012		TA-21-120
21-011(d)	**		Tsk 9 : 116	TA-21-110
21-011(e)	**		Tsk 9 : 116	TA-21-111
21-011(f)	**		Tsk 9 : 116	TA-21-112
21-011(g)	**		Tsk 9 : 116	TA-21-113
21-011(h)	**		Tsk 9 : 97	TA-21-256
21-011(i)	**		Tsk 9 : 116	TA-21-288
21-011(j)	**		Tsk 9 : 116	TA-21-289

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : WELL
UNIT USE : DISPOSAL
OPERATIONAL STATUS : UNKNOWN
PERIOD OF USE : ?
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : UNKNOWN

UNIT INFORMATION

There is a dry well inside the steam plant (TA-21-357) that receives liquids from the steam plant [21-012(a)]. There was another dry well associated with the old steam plant, TA-21-9 [21-012(b)]. Prior to the construction of this dry well, the blow down was discharged to the surface via a 6"-diameter steel drainline.

WASTE INFORMATION

The liquid from the plants could have contained chromium; further data characterizing the waste is not available.

RELEASE INFORMATION

There is no information currently available regarding releases from this unit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-012(a)	**			TA-21-357
21-012(b)	**		Tsk 9 : 32 78	TA-21-9

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-21	MATERIALS MANAGED	: SANITARY WASTE
TYPE OF UNIT(s)	: SURFACE DISPOSAL		UNKNOWN
UNIT USE	: DISPOSAL		SOLID WASTE
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: ?		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

There is a small surface disposal area [21-013(a)] possibly consisting of sand from the drying beds, TA-21-230, of the sanitary waste treatment plant. This area is located near the north rim of the mesa near the plant, along the southern edge of DP Canyon. Normally the sludge from the plant is taken to the contaminated disposal facility at TA-54. A second disposal area [21-013(b)] was noted in Los Alamos Canyon near MDA-V during the CEARP field reconnaissance. The area contained building debris. A third possible disposal area [21-013(c)] is northeast of TA-21-209, just south of the road to the sanitary treatment plant. During an ER Program site visit on 12/14/88, this surface disposal was located approximately 122 ft from LASL Marker KI 1968 and 85 ft from the DP East fence where it makes right angles east of MDA-U. Another possible disposal area [21-013(d)] is the disturbed area north of TA-21-20 and DP road, referred to as the "cold dump." Geophysical surveys and the ER Program site visit noted that the area has been scraped and that the cold dump may have been removed. A fifth possible disposal area [21-013(e)] northwest of the "cold dump" may have been used for construction refuse. Construction debris, soil piles, and drain pipes were observed during the ER Program site visit on 12/14/88. This site is 308 ft east of fence adjacent to the Lobo Lift building and 175 ft north of the fence along DP Road. A sixth possible disposal area [21-013(f)] was identified on a 1949 aerial photo (photo 12244) as a series of mounds. Another aerial photo (15927), taken in 1950, shows the mounds had been removed and replaced by TA-21-61. No information is available on the contents of the mounds, or whether they were waste material. No physical evidence of this disposal area was found during an E.R. Program site visit on 12/14/88. Two drainlines were observed during an E.R. Program site visit, located immediately south of MDA-V [21-013(g)]. These drainlines appeared to have been disposed of and are not associated with drainage from MDA-V. These drainlines may have been left in this location when the old acid waste line was replaced.

WASTE INFORMATION

The waste in the area at the north canyon edge probably consists of sand from the drying beds at the sanitary waste treatment plant. Further information characterizing the waste is not available. The surface disposal area in Los Alamos Canyon contained asphalt, concrete pipe, reinforcing rods, booties, and a tank. The area by TA-21-209 is disturbed and appears to contain building debris. It is unknown if there is subsurface burial here. Waste contents of the "cold dump" are unknown; however, analytical results suggest that 1,1,1-Trichloroethane may have been present in the waste. The disposal area northwest of the "cold dump" appears to contain construction debris. Contents of the mounds in the 1949 aerial photo are unknown.

RELEASE INFORMATION

There is no information available indicating the release of hazardous waste from most of these surface disposal areas. The "cold dump" was identified by the DOE Environmental Survey as Problem 22. Soil gas sampling in this location detected an estimated 0.5 to 1.0 mg/cubic meter of 1,1,1-Trichloroethane in the 1.7- to 4-ft depth interval.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-013(a)	TA21-12-OL-I-RW/HW	? 21.024	Tsk 8 : 14	TA-21-230
21-013(b)	TA21-12-OL-I-RW/HW	? 21.024	Tsk 8 : 13	NEAR MDA-V
21-013(c)	TA21-11-L-I-RW/HW/SW	? 21.024	Tsk 8 : 7	NORTHEAST OF TA-21-209
21-013(d)	**	? 21.024	Tsk 8 : 8	NORTH OF TA-21-20 AND DP ROAD
21-013(e)	**	? 21.024	Tsk 8 : 11	NORTHWEST OF TA-21-20 AND DP ROAD
21-013(f)	**	? 21.024	Tsk 8 : 12	SITE OF TA-21-61
21-013(g)	**	? 21.024	Tsk 9 : 107 108	SOUTH OF MDA-V

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

SUMMARY

LOCATION	: TA-21	MATERIALS MANAGED	: SUSPECTED HAZARDOUS WASTE
TYPE OF UNIT(s)	: LANDFILL		RADIOACTIVE WASTE
UNIT USE	: STORAGE/DISPOSAL		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: 1944-1947, 1969-1978		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

MDA-A is about 1.25 acres in size and consists of 5 pits and 2 underground storage tanks (50,000 gallons each) known as the "General's Tanks" (TA-21-107 and -108). The tanks were each 12' in diameter and 62'10" long. The tanks were connected to the treatment plant, TA-21-257 (see SWMU 21-011), via a mild steel drainline. Waste solutions containing plutonium and americium were stored in these tanks with the hope that some day chemical recovery processes would improve so that the plutonium in them could be recovered. Liquids (48,877 gallons) in the tanks were removed for processing in 1983. The tanks contained a few inches of semisolid precipitate in 1986. There is some evidence that rainwater has been leaking into the tanks since recovery operations. Site stabilization was done in FY1985 and included sealing and covering openings in the tanks to prevent further water entry, removing surface contamination, adding cover material and recontouring and reseeding the area. The reseeding operation was largely unsuccessful. The four small disposal pits (125' x 18' x 12') are believed to contain solid waste contaminated with polonium (now decayed away), trace amounts of beta-gamma activity, and probably some trace amounts of long-lived alpha-emitters (probably plutonium). These pits were used between 1944 and 1947. However, geophysical surveys indicate only 2 of these pits were actually present. A larger pit (172' x 134' x 22'), constructed in 1969, contains building debris from the decommissioning of several facilities at TA-21. The pit was covered in May 1978. Additionally, hundreds of drums of radioactive iodide waste were stored on the surface at MDA-A; some of the drums leaked. The drums were taken to TA-45 in 1960. Residual radioactive iodide would have decayed by now. The site shares a common watershed and is on the same mesa as MDA-T and MDA-U.

WASTE INFORMATION

The waste is described as radioactive waste solutions containing plutonium, americium, and polonium. LANL staff indicate that the waste may also have included solvents and other chemicals.

RELEASE INFORMATION

No releases of hazardous wastes are known to have occured from this landfill. The drainlines from TA-21-257 to the General's Tanks were never used and are assumed to have been abandoned in-place. Radiation sampling in 1974 in the are around the General's Tanks resulted in gross-alpha and gross-beta measurements that were indistinguishable from background samples. The site undergoes routine radiological monitoring under IWMP.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-014	TA21-11-L-I-RW/HW/SW	21.017	Tsk 8 : 3 Tsk 9 : 103	MDA-A, TA-21-107, -108

SUMMARY

LOCATION	: TA-21	MATERIALS MANAGED	: MIXED WASTE
TYPE OF UNIT(s)	: LANDFILL		RADIOACTIVE WASTE
UNIT USE	: DISPOSAL		HAZARDOUS WASTE
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: 1945 - 1948		
HAZARDOUS RELEASE	: UNKNOWN		
RADIOACTIVE RELEASE	: UNKNOWN		

UNIT INFORMATION

MDA-B is approximately 6 acres and is an inactive landfill located south of DP Road near TA-21. It is not clearly documented whether the unit consists of several pits or one large pit covered and expanded as necessary. Chemical wastes were buried in slit trenches 3' to 4' deep, 2' wide and <40' long along the eastern edge of the unit. A section of the western portion has been paved and the surface has been leased to Los Alamos County, which in turn rents parking places to store trailers, old cars, etc. Erosion on the south perimeter is a continuing problem. The surface of the eastern part was extensively renovated in 1982 and replanted in 1984. All vegetation was removed and it was divided into two areas for treatment. The control was adding (from the top) a 6" layer of top soil followed by 30" of crushed tuff with 6" of top soil below the tuff. Grass plugs (sand dropseed) and rabbit brush were then planted. The other treatment, starting from the top, was to spread 6" of topsoil, 18" of crushed tuff and 2' of cobble (for a biobarrier) and 6" top soil on the bottom. Grass plugs and rabbit brush were also planted in the area. The effectiveness of this new trench cap is being studied by the LANL Environmental Science Group (HSE-12).

WASTE INFORMATION

The wastes consist primarily of solids with various radioactive contaminants such as plutonium, polonium (now decayed away), uranium, americium, curium and actinium. At least one truck contaminated with fission products from the Trinity test is buried in the pit. The slit trenches contain old bottles of organics, perchlorates, ethers, solvents, etc. Lecture bottles of mixtures, spent chemicals, old chemicals and corrosive gases may be in the slit trenches.

RELEASE INFORMATION

A study of the area in 1966 by the U.S.G.S. indicated possible lateral movement of water--probably from the pit(s). The amount of water moving through the tuff was well below the effective porosity of the tuff. Radiochemical analysis of the soil and tuff from 13 test holes around the perimeter showed no indication of radioactive contamination. Investigations of the eastern end of the site in the late 1970's showed plant root penetration of the waste and animal intrusion. The area is being monitored for radioactive transport under the IWMP.

NOTES

The possible trenches south of MDA-B are being addressed under townsite tasks.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-015	TA21-11-L-I-RW/HW/SW	21.001	Tsk 8 : 4	MDA-B

SUMMARY

LOCATION	: TA-21	MATERIALS MANAGED	: SUSPECTED HAZARDOUS WASTE
TYPE OF UNIT(s)	: MATERIAL DISPOSAL AREA		RADIOACTIVE WASTE
UNIT USE	: DISPOSAL		
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: 1945 - 1980s		
HAZARDOUS RELEASE	: KNOWN		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

MDA-T covers an area of about 2 acres. This disposal area included adsorption beds, sumps, and shafts. There are four adsorption beds [21-016(a)] each 120' long, 20' wide and 4' deep. The beds received a total of 14,010,500 gallons of plutonium processing waste which included 10,500 gallons of effluent containing highly concentrated ammonium citrate. The adsorption beds received untreated waste from 1945 to 1952; after construction of the industrial liquid waste treatment facility (TA-21-35; SWMU 21-010) in 1952, these beds received treated waste until 1967, when the new industrial waste treatment plant (TA-21-257; SWMU 21-011) went into operation. Located near and within the adsorption beds were four sumps: TA-21-121, -122, -131, and -132. The sumps were built in 1946 of reinforced concrete and are 2'6" x 4' x 8'. MDA-T received waste liquids from most of the buildings in TA-21. Building TA-21-12 was connected to MDA-T by a 125-ft long, 6"-diameter jennite-coated black iron drainline. Building TA-21-34 was connected to the drainline from TA-21-12 by another drainline. A 250-ft long, 6"-diameter cast iron drainline connected TA-21-35 with tanks TA-21-112 and -113 and the tanks with adsorption bed 4 in MDA-T. In 1952, the volume of waste exceeded the capacity of the adsorption beds and the waste was routed to TA-21-35 for treatment. The beds sporadically received a few hundred gallons of waste at a time up until 1967. A pit, TA-21-186 [21-016(b)], was built in 1959 of redwood and it was about 6' x 10' x 30' deep. The pit was located between two rows of adsorption beds. This pit, referred to as the "Snake Pit," was used for monitoring purposes and did not contain waste. From 1974 to 1982, transuranic wastes were mixed with cement and pumped into corrugated metal pipes into the pit. There were 175 corrugated metal pipes (2.5 ft in diameter, 20 ft long) in the pit, which was located between adsorption beds 1 and 3. In 1984 to 1986, the pipes were transported to TA-54 with the intention of shipping them to the WIPP site near Carlsbad, NM. There were 62 shafts [21-016(c)], 15' to 68' deep and 4' to 8' diameter, augered between adsorption beds 2 and 4 and cemented batch americium wastes were pumped down the shafts. The shafts were sprayed with heated roofing asphalt prior to emplacing the cemented mixture. The shafts were used for transuranic cement paste disposal from 1968 to 1983.

WASTE INFORMATION

The waste in the adsorption beds consists of liquids generated during plutonium processing. Americium-241 and plutonium-239 have been measured at sampling points in the adsorption beds. As stated, the shafts contain batch americium wastes and the pit at one time contained transuranic wastes. Information on hazardous chemical co-contaminants is unavailable. Chemicals discharged to the adsorption beds are reported to include fluorine, ammonium citrate, citric acid and nitrogen and chlorine compounds. According to LANL staff, lead, mercury and cadmium are suspected to have been waste constituents.

RELEASE INFORMATION

Subsurface migration of radionuclides and surface overflow have been documented. According to LANL staff, hazardous releases are suspected. Several studies have been done over the years to characterize the movement of radionuclides through the tuff. Five test holes were dug around the pits in 1953; two were through the pits and one was a 45 degree hole that angled below pit 1. A 30' deep caisson (the "Snake Pit") was dug to obtain horizontal cores in 1961 and several test holes were drilled in 1967. In a study completed in 1978, four sampling holes were drilled to a depth of 100' through two adsorption beds. The holes were drilled in the vicinity of the place where the wastewater entered the beds. Two other holes were drilled further away from the entrance point for the waste. Data starting in 1952 provide the mineral composition of the waste; before that date, it is unknown. MDA-T is being monitored for radioactive transport under the IWMP. The drainlines are assumed to have been abandoned in-place, except the drainline from TA-21-12 to MDA-T wich was removed in 1972-1973.

NOTES

SWMU Nos. 21-016(b), (c), (d), and (e) were sumps located near and in the adsorption beds. The sumps are now addressed as part of the adsorption bed in SWMU No. 21-016(a).

(continued)

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-016(a)	MDA-T	21.002 18.067- 18.070	Tsk 8 : 1 2 Tsk 9 : 56 58 67	TA-21-121, -122, -131, -132, MDA-T
21-016(b)	MDA-T	21.002	Tsk 8 : 1 2	TA-21-186, MDA-T
21-016(c)	MDA-T	21.002 18.005- 18.066	Tsk 8 : 1 2	MDA-T

SUMMARY

LOCATION	: TA-21	MATERIALS MANAGED	: RADIOACTIVE WASTE
TYPE OF UNIT(s)	: MATERIAL DISPOSAL AREA		SUSPECTED HAZARDOUS WASTE
UNIT USE	: DISPOSAL		SUSPECTED PCBs
OPERATIONAL STATUS	: INACTIVE		
PERIOD OF USE	: 1945 - 1968		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: KNOWN		

UNIT INFORMATION

MDA-U covers about 0.25 acres and contains two adsorption beds, formerly TA-21-162 and -163 [21-017(a) and (b)] (since 1951 these adsorption beds have had no structure numbers) that were used for the subsurface disposal of contaminated liquid wastes from DP East from 1948 to 1968. MDA-U received liquid wastes from buildings TA-21-152, -153, and -155. Building TA-21-152 was connected with both adsorption beds in MDA-U by an 86-ft long, 6"-diameter jennite-coated black iron drainline which went through acid manhole TA-21-173. Building TA-21-153 was connected to MDA-U adsorption bed 2 (formerly TA-21-163) by a 45-ft long, 6"-diameter jennite-coated black iron drainline. Building TA-21-155 was connected to MDA-U adsorption bed 1 (formerly TA-21-162), via acid pit TA-21-222, by a 200-ft long, 4"-diameter cast iron drainline. Engineering drawing ENG-R4821 indicates that this drainline formerly discharged to the surface. The primary radionuclide in these wastes was polonium-210 which, with its 138-day half-life, has since decayed away. In 1953, an estimated 2.5 curie of actinium-227 were also discharged to these beds, principally from the effluents from a filter building (TA-21-153) that scrubbed actinium-227 out of the air in several process buildings at TA-21. Early problems with the pits included oil washing down from the precipitators which in 1946 was observed to be lying on top of the ground. This was noted to be contaminated to a high degree. The area around the filter building was decontaminated when the building was removed in 1978. MDA-U was improved in 1985 with the removal of the piping from the adsorption beds and the associated sump, TA-21-164 [21-017(c)]. The sump was built in 1946 of reinforced concrete, about 2'6" x 4' x 8'. In addition, a sampling trench was dug in the length of the beds, and soil contaminated with actinium was removed to MDA-G. Not all contamination was removed. The CEARP reports the trench dimension as 20' wide, 100' long and 4' to 13' deep. A plastic lining was placed in the trench to indicate the excavation boundary, and then the trench was filled with uncontaminated tuff. The area was covered with 6" of topsoil. There is a graded drainage ditch outside of the fence to divert storm water around MDA-U.

WASTE INFORMATION

The liquid waste managed by MDA-U included radionuclides (polonium, actinium) and possibly some organics. Oils from the precipitators that were discharged to the beds may have contained beryllium and PCBs.

RELEASE INFORMATION

There was no release observed during the VSI, however, some erosion of surface soil was observed. Several storm water outfalls (non-NPDES) were observed to discharge into the canyon. Memos suggest that releases have occurred from surface overflow in the early days. The location of the former surface discharge from the drainline serving building TA-21-155 is unknown. The drainline from building TA-21-153 to MDA-U was removed in 1978.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-017(a)	MDA-U	21.002 21.003 21.004 18.071 18.072	Tsk 8 : 5 Tsk 9 : 65 66 79	TA-21-162 (pre-1951) MDA-U
21-017(b)	MDA-U	21.002 21.003 21.004 18.071 18.072		TA-21-163 (pre-1951), MDA-U
21-017(c)	MDA-U		Tsk 8 : 5	TA-21-164, MDA-U

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : MATERIAL DISPOSAL AREA
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1945 - 1961
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : SUSPECTED MIXED WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

MDA-V [21-018(a)], an area of approximately 1 acre, was used for the disposal of radionuclide-contaminated wastewater from laundry operations from 1945 to 1961. The laundry, TA-21-20 [21-018(b)], was in use between 1945 and the 1950's; its purpose was cleaning contaminated clothing. Wastewater was discharged to three "adsorption beds" or seepage pits that were used in series. There is documentation that these pits discharged to the canyon. An estimated 2 Ci of strontium-89, barium-140 and lanthanum-140, now decayed to undetectable levels, was discharged to these pits. Small quantities of strontium-90 and plutonium-239 were also discharged to the pits. MDA-V was connected to the laundry (TA-21-20) by a 90-ft long, 6"-diameter jennite-coated black iron drainline. Within MDA-V, connecting the adsorption beds, was 775 feet of 4"-diameter jennite-coated black iron drainline.

WASTE INFORMATION

The laundry wastewater contained radionuclides (barium-140, strontium-90, plutonium-239, plutonium-240, tritium, and probably uranium) and may have contained chemicals including solvents.

RELEASE INFORMATION

The seepage pits did not always function properly, and on occasion there were discharges to the canyon. It is assumed that the drainline from the laundry (TA-21-20) to MDA-V was abandoned in-place, since no records exist regarding its removal. Surface stabilization efforts were completed in 1985. Sanitary sludges were used to aid re-vegetation of the unit in the summer of 1987. Soil samples of MDA-V taken in 1985 found that surface samples (from 0-30 cm deep) had traces of tritium, uranium, plutonium-239, and plutonium-240. Samples of adsorption bed materials (from 30 to 120 cm) and of the underlying tuff (from below 120 cm) indicated traces of uranium from 0.9 to 4.0 m deep and plutonium-239 and plutonium-240 from the surface to 17.7 m deep. The vertical distribution of plutonium suggests that other contaminants may have moved downward into the tuff under the influence of wastewater to at least 17.7 m. MDA-V is being monitored under the IWMP.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-018(a)	MDA-V	21.005	Tsk 8 : 6 Tsk 9 : 55	MDA-V
21-018(b)	MDA-V	21.005 18.073- 18.075	Tsk 9 : 55 Tsk 10 : 171	TA-21-20

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : TREATMENT
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : 1958 - PRESENT
HAZARDOUS RELEASE : SUSPECTED
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : SUSPECTED MIXED WASTE
RADIOACTIVE WASTE

UNIT INFORMATION

There are several filter houses and exhaust stacks that are used to treat the radioactive off-gases in TA-21. The effluents from the active units are sampled monthly for radionuclides. In some labs, filters are in use before the gases discharge to the main filter houses.

STRUCTURE	SWMU NO.	STATUS	FAN NO.	SAMPLED FOR
TA-21-3	21-019(a)	active	FE-6	U235
TA-21-4	21-019(b)	active	FE-1	Pu, mixed fission products
TA-21-4	21-019(b)	active	FE-3	U235
TA-21-146	21-019(c)	inactive(?)		
TA-21-150	21-019(d)	active	FE-1	Pu
TA-21-155	21-019(e)	active	FE-5	tritium gas, tritium oxide
TA-21-209	21-019(f)	active	FE-1,-10,-12	tritium gas
TA-21-257	21-019(g)	active	FE-4	Pu
TA-21-313	21-019(h)	active	FE-2	Pu
TA-21-314	21-019(i)	active	FE-1,-7	Pu
TA-21-315	21-019(j)	active	FE-1	Pu
TA-21-322	21-019(k)	inactive (?)		
TA-21-323	21-019(l)	inactive (?)		
TA-21-324	21-019(m)	active	FE-1	Pu

TA-21-146 is a filter house built between 1958 and 1960 of pumice block with a steel deck roof; it is about 40'8" x 18' x 13'11.5". TA-21-324 is also a filter house that is about 18' x 58' x 10'.

WASTE INFORMATION

The off-gases contain radionuclides and possibly hazardous chemicals.

RELEASE INFORMATION

Detailed data on any releases other than radionuclides is lacking.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-019(a)	TA21-1-CA-I/A-RW/HW TA21-9-CA-I-HW/RW			TA-21-3
21-019(b)	TA21-1-CA-I/A-RW/HW TA21-9-CA-I-HW/RW			TA-21-4
21-019(c)	TA21-9-CA-I-HW/RW			TA-21-146
21-019(d)	TA21-8-CA-I/A-RW/HW TA21-9-CA-I-HW/RW			TA-21-150
21-019(e)	TA21-8-CA-I/A-RW/HW TA21-9-CA-I-HW/RW			TA-21-155
21-019(f)	TA21-9-CA-I-HW/RW			TA-21-209
21-019(g)	TA21-8-CA-I-RW/HW TA21-9-CA-I-HW/RW		Tsk 10 : 180	TA-21-257
21-019(h)	TA21-9-CA-I-HW/RW			TA-21-313

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-019(i)	TA21-9-CA-I-HW/RW			TA-21-314
21-019(j)	TA21-9-CA-I-HW/RW			TA-21-315
21-019(k)	TA21-9-CA-I-HW/RW			TA-21-322
21-019(l)	TA21-9-CA-I-HW/RW			TA-21-323
21-019(m)	TA21-9-CA-I-HW/RW			TA-21-324

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : TREATMENT
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1945 - 1973
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
SUSPECTED MIXED WASTE

UNIT INFORMATION

Filter house TA-21-12 [21-020(a)] began operating in May 1945. It treated air from DP West rooms and processes with electrostatic precipitators and filters. Decontamination and decommissioning occurred, and in 1973 the ductwork was removed and the filter house was demolished. The interior was cleaned and painted and the stacks, filters, frames and other items were removed for burial. The building was carefully demolished inside to outside and contaminated items were removed for disposal. The drain pipe to the tile field and contaminated soil were also reported to have been removed. The tile field itself was removed at an earlier date. The decommissioning residues were taken to MDA-A and to TA-54 for disposal and, if wastes contained >10 nCi/g of plutonium, to retrievable storage. Filter Building TA-21-153 [21-020(b)] was constructed in 1945 to clean air from some of the process operations at DP East. The building contained filters and electrostatic precipitators. In 1970 the building was shut down and in the 1970's the radioactive and contaminated accessible parts of the building were removed. The building, its contents, and contaminated soil were disposed of or were placed in retrievable storage at TA-54.

WASTE INFORMATION

The off-gases contained radionuclides. Further information characterizing the chemicals or other constituents that may have been present is not available, however, various acid vapors including hydrofluoric acid were probably discharged.

RELEASE INFORMATION

Radioactive waste is known to have been released through the stacks due to above background samples in the area around DP. Soil samples from a depth of 30 cm below building TA-21-12 had 1.3 to 70 pCi/g of plutonium-239. The area was backfilled with soil, a composite of which contained 1.3 +/- 0.1 pCi/g plutonium. Clean-up of building TA-21-153 in 1978 was to less than or equal to 30 pCi gross alpha/g of soil, which is the detection limit of the ZnS gross alpha measurement system. No information on releases of hazardous constituents is available.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-020(a)	TA21-1-CA-I/A-RW/HW		Tsk 10 : 155	TA-21-12
21-020(b)	TA21-1-CA-I/A-RW/HW		Tsk 10 : 170	TA-21-153

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE/ACTIVE
PERIOD OF USE : 1940s - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : KNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

In 1970, above background levels of plutonium and strontium-90 were measured in the vicinity of TA-21. The study concluded that the plutonium was probably deposited from DP Site air stacks. The estimated area of soil contaminated by TA-21 is approximately 300,000 square meters, with plutonium-239 concentrations ranging from 0.005 to 0.6 pCi/g. The sampling locations are located throughout TA-21 extending to the airport. The soil samples were not analyzed for constituents other than radionuclides.

WASTE INFORMATION

The emissions consisted of particulate matter containing plutonium-239 and strontium. LANL staff suspect chemical waste constituents.

RELEASE INFORMATION

Documentation on releases of hazardous non-radionuclide constituents from this unit is lacking; however, airborne releases of radionuclides are indicated by the concentrations of plutonium and strontium in the soil surrounding the unit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-021	TA21-9-CA-I-HW/RW	? 21.030 ? 21.033 ? 21.036	Tsk 10 : 189	

? Indicates uncertainty with RFA Unit correlation.

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : WASTE LINE/SUMP
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1950s - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : MIXED WASTE

UNIT INFORMATION

There were acid lines running from Building 2 to Building 3 and also from Building 2 to an ether pit. These acid lines were in a concrete trench and the trench may still connect TA-21-2 to TA-2-3, although, if present, it has been filled in and paved over. These lines are reported to be removed and replaced with a nitric acid supply line and a 5,200-gallon tank. A four-inch waste line connected Buildings 2, 3, 4, and 5 to the old treatment plant, TA-21-35. A six-inch waste line was abandoned when the four-inch line was installed in 1952. Information on other possible abandoned waste lines is lacking. Industrial waste wells were located at the northeast corners of Buildings TA-21-2, -3, -4, and -5 and on the northwest corner of TA-21-150 with structure numbers of TA-21-81, -84, -87, -89, and -189, respectively. The wells were removed during the 1978-1981 cleanup. They were liquid-waste collection and sampling wells that received liquid from the buildings and discharged to MDA-T (21-016) via 6"-diameter jennite-coated black iron drainlines. In 1952, a new 4"-diameter waste line connecting the wells to the treatment plant (TA-21-35, 21-010) was installed. The following are acid manholes (industrial waste wells) and manhole sumps in TA-21:

STRUCTURE	SWMU NO.	DATE BUILT	MANHOLE DIMENSIONS	LOCATION
TA-21-74	21-022(a)	1946	5' dia, brick, wood cover	northwest corner TA-21-21
TA-21-81	21-022(b)	1945	5'3" dia, 10' deep, brick, steel cover	northeast of TA-21-2
TA-21-84	21-022(c)	1945	5'3" dia, 10' deep, brick, steel cover	northeast of TA-21-3
TA-21-87	21-022(d)	1945	5'3" dia, 10' deep, brick, steel cover	northeast of TA-21-4
TA-21-89	21-022(e)	1945	5'3" dia, 10' deep, brick, steel cover	northeast of TA-21-5
TA-21-173	21-022(f)	1945	5'6" dia, 6' deep, brick	northwest of TA-21-152
TA-21-189	21-022(g)	1962	unknown	northwest of TA-21-150
TA-21-202	21-022(h)	1962	unknown	southeast of TA-21-150

STRUCTURE	DRAINLINE
TA-21-74	4"-diameter from old section of TA-21-21 to sump TA-21-74 and a 4"-diameter from new section of TA-21-21 to sump TA-21-74
TA-21-81	6"-diameter, jennite-coated black iron, 670 ft long, to MDA-T
TA-21-84	6"-diameter, jennite-coated black iron, 670 ft long, to MDA-T
TA-21-87	6"-diameter, jennite-coated black iron, 670 ft long, to MDA-T
TA-21-89	6"-diameter, jennite-coated black iron, 670 ft long, to MDA-T
TA-21-173	6"-diameter, jennite-coated black iron, 86 ft long, to MDA-U
TA-21-189	6"-diameter, jennite-coated black iron, 670 ft long, to MDA-T
TA-21-202	150-ft long, 6" line from TA-21-150 through TA-21-202 to outfall in Los Alamos Canyon

The DP West acid manholes, TA-21-81, -84, -87, -89, and TA-21-189 were removed in the 1978-81 cleanup. Contaminated soil around these manholes was removed to the point that further excavation would have jeopardized the integrity of the adjacent buildings. The status of manholes and sump TA-21-74, -173, -189, and -202 is unknown. Sump pumps, that may have been contaminated, were reported to have been present in equipment rooms in the south end of Buildings TA-21-2 and -3 [21-022(i), (j)]. An ER Program site visit on 3/13/89 found no physical evidence of these sites.

WASTE INFORMATION

The waste is described as radioactive mixed. Data characterizing the waste discharged to the manholes is not available. However, some of the waste received by the wells was wash water from floor drains. A memo indicates that floor wash water containing approximately 28 micrograms of plutonium a day was poured down floor drains, but the memo does not indicate in which building this occurred. The wastes managed by the sump pumps are unknown.

(continued)

RELEASE INFORMATION

There is no documentation indicating whether the waste lines leaked; however LANL staff suspect the early lines may have leaked. The DP West manholes and associated radionuclide contaminated soil have been excavated to the point that the integrity of the adjecent buildings could be preserved. It is unknown whether hazardous releases have occurred from the other manholes or sumps.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-022(a)	TA21-5-S-I-HW/RW		Tsk 9 : 28 82 83 84 85	TA-21-74
	TA21-7-CA-A/I-HW/RW		Tsk 10 : 173	
			Tsk 9 : 36 92 93	
21-022(b)	TA21-5-S-I-HW/RW		Tsk 9 : 28 82 83 84 85	TA-21-81
	TA21-7-CA-A/I-HW/RW		Tsk 10 : 173	
			Tsk 9 : 22	
21-022(c)	TA21-5-S-I-HW/RW		Tsk 9 : 28 82 83 84 85	TA-21-84
	TA21-7-CA-A/I-HW/RW		Tsk 10 : 173	
			Tsk 9 : 23	
21-022(d)	TA21-5-S-I-HW/RW		Tsk 9 : 28 82 83 84 85	TA-21-87
	TA21-7-CA-A/I-HW/RW		Tsk 10 : 173	
			Tsk 9 : 24	
21-022(e)	TA21-5-S-I-HW/RW		Tsk 9 : 28 82 83 84 85	TA-21-89
	TA21-7-CA-A/I-HW/RW		Tsk 10 : 173	
			Tsk 9 : 25	
21-022(f)	TA21-5-S-I-HW/RW		Tsk 9 : 28 82 83 84 85	TA-21-173
	TA21-7-CA-A/I-HW/RW		Tsk 10 : 173	
21-022(g)	TA21-5-S-I-HW/RW		Tsk 9 : 28 82 83 84 85	TA-21-189
	TA21-7-CA-A/I-HW/RW		Tsk 10 : 173	
			Tsk 9 : 26	
21-022(h)	TA21-5-S-I-HW/RW		Tsk 9 : 28 82 83 84 85	TA-21-202
	TA21-7-CA-A/I-HW/RW		Tsk 10 : 173	
			Tsk 9 : 54	
21-022(i)	TA21-5-S-I-HW/RW		Tsk 9 : 28 82 83 84 85	TA-21-2
	TA21-7-CA-A/I-HW/RW		Tsk 10 : 173	
21-022(j)	TA21-5-S-I-HW/RW		Tsk 9 : 28 82 83 84 85	TA-21-3
	TA21-7-CA-A/I-HW/RW		Tsk 10 : 173	
			Tsk 9 : 29	

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : SUSPECTED

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED MIXED WASTE

UNIT INFORMATION

The following septic systems in TA-21 have been decommissioned:

LOCATION	SWMU NO.	DATES BUILT/REMOVED	CONSTRUCTION/CAPACITY	DISCHARGE	DRAINLINES
TA-21-225	21-023(a)	1966/1966	5' x 9' x 6' deep, reinforced concrete	unknown	unknown
TA-21-142	21-023(b)	1945/1965-66	500 gallons, steel	TA-21-84	unknown
TA-21-62	21-023(c)	1948/1965	5' x 10' x 7', reinforced concrete	outfall	4"-dia. vitrified clay pipe
TA-21-187	21-023(d)	1960/1966	5' x 3' x 5'6" deep, reinforced concrete	unknown	unknown

The septic systems included septic tanks, piping from the building to the tank, and piping from the tank to the discharge. TA-21-62 was buried in MDA-G in 1966; TA-21-142 served shower room in TA-21-3. The previous locations of TA-21-142 and -225 are currently covered with asphalt or the addition to the north side of building TA-21-3, as noted on ER Program site visit, 4/4/89.

WASTE INFORMATION

The waste was sanitary, but some of the tanks probably contained radioactive-mixed constituents. Tank TA-21-187 received industrial waste.

RELEASE INFORMATION

It is unknown whether a hazardous waste release has occurred. At one time the canyon south of TA-21 was fenced to prevent entry due to high radioactivity levels. The radionuclides were believed to have come from the septic systems and/or other units with canyon outfalls.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-023(a)	**		Tsk 9 : 53 106	TA-21-225
21-023(b)	TA21-6-ST-I-HW/RW		Tsk 9 : 49	TA-21-142
21-023(c)	TA21-6-ST-I-HW/RW		Tsk 9 : 39 75 Tsk 10 : 145	TA-21-62
21-023(d)	**		Tsk 9 : 20	TA-21-187

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : SUSPECTED

MATERIALS MANAGED : SUSPECTED MIXED WASTE

UNIT INFORMATION

The following are abandoned septic systems in TA-21. Septic systems include the septic tank, piping from the building to the tank, and piping from the tank to the outfall. The systems had outfalls to the north rim of Los Alamos Canyon or the south rim of DP Canyon.

STRUCTURE	SWMU NO.	BUILT	CONSTRUCTION	BUILDING(S) SERVED	DRAINLINES *	OUTFALL **
TA-21-53	21-024(a)	1945	8' x 16' x 7'9" deep	TA-21-9	6"-diameter v.c.p.	LA
TA-21-55	21-024(b)	1945	4' x 8' x 6'6" deep	TA-21-17	6"-diameter v.c.p.	LA
TA-21-56	21-024(c)	1945	4' x 8' x 6' deep	TA-21-54	4"-diameter v.c.p.	LA
TA-21-106	21-024(d)	1945	9'6" x 18' x 5' deep	TA-21-1	6"-diameter v.c.p.	LA
TA-21-123	21-024(e)	1945	1000 gal., steel, 6'4" dia, 11'4" long	TA-21-21	6"-diameter v.c.p.	LA
TA-21-124	21-024(f)	1952	1000 gal., metal	TA-21-45	4"-diameter v.c.p.	DP
TA-21-125	21-024(g)	1945	9'6" x 18' x 5'	TA-21-7, -31	4"-diameter v.c.p.	DP
TA-21-163	21-024(h)	1945	6' x 14' x 5' deep	TA-21-151	6"-diameter v.c.p.	DP
TA-21-181	21-024(i)	1945	5' x 10' x 7'9" deep	TA-21-152	6"-diameter v.c.p.	LA
TA-21-194	21-024(j)	1961	5' x 3' x 6' deep	TA-21-155	unknown	LA (?)
TA-21-219	21-024(k)	1966		TA-21-155(?)	unknown	lf

Prior to 1965, septic tank TA-21-181 also received waste from buildings TA-21-166 and -167; the drainlines from buildings TA-21-166 and -167 intersected the drainline from building TA-21-152 at manhole TA-21-175. After 1965, liquids from TA-21-166 and -167 discharged to an outfall in Los Alamos Canyon via a 4"-diameter vitrified clay pipe. All of the septic tanks were abandoned in place by backfilling with earth, except for tank TA-21-56 for which information is lacking and tank TA-21-194 which had only the inlet and outlet filled. The tanks were abandoned in 1964-1966. All of the septic tanks were built of reinforced concrete, except where noted differently above. Septic tank TA-21-106 was noted to have contained two beds by the ER Program site visit on 4/4/89. Tank TA-2-124 was located north of DP Road, across from TA-21-69, according to engineering drawing ENG-R5113. However, according to the ER Program site visit on 4/4/89, the engineering drawing location and the outfall location do not conform. Septic tank TA-21-219 was noted to have two manholes, one open pipe and one pipe with a cap, during the ER Program site visit on 4/4/89. A 3"-diameter drainline from the mechanical room of TA-21-21 discharges to an outfall in DP Canyon [21-024(l)]. Another drainline, from building TA-21-209, discharges to an outfall in Los Alamos Canyon via a 112-ft long, 8"-diameter vitrified clay pipe [21-024(m)]. This is listed as an industrial waste line on engineering drawing ENG-R4816. A third drainline connects floor drains in TA-21-155 to an outfall in DP Canyon [21-024(n)]. This line is 116 ft long, 4"-diameter cast iron, and is also listed as an industrial waste line on engineering drawing ENG-R4816. Engineering drawing ENG-R1193 (1956) shows a 4"-diameter vitrified clay pipe and indicates that this pipe is connected to the former diesel plant, TA-21-46 [21-024(o)]. However, this drainline is not shown as connected to the building on the drawing. This drainline discharged to an outfall in Los Alamos Canyon. No septic tanks are currently in use at TA-21 because all sewage is treated at the sewage treatment plant (21-026).

* v.c.p. = vitrified clay pipe
** LA = Los Alamos Canyon
DP = DP Canyon
lf = leach field

WASTE INFORMATION

The waste was sanitary, but is suspected to have contained radioactive-mixed constituents in at least some of the tanks. The wastes managed by the drainline from the mechanical room of TA-21-21 are unknown. The wastes managed by the drainline from building TA-21-209 are expected to be industrial wastes; building TA-21-209 is a high-temperature chemistry building. The wastes managed by the drainline from building TA-21-155 are expected to be liquid wastes poured down floor drains. The wastes from the former diesel plant, TA-21-46, are unknown.

(continued)

RELEASE INFORMATION

It is unknown in which tanks a hazardous or radioactive release has occurred. At one time the canyon south of TA-21 was fenced to prevent entry due to high radioactivity level. The radionuclides are believed to have come from the septic systems and/or other units with canyon outfalls.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-024(a)	TA21-3-CA/O-I/A-HW/RW	? 21.023	Tsk 9 : 40 77 Tsk 10 : 133	TA-21-53
21-024(b)	TA21-3-CA/O-I/A-HW/RW	? 21.023	Tsk 9 : 41 70 Tsk 10 : 127	TA-21-55
21-024(c)	TA21-3-CA/O-I/A-HW/RW TA21-6-ST-1-HW/RW	? 21.023	Tsk 9 : 42 57 Tsk 10 : 128	TA-21-56
21-024(d)	TA21-3-CA/O-I/A-HW/RW	? 21.023	Tsk 9 : 43 69 Tsk 10 : 126	TA-21-106
21-024(e)	TA21-3-CA/O-I/A-HW/RW	? 21.023	Tsk 9 : 44 68 Tsk 10 : 125	TA-21-123
21-024(f)	**	? 21.023	Tsk 9 : 50 73 Tsk 10 : 131	TA-21-124
21-024(g)	TA21-3-CA/O-I/A-HW/RW	? 21.023	Tsk 9 : 47 76 Tsk 10 : 132	TA-21-125
21-024(h)	TA21-3-CA/O-I/A-HW/RW	? 21.023	Tsk 9 : 45 71 Tsk 10 : 129	TA-21-163
21-024(i)	TA21-3-CA/O-I/A-HW/RW	? 21.023	Tsk 9 : 46 72 98 Tsk 10 : 130	TA-21-181
21-024(j)	**	? 21.023	Tsk 9 : 51 104	TA-21-194
21-024(k)	**	? 21.023	Tsk 9 : 52 105	TA-21-219
21-024(l)	**	? 21.023	Tsk 9 : 94 Tsk 10 : 144	FROM TA-21-21
21-024(m)	**	? 21.023	Tsk 9 : 99 Tsk 10 : 146	FROM TA-21-209
21-024(n)	**	? 21.023	Tsk 9 : 101 Tsk 10 : 147	FROM TA-21-155
21-024(o)	**	? 21.023	Tsk 9 : 102 Tsk 10 : 148	FROM TA-21-46

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

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : OFF-GAS SYSTEM
UNIT USE : TREATMENT
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : RADIOACTIVE WASTE

UNIT INFORMATION

In both the TA-21-155 [21-025(a)] (TSTA facility) and the adjacent tritium facility (TA-21-209) [21-025(b)], a tritium treatment train is in operation. On each train, gases which may contain tritium are stored in a tank until a given pressure is exceeded. The gases are then released and passed through a catalyst bed operated at high temperatures in order to oxidize the tritium to tritiated water. The water is then collected in a series of molecular sieves. When a sieve is near breakthrough, it is removed, and hot nitrogen gas is used to strip the water from the sieve unit. The now concentrated tritiated water vapor is collected on a second series of molecular sieves. Before breakthrough, the sieves are placed in asphalt-lined 55 gallon drums for collection by HSE-7. The TSTA tritium storage tank is approximately seven cubic meters. The entire off-gas treatment trains, including the tanks, are located entirely within the buildings.

WASTE INFORMATION

The waste consists of tritium.

RELEASE INFORMATION

There is no known release of hazardous waste from these systems.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-025(a)	TA21-1-CA-I/A-RW/HW	21.014 21.015		TA-21-155
21-025(b)	**			TA-21-209

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : WASTE TREATMENT PLANT
UNIT USE : TREATMENT
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1966 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SANITARY WASTE
SUSPECTED MIXED WASTE

UNIT INFORMATION

The TA-21 sewage treatment plant, TA-21-227 [21-026(a)], treats sanitary wastes and noncontact cooling water from TA-21 facilities. All of the TA-21 buildings that have sanitary facilities are connected to this sewage treatment plant by sewer lines. Sludge is discharged to drying beds TA-21-230 [21-026(b)]. Normally, the sludge is taken to the contaminated disposal facility at TA-54. TA-21-348 [21-026(c)] is a chlorine contact chamber, 3' x 3' x 5' deep located next to the sewage plant.

WASTE INFORMATION

The waste consists of sanitary waste and non-contact cooling water. The treatment plant received water from a decontamination area. Hence, the sludge contained small amounts of plutonium, uranium, americium, and tritium. Janitors also poured scrub water into sanitary waste drains on a daily basis.

RELEASE INFORMATION

There have been no known releases of hazardous constituents from these units. The sewage treatment plant discharges through an NPDES-permitted outfall, EPASSS055 (see Appendix A).

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-026(a)	**	21.025-21.028	Tsk 9 : 86-91 Tsk 10 : 143	TA-21-227
21-026(b)	**	21.025-21.028	Tsk 9 : 86-91	TA-21-230
21-026(c)	TA21-2-SI-I-HW/RW	21.025-21.028	Tsk 9 : 86-91 18	TA-21-348

** No corresponding E. R. Program unit.

SUMMARY

LOCATION	: TA-21	MATERIALS MANAGED	: SUSPECTED HAZARDOUS WASTE
TYPE OF UNIT(s)	: OPERATIONAL RELEASE		SUSPECTED MIXED WASTE
UNIT USE	: DISPOSAL		RADIOACTIVE WASTE
OPERATIONAL STATUS	: UNKNOWN		
PERIOD OF USE	: 1950s - ?		
HAZARDOUS RELEASE	: SUSPECTED		
RADIOACTIVE RELEASE	: SUSPECTED		

UNIT INFORMATION

Floor drains from TA-21-3 and drainage from surface areas around buildings TA-21-2, -3, -4, and -5 are believed to have gone to storm drains. Small quantities of radionuclides may have run into Los Alamos Canyon through the culverts. The drainpipe from building TA-21-3 consists of two separate drainpipes: a 3"-diameter line from the floor drain in room 3A inside of a 12"-diameter storm drainline. The effluent from both lines outfalls south of building TA-21-143; a drainline from building TA-21-143 also outfalls at this same location. The liquid from all three drainlines discharges to a small ponded area. This ponded area is drained by a corrugated metal pipe into Los Alamos Canyon. Building TA-21-152 had a cooling tower that discharged to an outfall in Los Alamos Canyon. In 1971, the amount of cooling tower discharge was 16,700 gallons/year. Another surface discharge came from a 4"-diameter vitrified clay drainline that was connected to the southeast corner of building TA-21-6. Building TA-21-6 contained a machine shop, a cafeteria, two electronics shops, a lucite machine shop, and stock room. The bermed containment area surrounding fuel tank TA-21-47 was drained by a 4"-diameter steel drainline into Los Alamos Canyon from 1945 to 1960.

WASTE INFORMATION

The waste is described as radioactive and is suspected to contain chemicals. The waste managed by the drainline from building TA-21-6 is unknown; however, the lucite machine shop did have acid sinks. Wastes from the floor drain in building TA-21-3 are unknown; however, the floor drain is in an equipment room. The drainline from the TA-21-47 containment area is assumed to have discharged surface water, although leaks or spills from the tank would also have been discharged. Building TA-21-152 cooling tower discharge was reported to have been treated with biogdegradable and nontoxic chemicals.

RELEASE INFORMATION

There has been no monitoring in the receiving area. The drainline from building TA-21-6 is assumed to have been abandoned in-place. It is unknown whether there were hazardous releases from the drainline. The surface discharge point could not be identified during an ER Program site visit. The drainline from the floor drain of building TA-21-3 was observed at an outfall area during an ER Program site visit. It is unknown whether there were hazardous releases from the TA-21-47 drainline. The outfall from the TA-21-152 cooling tower could not be located during the ER Program site visit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-027	TA21-3-CA/O-I/A-HW/RW		Tsk 9 : 60-64 74 Tsk 10 : 123 124 136 137 151 152	TA-21-2, -3, -4, -5, -6, -47 -143, -152

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : CONTAINER STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : ? - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
MIXED WASTE

UNIT INFORMATION

The following are active storage areas. All of these units are based on 10/88 and 1/90 versions of the LANL container storage area database, except 21-028(d).

LOCATION	SWMU NO.	FACILITY TYPE	MATERIALS STORED
TA-21-121	21-028(a)	satellite	alcohol, acetone, freon, inactive as of 1/90
TA-21-150	21-028(b)	satellite	solvents, miscellaneous chemicals; 3 satellite storage areas
TA-21-3	21-028(c)	satellite	solvents, miscellaneous chemicals; halogenated organics, non-halogenated organics, possible radioactive contamination; 4 different satellite storage areas
TA-21-209	21-028(d)	<90 day storage	radioactive-contaminated waste
TA-21-210	21-028(e)	satellite	solvents, freon, waste oil; 3 satellite storage areas

The less than 90 day storage area at TA-21-209 loading dock was noted during a November 1988 field survey. These drums were awaiting transport to TA-54.

WASTE INFORMATION

TA-21-121 stores alcohol, acetone and freon; TA-21-150, TA-21-3 and TA-21-210 store solvents and miscellaneous chemicals. TA-21-209 stores wastes containing radionuclides. One of the storage areas at TA-21-3 may store mixed waste.

RELEASE INFORMATION

TA-21-121 and the TA-21-209 storage areas are located outside on loading docks. The TA-21-150 storage areas are located in the building and the storage areas at TA-21-3 are located in the building and in an outside cabinet. No releases from these units are known. 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
21-028(a)	**			TA-21-121
21-028(b)	**			TA-21-150
21-028(c)	**			TA-21-3
21-028(d)	**			TA-21-209
21-028(e)	**			TA-21-210

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-21
TYPE OF UNIT(s) : SOIL CONTAMINATION
UNIT USE : DISPOSAL
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1946 - 1988
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

The DP Tank Farm consisted of 15 product storage tanks, most of which were underground. The tank farm was a rectangular area, with the long axis parallel to DP Road. It was on a slope from the DP Road toward the canyon, and the edge of the tank farm nearest the Canyon was enclosed by a 4' high, 397' long earth berm. Fill ports for the tanks were located along DP Road. Two loading docks were present downslope, toward the earth berm. A storm drain was located within the DP Tank Farm to collect and discharge surface water. The storm drainline went through the earth berm and discharged to an outfall in DP Canyon. The DP Tank Farm was decommissioned in 1988; all tanks, lines, and surface equipment were removed. Spills from overfilling the tanks were noted around the fill ports and the loading docks. The tanks and lines were reported to have been in good condition when removed, with no evidence of leakage.

WASTE INFORMATION

The products spilled on the soil include Number 2 fuel oil, kerosene, and diesel. Memos indicate that two of the tanks may have stored gasoline and ethanol alcohol.

RELEASE INFORMATION

Soil samples collected around loading docks during decommissioning were analyzed for benzene, toluene, and xylene (BTX) and by the Extraction Procedure (EP) toxicity method for lead. Visibly contaminated soil was removed; however, verification sampling showed that soil with ppb concentrations of BTX were left in place. EP toxicity lead concentrations were not present. Analysis of samples from the outfall receiving area indicated ppb concentrations of BTX and below EP toxic concentrations of lead.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
21-029	TA0-14-UST-1-PP	? 21.037 ? 21.040 ? 21.043	Tsk 27 : 1083-1097	

? Indicates uncertainty with RFA Unit correlation.

TA-21 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
21-001	21-1
21-002(a)	Not shown, located throughout TA-21
21-002(b)	21-1
21-003	21-2
21-004(a)	21-1
21-004(b)	21-2
21-004(c)	21-2
21-004(d)	21-2
21-005	21-7
21-006(a)	21-1
21-006(b)	21-6
21-006(c)	21-1
21-006(d)	21-6
21-006(e)	Not shown
21-006(f)	21-1
21-007	Not shown
21-008	Not shown
21-009	21-7, 21-8
21-010(a)	21-7
21-010(b)	21-7
21-010(c)	21-5
21-010(d)	21-5
21-010(e)	21-5
21-010(f)	21-5
21-010(g)	21-5
21-010(h)	21-5
21-011(a)	21-1
21-011(b)	21-4
21-011(c)	21-3, 21-7
21-011(d)	21-1
21-011(e)	21-1
21-011(f)	21-1
21-011(g)	21-1
21-011(h)	21-3
21-011(i)	21-3
21-011(j)	21-3
21-012(a)	21-1
21-012(b)	21-1
21-013(a)	21-2
21-013(b)	21-1
21-013(c)	21-2, 21-4
21-013(d)	21-1

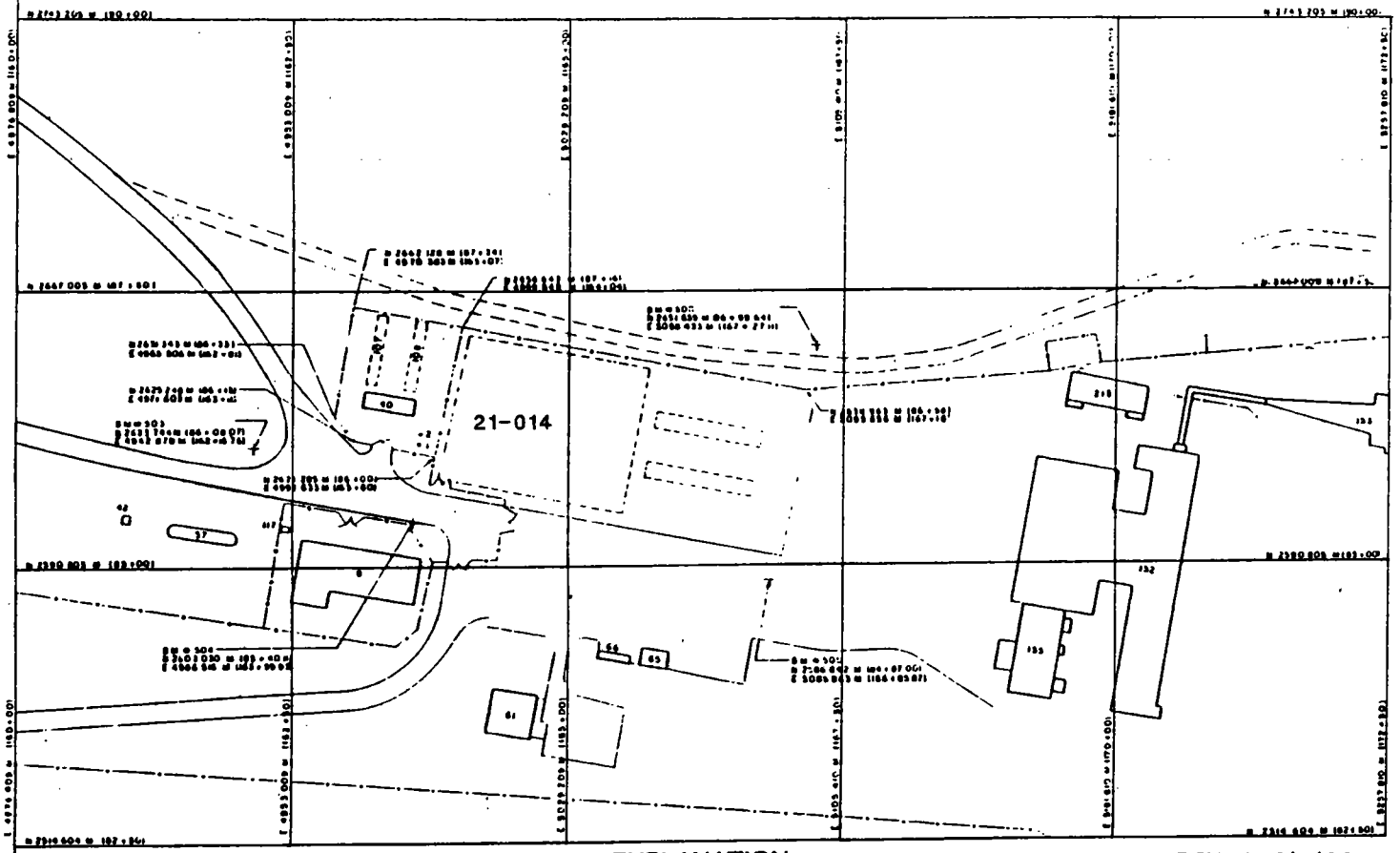
TA-21 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX (CONTINUED)

SWMU	FIGURE NUMBER
21-013(e)	Not shown
21-013(f)	21-2
21-013(g)	2-1
21-014	21-2, 21-9
21-015	21-1, 21-5, 21-10
21-016(a)	21-8, 21-11
21-016(b)	21-3
21-016(c)	21-11
21-017(a)	21-8, 21-12
21-017(b)	21-8, 21-12
21-017(c)	21-8, 21-12
21-018(a)	21-1, 21-7, 21-13
21-018(b)	21-7
21-019(a)	21-1
21-019(b)	21-1
21-019(c)	21-1
21-019(d)	21-1
21-019(e)	21-2
21-019(f)	21-1
21-019(g)	21-1
21-019(h)	21-1
21-019(i)	21-1
21-019(j)	21-1
21-019(k)	21-4
21-019(l)	21-4
21-019(m)	21-1
21-020(a)	21-7
21-020(b)	21-7
21-021	Not shown
21-022(a)	21-7
21-022(b)	21-6, 21-7
21-022(c)	21-7
21-022(d)	21-7
21-022(e)	21-7
21-022(f)	21-7
21-022(g)	21-3
21-022(h)	21-3
21-022(i)	21-1
21-022(j)	21-1
21-023(a)	21-5
21-023(b)	21-6

TA-21 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX (CONTINUED)

SWMU	FIGURE NUMBER
21-023(c)	21-7, 21-8
21-023(d)	21-6
21-024(a)	21-3
21-024(b)	21-3
21-024(c)	21-3
21-024(d)	21-3
21-024(e)	21-3
21-024(f)	21-3
21-024(g)	21-3
21-024(h)	21-4
21-024(i)	21-4
21-024(j)	21-4
21-024(k)	21-4
21-024(l)	21-1
21-024(m)	21-2
21-024(n)	21-2
21-024(o)	21-1
21-025(a)	21-2
21-025(b)	21-2
21-026(a)	21-2
21-026(b)	21-2
21-026(c)	21-2
21-027	Not shown
21-028(a)	21-3
21-028(b)	21-1
21-028(c)	21-1
21-028(d)	21-2
21-028(e)	21-1
21-029	Not shown

NOTE: Some structure locations contain more than one SWMU.



LOCATION PLAN

50 25 0 50 100

FIGURE 21-9

MATERIAL DISPOSAL AREA
A, TA-21

REVISED TO STATUS AS OF 3/29/1978

LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT

MATERIALS DISPOSAL AREAS
AREA "A"
OP SITE TA 21

ENG-R 1457

EXPLANATION

REV. 1 2/7/90

21-001 SWMU LOCATION

NOTES

21-014 SWMU ENCOMPASSES FENCED AREA

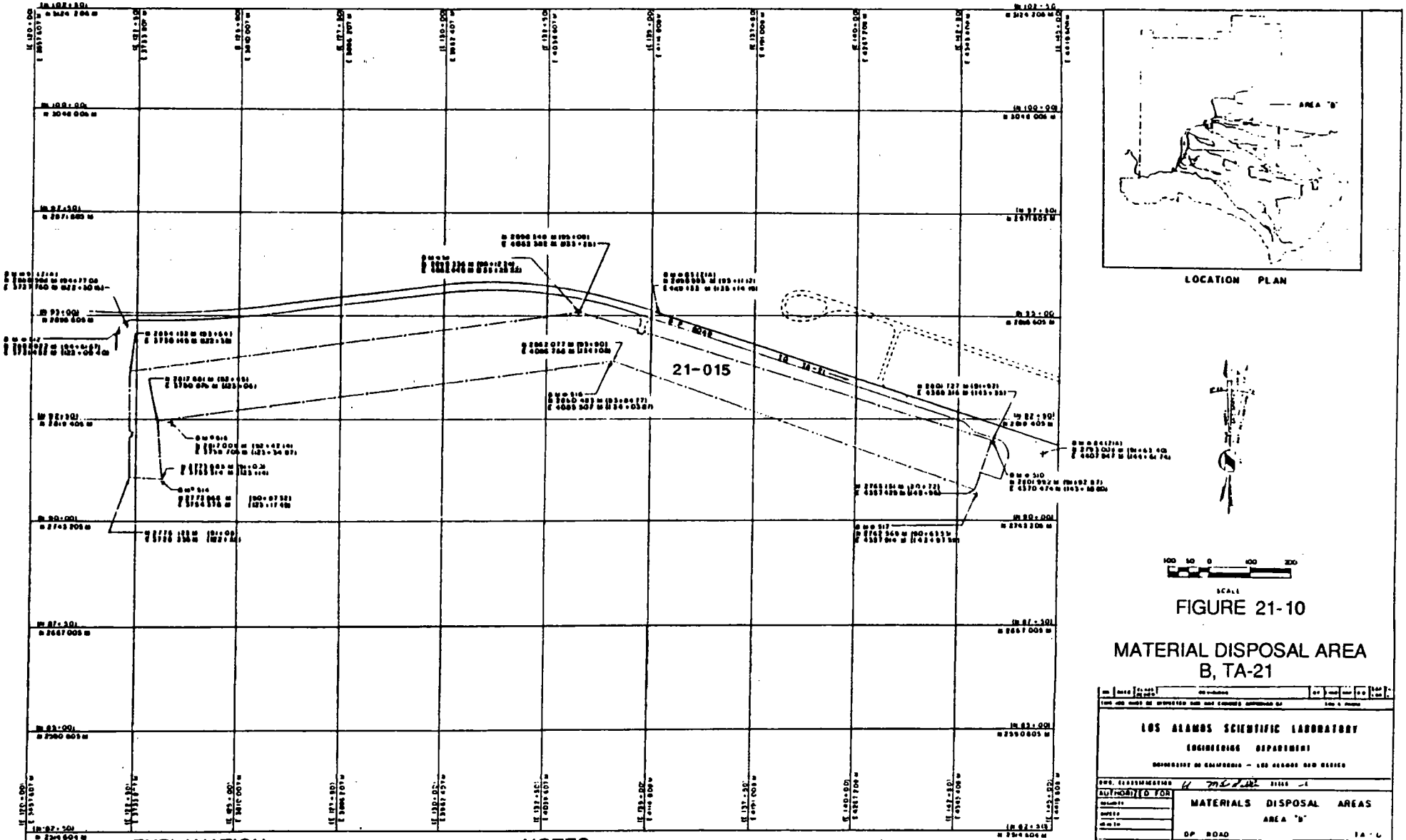
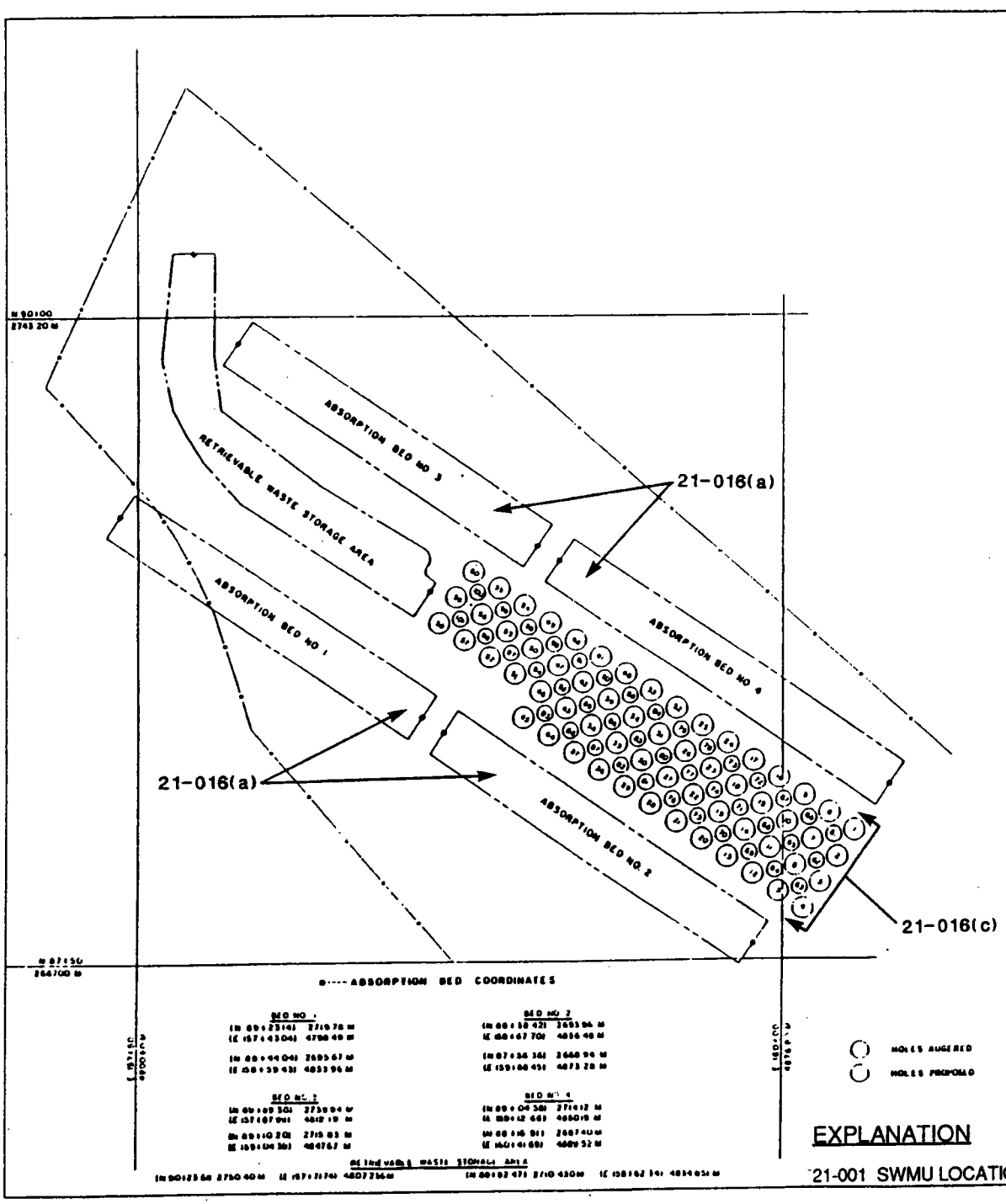


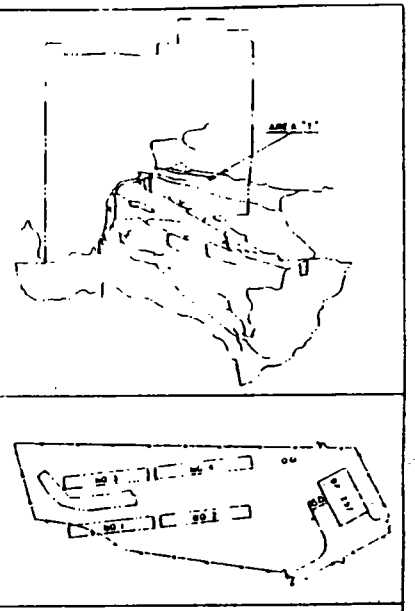
FIGURE 21-10

MATERIAL DISPOSAL AREA B, TA-21

REV. 1 2/7/90



SHAFT NUMBER	SHAFT DIAMETER	DATE COMPLETED	APPROXIMATE DEPTH



LOCATION PLAN

FIGURE 21-11

MATERIAL DISPOSAL AREA
T, TA-21

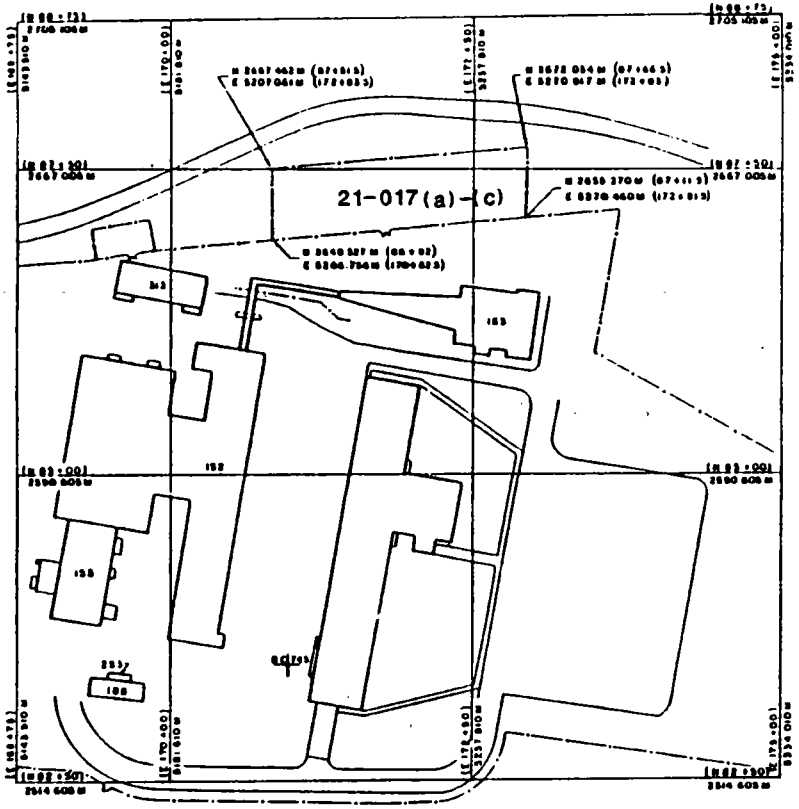
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT

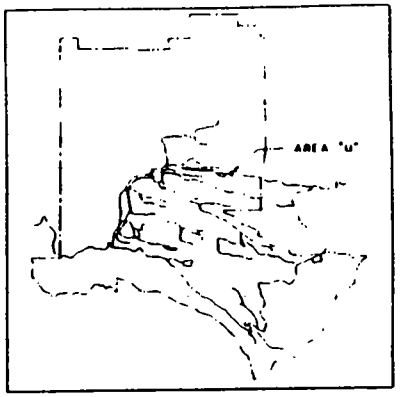
AUTHORIZED FOR

MATERIALS DISPOSAL AREAS
AREA "T"

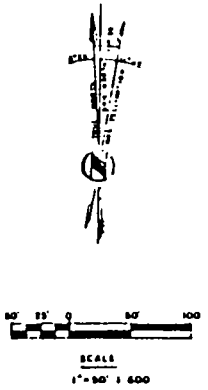
DP SITE TA 21

REV. 1 2/7/90





LOCATION PLAN



SCALE

FIGURE 21-12

MATERIAL DISPOSAL AREA U, TA-21

REV. 1 2/7/90

EXPLANATION

21-001 SWMU LOCATION

NOTES

21-017 SWMU ENCOMPASSES FENCED AREA

LOS ALAMOS SCIENTIFIC LABORATORY

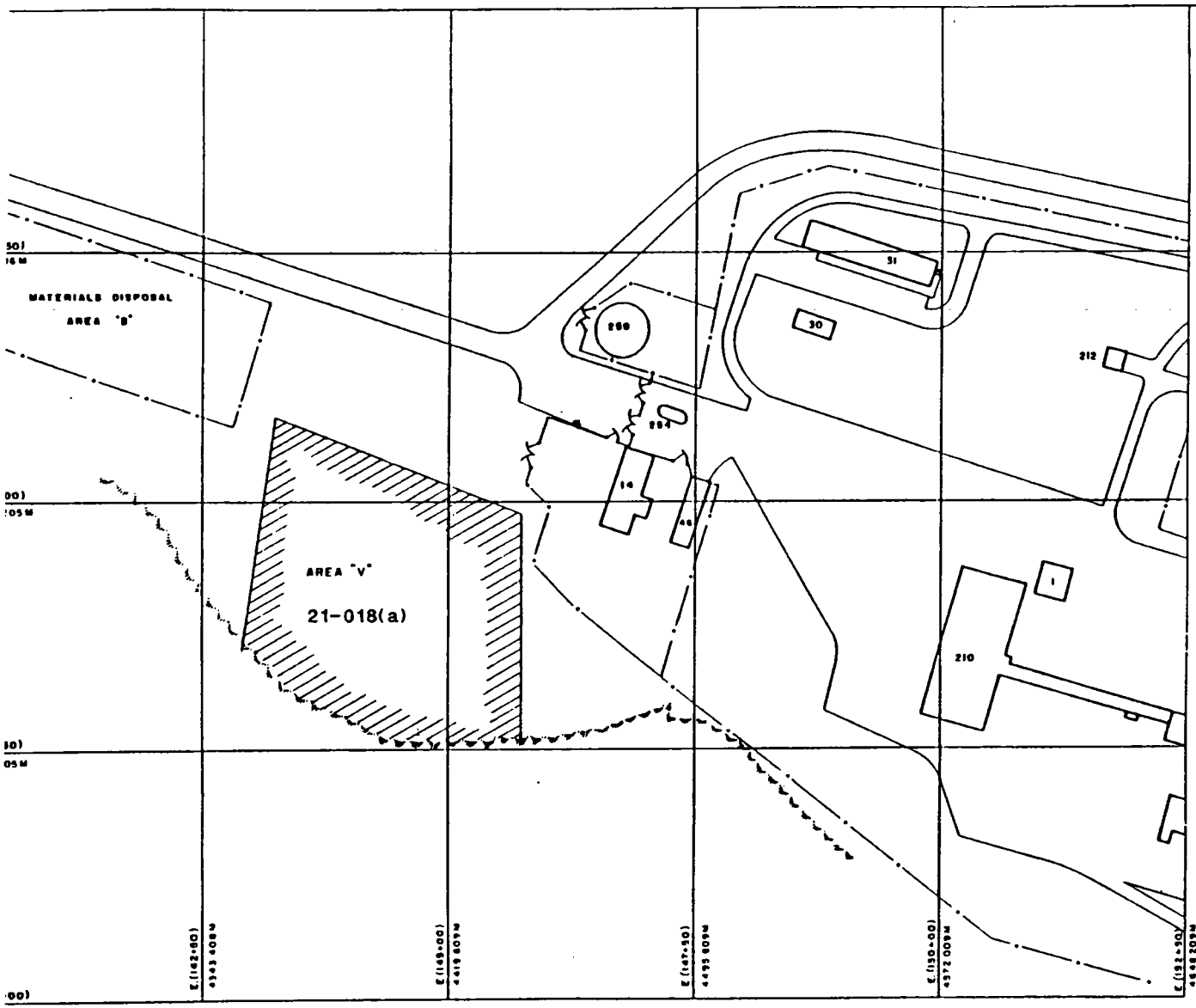
ENGINEERING DEPARTMENT

MATERIALS DISPOSAL AREAS

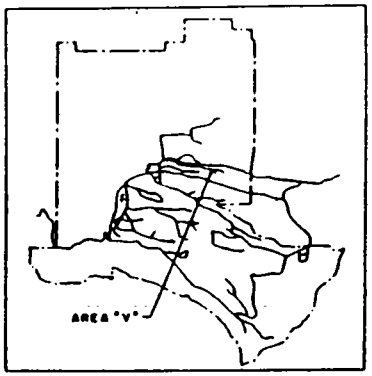
AREA "U"

DP - SITE TA - 21

ENG-R4471



REV. 12/7/90



LOCATION PLAN

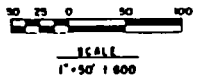
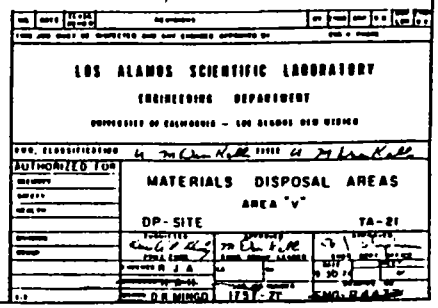


FIGURE 21-13

MATERIAL DISPOSAL AREA
V, TA-21



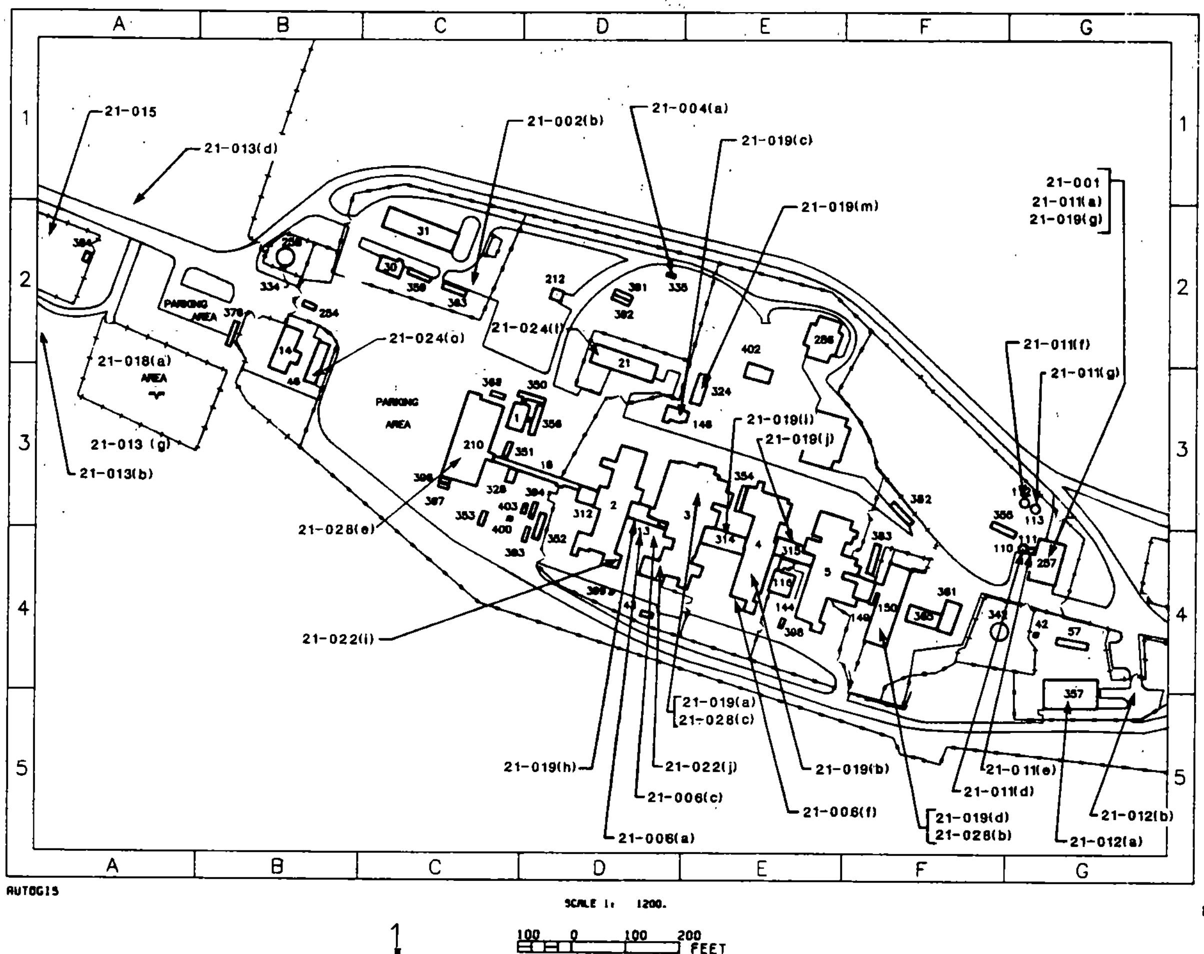
EXPLANATION

21-001 SWMU LOCATION

NOTES

21-018(a) SWMU ENCOMPASSES SHADED AREA

TA-21



REV. 1 2/7/90

STRUCTURE NUMBER INDEX

STRUCTURE TA-NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	STRUCTURE LOCATOR SHEET NO.	STRUCTURE LOCATOR MAP KEY
21- 1	DP- 1	OFFICE BUILDING	2	C-3
21- 2	DP- 2	LABORATORY	2	D-3
21- 3	DP- 3	LABORATORY	2	D-3
21- 4	DP- 4	LABORATORY	2	E-4
21- 5	DP- 5	LABORATORY	2	E-4
21- 14	DP- 14	INSTRUMENT BUILDING	2	B-2
21- 18	21- 18	PASSAGEWAY	2	C-3
21- 21	DP- 21	VAULT	2	D-3
21- 30	DP- 30	PAINT SHOP	2	C-2
21- 31	DP- 31	ELECTRONICS SHOP	2	C-2
21- 42	DP- 42	PUMP HOUSE	2	G-4
21- 46	DP- 46	WAREHOUSE	2	B-2
21- 57	21- 57	FUEL TANK	2	G-4
21- 59	DP- 59	LABORATORY	3	A-4
21- 61	DP- 61	LABORATORY	3	A-4
21- 65	DP- 65	EXPERIMENTAL BLDG.	3	A-4
21- 66	21- 66	CYLINDER STORAGE	3	A-4
21-110	21-110	ACID TANK	2	G-4
21-111	21-111	ACID TANK	2	G-4
21-112	DP-112	ACID TANK	2	G-3
21-113	DP-113	ACID TANK	2	G-3
21-116	21-116	EQUIPMENT WAREHOUSE	2	E-4
21-143	21-143	COOLING TOWER	2	D-4
21-144	21-144	PASSAGEWAY	2	E-4
21-146	DP-146	FILTER BUILDING	2	E-3
21-149	21-149	PASSAGEWAY	2	F-4
21-150	21-150	PLUT. FUEL SERVICE BLDG.	2	F-4
21-152	DP-152	LABORATORY	3	C-4
21-155	DP-155	FURNACE BUILDING	3	C-4
21-160	21-160	OPEN SHELTER	3	C-3
21-166	DP-166	EQUIPMENT BUILDING	3	C-4
21-167	DP-167	EQUIPMENT BUILDING	3	C-4
21-209	DP-209	HIGH TEMP. CHEMISTRY BLDG.	3	C-4
21-210	21-210	PLUT. RESEARCH SUPPORT BL.	2	C-3
21-212	DP-212	CALCIUM BUILDING	2	D-2
21-213	DP-213	LAB. SUPPLY WAREHOUSE	3	C-3
21-220	21-220	COOLING TOWER	3	B-3
21-227	DP-227	SEWAGE TREATMENT PLANT	3	G-5
21-228	21-228	REPLACEMENT WAREHOUSE	2	E-3
21-229	21-229	CONTROL BUILDING	3	G-5
21-230	21-230	SLUDGE DRYING BEDS	3	G-5
21-254	DP-254	GUARD HOUSE	2	B-2
21-257	DP-257	WASTE DISPOSAL PLANT	2	G-4
21-258	21-258	WATER TANK	2	B-2
21-286	DP-286	HOT STORAGE REPL. WHSE.	2	E-2
21-312	21-312	CORRIDOR STRUCTURE	2	D-3

FIGURE 21-1

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-21

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

FACILITIES ENGINEERING DIVISION

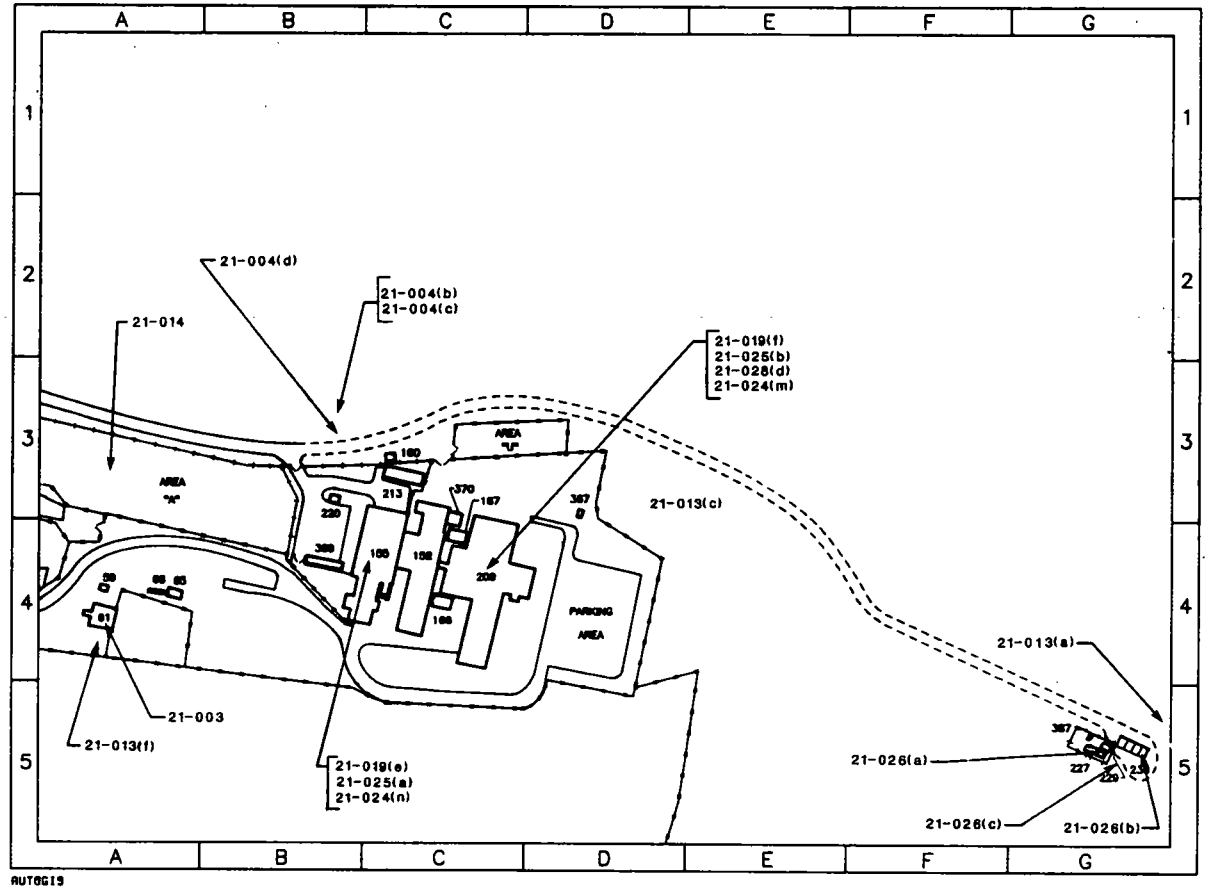
STRUCTURE LOCATION MAP

TA-21 DP-SITE

ENG- R5113

301215 02 01 B180

TA-21



SCALE 1: 1200.

100 0 100 200 FEET

REV. 1 2/7/90

STRUCTURE NUMBER INDEX

STRUCTURE TA-NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	STRUCTURE LOCATOR SHEET NO.	STRUCTURE LOCATOR MAP KEY
21-313	21-313	CORRIDOR STRUCTURE	2	D-3
21-314	21-314	CORRIDOR STRUCTURE	2	E-4
21-315	21-315	CORRIDOR STRUCTURE	2	E-4
21-324	DP-324	FILTER HOUSE	2	E-3
21-328	DP-328	MATERIALS RECEIVING BLDG.	2	C-3
21-334	21-334	UTILITY SHED	2	B-2
21-335	21-335	CONTAINMENT VESSEL	2	D-2
21-342	21-342	WATER TANK	2	F-4
21-350	DP-350	TRAILER, OFFICE	2	D-3
21-351	DP-351	TRAILER, OFFICE	2	C-3
21-352	DP-352	TRAILER, OFFICE	2	D-4
21-353	DP-353	TRAILER, CHANGE ROOM	2	C-3
21-354	DP-354	TRAILER, OFFICE	2	E-3
21-355	DP-355	TRAILER, OFFICE	2	F-4
21-356	DP-356	TRAILER, OFFICE	2	D-3
21-357	DP-357	STEAM PLANT	2	G-4
21-359	DP-359	TRAILER, OFFICE	2	C-2
21-361	DP-361	TRANSPORTABLE OFF. BLDG.	2	F-4
21-363	DP-363	TRAILER, OFFICE	2	C-2
21-365	DP-365	TRANSPORTABLE OFF. BLDG.	2	F-4
21-367	DP-367	TRANSPORTAINER	3	D-3
21-368	DP-368	COLD STORAGE UNIT	2	C-3
21-369	DP-369	TRAILER, OFFICE	3	B-4
21-370	DP-370	MECHANICAL EQUIP. BLDG.	3	C-4
21-376	DP-376	TRAILER, OFFICE	2	B-2
21-382	DP-382	TRAILER, OFFICE	2	F-4
21-383	DP-383	TRAILER, OFFICE	2	F-3
21-384	DP-384	STORAGE SHED	2	A-2
21-387	DP-387	STORAGE SHED	3	G-5
21-391	DP-391	TRAILER, STORAGE	2	D-2
21-392	DP-392	TRAILER, STORAGE	2	D-2
21-393	DP-393	TRAILER, EQUIPMENT	2	D-4
21-394	DP-394	TRAILER, EQUIPMENT	2	D-3
21-396	DP-396	TRANSPORTAINER	2	C-3
21-397	DP-397	TRANSPORTAINER	2	C-3
21-398	DP-398	TRANSPORTAINER	2	E-4
21-399	DP-399	TRANSPORTAINER	2	D-4
21-400	DP-400	TRANSPORTAINER	2	D-4
21-402	DP-402	OPEN SHED	2	E-2
21-403	DP-403	TRANSPORTAINER	2	D-3

FIGURE 21-2
SOLID WASTE MANAGEMENT
UNITS (SWMUs) IN TA-21

REV	DATE	REVISION	BY	CKD	APP'D
12	10-2-89	REDRAWN & REVISED TO STATUS OF 9-27-89	[illegible]	[illegible]	[illegible]
11	01-17-89	REDRAWN & REVISED TO STATUS OF 12-22-88	[illegible]	[illegible]	[illegible]

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

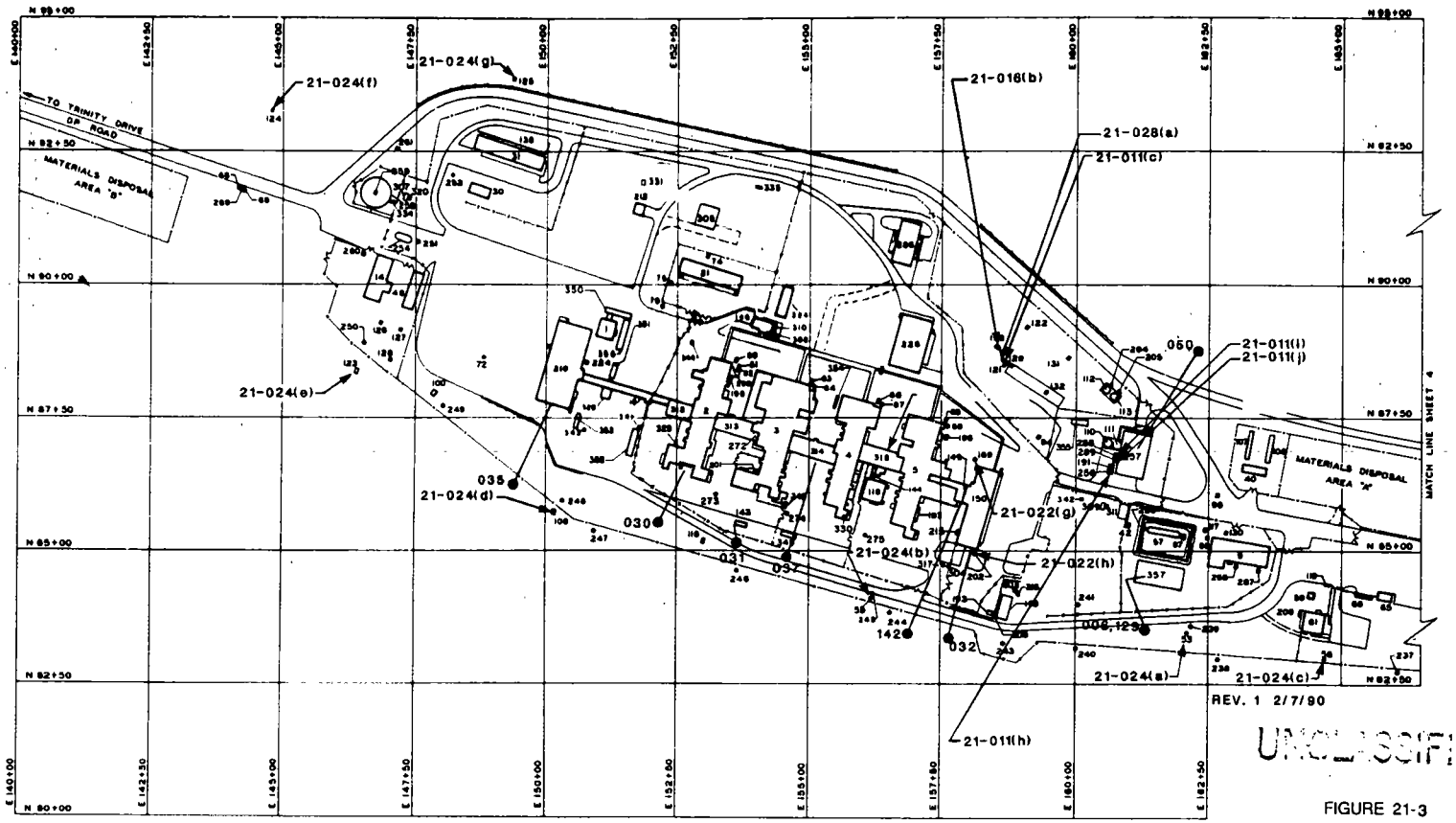
FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION MAP

SEC CLASSIFICATION: [illegible]
CLASS: U
REVIEWER: [illegible]
DATE: 1-17-89

TA-21 DP-SITE

SUBMITTED	RECOMMENDED	APPROVED
[illegible]	[illegible]	[illegible]
DRAWN: S. BLYTHE	DATE: 01-17-89	SHEET NO.: 3 of 3
CHECKED: R. BYERS		ENG- DRAWING NO.: RS113



REV. 1 2/7/90

UNCLASSIFIED

FIGURE 21-3

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-21

EXPLANATION

21-001 SWMU LOCATION

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

1" = 100'

GRAPHIC SCALE

NOTES

UNIT 21-002(a): DRUMS AND CYLINDERS WERE AT DIFFERENT LOCATIONS THROUGHOUT TA-21. THE PLACEMENT OF DRUMS CONSTANTLY CHANGES.

UNIT 21-021: SOIL CONTAMINATION FROM STACK EMISSIONS IS THROUGHOUT TA-21 TO THE AIRPORT.

10	6-3-93	REVISED TITLE BLOCK & DRW TO STATUS OF 6-1-93	K.S.	XS

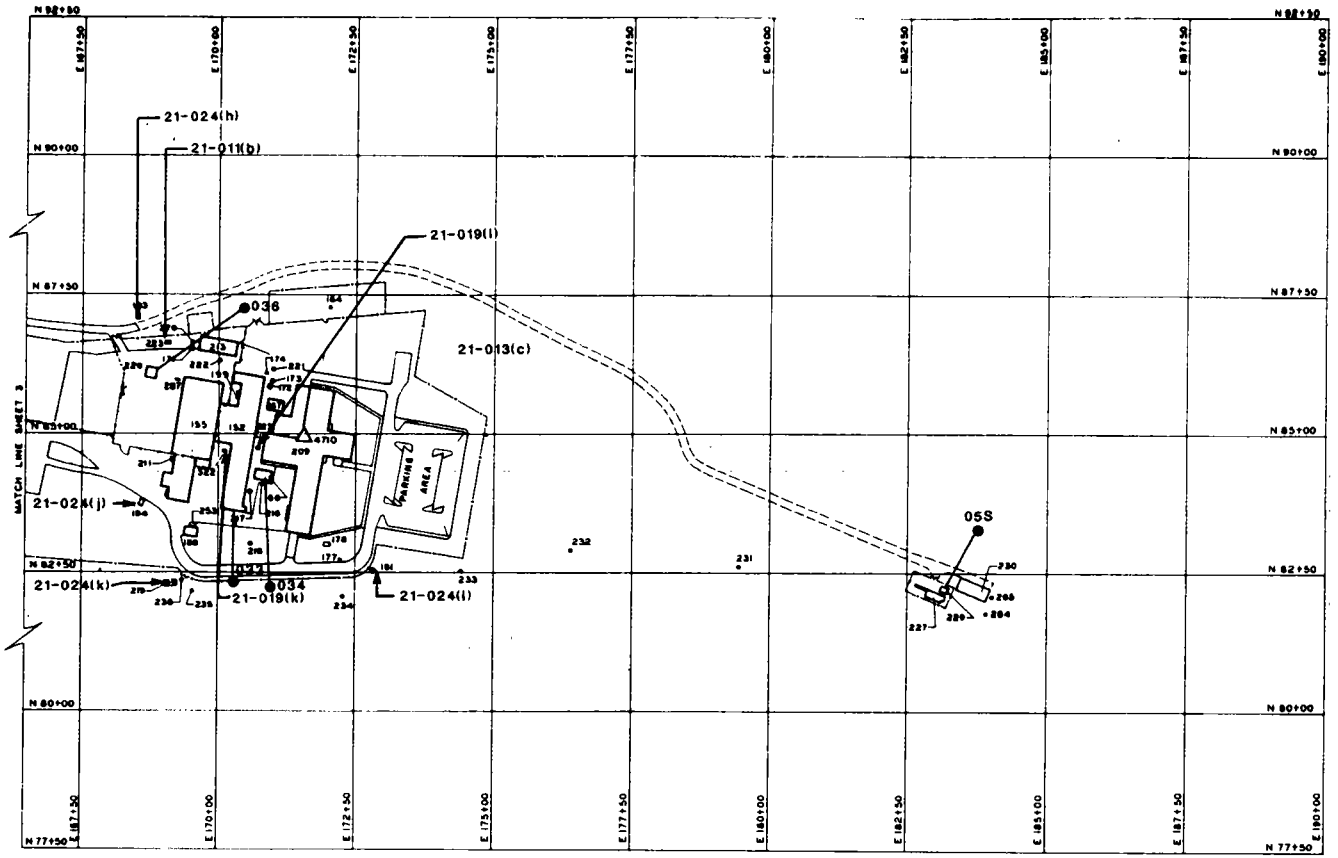
UNIVERSITY OF CALIFORNIA
Los Alamos — Los Alamos National Laboratory, Los Alamos, New Mexico 87545

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-21 DP-SITE

DESIGNED	DRAWN	DATE	SHEET NO.
		6-6-93	3 of 4

ENG-6513



LEGEND: ARCHY SITE STATUS

△ EXCAVATED

○ UNEXCAVATED

REV. 1 2/7/90

FIGURE 21-4

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-21

EXPLANATION

21-001 SWMU LOCATION

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

1" = 100'

GRAPHIC SCALE

NOTES

UNIT 21-013(a) UNIT LOCATION IS APPROXIMATE

UNCLASSIFIED

6	8-5-93	REVISED TITLE BLOCK & DWG TO STATUS OF 8-1-93	MLS

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

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-21 DP-SITE

SEC CLASSIFICATION: CLASS. U

SUBMITTED	RECOMMENDED	APPROVED
DRAWN	DATE 8-6-93	SHEET NO 9 OF 9
DESIGNED		DRAWING NO ENG-RB13

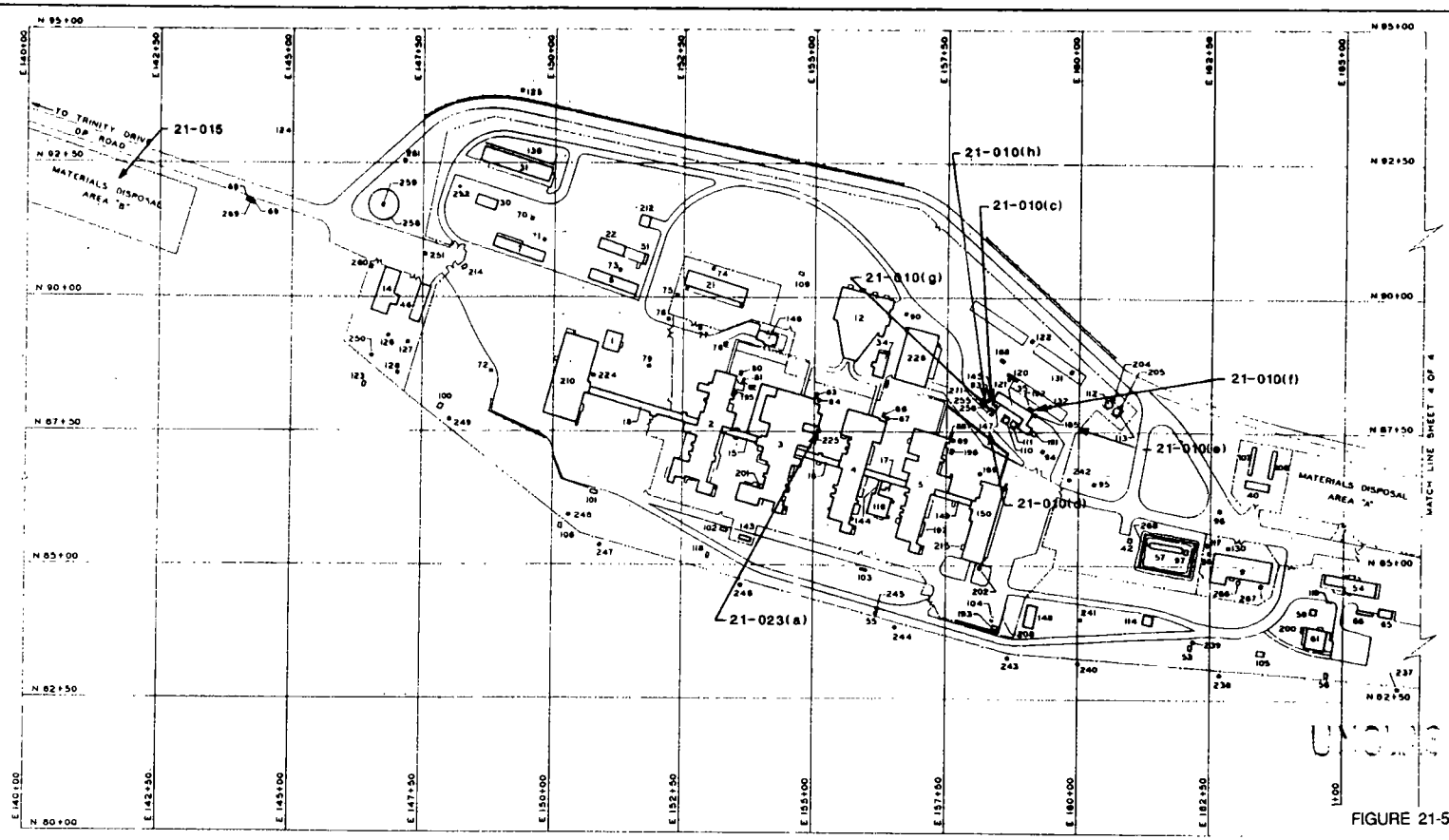


FIGURE 21-5

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-21

SCALE

NOTE:
THIS SET OF FOUR DRAWINGS CONSISTS OF:
ENG-R2449, INDEX SHEET, 1 OF 4
ENG-R2450, INDEX SHEET, 2 OF 4
ENG-R2451, SITE MAP, 3 OF 4
ENG-R2452, SITE MAP, 4 OF 4
THIS SET VOIDS AND SUPERSEDES DRAWINGS,
ENG-R2449, REV NO 10, DATED 5-13-88
ENG-R2450, REV NO 10, DATED 5-13-88

REV. 1 2/7/90

EXPLANATION

21-001 SWMU LOCATION

NO.	DATE	REVISIONS	BY
1	12 7 89	REVISED TO STATUS OF 12 7 89	
0	2-25-88	REDRAWN TO STATUS OF 2 88 (SEE NOTE)	

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

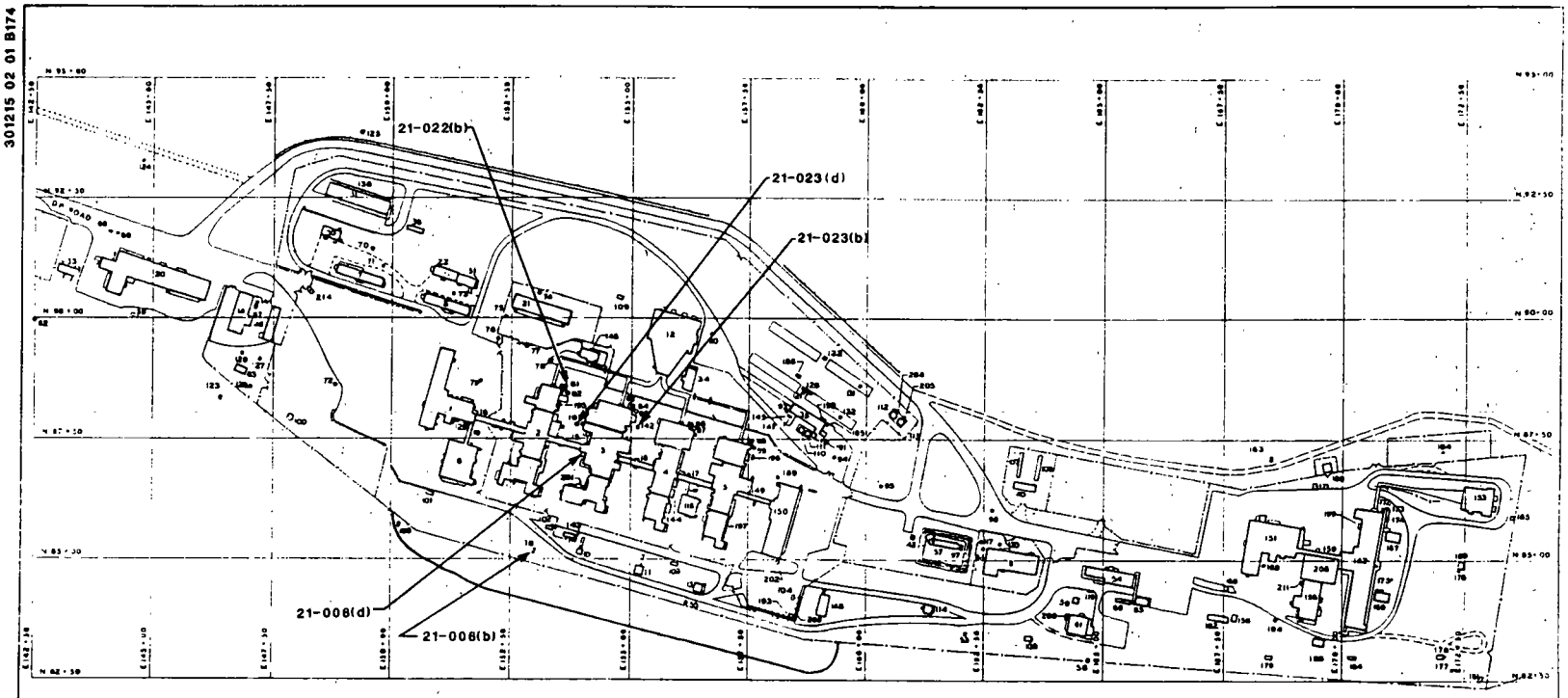
LOS ALAMOS SCIENTIFIC LABORATORY
ENGINEERING DEPARTMENT
UNIVERSITY OF CALIFORNIA — LOS ALAMOS, NEW MEXICO

STRUCTURE LOCATION PLAN
TA-21 DP-SITE

CHECKED		
DESIGNED		DATE 2-25-88
DRAWN T. ROYBAL	SCALE AS NOTED	SHEET 3 OF 4

ENG-R 2451

301215 02 01 B174



REV. 1 2/7/90

FIGURE 21-6

SOLID WASTE MANAGEMENT UNITS
(SWMUs)IN TA-21

EXPLANATION

21-001 SWMU LOCATION

SCALE

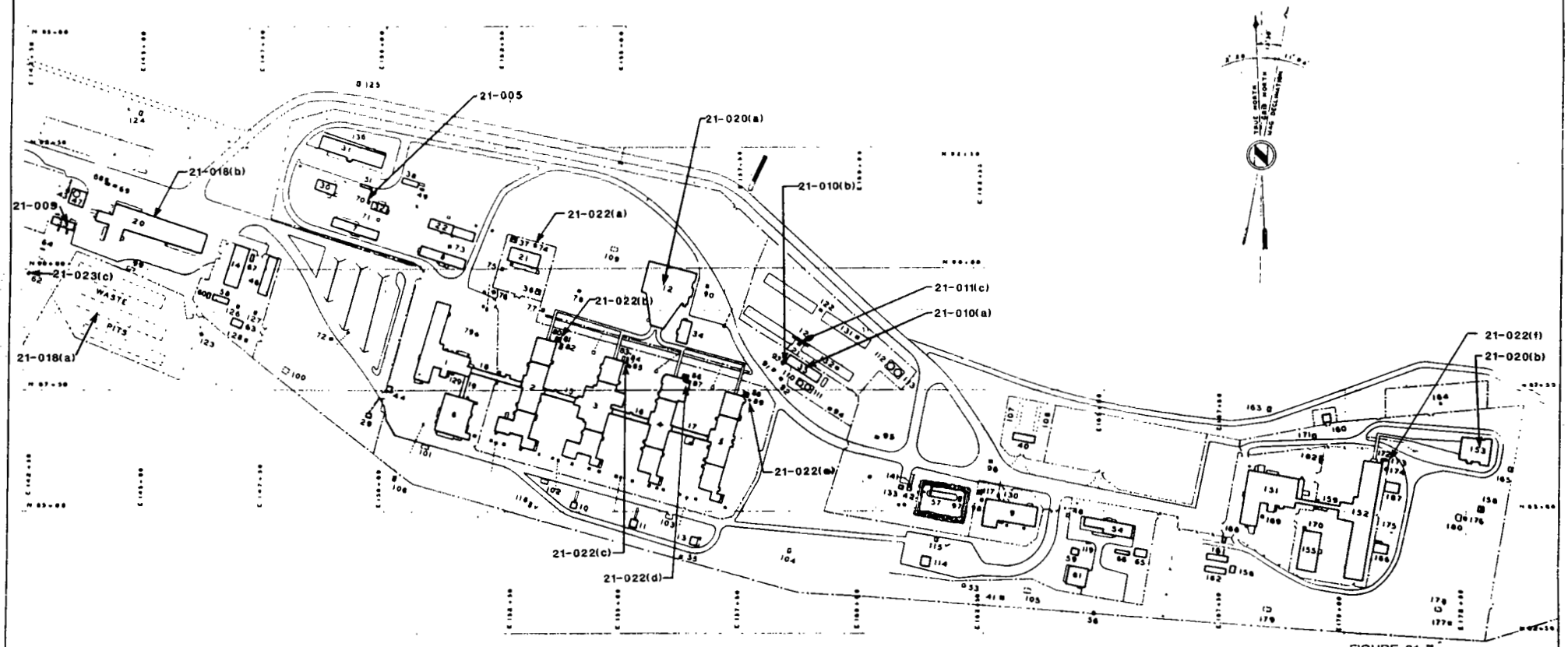
UNCLASSIFIED

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

STRUCTURE LOCATION PLAN
TA-21 DP-SITE

AUTHORIZED FOR

IRBY
6-15-84
AS NOTED
2 OF 2
ENG-R 2450



EXPLANATION

21-001 SWMU LOCATION

REV. 1 2/7/90

FIGURE 21-7

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-21

AUTHORIZED FOR

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

STRUCTURE LOCATION PLAN
TA-21 DP SITE

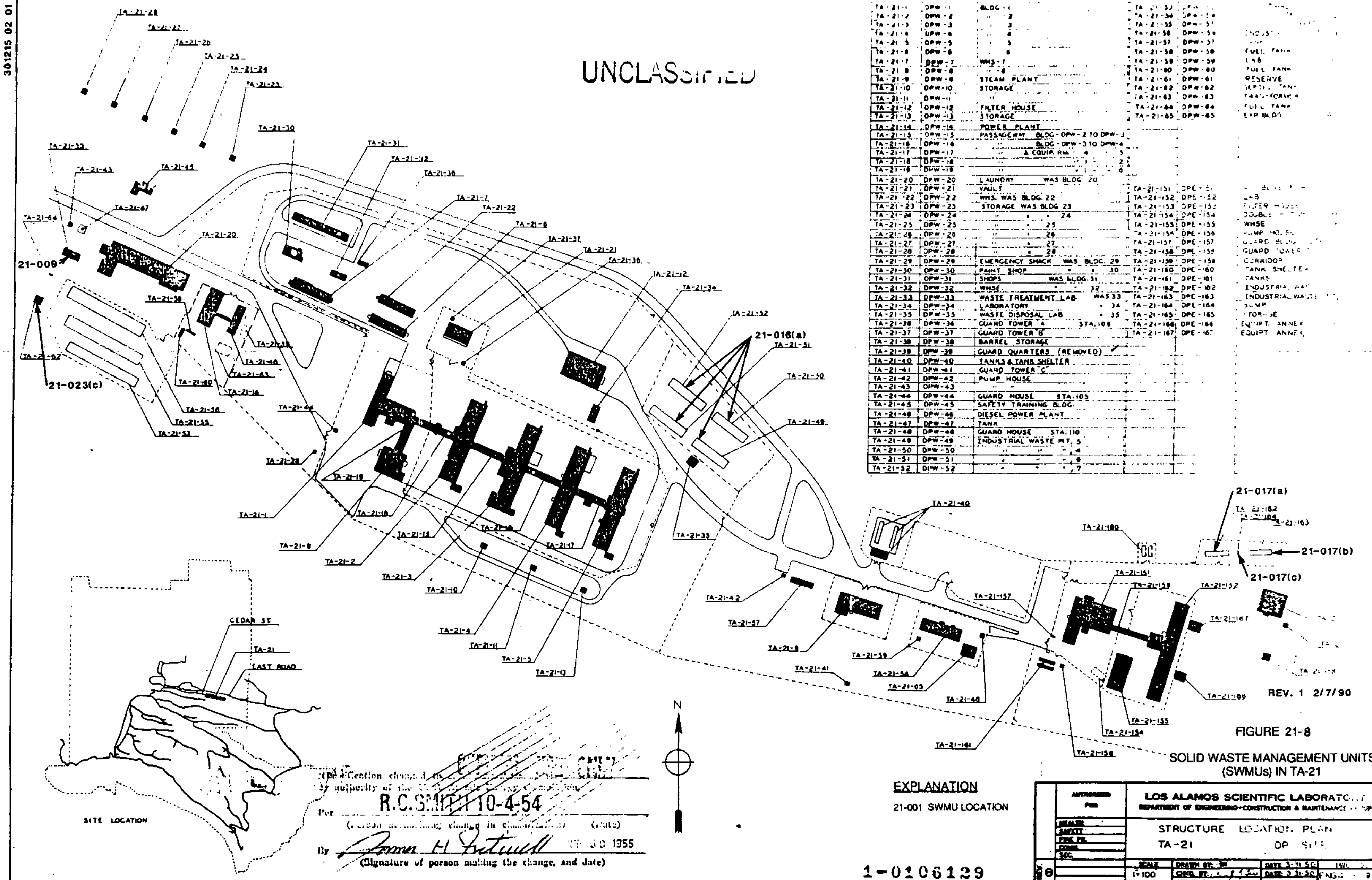
DRAWN H. BYERS
DATE 9-23-55
SCALE 1" = 100'
SHEET 2 OF 2
ENG-R 140

UNCLASSIFIED

UNCLASSIFIED

STRUCTURE NUMBER	DESIGNATION	REMARKS & FORMER DESIGNATION
TA-21-1	DPW-1	BLDG-1
TA-21-2	DPW-2	" -2
TA-21-3	DPW-3	" 3
TA-21-4	DPW-4	" 4
TA-21-5	DPW-5	" 5
TA-21-6	DPW-6	" 6
TA-21-7	DPW-7	WHS-7
TA-21-8	DPW-8	" -8
TA-21-9	DPW-9	STEAM PLANT
TA-21-10	DPW-10	STORAGE
TA-21-11	DPW-11	"
TA-21-12	DPW-12	FILTER HOUSE
TA-21-13	DPW-13	STORAGE
TA-21-14	DPW-14	POWER PLANT
TA-21-15	DPW-15	PASSAGEWAY BLDG-DPW-2 TO DPW-3
TA-21-16	DPW-16	" BLDG-DPW-3 TO DPW-4
TA-21-17	DPW-17	" & EQUIP. RM. 4 5
TA-21-18	DPW-18	" 1 2
TA-21-19	DPW-19	" 1 6
TA-21-20	DPW-20	LAUNDRY WAS BLDG 20
TA-21-21	DPW-21	VAULT
TA-21-22	DPW-22	WHS. WAS BLDG. 22
TA-21-23	DPW-23	STORAGE WAS BLDG 23
TA-21-24	DPW-24	" " " 24
TA-21-25	DPW-25	" " 25
TA-21-26	DPW-26	" " 26
TA-21-27	DPW-27	" " 27
TA-21-28	DPW-28	" " 28
TA-21-29	DPW-29	EMERGENCY SHACK WAS BLDG. 29
TA-21-30	DPW-30	PAINT SHOP " " 30
TA-21-31	DPW-31	SHOPS WAS BLDG. 31
TA-21-32	DPW-32	WHSE. " " 32
TA-21-33	DPW-33	WASTE TREATMENT LAB. WAS 33
TA-21-34	DPW-34	LABORATORY " 34
TA-21-35	DPW-35	WASTE DISPOSAL LAB " 35
TA-21-36	DPW-36	GUARD TOWER "A" STA. 106
TA-21-37	DPW-37	GUARD TOWER "B"
TA-21-38	DPW-38	BARREL STORAGE
TA-21-39	DPW-39	GUARD QUARTERS (REMOVED)
TA-21-40	DPW-40	TANKS & TANK SHELTER
TA-21-41	DPW-41	GUARD TOWER "C"
TA-21-42	DPW-42	PUMP HOUSE
TA-21-43	DPW-43	" "
TA-21-44	DPW-44	GUARD HOUSE STA. 105
TA-21-45	DPW-45	SAFETY TRAINING BLDG.
TA-21-46	DPW-46	DIESEL POWER PLANT
TA-21-47	DPW-47	TANK
TA-21-48	DPW-48	GUARD HOUSE STA. 110
TA-21-49	DPW-49	INDUSTRIAL WASTE PIT, 5
TA-21-50	DPW-50	" " " 4
TA-21-51	DPW-51	" " " 6
TA-21-52	DPW-52	" " " 7

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-21-53	[illegible]	[illegible]
TA-21-54	DPW-54	[illegible]
TA-21-55	DPW-55	[illegible]
TA-21-56	DPW-56	INDUST[illegible]
TA-21-57	DPW-57	[illegible]
TA-21-58	DPW-58	FUEL TANK
TA-21-59	DPW-59	LAB
TA-21-60	DPW-60	FUEL TANK
TA-21-61	DPW-61	RESERVE
TA-21-62	DPW-62	SEPTIC TANK
TA-21-63	DPW-63	TRANSFORMER
TA-21-64	DPW-64	FUEL TANK
TA-21-65	DPW-65	EXP. BLDG
TA-21-151	DPE-151	[illegible]
TA-21-152	DPE-152	LAB
TA-21-153	DPE-153	FILTER HOUSE
TA-21-154	DPE-154	DOUBLE [illegible]
TA-21-155	DPE-155	WHSE
TA-21-156	DPE-156	PUMP HOUSE
TA-21-157	DPE-157	GUARD BLDG [illegible]
TA-21-158	DPE-158	GUARD TOWER [illegible]
TA-21-159	DPE-159	CORRIDOR
TA-21-160	DPE-160	TANK SHELTER
TA-21-161	DPE-161	TANKS
TA-21-162	DPE-162	INDUSTRIAL WA[illegible]
TA-21-163	DPE-163	INDUSTRIAL WASTE [illegible]
TA-21-164	DPE-164	SUMP
TA-21-165	DPE-165	STORAGE
TA-21-166	DPE-166	EQUIPT. ANNEX
TA-21-167	DPE-167	EQUIPT. ANNEX



REV. 1 2/7/90

FIGURE 21-8

SOLID WASTE MANAGEMENT UNITS (SWMUs) IN TA-21

EXPLANATION

21-001 SWMU LOCATION

Classification changed to [illegible] by authority of the [illegible]
Per R.C. SMITH 10-4-54
(person authorizing change in classification) (date)
By [signature] [illegible] 1955
(Signature of person making the change, and date)

1-0106129

LOS ALAMOS SCIENTIFIC LABORATORY
DEPARTMENT OF ENGINEERING—CONSTRUCTION & MAINTENANCE GROUP

STRUCTURE LOCATION PLAN
TA-21 DP SITE

SCALE 1"=100

301215 02 01 B63

30121502 01 826

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-21-1	OP-1	OFFICE, VAULT BUILDING		N87+50 E130+00
TA-21-2	OP-2	LABORATORY BUILDING		N87+50 E132+50
TA-21-3	OP-3	LABORATORY BUILDING		N87+50 E133+00
TA-21-4	OP-4	LABORATORY BUILDING		N87+50 E135+00
TA-21-5	OP-5	LABORATORY BUILDING		N87+50 E137+50
TA-21-6	OP-6	MACH. SHOP, CAFETERIA	REMOVED 1986	
TA-21-7	OP-7	WAREHOUSE	REMOVED 1987	
TA-21-8	OP-8	WAREHOUSE	REMOVED 1987	
TA-21-9	OP-9	STEAM PLANT		N83+00 E182+50
TA-21-10	OP-10	STORAGE BUILDING	REMOVED 1968	
TA-21-11	OP-11	STORAGE BUILDING	REMOVED 1993	
TA-21-12	OP-12	FILTER BUILDING	REMOVED 1979	
TA-21-13	OP-13	STORAGE BUILDING	REMOVED 1965	
TA-21-14	OP-14	INSTRUMENT BUILDING		N90+00 E147+50
TA-21-15	OP-15	PASSAGEWAY	REMOVED 1968	
TA-21-16	OP-16	PASSAGEWAY	REMOVED 1968	
TA-21-17	OP-17	PASSAGEWAY	REMOVED 1951	
TA-21-18	OP-18	PASSAGEWAY		N87+50 E152+50
TA-21-19	OP-19	PASSAGEWAY	REMOVED 1946	
TA-21-20	OP-20	LAUNDRY	REMOVED 1965	
TA-21-21	OP-21	VAULT		N90+00 E132+50
TA-21-22	OP-22	WAREHOUSE	REMOVED 1967	
TA-21-23	OP-23	STORAGE BUILDING	REMOVED 1954	
TA-21-24	OP-24	STORAGE BUILDING	REMOVED 1953	
TA-21-25	OP-25	STORAGE BUILDING	REMOVED 1953	
TA-21-26	OP-26	STORAGE BUILDING	REMOVED 1954	
TA-21-27	OP-27	STORAGE BUILDING	REMOVED 1954	
TA-21-28	OP-28	STORAGE BUILDING	REMOVED 1954	
TA-21-29	OP-29	EMERGENCY EQUIP BLDG.	REMOVED 1939	
TA-21-30	OP-30	PAINT SHOP		N92+50 E147+50
TA-21-31	OP-31	ELECTRONICS BUILDING		N92+50 E150+00
TA-21-32	OP-32	WAREHOUSE	REMOVED 1960	
TA-21-33	OP-33	WASTE TREATMENT LAB	REMOVED 1965	
TA-21-34	OP-34	LABORATORY BUILDING	REMOVED 1959	
TA-21-35	OP-35	WASTE DISPOSAL LAB	REMOVED 1968	
TA-21-36	OP-36	GUARD TOWER	REMOVED 1990	
TA-21-37	OP-37	GUARD TOWER	REMOVED 1990	
TA-21-38	OP-38	BARREL STORAGE	REMOVED 1966	
TA-21-39	OP-39	GUARD QUARTERS	REMOVED 1946	
TA-21-40	OP-40	TANK SHELTER		N87+50 E182+50
TA-21-41	OP-41	GUARD TOWER	REMOVED 1980	
TA-21-42	OP-42	PUMP HOUSE		N83+00 E180+00
TA-21-43	OP-43	PUMP HOUSE	REMOVED 1980	
TA-21-44	OP-44	GUARD HOUSE	REMOVED 1964	
TA-21-45	OP-45	SAFETY TRAINING BLDG.	REMOVED 1954	
TA-21-46	OP-46	WAREHOUSE		N90+00 E147+50
TA-21-47	OP-47	TANK FUEL	REMOVED 1980	
TA-21-48	OP-48	GUARD HOUSE	REMOVED 1958	
TA-21-49	OP-49	STORAGE BUILDING	REMOVED 1958	
TA-21-50	OP-50	DRUM STORAGE	REMOVED 1981	
TA-21-51	OP-51	CYLINDER STORAGE	REMOVED 1967	
TA-21-52	OP-52	CYLINDER STORAGE	REMOVED 1955	
TA-21-53	OP-53	TANK, SEPTIC	ABANDONED 1980	N82+50 E182+50
TA-21-54	OP-54	LABORATORY BUILDING	REMOVED 1968	
TA-21-55	OP-55	TANK, SEPTIC	ABANDONED 1988	N83+00 E155+00
TA-21-56	OP-56	TANK, SEPTIC	ABANDONED 1958	N83+00 E182+50
TA-21-57	OP-57	TANK	FUEL	N83+00 E182+50
TA-21-58	OP-58	TANK, FUEL	REMOVED 1957	
TA-21-59	OP-59	LABORATORY BUILDING		N83+00 E163+00
TA-21-60	OP-60	TANK FUEL	REMOVED 1957	
TA-21-61	OP-61	LABORATORY BUILDING	REMOVED 1957	
TA-21-62	OP-62	TANK, SEPTIC	REMOVED 1985	N82-30 E183+00
TA-21-63	OP-63	TRANSFORMER STATION	REMOVED 1981	
TA-21-64	OP-64	TANK - JEL	REMOVED 1983	
TA-21-65	OP-65	EXPERIMENTAL BUILDING		N83+00 E165+00
TA-21-66	OP-66	CYLINDER STORAGE		N83+00 E165+00
TA-21-67	OP-67	TRANSFORMER STATION	REMOVED 1958	
TA-21-68	OP-68	MANHOLE	WATER	N92+50 E145+00
TA-21-69	OP-69	MANHOLE	WATER	N92+50 E145+00
TA-21-70	OP-70	MANHOLE, ACID	REMOVED 1967	
TA-21-71	OP-71	MANHOLE, STEAM	REMOVED 1958	
TA-21-72	OP-72	MANHOLE, ELECTRIC	ABANDONED 1964	N87+50 E150+00
TA-21-73	OP-73	MANHOLE, STEAM	REMOVED 1968	
TA-21-74	OP-74	MANHOLE	ACID SUMP	N90+00 E152+50
TA-21-75	OP-75	MANHOLE	STEAM	N90+00 E152+50
TA-21-76	OP-76	MANHOLE	STORM DRAINAGE	N90+00 E152+50
TA-21-77	OP-77	MANHOLE	STEAM	N90+00 E152+50
TA-21-78	OP-78	MANHOLE	STEAM	N90+00 E152+50
TA-21-79	OP-79	MANHOLE	ELECTRICAL	N87+50 E152+50
TA-21-80	OP-80	PRV STATION	WATER	N87+50 E152+50
TA-21-81	OP-81	MANHOLE	ACID	N87+50 E152+50
TA-21-82	OP-82	MANHOLE	WATER PRV.	N87+50 E152+50
TA-21-83	OP-83	PRV STATION	WATER	N87+50 E155+00
TA-21-84	OP-84	MANHOLE	ACID	N87+50 E155+00
TA-21-85	OP-85	MANHOLE	REMOVED 1958	
TA-21-86	OP-86	PRV STATION	WATER	N87+50 E157+50
TA-21-87	OP-87	MANHOLE	ACID	N87+50 E157+50
TA-21-88	OP-88	PRV STATION	WATER	N87+50 E157+50
TA-21-89	OP-89	MANHOLE	ACID	N87+50 E157+50
TA-21-90	OP-90	MANHOLE	REMOVED 1968	
TA-21-91	OP-91	MANHOLE	REMOVED 1981	
TA-21-92	OP-92	MANHOLE	REMOVED 1968	
TA-21-93	OP-93	MANHOLE, ACID	REMOVED 1968	
TA-21-94	OP-94	MANHOLE	ELECTRICAL	N87+50 E180+00
TA-21-95	OP-95	MANHOLE, ELECTRICAL	REMOVED 1967	
TA-21-96	OP-96	MANHOLE	ELECTRICAL	N83+00 E182+50
TA-21-97	OP-97	MANHOLE	FUEL STRAINER PIT	N83+00 E182+50

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-21-98	OP-98	MANHOLE	STEAM PIT	N83+00 E182+50
TA-21-99	OP-99	TRANSFORMER STATION		N83+00 E147+50
TA-21-100	OP-100	TRANSFORMER STATION		N87+50 E147+50
TA-21-101	OP-101	TRANSFORMER STATION	REMOVED 1977	
TA-21-102	OP-102	TRANSFORMER STATION	REMOVED 1977	
TA-21-103	OP-103	TRANSFORMER STATION	REMOVED 1977	
TA-21-104	OP-104	TRANSFORMER STATION	REMOVED 1977	
TA-21-105	OP-105	TRANSFORMER STATION	REMOVED 1977	
TA-21-106	OP-106	TANK, SEPTIC	ABANDONED 1988	N83+00 E130+00
TA-21-107	OP-107	TANK	UNDERGROUND, ACID	N87+50 E182+50
TA-21-109	OP-109	TANK	UNDERGROUND, ACID	N87+50 E182+50
TA-21-109	OP-109	TRANSFORMER STATION	REMOVED 1977	
TA-21-110	OP-110	TANK	ACID	N87+50 E180+00
TA-21-111	OP-111	TANK	ACID	N87+50 E180+00
TA-21-112	OP-112	TANK	ACID	N87+50 E180+00
TA-21-113	OP-113	TANK	ACID	N87+50 E180+00
TA-21-114	OP-114	EXPERIMENTAL TOWER	REMOVED 1968	
TA-21-115	OP-115	INSTRUMENT BUILDING	REMOVED 1958	
TA-21-116	OP-116	EQUIPMENT WAREHOUSE		N83+00 E133+00
TA-21-117	OP-117	TOWER		N85+00 E182+50
TA-21-118	OP-118	ACID PIT		N83+00 E132+50
TA-21-119	OP-119	TANK	FUEL	N83+00 E182+00
TA-21-120	OP-120	TANK	ACID	N87+50 E180+00
TA-21-121	OP-121	ACID SUMP		N87+50 E180+00
TA-21-122	OP-122	ACID SUMP		N90+00 E180+00
TA-21-123	OP-123	TANK, ACID	ABANDONED 1988	N87+50 E147+50
TA-21-124	OP-124	TANK, SEPTIC	ABANDONED 1988	N92+50 E143+00
TA-21-125	OP-125	TANK, SEPTIC	ABANDONED 1988	N83+00 E150+00
TA-21-126	OP-126	MANHOLE, ELECTRIC	ABANDONED 1981	N90+00 E147+50
TA-21-127	OP-127	MANHOLE, ELECTRIC	ABANDONED 1981	N90+00 E147+50
TA-21-128	OP-128	MANHOLE, ELECTRIC	ABANDONED 1981	N87+50 E147+50
TA-21-129	OP-129	MANHOLE	REMOVED 1965	
TA-21-130	OP-130	MANHOLE	WATER PRV.	N83+00 E182+50
TA-21-131	OP-131	ACID SUMP		N87+50 E180+00
TA-21-132	OP-132	ACID SUMP		N87+50 E180+00
TA-21-133	OP-133	STORAGE BUILDING	REMOVED 1982	
TA-21-134	OP-134	PUMP HOUSE	REMOVED 1946	
TA-21-135	OP-135	PUMP HOUSE	REMOVED 1948	
TA-21-136	OP-136	RETAINING WALL		N92-50 E130+00
TA-21-137	OP-137	PUMP HOUSE	CANCELLED	
TA-21-138	OP-138	GUARD TOWER	REMOVED 1952	
TA-21-139	OP-139	GUARD TOWER	REMOVED 1952	
TA-21-140	OP-140	GUARD TOWER	REMOVED 1952	
TA-21-141	OP-141	MANHOLE	CANCELLED	
TA-21-142	OP-142	TANK, SEPTIC	REMOVED 1985	
TA-21-143	OP-143	COOLING TOWER		N83+00 E132+50
TA-21-144	OP-144	PASSAGEWAY	BLDG. 116 TO PASS. 315	N87+00 E132+00
TA-21-145	OP-145	TANK	REMOVED 1968	
TA-21-146	OP-146	FILTER BUILDING		N90+00 E132+00
TA-21-147	OP-147	TANK	REMOVED 1968	
TA-21-148	OP-148	SUBSTATION		N83+00 E180+00
TA-21-149	OP-149	CORRIDOR STRUCTURE	BLDG. 3 TO 150	N83+00 E137+50
TA-21-150	OP-150	PLUT. FUEL SERVICE BLDG.		N83+00 E137+50
TA-21-151	OP-151	ADMIN BLDG. & SHOP	REMOVED 1980	
TA-21-152	OP-152	LABORATORY BUILDING		N83+00 E179+00
TA-21-153	OP-153	FILTER	DEMOLISHED 1978	
TA-21-154	OP-154	DOUBLE HUTMENT	REMOVED 1949	
TA-21-155	OP-155	FURNACE BUILDING		N83+00 E179+00
TA-21-156	OP-156	PUMP HOUSE	REMOVED 1964	
TA-21-157	OP-157	GUARD HOUSE	REMOVED 1950	
TA-21-158	OP-158	GUARD TOWER	REMOVED 1980	
TA-21-159	OP-159	PASSAGEWAY	REMOVED 1905	
TA-21-160	OP-160		REMOVED 1971	
TA-21-161	OP-161	TANK, WATER	RELOCATED TO TA-35-30	
TA-21-162	OP-162	TANK, WATER	RELOCATED TO TA-3-730	
TA-21-163	OP-163	TANK, SEPTIC	ABANDONED 1966	N87+50 E187+50
TA-21-164	OP-164	ACID SUMP		N87+50 E172+50
TA-21-165	OP-165	STORAGE BUILDING	REMOVED 1964	
TA-21-166	OP-166	EQUIPMENT BUILDING		N83+00 E170+00
TA-21-167	OP-167	EQUIPMENT BUILDING		N83+00 E170+00
TA-21-168	OP-168	GUARD HOUSE	REMOVED 1966	
TA-21-169	OP-169	MANHOLE, WATER PRV	REMOVED 1965	
TA-21-170	OP-170	MANHOLE	REMOVED 1964	
TA-21-171	OP-171	MANHOLE	WATER VALVE BOX	N87+50 E179+00
TA-21-172	OP-172	PRV STATION	WATER	N83+00 E179+00
TA-21-173	OP-173	MANHOLE	ACID	N83+00 E179+00
TA-21-174	OP-174	MANHOLE	WATER	N83+00 E179+00
TA-21-175	OP-175	MANHOLE	REMOVED 1965	
TA-21-176	OP-176	MANHOLE	REMOVED 1965	
TA-21-177	OP-177	MANHOLE, ELECTRIC	ABANDONED 1965	N82-50 E172-50
TA-21-178	OP-178	TRANSFORMER STATION		N82-50 E172-50
TA-21-179	OP-179	TRANSFORMER STATION	REMOVED 1977	
TA-21-180	OP-180	TRANSFORMER STATION	REMOVED 1965	
TA-21-181	OP-181	TANK, SEPTIC	ABANDONED 1965	N82-50 E172-50
TA-21-182	OP-182	DRUM STORAGE	REMOVED 1964	
TA-21-183	OP-183	GUARD TOWER	REMOVED 1948	
TA-21-184	OP-184	SUBSTATION	REMOVED 1977	
TA-21-185	OP-185	TANK, ACID	REMOVED 1958	
TA-21-186	OP-186	ACID PIT		N90-00 E137-50
TA-21-187	OP-187	TANK ACID	REMOVED 1966	
TA-21-188	OP-188	SUBSTATION		N82-50 E170+00
TA-21-189	OP-189	MANHOLE	ACID	N87+50 E187+50
TA-21-190	OP-190	SAMPLING BUILDING	CANCELLED	
TA-21-191	OP-191	CEMENT STORAGE SILO		N87+50 E180+00
TA-21-192	OP-192	GRIT CHAMBER	REMOVED 1968	
TA-21-193	OP-193	SUBSTATION		N83+00 E137+50
TA-21-194	OP-194	TANK, SEPTIC	ABANDONED 1988	N88+00 E187+50

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-21-195	OP-195	MANIFOLD	HELIUM	N87+50 E182+50
TA-21-196	OP-196	MANIFOLD	OXYGEN	N87+50 E187+50
TA-21-197	OP-197	MANIFOLD	HELIUM	N83+00 E187+50
TA-21-198	OP-198	MANIFOLD	CANCELLED	
TA-21-199	OP-199	MANIFOLD	HELIUM	N83+00 E170+00
TA-21-200	OP-200	MANIFOLD	HELIUM	N83+00 E182+00
TA-21-201	OP-201	MANIFOLD	OXYGEN	N87+50 E182+00
TA-21-202	OP-202	MANHOLE	ACID	N83+00 E157+50
TA-21-203	OP-203	DRY AIR SYSTEM BUILDING	CANCELLED	
TA-21-204	OP-204	VALVE PIT	ACID	N87+50 E160+00
TA-21-205	OP-205	VALVE PIT	ACID	N87+50 E160+00
TA-21-206	OP-206	DEVELOPMENT BUILDING	INCORPORATED OP-155	N85+00 E170+00
TA-21-207	OP-207	FURNACE BUILDING	INCORPORATED OP-155	N85+00 E170+00
TA-21-208	OP-208	RETAINING WALL		N85+00 E157+50
TA-21-209	OP-209	HIGH TEMP CHEMISTRY BLDG		N85+00 E172+50
TA-21-210	OP-210	PU RESEARCH SUPPORT BLDG		N87+50 E150+00
TA-21-211	OP-211	MANIFOLD		N85+00 E170+00
TA-21-212	OP-212	CALCIUM BUILDING		N92+50 E152+50
TA-21-213	OP-213	LAB SUPPLY WAREHOUSE		N87+50 E170+00
TA-21-214	OP-214	GUARD HOUSE	RELOCATED TO TA-49-1	
TA-21-215	OP-215	MANIFOLD	ARGON	N85+00 E157+50
TA-21-216	OP-216	MANHOLE	STEAM	N85+00 E170+00
TA-21-217	OP-217	MANHOLE	SANITARY	N85+00 E170+00
TA-21-218	OP-218	MANHOLE	SANITARY	N82+50 E170+00
TA-21-219	OP-219	TANK, SEPTIC	ABANDONED 1986	N82+50 E170+00
TA-21-220	OP-220	COOLING TOWER		N85+00 E187+50
TA-21-221	OP-221	MANHOLE	ACID	N85+00 E170+00
TA-21-222	OP-222	MANHOLE	ACID	N85+00 E170+00
TA-21-223	OP-223	MANHOLE	ACID SUMP	N87+50 E170+00
TA-21-224	OP-224	MANHOLE	ELECTRIC	N87+50 E150+00
TA-21-225	OP-225	TANK, SEPTIC	REMOVED 1966	
TA-21-226	OP-226	MANHOLE	REMOVED 1968	
TA-21-227	OP-227	SEWAGE TREATMENT PLANT		N82+50 E182+50
TA-21-226	OP-226	REPLACEMENT WAREHOUSE		N90+00 E157+50
TA-21-229	OP-229	CONTROL BUILDING		N82+50 E182+50
TA-21-230	OP-230	SLUDGE DRYING BEDS		N82+50 E182+50
TA-21-231	OP-231	MANHOLE	SANITARY	N82+50 E180+00
TA-21-232	OP-232	MANHOLE	SANITARY	N82+50 E180+00
TA-21-233	OP-233	MANHOLE	SANITARY	N82+50 E175+00
TA-21-234	OP-234	MANHOLE	SANITARY	N82+50 E172+50
TA-21-235	OP-235	MANHOLE	SANITARY	N82+50 E170+00
TA-21-236	OP-236	MANHOLE	SANITARY	N82+50 E165+00
TA-21-237	OP-237	MANHOLE	SANITARY	N82+50 E165+00
TA-21-238	OP-238	MANHOLE	SANITARY	N82+50 E162+50
TA-21-239	OP-239	MANHOLE	SANITARY	N82+50 E162+50
TA-21-240	OP-240	MANHOLE	SANITARY	N82+50 E160+00
TA-21-241	OP-241	MANHOLE	SANITARY	N85+00 E160+00
TA-21 242	OP-242	MANHOLE	SANITARY	N87+50 E160+00
TA-21-243	OP-243	MANHOLE	SANITARY	N82+50 E157+50
TA-21-244	OP-244	MANHOLE	SANITARY	N82+50 E157+50
TA-21-245	OP-245	MANHOLE	SANITARY	N85+00 E157+50
TA-21-246	OP-246	MANHOLE	SANITARY	N85+00 E152+50
TA-21-247	OP-247	MANHOLE	SANITARY	N85+00 E150+00
TA-21-248	OP-248	MANHOLE	SANITARY	N85+00 E150+00
TA-21-249	OP-249	MANHOLE	SANITARY	N87+50 E147+50
TA-21-250	OP-250	MANHOLE	SANITARY	N90+00 E147+50
TA-21-251	OP-251	MANHOLE	SANITARY	N90+00 E147+50
TA-21-252	OP-252	MANHOLE	SANITARY	N92+50 E147+50
TA-21-253	OP-253	MANHOLE	ELECTRIC	N82+50 E147+50
TA-21-254	OP-254	GUARD HOUSE		
TA-21-255	OP-255	TANK	REMOVED 1988	
TA-21-256	OP-256	TANK	ACID	N87+37 E157+50
TA-21-257	OP-257	WASTE DISPOSAL PLANT		N87+50 E160+00
TA-21-258	OP-258	TANK	WATER	N92+50 E147+50
TA-21-259	OP-259	MANHOLE	WATER	N92+50 E147+50
TA-21-260	OP-260	MANHOLE	STEAM PIT	N90+00 E147+50

REV.1 2/7/90

FIGURE 21-14-

UNCLASSIFIED TA-21 STRUCTURE LOCATION INDEX (1 OF 2)

REV	DATE	REVISION	BY	CKD	APP
18	9-22-93	REVISED TITLE BLOCK AND DWG TO STATUS OF 8-1-83	VM		

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

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-21 OP-SITE

DOE CLASSIFICATION
CLASS. U
REVIEWER
DATE 9-22-93

SUBMITTED	RECOMMENDED	APPROVED
DRAWN VM	DATE 9-22-93	SHEET NO. 1 of 1
CHECKED		DRAWING NO. ENG-R513

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-21-261	DP-261	MANHOLE	STEAM	N92+50 E147+50
TA-21-262	DP-262	TANK, ACID	CANCELLED	
TA-21-263	DP-263	TANK, ACID	CANCELLED	
TA-21-264	DP-264	MANHOLE	SANITARY	N82+50 E165+00
TA-21-265	DP-265	MANHOLE	SANITARY	N82+50 E165+00
TA-21-266	DP-266	MANHOLE	STEAM PIT	N85+00 E162+50
TA-21-267	DP-267	MANHOLE	STEAM PIT	N85+00 E162+50
TA-21-268	DP-268	TANK	FUEL	N85+00 E162+50
TA-21-269	DP-269	MANHOLE	WATER PRV	N82+50 E145+00
TA-21-270	DP-270	MANHOLE	WATER PRV	N87+50 E170+00
TA-21-271	DP-271	MANHOLE, ACID FLOW METER	REMOVED 1968	
TA-21-272	DP-272	CONCRETE PAD		N87+50 E155+00
TA-21-273	DP-273	MANHOLE	SANITARY	N83+00 E152+50
TA-21-274	DP-274	MANHOLE	SANITARY	N85+00 E155+00
TA-21-275	DP-275	MANHOLE	SANITARY	N85+00 E155+00
TA-21-276	DP-276	TRANSFORMER STATION		N82+50 E160+00
TA-21-277	DP-277	TRANSFORMER STATION		
TA-21-278	DP-278	TRANSFORMER STATION	REMOVED 1977	
TA-21-279	DP-279	TRANSFORMER STATION		
TA-21-280	DP-280	TRANSFORMER STATION	REMOVED 1977	
TA-21-281	DP-281	TRANSFORMER STATION	REMOVED 1977	
TA-21-282	DP-282	TRANSFORMER STATION	REMOVED 1977	
TA-21-283	DP-283	TRANSFORMER STATION	REMOVED 1977	
TA-21-284	DP-284	TRANSFORMER STATION		
TA-21-285	DP-285	TRANSFORMER STATION		
TA-21-286	DP-286	HOT STORAGE REPL. WHSE		N90+00 E157+50
TA-21-287	DP-287	TANK	LIQUID ARGON	N85+00 E170+00
TA-21-288	DP-288	TANK	ACID	N87+50 E160+00
TA-21-289	DP-289	TANK	ACID	N87+50 E160+00
TA-21-290	DP-290	MANIFOLD		N87+50 E152+50
TA-21-291	DP-291	TRAILER, OFFICE	RENUMBERED TA-0-301 RELOC. TO TA-53	
TA-21-292	DP-292	TRAILER, OFFICE	RENUMBERED TA-0-305 RELOC. TO TA-3	
TA-21-293	DP-293	TRAILER, OFFICE	RENUMBERED TA-0-311 RELOC. TO TA-53	
TA-21-294	DP-294	TRAILER, OFFICE	RENUMBERED TA-0-304 RELOC. TO TA-36	
TA-21-295	DP-295	TRAILER, OFFICE	RENUMBERED TA-0-303 RELOC. IN TA-21	
TA-21-296	DP-296	TRAILER, OFFICE	RENUMBERED TA-0-308 RELOC. TO TA-35	
TA-21-297	DP-297	TRAILER, OFFICE	RENUMBERED TA-0-307 RELOC. TO TA-15	
TA-21-298	DP-298			
TA-21-299	DP-299			
TA-21-300	DP-300			
TA-21-301	DP-301	TRANSFORMER STATION	REMOVED 1977	
TA-21-302	DP-302			
TA-21-303	DP-303	MANHOLE	ELECTRICAL, PRI.	N85+00 E160+00
TA-21-304	DP-304	MANHOLE	ELECTRICAL, PRI.	N85+00 E157+50
TA-21-305	DP-305	MANIFOLD		N92+50 E152+50
TA-21-306	DP-306			
TA-21-307	DP-307	SUBSTATION		N92+50 E147+50
TA-21-308	DP-308	SUBSTATION		N90+00 E155+00
TA-21-309	DP-309	SUBSTATION		N85+00 E160+00
TA-21-310	DP-310	CABINET, TELEPHONE		N90+00 E155+00
TA-21-311	DP-311	CABINET, TELEPHONE		N85+00 E160+00
TA-21-312	DP-312	CORRIDOR STRUCTURE	REPLACES TA-21-18	N87+50 E152+50
TA-21-313	DP-313	CORRIDOR STRUCTURE	REPLACES TA-21-15	N87+50 E152+50
TA-21-314	DP-314	CORRIDOR STRUCTURE	REPLACES TA-21-16	N87+50 E152+50
TA-21-315	DP-315	CORRIDOR STRUCTURE	REPLACES TA-21-17	N87+50 E152+50
TA-21-316	DP-316	MANHOLE, TELEPHONE		N85+00 E160+00
TA-21-317	DP-317	MANHOLE, TELEPHONE		N85+00 E157+50
TA-21-318	DP-318	CAPACITOR BANK		
TA-21-319	DP-319	TRAILER, OFFICE	RENUMBERED TA-0-593 RELOC IN TA-21	
TA-21-320	DP-320	CABINET, TELEPHONE		N92+50 E147+50
TA-21-321	DP-321	TRANSFORMER STATION		
TA-21-322	DP-322	EXH. STACK & FIL. HSG.		N85+00 E170+00
TA-21-323	DP-323	EXH STACK & FIL HSG.		N85+00 E170+00
TA-21-324	DP-324	FILTER HOUSE		N90+00 E155+00
TA-21-325	DP-325	TANK	NITRIC ACID STORAGE	N87+50 E152+50
TA-21-326	DP-326	TRANSFORMER		N90+00 E147+50
TA-21-327	DP-327	TRANSFORMER		N82+50 E172+50
TA-21-328	DP-328	MATERIAL RECEIVING FAC BLDG.		N87+50 E150+00
TA-21-329	DP-329	FIRE SCREEN	REMOVED 1980	
TA-21-330	DP-330	PLATFORM (GAS LOADING)		N85+00 E155+00
TA-21-331	DP-331	WASTE STORAGE TEST PIT		N92+50 E152+50
TA-21-332	DP-332	CANCELLED		
TA-21-333	DP-333	CANCELLED		
TA-21-334	DP-334	METAL UTILITY SHED		N92+50 E147+50
TA-21-335	DP-335	CONTAINMENT VESSEL		N92+50 E155+00
TA-21-336	DP-336	MODULAR OFFICE BUILDING	RELOCATED TO TA-53-20	
TA-21-337	DP-337	MODULAR OFFICE BUILDING	RELOCATED TO TA-53-21	
TA-21-338	DP-338	SUBSTATION		N85+00 E157+50
TA-21-339	DP-339		CANCELLED	
TA-21-340	DP-340	TRANSFORMER STATION		N80+00 E160+00
TA-21-341	DP-341	TANK	PROPANE	N87+50 E152+50
TA-21-342	DP-342	TANK	WATER	N85+00 E160+00
TA-21-343	DP-343	MANHOLE	WATER	N87+50 E150+00
TA-21-344	DP-344	GUARD STATION		N87+50 E152+00
TA-21-345	DP-345	GUARD STATION		N85+00 E155+00
TA-21-346	DP-346	TANK, PUMP STATION	NOT SHOWN	
TA-21-347	DP-347	MANHOLE, STEAM	NOT SHOWN	
TA-21-348	DP-348	SEWAGE PIT	NOT SHOWN	
TA-21-349	DP-349	TRAILER, LUNCH ROOM		N85+00 E155+00
TA-21-350	DP-350	TRAILER, OFFICE	FORMERLY TA-0-303	N87+50 E152+50
TA-21-351	DP-351	TRAILER, OFFICE	FORMERLY TA-0-447	N87+50 E150+00
TA-21-352	DP-352	TRAILER, OFFICE	FORMERLY TA-0-456	N87+50 E152+50
TA-21-353	DP-353	TRAILER, CHANGE ROOM	FORMERLY TA-0-500	N85+00 E152+50
TA-21-354	DP-354	TRAILER, OFFICE	FORMERLY TA-0-516	N87+50 E155+00
TA-21-355	DP-355	TRAILER, OFFICE	FORMERLY TA-0-593	N87+00 E157+50
TA-21-356	DP-356	TRAILER, OFFICE	FORMERLY TA-0-712	N87+50 E162+50
TA-21-357	DP-357	STEAM PLANT		N82+50 E162+50

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

REV.1 2/7/90

FIGURE 21-14

UNCLASSIFIED

TA-21 STRUCTURE LOCATION INDEX (2 OF 2)

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

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

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTRUE LOCATION PLAN
TA-21 DP-SITE

SEC. CLASSIFICATION — CLASS: U — REVIEWER: [signature] — DATE: 9-28-83

SUBMITTED: [signature] — RECOMMENDED: [signature] — APPROVED: [signature]
DRAWN: [signature] — CHECKED: [signature] — DATE: 9-22-83 — SHEET NO: 2 of 4 — DRAWING NO: ENG-R5113

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-21-1	DP-1	ADMINISTRATION BLDG		N87+50 E150+00
TA-21-2	DP-2	LABORATORY BUILDING		N87+50 E154+50
TA-21-3	DP-3	LABORATORY BUILDING		N87+50 E155+00
TA-21-4	DP-4	LABORATORY BUILDING		N87+50 E155+00
TA-21-5	DP-5	LABORATORY BUILDING		N87+50 E157+50
TA-21-6	DP-6	MACH. SHOP & CAFETERIA		N87+50 E152+50
TA-21-7	DP-7	WAREHOUSE		N90+00 E150+00
TA-21-8	DP-8	WAREHOUSE		N90+00 E150+00
TA-21-9	DP-9	STEAM PLANT		N85+00 E162+50
TA-21-10	DP-10	STORAGE BUILDING		N82+00 E155+00
TA-21-11	DP-11	STORAGE BUILDING		N85+00 E155+00
TA-21-12	DP-12	FILTER BUILDING		N90+00 E155+00
TA-21-13	DP-13	STORAGE BUILDING		N85+00 E157+50
TA-21-14	DP-14	WAREHOUSE		N90+00 E147+50
TA-21-15	DP-15	PASSAGEWAY	BLDG. 2 TO 3	N87+50 E152+50
TA-21-16	DP-16	PASSAGEWAY	BLDG. 3 TO 4	N87+50 E155+00
TA-21-17	DP-17	PASSAGEWAY	BLDG. 4 TO 5	N87+50 E157+50
TA-21-18	DP-18	PASSAGEWAY	BLDG. 1 TO 2	N87+50 E152+50
TA-21-19	DP-19	PASSAGEWAY	BLDG. 1 TO 6	N87+50 E152+50
TA-21-20	DP-20	LAUNDRY		N90+00 E145+00
TA-21-21	DP-21	VAULT		N90+00 E152+50
TA-21-22	DP-22	WAREHOUSE		N90+00 E150+00
TA-21-23	DP-23	STORAGE BUILDING	REMOVED 1954	
TA-21-24	DP-24	STORAGE BUILDING	REMOVED 1953	
TA-21-25	DP-25	STORAGE BUILDING	REMOVED 1953	
TA-21-26	DP-26	STORAGE BUILDING	REMOVED 1954	
TA-21-27	DP-27	STORAGE BUILDING	REMOVED 1954	
TA-21-28	DP-28	STORAGE BUILDING	REMOVED 1954	
TA-21-29	DP-29	EMERGENCY EQUIP BLDG	REMOVED 1957	
TA-21-30	DP-30	PAINT SHOP		N92+50 E147+50
TA-21-31	DP-31	ELECTRONICS BUILDING		N92+50 E150+00
TA-21-32	DP-32	WAREHOUSE	REMOVED 1980	
TA-21-33	DP-33	WASTE TREATMENT LAB		N90+00 E142+50
TA-21-34	DP-34	LABORATORY BUILDING		N87+50 E155+00
TA-21-35	DP-35	WASTE DISPOSAL LAB		N87+50 E157+50
TA-21-36	DP-36	GUARD TOWER	REMOVED 1980	
TA-21-37	DP-37	GUARD TOWER	REMOVED 1980	
TA-21-38	DP-38	BARREL STORAGE		N92+50 E150+00
TA-21-39	DP-39	GUARD QUARTERS	REMOVED 1948	
TA-21-40	DP-40	TANK SHELTER		N87+50 E182+50
TA-21-41	DP-41	GUARD TOWER	REMOVED 1980	
TA-21-42	DP-42	PUMP HOUSE		N85+00 E180+00
TA-21-43	DP-43	PUMP HOUSE	REMOVED 1980	
TA-21-44	DP-44	GUARD HOUSE	REMOVED 1984	
TA-21-45	DP-45	SAFETY TRAINING BLDG	REMOVED 1954	
TA-21-46	DP-46	WAREHOUSE		N90+00 E147+50
TA-21-47	DP-47	FUEL TANK	REMOVED 1980	
TA-21-48	DP-48	GUARD HOUSE	REMOVED 1958	
TA-21-49	DP-49	STORAGE BUILDING	REMOVED 1958	
TA-21-50	DP-50	DRUM STORAGE	REMOVED 1954	
TA-21-51	DP-51	CYLINDER STORAGE		N90+00 E152+50
TA-21-52	DP-52	CYLINDER STORAGE	REMOVED 1955	
TA-21-53	DP-53	SEPTIC TANK	SANITARY	N82+50 E182+50
TA-21-54	DP-54	LABORATORY BUILDING		N85+00 E185+00
TA-21-55	DP-55	SEPTIC TANK	SANITARY	N85+00 E155+00
TA-21-56	DP-56	SEPTIC TANK	SANITARY	N82+50 E182+00
TA-21-57	DP-57	FUEL TANK		N85+00 E187+50
TA-21-58	DP-58	FUEL TANK	REMOVED 1957	
TA-21-59	DP-59	LABORATORY BUILDING		N85+00 E185+00
TA-21-60	DP-60	FUEL TANK	REMOVED 1957	
TA-21-61	DP-61	LABORATORY BUILDING		N82+50 E185+00
TA-21-62	DP-62	SEPTIC TANK	SANITARY	N90+00 E142+50
TA-21-63	DP-63	TRANSFORMER STATION		N90+00 E147+50
TA-21-64	DP-64	FUEL TANK	REMOVED 1982	
TA-21-65	DP-65	EXPERIMENTAL BUILDING		N85+00 E185+00
TA-21-66	DP-66	CYLINDER STORAGE		N85+00 E185+00
TA-21-67	DP-67	TRANSFORMER STATION		N90+00 E147+50
TA-21-68	DP-68	MANHOLE	WATER	N92+50 E145+00
TA-21-69	DP-69	MANHOLE	WATER	N92+50 E145+00
TA-21-70	DP-70	MANHOLE	ACID	N92+50 E150+00
TA-21-71	DP-71	MANHOLE	STEAM	N90+00 E150+00
TA-21-72	DP-72	MANHOLE	ELECTRICAL	N87+50 E150+00
TA-21-73	DP-73	MANHOLE	STEAM	N90+00 E152+50
TA-21-74	DP-74	MANHOLE	STEAM	N90+00 E152+50
TA-21-75	DP-75	MANHOLE	STEAM	N90+00 E152+50
TA-21-76	DP-76	MANHOLE	STORM DRAINAGE	N90+00 E152+50
TA-21-77	DP-77	MANHOLE	STEAM	N90+00 E152+50
TA-21-78	DP-78	MANHOLE	STEAM	N90+00 E152+50
TA-21-79	DP-79	MANHOLE	ELECTRICAL	N87+50 E152+50
TA-21-80	DP-80	MANHOLE	WATER PRV.	N87+50 E152+50
TA-21-81	DP-81	MANHOLE	ACID	N87+50 E152+50
TA-21-82	DP-82	MANHOLE	WATER PRV.	N87+50 E152+50
TA-21-83	DP-83	MANHOLE	WATER	N87+50 E155+00
TA-21-84	DP-84	MANHOLE	ACID	N87+50 E155+00
TA-21-85	DP-85	MANHOLE	WATER	N87+50 E155+00
TA-21-86	DP-86	MANHOLE	WATER PRV.	N87+50 E157+50
TA-21-87	DP-87	MANHOLE	ACID	N87+50 E157+50
TA-21-88	DP-88	MANHOLE	WATER PRV.	N87+50 E157+50
TA-21-89	DP-89	MANHOLE	ACID	N87+50 E157+50
TA-21-90	DP-90	MANHOLE	ELECTRICAL	N90+00 E157+50
TA-21-91	DP-91	MANHOLE	REMOVED 1961	
TA-21-92	DP-92	MANHOLE	REMOVED 1961	
TA-21-93	DP-93	MANHOLE	WATER	N87+50 E157+50
TA-21-94	DP-94	MANHOLE	ELECTRICAL	N87+50 E160+00
TA-21-95	DP-95	MANHOLE	ELECTRICAL	N87+50 E160+00
TA-21-96	DP-96	MANHOLE	ELECTRICAL	N85+00 E162+50
TA-21-97	DP-97	MANHOLE	STEAM STRAINER PIT	N85+00 E162+50
TA-21-98	DP-98	MANHOLE	ACID	N85+00 E162+50
TA-21-99	DP-99	TRANSFORMER STATION		N87+00 E150+00
TA-21-100	DP-100	TRANSFORMER STATION		N87+50 E147+50
TA-21-101	DP-101	TRANSFORMER STATION		N87+50 E160+00
TA-21-102	DP-102	TRANSFORMER STATION		N85+00 E152+50
TA-21-103	DP-103	TRANSFORMER STATION		N85+00 E160+00
TA-21-104	DP-104	TRANSFORMER STATION		N85+00 E157+50
TA-21-105	DP-105	TRANSFORMER STATION		N82+50 E162+50
TA-21-106	DP-106	SEPTIC TANK	SANITARY	N85+00 E150+00
TA-21-107	DP-107	ACID TANK	UNDERGROUND	N87+50 E162+50
TA-21-108	DP-108	ACID TANK	UNDERGROUND	N87+50 E162+50
TA-21-109	DP-109	TRANSFORMER STATION		N90+00 E160+00
TA-21-110	DP-110	ACID HOLDING TANK		N87+50 E160+00
TA-21-111	DP-111	ACID HOLDING TANK		N87+50 E160+00
TA-21-112	DP-112	ACID HOLDING TANK		N87+50 E160+00
TA-21-113	DP-113	ACID HOLDING TANK		N87+50 E160+00
TA-21-114	DP-114	EXPERIMENTAL TOWER	FORMERLY TA-33-30	N85+00 E162+50
TA-21-115	DP-115	INSTRUMENT BUILDING	REMOVED 1959	
TA-21-116	DP-116	EQUIPMENT WAREHOUSE		N85+00 E155+00
TA-21-117	DP-117	TOWER		N85+00 E162+50
TA-21-118	DP-118	ACID PIT		N85+00 E157+50
TA-21-119	DP-119	FUEL TANK		N85+00 E165+00
TA-21-120	DP-120	ACID TANK		N87+50 E160+00
TA-21-121	DP-121	ACID SUMP		N87+50 E160+00
TA-21-122	DP-122	ACID SUMP		N90+00 E160+00
TA-21-123	DP-123	SEPTIC TANK	ACID	N87+50 E147+50
TA-21-124	DP-124	SEPTIC TANK	ABANDONED 1955	N92+50 E145+00
TA-21-125	DP-125	SEPTIC TANK	SANITARY	N95+00 E150+00
TA-21-126	DP-126	MANHOLE	ELECTRICAL	N90+00 E147+50
TA-21-127	DP-127	MANHOLE	ELECTRICAL	N90+00 E147+50
TA-21-128	DP-128	MANHOLE	ELECTRICAL	N87+50 E147+50
TA-21-129	DP-129	MANHOLE	WATER PRV.	N87+50 E152+50
TA-21-130	DP-130	MANHOLE	WATER PRV.	N85+00 E162+50
TA-21-131	DP-131	ACID SUMP		N87+50 E160+00
TA-21-132	DP-132	ACID SUMP		N87+50 E160+00
TA-21-133	DP-133	STORAGE BUILDING	REMOVED 1952	
TA-21-134	DP-134	PUMP HOUSE	REMOVED 1948	
TA-21-135	DP-135	PUMP HOUSE	REMOVED 1948	
TA-21-136	DP-136	RETAINING WALL		N92+50 E150+00
TA-21-137	DP-137	PUMP HOUSE	CANCELLED	
TA-21-138	DP-138	GUARD TOWER	REMOVED 1952	
TA-21-139	DP-139	GUARD TOWER	REMOVED 1952	
TA-21-140	DP-140	GUARD TOWER	REMOVED 1952	
TA-21-141	DP-141	MANHOLE	CANCELLED	
TA-21-142	DP-142	SEPTIC TANK	SANITARY	N87+50 E155+00
TA-21-143	DP-143	COOLING TOWER		N85+00 E152+50
TA-21-144	DP-144	PASSAGEWAY	BLDG. 116 TO PASS. 17	N85+00 E155+00
TA-21-145	DP-145	ACID TANK		N87+50 E157+50
TA-21-146	DP-146	FILTER BUILDING		N90+00 E155+00
TA-21-147	DP-147	ACID TANK		N87+50 E157+50
TA-21-148	DP-148	TRANSFORMER STATION		N85+00 E160+00
TA-21-149	DP-149	PASSAGEWAY	BLDG. 5 TO 150	N85+00 E157+50
TA-21-150	DP-150	PLUT. FUEL SERVICE BLDG		N85+00 E157+50
TA-21-151	DP-151	ADMIN. BLDG. & SHOP		N82+00 E167+50
TA-21-152	DP-152	LABORATORY BUILDING		N85+00 E170+00
TA-21-153	DP-153	FILTER BUILDING		N87+50 E172+50
TA-21-154	DP-154	DOUBLE HUTMENT	REMOVED 1949	
TA-21-155	DP-155	WAREHOUSE & LAB.		N85+00 E170+00
TA-21-156	DP-156	PUMP HOUSE		N85+00 E167+50
TA-21-157	DP-157	GUARD HOUSE	REMOVED 1980	
TA-21-158	DP-158	GUARD TOWER	REMOVED 1980	
TA-21-159	DP-159	PASSAGEWAY	BLDG 151 TO 152	N85+00 E170+00
TA-21-160	DP-160	TANK SHELTER		N87+50 E170+00
TA-21-161	DP-161	TANK	REMOVED 1958	
TA-21-162	DP-162	WATER TANK		N85+00 E167+50
TA-21-163	DP-163	SEPTIC TANK	SANITARY	N87+50 E167+50
TA-21-164	DP-164	ACID SUMP		N87+50 E172+50
TA-21-165	DP-165	STORAGE BUILDING		N85+00 E172+50
TA-21-166	DP-166	EQUIPMENT BUILDING		N85+00 E170+00
TA-21-167	DP-167	EQUIPMENT BUILDING		N85+00 E170+00
TA-21-168	DP-168	GUARD HOUSE	STA.127 FORM. TA-18-1133	N85+00 E167+50
TA-21-169	DP-169	MANHOLE	WATER PRV.	N85+00 E167+50
TA-21-170	DP-170	MANHOLE	REMOVED 1984	
TA-21-171	DP-171	MANHOLE	WATER VALVE BOX	N87+50 E170+00
TA-21-172	DP-172	MANHOLE	WATER PRV	N85+00 E170+00
TA-21-173	DP-173	MANHOLE	SANITARY	N85+00 E170+00
TA-21-174	DP-174	MANHOLE	WATER	N85+00 E170+00
TA-21-175	DP-175	MANHOLE	SANITARY	N85+00 E170+00
TA-21-176	DP-176	MANHOLE	ELECTRICAL	N85+00 E172+50
TA-21-177	DP-177	MANHOLE	ELECTRICAL	N82+50 E172+50
TA-21-178	DP-178	TRANSFORMER STATION		N82+50 E172+50
TA-21-179	DP-179	TRANSFORMER STATION		N82+50 E167+50
TA-21-180	DP-180	TRANSFORMER STATION		N85+00 E172+50
TA-21-181	DP-181	SEPTIC TANK	SANITARY	N82+50 E172+50
TA-21-182	DP-182	DRUM STORAGE	REMOVED 1958	
TA-21-183	DP-183	GUARD TOWER	REMOVED 1948	
TA-21-184	DP-184	SUBSTATION		N82+50 E170+00
TA-21-185	DP-185	SEPTIC TANK	ACID	N87+50 E180+00
TA-21-186	DP-186	ACID PIT		N90+00 E157+50
TA-21-187	DP-187	SEPTIC TANK	ACID	N87+50 E155+00
TA-21-188	DP-188	TRANSFORMER STATION		N82+50 E170+00
TA-21-189	DP-189	MANHOLE	ACID	N87+50 E157+50
TA-21-190	DP-190	SAMPLING BUILDING	CANCELLED	
TA-21-191	DP-191	CEMENT STORAGE SILO		N87+50 E180+00
TA-21-192	DP-192	GRIT CHAMBER		N87+50 E180+00
TA-21-193	DP-193	SUBSTATION		N85+00 E157+50
TA-21-194	DP-194	SEPTIC TANK	SANITARY	N85+00 E167+50
TA-21-195	DP-195	MANIFOLD	HELIUM	N87+50 E152+50
TA-21-196	DP-196	MANIFOLD	OXYGEN	N87+50 E157+50
TA-21-197	DP-197	MANIFOLD	HELIUM	N85+00 E157+50
TA-21-198	DP-198	MANIFOLD	CANCELLED	
TA-21-199	DP-199	MANIFOLD	HELIUM	N85+00 E170+00
TA-21-200	DP-200	MANIFOLD	HELIUM	N85+00 E165+00
TA-21-201	DP-201	MANIFOLD	OXYGEN	N87+50 E155+00
TA-21-202	DP-202	MANHOLE	ACID	N82+00 E157+50
TA-21-203	DP-203	DRY AIR SYSTEM BUILDING	CANCELLED	
TA-21-204	DP-204	VALVE PIT	ACID	N87+50 E160+00
TA-21-205	DP-205	VALVE PIT	ACID	N87+50 E160+00
TA-21-206	DP-206	DEVELOPMENT BUILDING		N85+00 E170+00
TA-21-207	DP-207	FURNACE BUILDING	PROPOSED	
TA-21-208	DP-208	RETAINING WALL		N85+00 E157+50
TA-21-209	DP-209	HIGH TEMP. CHEMISTRY BLDG.	PROPOSED	
TA-21-210	DP-210	PU RESEARCH SUPPORT BLDG	PROPOSED	
TA-21-211	DP-211	MANIFOLD		N85+00 E170+00
TA-21-212	DP-212	CALCIUM BUILDING	PROPOSED	
TA-21-213	DP-213	LAB. SUPPLY WAREHOUSE	PROPOSED	
TA-21-214	DP-214	GUARD HOUSE	STATION 215	N90+00 E147+50

UNCLASSIFIED

REV.1 2/7/90

FIGURE 21-15

TA-21 STRUCTURE LOCATION INDEX

NO.	DATE	REVISIONS	BY	CHAR.	CHF. ENG.
10	3-13-64	REVISED TO STATUS OF 3-64	BLC		
9	8-15-61	REDRAWN TO STATUS OF 8-1-61 (WAS ENG-R139)	GCS		

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-21 DP-SITE

CHECKED: [signature] RECOMMENDED: [signature] APPROVED: ENG. DEPT OFFICE [signature]
DRAWN: DD SIMES
SCALE: NONE
DATE: 8-15-61
SHEET 1 OF 2
DRAWING NO. ENG-R 2449

UNCLASSIFIED

301215 02 01 B173

301215 02 01 B27

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-21-281	DP-281	MANHOLE	STEAM	N82+50 E67+50
TA-21-282	DP-282	TANK, ACID	PROPOSED	
TA-21-283	DP-283	TANK, ACID	CANCELLED	
TA-21-284	DP-284	MANHOLE	SANITARY	N83+50 E83+00
TA-21-285	DP-285	MANHOLE	SANITARY	N82+50 E185+00
TA-21-286	DP-286	MANHOLE	STEAM PIT	N85+00 E102+50
TA-21-287	DP-287	MANHOLE	STEAM PIT	N85+00 E102+50
TA-21-288	DP-288	TANK	FUEL	N85+00 E102+50
TA-21-289	DP-289	MANHOLE	WATER REV	N82+50 E145+00
TA-21-270	DP-270	MANHOLE	WATER REV	N87+50 E170+00
TA-21-271	DP-271	MANHOLE	ACID FLOW METER	N87+50 E137+50

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROX GRID

UNCLASSIFIED

REV.1 2/7/90

FIGURE 21-16

TA-21 STRUCTURE LOCATION INDEX

NOTE:
THIS SET OF FOUR DRAWINGS CONSISTS OF:
ENG-R 2440, INDEX SHEET 1 OF 4
ENG-R 2440, INDEX SHEET 2 OF 4
ENG-R 2441, SITE MAP, 3 OF 4
ENG-R 2442, SITE MAP, 4 OF 4
THIS SET VOIDS AND SUPERSEDES DRAWINGS:
ENG-R 2440, REV NO 10, DATED 5-12-94
ENG-R 2440, REV NO 10, DATED 5-13-94

NO.	DATE	REVISIONS
A	2-23-96	REVISION TO STATUS OF 2-96 (SEE NOTE)

AUTHORIZED FOR: HEALTH, SAFETY, FIRE PROT, ENG

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

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-21 DP-SITE

DESIGNED	DATE	APPROVED
DRAWN T ROYBAL	2-23-96	
SCALE NONE	SHEET 2 OF 4	ENG-R 2450

E.A. NO. LAB JOB NO

OFFICIAL USE ONLY

301215 02 01 825

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-21-1	DP-1	ADMINISTRATION BUILDING
TA-21-2	DP-2	LABORATORY
TA-21-3	DP-3	LABORATORY
TA-21-4	DP-4	LABORATORY
TA-21-5	DP-5	LABORATORY
TA-21-6	DP-6	MACHINE SHOP & CAFETERIA
TA-21-7	DP-7	WAREHOUSE
TA-21-8	DP-8	WAREHOUSE
TA-21-9	DP-9	STEAM PLANT
TA-21-10	DP-10	STORAGE
TA-21-11	DP-11	STORAGE
TA-21-12	DP-12	FILTER HOUSE
TA-21-13	DP-13	STORAGE
TA-21-14	DP-14	POWER PLANT
TA-21-15	DP-15	PASSAGEWAY (BLDG 2 TO 3)
TA-21-16	DP-16	PASSAGEWAY (BLDG 3 TO 4)
TA-21-17	DP-17	PASSAGEWAY (BLDG 4 TO 5)
TA-21-18	DP-18	PASSAGEWAY (BLDG 1 TO 2)
TA-21-19	DP-19	PASSAGEWAY (BLDG 1 TO 6)
TA-21-20	DP-20	LAUNDRY
TA-21-21	DP-21	VAULT
TA-21-22	DP-22	WAREHOUSE
TA-21-23	DP-23	STORAGE BLDG (REMOVED) 1954
TA-21-24	DP-24	STORAGE BLDG (REMOVED) 1953
TA-21-25	DP-25	STORAGE BLDG (REMOVED) 1953
TA-21-26	DP-26	STORAGE BLDG (REMOVED) 1954
TA-21-27	DP-27	STORAGE BLDG (REMOVED) 1954
TA-21-28	DP-28	STORAGE BLDG (REMOVED) 1954
TA-21-29	DP-29	EMERGENCY SHACK (WAS TA-1-7)
TA-21-30	DP-30	PAINT SHOP
TA-21-31	DP-31	SHOPS
TA-21-32	DP-32	WAREHOUSE
TA-21-33	DP-33	WASTE TREATMENT LAB
TA-21-34	DP-34	LABORATORY
TA-21-35	DP-35	WASTE DISPOSAL LAB
TA-21-36	DP-36	GUARD TOWER "A"
TA-21-37	DP-37	GUARD TOWER "B"
TA-21-38	DP-38	BARREL STORAGE
TA-21-39	DP-39	GUARD QUARTERS (REMOVED)
TA-21-40	DP-40	TANK SHELTER
TA-21-41	DP-41	GUARD TOWER "C"
TA-21-42	DP-42	PUMP HOUSE
TA-21-43	DP-43	PUMP HOUSE
TA-21-44	DP-44	GUARD HOUSE (STATION 115)
TA-21-45	DP-45	SAFETY TRAINING BLDG (REMOVED) 1954
TA-21-46	DP-46	DIESEL POWER PLANT
TA-21-47	DP-47	TANK (FUEL OIL)
TA-21-48	DP-48	GUARD HOUSE (STATION 125)
TA-21-49	DP-49	STORAGE BLDG
TA-21-50	DP-50	DRUM STORAGE (REMOVED)
TA-21-51	DP-51	CYLINDER STORAGE
TA-21-52	DP-52	CYLINDER STORAGE (REMOVED) 1955
TA-21-53	DP-53	SEPTIC TANK (SANITARY)
TA-21-54	DP-54	LABORATORY
TA-21-55	DP-55	SEPTIC TANK (SANITARY)
TA-21-56	DP-56	SEPTIC TANK (SANITARY)
TA-21-57	DP-57	TANK (FUEL OIL)
TA-21-58	DP-58	TANK (FUEL OIL)
TA-21-59	DP-59	LABORATORY
TA-21-60	DP-60	TANK (FUEL OIL)
TA-21-61	DP-61	LABORATORY
TA-21-62	DP-62	SEPTIC TANK (SANITARY)
TA-21-63	DP-63	TRANSFORMER STATION
TA-21-64	DP-64	TANK (FUEL OIL)
TA-21-65	DP-65	EXP. BLDG
TA-21-66	DP-66	CYLINDER STORAGE
TA-21-67	DP-67	TRANSFORMER STATION
TA-21-68	DP-68	MANHOLE (WATER)
TA-21-69	DP-69	MANHOLE (WATER)
TA-21-70	DP-70	MANHOLE (ACID)
TA-21-71	DP-71	MANHOLE (STEAM)
TA-21-72	DP-72	MANHOLE (ELECTRIC)
TA-21-73	DP-73	MANHOLE (STEAM)
TA-21-74	DP-74	MANHOLE (STEAM)
TA-21-75	DP-75	MANHOLE (STEAM)

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-21-76	DP-76	MANHOLE (DRAINAGE)
TA-21-77	DP-77	MANHOLE (STEAM)
TA-21-78	DP-78	MANHOLE (STEAM)
TA-21-79	DP-79	MANHOLE (ELECTRIC)
TA-21-80	DP-80	MANHOLE (WATER PRV)
TA-21-81	DP-81	MANHOLE (ACID)
TA-21-82	DP-82	MANHOLE (WATER)
TA-21-83	DP-83	MANHOLE (WATER PRV)
TA-21-84	DP-84	MANHOLE (ACID)
TA-21-85	DP-85	MANHOLE (WATER)
TA-21-86	DP-86	MANHOLE (WATER PRV)
TA-21-87	DP-87	MANHOLE (ACID)
TA-21-88	DP-88	MANHOLE (WATER PRV)
TA-21-89	DP-89	MANHOLE (ACID)
TA-21-90	DP-90	MANHOLE (ELECTRIC)
TA-21-91	DP-91	MANHOLE (ELECTRIC)
TA-21-92	DP-92	MANHOLE (ELECTRIC)
TA-21-93	DP-93	MANHOLE (WATER)
TA-21-94	DP-94	MANHOLE (ELECTRIC)
TA-21-95	DP-95	MANHOLE (ELECTRIC)
TA-21-96	DP-96	MANHOLE (ELECTRIC)
TA-21-97	DP-97	MANHOLE (STRAINER PIT)
TA-21-98	DP-98	MANHOLE (ACID)
TA-21-99	DP-99	TRANSFORMER STATION
TA-21-100	DP-100	TRANSFORMER STATION
TA-21-101	DP-101	TRANSFORMER STATION
TA-21-102	DP-102	TRANSFORMER STATION
TA-21-103	DP-103	TRANSFORMER STATION
TA-21-104	DP-104	TRANSFORMER STATION
TA-21-105	DP-105	TRANSFORMER STATION
TA-21-106	DP-106	SEPTIC TANK (SANITARY)
TA-21-107	DP-107	UNDERGROUND TANK (ACID)
TA-21-108	DP-108	UNDERGROUND TANK (ACID)
TA-21-109	DP-109	TRANSFORMER STATION
TA-21-110	DP-110	HOLDING TANK (ACID)
TA-21-111	DP-111	HOLDING TANK (ACID)
TA-21-112	DP-112	HOLDING TANK (ACID)
TA-21-113	DP-113	HOLDING TANK (ACID)
TA-21-114	DP-114	EXPERIMENTAL TOWER (WAS TA-33-38)
TA-21-115	DP-115	INSTRUMENT BLDG
TA-21-116	DP-116	EQUIPMENT WHSE (PROPOSED)
TA-21-117	DP-117	TOWER
TA-21-118	DP-118	PIT (ACID)
TA-21-119	DP-119	BUTANE TANK
TA-21-120	DP-120	TANK (ACID)
TA-21-121	DP-121	SUMP (ACID)
TA-21-122	DP-122	SUMP (ACID)
TA-21-123	DP-123	SEPTIC TANK (ACID)
TA-21-124	DP-124	SEPTIC TANK (ABANDONED)
TA-21-125	DP-125	SEPTIC TANK (SANITARY)
TA-21-126	DP-126	MANHOLE (ELECTRIC)
TA-21-127	DP-127	MANHOLE (ELECTRIC)
TA-21-128	DP-128	MANHOLE (ELECTRIC)
TA-21-129	DP-129	MANHOLE (WATER PRV)
TA-21-130	DP-130	MANHOLE (WATER PRV)
TA-21-131	DP-131	SUMP (ACID)
TA-21-132	DP-132	SUMP (ACID)
TA-21-133	DP-133	STORAGE BLDG (WAS TA-1-150)
TA-21-134	DP-134	PUMP HOUSE (REMOVED)
TA-21-135	DP-135	PUMP HOUSE (REMOVED) 1948
TA-21-136	DP-136	RETAINING WALL
TA-21-137	DP-137	PUMP HOUSE (NEVER BUILT)
TA-21-138	DP-138	GUARD TOWER (REMOVED)
TA-21-139	DP-139	GUARD TOWER (REMOVED)
TA-21-140	DP-140	GUARD TOWER (REMOVED)
TA-21-141	DP-141	MANHOLE (NEVER BUILT)

STRUCTURE NUMBER	DESIGNATION	REMARKS
TA-21-151	DP-151	ADM BLDG & SHOP
TA-21-152	DP-152	LABORATORY
TA-21-153	DP-153	FILTER HOUSE
TA-21-154	DP-154	DOUBLE HUTMENT (REMOVED)
TA-21-155	DP-155	WAREHOUSE
TA-21-156	DP-156	PUMP HOUSE
TA-21-157	DP-157	GUARD BLDG (REMOVED) 1950
TA-21-158	DP-158	GUARD TOWER "D"
TA-21-159	DP-159	PASSAGEWAY (BLDG 151 TO 152)
TA-21-160	DP-160	TANK SHELTER
TA-21-161	DP-161	TANK (WATER)
TA-21-162	DP-162	TANK (WATER)
TA-21-163	DP-163	SEPTIC TANK (SANITARY)
TA-21-164	DP-164	SUMP (ACID)
TA-21-165	DP-165	STORAGE
TA-21-166	DP-166	EQUIPMENT ANNEX
TA-21-167	DP-167	EQUIPMENT ANNEX
TA-21-168	DP-168	GUARD HOUSE (STATION 127)
TA-21-169	DP-169	MANHOLE (WATER PRV)
TA-21-170	DP-170	MANHOLE (STEAM)
TA-21-171	DP-171	MANHOLE (WATER VALVE BOX)
TA-21-172	DP-172	MANHOLE (WATER PRV)
TA-21-173	DP-173	MANHOLE (SANITARY)
TA-21-174	DP-174	MANHOLE (WATER)
TA-21-175	DP-175	MANHOLE (SANITARY)
TA-21-176	DP-176	MANHOLE (ELECTRIC)
TA-21-177	DP-177	MANHOLE (ELECTRIC)
TA-21-178	DP-178	TRANSFORMER STATION
TA-21-179	DP-179	TRANSFORMER STATION
TA-21-180	DP-180	TRANSFORMER STATION
TA-21-181	DP-181	SEPTIC TANK (SANITARY)
TA-21-182	DP-182	DRUM STORAGE
TA-21-183	DP-183	GUARD TOWER (REMOVED)
TA-21-184	DP-184	SUBSTATION

UNCLASSIFIED

REV.1 2/7/90

FIGURE 21-17

TA-21 STRUCTURE LOCATION INDEX

REVISED TO STATUS OF 7-1-57

REVISIONS

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

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

STRUCTURE LOCATION PLAN
TA-21 DP SITE

DRAWN: N BYERS — SCALE: NONE — DATE: 9-23-55 — SHEET 1 OF 2 — ENG-R 139

OFFICIAL USE ONLY

TA-22
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 22 is used principally for developing and fabricating detonation systems. The main explosive used is pentaerythritol tetranitrate (PETN) (DOE, 1987a).

TA-22 lies at elevations between 7,300 and 7,500 feet asl. It is located on Two Mile Mesa, a broad and moderately sloping mesa. The mesa is bounded on the north by unnamed branches of Two Mile Canyon and on the south by Pajarito Canyon. Canyon walls are steep slopes or cliffs in the area. TA-22 lies on welded Bandelier Tuff in the Ponderosa Pine/Pinon-Juniper and Ponderosa Pine-fir overstory vegetative zones. Soil types include Carjo loam, Tocal very fine sandy loam, and rock outcrop (Nyhan et al., 1978).

The potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,280 to 6,330 feet asl at TA-22. 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-22

22-001	HE WASTE STORAGE AREA
22-002	CONTAINER STORAGE AREAS (renumbered)
22-003	SATELLITE WASTE STORAGE AREAS
22-004	SUMP AND DRY WELL (renumbered)
22-005	BUILDING 34 SUMPS (renumbered)
22-006	BUILDING 91 DRY WELLS (renumbered)
22-007	BUILDING 25 SUMP SYSTEM (renumbered)
22-008	BUILDING 52 DISCHARGE REGION / HILLSIDE DISPOSAL (renumbered)
22-009	BUILDING, HE SUMP SYSTEM (renumbered)
22-010	ACTIVE SEPTIC SYSTEMS
22-011	DISPOSAL PIT
22-012	WASH PAD
22-013	LIQUID WASTE TREATMENT / STORAGE
22-014	ACTIVE SUMPS, DRY WELLS, AND OUTFALLS
22-015	INACTIVE SUMPS, DRY WELLS, AND OUTFALLS
22-016	INACTIVE SEPTIC SYSTEM

SUMMARY

LOCATION : TA-22
TYPE OF UNIT(s) : BUILDING/STRUCTURE
UNIT USE : STORAGE
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : EST. 1950s - 1982
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

Concrete and soil magazine bunker TA-22-24 was used for the storage of HE-contaminated waste. The unit was closed unc an approved RCRA closure plan in 1988.

WASTE INFORMATION

The building was used for the storage of scrap HE and other HE-contaminated waste.

RELEASE INFORMATION

The RFA states that no past releases are known to have occurred from this unit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
22-001	TA22-1-CA-A/I-HW/RW	22.001		TA-22-24

NOTES

SWMU Nos. 22-002(a) and (b) have been renumbered to 22-003(a) and (q), respectively.

SUMMARY

LOCATION : TA-22
TYPE OF UNIT(s) : SATELLITE STORAGE AREA
UNIT USE : STORAGE
OPERATIONAL STATUS : ACTIVE/INACTIVE
PERIOD OF USE : 1983 - PRESENT
HAZARDOUS RELEASE : NONE
RADIOACTIVE RELEASE : NONE
MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

The following buildings have satellite storage areas:

SWMU NO.	STRUCTURE	NUMBER OF AREAS	DESCRIPTION
22-003(a)	TA-22-5	2 active, 2 inactive	electronics lab & warehouse; 55-gal. drum for waste solvents
22-003(b)	TA-22-96	1	Cubicle 3 in concrete and aluminum Bunker 96
22-003(c)	TA-22-34	11	detonator explosives building; has locked compartments
22-003(d)	TA-22-91	4	inert fabrication building; has locked compartments
22-003(e)	TA-22-95	1	
22-003(f)	TA-22-93	7	detonator explosives building
22-003(g)	TA-22-52	1	

WASTE INFORMATION

SWMU NO.	STRUCTURE	ROOM	WASTES STORED	PROCESS GENERATING WASTE
22-003(a)	TA-22-5	101	acetone, alcohol	parts cleaning and potting
22-003(a)	TA-22-5	103	acetone, alcohol, HCl	parts cleaning
22-003(a)	TA-22-5	116	acetone, alcohol	machine cleaning
22-003(a)	TA-22-5	SE end, outside	acetone, alcohol, chloroform	inactive; cleaning detonator parts
22-003(b)	TA-22-96	3	HE waste, detonators, acetone, alcohol, subassemblies	inactive; HE pressing
22-003(c)	TA-22-34	101	HE waste, subassemblies, detonators	explosives experiments
22-003(c)	TA-22-34	102	HE waste, subassemblies, detonators	explosives experiments
22-003(c)	TA-22-34	103	HE waste, subassemblies, detonators, acetone, alcohol	cleaning assembly parts
22-003(c)	TA-22-34	105, 106	HE waste, subassemblies, detonators, acetone, alcohol	cleaning assembly parts; explosives experiments
22-003(c)	TA-22-34	107, 108	HE waste, subassemblies, detonators, acetone, alcohol	cleaning assembly parts
22-003(c)	TA-22-34	110	HE waste, subassemblies, detonators, acetone, alcohol	cleaning assembly parts; explosives experiments
22-003(c)	TA-22-34	111	HE waste, subassemblies, detonators, acetone, alcohol	cleaning assembly parts; explosives experiments
22-003(c)	TA-22-34	112	HE waste, subassemblies, detonators, acetone, alcohol	cleaning assembly parts; explosives experiments
22-003(c)	TA-22-34	113	developer, fixer, sodium sulfite	cleaning assembly parts
22-003(c)	TA-22-34	NA	HE waste	--
22-003(c)	TA-22-34	hallway	acetone and alcohol contaminated with HE	cleaning assembly parts
22-003(d)	TA-22-91	B107	acetone and alcohol	cleaning
22-003(d)	TA-22-91	B111	alcohols, NaF2, NaOH, ammonium persulfate, sulfuric acid, HCl	printed circuit process
22-003(d)	TA-22-91	B121	acetic acid, ammonium chloride, ceric ammonium nitrate, nitric acid, sodium bifluoride, sodium hydroxide, ammonium persulfate, cadmium sulfide, ceric sulfate, chromium oxide, hydrofluoric acid, sulfuric acid, hydrogen peroxide, cupic nitrate, organics	chemistry development lab
22-003(d)	TA-22-91	B145	acetone, alcohol, chloroform, hydrochloric acid, hydrofluoric acid	cleaning parts for soldering
22-003(e)	TA-22-95		circuit etch, sodium hydroxide, acetone, alcohols	printed circuit process
22-003(f)	TA-22-93	C111	detonators, HE waste, subassemblies	HE pressing
22-003(f)	TA-22-93	C114	acetone/HE, alcohol/HE	cleaning parts for HE pressing
22-003(f)	TA-22-93	C116	detonators, subassemblies, HE waste	HE pressing
22-003(f)	TA-22-93	C122	detonators, subassemblies, HE waste	HE pressing
22-003(f)	TA-22-93	C123	detonators, subassemblies, HE waste	HE pressing
22-003(f)	TA-22-93	C125	detonators, subassemblies, HE waste	HE pressing
22-003(f)	TA-22-93	C126	detonators, subassemblies, HE waste	HE pressing
22-003(g)	TA-22-52	--	acetone, Stoddart solvent, TCA, WD-40, magnesium chips	cleaning and machining

Wastes that do not contain HE are taken to TA-54. Wastes containing HE are taken to TA-16 to be flashed before disposal in TA-54. Materials from 22-003(b) are removed regularly and burned at TA-16 or detonated at TA-36 or TA-39.

RELEASE INFORMATION

There have been no known releases from 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
22-003(a)	**			TA-22-5
22-003(b)	TA-22-8-CA-A-HW	22.003-22.005		TA-22-96
22-003(c)	**			TA-22-34
22-003(d)	**	22.002		TA-22-91
22-003(e)	**			TA-22-95
22-003(f)	**			TA-22-93
22-003(g)	**			TA-22-52

** No corresponding E. R. Program unit.

NOTES

SWMU Nos. 22-004(a) and (b) have been renumbered to 22-014(a).

NOTES

SWMU No. 22-005 has been renumbered to 22-014(b).

NOTES

SWMU No. 22-006 has been renumbered to 22-015(a).

NOTES

SWMU No. 22-007 has been renumbered to 22-015(b).

NOTES

SWMU No. 22-008 has been renumbered to 22-015(c).

NOTES

SWMU No. 22-009 has been renumbered to 22-015(d).

SUMMARY

LOCATION : TA-22
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : DISPOSAL/TREATMENT
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1952 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

Two active septic tanks are present at TA-22:

SWMU NO.	STRUCTURE	EID REG. NO.	COMPLETED	CAPACITY	BUILDING(S) SERVED	OVERFLOW
22-010(a)	TA-22-50	LA-30	1952	1,365 gal.	TA-22-34	leach field
22-010(b)	TA-22-51	LA-31	1952	8,775 gal.	TA-22-5, -32, -52, -90, -91, -93	subsurface sand filter

After 1973 industrial flows were separated from sewage flows, and the surfacing of sewage was discontinued. The leach field associated with TA-22-50 covers 800 sq ft. Septic tank TA-22-51 formerly served building TA-22-1.

WASTE INFORMATION

Contaminants, if present, are most likely HE such as PETN, RDX, tetryl, and PBX. Septic tank TA-22-50 received sanitary waste from TA-22-34. Septic tank TA-22-51 receives waste from TA-22-5, -32, -52, -90, -91, and -93, and may be contaminated with HE. Engineering drawings ENG-R1227 and ENG-R1228 indicate that septic tank TA-22-51 also served TA-22-4 and -5.

RELEASE INFORMATION

In 1972, tank TA-22-50 was indicated to be free of contamination from HE. It is unknown whether hazardous waste has been discharged.

NOTES

SWMU No. 22-010(a), TA-22-42, is an inactive septic system and is addressed as 22-016.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
22-010(a)	TA22-4-ST/CA-I/A-HW/RW	22.012		TA-22-50, -34
22-010(b)	TA22-4-ST/CA-I/A-HW/RW	22.012		TA-22-51, -32, -52, -90, -91, -93, -4, -5

SUMMARY

LOCATION : TA-22
TYPE OF UNIT(s) : PIT
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1946
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : HAZARDOUS WASTE
SUSPECTED RADIOACTIVE WASTE

UNIT INFORMATION

In 1946, a pit had been prepared for the disposal of discarded objects and shapes at TA-22. The pit was to remain open until June 1. No further information on this pit is available. However, there are warning signs at this area.

WASTE INFORMATION

The waste was most likely discarded devices. The pit may also contain radioactive waste.

RELEASE INFORMATION

It is unknown whether there have been releases from the burial pit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
22-011	TA22-6-L-I-HW/RW	22.007 22.009		

SUMMARY

LOCATION : TA-22
TYPE OF UNIT(s) : WASH PAD
UNIT USE : DECONTAMINATION
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1961 - ?
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : UNKNOWN
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

This unit is a reinforced concrete pad 8' x 8' x 10" thick used for decontaminating equipment. The pad is designated TA-22-77.

WASTE INFORMATION

The waste probably consisted of HE residues. An undated survey of TA-22 structures reports TA-22-77 as contaminated; contaminants are unknown.

RELEASE INFORMATION

It is unknown whether there have been releases of hazardous constituents from this unit.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
22-012	**			TA-22-77

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-22
TYPE OF UNIT(s) : ABOVEGROUND TANKS
UNIT USE : TREATMENT/STORAGE
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : 1987 - PRESENT
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

In TA-22-91, there are two 1000-gallon tanks that are used to neutralize and precipitate contaminants from liquid waste solutions generated from the etching processes. The sludge that contains most of the copper originally in the waste solutions is stored for pick-up by HSE-7. The treated liquid is discharged through NPDES outfall No. 128.

WASTE INFORMATION

The etching wastes undergoing treatment contain organics, hydrochloric acid, copper, ferric chloride, sodium carbonate and sodium hydroxide.

RELEASE INFORMATION

The extent of any hazardous release through the outfall is unknown.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
22-013	**			TA-22-91

** No corresponding E. R. Program unit.

SUMMARY

LOCATION : TA-22
TYPE OF UNIT(s) : SUMP
UNIT USE : TREATMENT/DISPOSAL
OPERATIONAL STATUS : ACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

The unit at TA-22-93, where HE is compacted for use in detonators, has been operating since 1985. The wash water goes to a baffle/catchment basin (4' deep, 9'2" long, 3'2" wide) and then to a seepage well (4' diameter and approximately 25' deep). According to the CEARP, the wastewater volume is approximately 100 gallons per week. The basin and seepage well are designated SWMU No. 22-014(a). TA-22-34 housed a chemistry laboratory for many years. It was later converted to a laser laboratory. This part of the building also houses an active photographic laboratory that does not have a silver recovery unit. There is a sump for the liquid wastes. Drains from the side of the building used in explosive experimental work are connected to an explosives settling basin. Currently no HE waste is routinely discharged to the settling basin. The sump and settling basin are constructed of concrete and are approximately 4' x 2' x 3' deep. The sump and settling basin are designated SWMU No. 22-014(b).

WASTE INFORMATION

The wash water from TA-22-93 operations may contain HE. The settling basin at TA-22-34 at one time received HE waste. The sump receives photoprocessing waste and may have received silver and other chemicals and solvents.

RELEASE INFORMATION

Small quantities of decanted wash water have been absorbed by the dry well soil. The sumps at TA-22-34 have a decant outlet to NPDES outfall no. 064/078. Silver and other chemicals have probably been discharged through the outfall.

NOTES

SWMU Nos. 22-014(a) and (b) were formerly SWMU Nos. 22-004(a) and (b), respectively. SWMU No. 22-014(c) was formerly SWMU No. 22-005.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
22-014(a)	TA22-3-S/O-1/A-MW	22.008		TA-22-93
22-014(b)	TA22-3-S/O-1/A-MW			TA-22-34

SUMMARY

LOCATION : TA-22
TYPE OF UNIT(s) : SUMPS, DRY WELLS, OUTFALLS
UNIT USE : DISPOSAL
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : SEE BELOW
HAZARDOUS RELEASE : KNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

The industrial drains from TA-22-91 [22-015(a)] discharged in series to two dry wells before the liquid flowed to the outfall located southeast of the building. Each dry well is stone-lined and is 25' deep, with an outside diameter of 6'. These wells are no longer used, but they remain in place and have not been filled in. The unit was active from 1985-87. Building TA-22-25 [22-015(b)] was used primarily for PETN recrystallization. The CEARP states that this building had a sump and an associated outfall that were used to dispose of mixtures of PETN and solvents. The concrete sump, containing an aluminum tank, is 4'6" x 3' x 3'6" deep (outside dimensions). The sump and outfall operated from 1949 until the 1960s. TA-22-52 [22-015(c)] housed etching and plating operations. Wastewater was sent to drains that were connected to the outfall behind the building. The former outfall area has left a residue of sorbed contaminants. The area which can be visually noted as having contamination extends an estimated drop of 100' to the streambed. The liquids previously discharged to this outfall are now piped to building TA-22-93, and are discharged to a seepage well [see 22-014(a)]. TA-22-1 was used for detonator development from 1945 until the group moved to TA-22-91 in 1984. Room 108 of TA-22-1 had a drain [22-015(d)] which apparently emptied onto the ground about 100' from the building. The location of the drain and associated outfall is undetermined. A sump [22-015(e)] measuring approximately 4'6" x 3' x 3'6" deep is associated with TA-22-1. This sump was noted by the CEARP to have been filled with concrete.

WASTE INFORMATION

The waste received by 22-015(a) is described as etching solutions containing organics, hydrochloric acid, copper, ferric chloride, sodium carbonate, and sodium hydroxide. The liquids discharged to 22-015(b) included mixtures of PETN and solvents (acetone and ethanol) generated at TA-22-25. Chemicals from plating and etching operations were the primary components of the wastewater from 22-015(c). Chemicals reported to be used include sodium hydroxide, perchloroethylene, sodium thiosulfate, gold, hydrogen peroxide, sodium cyanide, nickel, copper, zinc, cadmium, and sulfuric, hydrochloric, fluoroboric, nitric, chromic, hydrofluoric, and phosphoric acids. The CEARP also states that ferric chloride, sodium carbonate, thallium, and lead had also been used in the plating work during the 20 - 25 years of operation. The plating facility operators were instructed not to flush cyanide solutions down the site drains, however, rinse water containing up to 3.2 ppm cyanide was sent to the drains and thus to the outfall. TA-22-1 handled explosives such as PETN, RDX, tetryl, PBX, and small amounts of acetone and ethanol.

RELEASE INFORMATION

After a past overflow to an outfall, the 22-015(a) wells were removed from service. Decant from the TA-22-25 sump apparently went to a drainage area north of the building. Signs reading "High Explosive" were seen in the general outfall area during the 1987 CEARP field survey. The CEARP reports that discolored material was observed from the TA-22-52 outfall all the way to the stream at the bottom of the canyon. This apparently resulted from the ferric chloride in the waste stream. Discolored soil was sampled in 1988; however, analytical results are not available. The sump [22-015(d)] had an outfall to the south, and what is believed to be the discharge area is currently marked with signs warning of HE.

NOTES

Sub-SWMUs 22-015(a), (b), and (c) were formerly SWMU Nos. 22-006, 22-007, and 22-008, respectively. SWMU Nos. 22-015(d) and (e) were formerly addressed in SWMU No. 22-009.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
22-015(a)	TA22-3-S/O-I/A-HW	22.006 22.010- 22.011		TA-22-91

(continued)

SWMU CROSS-REFERENCE LIST
(continued)

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
22-015(b)	TA22-3-S/O-1/A-HW			TA-22-25
22-015(c)	TA22-2-CA/O-1/A-HW	22.013-22.014		TA-22-52
22-015(d)	TA22-2-CA/O-1/A-HW TA22-3-S/O-1/A-HW			TA-22-1
22-015(e)	TA22-2-CA/O-1/A-HW TA22-3-S/O-1/A-HW			NEAR TA-22-1

SUMMARY

LOCATION : TA-22
TYPE OF UNIT(s) : SEPTIC SYSTEM
UNIT USE : DISPOSAL/TREATMENT
OPERATIONAL STATUS : INACTIVE
PERIOD OF USE : 1945 - 1952
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : UNKNOWN

MATERIALS MANAGED : SOLID WASTE
SUSPECTED HAZARDOUS WASTE

UNIT INFORMATION

Septic tank TA-22-42 was constructed of reinforced concrete and measured 6' x 9' x 5'. Its overflow discharged to a leach field. The tank was abandoned in-place in 1952.

WASTE INFORMATION

It is unknown whether TA-22-42 contains radionuclides or HE contaminants.

RELEASE INFORMATION

It is unknown whether a hazardous or radioactive release occurred from TA-22-42.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
22-016	TA22-4-ST/CA-1/A-HW/RW	22.012		TA-22-42

TA-22 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
22-001	22-1
22-003(a)	22-1
22-003(b)	22-1
22-003(c)	22-1
22-003(d)	22-1
22-003(e)	22-1
22-003(f)	22-1
22-003(g)	22-1
22-010(a)	22-1
22-010(b)	22-1
22-011	22-1
22-012	22-1
22-013	22-1
22-014(a)	22-1
22-014(b)	22-1
22-015(a)	22-1
22-015(b)	22-1
22-015(c)	22-1
22-015(d)	22-1
22-016	22-1

NOTE: Some structure locations contain more than one SWMU.

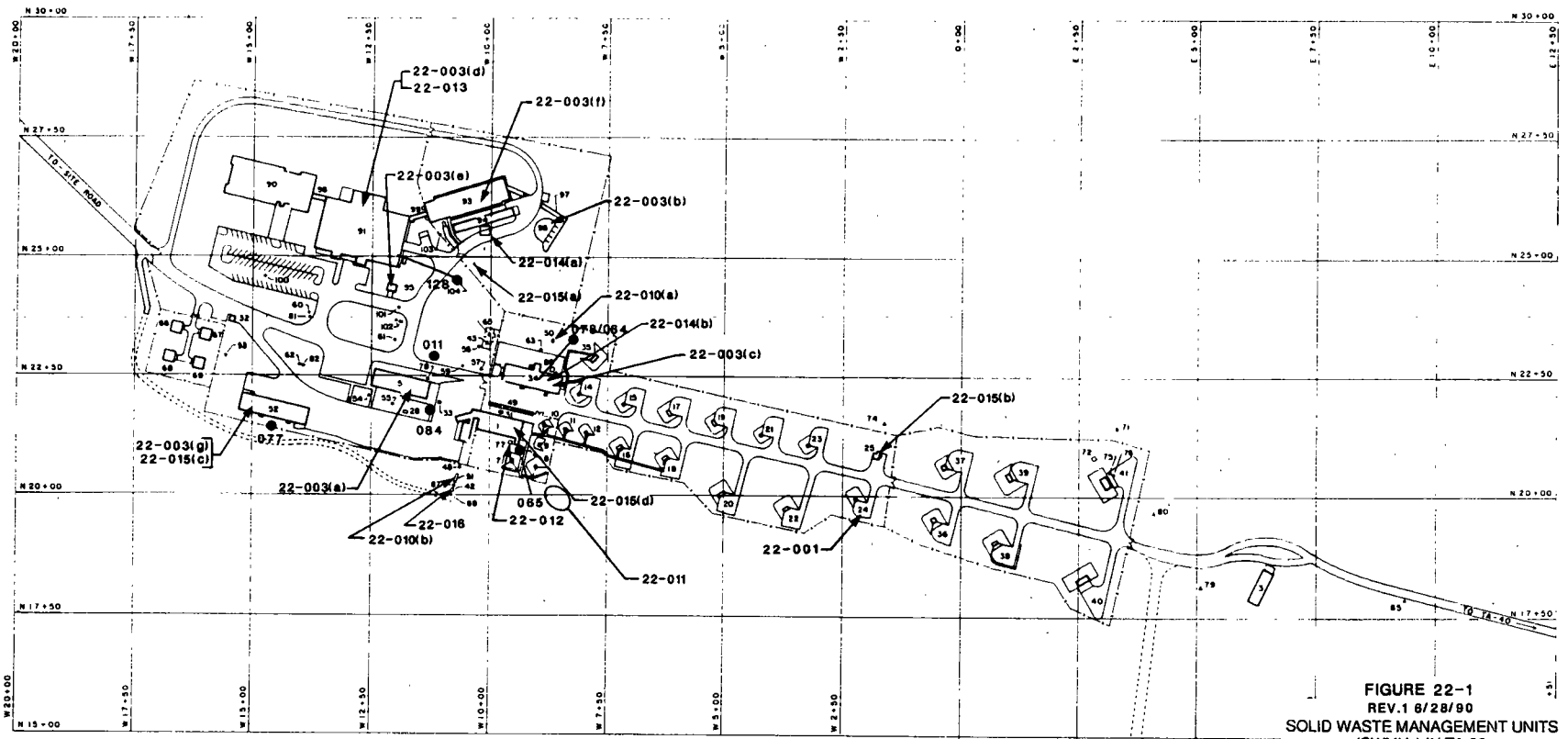


FIGURE 22-1
REV.1 6/28/90
SOLID WASTE MANAGEMENT UNITS
(SWMUs) IN TA-22

EXPLANATION

22-001 SWMU LOCATION

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

NOTES

NPDES outfall numbers 04A085 and 02A008 were associated with structure TA-22-6 which was removed in 1984.

GRAPHIC SCALE

UNCLASSIFIED

REV	DATE	REVISION	BY
16	11-1-84	REDRAWN & REVISED, TO STATUS OF 10-31-84	

UNIVERSITY OF CALIFORNIA
Los Alamos

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN

TA-22 TD-SITE

DESIGNED		DATE 11-1-84	SHEET NO. 2 of 2
DRAWN			
CHECKED			ENG-R 5114

30215 02 01 854

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-22-1	TD-1	LOADING BUILDING		N18+50 W10+00
TA-22-2	TD-2	STORAGE BUILDING		N18+00 E 2+50
TA-22-3	TD-3	STORAGE BUILDING		N17+50 E 2+50
TA-22-4	TD-4		REMOVED 1984	
TA-22-5	TD-5	WAREHOUSE & PLASTIC SHOP		N22+50 W12+50
TA-22-6	TD-6		REMOVED 1984	
TA-22-7	TD-7	PROCESS BUILDING		N20+00 W101.00
TA-22-8	TD-8	PROCESS BUILDING		N20+00 W101.00
TA-22-9	TD-9	MAGAZINE		N20+00 W10+00
TA-22-10	TD-10	MAGAZINE		N22+50 W7+50
TA-22-11	TD-11	MAGAZINE		N22+50 W7+50
TA-22-12	TD-12	MAGAZINE		N22+50 W7+50
TA-22-13	TD-13		REMOVED 1932	
TA-22-14	TD-14	MAGAZINE		N22+50 W7+50
TA-22-15	TD-15	PROCESS BUILDING		N22+50 W7+50
TA-22-16	TD-16	MAGAZINE		N22+50 W7+50
TA-22-17	TD-17	MAGAZINE		N22+50 W3+00
TA-22-18	TD-18	MAGAZINE		N20+00 W7+50
TA-22-19	TD-19	PROCESS BUILDING		N22+50 W3+00
TA-22-20	TD-20	MAGAZINE		N20+00 W3+00
TA-22-21	TD-21	MAGAZINE		N20+00 W3+00
TA-22-22	TD-22	MAGAZINE		N20+00 W2+50
TA-22-23	TD-23	MAGAZINE		N20+00 W2+50
TA-22-24	TD-24	MAGAZINE		N20+00 W2+50
TA-22-25	TD-25	PROCESS BUILDING		N20+00 W2+50
TA-22-26	TD-26		REMOVED 1980	
TA-22-27	TD-27		REMOVED 1949	
TA-22-28	TD-28	VALVE HOUSE		N22+50 W12+50
TA-22-29	TD-29		REMOVED 1984	
TA-22-30	TD-30		CANCELLED	
TA-22-31	TD-31	SPRINKLER HOUSE		N22+50 W10+00
TA-22-32	TD-32	GUARD HOUSE		N22+50 W15+00
TA-22-33	TD-33	STEAM PIT	ABANDONED 1964	N22+50 W10+00
TA-22-34	TD-34	LABORATORY BUILDING		N22+50 W10+00
TA-22-35	TD-35	MAGAZINE		N22+50 W7+50
TA-22-36	TD-36	MAGAZINE		N20+00 0+00
TA-22-37	TD-37	MAGAZINE		N20+00 0+00
TA-22-38	TD-38	MAGAZINE		N20+00 0+00
TA-22-39	TD-39	MAGAZINE		N20+00 0+00
TA-22-40	TD-40	INERT PREPARATION BLDG		N17+50 E 2+50
TA-22-41	TD-41	LABORATORY BUILDING		N20+00 E 2+50
TA-22-42	TD-42	TANK, SEPTIC	ABANDONED 1952	N20+00 W10+00
TA-22-43	TD-43	TRANSFORMER STATION		N22+50 W10+00
TA-22-44	TD-44	WOOD FENCE	REMOVED 1940	
TA-22-45	TD-45		REMOVED 1984	
TA-22-46	TD-46		REMOVED 1949	
TA-22-47	TD-47	MANHOLE	STEAM	N20+00 W10+00
TA-22-48	TD-48	MANHOLE	SANITARY	N20+00 W10+00
TA-22-49	TD-49	BARRICADE		N22+50 W10+00
TA-22-50	TD-50	TANK	SEPTIC	N22+50 W17+50
TA-22-51	TD-51	TANK	SEPTIC	N20+00 W10+00
TA-22-52	TD-52	SHOPS BUILDING		N22+50 W15+00
TA-22-53	TD-53	MANHOLE	SANITARY	N22+50 W15+00
TA-22-54	TD-54	MANHOLE	SANITARY	N22+50 W12+50
TA-22-55	TD-55	MANHOLE	SANITARY	N22+50 W12+50
TA-22-56	TD-56	MANHOLE	ELECTRICAL	N22+50 W10+00
TA-22-57	TD-57	TRANSFORMER STATION	ABANDONED 1984	N22+50 W10+00
TA-22-58	TD-58		REMOVED 1984	
TA-22-59	TD-59	MANHOLE	WATER	N22+50 W15+00
TA-22-60	TD-60	MANHOLE	ELECTRICAL	N22+00 W15+00
TA-22-61	TD-61	MANHOLE	ELECTRICAL	N22+50 W12+50
TA-22-62	TD-62	MANHOLE	ELECTRICAL	N22+50 W15+00
TA-22-63	TD-63	MANHOLE	SANITARY	N22+50 W10+00
TA-22-64	TD-64		REMOVED 1984	
TA-22-65	TD-65	TRANSFORMER STATION		N22+50 W10+00
TA-22-66	TD-66	STORAGE BUILDING		N22+50 W17+50
TA-22-67	TD-67	STORAGE BUILDING		N22+50 W15+00
TA-22-68	TD-68	STORAGE BUILDING		N22+50 W17+50
TA-22-69	TD-69	STORAGE BUILDING		N22+50 W15+00
TA-22-70	TD-70		REMOVED 1952	
TA-22-71	TD-71	TRANSFORMER STATION		N22+50 E 2+50
TA-22-72	TD-72	EQUIPMENT BUILDING		N20+00 E 2+50
TA-22-73	TD-73		REMOVED	
TA-22-74	TD-74	TRANSFORMER STATION		N22+50 W2+50
TA-22-75	TD-75	MANHOLE	H.E. SUMP	N20+00 E 2+50
TA-22-76	TD-76	MANHOLE	WATER	N20+00 E 2+50
TA-22-77	TD-77	CONTAM. WASH PAD		N20+00 W10+00
TA-22-78	TD-78	MANHOLE	STEAM PUMP PIT	N22 50 W12+50
TA-22-79	TD-79	TRANSFORMER STATION		N17+50 E 5+00
TA-22-80	TD-80	TRANSFORMER STATION		N20+00 E 5+00
TA-22-81	TD-81	MANHOLE	TELEPHONE	N22+50 W15+00
TA-22-82	TD-82	MANHOLE	TELEPHONE	N22+50 W15+00
TA-22-83	TD-83		UNASSIGNED	
TA-22-84	TD-84		REMOVED 1984	
TA-22-85	TD-85	MANHOLE	WATER	N17+50 E 8+00
TA-22-86	TD-86	SHIELDED ENCLOSURE		N22+50 W10+00
TA-22-87	TD-87	MANHOLE	SANITARY	N20+00 W10+00
TA-22-88	TD-88	MANHOLE	SANITARY	N20+00 W10+00
TA-22-89	TD-89		CANCELLED	
TA-22-90	TD-90	ADMINISTRATIVE BUILDING		N27+50 W15+00
TA-22-91	TD-91	DETONATOR SUPPORT BLDG		N25+00 W12+50
TA-22-92	TD-92		UNASSIGNED	
TA-22-93	TD-93	DETONATOR EXPLOSIVES BLDG		N25+00 W10+00
TA-22-94	TD-94	BUNKER		N25+00 W10+00
TA-22-95	TD-95	SOLVENT STORAGE SHED		N25+00 W12+50
TA-22-96	TD-96	MAGAZINE		N23+00 W10+00
TA-22-97	TD-97	COVERED WALKWAY		N25+00 W10+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA-22-98	TD-98	PASSAGEWAY		N21+00 W10+00
TA-22-99	TD-99	PASSAGEWAY		N21+00 W7+50
TA-22-100	TD-100	MANHOLE		N21+00 W7+50
TA-22-101	TD-101	MANHOLE	SANITARY	N21+00 W10+00
TA-22-102	TD-102	MANHOLE	SANITARY	N21+00 W10+00
TA-22-103	TD-103	LIFT STATION & VALVE VAULT	SANITARY	N21+00 W12+50
TA-22-104	TD-104	MANHOLE	SANITARY	N21+00 W10+00
TA-22-105	TD-105	MANHOLE	ACID	N21+00 W10+00

STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION

UNCLASSIFIED

FIGURE 22-2

TA-22 STRUCTURE LOCATION INDEX

REV.	DATE	REVISION	BY	CHK'D	APP'D
16	11-1-84	REVISED TO STATUS OF 10-31-84	TD		
15	9-21-83	REVISED TITLE BLOCK AND DWG. TO STATUS OF 7-22-83	VM		

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

FACILITIES ENGINEERING DIVISION

INDEX SHEET
STRUCTURE LOCATION PLAN
TA-22 TD - SITE

SEC CLASSIFICATION: CLASS. U
REVIEWER:
DATE: 11-5-83

SUBMITTED	RECOMMENDED	APPROVED
DRAWN	DATE 9-21-83	SHEET NO. 1 OF 2
CHECKED		DRAWING NO. ENG-R 5114

TA-23
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 23 is a small decommissioned area that contained a firing point, magazine, office, and laboratories. It was used principally as a firing site. It lies within the current boundaries of TA-9. Two SWMUs have been identified in former TA-23. They have been renumbered to 9-014 and 9-015.

The elevation of the former site of TA-23 is about 7,540 feet asl. It is located on a broad mesa bounded by a branch of Pajarito Canyon on the north and by Canon de Valle on the south. The canyon walls range from steep to moderate slopes in this area. It is in the Ponderosa Pine/Pinon-Juniper overstory vegetative zone and the soil consists of Carjo loam (Nyhan et al., 1978).

The potentiometric surface of the main aquifer in the Los Alamos area lies at a little over 6,300 feet asl at the site of the former TA-23 (IT, 1987a). 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-23

23-001	FIRING SITE (renumbered)
23-002	INDUSTRIAL WASTE MANHOLE (renumbered)

NOTES

This SWMU has been renumbered to 9-014.

NOTES

This SWMU has been renumbered to 9-015.

TA-24

OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 24 is no longer operational. It was used for x-ray examination of high-explosive charges. A large storage magazine and laboratories were part of the facility (DOE, 1987a). It now lies within TA-16. One SWMU has been identified in TA-24. It has been renumbered to 16-024.

The former site of TA-24 lies at 7,590 feet asl. It is located on a broad mesa that is bounded on the north by Canon de Valle and on the south by Water Canyon. Soil consists of clayey-skeletal Typic Eutroboralfs. Plant life is from the Ponderosa Pine/Pinon-Juniper overstory vegetation zone (Nyhan et al., 1978).

The potentiometric surface of the main aquifer in the Los Alamos lies at about 6,340 feet asl at the former location of TA-24. 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-24

24-001 SEPTIC SYSTEM (renumbered)

NOTES

This SWMU has been renumebered to SWMU Nos. 16-005(j) and (m).

TA-25
OPERATIONS AND ENVIRONMENTAL SETTING

Technical Area (TA) 25, called V Site, was constructed in 1944 for experimental work in connection with special assemblies. In 1945, the site underwent extensive alterations to become a part of TA-16, allowing process work on explosive charges to be done. Structures at the site included an laboratory buildings, an equipment building, a warehouse, and museum buildings (DOE, 1987a). Two SWMUs were originally identified in TA-25. One of these, a septic system, is renumbered to 16-006(g) and 16-006(h) in this revision of the report. The second SWMU, a pit that was decommissioned in 1945, is listed as part of former TA-25 because it was never actively used as part of TA-16.

The site of former TA-25 has elevation of about 7,600 feet asl. It is located on a broad mesa that is bounded on the north by Canon de Valle and on the south by Water Canyon. It lies in the Ponderosa Pine/Pinon-Juniper overstory vegetation zone. Soil consists of Tocal very fine sandy loam and Totavi gravelly loamy sand (Nyhan et al., 1978).

The potentiometric surface of the main aquifer in the Los Alamos region lies at about 6,300 feet asl at the site of TA-25. 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-25

25-001	PIT
25-002	SEPTIC SYSTEM (renumbered)

SUMMARY

LOCATION : TA-25
TYPE OF UNIT(s) : PIT
UNIT USE : UNKNOWN
OPERATIONAL STATUS : DECOMMISSIONED
PERIOD OF USE : 1944 - 1945
HAZARDOUS RELEASE : UNKNOWN
RADIOACTIVE RELEASE : NONE

MATERIALS MANAGED : HAZARDOUS WASTE

UNIT INFORMATION

Pit TA-25-9 was associated with HE work at TA-25; it was removed in 1945. No details on the size or capacity of the unit are available. It is not known whether this is the same pit designated as TA-16-523 in SWMU No. 16-029(g2).

WASTE INFORMATION

The pit contained HE and beryllium. Details on the removal of these materials is lacking, as is any documentation about the possibility that any residual contamination remains.

RELEASE INFORMATION

It is not known whether hazardous releases from this unit have occurred.

NOTES

The location of this SWMU is within the current boundaries of TA-16.

SWMU CROSS-REFERENCE LIST

SWMU NUMBER	CEARP IDENTIFICATION NUMBER(S)	RFA UNIT	E.R. RELEASE SITE INFO.	ASSOCIATED STRUCTURES
25-001	TA25-1-CA-I-HW/RW			TA-25-9

NOTES

This SWMU has been renumbered to SWMU Nos. 16-006(g) and (h).

TA-25 SOLID WASTE MANAGEMENT UNITS (SWMUs) FIGURE INDEX

SWMU	FIGURE NUMBER
25-001	Not shown

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

Rev. 1, 7/3/90

LAN:TA-Units/43

*U.S. GOVERNMENT PRINTING OFFICE: 1990-0-573-036/20120