Kearney/Centaur Division
A.T. Kearney, Inc.
Three Lagoon Drive
Redwood City, California 94065
415 598 9390

Management
Consultants

August 18, 1987

AT KEARNEY

Mr. Tom Clark
Regional Project Officer
U.S. Environmental Protection Agency
Region VI - 10th Floor
1445 Ross Avenue
Dallas, TX 75202-2433

Reference: EPA Contract No. 68-01-7374; Work Assignment No. R26-01-12; U.S. DOE, Los Alamos National Laboratory, NM0890010515; PR/VSI Report

Dear Mr. Clark:

Enclosed is the PR/VSI report for the Los Alamos National Laboratory (LANL) located in Los Alamos, New Mexico. A total of 775 solid waste management units and other areas of concern were identified as a result of the assessment process. Most of these units where hazardous constituents are expected to be found are also contaminated with radioisotopes, thus generating "mixed waste" (i.e., considered under the authority of RCRA). Mixed waste is suspected to be found throughout the LANL facility in various TSD units including drum storage areas, pits, lagoons, surface impoundments, landfills, tanks, and trenches. In addition, LANL possesses a variety of active and abandoned units where mixed waste is also suspected to exist.

While evidence of release from various LANL units was noted during this RFA, numerous releases of hazardous and radioactive waste have already been documented by LANL. In fact, it was determined during this RFA that LANL has prepared a Comprehensive Environmental Assessment and Response Program (CEARP) report which assesses the degree of potential impact to human health and the environment which may be encountered at various LANL sites. The results of the LANL CEARP study were not available during the course of this RFA. While the conclusions and suggested further actions presented in this report have been developed independently of the CEARP report, the suggested further actions of the CEARP report, when released to EPA, should be considered in conjunction with those of this RFA report.

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Suggested further action at units throughout the LANL facility involves small scale clean-up and broad area (i.e., larger than 10 acres) characterization. Because of the health risk associated with radioactive wastes, it is suggested that any further RFA action at this facility (i.e., SV or RFI) should give careful consideration to the radiation hazards. Indeed, every attempt should be made to build on the existing programs, including having all sample collection activities implemented by LANL personnel (e.g., those who are sensitive to these potential health risk conditions).

If you have any questions, do not hesitate to call me or John Donley.

Sincerely,

Don R Beasley

Lee Deets
Technical Director

Enclosure

cc: L. Boada, EPA Region VI
G. Uetrecht, EPA Region VI
M. Sides, EPA Region VI
E. Allen, EPA Region VI
D. Beasley
J. Grieve
A. Schaffer
J. Donley
M. Unger, KWB

RECEIVED
AUG 24 1987
HAZARDOUS WASTE COMPLIANCE
TECHNICAL SECTION

RCRA FACILITY ASSESSMENT EVALUATION

PRELIMINARY REVIEW AND VISUAL SITE INSPECTION

(NO SAMPLING VISIT)

Region VI, Technical Compliance Section

FACILITY'S NAME(S): U. S. Los Alamos National Laboratory

EPA ID NUMBER: NM0890010515

ADDRESS: P.O. Box 1663 Los Alamos, NM 87545

LOCATION: Los Alamos Area Office Los Alamos, NM

DATE OF INSPECTION: May 18, 1987

SITE DESCRIPTION: Research facility with areas designated to work on space technology, nuclear weapons, nuclear reactors, health and medical, basic nuclear and particle physics, and non-nuclear ordinance.

PREPARED BY: K.W. Brown & Assoc., Inc. A.T. Kearney, Inc. and DATE PREPARED: August 1987

REVIEWED BY: Bobby Williams-EPA DATE REVIEWED: April 23, 1988

ANTICIPATED DRAFT PERMIT DATE: 3rd Qtr. 1988

ANY ON-GOING STATE/FED 264, 265, or 270 CORRECTIVE ACTION OR CERCLA ACTION; No

DOES FACILITY HAVE A CERCLA FILE? YES X NO ____

Was a CERCLA PA/SI performed at this facility: Yes

DOES FACILITY HAVE UIC WELL? YES ____ NO X

TYPE OF DRINKING WATER SUPPLY WITHIN A 3-MILE RADIUS: Groundwater from a deep aquifer.

TARGET POPULATION WITHIN A 3-MILE RADIUS: Approximately 20,000 persons.

RECOMMENDATIONS: ____ S.V. X R.F.I. ____ I.M. ____ No Further Action under RFA

(Indicate only one unless I.M. is marked)

X 3004(u) ____ 3007

Possible Enforcement Action: 3008(a) 3008(h)

RCRA FACILITY ASSESSMENT (RFA)
PRELIMINARY REVIEW/VISUAL SITE INSPECTION (PR/VSI) REPORT
OF THE LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO
I.D. NUMBER NM0890010515

prepared for

U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue
Dallas, Texas 75202

by

A. T. Kearney
699 Prince Street
Alexandria, VA 22313

and

K. W. Brown & Associates, Inc.
6 Graham Road
College Station, TX 77840

EPA Contract Number 68-01-7374
A. T. Kearney Work Assignment Number R26-01-12

August, 1987

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I. EXECUTIVE SUMMARY

A RCRA Facility Assessment (RFA) was performed for the Los Alamos National Laboratory (LANL), Los Alamos, New Mexico. The purpose of the RFA was to identify and assess the potential for release of hazardous waste or hazardous constituents into the environment from solid waste management units (SWMUs) and other areas of concern. The RFA included a review of existing records at EPA Region VI, discussions with regulatory personnel familiar with the facility, interviews with facility personnel, and a visual site inspection (VSI). Following discussion with EPA Region VI, it was determined that the New Mexico State files did not need to be reviewed, as no new or significant data were expected. In addition, following approval from EPA Region VI, a RFA Report format was developed specific for the LANL facility to provide an effective and comprehensive means to present the large amount of information gathered and developed for this facility.

The LANL began operation in 1943 for the purpose of developing the atomic bomb. Since that time, LANL activities have expanded into a variety of other research areas including space technology, nuclear weapons, nuclear reactors, health and medical, basic nuclear and particle physics, and non-nuclear ordnance. Presently, the facility is owned by the U. S. Department of Energy and operated by the University of California. During the VSI, the increased security protocols associated with the confidentiality of these programs often restricted access to various areas and impacted the ability of the VSI team to observe and photograph all units.

The facility, which includes about 43 square miles of contiguous property, is located 25 miles northwest of Santa Fe, in north central New Mexico. It is an arid region, receiving approximately 18 inches of rainfall annually. The terrain is characterized by finger mesas composed of volcanic tuff. Facility operations are conducted on the mesas and in the canyons below. Industrial activities are often geographically isolated by the terrain. Groundwater typically occurs between 900 and 1,200 feet below the ground surface, although some perched water may be found in alluvial deposits within the canyons. Naturally occurring surface water is rare and seasonal, although wastewater discharges have created artificial perennial streams in some areas.

Industrial activities have been conducted throughout much of the facility in functional centers termed "Technical Areas", referred to as "TA" in this report. There are presently a total of 49 such areas, 32 of which are currently active (TA-0 through TA-59). To note, the LANL TA numbering system is not sequential, therefore, it should be understood that there are a total of 49 TAs at the LANL facility, although reference is made to numbers as high as TA-59.

~~Within the technical areas, a total of 335 SWMUs and other areas of concern have been identified.~~ Most of these units have been used to manage solid wastes that are also contaminated with radioactive isotopes. For this RFA,

these radioactive, contaminated solid wastes are considered "mixed waste" (i.e., considered under the authority of RCRA); units/areas containing mixed wastes are therefore considered as SWMUs or other areas of concern.

In many cases, waste management practices are self-contained within a technical area. However, the facility does maintain centralized waste accumulation and disposal facilities in TA-54, and waste treatment facilities in TA-50. In addition, Pan Am Services, the contractor responsible for general support services, maintains a centralized waste accumulation area in TA-3, primarily for scrap metals and surplus materials.

Within individual technical areas, [redacted] In addition, many TAs possess a variety of other active and abandoned units suspected of containing hazardous and radioactive constituents. Due to the size of the LANL facility, and the number and diversity of areas suspected of containing hazardous waste and constituents, two 2-man teams were utilized to conduct the VSI. Even so, due to increased security protocols, the size of the facility, the terrain on which LANL units were often encountered, and the inability of LANL personnel to identify all potential units described in the PR references, visual inspection was not accomplished at all units identified during the PR. In addition, certain file material was not reviewed during this RFA (e.g., files provided to EPA by an ex-employee of LANL after the VSI; following discussion of this situation, EPA directed the RFA team to complete the RFA report without reviewing this information). Nevertheless, the available information and level of visual inspection accomplished during the course of this RFA has provided an effective and comprehensive assessment of solid waste management practices and environmental conditions associated with the LANL facility.

Historically, LANL waste management practices have relied heavily on the characteristics of the natural environment, such as the low annual rainfall, absence of perennial surface water, depth to the water table, and the natural ability of volcanic tuff to retard pollutant migration. Only recently has the facility used engineered release controls such as synthetic liners and secondary containment systems.

This report identifies and describes SWMUs and other areas of concern at the facility, evaluates the release potential of each, and presents suggestions for further action. LANL has prepared a Comprehensive Environmental Assessment and Response Program (CEARP) report. This CEARP report describes an investigation developed and implemented by LANL personnel to assess the degree of potential impact to human health and the environment which may be encountered at various sites throughout the LANL facility. The results of the LANL CEARP study were not available during the course of this RFA; consequently, all conclusions and suggested further actions have been developed independently of the CEARP report.

Because of the health risks associated with radioactive wastes,the facility is currently involved in an extensive environmental monitoring program and varying stages of remedial activities. Any further actions should give

careful consideration to the radiation hazards and every attempt should be made to build upon the existing programs. It should be noted that all findings and further actions were reviewed by EPA Region VI, and all agency comments and concerns have been incorporated into this RFA Report prior to finalization.

II. INTRODUCTION

The 1984 Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA) provided new authority to EPA to require comprehensive corrective actions for releases of hazardous wastes and hazardous constituents from solid waste management units (SWMUs) and other areas of concern at interim status facilities and those applying for RCRA permits. The intent of this authority is to address previously unregulated releases to air, surface water, soil, and groundwater and the generation of subsurface gas. In order to accomplish this objective, a RCRA Facility Assessment ([redacted]) is undertaken, consisting of a Preliminary Review ([redacted]), a Visual Site Inspection ([redacted]), and, if appropriate, a Sampling Visit ([redacted]).

This report summarizes the PR and VSI of all contiguous properties associated with the Los Alamos National Laboratory (LANL), Los Alamos, New Mexico. [redacted] utilized in the PR are the files of EPA Region VI, including the facility's RCRA Part B application and CERCLA, NPDES, and RCRA files. During the VSI, SWMUs and other areas of concern were inspected and facility personnel were interviewed.

The information presented in this report has been derived from many volumes of related file material, visual observation, and discussions with personnel familiar with the facility. Every effort has been made to ensure that the report contains an accurate and complete representation of conditions at the facility. In the course of this RFA, it frequently became necessary to prioritize data collection efforts, to avoid expending a disproportionate amount of time obtaining information that may have presented a more complete view of the facility, but would have actually contributed little to the final decisions regarding the need for further actions at the facility. Nevertheless, due to the size, complexity, and age of the facility, the possibility remains that certain waste management activities, especially those associated with past practices, have not been identified (e.g., files provided to EPA by an ex-employee of LANL after the VSI; following discussion of this situation, EPA directed the RFA team to complete the RFA report without reviewing this information). Conceivably, these activities could be discovered, given a significant increase in time and level of effort. We believe, however, that the efforts expended to date have been successful in identifying the issues that are sensitive to the requirements of the Corrective Action Program. Therefore, further PR/VSI investigation efforts are not deemed necessary at this time.

The report begins with a general discussion of the facility's waste generating activities and regulatory history (Section III). Section IV provides historical release information including both regulated and non-regulated releases. Next is a discussion of the environmental setting (Section V), with special emphasis on those factors that are important to evaluating the release potential of the facility as a whole and of individual waste management practices. A summary of the characteristics of individual SWMUs and areas of concern, including photographs obtained during the VSI, is presented in the chapters that follow (Section VI). The facility has divided its operations into Technical Areas that can be defined both geographically and functionally. For clarity, the SWMU descriptions have been organized in this same fashion. A description of

the format and example are provided at the beginning of Section VI. Each chapter within this section begins with an overview of the Technical Area, including a list of SWMUs and an area map. It should be noted that maps were not available for all TA's; either not available during the PR, or not provided by LANL during the VSI. The unit descriptions and associated photographs are then presented individually. Finally, the report ends with a discussion of conclusions, followed by suggestions for further actions.

Because of the size and complexity of the facility, the organization, content and manner of presentation may differ somewhat from previous RFA reports. All of these changes are intended to present only that level of detail necessary to reliably evaluate the conditions at the facility and to formulate a plan for further action. For example, SWMU descriptions are presented in outline form and supported by photographs. In this manner, many of the details of construction can be gleaned quite readily from the photograph, eliminating the need for the extensive narrative.

III. FACILITY AND PROCESS DESCRIPTION

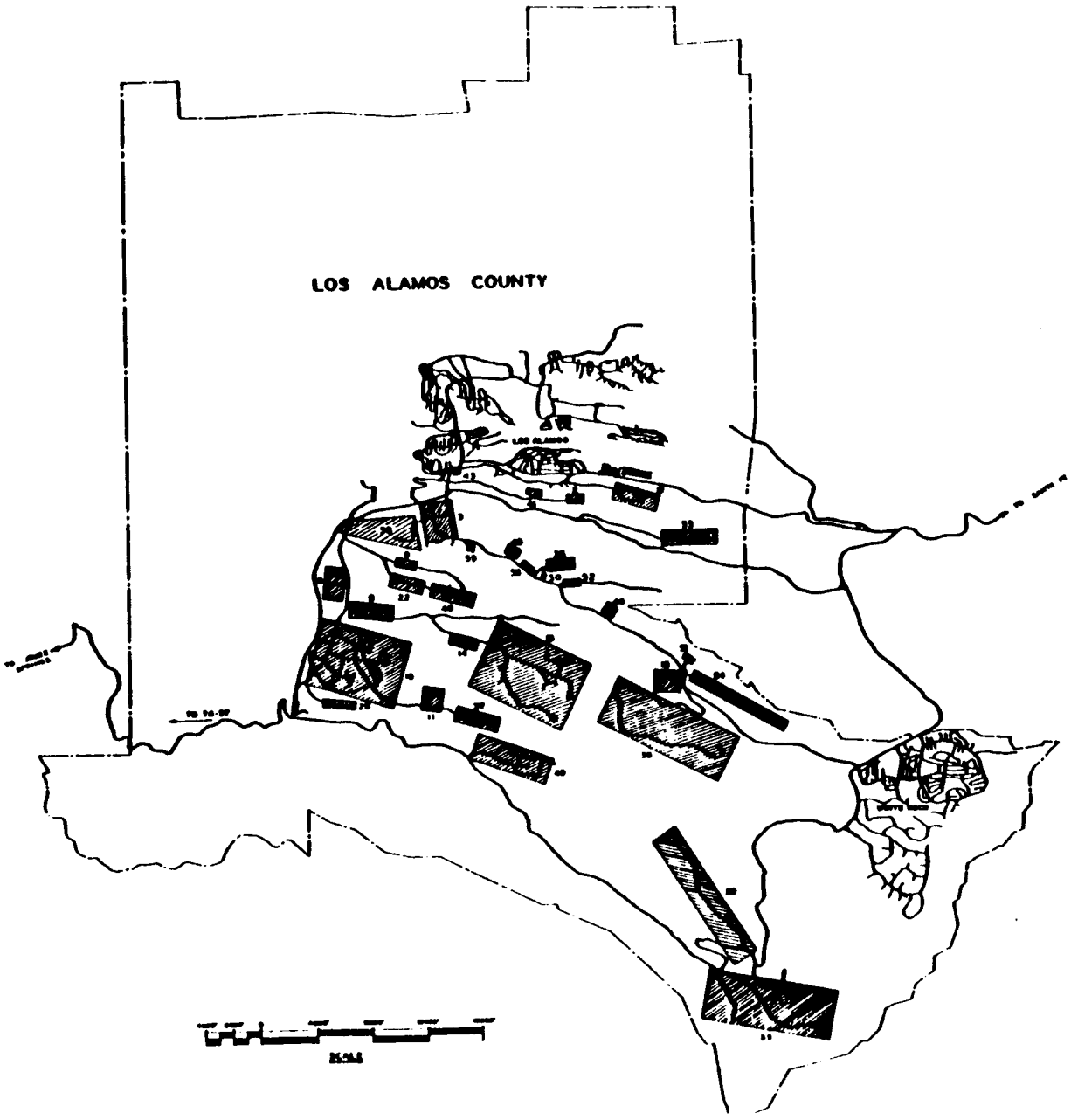
LANL was established in January 1943 in Los Alamos County in north central New Mexico, approximately 60 miles north northeast of Santa Fe. Its initial purpose was to develop the atomic bomb. Following World War II, its primary aim continued to be associated with the development of nuclear weapons. However, in contemporary times, its purpose has expanded to include a variety of other research areas such as space technology, nuclear reactors, health and medical, basic nuclear and particle physics, and non-nuclear ordnance. LANL is owned by the U.S. Department of Energy and operated by the University of California.

The LANL facility area consists of about 43 square miles, containing a total of 49 functional centers termed "Technical Areas" (TA) (Figure 1). At the time of the VSI, 32 active technical areas were identified in addition to numerous other inactive technical areas (TA-0 through TA-59). To note, the LANL TA numbering system is not sequential, therefore, it should be understood that there are not a total of 59 TAs at the LANL facility (e.g., there is no TA-17). In many respects, waste management practices are self-contained within each technical area, resulting in various SWMUs and other areas of concern. Units specific to these technical areas where hazardous waste or constituents may be encountered include treatment, storage, and disposal units including drum storage areas, pits, lagoons, surface impoundments, landfills, and trenches. In addition, many LANL TAs possess a variety of other active and abandoned units suspected of containing hazardous and radioactive constituents. Nevertheless, the LANL facility maintains centralized waste accumulation and disposal facilities in TA-54 and waste treatment facilities in TA-50, and wastes generated throughout LANL may be processed in these areas. In addition, Pan Am Services, the contractor responsible for general support services, maintains a centralized waste accumulation area, primarily for scrap metals and surplus materials, in TA-3.

In addition, regulations mandated by the Nuclear Regulatory Commission may pertain to conditions encountered at the LANL facility; however, these NRC regulations are outside the scope of this RFA.

A. PRINCIPAL WASTES GENERATED AND TREATMENT/DISPOSAL OPTIONS

The hazardous wastes generated at LANL include: wastes from processing operations; wastes from research and development (R&D) activities; and high explosive (HE) wastes. Each type has unique characteristics. Typically, processing wastes are significant volumes of material that contain a limited number of constituents: R&D wastes, however, are typically lesser volumes of a variety of laboratory reagents, chemicals, solvents and other general laboratory waste. The composition and concentration of contaminants in a given process waste are generally uniform, unless modifications to the process are made. Conversely, the waste species from R&D activities continually vary depending on the activities of the R&D efforts at the LANL. HE wastes consist of a variety of chemicals, the concentrations of which may vary.



TECH AREA NUMBER	NOMENCLATURE	REMARKS
TA-0	UNASSIGNED LAND RESERVE	REMOVED 1964-1965
TA-1	OMEGA SITE	
TA-2	SOUTH MESA SITE	REMOVED 1958
TA-3		ABANDONED 1960
TA-4		
TA-5	BETA SITE	
TA-6	TWO MILE MESA SITE	
TA-7	ZOOMET RANCH SITE	ABANDONED 1945
TA-8	ANCHOR SITE WEST	
TA-9	ANCHOR SITE EAST	
TA-10		REMOVED 1952
TA-11	R SITE	
TA-12	L SITE	ABANDONED 1953
TA-13	P SITE	INCORPORATED WITH 3
TA-14	Q SITE	
TA-15	B SITE	
TA-16	S SITE	
TA-17		CANCELLED
TA-18	PAJARITO LABORATORY	
TA-19		REMOVED 1975
TA-20	SANDIA CANYON SITE	ABANDONED 1957
TA-21	DP SITE	
TA-22	TD SITE	
TA-23		REMOVED 1950
TA-24		INCORPORATED WITH 3
TA-25	T SITE	INCORPORATED WITH 3
TA-26	V SITE	REMOVED 1949
TA-27		ABANDONED 1945
TA-28		
TA-29	SANDIA SITE	
TA-30	MAGAZINE AREA A	
TA-31	MAGAZINE AREA B	ABANDONED 1957
TA-32		REMOVED 1946
TA-33		REMOVED 1956
TA-34		REMOVED 1954
TA-35		
TA-36	HP SITE	CANCELLED
TA-37		
TA-38	TEN SITE	
TA-39	RAPPS SITE	
TA-40	MAGAZINE AREA C	CANCELLED
TA-41		
TA-42	ANCHO CANYON SITE	
TA-43	DP SITE	
TA-44	W SITE	
TA-45	INCINERATOR SITE	ABANDONED 1979
TA-46	HEALTH RESEARCH LABORATORY	
TA-47	LOS ANGELES SITE	ABANDONED 1950
TA-48		REMOVED 1967
TA-49	WA SITE	
TA-50	WA SITE DOUGLAS RAILROAD	ABANDONED 1950
TA-51	RADIOCHEMISTRY SITE	
TA-52	PAJAROLES MESA SITE	INACTIVE
TA-53	WASTE MANAGEMENT SITE	
TA-54	RADIATION EXPOSURE FACILITY	
TA-55	REACTOR DEVELOPMENT SITE	
TA-56	NEUTRON PHYSICS FACILITY	
TA-57	WASTE DISPOSAL SITE	
TA-58	CC SITE	
TA-59	SCOTTSBLUFF DESERT SITE	ABANDONED 1979
TA-60	FENTON HILL SITE	0
TA-61	TWO MILE NORTH SITE	PROPOSED
TA-62	DM SITE	

0 PROPOSED 30 MILES WEST OF LOS ALAMOS

LEGEND

ACTIVE TECHNICAL AREAS

Figure 1

15	10-8-80	REVISED TITLE BLOCK & DWG TO STATUS OF 9-17-80
REV	DATE	REVISION

UNIVERSITY OF CALIFORNIA
Los Alamos

FACILITIES ENGINEERING DIVISIO

TECHNICAL AREA LOCATION PLAN

Figure 2 is a schematic of the waste management operations at the LANL facility. Following the PR/VSI, several general conditions were noted regarding LANL waste management operations, namely:

1. The LANL facility generates and manages a variety of hazardous wastes including F-, K-, and P- listed wastes, as well as characteristic wastes (i.e., corrosives, ignitables, reactives, and EP toxics).

2. A number of operations at the LANL facility result in the generation of radioactive wastes including uranium, strontium, and tritium. These operations include basic and applied chemistry research and development programs, isotope and structural chemistry programs, and dynamic and design engineering programs for the testing of high explosives.

3. Few LANL units are dedicated to the management of radioactive waste; instead, most LANL waste management units are believed to involve mixed waste (i.e., radioactive waste mixed with hazardous waste or hazardous constituents).

4. The LANL facility possesses a number of RCRA-regulated units including the Batch Waste Treatment Tank and Storage Area and the TRU Incinerator, all located at TA-50, and the Area L Landfill and treatment tanks located at TA-54 (see Section VI).

Wastes from Basic and Applied Chemistry R&D Programs

Primary Laboratory sites for basic and applied chemistry R&D include the Chemistry and Metallurgy Research Building (TA-3-29), Radiochemistry Laboratory (TA-48), Sigma Building (TA-3-66) and the Health Research Laboratory (TA-43). Typical nonradioactive chemical wastes consist of large quantities of partly empty small containers of laboratory reagents, solvent test samples and other laboratory wastes.

Up to several hundred waste types consisting of relatively small quantities of different acids, bases, organics, inorganics, reactive metals and other chemicals require offsite disposal. LANL estimates that approximately 50,000 lb and 40,000 lb of organic and inorganic wastes, respectively, are annually generated in conjunction with R&D operations.

Following temporary storage in 55-gallon steel drums at Area L in TA-54, acid/base and metal-bearing wastes are typically treated at TA-50; the resulting sludge is mixed in drums with cement for temporary storage at Area L and ultimately disposed of at a RCRA-permitted offsite disposal facility. Organic solvents are disposed of offsite. It is believed that LANL may utilize the incinerator for the disposal of organic solvents in the event that the incinerator is granted a RCRA permit. "Lab packs" are packaged within vermiculite in 55-gallon steel drums for offsite disposal.

Electrochemistry Processing Wastes

The Electrochemistry section of the MST-6 Materials Technology Group, located at TA-3-66, generates plating solutions containing chromates and

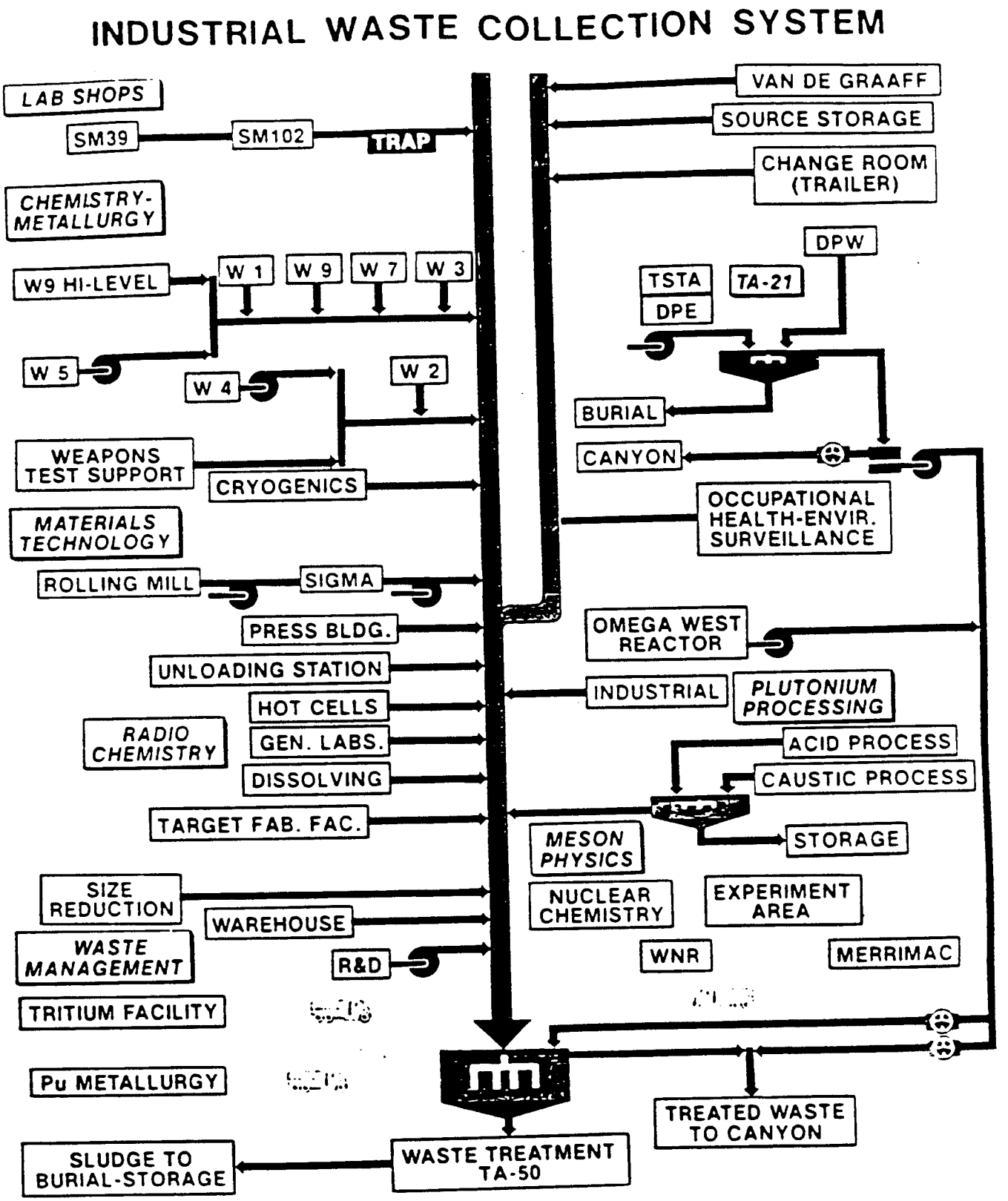


FIGURE 2. WASTE MANAGEMENT OPERATIONS AT THE LANL FACILITY.

cyanides. LANL estimates that 2,000 lb of chromate- and cyanide-containing plating wastes are generated annually by MST-6. The Print Circuit Board Shop of the E-2 Electronic Manufacturing and Technician Resources Group, located at TA-3-40, generates acid/base wastes heavily contaminated with dissolved copper. LANL estimates that 40,000 lb of such wastes are generated annually by the Print Circuit Board Shop. Chromate, cyanide and heavy metal wastes are chemically treated at TA-50. The sludge recovered from metal precipitation is then mixed in drums with cement, temporarily stored at Area L in TA-54 and disposed of offsite at a RCRA-permitted disposal facility.

Isotope Separation Wastes

The Isotope and Structural Chemistry Group, INC-4, generates highly concentrated nitric and sulfuric acid wastes. LANL estimates that approximately 80,000 lb of these corrosive wastes are annually generated by INC-4. These wastes are stored in portable tanks and then transferred to Area L in TA-54, where they are neutralized with sodium hydroxide.

Shop Department Wastes

The Main Shop Department, Building TA-3-39, houses most of the machine shop capabilities at LANL. Parts can be machined from almost any known metal or alloy. When generated, waste materials from machining operations are segregated by metal. The machining operations routinely generate waste lithium metal and lithium hydride. These materials are commingled with other wastes. LANL estimates that approximately 3,000 lb of reactive wastes, less than 1,000 lb of toxic wastes and less than 1,000 lb of ignitable wastes are generated by the Shop Department. Ignitable wastes are either incinerated in the Controlled Air Incinerator at TA-50 or disposed of offsite at a RCRA-permitted facility. Reactive and toxic wastes are packaged for offsite disposal in 55-gallon steel drums in Area L at TA-54, and then transported offsite for disposal at a RCRA-permitted facility.

Explosives Wastes

High explosives (HE) waste is generated by the Dynamic Testing (M) and Design Engineering (WX) Division groups in the course of processing and testing various high explosive materials. Processing includes pressing, machining and casting high explosives. Waste includes discrete pieces of high explosives, as well as chips, machine cuttings and powder. The chips, cuttings and powder are usually in the form of waterborne suspensions, collected in specially designed accumulating/settling sump tanks. Wastes also consist of materials contaminated with high explosives. These may include paper, oil, solvents, wood, machine tools, fixtures, etc. These wastes are flashed, burned or detonated within the specific technical area in which they are generated (TA-15, -36, -39, -14, -16, and -40). Residues from HE waste are generated by flashing or burning HE waste at TA-16. These residues are typically present in the uppermost layer of sand which covers the burn pad. LANL estimates that 50,000 lbs of high explosive waste are generated annually by the Dynamic Testing and Design Engineering groups, and 10,000 lb of contaminated burn pad sand are generated. The latter have been disposed of in Area P of TA-16.

Chemically-contaminated Equipment

Various laboratory items which contain chemical residues or are otherwise chemically contaminated may be considered hazardous waste. Empty drums, tanks and gas cylinders are typical of these contaminated items. Generation of this type of hazardous waste occurs throughout LANL and provides a wide variety of waste types. LANL estimates that 12,000 lbs of chemically contaminated equipment are generated annually throughout the Laboratory. This contaminated equipment is temporarily stored at Area L of TA-54, and thereafter disposed of in Area J of TA-54.

B. ENVIRONMENTAL REGULATORY HISTORY

Several state and federal environmental regulations apply to the manner by which LANL manages the chemical and radioactive wastes generated in conjunction with efforts directed at studying the nature of nuclear weapons. These regulations are concerned with a wide variety of potential environmental problems, ranging from the release of hazardous air pollutants to the atmosphere to the treatment, storage and disposal of hazardous wastes. The following discussion summarizes the extent to which LANL has responded to appropriate environmental regulations, especially as the result of specific environmental surveillance activities conducted during 1986.

The Resource Conservation and Recovery Act (RCRA)

The most recent RCRA Part A application identifies numerous wastes that are generated by this facility: 15 characteristic wastes (D wastes); 13 specific and nonspecific wastes (F and K wastes); 107 acutely toxic (P) wastes; and 233 toxic (U) wastes. These wastes include high explosives and other reactive wastes, cyanide and chrome-bearing electroplating wastes, halogenated and nonhalogenated solvents, beryllium-containing wastes, and many others. LANL is currently operating its hazardous waste management program in TA-50 and TA-54 under interim status, except for the waste incinerator in TA-50. The Los Alamos office of DOE submitted its Part A and Part B application to USEPA and New Mexico Environmental Improvement Division (NMEID).

The Part B application has undergone administrative review and is now being subjected to technical review. The LANL facility has applied for a groundwater monitoring waiver for its land disposal units (limited to Areas G and L in TA-54). NMEID has defined a vadose zone characterization program which the laboratory must complete. The program consists of a number of tasks which are defined in a Compliance Order/Schedule issued by NMEID. LANL has taken the position that no potential exists for groundwater contamination from its disposal practices in Areas G and L.

The Clean Air Act

In New Mexico, the Clean Air Act is administered by the NMEID. LANL operations are directly concerned with several aspects of the National Emissions Standards for Hazardous Air Pollutants (NESHAPS), primarily related to three areas: (a) the notification, emission control and disposal requirements for operations involving the removal of friable

asbestos (mainly from buildings constructed prior to the early 1970's); (b) notification, emission limit and stack performance testing requirements for beryllium machine shops; and (c) the "open burning" of waste explosives and explosives-contaminated wastes.

During 1986 alone, over 70 asbestos-removal operations were conducted at LANL involving the disposal of 250 cubic meters of asbestos. In addition, the State of New Mexico issued two permits to LANL relating to beryllium machine shops. Also in 1986, airborne radioactive emissions were monitored at 87 release points at LANL; these emissions reportedly declined when compared to 1985 measurements.

New Mexico has also established emission standards relating to the control of fugitive emissions from asphalt-processing equipment. Pan Am World Services operates a concrete-asphalt plant for LANL which is very old and not directly subject to the stack-emission limits for asphalt plants. Nevertheless, the LANL asphalt plant reportedly meets the stack emission standard for particulates as specified in these regulations.

New Mexico also regulates the emission of nitrogen oxides from gas burning equipment built prior to January 10, 1973, if the natural gas consumption exceeds 1,012 Btu/yr/unit. Power plant boilers located in TA-3 have the potential to exceed this value and, therefore, have the potential to be subject to regulation. Accordingly, an annual fuel consumption report is submitted for the power plant. The TA-3 power plant also reportedly meets the minimum requirements of the emission standard for nitrogen oxides, although it is not required to do so.

New Mexico also requires the permitting of any new or modified source which, if uncontrolled, would emit greater than 10 lb/hr (or 25 tons/yr) of any contaminant or would emit any hazardous air pollutant. Under this regulation, New Mexico issued three permits during 1986 to LANL for the following hazardous air pollutant emission sources: the beryllium machine shops located at TA-3-39 and TA-3-102 and a beryllium-uranium oxide processing facility planned for TA-3-141. (Beryllium operations planned for TA-3-141 have been modified and require an amendment to the permit).

Finally, New Mexico requires the registration of any stationary source which emits more than 2,000 lb/yr of any contaminant. The TA-3 power plant and steam plants are registered.

The Clean Water Act

The National Pollutant Discharge Elimination System (NPDES) standards require the permitting of all nonradioactive point source effluent discharges to the nation's waters. NPDES permits establish specific chemical, physical and biological criteria which an effluent must meet prior to discharge. The Department of Energy (DOE) has two NPDES permits, one for the collective Laboratory facilities in Los Alamos and one for the hot dry rock geothermal facility located 50 km west of Los Alamos. The latter facility is not located on property contiguous with the main LANL facility. Both permits were issued and enforced by USEPA, Region VI. The NMEID performs compliance monitoring and reporting as agents for USEPA. The NPDES permit in effect for LANL in 1986 was reissued March 1, 1986, and expires March 1, 1991. It lists 95 industrial outfalls and 11 sanitary

outfalls. Each outfall represents a sampling station for permit compliance monitoring. Outfalls suspected in the release of hazardous constituents are described within their respective TA subsections located in Section VI.

Since issuance of the NPDES permit at LANL, LANL has identified several individual parameter violations occurring at specific outfalls. During 1986, for example, 93% and 97.5% of the monitoring analyses complied with NPDES limits at the sanitary and industrial outfalls, respectively, based on self-monitoring reports. The difference represents noncompliance with individual parameter requirements for 1986.

On February 12, 1985, USEPA, Region VI, issued an Administrative Order to the Department of Energy (DOE) regarding one of the NPDES permits. The order was based on self-monitoring reports submitted by the Laboratory which identified a number of individual parameter violations occurring at the outfalls during 1984. DOE responded to this administrative order in two separate submittals to USEPA. One response states that corrective action has been taken and completed on industrial outfalls identified as 02A, 03A, 05A, 06A, 050, and 051. The second response proposed a schedule of compliance for the sanitary wastewater outfalls identified as 01S, 03S, 05S, 07S, 08S, 10S, and 11S. Corrective actions were completed on outfall 09S by at least February 10, 1986. On October 15, 1986, USEPA reportedly issued notice to DOE that the Administrative Order was closed.

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

In 1986, CERCLA was reauthorized and extended in the form of the Superfund Amendments and Reauthorization Act (SARA). SARA provides a comprehensive framework for the conduct of the cleanup program at federal facilities. Federal facilities are obligated to respond to the Comprehensive Environmental Assessment and Response Program (CEARP). LANL has completed the first phase of the CEARP program, which involves identification of sites suspected of being contaminated by CERCLA hazardous substances. (The second and third phases involve sampling and remediation, when appropriate.) LANL intends to submit its first phase findings in August 1987.

The Toxic Substances Control Act (TSCA)

LANL has largely responded to TSCA as it concerns the disposal of PCBs and PCB-containing items. Typical wastes are PCB-containing transformer fluids. In 1980, LANL received authority from USEPA, Region VI, to dispose of PCB-contaminated articles, oils and materials in the chemical waste landfill located at Area G in TA-54. During 1986 the Laboratory reportedly continued to inventory and mark PCB articles, such as transformers and capacitors. In addition, it is believed that the LANL facility has the authority to incinerate liquid PCBs.

LANL has also responded to TSCA as it concerns the land disposal of friable asbestos. Area G of TA-54 is used for this purpose.

IV. HISTORICAL RELEASE INFORMATION

Waste related release events at the LANL facility include those that are routinely regulated (e.g., NPDES discharge) and nonregulated events which have either occurred in the past as singular release episodes or continue to occur with regularity within the facility boundaries (e.g., stormwater runoff discharge).

A. REGULATED RELEASES

The LANL facility utilizes various waste management activities that involve permitted industrial and sanitary liquid effluent discharges under the authority of the National Pollution Discharge Elimination System (NPDES Permit #NM0028355). Although these are permitted releases and most LANL outfalls are not maintained in consideration of hazardous constituents, a number of NPDES outfalls have been releasing various constituents in excess of concentrations established in the NPDES permit. The conditions involving these release violations are outlined in Table 1.

Table 1. NPDES Outfall Permit Violations (Ref. 90).

Outfall No.	Tech. Area	No. of Violations	Permit Parameter Violated
115	8	7	pH max
050	21	2	Iron
01A	3	2	Free chlorine
025	3	1	TSS
095	3	2	BOD, TSS, pH
015	3	12	BOD, F.C.*
051	50	13	Iron, copper
045	48	9	BOD, TSS, pH
065	22	7	BOD, TSS F.C.
105	35	4	BOD, TSS

* F.C. represents fecal coliform concentration.

B. REPORTED NONREGULATED RELEASES

Unpermitted releases have occurred at various technical areas at the LANL facility as a result of waste management activities and on-going facility operations. For example, unregulated discharges may occur in the form of stormwater runoff. During the VSI, LANL representatives substantiated the existence of more than 1,400 stormwater discharges throughout the facility. Although each stormwater discharge point was not identified during the VSI, it is reasonable to expect stormwater runoff to traverse vulnerable waste management areas (e.g., areas containing no run-on/runoff control). In addition, many other facility related release events have been identified, some of which LANL has ranked according to a priority classification system (Table 2) which they developed to classify varying types of nonregulated releases in affected areas. To note: Quantitative data on these suspected releases/contamination was not provided by LANL. It should be realized that this RFA report is not providing judgment or the accuracy of this LANL priority classification system, instead, these priority classification sites are presented only for the information of the reader.

Table 2. Priority Ranking System Devised by LANL for Classifying Nonregulated Releases.

Priority*	Criteria
1	Potential for public injury or perceived injury during trespass on DOE property.
2	Potentially-contaminated areas that could lead to offsite migration of materials, or sites in restricted areas with some HE hazard potential.
3	Areas containing unknown amounts of hazardous materials and/or suspected contamination or poorly-documented areas.
4	Slight chance that contaminants are present or waste disposal has occurred.
5	No proposed actions.

* Short-term migration potential (less than five years) sites would receive higher priority than long-term migration potential (greater than five years) sites.

Based on the information available during the PR/VSI, the following have been identified as technical areas where conditions exist which may support the likelihood of a release:

TA-1

The stream bed in upper Los Alamos Canyon is reported to have received effluent containing trace amounts of plutonium and polonium from the Omega West and former Water Boiler Reactors (located in TA-2). This area has not been assigned a priority level by LANL.

TA-2

Omega Site: LANL reports that occasional releases of effluent and other radioactive materials (in small quantities) have occurred from the Omega West and former Water Boiler Reactors, both of which are located in TA-2. These releases have been received by the stream bed in upper Los Alamos Canyon, resulting in areas of potential localized contamination. Trace amounts of plutonium, strontium-90, and cesium-137 have been detected in sediment samples taken from this stream bed. This area is assigned Priority 4 by LANL (101, p. 4-1).

TA-3

On December 8, 1986, a cylinder in the container storage area of TA-3 developed a leak which released an estimated 600 grams of HCl. The mixture in the cylinder consisted of 5% hydrogen chloride (HCl) and 95% helium. The maximum concentration of the leakage was described by LANL as a small percentage of the 5 ppm occupational exposure limit. This area has not been assigned a priority level by LANL (Environmental Surveillance at Los Alamos, 1986, p. 19).

TA-4

Alpha Site: LANL describes the principal form of contamination in this area as uranium-contaminated soil. Debris from early test firings at the site was pushed north to Mortandad Canyon or covered on-site. This area has been assigned Priority 2 by LANL (101, p. 2-1).

TA-5

Beta Site: As at the Alpha Site, the principal form of contamination in this area is described by LANL as uranium-contaminated soil. Debris from early test firings at the site was pushed north to Mortandad Canyon or covered on-site. This area has been assigned Priority 2 by LANL (101, p. 2-1).

TA-6

Two-Mile Mesa Site: Area F is an inactive mixed-waste site that has not been assigned a priority level by LANL (101, p. 7-4).

Two-Mile Mesa Site: In the early 1950's, three small pits, locations presently unknown, were dug for the disposal of unknown wastes. Also, magazines, septic tanks, and an old HE sump are present in the area. The condition of these units is unknown. This area has been assigned Priority 2 by LANL (101, p. 2-2).

TA-7

Gomez Ranch Site: Two firing pits are located in this technical area, and the extent of contamination is described by LANL as unknown. This area is assigned Priority 3 by LANL (101, p. 3-1).

TA-8

Area Q: This site is the location of a 30-foot by 32-foot burial pit which was used to bury metal scrap such as guns, projectiles embedded in steel, and Little Boy bomb components. These metal scraps were possibly contaminated with uranium. The burial location of explosives along with the aforementioned materials is unknown. This area is assigned Priority 3 by LANL (101, pp. 3-4, 3-5).

Anchor Site West: According to LANL, a large strontium contamination incident was cleaned up in this area in 1954. Both the adequacy of remediation and the status of an inoperative septic tank are unknown. This area is assigned Priority 3 by LANL (101, p. 3-1).

TA-9

Anchor Site East: Explosives are manufactured at this site, which contains 15 waste-settling tanks. Many HE-contaminated structures have been removed, and the existence of HE-contaminated drain fields remains a possibility. This area is assigned Priority 3 by LANL (101, p. 3-1).

TA-11

K-Site: Documentation refers to a burn pit (which may have been a firing pit that was "removed" in 1956) and a RaLa contamination incident (with strontium contamination). The status of the pit and the adequacy of remediation of the cleaned-up contamination incident is unknown. This area is assigned Priority 3 by LANL (101, p. 3-2).

Area-S: This area is the location of a small "disposal" site used for sensitivity testing of HE in the environment, and has been assigned Priority 2 by LANL (101, p. 2-4).

TA-12

L-Site: This site contains an abandoned firing pit and possible strontium-contaminated components of an old exposure device which was abandoned in 1953. The extent of contamination is unknown. This area is assigned Priority 3 by LANL (101, p. 3-2).

TA-14

Wind dispersion and leaching of toxic materials is reported by LANL to have occurred in this technical area. These materials were reportedly detected in sand and soil samples, and visual determination was made of atmospheric releases. This area has not been assigned a priority level by LANL (19, p. 1).

Q-Site: Removal of a "closed chamber" (TA-14-2) containing alpha (uranium) and HE contamination was completed in 1973 according to LANL. This area has not been assigned a priority level by LANL.

Q-Site: Apparently an HE-contaminated sump is associated with TA-14-2. This area is assigned Priority 4 by LANL (101, p. 4-1).

TA-15

LANL reports that wind dispersion and leaching of toxic materials has occurred in this technical area. Toxic materials have reportedly been detected in sand and soil samples and visual determination by was made of atmospheric releases. This area has not been assigned a priority level by LANL (19, p. 1).

Area N: This site is the location of a burial pit reputed to contain remnants of demolished structures that have been exposed to explosive or chemical contamination. This area is assigned Priority 3 by LANL (101, p. 3-4).

R-Site: Tons of uranium and multi-kilogram quantities of beryllium, mercury, and lead have been expended in hydrodynamic testing in this area. During the 1970's, detailed studies at the EF-Site, located within the R-Site, resulted in estimates of 3,000 to 4,500 kilograms of uranium remaining in the 0 to 5 centimeter soil layer within 200 meters of the firing point. These studies also showed that some uranium was being transported off the EF-Site in runoff. There are no present estimates available for the amount of beryllium, mercury and lead remaining in this area. It is estimated that more than 25,000 cubic meters of soil are contaminated. LANL has assigned this area Priority 2 (101, p. 2-2).

Area Z: This area is believed to contain a pit where firing site debris or debris from a burn pit from the R-Site were disposed of. This area is assigned Priority 3 by LANL (101, p. 3-5).

TA-16

LANL reports that wind dispersion and leaching of toxic materials has occurred in this technical area. LANL indicates that detection of these releases was made through analyzing sand and soil samples, and visual determination was made of atmospheric releases. This area has not been assigned a priority level by LANL (19, p. 1).

Boiler blowdown, from Building 540, is discharged into a 6-foot diameter by 60-foot deep, rock-filled "injection well" located in this technical area. This area has not been assigned a priority level by LANL (101, p. 6).

Area R: This is an old burning ground for waste explosives from the S-Site. During construction of the 132 Group buildings and a new burning ground, the ground surface from this area was graded and pushed into a nearby canyon. The status of contamination at Area R is unknown. This area is assigned Priority 3 by LANL (101, p. 3-5).

S-Site: Buildings removed from this area had known HE, uranium, strontium, and radium contamination. In addition, many abandoned buildings at this

site are contaminated with HE. Poorly-documented drain fields, containing HE, have been removed; however, the possibility of others exists. This area has been assigned Priority 2 by LANL (101, p. 2-3).

The remains of a basement which was used for incineration of paper, electrical wires, cardboard boxes, furniture, etc. is located in this technical area. This area is possibly contaminated with HE. This area has not been assigned a priority level by LANL (101, p. 5).

TA-18

Pajarito Site: Critical assembly studies are conducted at this site. The main hazards stem from direct radiation (101, p. 7-1). LANL has not assigned this area a priority level.

TA-19

East Gate Laboratory: At one time, some low-level uranium contamination was reported on some laboratory shelves. LANL eventually conveyed the property with the buildings to the Los Alamos Radio Club. In time, the Radio Club removed the buildings and sold the property. This area is assigned Priority 5 by LANL (101, p. 5-1).

TA-20

Sandia Canyon Site: Methylene chloride was reportedly detected in an on-site water sample at the Sandia Canyon Site SCS-3 in 1986. The concentration of methylene chloride exceeded the toxic standard for aquatic life of 10 ug/l, though the exact concentration was not provided by LANL. This area has not been assigned a priority level by LANL (Environmental Surveillance at LANL, 1986, p. 57).

Sandia Canyon Site: Three possible waste disposal areas containing metal scrap, buried gun barrels, and cut-up, 3 to 5 inch guns are located at this site. Contaminants consist of polonium and possibly uranium. Strontium-90 contamination may be present as a result of leaking RaLa sources reported to have been stored in an Indian cave. HE contamination from experimental operations may also be present. Unknown burial locations and minor contamination is suspected by LANL. This area has been assigned Priority 1 by LANL (101, p. 1-1).

TA-21

Area B: This area covers approximately 6.03 acres and was used from 1946-48 for the disposal of all types of contaminated radioactive materials used at Los Alamos. Investigations in recent years are reported by LANL to show considerable areas of surface contamination. This area has not been assigned a priority level by LANL (84, p. 3).

DP Site: The former plutonium processing plant and some waste treatment facilities were located here. Present hazardous material usage is restricted to enriched uranium and tritium (101, p. 7-1). This area has not been assigned a priority level by LANL.

DP Site: Areas A & B are inactive rad-waste sites (101, p. 7-4). These areas have not been assigned a priority level by LANL.

DP Site: Area T is an inactive rad-waste site that has not been assigned a priority level by LANL (101, p. 7-4).

DP Site: Areas U and V are inactive mixed-waste sites that have not been assigned priority levels by LANL (101, p. 7-4).

TA-22

Two 4-foot diameter by 20-foot deep wells, connected in series, receive rinse water from a printed circuit board operation. This area has not been assigned a priority level by LANL (101, p. 6).

TD Site: In the early 1950's, three small pits, locations presently unknown, were dug for the disposal of unknown wastes. Also, magazines, septic tanks, and an old HE sump are present in this area. The conditions of these units are unknown. This area has been assigned Priority 2 by LANL (101, p. 2-2).

TA-26

D-Site: Uncontaminated and possibly slightly-contaminated (uranium and plutonium) concrete debris was pushed over the edge of the cliff onto a shelf of Los Alamos Canyon and covered with soil. This area has been assigned Priority 2 by LANL (101, pp. 2-3, 2-4).

TA-27

Gamma Site: According to LANL, depleted and natural uranium were probably used at this site during firing operations. Additionally, the military conducted HE sensitivity testing here. Also, it is suspected that there is a 600-foot long by 10-foot deep trench where Navy gun barrels, live ammunition, and depleted uranium are buried. The location of this trench is unknown despite numerous attempts in the 1960's to locate the excavation. The extent of uranium contamination at this site is unknown. This area has been assigned Priority 1 by LANL (101, p. 1-2).

TA-28

Magazine Area "A": This site represents a magazine area for the storage of HE. This area is assigned Priority 4 by LANL (101, p. 4-2).

TA-29

Magazine Area "B": This site represented a magazine area for the storage of HE, and was abandoned in 1957. This area is assigned Priority 4 by LANL (101, p. 4-2).

TA-30

Electronics Test Area: This facility was described by LANL as being removed in 1946. LANL indicates that they have no reason to believe that

associated with this site. This area is assigned Priority 5 by LANL (101, p. 5-1).

TA-31

East Receiving Yard: This site, removed in 1954, was located in the town of Los Alamos and served as a receiving station for shipments to LANL. LANL believes that there is no contamination associated with this site. This area is assigned Priority 5 by LANL (101, p. 5-1).

TA-32

Medical Research Laboratory: This barracks-type building was located in the vicinity of the present school administration building and was used for monkey irradiation experiments and industrial hygiene activities. LANL believes that there is no significant contamination at this site. This area is assigned Priority 5 by LANL (101, p. 5-1).

TA-33

On July 22, 1986, 1700 Ci of tritium were released in the form of hydrogen gas at TA-33. This area has not been assigned a priority level by LANL (Environmental Surveillance at Los Alamos, 1986, p. 9).

On October 30-31, 1986, approximately 633 Ci of tritium were released over a 23 hour period at TA-33 in the form of tritiated water. This area has not been assigned a priority level by LANL (Environmental Surveillance at Los Alamos, 1986, p. 19).

On November 14, 1986, 11.5 Ci of elemental tritium were released at TA-33, resulting in a maximum lung dose to the public of 0.01 mrem, or less than 0.01% of EPA's air emission standard. This area has not been assigned a priority level by LANL (Environmental Surveillance at Los Alamos, 1986, p. 19).

HP-Site: As a result of test firing of projectiles and large implosion tests, scattered debris and pieces of shrapnel are known to exist throughout the area, in addition to surface uranium contamination. Shrapnel has been located across a canyon from the firing pads along the border of Bandelier National Monument. A disposal trench near waste disposal Area E, containing metal debris and uranium, may not be identified or marked. In addition, a waste disposal sump located in Area K may contain tritium and uranium. The outfall for septic tank 93 may be contaminated, and there is some indication of uranium contamination of the septic tanks. In September 1984, deteriorated wooden catcher boxes, for projectiles, and the majority of large uncontaminated surface debris were removed and buried on-site. Also, several old structures were removed, in addition to contaminated soil and equipment. These materials were subsequently sent to TA-54 and several open shafts in TA-33. This area has been assigned Priority 1 by LANL (101, p. 1-3).

HP-Site: Area D is an inactive rad-waste site consisting of several test shafts that are principally contaminated with polonium-210 (101, p. 7-4). This area has not been assigned a priority level by LANL.

HP-Site: Area E is an inactive mixed-waste site that has not been assigned a priority level by LANL (101, p. 7-4).

TA-35

Area W: The term "Area W" has been applied to two locations: a sodium storage area on a boundary of TA-35, and an abandoned waste treatment facility. The former area, as stated, functions as a place of storage for slightly-contaminated (with plutonium and fission products) sodium. This unit consists of two doubly-lined vertical tanks buried at an edge of TA-35. The tops of the tanks and valving were encased in concrete in 1979.

The latter "Area W" is an abandoned waste treatment facility which is being removed as part of a "waste line removal project." There is known strontium, plutonium, and cesium contamination in the outfall area from this unit. The LANL considers the probability of migration of these contaminants to Mortandad Canyon as high. This area has been assigned Priority 2 by LANL (101, p. 2-5).

Area X: This disposal site contains the tanks, pump pit, and reactor vessel of the LAPRE II reactor. LANL expects little, if any, contamination present at this site. Nevertheless, this area is assigned Priority 3 by LANL (101, p. 3-5).

Ten Site: Former hazardous material usage at this site was principally tritium and strontium. Present hazards include some tritium and direct radiation. Oil spill problems are under investigation (101, p. 7-2). This area has not been assigned a priority level by LANL.

TA-36

Kappa Site: Many explosives tests have been conducted here, some of which resulted in dissemination of uranium around the firing points. The extent of contamination is presently unknown. The contents of a sump pit and the status of waste disposal Area AA (reputed to be two pits containing ash from fires in which tuballoy was consumed) are also unknown. LANL anticipates that a significant cleanup effort will be required in this area. This area is assigned Priority 3 by LANL (101, pp. 3-2, 3-3).

Wind dispersion and leaching of toxic materials are reported by LANL to have occurred in this technical area. Detection of these releases was made through included sand and soil samples and visual determination of atmospheric releases. This area has not been assigned a priority level by LANL (19, p. 1).

TA-37

Magazine Area "C": This site represents a magazine area for the storage of HE. This area is assigned Priority 4 by LANL (101, p. 4-2).

TA-39

Wind dispersion and leaching of toxic materials has occurred in this technical area. These releases were identified through soil and sand

sampling and visual inspection. This area has not been assigned a priority level by LANL (19, p. 1).

Anchor Canyon Site: Uranium, lead, mercury, and beryllium were involved in many early explosive tests at this site. There is a poorly-documented waste disposal pit called Area Y present here, and the possibility of undocumented pits exists. Specific contaminants and their quantities are unknown. This area has been assigned Priority 2 by LANL (101, p. 2-4).

TA-40

DF Site: A firing pit and a burning pit are located at this site. This area is assigned Priority 3 by LANL (101, p. 3-3).

TA-41

W-Site: Over the years, TA-41 has been used as offices for engineering support of weapons-related activities. Some tritium-related work was performed here; additionally, there is a large vault built into the hillside. These areas are assigned Priority 4 by LANL (101, p. 4-1).

TA-46

WA-Site: Small amounts of hazardous materials have been used at this site, and the only known environmental releases consisted of UF_6 gas. This area is assigned Priority 4 by LANL (101, p. 4-2).

TA-50

Area C: Area C occupies 11.8 acres and contains 7 pits and 108 disposal shafts. The area was used from 1948 to 1969 and the pits and shafts contain some alpha and beta-gamma wastes. There are some low levels of surface soil contamination and slumping of pit covers. This area has not been assigned a priority level by LANL (84, p. 4).

Waste Management Site: Area C is an inactive mixed-waste site where surface remedial action was completed in 1984 (101, p. 7-4). This area has not been assigned a priority level by LANL.

Treatment Plant: After the treatment plant in TA-50 began operating, relatively high concentrations of chloride, nitrates, and total dissolved solids were recorded in surrounding Mortandad Canyon. This area has not been assigned a priority level by LANL (Environmental Surveillance at Los Alamos during 1985, p. 40).

Incomplete treatment and containment failure was detected by analysis and inspection for leaking containers, respectively, in TA-50-1. This area has not been assigned a priority level by LANL (19, p. 1).

Incomplete treatment and container failure was detected in TA-50-37 by stack monitoring and inspection for leaking containers and secondary containment integrity, respectively. This area has not been assigned a priority level by LANL (19, p. 1).

TA-53

Meson Physics Facility: The largest release of radiation detected at an occupied public area in 1986 was attributable to LAMPF, and the public dose was 11.5 mrem, or 46% of the air emission standard. This area has not been assigned a priority level by LANL (Environmental Surveillance at Los Alamos, 1986, p. 19).

Meson Physics Facility: An 18 mrem radiation emission was detected by the thermoluminescent dosimeter at the laboratory boundary just north of the Los Alamos Meson Physics Facility (LAMPF) in 1986. The release was attributed to emissions from LAMPF. This area has not been assigned a priority level by LANL (Environmental Surveillance at Los Alamos, 1986, p. 21).

TA-54

Mesita del Buey: Burial of radioactive, chemical, and HE waste is currently conducted at this area. This area has not been assigned a priority level by LANL (101, p. 7-3).

Mesita del Buey: Area G is the location of the present radioactive waste site at LANL. This area has not been assigned a priority level by LANL (101, p. 7-4).

Mesita del Buey: Area H is an active mixed-waste disposal site used for classified shapes. Some tritium contamination has been noted here. This area has not been assigned a priority level by LANL (101, p. 7-4).

Mesita del Buey: Area J is an active burial site for items suspected of being contaminated with HE and/or radioactivity. This area has not been assigned a priority level by LANL (101, p. 7-4).

Mesita del Buey: Area L is used for disposal of chemical wastes. This area has not been assigned a priority level by LANL (101, p. 704).

Area G: Leakage of liquid waste and movement of tritium in the vapor phase is reported to have occurred in disposal shafts in Area G. Area G is the current low level radioactive solid waste burial/storage site at the laboratory. This area has not been assigned a priority level by LANL (60, p. 12).

Area L: Waste disposal shafts 25 and 26 in Area L contain organic compounds, solvents, and oils stored in leaking barrels. Liquid organic material has mixed with vermiculite and tuff, and benzene and toluene are suspected of moving in the vapor phase through open joints in the shafts (89, Attachment 2h). Inspection for leaking containers and secondary containment integrity revealed containment failure at TA-54, Area L. This area has not been assigned a priority level by LANL (19, p. 1).

Pit C in Area L: This pit is suspected of actively contributing to soil contamination. This area has not been assigned a priority level by LANL (101, p. 4).

TA-56

Subterrene Basalt Site: This site, which was abandoned in 1976, was used for testing of the earth penetrator concept, which was an attempt to make holes in the earth by melting, rather than drilling, through rock. LANL states that it is unlikely that any environmental contamination is present or that any releases of hazardous waste or constituents have occurred. This area is assigned Priority 4 by LANL (101, p. 4-2).

Los Alamos Canyon: Suspended sediments in Los Alamos Canyon at SR-4 and at Otowi reportedly contained plutonium concentrations that were above background. Sediments from Pueblo Canyon reportedly revealed similar higher than background concentrations for Pu. No qualitative data were provided. This area has not been assigned a priority level by LANL (Surveillance in 1985, p. 41).

Los Alamos Canyon Sites: Sediment samples from Acid-Pueblo, DP-Los Alamos, and Mortandad Canyon showed higher than background radionuclide concentrations. The major radionuclide releases to these canyons are in the form of Cs and Pu. All seven sampling stations in Mortandad Canyon reportedly showed some radioactive sediment contamination from ^{238}Pu, ^{239}Pu, and ^{240}Pu. This area has not been assigned a priority level by LANL (Environmental Surveillance at Los Alamos during 1985, p. 46).

Area M: Around 1947, the Atomic Energy Commission designated this site as a surface disposal area for construction debris. Since that time, additional debris have been deposited here including asbestos-covered pipe, uranium-contaminated firing site debris, old chemical bottles, and garbage cans that were probably used to carry explosives. This area is assigned Priority 3 by LANL (101, p. 3-4).

Waste Areas J and K: Area J has been used as a classified materials waste area and tritium has reportedly been found in tuff samples taken by the waste pits. A septic tank located in Area K is also contaminated with tritium. The area has not been assigned a priority level by LANL (82, p. 22).

Los Alamos Reservoir Area: Hexachlorobutadiene at a reported concentration of 1200% above the toxic standard was detected in water samples from the perimeter of the Los Alamos Reservoir area. According to LANL, the concentration is significant in that all other compounds detected in water samples, either on-site or perimeter, have never exceeded 2% of their respective standard concentration. This area has not been assigned a priority level by LANL (Environmental Surveillance, p. 59).

In addition, there are various broad-scale on-site areas at LANL that have been identified as having undetermined types and levels of contamination (101, p. 7-6). These broad-scale contaminated LANL areas include canyons and hillsides, and involve the following:

DP Canyon
Upper Los Alamos Canyon
Mortandad Canyon
Ten-Site Canyon
Portrillo Canyon
TA-1 hillsides

V. ENVIRONMENTAL SETTING

A. GEOGRAPHIC SETTING (43, 11, 93)

The LANL and associated residential area of Los Alamos and White Rock are located in north central New Mexico in Los Alamos County, approximately 60 miles north-northeast of Albuquerque and 25 miles northwest of Santa Fe. The 27,500-acre LANL site and adjacent communities are situated on Pajarito Plateau. The plateau consists of a series of finger-like mesas separated by deep east-west oriented canyons cut by intermittent streams. The mesa tops range in elevation from approximately 7,800 ft at the flank of the Jemez Mountains to about 6,200 ft on their eastern margin, terminating above the Rio Grande valley.

B. TOPOGRAPHY (93)

The topography of the LANL site includes a 20% or greater slope class which occurs extensively in the mountainous regions of the site in areas with steep canyon sideslopes. Many portions of the broad mesa tops and canyon floors have slope gradients of 0 to 5%. More frequently, however, two or more slope gradient classes occur within several square kilometers of a waste management area.

C. CLIMATE AND METEOROLOGY (92, 11)

Los Alamos has a semi-arid, temperate mountain climate. Average annual precipitation is nearly 18 inches, with 40% occurring during July and August from thundershowers. There are 58 thunderstorm days during an average year, with most occurring during the summer. The rest of the precipitation is from winter storms moving through New Mexico. Winter precipitation falls primarily as snow, with accumulations of about 51 inches annually. Snowstorms with accumulations exceeding 4 inches are common in Los Alamos. Hail damage can occur.

Summers are generally sunny with moderately warm days and cool nights. Maximum temperatures are usually below 90° F. Brief afternoon and evening thundershowers are common, especially in July and August. High altitude, light winds, clear skies, and the dry atmosphere allow night temperatures to drop below 60° F after even the warmest days. Winter temperatures typically range from about 15 to 25° F during the night and from 30 to 50° F during the day. Winter temperatures occasionally drop to near or below 0° F.

The mountainous terrain at Los Alamos produces a distinct daily wind pattern, and surface winds often vary dramatically with time-of-day and location. At night, winds tend to flow downward from the Jemez Mountains generally out of the west-northwest and northwest. During the day, the pattern reverses and light upslope winds come generally from the southeast and south-southeast. Los Alamos generally experiences light winds with an average wind speed of 2.8 meters per second. Only 12% of wind speeds in 1983 were greater than 5.0 meters per second, and 38% were less than 2.5 meters per second.

Frequent clear skies and light winds promote good daytime atmospheric dispersion at Los Alamos, although poor atmospheric dispersion conditions frequently exist during the day and night in canyon bottoms. Complex terrain and forested vegetation enhance vertical and horizontal mixing of the atmosphere. During the night, light winds and clear skies favor the formation of temperature inversions, restricting atmospheric dispersion. Air flow channeling by terrain features (e.g., along the length of canyon bottoms) also reduces nighttime dispersion. The frequency of atmospheric stability, an estimate of the dispersion capability of the atmosphere, is approximately 40% unstable (good mixing), 35% neutral (fair mixing), and 25% stable (poor mixing) on the mesa tops of the Los Alamos area.

Historically, no tornadoes have been reported to have touched down in Los Alamos County. However, dust devils may occasionally produce strong winds up to approximately 75 mph at isolated spots in the county, especially at lower elevations. Strong winds with gusts exceeding 60 mph are common and widespread during the spring. Lightning is very common over Pajarito Plateau.

D. FLOODPLAINS AND SURFACE WATER (43, 11)

In the area of the LANL facility, surface water exists primarily as intermittent streams. Springs on flanks of the Jemez Mountains supply limited surface water flow to upper reaches of some canyons, but the amount is insufficient to maintain surface flows across the LANL area. Alluvium deposited by intermittent stream flow ranges from less than 3 ft to as much as 100 ft in thickness. Since the alluvium is quite permeable in contrast to the underlying volcanic tuff and sediments, intermittent runoff in canyons infiltrates the alluvium until percolation is impeded by the less permeable tuff and volcanic sediment. This results in a shallow alluvial "temporally perched" groundwater body that moves downgradient in the alluvium. As water in the alluvium moves downgradient, it is depleted by evaporation, transpiration, and infiltration into underlying volcanic rocks.

Despite the rapid infiltration into the alluvium, runoff from heavy thunderstorms or heavy snowmelt reaches the Rio Grande several times a year. Effluents from sanitary sewage, industrial waste treatment plants, and cooling tower blowdown are released to some canyons at rates sufficient to maintain surface flows up to one mile.

A floodplain map of LANL was not available. However, personnel from the U.S. Department of the Army, Albuquerque District Corps of Engineers, Engineering and Planning Division, have evaluated the potential for flooding and have concluded that LANL waste management areas do not lie within the 100-year floodplain. Nevertheless, it was noted during the VSI that although the likelihood of catastrophic flooding along mesa tops may be improbable, the types of rainfall events which occur at the LANL site (i.e., short duration, high intensity) may result in significant quantities of runoff supporting the formation of short-lived rivulets and streams. In turn, various areas suspected of being associated with hazardous waste or constituents (e.g., firing sites, canyon bottoms) may be affected by an undetermined amount of surface water flow.

E. GEOLOGY AND SOILS

Regional Geology

The LANL facility is located on the east-central edge of the Jemez Mountains. The Jemez Mountains are formed by a complex accumulation of volcanic rocks along the northwest margin of the Rio Grande rift in north-central New Mexico. The immense volume of Pliocene and Quaternary extrusive rocks that represent the Jemez volcanic field covers an area of over 30 miles east-to-west and 50 miles north-to-south and is over 4,000 ft in thickness near the center.

The Jemez volcanic field uncomformably overlies the eastern part of the Nacimiento uplift and the southern Chama basin. The Chama basin, the San Juan Basin and the Gallina-Archuleta Arch are part of the Colorado Plateau, whereas the Brazos and Nacimiento uplifts are generally included with the Southern Rocky Mountains. These features attained their present structural outlines during the Laramide orogeny of late Cretaceous and early Tertiary time. Superimposed on these Laramide structures is the Rio Grande rift that began to form during the Miocene. Volcanism in the Jemez area began in Pliocene time after initial development of the rift, with extrusive rocks accumulating along the western margin of the rift contemporaneously with late stages of rifting. Initial eruptions were dominantly mafic to intermediate flows, which probably formed low, coalescing shields. Eruptive activity culminated in the early Pleistocene with explosive, caldera-forming eruptions of ash-flow tuffs which covered most of the shields and formed two calderas, the largest and youngest of which is the Valles caldera located 7 to 10 miles west of Los Alamos, New Mexico.

Major tectonic features at LANL are dominated by vertical movements. Minor horizontal shift and compressional features, however, occur in parts of the Colorado Plateau and Southern Rocky Mountain structures.

Stratigraphy of Pajarito Plateau --

The Pajarito Plateau is formed by a series of sediments and volcanic extrusive rocks and is typical of a terrain produced by concurrent sedimentation and volcanism. The base of the plateau is represented by the Miocene Santa Fe Group, which in this area consists of friable to moderately well cemented siltstone and sandstones that contain lenses of conglomerate and clay. Some basalt flows are interbedded with the sediments in the unit. The lower part of the Santa Fe is comprised of fine arkosic sand and the upper part is composed of very coarse arkosic sand, latitic gravels and volcanic detritus.

Overlying the Santa Fe Group are the volcanic extrusives of the Tschicoma Formation, which consist of latite, quartz-latite flows and pyroclastic rocks. The Tschicoma has extruded through the Santa Fe west of Los Alamos, forming the lower part of the Jemez Volcanic Pile. The thickness of the Tschicoma is unknown as the base of the unit is not exposed in the Pajarito Plateau area. Interfingering with the Tschicoma and overlying the Santa Fe Group are the conglomeratic and fanglomeratic rocks of the Puye Formation. The Puye contains a thin basal conglomerate composed of pebble through small boulder size clasts of quartzite, quartz, granite and volcanic debris

in a matrix of coarse sand. Overlying the conglomerate is a thicker fanglomerate comprised of debris that was washed eastward from the volcanic rocks of the Tschicoma Formation. The fanglomerate consists of a series of conglomerates and siltstones with up-to-boulder size clasts in a matrix of silt and sand. Beds of volcanic ash that were water-lain or possibly represent air fall materials are also present within the Puye Formation. The overall thickness of the Puye ranges from about 725 ft in the north central part of the Pajarito Plateau to 220 to 270 ft along the east edge of the Puye Escarpment to 60 to 80 ft at the north end of White Rock Canyon.

Overlying and interfingering with the conglomerates of the Puye Formation are the basaltic rocks of Chino Mesa. The basalt, which is over 1,300 ft thick near the volcanic vents near Chino Mesa from which it originated, thickens southward along the river and thins westward.

The Pajarito Plateau is capped for the most part by the Bandelier Tuff, which ranges in thickness from about 1,050 ft along the western edge of the plateau to about 260 ft just west of White Rock, New Mexico. The Bandelier is composed of a basal unit of pebble-size pumice, overlain by a poorly sorted rhyolite tuff breccia and capped by a cliff-forming welded rhyolite tuff.

Structure of the Pajarito Plateau --

The geologic structure of surface rocks in the Los Alamos area is simple, although the structure of underlying rocks may be complex. The regional dip of surface rocks of the Pajarito Plateau is one to two degrees east. Beds of the Santa Fe Group in the easternmost part of the area dip gently to the west.

The rocks of the Pajarito Plateau are broken by several northward-trending normal faults. The Pajarito fault zone lies near the western edge of the plateau in the southern part of the area. The Bandelier Tuff at the southern edge of the area and on the east side of the Pajarito fault is downthrown about 300 ft in relation to the tuff on the west side of the fault. The fault farther north splits into two smaller subparallel faults, both downthrown to the east. Displacement decreases northward until both faults die out. The fault planes dip steeply to the east.

Two other normal faults, en echelon to the Pajarito zone, are located to the northeast. These faults are downthrown to the west and the fault planes also dip to the west. The westernmost of the faults extends southward for a short distance, subparallel to the northern extension of the Pajarito zone. The Bandelier Tuff is displaced about 50 ft across the en echelon faults. The older Tschicoma Formation, however, may be displaced as much as 500 ft along the easternmost fault. This difference in displacement tends to indicate recurring movement along a pre-Bandelier fault.

Site-Specific Geology

The technical areas of the LANL and the communities of Los Alamos and White Rock are located on the Pajarito Plateau. The plateau is 16 to 24 km (10 to 15 mi) wide and 40 to 48 km (25 to 30 mi) long, lying on the eastern flank of the Jemez Mountains. The plateau slopes eastward from an altitude

of about 2,400 m (7,800 ft) along its western margin to about 1,800 m (6,200 ft) to the east, where it terminates above the Rio Grande at the Puye Escarpment and the rim of White Rock Canyon. The surface of the plateau is cut into numerous narrow "finger mesas" by southeast trending intermittent streams. The dissected eastern margin of the plateau stands 90 to 300 m (300 to 1,000 ft) above the Rio Grande.

Bandelier Tuff, which caps the Pajarito Plateau, is the most important geologic unit of this RFA Report since all LANL facilities are sited on this geologic formation. This tuff is in excess of 1,000 ft thick in the western part of Pajarito Plateau and thins to about 260 ft toward the east above the Rio Grande (Ref: #43). It was deposited from a major eruption of a volcano in the Jemez Mountains to the west about 1.1 to 1.4 million years ago.

Bandelier Tuff is exposed along canyon walls and is covered by a thin mantle of soil on the surface of the mesas. The ashfalls and ashflows that form the surface of Pajarito Plateau are described as nonwelded, moderately welded, and welded tuff. Nonwelded tuff has a high porosity of 40% to 60% by volume, slight cohesion of glassy fragments, and crumbly fracture. Moderately welded tuff has a lesser degree of porosity, ranging from 30% to 55% by volume. It has moderate cohesion with slight deformation of glassy fragments, and somewhat brittle fracture. Welded tuff has a low porosity of 15% to 40% by volume, good cohesion, a high degree of deformation by flatting of glassy fragments, and a brittle fracture. Hydraulic conductivities range from 3×10^{-3} m/day for a welded tuff to as much as 2 m/day in a nonwelded tuff. Almost all of the LANL facilities are sited on the moderately welded or welded ashflow. The natural moisture content of the tuff forming the mesas between the southeastward trending canyons is generally less than 5% by volume.

The tuff is rhyolitic in composition and contains small rock fragments of rhyolite, latite, pumice, and crystal fragments of sanidine and quartz in a matrix of glass shards and welded ash. Dark minerals are scarce, although traces of crystal fragments of biotite, horneblende, and pyroxene have been identified. The surface of the exposed tuff becomes "case hardened" as it is exposed to weather. This rind forms a protective surface that resists erosion by wind and water; however, exposed pumice fragments weather out rapidly, resulting in a pitted surface. Joints that were formed as the ashflow cooled are common in the tuff, dividing it into irregular blocks. Joint frequency decreases with a decrease in the degree of welding (i.e., fewer joints are found in nonwelded tuff than in welded tuff). The predominant joint sets are vertical or near vertical. Joints range from closed to open as much as 5 cm (2 in) and may contain a clay platting or fill.

Soils (11)

The principal parent materials comprising about 95% of the LANL soils are Bandelier Tuff, volcanic rocks of the Tschicoma and Puye Formations, the basaltic rocks of Chino Mesa, and the remnants of the El Cajete pumice. The remaining 5% of the soils were formed from colluvium, alluvium, andesitic rocks of the Paliza Canyon Formation, Cerro Rubio quartz latites, and tuffs associated with sediments of Cerro Toledo rhyolite. Textures of these soils range from very fine sandy loams and clay loams to gravelly, sandy loams and stony, silty, clay loams.

Only the soils in Area L (Technical Area 54), Hackroy sandy loam, have been classified. These soils consist of shallow, well-drained soils that have formed in material weathered from volcanic tuff on mesa tops. The following description of the Hackroy soil series is taken from the published soil survey report for Los Alamos County:

> "The surface layer of the Hackroy soils (1 to 5% slope) is a brown sandy loam, about 10 cm thick. The subsoil is a reddish brown clay, gravelly clay, or clay loam, about 20 cm thick. The depth to tuff bedrock and the effective rooting depth are 20 to 50 cm. Both the Hackroy and the Hackroy-Rock outcrop mapping units exhibit slow permeabilities and low available water capacities. The Hackroy mapping unit has medium runoff and only moderate water erosion hazard, whereas the Hackroy-Rock outcrop unit has a moderate to severe water erosion hazard and medium to high runoff."
>
> "The Hackroy soils range from a sandy loam in the top 8 cm of depth to a clay loam in depths of from 8 to 30 cm. Permeability rates range from 5 to 15 cm per hour in the top layers down to 0.5 to 0.15 cm per hour or less in the lower layers. The shrink-swell potential is low. The available water holding capacity is 0.11 to 0.21 cm per cm and the soil pH ranges from 6.6 to 7.8."

Other Geologic Considerations (93)

The Los Alamos area lies within the Rio Grande depression, which was formed by a complex series of faults. Adjustments that result in seismic activity are still taking place along the faults within the depression. LANL facilities are not located across any known fault zones, and no faults or fault traces with Holocene (or other) displacements have been located within 3,000 ft of the locations of the pertinent waste management areas (Ref: #11). Nevertheless, these faults trend north-south in the Los Alamos area, and displace the Bandelier Tuff. Estimates of the strongest shock to occur in a 100-year period at the Los Alamos area range from a Richter magnitude of 3.9 to 5.4.

The Rio Grande Depression has the potential for future volcanic eruptions, as does the dormant Jemez volcanic locus. Although the possibility of a major rhyolite ashflow and ashfall type of eruption is remote, a smaller rhyolite could occur. Nevertheless, the structural development and periodicity of past eruptions indicate a very low probability of a smaller event occurring within the next 1,000 years.

Landslides, except for isolated rock falls from the mesa rims, are an unlikely hazard at LANL because of the dry climate, deep water table, and the characteristics of the rock. Omega West and W-Site in Los Alamos Canyon have experienced some isolated rock falls in the past with no damage.

Ground compaction caused by withdrawal of water from the main aquifer is not considered to be a significant geologic hazard as there has not been a significant lowering of the water table except in the vicinity of the well field. The aquifer is a silty sandstone, sandstone and conglomerate and, as such, is not particularly susceptible to compaction when water is withdrawn.

F. GROUNDWATER (11)

Groundwater occurs in three modes in the LANL area: (1) water in shallow alluvium in canyons, (2) perched water (a groundwater body above an impermeable layer that is separated from an underlying main body of groundwater by an unsaturated zone), and (3) the main aquifer of the LANL area (Ref: #43).

The Tschicoma Formation and the Bandelier Tuff, west of the Pajarito Plateau on the flank of the mountains, contain localized, small bodies of perched water. The Bandelier Tuff contains no perched water beneath the Pajarito Plateau.

Perched water occurs in one limited area about 120 ft beneath the mid-reach of Pueblo Canyon and in a second area about 150 to 200 ft beneath the surface near the confluence of lower Pueblo and Los Alamos Canyons. The second area is mainly in the basalts and has one discharge point at Basalt Springs in Los Alamos Canyon.

The only aquifer of the Pajarito Plateau (i.e., including the LANL area) capable of providing municipal and industrial water supply is in rocks of the Santa Fe Group and Puye Formation. The upper surface of this aquifer rises westward from the Rio Grande within the Tesuque Formation, through the Santa Fe and into the lower part of the Puye beneath the central and western parts of the plateau. The water in the aquifer moves from the major recharge area of the intermountain basins of the Valles Caldera (the apparent western boundary of the aquifer) eastward toward the Rio Grande, where a part is discharged into the river through seeps and springs. The groundwater flow rate in the upper part of the aquifer is estimated to be about 100 ft per year. The intermountain basins are filled with deposits of clay, sand and gravels which are underlain by volcanic debris resulting from the collapse of the caldera. The sediments and volcanics in the basin are highly permeable and saturated and recharge the main aquifer in the Santa Fe Group.

The gradient on the surface of the aquifer averages about 60 ft per mile beneath the plateau in the Puye Formation, with the depth to water decreasing along with the gentle slope of the surface of the plateau from about 1,200 ft to the west to about 600 ft to the east. The depth to the water table under the Los Alamos facilities ranges from about 900 to 1,200 ft except in the deeper canyons. The gradient of the aquifer steepens to about 100 ft per mile along the eastern edge of plateau because of the lesser permeabilities of the Santa Fe Group sediments. The aquifer is under water table conditions in the western and central parts of the plateau and is artesian along the eastern edge and along the Rio Grande. In addition, this aquifer is isolated from alluvial water and perched water by about 350 to 620 ft of dry tuff and volcanic sediments (Ref: #43).

Water in the main aquifer is under water table conditions in the western and central part of the Plateau and under artesian conditions in the eastern part and along the Rio Grande. The major recharge area to the main aquifer is from the intermountain basin of the Valles Caldera in the Jemez Mountains west of the LANL site. The water table in the Caldera is near land surface. The underlying lake sediment and volcanics are highly

permeable and recharge the main aquifer through Tschicoma Formation interflow breccias (rock consisting of sharp fragments embedded in a fine-grained matrix) and the Tesuque Formation. The Rio Grande receives groundwater discharges from springs fed by the main aquifer.

Minor amounts of recharge may occur in the deep canyons containing perennial streams on the flanks of the mountains. The intermittent streams in canyons which are cut into the plateau add little, if any, recharge to the main aquifer.

Water balance calculations for the area of the Los Alamos facilities indicate that the annual evapotranspiration rate exceeds the annual precipitation rate. Additionally, field investigations have shown that infiltration of precipitation into the Bandelier Tuff is essentially zero. Further, the moisture content of the tuff at the Los Alamos facilities varies from about 0.2 to 2.0% by weight at depths below 10 ft.

The municipal and industrial water supply for LANL and the Los Alamos community is from 17 deep wells in three well fields and one gallery. The wells are located on Pajarito Plateau and in canyons east of the LANL site. Water is pumped from the main aquifer, which is about 850 to 1,150 ft below the surface of the plateau. The gallery collects spring discharge from a perched water zone in the volcanics on the flanks of the mountains located west of Los Alamos.

G. RECEPTOR INFORMATION (11, 43)

The communities located closest to the LANL facilities are Los Alamos, which is located just north of the LANL site, and White Rock, which is located a few miles to the east-southeast. The total population of Los Alamos County is 19,000 to 20,000.

Most of Los Alamos County, as well as adjoining portions of neighboring Sandoval, Rio Arriba, and Santa Fe counties, is undeveloped. The only significant developments in Los Alamos county are the LANL facilities and the associated residential communities. Most LANL developments are confined to mesa tops. The surrounding land is largely undeveloped with large tracts of land north, west, and south of the LANL site held by the Santa Fe National Forest, Bureau of Land Management, Bandelier National Monument, General Services Administration, and Los Alamos County, The San Ildefonso Pueblo borders the LANL site to the east. Laboratory land is used for building sites, test areas, waste disposal locations, roads, and utility right-of-way. However, these account for only a small fraction of the total land area. Most land provides isolation for security and safety or is reserved for future structure locations.

Limited access by the public is allowed in certain areas of the LANL reservation. An area north of Ancho Canyon between the Rio Grande and State Road 4 is open to hikers, rafters, and hunters, but woodcutting and vehicles are prohibited. Portions of Mortandad and Pueblo Canyons are also open to the public. An archaeological site (Otowi Tract) northwest of State Road 4 is open to the public subject to the restrictions of the Antiquities Act.

Large tracts of land in the Jemez Mountains which lie to the north, west, and south of Los Alamos are held by the U.S. Forest Service and the National Park Service. This land is largely occupied by pine, fir, and aspen forests. Agriculture in the vicinity of the LANL site is limited to home gardens and some cattle grazing. In the river valleys to the east, agriculture is limited to the cultivation of relatively small, irrigated plots. Primary crops are corn, chili, fruit trees, and alfalfa.

VI. SOLID WASTE MANAGEMENT UNITS

HOW TO USE THE LOS ALAMOS RFA FORMAT FOR INDIVIDUAL UNITS

Data Collection Background

This RFA document section presents all of the units (e.g., SWMUs and Areas of Concern) identified following the PR and VSI of the LANL facility. It should be noted that there were factors that influenced the manner by which the information in this document is presented:

- Many of the LANL unit areas consist of large nondescript tracts of land whose sheer size (e.g., often greater than 10 acres) and rugged terrain precluded an in-depth, systematic visual inspection.

- The LANL personnel assigned as guides during the VSI were often not familiar with particular reference(s) citing the suspect area, and could not identify the location of the unit, provide any additional information, or verify if a particular unit was redundant with other historic referenced unit(s) identified by a different name.

- Sections of the draft CEARP document describing historical release information at the LANL facility was not provided until the end of the VSI; therefore, additional units were identified from this report were not visibly inspected.

- Photographs of units, areas and conditions observed at the LANL facility were taken by LANL personnel (i.e., as agreed to by EPA Region VI). In addition, all photoprocessing was by LANL, and all photographic negatives were retained by the LANL facility.

- Throughout the course of this RFA, LANL personnel offered conflicting waste type descriptions. To note: In some areas "rad/waste" or "radioactive waste" was defined as solid/hazardous waste associated with radioactive properties. In other areas, these terms were used to define only nonhazardous radioactive waste materials. In this document, all SWMUs identified as being associated with "rad/waste" or "radioactive" waste are considered to concomitantly contain solid/hazardous waste types. Those units where only radioactive waste materials are handled (i.e., void of solid/hazardous waste), are described as areas of concern.

As a result, various units identified during the PR portion of this RFA were not visibly inspected during the VSI, nor fully characterized in this RFA report. Nevertheless, the information that is presented in this report is indicative of the level of information that has been provided by LANL during the course of this RFA.

Organization and Unit Description Format

This section of the Los Alamos RFA document has been organized and formatted to effectively provide the greatest amount of pertinent information in a readily accessible manner. The key to interpreting the unit specific information described in this format follows:

are formatted to include verbiage, wherever appropriate, and characteristics which may be applicable for the unit being described (note: only those applicable unit characteristics will have an "X" placed in the adjacent box). Headings used to describe unit specific characteristics include:

DESCRIPTION
CLOSURE INFORMATION
(It should be realized that "Regulatory Status" indicates that the operation of that particular unit is regulated under the authority of RCRA.)
WASTES MANAGED
RELEASE CONTROLS
RELEASE HISTORY

Areas of Concern - Areas where in situ contamination or environmental impact are suggested in the reference(s) are defined as areas of concern. For example, septic tanks which are known not to have contained industrial constituents but which nevertheless are suspected to be associated with the containment of hazardous constituents are defined as areas of concern.

Unit Numbers - The numbering system for units will be TA-specific. For example, the 25th unit described in TA-50 is listed as Unit 50.025. In addition, similar units situated in the same location will be grouped under the same descriptive heading (e.g., Units 16.042 - 16.047: Six Storage Tanks). It should be noted that units that were not visited during the VSI, but which nevertheless are referenced as being potential release affected areas may also be grouped under a single descriptive heading. This will only be the case if there is insufficient information in the reference which would provide a means to distinguish between individual units (e.g., Units 21.031 - 21.037: Contaminated Areas).

Maps - Maps of some TAs are provided showing the locations of specific units located in the TA. The locations of some units could not be identified. Maps were not available for all TAs.

Information Gaps - At times, the phrase "DATA NOT AVAILABLE" is encountered throughout this document. This phrase denotes that a data gap has been recognized. However, although the information to fill this data gap has been requested, it has either not been made available, or it was not made known by LANL during the PR and VSI portions of this RFA.

Photographic Documentation - Wherever possible, photographs are presented in conjunction with their respective unit specific descriptions. However, due to LANL security constraints and LANL control of all photographic operations, photographs of all units are not provided. In addition, photographs were not provided for suspect units that were not observed during the VSI. In these cases, "No Photo Is Available" is stated.

This technical area includes a power plant (e.g., steam generated from boilers), and various other units that were identified to be involved in past LANL waste management activities. There is not a map of this technical area, as it consists of units that, in the past, had been part of the active LANL facility, but are presently scattered throughout the city limits of Los Alamos. Nevertheless, the units in this technical area are considered continuous within the perimeter of the LANL facility.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

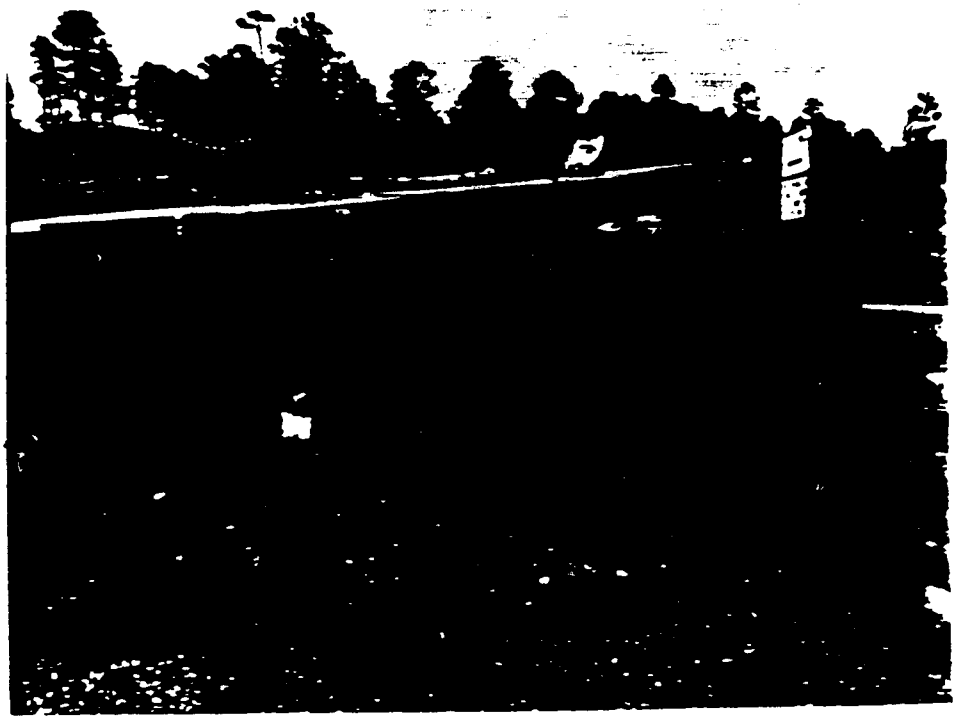
TA - 0

SWMUs	
0.001	Used oil management area
0.002	Sanitary landfill
0.003	Temporary storage area
0.004-0.006	Three used oil underground storage tanks
0.007	Airport landfill "cold" dump

AOC	
0.008	Boiler condensate tank
0.009	Septic tank #1
0.010	Septic tank #2
0.011	Bailey bridge landfill
0.012	Old incinerator building

Unit Number: 0.001 Unit Name: USED OIL MANAGEMENT AREA

Location: TA-0 References: VSI LOG BOOK



A. Typical Drums Stored in the Used Oil Management Area. Note Battery and Surface Soil Discoloration Below Drums. See Additional Photos on the Following Page.

B. Materials Stored in the Used Oil Management Area.
Note Soil Discoloration Extending to Other Side of Adjacent Mesa.

Unit Number: 0.001

A. DESCRIPTION

Unit Type: AREA IS USED FOR THE STORAGE OF LESS THAN 10 DRUMS OF WASTE OIL AND IS LOCATED ON THE EDGE OF A CANYON.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DRUM STORAGE AREA MEASURES 50 SQUARE FEET; DRUMS ARE 55 GALLONS EACH.

Material of Construction: WASTES ARE STORED IN 55 GALLON STEEL DRUMS ON SOIL

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: LOCAL RESIDENTS BRING USED OIL TO THIS AREA FOR DISPOSAL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 0.001

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THIS UNIT MANAGES LIQUID WASTE, MOSTLY WASTE OIL. AN ACID BATTERY WAS ALSO NOTED ON THE SOIL AT THIS SITE.

Source of Waste: LOCAL RESIDENTS, MUNICIPAL WASTES.

Disposition of Waste: WASTE OIL IS PICKED UP BY A RECYCLER.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE NOTED DURING THE VSI. THERE IS UNCONTROLLED DRAINAGE INTO THE NEARBY CANYON.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: DURING THE VSI, DISCOLORATION OF THE SURFACE SOIL WAS NOTED. THE DISCOLORATION EXTENDED OVER THE SIDE OF THE MESA TOWARD THE CANYON.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 0.002 Unit Name: SANITARY LANDFILL

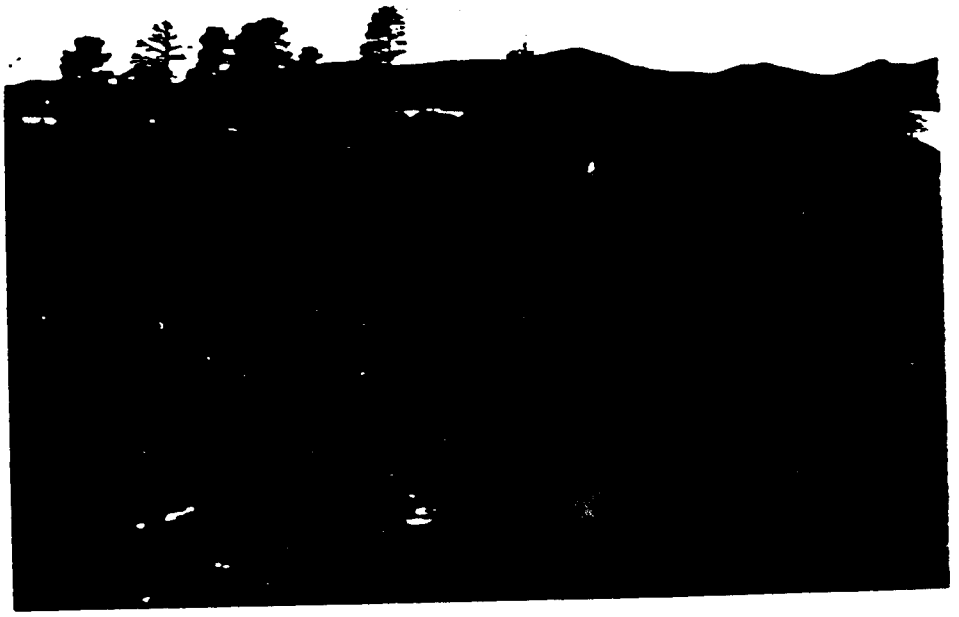
Location: TA-0 References: VSI LOG BOOK

A. Sanitary Landfill Located to Left of Center on Side of Ravine. Note Pond of Leachate Below Landfill. See Additional Photos on the Following Page.

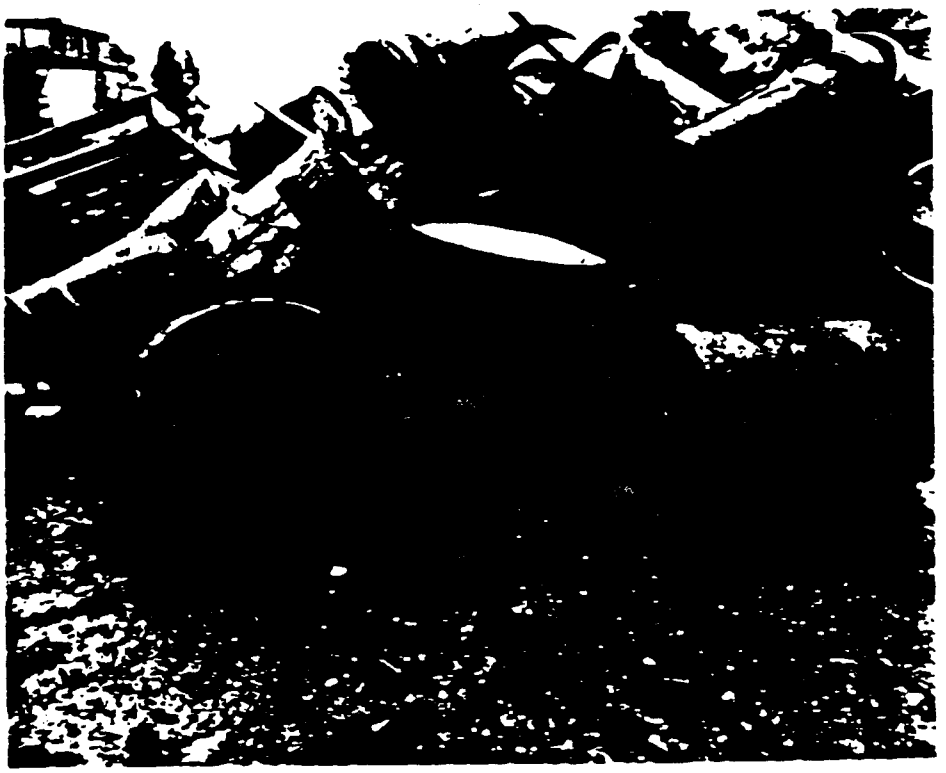
B. Typical Wastes Disposed of in the Sanitary Landfill. Note Discarded Buckets Containing Roofing Tar Residues at Left-Center.

C. Waste Roofing Tar Buckets in Foreground, and Other Typical Wastes Disposed of in the Sanitary Landfill.

D. Dumping and Compaction of Wastes at the Sanitary Landfill.



E. Ravine at Which the Sanitary Landfill is Located.



F. Discarded Buckets Containing Roofing Tar Residues in the Sanitary Landfill

Unit Number: 0.002

A. DESCRIPTION

Unit Type: SANITARY LANDFILL IS LOCATED ON SIDE OF RAVINE AND OPERATED BY THE COUNTY.

Period of Operation: 1975 TO PRESENT.

Dimensions/Volume: APPROXIMATELY 200 SQUARE YARDS.

Material of Construction: EXCAVATED IN NATURAL SOIL/BEDROCK.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground:

Purpose of Unit: DISPOSAL OF RESIDENTIAL SANITARY WASTES BY BURIAL (SOIL-COVER.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 0.002

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THIS UNIT MANAGES SMALL QUANTITIES OF LIQUIDS AND MUNICIPAL WASTES. SEVERAL BUCKETS OF A BLACK TARRY SUBSTANCE (ROOFING TAR) WERE NOTED.

Source of Waste: WASTE BROUGHT IN BY LOCAL RESIDENTS.

Disposition of Waste: BURIAL AT THIS UNIT.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: THERE ARE NO RELEASE CONTROLS. THE PITS HAVE BEEN EXCAVATED INTO TUFF NEAR THE EDGE OF A MESA.

E. RELEASE HISTORY

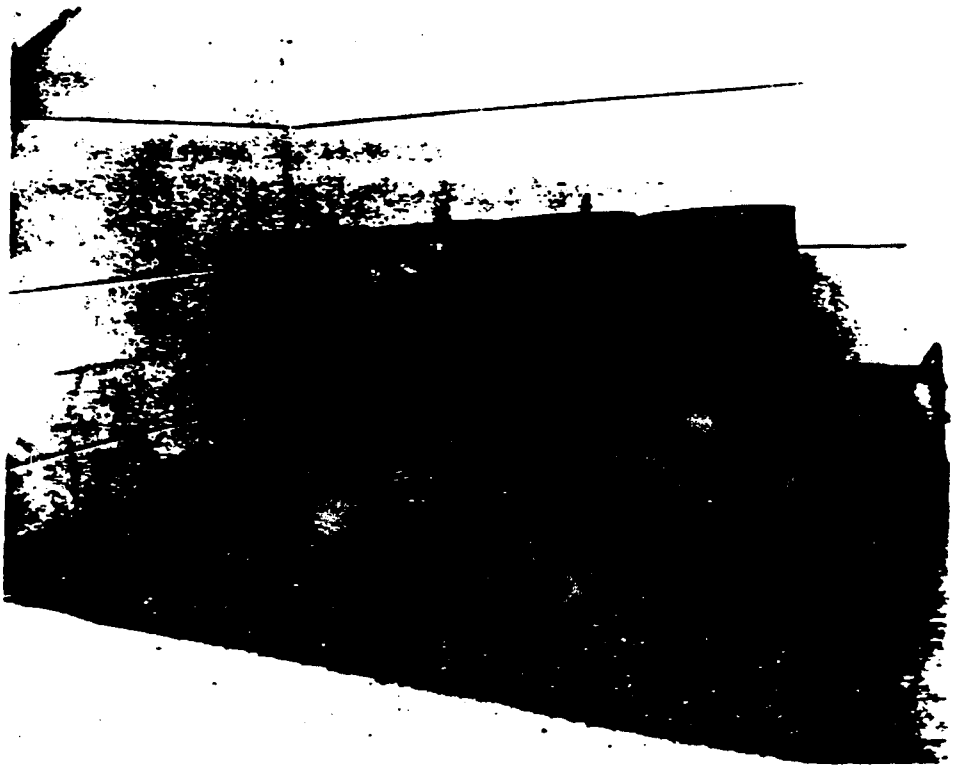
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: PONDING OF LEACHATE BELOW LANDFILL WAS OBSERVED ALONG WITH DISCARDED BUCKETS CONTAINING ROOFING TAR RESIDUES.

Detail of Past Releases: NO ADDITONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 0.003 Unit Name: TEMPORARY USED OIL STORAGE AREA

Location: TA-0-1051 References: VSI LOG BOOK



Drum Storage of Used Oil at the Western Steam Plant in TA-0. Note Drum Corrosion and Spillage Below Pallets.

Unit Number: 0.003

A. DESCRIPTION

Unit Type: AREA IS USED FOR THE STORAGE OF USED OIL IN STEEL DRUMS. THE UNIT IS LOCATED WITHIN A PARKING LOT.

Period of Operation: 1949-PRESENT

Dimensions/Volume: DRUM STORAGE AREA MEASURES 10'X10'; DRUMS ARE 55-GALLONS EACH.

Material of Construction: ASPHALT WITHIN A PARKING LOT. DRUMS ARE STORED ON AN ASPHALT PAD.

Underlain by:	Concrete:	Asphalt: X	Gravel:
	Grass:	Soil:	

Environmental:

Indoors:	Close to Surface Water:	In Ground:
Outdoors: X	Close to Drinking Water:	Aboveground: X
Covered:	Residences:	Belowground:

Purpose of Unit: UNIT USED FOR TEMPORARY STORAGE OF USED OIL FROM WESTERN STEAM PLANT (TAO-1051)

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL CLOSURE INFORMATION IS AVAILABLE AT THIS TIME.

Unit Number: 0.003

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTES MANAGED COMPRISES RESALVAGED OIL.

Source of Waste: MOTOR BEARING AND PUMP OIL FROM BOOSTER STATIONS AND WELLS

Disposition of Waste: TA-54 AND POSSIBLY TA-21 (GIVEN TO HSE-7 FOR SUITABLE DISPOSAL)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE OBSERVED; PARKING-LOT RUNOFF GOES TO ADJACENT AREA. THE DRUMS ARE STORED ON AN ASPHALT PAD.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: VSI NOTED OILY STAINS ON THE ASPHALT; DRUMS EXHIBITED SIGNS OF CORROSION.

Detail of Past Releases: NO ADDITONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 0.004-0.006

Unit Name: THREE USED OIL UNDERGROUND STORAGE TANKS

Location: TA-0

References: VSI LOG BOOK

A. Underground Used Oil Storage Tank Near Edge of a Canyon. Drums Surrounding the Storage Tank are 55 gallons each and used to store used oil. Note discoloration of Surface Soil Surrounding Tank. See Additional Photos on following page.

B. Two Underground Storage Tanks Containing Used Oil.
Note Surface Soil Discoloration Around Tanks.

Unit Number: 0.004-0.006

A. DESCRIPTION

Unit Type: THREE USED OIL UNDERGROUND STORAGE TANKS NEAR THE EDGE OF A CANYON.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DIMENSIONS OF THE TANKS ARE UNKNOWN.

Material of Construction: STEEL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: LOCAL RESIDENTS BRING USED OIL TO THIS AREA FOR DISPOSAL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 0.004-0.006

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THESE UNITS CONTAIN WASTE OILS.

Source of Waste: LOCAL RESIDENTS, MUNICIPAL WASTES.

Disposition of Waste: WASTE IS PICKED UP BY A RECYCLER.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO CONTROLS WERE NOTED DURING THE VSI, AND LANL PERSONNEL HAD NO INFORMATION ON RELEASE CONTROLS FOR THESES TANKS. THERE IS UNCONTROLLED DRAINAGE INTO THE NEARBY CANYON.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: DURING THE VSI, DISCOLORATION OF THE SURFACE SOIL WAS OBSERVED. THIS DISCOLORATION EXTENDED OVER THE SIDE OF THE MESA TOWARD THE CANYON. BECAUSE THE TANKS ARE UNDERGROUND, CONDITION COULD NOT BE OBSERVED.

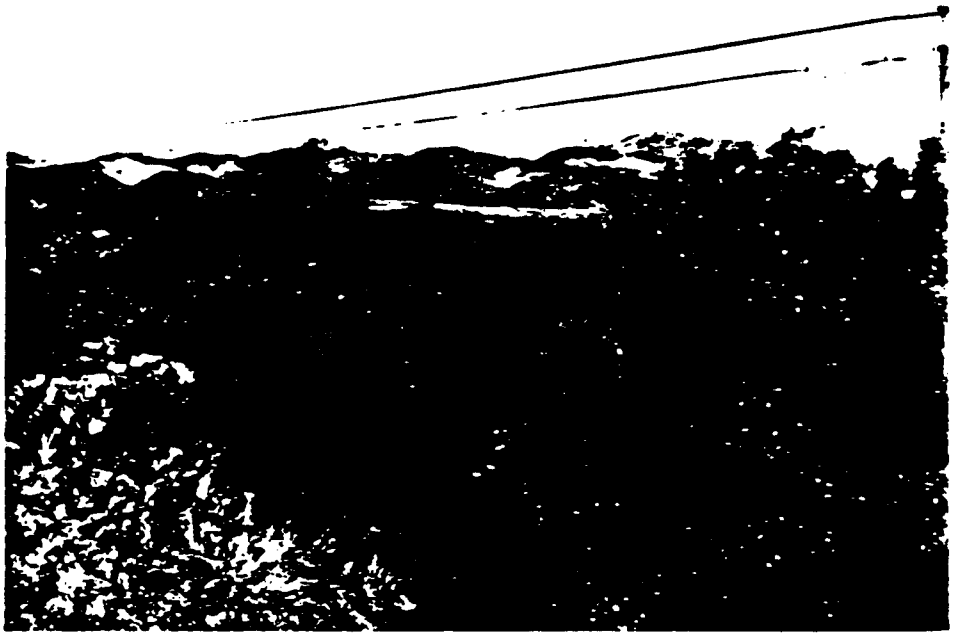
Detail of Past Releases: NO ADDITONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 0.007

Unit Name: AIRPORT LANDFILL "COLD DUMP"

Location: EAST END OF LOS ALAMOS AIRPORT RUNWAY

References: VSI LOG BOOK



County Landfill Designed for the Disposition of Laboratory Wastes.

Unit Number: 0.007

A. DESCRIPTION

Unit Type: COUNTY LANDFILL

Period of Operation: 1944 TO 1986

Dimensions/Volume: 100 ACRES - STARTS AT AIRPORT TERMINAL AND ENDS ABOUT 3500 FEET AWAY

Material of Construction: EXCAVATED LANDFILL

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS DESIGNED AS A LANDFILL FOR LAB WASTES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 0.007

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: LAB WASTES AND POSSIBLY SOME RADIOACTIVE MATERIALS/WASTES.

Source of Waste: COUNTY AND LANL

Disposition of Waste: BURIED

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.: X

VSI Noted Release Conditions: AS OBSERVED DURING THE VSI, THERE IS SOME METHANE BEING GENERATED BY THIS UNIT.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

TA-0: AREAS OF CONCERN

UNIT 0.008: BOILER CONDENSATE TANK - As seen during the VSI, this unit is a 70-gallon open top tank designed for the containment of a boiler condensate/sodium sulfite solution prior to its return to the boiler. It should be noted that the inner liner of this unit was observed to be corroded and that there are numerous stains on the floor.

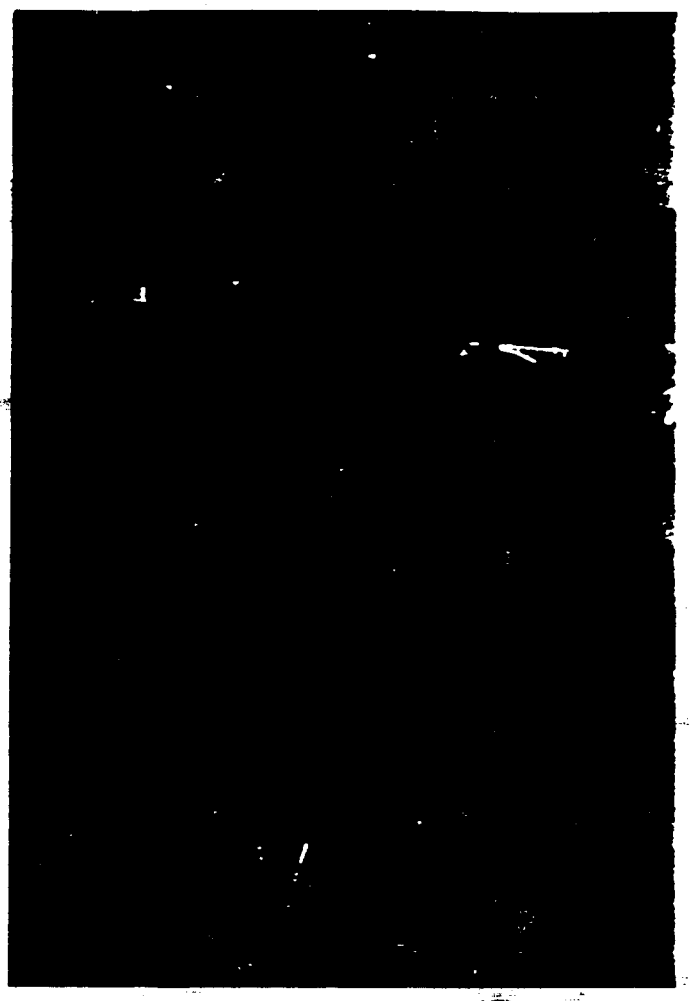
Open Top Boiler Condensate Holding Tank. Note Lack of Secondary Containment and Spill Stains Under Tank.

UNIT 0.009: SEPTIC TANK NO. 1 - As observed during the VSI, this inactive, concrete unit was designed for the treatment of domestic wastes originating from TA-0 facility buildings. This unit was in service during the 1940's to the 1950's and may have been involved in the containment of wastes suspected of having hazardous constituents. See photos on following pages.

A. Area Behind Trinity Village Apartments.
A Septic Tank Used to Treat Domestic Waste was Removed from Area.

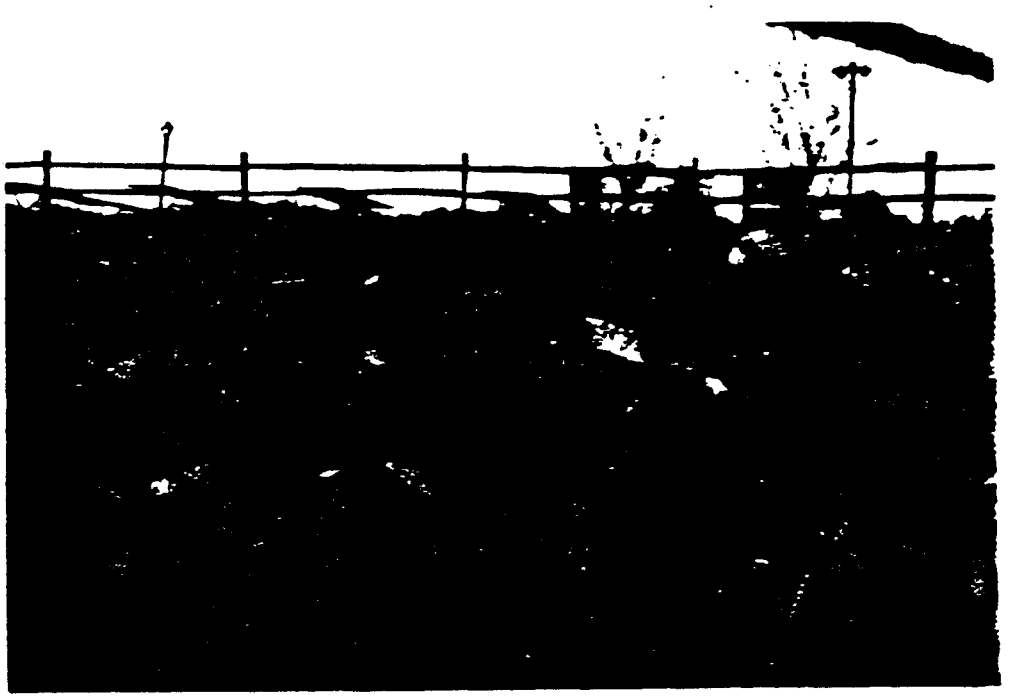
B. Area Behind Trinity Village Apartments.
A Septic Tank Used to Treat Domestic Waste was Removed from Area.

UNIT 0.010: SEPTIC TANK NO. 2 - See unit description of Unit 0.008.



A. Area Behind Los Alamos Inn.
Two Septic Tanks have been Removed from This Area.

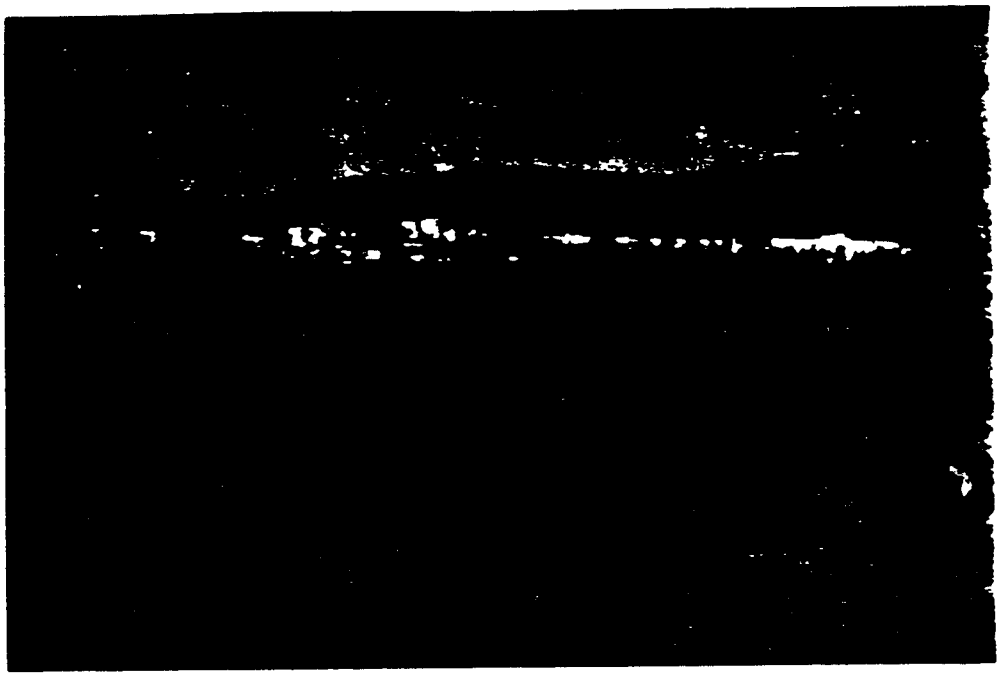
B. Area Behind Los Alamos Inn.
Two Septic Tanks have been Removed from This Area.



C. Area Behind Los Alamos Inn.
Two Septic Tanks have been Removed from This Area.
Note, in Photos C, D, and E, Mounded Pile of Construction Rubble.

D. Area Behind Los Alamos Inn.
Two Septic Tanks have been Removed from This Area.
Note, in Photos C, D, and E, Mounded Pile of Construction Rubble.

E. Area Behind Los Alamos Inn.
Two Septic Tanks have been Removed from This Area.
Note, in Photos C, D, and E, Mounded Pile of Construction Rubble.



F. Area Behind Los Alamos Inn.
Two Septic Tanks have been Removed from This Area.

UNIT 0.011: BAILEY BRIDGE LANDFILL - As seen during the VSI, this unit was designed for the disposition of facility construction waste and some residual wastes which may have contained hazardous constituents generated from the 1940's to the 1950's. LANL personnel have no information pertaining to the dimensions of this unit. No photo is available for this unit.

UNIT 0.012: OLD INCINERATOR BUILDING - As seen during the VSI, this inactive unit consists of two incinerators, which were in operation from the early 1950's until 1967. It is underlain by soil and was designed for the incineration of domestic wastes. It is unknown whether or not radioactive constituents were placed into the incinerator. The source of the waste is old technical areas and the residue is believed to have been dumped over the hillside. Ash was observed on the soil surrounding that area, however, no past releases are known to have occurred.

A. Ash from Old Incinerator Building
Adjacent to Los Alamos Airport Terminal.

B. Frontal View of Old Incinerator Building Adjacent to Los Alamos Airport Terminal.

C. Back View of Old Incinerator Building Adjacent to Los Alamos Airport Terminal.

Specific references have not been made to waste management operations in TA-1; therefore, there is no map of this technical area. However, there have been documented episodes suggesting the likelihood of a release in this technical area (see Section IV).

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE

TA-2, Omega Site

This active technical area houses the Omega West Reactor, an eight-megawatt nuclear research reactor, which provides a source of neutrons for fundamental studies in nuclear physics and associated fields. Water Boiler Reactors were formerly located in TA-2. Occasional releases of effluents and other wastes containing radioactive materials have occurred from operations conducted in TA-2 to the stream bed in the nearby canyon (10, p. 4-1). Figure 3 is a map of the TA-2 area.

Units which may be associated with the handling of hazardous constituents (e.g., underground storage tanks, NPDES outfalls) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 2

SWMUs	
2.001	Underground waste storage tank

AOC	
2.002	Photoprocessing outfall
2.003-2.005	Three contaminated areas

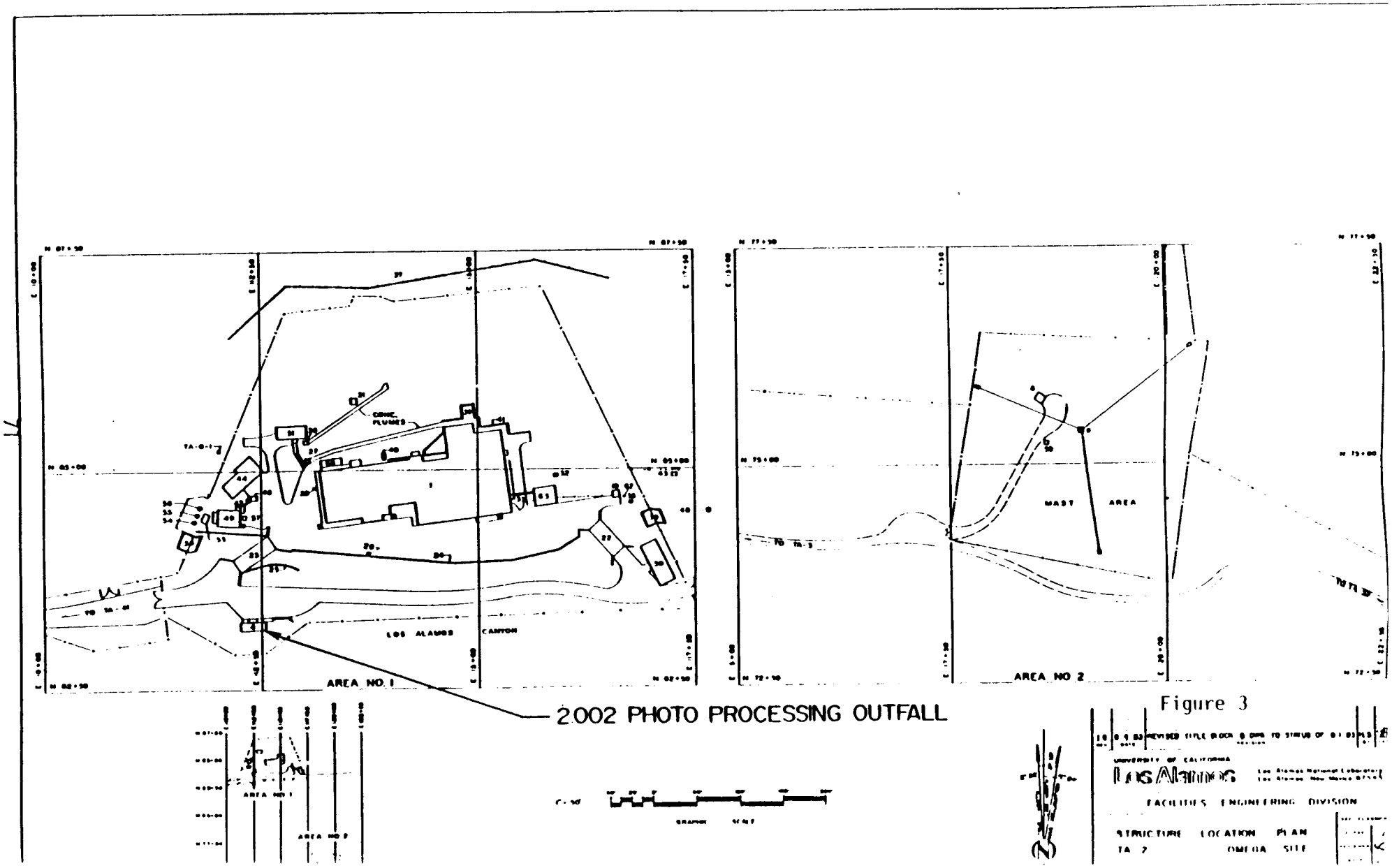

AREA NO. 1
AREA NO 2
MAST AREA
LOS ALAMOS
CANYON
2002 PHOTO PROCESSING OUTFALL
UNIVERSITY OF CALIFORNIA
LOS ALAMOS
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA 2 OMEGA SITE

Figure 3

Unit Number: 2.001

Unit Name: UNDERGROUND WASTE STORAGE TANK

Location: TA-2-2

References: 98, P. 2; 65, MASTER TABLE

No Photo is Available for this Unit. Unit Was not Seen During the VSI.

Unit Number: 2.001

A. DESCRIPTION

Unit.Type: UNDERGROUND STORAGE TANK

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: STORAGE OF RADIOACTIVE WASTES.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: PARTIALLY ACTIVE

Unit Number: 2.001

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: PART ACTIVE, PART INACTIVE, RADIOACTIVE WASTE; RADIONUCLIDES

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE.

TA-2: AREAS OF CONCERN

UNIT 2.002: PHOTOPROCESSING OUTFALL - This outfall has released solutions containing hazardous wastes and chemicals into the surrounding area (98, p. 2). No photo is available for this unit.

UNIT 2.003-2.005: CONTAMINATED AREAS - These unit areas (98, p. 2 and 10, p. 401) are suspected of being inactive but still physically present. Solutions containing radioactive and hazardous wastes comprised of radionuclides, heavy metals and chemicals are suspected of being released into these areas at an earlier date. No photos are available for these units.

TA-3, South Mesa Site

This is the main technical area of Los Alamos National Laboratory, which contains the Administration Building and laboratories for several technical divisions. Buildings in TA-3 house the Central Computing Facility, Administration offices, Materials Department, the Science Museum, the Chemistry and Materials Science Laboratories, Physics Laboratories, technical shops, cryogenics laboratories, a Van de Graaf accelerator and cafeteria. In addition, a Power Plant and Sewage Treatment Plant are located within TA-3.

Several specific buildings are located within TA-3 which routinely generate chemical waste, including the following:

(a) The Sigma Building, TA-3-66, in which parts are electroplated for experimental equipment used at the laboratory (this operation generates cyanide- and metal-bearing chemical wastes);

(b) The Printed Circuit Board Shop of the E-2 Electronic Manufacturing and Technician Resources Group, located at TA-3-43 (acid/base corrosive wastes heavily laden with dissolved copper are generated); and

(c) The Main Shops Department, Building TA-3-39, consists of several individual machine shops that are capable of accomplishing a variety of tasks (waste lithium metal and lithium hydride are typically generated).

The ultimate disposition of wastes generated at TA-3 may entail any of the following:

(a) Storage/disposal at TA-54;

(b) Treatment/storage/disposal at TA-50; and

(c) Offsite shipment for recycle/disposal.

Three main types of waste management activities are associated with this technical area:

(a) Wastewater treatment;

(b) Container/drum storage for used oils and various waste liquids; and

(c) Underground storage of various liquids including non-specific spills.

In addition, both process operations and past waste management practices suggest other areas of concern including sites where the continuing uncontrolled release of hazardous constituents (often in conjunction with radioactive conditions) is suspected.

Figures 4 through 8 are maps of the TA-3 area. Figure 9 is a diagram of the wastewater treatment system at TA-3.

RCRA FACILITY ASSESSMENT (RFA)
PRELIMINARY REVIEW/VISUAL SITE INSPECTION (PR/VSI) REPORT
OF THE LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO
I.D. NUMBER NM0890010515

prepared for

U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue
Dallas, Texas 75202

by

A. T. Kearney
699 Prince Street
Alexandria, VA 22313

and

K. W. Brown & Associates, Inc.
6 Graham Road
College Station, TX 77840

EPA Contract Number 68-01-7374
A. T. Kearney Work Assignment Number R26-01-12

August, 1987

A.T. Kearney, Inc.
Three Lagoon Drive
Redwood City, California 94065
415 598 9390

Consultants

AT KEARNEY

August 18, 1987

Mr. Tom Clark
Regional Project Officer
U.S. Environmental Protection Agency
Region VI - 10th Floor
1445 Ross Avenue
Dallas, TX 75202-2433

Reference: EPA Contract No. 68-01-7374; Work Assignment No. R26-01-12; U.S. DOE, Los Alamos National Laboratory, NM0890010515; PR/VSI Report

Dear Mr. Clark:

Enclosed is the PR/VSI report for the Los Alamos National Laboratory (LANL) located in Los Alamos, New Mexico. A [redacted] and other areas of concern were identified as a result of the assessment process. Most of these units where hazardous constituents are expected to be found are also contaminated with radioisotopes, thus generating "mixed waste" (i.e., considered under the authority of RCRA). Mixed waste is suspected to be found throughout the LANL facility in various TSD units including drum storage areas, pits, lagoons, surface impoundments, landfills, tanks, and trenches. In addition, LANL possesses a variety of active and abandoned units where mixed waste is also suspected to exist.

While evidence of release from various LANL units was noted during this RFA, numerous releases of hazardous and radioactive waste have already been documented by LANL. In fact, it was determined during this RFA that LANL has prepared a Comprehensive Environmental Assessment and Response Program (CEARP) report which assesses the degree of potential impact to human health and the environment which may be encountered at various LANL sites. The results of the LANL CEARP study were not available during the course of this RFA. While the conclusions and suggested further actions presented in this report have been developed independently of the CEARP report, the suggested further actions of the CEARP report, when released to EPA, should be considered in conjunction with those of this RFA report.

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Suggested further action at units throughout the LANL facility involves small scale clean-up and broad area (i.e., larger than 10 acres) characterization. Because of the health risk associated with radioactive wastes, it is suggested that any further RFA action at this facility (i.e., SV or RFI) should give careful consideration to the radiation hazards. Indeed, every attempt should be made to build on the existing programs, including having all sample collection activities implemented by LANL personnel (e.g., those who are sensitive to these potential health risk conditions).

If you have any questions, do not hesitate to call me or John Donley.

Sincerely,

Lee Deets
Technical Director

Enclosure

cc: L. Boada, EPA Region VI
G. Uetrecht, EPA Region VI
M. Sides, EPA Region VI
E. Allen, EPA Region VI
D. Beasley
J. Grieve
A. Schaffer
J. Donley
M. Unger, KWB

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AUG 24 1987
HAZARDOUS WASTE COMPLIANCE
TECHNICAL SECTION

Units which may be associated with the handling of hazardous constituents (e.g., underground storage tanks, sanitary tanks, NPDES outfalls, container storage, transfer stations, <90 day storage) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 3

SWMUs	
3.001	Drum storage
3.002-3.007	Six underground industrial sewer vaults
3.008	West loading dock
3.009-3.010	Two underground stainless steel tanks
3.011-3.012	Two underground concrete tanks
3.013-3.014	Two underground concrete emergency tanks
3.015-3.016	Two underground emergency storage tanks, wing 3
3.017-3.018	Two underground emergency storage tanks, wing 5
3.019-3.020	Two underground emergency storage tanks, wing 4
3.021-3.022	Two underground emergency storage tanks, wing 2
3.023-3.024	Two pump tanks
3.025	Temporary waste oil storage #1
3.026	Temporary drum storage #1
3.027	Temporary drum storage #2
3.028	Temporary drum storage #3
3.029	Secondary clarifiers #1
3.030	Trickling filter #1
3.031	Dosing siphon #1
3.032	Imhoff tanks #1
3.033	Splitter box, bar screen, and comminutor
3.034-3.035	Two emergency storage tanks, Sigma Bldg.
3.036	Satellite drum and tank storage
3.037	Asphalt batch plant-concrete basin
3.038	Sand blast shed-drum storage
3.039	Chlorine dosing chamber
3.040	Chlorine contact chamber
3.041	Flow weir
3.042	Imhoff tank #2
3.043	Dosing siphon #2
3.044	Secondary clarifiers #2
3.045	Trickling filter #2
3.046	Sludge drying beds #1
3.047	Sludge drying beds #2
3.048	Temporary waste oil storage #2
3.049	Small engine oil drums
3.050	Temporary drum storage #4
3.051	Spent battery storage
3.052	Kerosene waste drum
3.053	Motorpool floor drains
3.054-3.057	Four oil/water separators
3.058	Oil/water separator with drain
3.059	Underground storage tank #1

3.060	Less than 90-day misc. storage
3.061	Lawn mower storage area
3.062	Salvage yard
3.063	Solar pond at Sigma Mesa
3.064	Temporary chemical waste storage
3.065-3.066	Two sumps

ADC

3.067	Capacitor storage
3.068	Waste oil storage
3.069-3.070	Waste storage tanks with sumps
3.071	Underground storage tank with sump
3.072	Firing pits
3.073	Pesticide storage
3.074-3.076	Three gas service station underground tanks
3.077-3.079	Three electroplating tanks, Sigma Bldg.
3.080-3.081	Two asphalt batch plant storage tanks
3.082-3.083	Two cool asphalt storage tanks
3.084-3.085	Two insulated storage tanks
3.086	Empty drum storage
3.087-3.088	Two outfalls
3.089	Cooling tower
3.090	Vacuum pump
3.091	Van de Graaf accelerator
3.092	Burning site
3.093	Machine shop/main shops
3.094	Printed circuit board shop
3.095	Container storage
3.096	Litnium hydride, Rm. 118-A
3.097	Central shipping/receiving

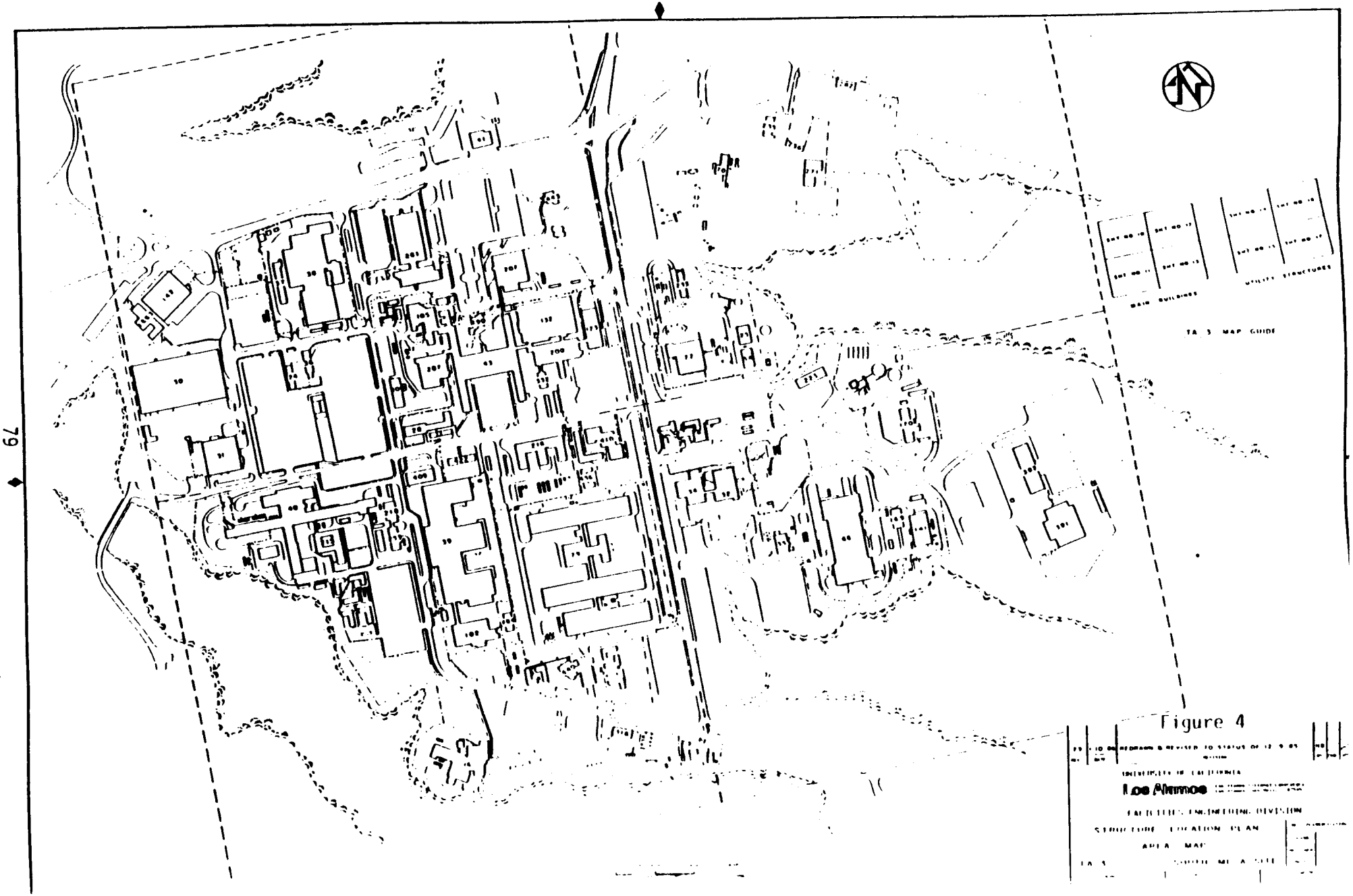
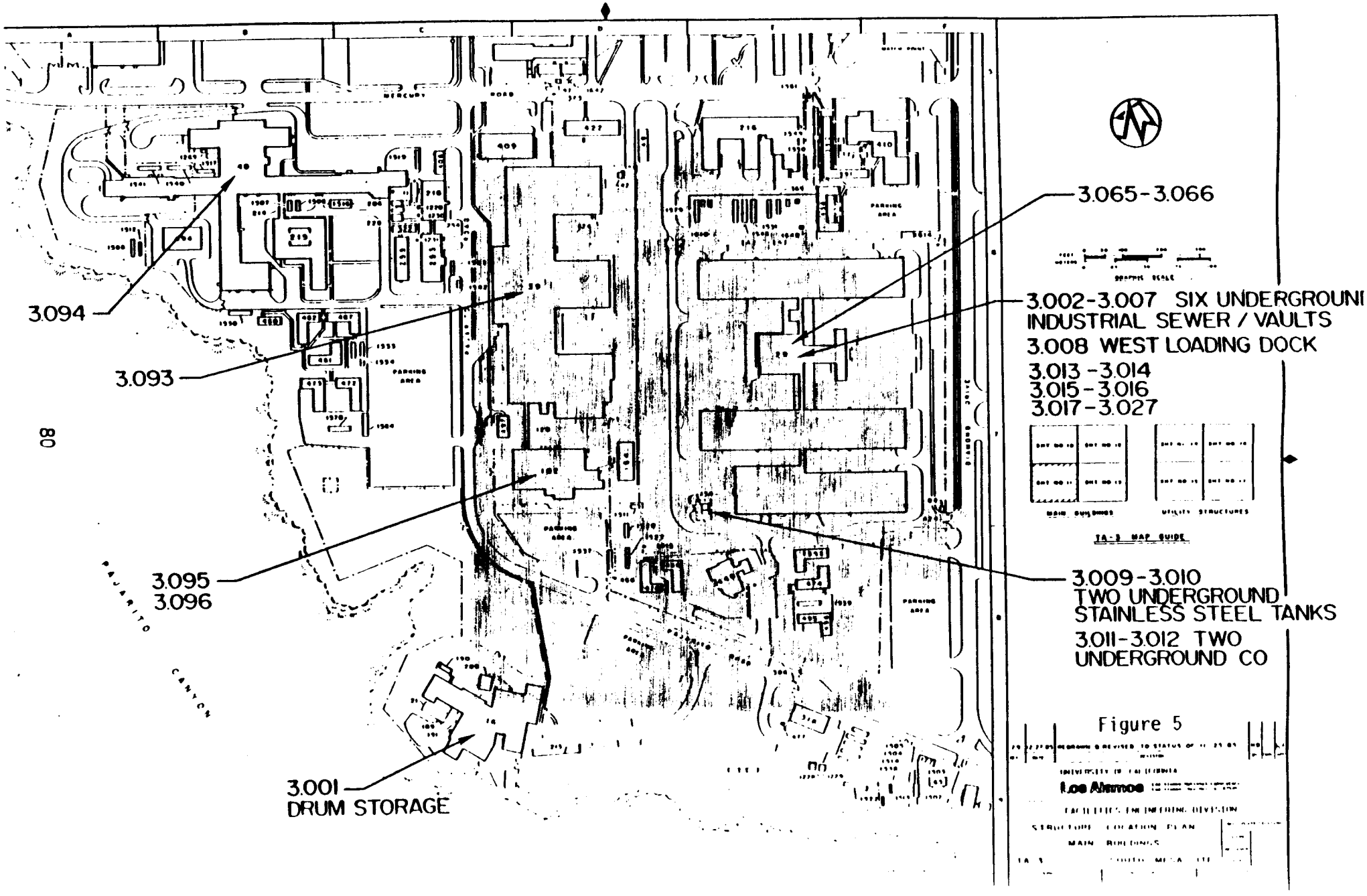

TA 3 MAP GUIDE
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
AREA MAP

Figure 4


3.094
3.093
3.095
3.096
3.001
DRUM STORAGE
3.065-3.066
3.002-3.007 SIX UNDERGROUNI
INDUSTRIAL SEWER / VAULTS
3.008 WEST LOADING DOCK
3.013 -3.014
3.015-3.016
3.017-3.027
3.009-3.010
TWO UNDERGROUND
STAINLESS STEEL TANKS
3.011-3.012 TWO
UNDERGROUND CO
Figure 5
Los Alamos

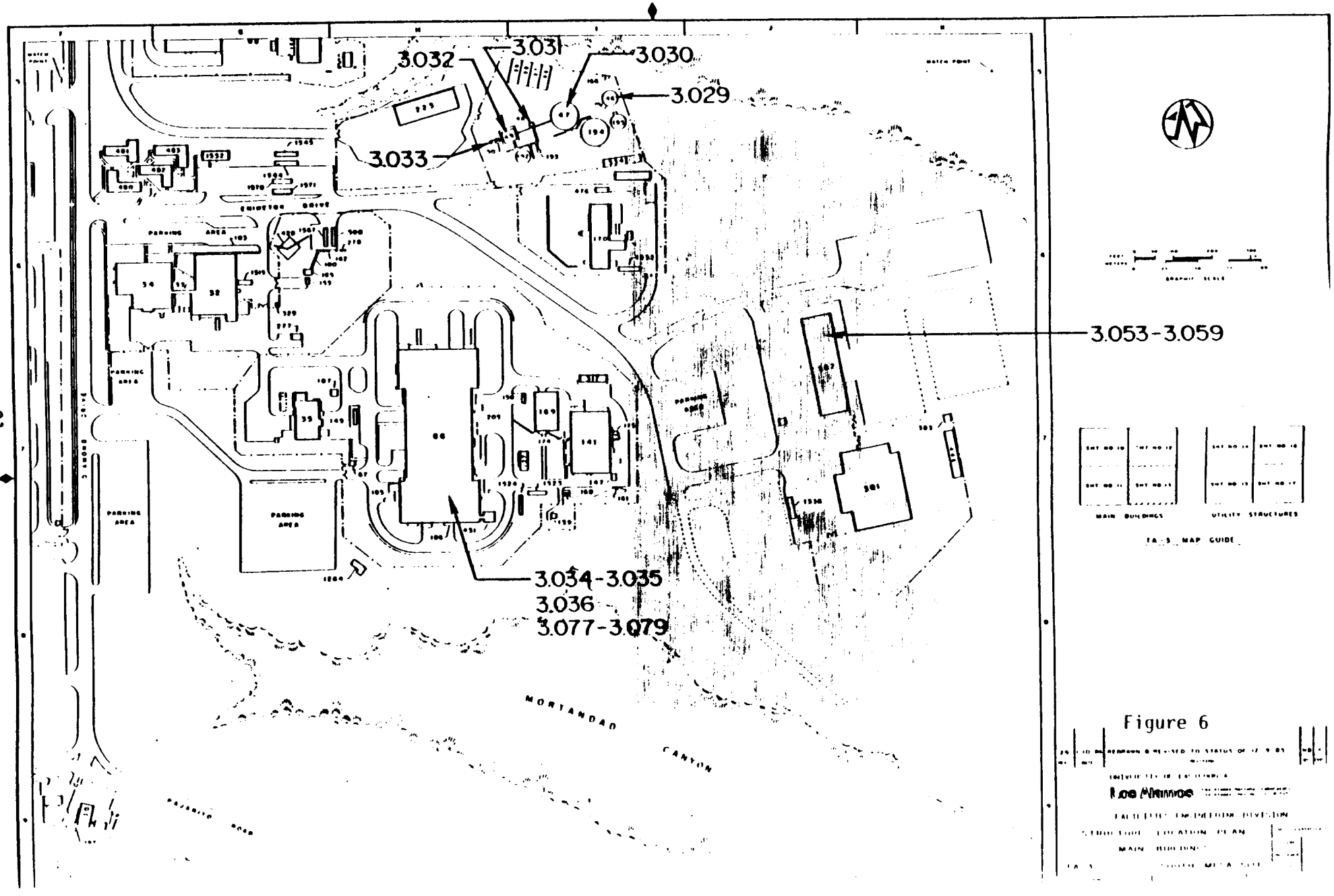

3.032
3.031
3.030
3.029
3.033
3.053-3.059
3.034-3.035
3.036
3.077-3.079
PARKING AREA
MORTANDAD
CANYON
MAIN BUILDINGS
UTILITY STRUCTURES
FA-3 MAP GUIDE
Los Alamos

Figure 6

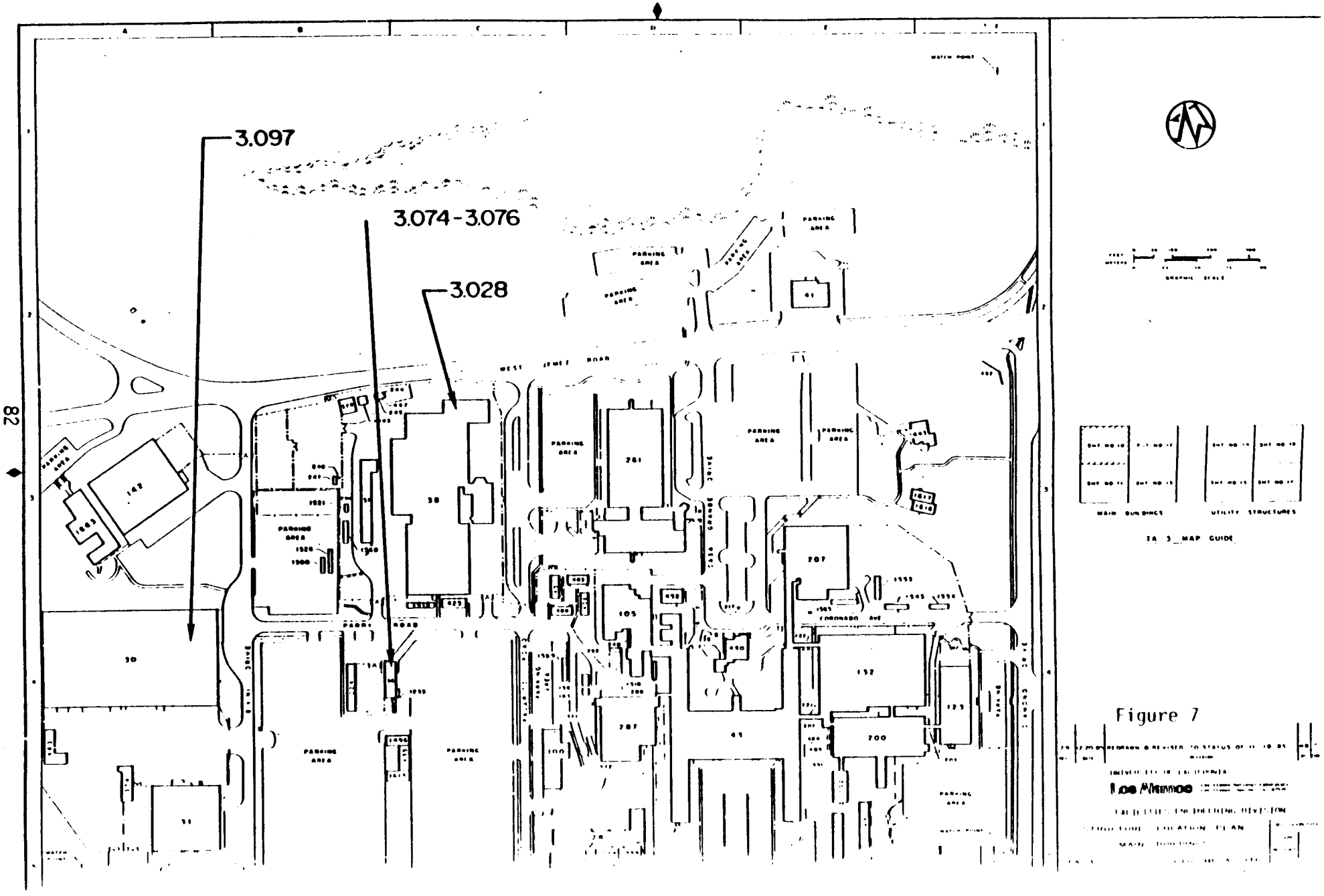

3.097
3.074-3.076
3.028
82
PARKING AREA
WEST JEMEZ ROAD
PARK ROAD
TRINITY DRIVE
CANYON ROAD
GRAPHIC SCALE
MAIN BUILDINGS
UTILITY STRUCTURES
TA 3 MAP GUIDE
Los Alamos

Figure 7

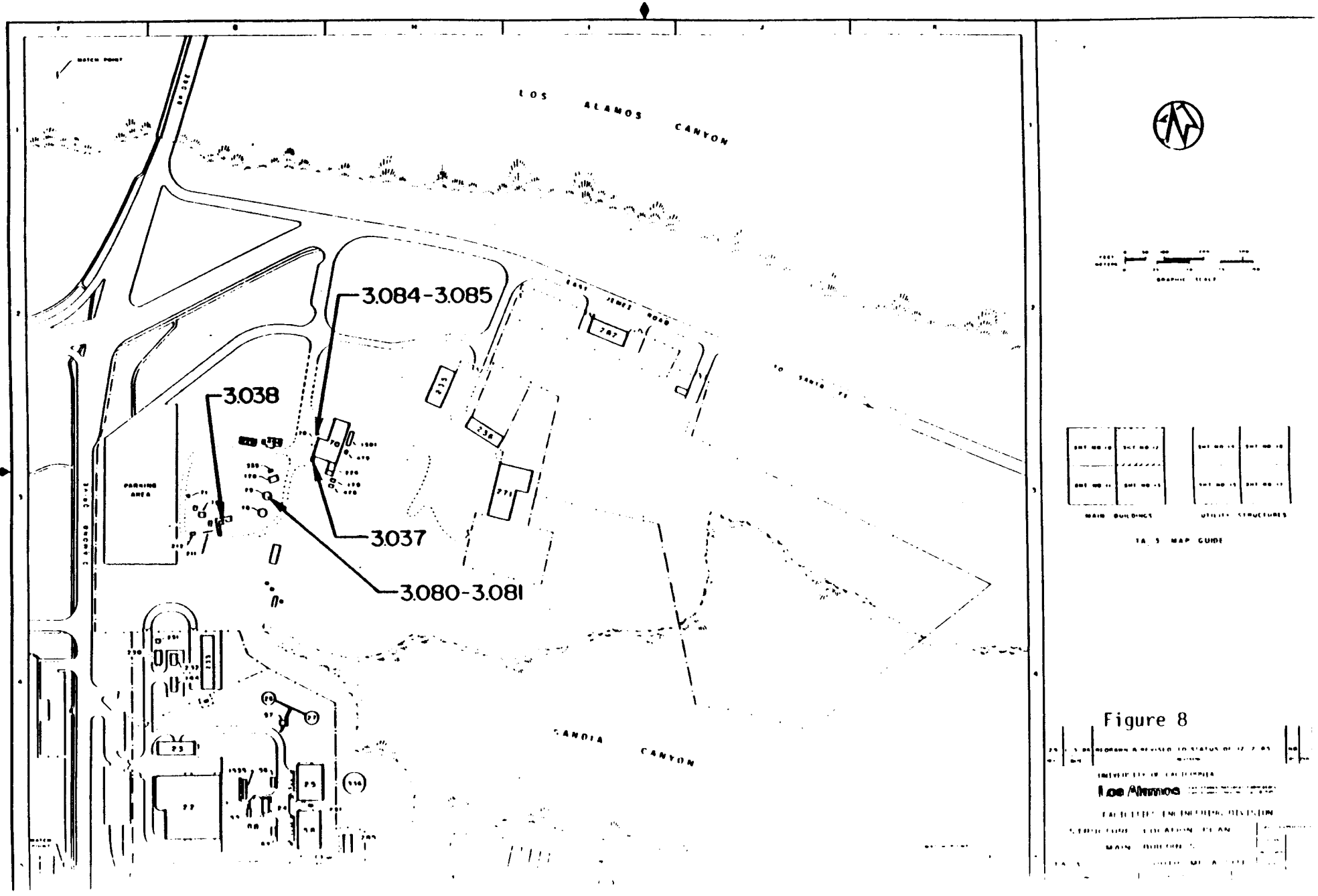

LOS ALAMOS CANYON
3.084-3.085
3.038
3.037
3.080-3.081
PARKING AREA
CANDIA CANYON
MAIN BUILDINGS
UTILITY STRUCTURES
TA-3 MAP GUIDE
Los Alamos

Figure 8

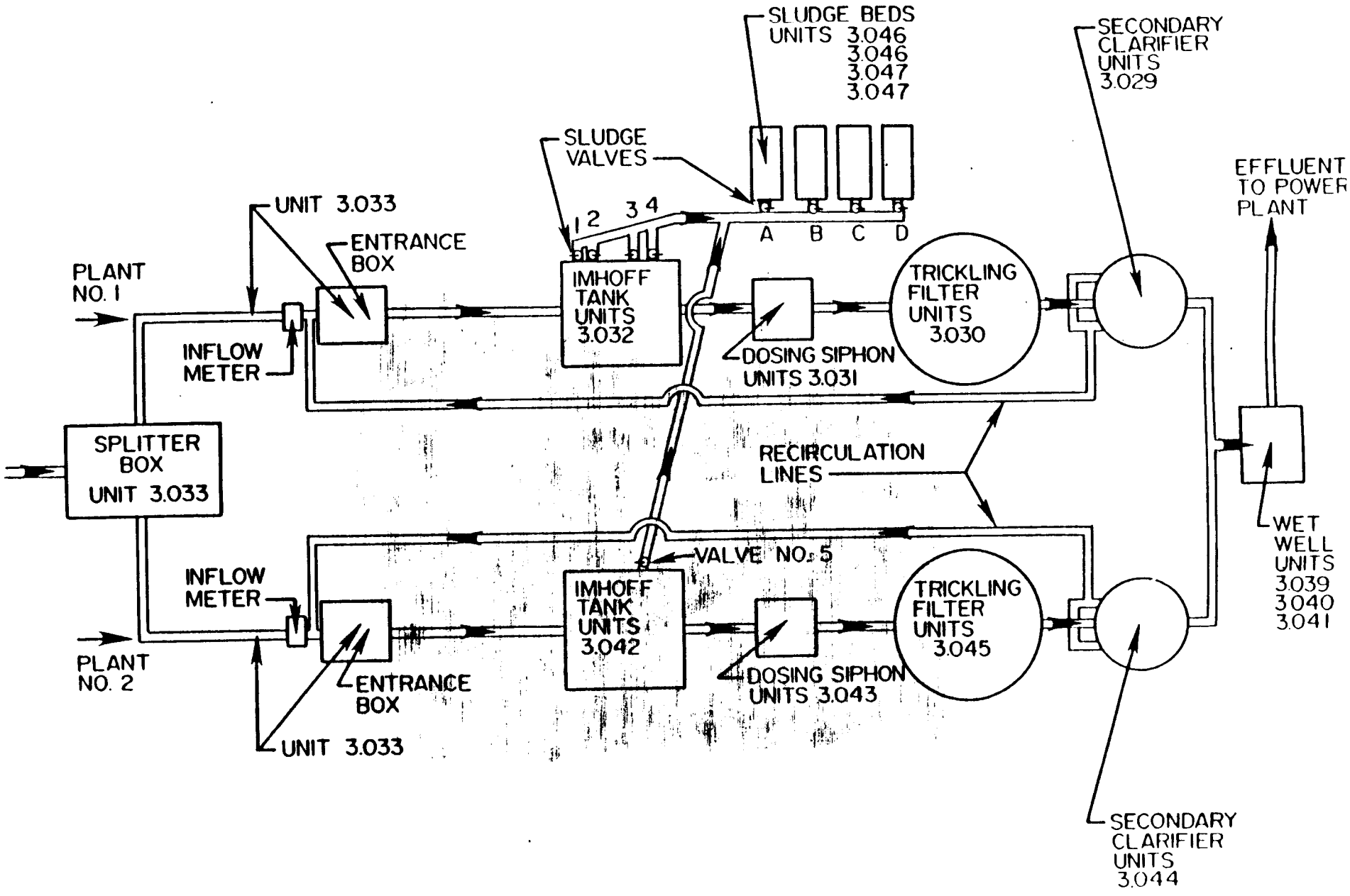


FIGURE 9. EXHIBIT SCHEMATIC OF TA-3 PLANT.

Unit Number: 3.001 Unit Name: DRUM STORAGE

Location: TA-3 References: 98,p.4;VSI LOG BOOK

A. Used Oil Collection and Temporary Drum Storage Area. Note Oily Stains on Drum and Surrounding Asphalt. See Additional Photos on Following Page.

B. Observed Drum Being Filled and Liquid Leaking From Drum to Asphalt. Note Lack of Secondary Containment Around Drums.

Unit Number: 3.001

A. DESCRIPTION

Unit Type: USED OIL COLLECTION AREA, TEMPORARY STORAGE.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: THERE ARE APPROXIMATELY TWENTY 55 GALLON DRUMS IN 30 SQUARE FOOT AREA.

Material of Construction: STEEL DRUM ON A SOIL PAD.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT SERVES AS A SATELLITE FOR THE USED OIL COLLECTION AREA.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.001

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: USED OIL CONTAINING HAZARDOUS WASTE IN THE FORM OF CHEMICALS, ORGANICS

Source of Waste: VAN DE GRAAF BUILDING.

Disposition of Waste: WASTE GOES TO TA-54.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: OBSERVED DRUM BEING FILLED AND LIQUID LEAKING FRO DRUM. STAINING OF SOIL OBSERVED.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 3.002-3.007

Unit Name: SIX UNDERGROUND INDUSTRIAL SEWER VAULTS

Location: TA-3-29

References: VSI LOG BOOK; 12, P. 3-2; 13, P. 3-2

Access to Underground Industrial Waste Sewer Vaults at TA-3-29.

Unit Number: 3.002-3.007

A. DESCRIPTION

Unit Type: SIX INDUSTRIAL WASTE SEWER VAULTS - UNDERGROUND OUTSIDE EACH WING OF BUILDING 29

Period of Operation: 5 YEARS (1982-87)

Dimensions/Volume: EACH VAULT MEASURES 7'X 7'X 8' DEEP

Material of Construction: STAINLESS STEEL (DOUBLE ENCASED)

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: LEAKS OCCURING WITHIN BUILDING 29 DRAIN INTO VAULT. VAULTS ARE LOCATED OUTSIDE EACH WING OF BUILDING AND SPECIFIED BY WING LOCATION (i.e. WING 1 TO 6).

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.002-3.007

C. WASTES MANAGED

Solids: X	Corrosive: X	Organics:
Liquids: X	Flammable: X	Inorganics: X
Gases: X	Reactive: X	Metals: X
Sludges: X	EP Toxic: X	

Particulars: NO OTHER DATA AVAILABLE.

Source of Waste: RADIOACTIVE LIQUID WASTE FROM THE PARTICULAR BUILDING WING THAT THE VAULT WAS DESIGNED FOR.

Disposition of Waste: WASTE DRAINS TO TA-50.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection: X

Details: COMPUTERIZED LEAK DETECTION AND VALVE CONTROL SYSTEM AT TA-50 MONITORS SEWER LINES FOR LEAKS. UNDERGROUND MANHOLE COVER SEEN AT WING 5 HAS ALUMINUM COVER TO KEEP OUT CONDENSATE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

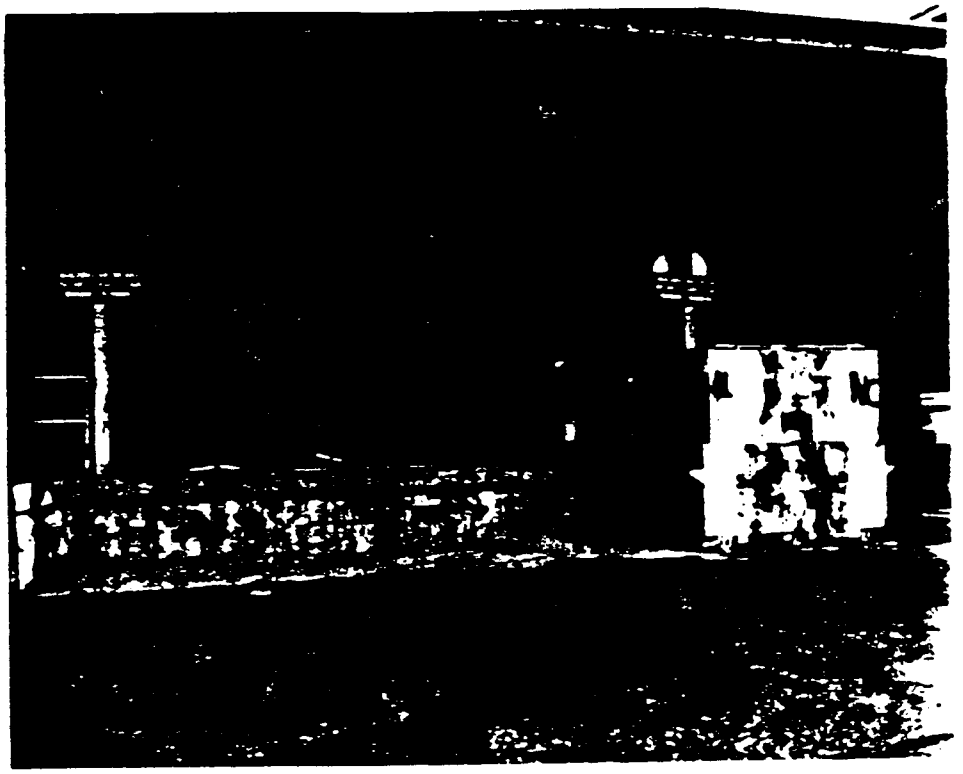
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.008

Unit Name: WEST LOADING DOCK

Location: TA-3-29

References: VSI LOG BOOK; 12, P. 3-2; 13, P. 3-2



West Loading Dock in TA-3-29 Used to Store Waste Prior to Transfer to TA-54.

Unit Number: 3.008

A. DESCRIPTION

Unit Type: LOADING DOCK; DURING THE VSI OBSERVED TWO LARGE BINS (CLOSED) USED FOR RADIOACTIVE WASTES WERE OBSERVED. ADDITIONALLY, A NUMBER OF GAS CYLINDERS OF DIFFERENT TYPES WERE OBSERVED.

Period of Operation: 1951-PRESENT

Dimensions/Volume: THE LOADING DOCK MEASURES 10'X 100'

Material of Construction: CONCRETE AREA UNDERLAIN BY ASPHALT

Underlain by: Concrete: X Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: X Residences: Belowground:

Purpose of Unit: LOADING DOCK USED TO STORE WASTE PRIOR TO SHIPMENT TO TA-54. WASTES ARE BROUGHT UP IN AN ELEVATOR ON SKIDS (8 BARRELS PER SKID) AND ARE MEASURED FOR RADIOACTIVITY BEFORE BEING SENT TO TA-54.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.008

C. WASTES MANAGED

Solids: X	Corrosive: X	Organics: X
Liquids: X	Flammable: X	Inorganics: X
Gases:	Reactive: X	Metals: X
Sludges: X	EP Toxic: X	

Particulars: WASTES CONTAINING RADIOACTIVE MATERIAL.

Source of Waste: LAB OPERATIONS

Disposition of Waste: DRUMS TRANSPORTED TO TA-54.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE NOTED DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

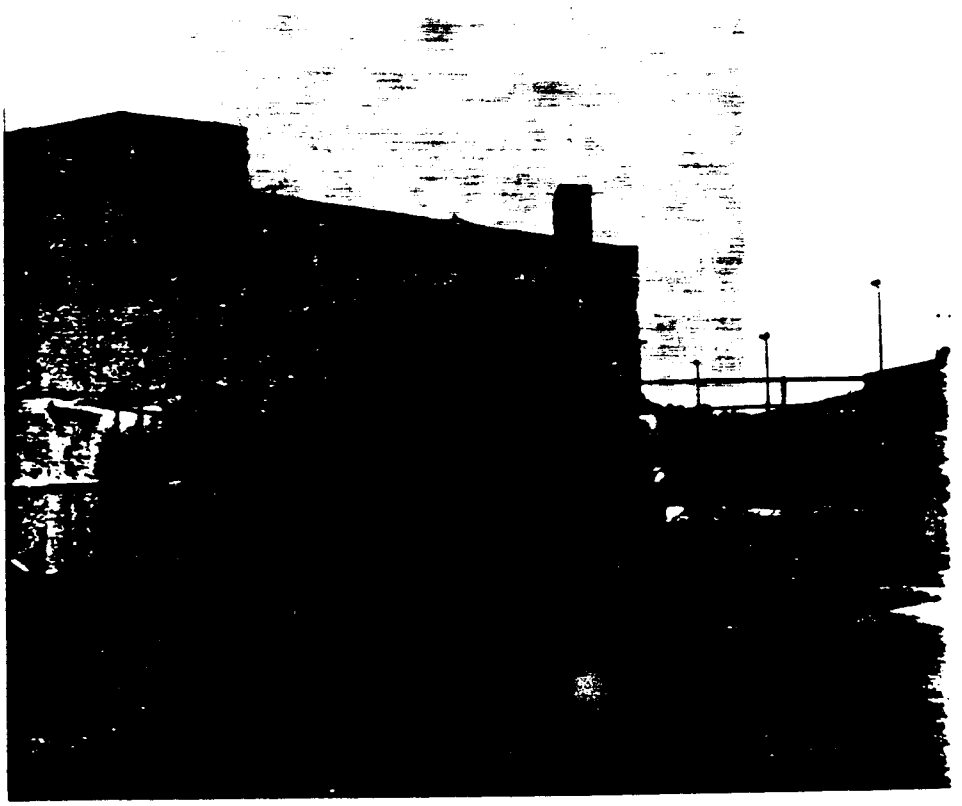
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.009-3.010

Unit Name: TWO UNDERGROUND STAINLESS ST... TANKS, HIGH LEVEL RADIOACTIVE WASTE

Location: TA-3-154

References: VSI LOG BOOK



Stainless Steel Tanks Used to Store High Level Waste From Hot Cells in Building 154.

Unit Number: 3.009-3.010

A. DESCRIPTION

Unit Type: TWO UNDERGROUND STAINLESS STEEL TANKS LOCATED LEFT OF DOOR (HIGH-LEVEL WASTE) WING 9, BUILDING 154.

Period of Operation: ESTIMATED TO HAVE BEEN IN OPERATION FOR 27 YEARS

Dimensions/Volume: 10,000 GALLONS

Material of Construction: STAINLESS STEEL; INFORMATION ON THICKNESS AND LINING MATERIAL NOT AVAILABLE. TANKS ARE LOCATED ON CONCRETE WITHIN BUILDING 154.

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground: X

Purpose of Unit: UNIT DRAINS HOT CELLS CONTAINING HIGH LEVEL WASTE FROM WING 9 BELOW GRADE TO TANKS UNDER BUILDING 154. SYSTEM IS PRESENTLY BEING BYPASSED SINCE HOT CELL AREA BECAME DECOMMISSIONED.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: AREA IS TO BE DECOMMISSIONED.

Unit Number: 3.009-3.010

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: STORAGE OF RADIOACTIVE WASTE; UNIT USED ONLY FOR EMERGENCIES.

Source of Waste: RADIOACTIVE LIQUID WASTE FROM WING 9.

Disposition of Waste: WASTE PIPED THROUGH SEWAGE SYSTEM TO TA-50.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer: X
Level Controls: X	Overflow Controls: X		Leak Detection: X

Details: OVERFLOW MONITORED BY A COMPUTER (TA-50) THAT ACTIVATES AN ALARM.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.011-3.012

Unit Name: TWO UNDERGROUND CONCRETE TANKS, LOW LEVEL WASTE

Location: TA-3-154

References: VSI LOG BOOK

No Photos are Available for these Units.

Unit Number: 3.011-3.012

A. DESCRIPTION

Unit Type: TWO UNDERGROUND CONCRETE TANKS ON RIGHT OF DOOR, WING 9, BUILDING 154 (LOW LEVEL WASTE).

Period of Operation: ESTIMATED TO HAVE BEEN IN OPERATION FOR 27 YEARS.

Dimensions/Volume: 5,000 GAL.

Material of Construction: CONCRETE

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground: X

Purpose of Unit: SYSTEM DRAINS HOT CELLS CONTAINING HIGH LEVEL WASTE FROM WING 9 TO TANKS UNDER BUILDING 154. SYSTEM IS PRESENTLY BEING BYPASSED SINCE HOT CELL AREA BECAME DECOMMISSIONED.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.011-3.012

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: STORAGE OF RADIOACTIVE LIQUID WASTE; UNIT USED ONLY FOR EMERGENCIES.

Source of Waste: RADIOACTIVE LIQUID WASTE FROM TA-3-29 WING 9

Disposition of Waste: WASTE IS PIPED THROUGH SEWAGE SYSTEM TO TA-50

D. RELEASE CONTROLS

Liner: X	Diking:	Sumps:	Ind. Sewer: X
Level Controls: X	Overflow Controls: X		Leak Detection: X

Details: OVERFLOW MONITORED BY A COMPUTER (TA-50) THAT ACTIVATES AN ALARM.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.013-3.014

Unit Name: TWO UNDERGROUND CONCRETE EMERGENCY TANKS

Location: TA-3-29

References: VSI LOG BOOK; 12, P. 3-2; 13, P. 3-2

No Photos are Available for these Units. Units were not seen During the VSI.

Unit Number: 3.013-3.014

A. DESCRIPTION

Unit Type: TWO CONCRETE EMERGENCY STORAGE TANKS - UNDERGROUND - WING 7 BUILDING 29; NOT VISITED DURING THE VSI.

Period of Operation: 1951 TO PRESENT

Dimensions/Volume: 5,000 GALLONS

Material of Construction: CONCRETE REINFORCED, EPOXY LINED

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X	Close to Surface Water:	In Ground:
Outdoors:	Close to Drinking Water:	Aboveground:
Covered:	Residences:	Belowground: X

Purpose of Unit: UNIT USED FOR EMERGENCY STORAGE OF RADIOACTIVE LIQUID WASTE

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.013-3.014

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: RADIOACTIVE LIQUID WASTE.

Source of Waste: LINE BREAKS OR OTHER EQUIPMENT FAILURES.

Disposition of Waste: WASTE IS PIPED THROUGH SEWAGE SYSTEM TO TA-50.

D. RELEASE CONTROLS

Liner: X	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection: X

Details: OVERFLOW IS MONITORED BY A COMPUTER (TA-50) THAT ACTIVATES AN ALARM; UNIT HAS AN EPOXY LINER.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.015-3.016

Unit Name: TWO UNDERGROUND EMERGENCY STORAGE TANKS, WING 3

Location: TA-3-29

References: VSI LOG BOOK; 12, P. 3-2; 13, P. 3-2

No Photos are Available for these Units.

Unit Number: 3.015-3.016

A. DESCRIPTION

Unit Type: TWO EMERGENCY STORAGE TANKS - UNDERGROUND - WING 3, BUILDING 29

Period of Operation: 1951-PRESENT

Dimensions/Volume: 5,000 GAL.

Material of Construction: CONCRETE REINFORCED, EPOXY LINED

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT USED FOR EMERGENCY STORAGE OF RADIOACTIVE LIQUID WASTE

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.015-3.016

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: LIQUID RADIOACTIVE WASTE

Source of Waste: LINE BREAKS OR OTHER EQUIPMENT FAILURE.

Disposition of Waste: WASTES IS PIPED THROUGH SEWAGE SYSTEM TO TA-50.

D. RELEASE CONTROLS

Liner: X	Diking:	Sumps:	Ind. Sewer: X
Level Controls: X	Overflow Controls: X		Leak Detection: X

Details: UNIT MONITORED BY AN ALARM SYSTEM AT TA-50; UNIT IS EPOXY LINED.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT OBSERVED DUE TO RESTRICTED ACCESS TO AREA.

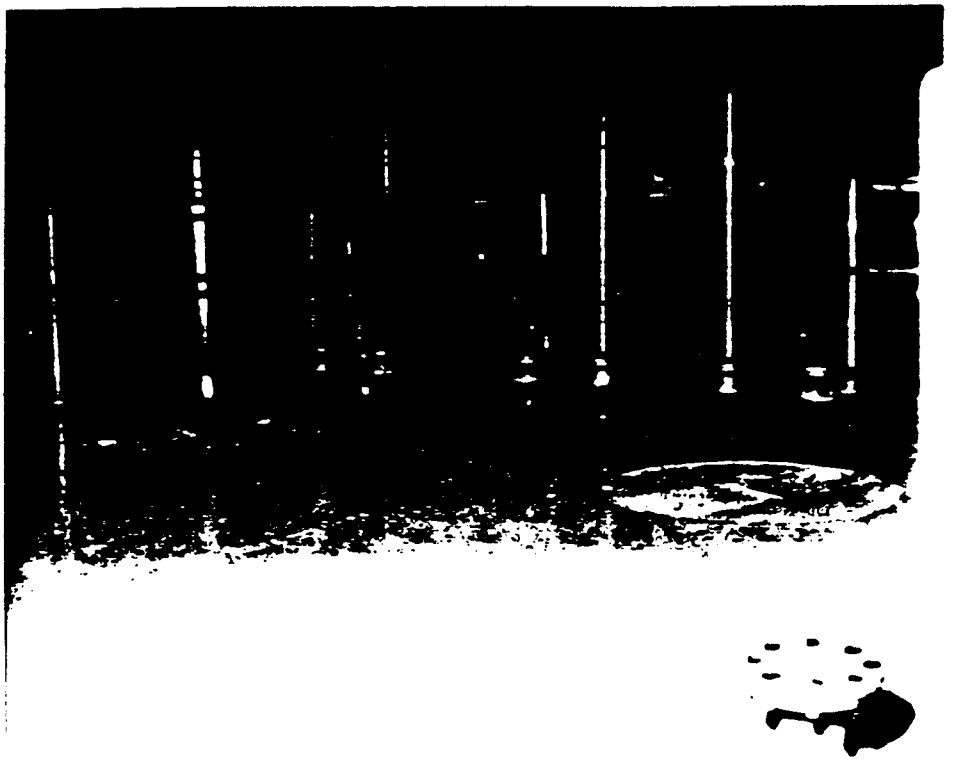
Detail of Past Releases: RECENT LEAK IN SEWAGE LINE CAUSED RELEASE OF RADIOACTIVE LIQUID WASTE.

Unit Number: 3.017-3.018

Unit Name: TWO UNDERGROUND EMERGENCY STORAGE TANKS, WING 5

Location: TA-3-29

References: VSI LOG BOOK;12, P. 3-2; 13, P. 3-2



Emergency Storage Tank No. 1 Used to Store Radioactive Liquid Waste. Underground Wing 5 at TA-3-29.

Unit Number: 3.017-3.018

A. DESCRIPTION

Unit Type: TWO EMERGENCY STORAGE TANKS - UNDERGROUND - WING 5, BUILDING 29

Period of Operation: 1951 TO PRESENT

Dimensions/Volume: 5,000 GAL.

Material of Construction: CONCRETE REINFORCED, EPOXY LINED

Underlain by: Concrete: X Asphalt: Gravel:
Grass: [redacted]l:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking [redacted]er: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT USED FOR EMERGENCY STORAGE OF RADIOACTIVE LIQUID WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.017-3.018

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: RADIOACTIVE LIQUID WASTE IS MANAGED BUT UNIT IS PRESENTLY EMPTY.

Source of Waste: LINE BREAKS OR OTHER EQUIPMENT FAILURES.

Disposition of Waste: WASTE IS PIPED THROUGH SEWAGE LINES TO TA-50

D. RELEASE CONTROLS

Liner: X	Diking:	Sumps:	Ind. Sewer: X
Level Controls: X	Overflow Controls: X		Leak Detection: X

Details: OVERFLOW IS MONITORED BY A COMPUTERIZED ALARM SYSTEM CONNECTED TO TA-50; UNIT IS EPOXY LINED.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.019-3.020

Unit Name: TWO UNDERGROUND EMERGENCY STORAGE TANKS, WING 4

Location: TA-3-29

References: VSI LOG BOOK; 12, P. 3-2; 13, P. 3-2

No Pnotos are Available for these Units.

Unit Number: 3.019-3.020

A. DESCRIPTION

Unit Type: TWO EMERGENCY STORAGE TANKS - UNDERGROUND - WING 4, BUILDING 29

Period of Operation: 1951-PRESENT

Dimensions/Volume: 5,000 GAL.

Material of Construction: CONCRETE REINFORCED, EPOXY LINED

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT USED FOR EMERGENCY STORAGE OF RADIOACTIVE LIQUID WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.019-3.020

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTES MANAGED ARE RADIOACTIVE BUT UNIT IS PRESENTLY EMPTY.

Source of Waste: LINE BREAKS OR OTHER EQUIPMENT FAILURES.

Disposition of Waste: WASTE IS PIPED THROUGH SEWAGE LINES TO TA-50

D. RELEASE CONTROLS

Liner: X	Diking:	Sumps:	Ind. Sewer: X
Level Controls: X	Overflow Controls: X		Leak Detection: X

Details: OVERFLOW IS MONITORED BY A COMPUTERIZED ALARM SYSTEM CONNECTED TO TA-50; UNIT IS EPOXY LINED.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.021-3.022

Unit Name: TWO UNDERGROUND EMERGENCY STORAGE TANKS, WING 2

Location: TA-3-29

References: VSI LOG BOOK; 12, P. 3-2; 13, P. 3-2

Underground Emergency Storage Tank No. 1 in Basement of Wing No. 2 at TA-3-29.

Unit Number: 3.021-3.022

A. DESCRIPTION

Unit Type: TWO UNDERGROUND EMERGENCY STORAGE TANKS, LOCATED IN THE BASEMENT OF WING NO. 2, BUILDING 29.

Period of Operation: 1951 TO PRESENT

Dimensions/Volume: 5,000 GAL.

Material of Construction: CONCRETE REINFORCED, EPOXY LINED

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT USED FOR EMERGENCY STORAGE OF RADIOACTIVE LIQUID WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.021-3.022

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE BUT IS CURRENTLY EMPTY.

Source of Waste: LINE BREAKS OR OTHER EQUIPMENT FAILURE.

Disposition of Waste: WASTE IS PIPED THROUGH SEWAGE LINE TO TA-50.

D. RELEASE CONTROLS

Liner: X	Diking:	Sumps: X	Ind. Sewer: X
Level Controls: X	Overflow Controls: X	Leak Detection: X	

Details: UNIT CONTAINS A COMPUTERIZED ALARM SYSTEM THAT IS CONNECTED TO TA-50. UNIT IS EPOXY LINED.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

B. Lawn Mower Storage Area Containing Three Waste Oil Drums.

Unit Number: 3.061

A. DESCRIPTION

Unit Type: DRUM STORAGE.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: TWO 55 GALLON DRUMS.

Material of Construction: STEEL; DRUMS ON GRAVEL.

Underlain by: Concrete: Asphalt: Gravel: X
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: DRUMS ARE ASSUMED TO CONTAIN WASTE OILS FROM LAWN MOWERS.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.061

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS WASTE OIL.

Source of Waste: LAWNMOWERS AND OTHER GROUND MAINTENANCE EQUIPMENT.

Disposition of Waste: DISPOSITION OF WASTE IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

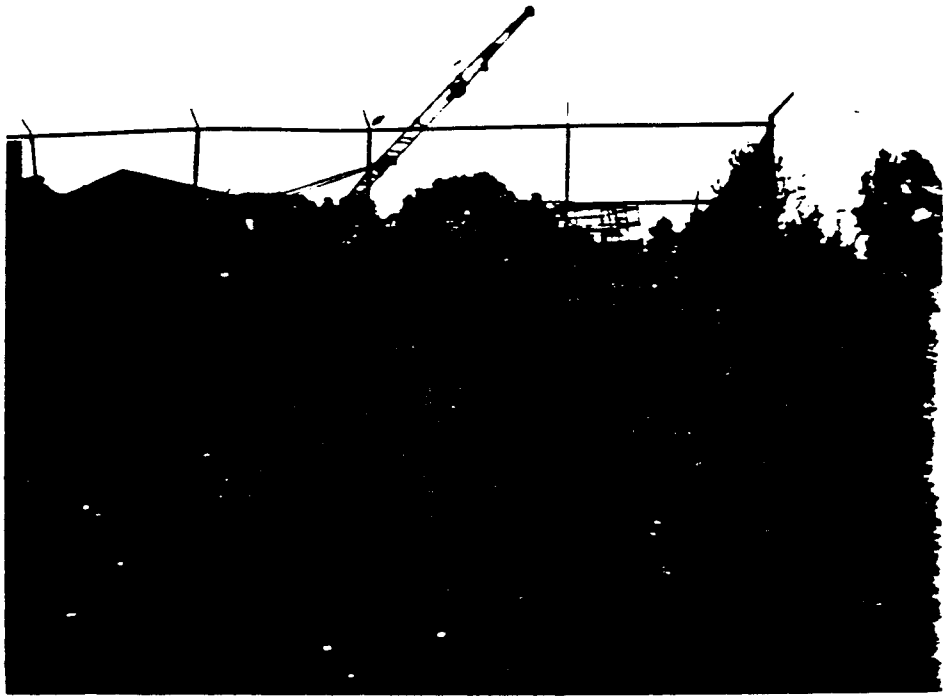
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.062 Unit Name SALVAGE YARD

Location: TA-3 References: VSI LOG BOOK



Salvage Yard for the Salvage of Scrap Metal. Note Gullies in Foreground Formed from Past Runoff from the Area.

B. Typical Materials Stored in Salvage Yard.

C. Materials Stored in Salvage Yard.
Note Drum Storage of Corrosive Waste.

Unit Number: 3.062

A. DESCRIPTION

Unit Type: SALVAGE YARD.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 200' X 130'

Material of Construction: SOIL SURROUNDED BY A FENCE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS FOR THE SALVAGE OF SCRAP METAL FOR RECYCLING.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.062

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: SCRAP METAL.

Source of Waste: REPORTEDLY GENERAL SALVAGE FROM BUILDINGS AND OPERATIONS.

Disposition of Waste: RECYCLED OR RESOLD.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: GULLIES FORMED BY PAST RUNOFF IN AREA WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 3.063 Unit Name: SOLAR POND AT SIGMA MESA

Location: TA-3-4 References: 98, P. 3

There is no Photo Available for this Unit. Unit was not seen During the VSI.

Unit Number: 3.063

A. DESCRIPTION

Unit Type: SURFACE IMPOUNDMENT

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DATA NOT AVAILABLE

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: ADDITIONAL DATA NOT AVAILABLE

Unit Number: 3.063

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: LOW LEVEL RADIONUCLIDES

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI.

Detail of Past Releases: DATA NOT AVAILABLE.

Unit Number: 3.064

Unit Name: TEMPORARY CHEMICAL WASTE STORAGE

Location: TA-3-40

References: 6; 36, P. 3; 89, P. 24

No Photo is Available for this Unit. Unit was not seen During the VSI.

Unit Number: 3.064

A. DESCRIPTION

Unit Type: DATA NOT AVAILABLE

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: TEMPORARY STORAGE OF CHEMICAL WASTE

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: DATA NOT AVAILABLE

Unit Number: 3.064

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: DATA NOT AVAILABLE

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

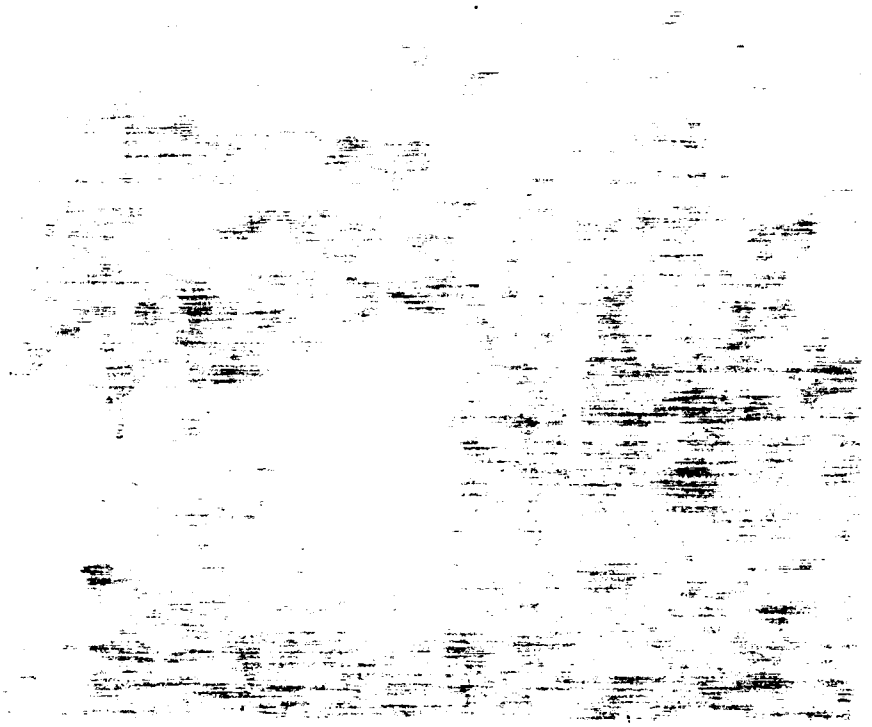
Detail of Past Releases: DATA NOT AVAILABLE.

Unit Number: 3.065-3.066

Unit Name: TWO SUMPS

Location: TA-3-29

References: VSI LOG BOOK; 12, P. 3-2; 13, P. 3-2



No Photo is Available for this Unit.

Unit Number: 3.065-3.066

A. DESCRIPTION

Unit Type: SUMP TANKS (2) IN BASEMENT OF WINGS 4 AND 5.

Period of Operation: 1982 TO PRESENT

Dimensions/Volume: 200 TO 300 GALLONS

Material of Construction: FIBERGLASS

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT IS USED TO STORE RADIOACTIVE WASTES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.065-3.066

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: RADIOACTIVE WASTES

Source of Waste: FLOOR DRAIN EFFLUENTS (SPILLS, ETC.) FROM SPECIFIC WINGS (4 AND 5).

Disposition of Waste: PUMPED INTO MAIN PUMP TANKS, THEN GOES TO TA-50.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Storm Sewer:
Level Controls:	Overflow Controls:	Leak Detection:	

Details: NO RELEASES CONTROLS WERE OBSERVED DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

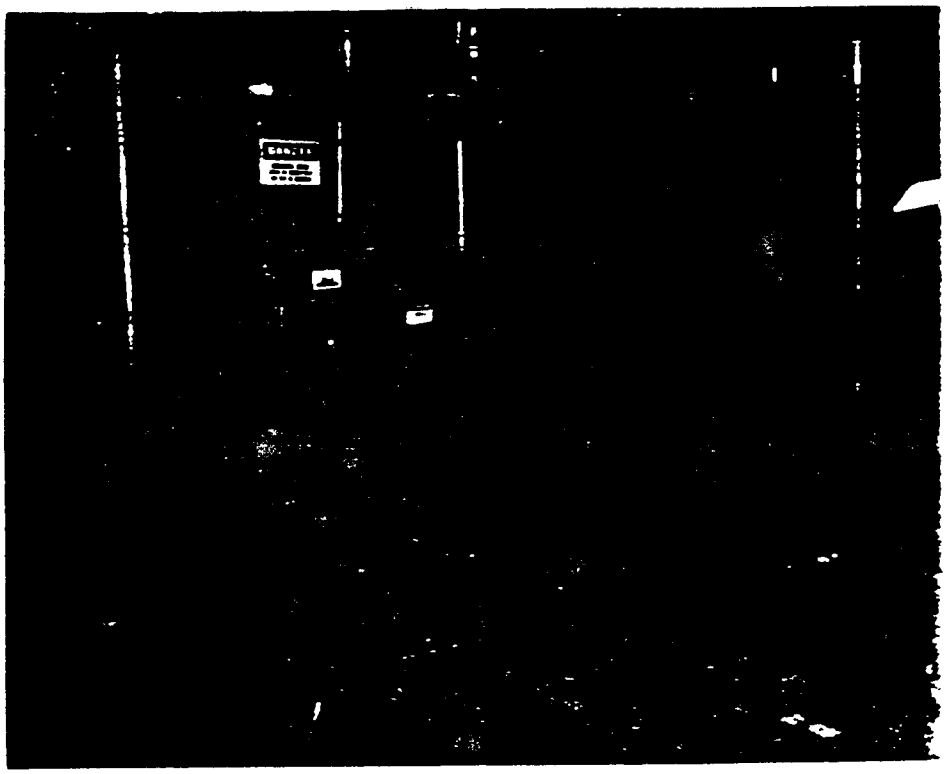
VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

UNIT 3.067: CAPACITOR STORAGE - This unit is a partially active storage area designed for the containment of old capacitors, hazardous wastes, and petroleum products. Composition of wastes include oils and PCB's (98, p. 3). Storage areas within TA-3 that contain old capacitors were visited during the VSI, but no conclusive evidence suggests that this particularly referenced area was one of them. No photo is available for this unit.

UNIT 3.068: WASTE OIL STORAGE - This unit is a partially active contaminated area that is suspected to contain waste petroleum products (98, p. 3), possibly containing hazardous constituents. No photo is available for this unit.

UNIT 3.069-3.070: WASTE STORAGE TANKS WITH SUMPS - These active units (98, p. 3) are designed for the collection and storage of radioactive and hazardous wastes containing radionuclides, chemicals, and organics.



Main Radioactive Waste Pump Tanks in the Basement of Wing 4, TA-3-29.

UNIT 3.071: UNDERGROUND STORAGE TANK WITH SUMP - This is an active unit (98, p. 4) designed for the collection and storage of hazardous wastes (i.e., solvents) and petroleum products (i.e., waste oils). No photo is available for this unit.

UNIT 3.072: FIRING PITS - This unit is an inactive contaminated area, suspected of containing high explosives wastes and radioactive wastes (98, p. 3). No photo is available for this unit.

UNIT 3.073: PESTICIDE STORAGE - As observed in the VSI, this unit (98, p. 4) is comprised of two metal sheds measuring approximately 12 ft. by 16 ft. and are used for the temporary storage of pesticides and liquids which may contain hazardous constituents.

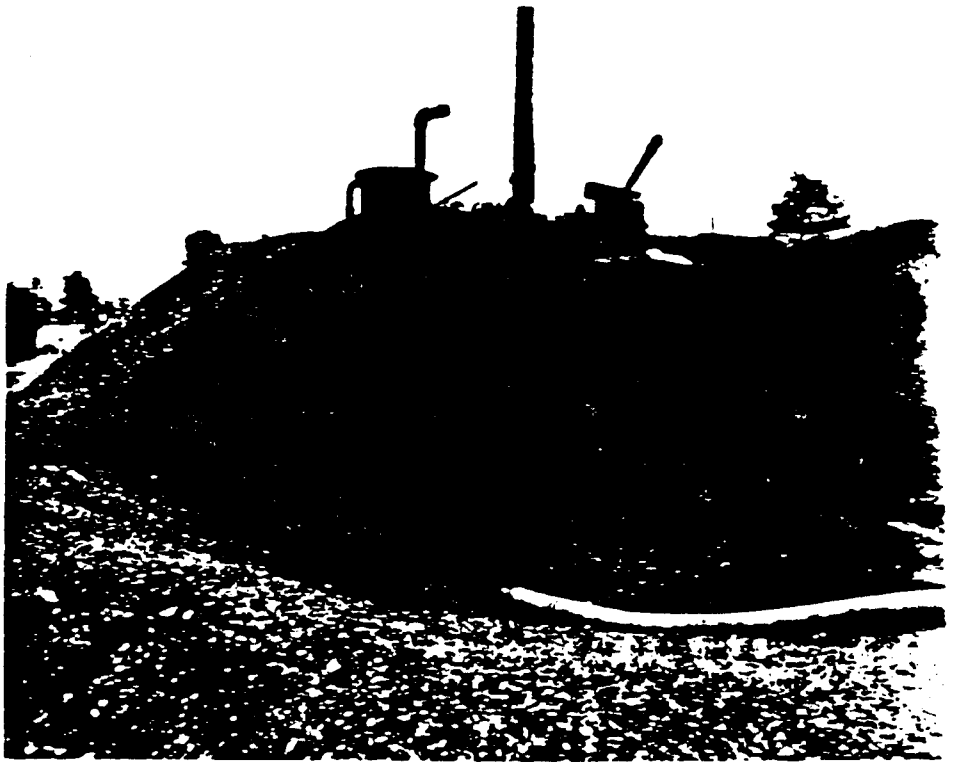
Storage Containers in the Pesticide Storage Area.
Note Lack of Secondary Containment and Liquid Spill on Floor.

UNIT 3.074-3.076: THREE GAS SERVICE STATION UNDERGROUND TANKS - As observed during the VSI, this unit is used for the storage of gasoline products. However, it was noted during the VSI that tests performed by LANL indicate a possible leak. No photos are available for these units.

UNIT 3.077-3.079: THREE ELECTROPLATING TANKS - As seen during the VSI, these units are comprised of three tanks measuring 36 ft. by 36 ft. by 4 ft. deep (250 gallons). No wastes are managed here, although liquids are considered to be EP Toxic. Spills from tanks are collected by sumps and transferred to 55 gallon drums (13, p. 3-2; 36, p. 3). See photo on following page.

Three Electroplating Tanks Located in the Sigma Building of TA-3-66.

UNIT 3.080-3.081: TWO ASPHALT BATCH PLANT STORAGE TANKS - As stated in the VSI log book, these 6 ft. diameter and 20 ft. long (98, p. 3) steel tanks are used for the product storage of asphalt. Discolored soil surrounds the structure due to uncontrolled surface drainage.



A. Tank Used for the Storage of Asphalt at the Asphalt Batch Plant in TA-3. Note Lack of Release Controls for This Unit, and Discolored Soil Surrounding the Structure.

B. Flow Lines and Pump Associated with the Asphalt Storage Tanks. Note Overflow and/or Spillage on Tanks and Flow Equipment.

UNIT 3.082-3.083: TWO COOL ASPHALT STORAGE TANKS - As observed during the VSI, these steel tanks are used for the product storage of cooled asphalt. Discolored soil surrounds the structure due to uncontrolled surface drainage (98, p. 3). No photos are available for these units.

UNIT 3.084-3.085: TWO INSULATED STORAGE TANKS - As observed during the VSI, these steel tanks are used for the product storage of asphalt. Discolored soil surrounds the structure due to uncontrolled surface drainage (98, p. 3). No photos are available for these units.

UNIT 3.086: EMPTY DRUM STORAGE - This unit was observed during the VSI to consist of several empty 55-gallon steel drums over bare soil. It is not known what materials were contained in these drums. See photo on following page.

Typical Drums Stored in the Empty Drum Storage Area.
Note Spillage on Drum on Far Right and Haphazard Stacking.

UNIT 3.087-3.088: TWO OUTFALLS - These outfalls (98, p. 3) include a partially active unit containing hazardous and radioactive wastes, and an inactive unit that has deposited organics, oils, and petroleum products generated from the TA-3 motorpool into the underlying canyon. No photos are available for these units.

UNIT 3.089: COOLING TOWER - During the VSI, LANL personnel assured the inspection team that there were no hazardous constituents within this area. However, referencing of this area suggests that hazardous wastes containing chromium may have been released into this area via partially active outfalls (98, p. 3). No photo is available for this unit.

UNIT 3.090: VACUUM PUMP - This is an inactive contaminated area (98, p. 3) that at one time is suspected to have contained wastes, including oil and mercury. No photo is available for this unit.

UNIT 3.091: VAN DE GRAAF ACCELERATOR - No visual evidence of releases was noted during the VSI, but references suggest that this is an active contaminated area suspected of containing radioactive tritium waste (98, p. 3; 10, p. 7-1). No photo is available for this unit.

UNIT 3.092: BURNING SITE - This unit (98, p. 4) is described as an inactive contaminated area that at one time supposedly managed high explosives contaminated wastes. No photo is available for this unit.

UNIT 3.093: MACHINE SHOP/ MAIN SHOPS - This unit is designed to provide machining services for various projects at LANL. These shops are suspected to have generated reactive wastes and wastes containing metals from machining operations (36, p. 3). During the VSI, LANL personnel did not confirm that there were any reactive wastes in this area. No photo is available for this unit.

UNIT 3.094: PRINTED CIRCUIT BOARD SHOP - This unit is suspected to have generated acid/base wastes heavily contaminated with copper (12, p. 3-2; 36, p. 3). Facility representatives did not confirm that there were presently any corrosive wastes within this area. No photo is available for this unit.

UNIT 3.095: CONTAINER STORAGE - This unit is described as a container storage area of unknown purpose (92, p. 179) located at TA-3. No photo is available for this unit.

UNIT 3.096: LITHIUM HYDRIDE, ROOM 118-A - This unit stores waste comprised of lithium hydride (6; 58, p. 2, 74, 75, 77). No photo is available for this unit.

UNIT 3.097: CENTRAL SHIPPING AND RECEIVING - This unit is described as a shipping and receiving station designed for storage prior to the offsite transport of hazardous chemical waste (88, p. 4; 65, p. 3-4). No photo is available for this unit.

TA-4, Alpha Site

This inactive technical area was used as a firing test site from 1944 to 1946. Early firing tests were varied and not well-documented. Most of the uranium which was used here was probably depleted uranium, but some natural uranium may also have been used. Debris was pushed north to Mortandad Canyon or covered-up on-site. The site is reported to be somewhat accessible to the public (910, p. 2-1). There is no map associated with this technical area.

According to the Comprehensive Environmental Assessment and Response Program (CEARP) (June 1986), there may be sites at this technical area where there is a likelihood of potential release(s) of hazard waste or constituents.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 4

SWMUs	
4.001	Landfill

AOC	
4.002	Photoprocessing outfall
4.003	Firing site

Unit Number: 4.001 Unit Name: LANDFILL

Location: TA-4-1 References: 98, P. 4

No Photo is Available for this Unit. Unit was not seen During the VSI.

Unit Number: 4.001

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AREA AS A LANDFILL; BURIAL OF DEBRIS FR
FIRING SITE; REPORTEDLY USED FOR MIXED RADIOACTIVE/HAZARDOUS WASTE

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors:	Close to Surface Water:	In Ground:
Outdoors: X	Close to Drinking Water:	Aboveground:
Covered:	Residences:	Belowground: X

Purpose of Unit: DISPOSAL OF RADIOACTIVE AND HAZARDOUS WASTES

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDIDTIONAL DATA AVAILABLE

Unit Number: 4.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES MANAGED AS RADIOACTIVE AND HAZARDOUS; HIGH EXPLOSIVES, URANIUM, DEPLETED URANIUM

Source of Waste: DEBRIS FROM FIRING SITE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE.

UNIT 4.002: PHOTOPROCESSING OUTFALL - This unit (98, p. 4) is an inactive outfall which contains hazardous waste and other unknown chemicals. No photo is available for this unit.

UNIT 4.003: FIRING SITE - This unit is a firing site (98, p. 4) which is physically present and inactive. The area is suspected to be contaminated with radioactive/hazardous waste, explosives, uranium, depleted uranium, and metals. No photo is available for this unit.

TA-5, Beta Site

This inactive technical area was used as a firing site from 1944 to 1946. Early tests reportedly were varied and not well-documented. Half-scale testing on the Fat Man device was also conducted here. Uranium is believed to be the principal contaminant. The site is reported to be somewhat accessible to the public. A map of this technical area is not available.

According to the Comprehensive Environmental Assessment and Response Program (CEARP) (June 1986), there may be sites at this technical area where there is a likelihood of potential release(s) of hazardous waste or constituents.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 5

SWMUs	
5.001	Landfill
AOC	
5.002	Outfall
5.003 - 4	Two firing sites

Unit Number: 5.001 Unit Name: LANDFILL

Location: TA-5-1 References: 98, P. 4; 10, P. 2-1

No Photo is Availabvle for this Unit. Unit was not seen During the VSI.

Unit Number: 5.001

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "LANDFILL" WHERE DEBRIS FROM FIRING SITES WAS BURIED

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: BURIAL OF DEBRIS FROM FIRING SITES

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 5.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: THE CEARP HAS IDENTIFIED THE WASTES HANDLED AS HAZARDOUS/ RADIOACTIVE, EXPLOSIVES, AND URANIUM OR DEPLETED URANIUM

Source of Waste: FIRING SITES

Disposition of Waste: IN SITU

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

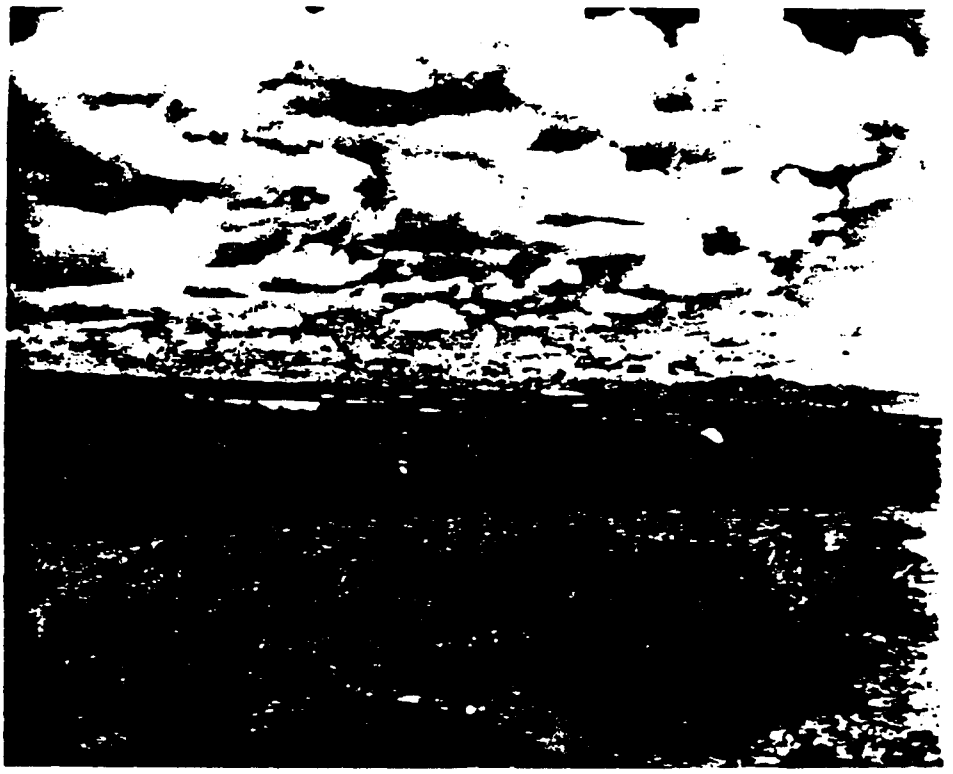
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING VSI

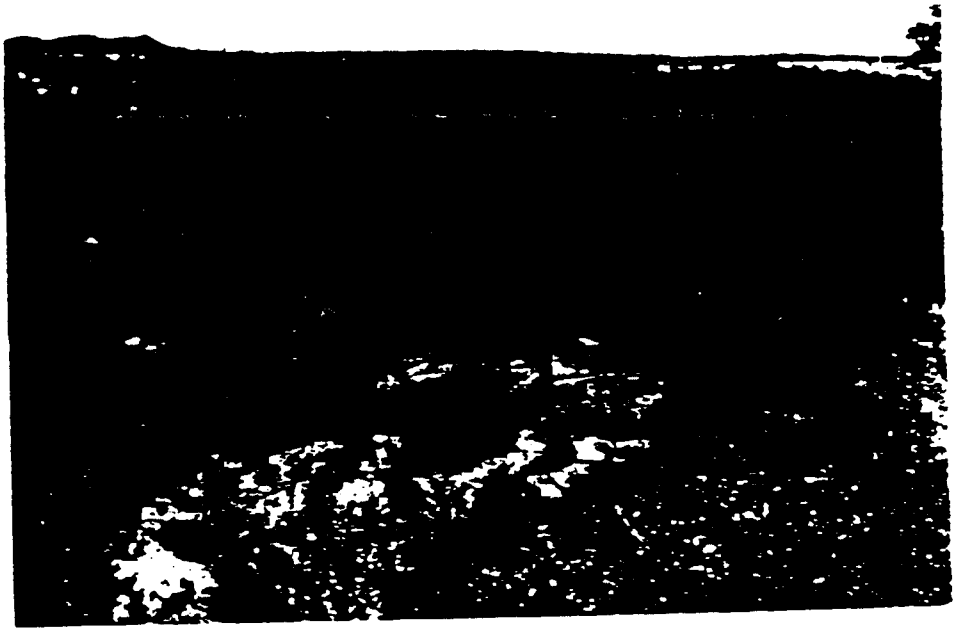
Detail of Past Releases: DATA NOT AVAILABLE.

UNIT 5.002: OUTFALL - This inactive unit (98, p. 4) is an outfall suspected to contain hazardous waste, cadmium, and silver. No photo is available for this unit.

UNIT 5.003-5.004: OLD FIRING SITE AT NORTH CANYON WALL - This inactive unit which was seen during the VSI, operated between 1944 and 1946. The unit was designed to be used as a firing site along an open hillside. The hillside is suspected to have some low level radioactive waste in the form of depleted uranium. Solid wastes from firing events were found at this unit. There are no release controls associated with this unit and the area has recently been reseeded. No releases were observed during the VSI; however, debris from early test firings at the site were said by LANL personnel to have been pushed north to Mortandad Canyon or covered on-site. The area has been assigned priority 2 by LANL (101, p. 2-1). Reference 98, p. 4, indicates the presence of another firing site located at TA-5-2 suspected of containing radioactive waste, high explosives, and depleted uranium. It is inconclusive if this is the firing site at north canyon wall.



A. Old Firing Site at North Canyon Wall in TA-5.



B. Portion of Old Firing Site at North Canyon Wall, TA-5.

TA-6, Two-Mile Mesa Site

This is one of three sites regularly used at Los Alamos National Laboratory for developing special detonators which initiate high explosive systems. Fundamental and applied research in support of this activity includes investigation of phenomena associated with the initiation of high explosives, and research in rapid shock-induced reactions using shock tubes.

An inactive material disposal area, called Area F, is located near TA-6. This area was opened in 1946 for the disposal of unsalvageable classified objects, particularly those which would be too difficult to destroy. It is likely that the objects include metal parts, tuballoy, blocks of high explosive and primacord.

According to the Comprehensive Environmental Assessment and Response Program (CEARP) (June 1986), there may be sites at this technical area where there is a likelihood of potential release(s) of hazardous waste or constituents. Figure 10 is a map of TA-6.

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 6

SWMUs	
6.001-6.002	Two area F material disposal pits
6.003	Waste oil drum storage
6.004-6.005	Two septic tanks and sumps/outfall
6.006	Partially covered tank

AOC	
6.007	Concrete bowl
6.008	Tank
6.009	Septic tank
6.010	Stored capacitors and waste oil drums
6.011-6.014	Four contaminated disposal areas

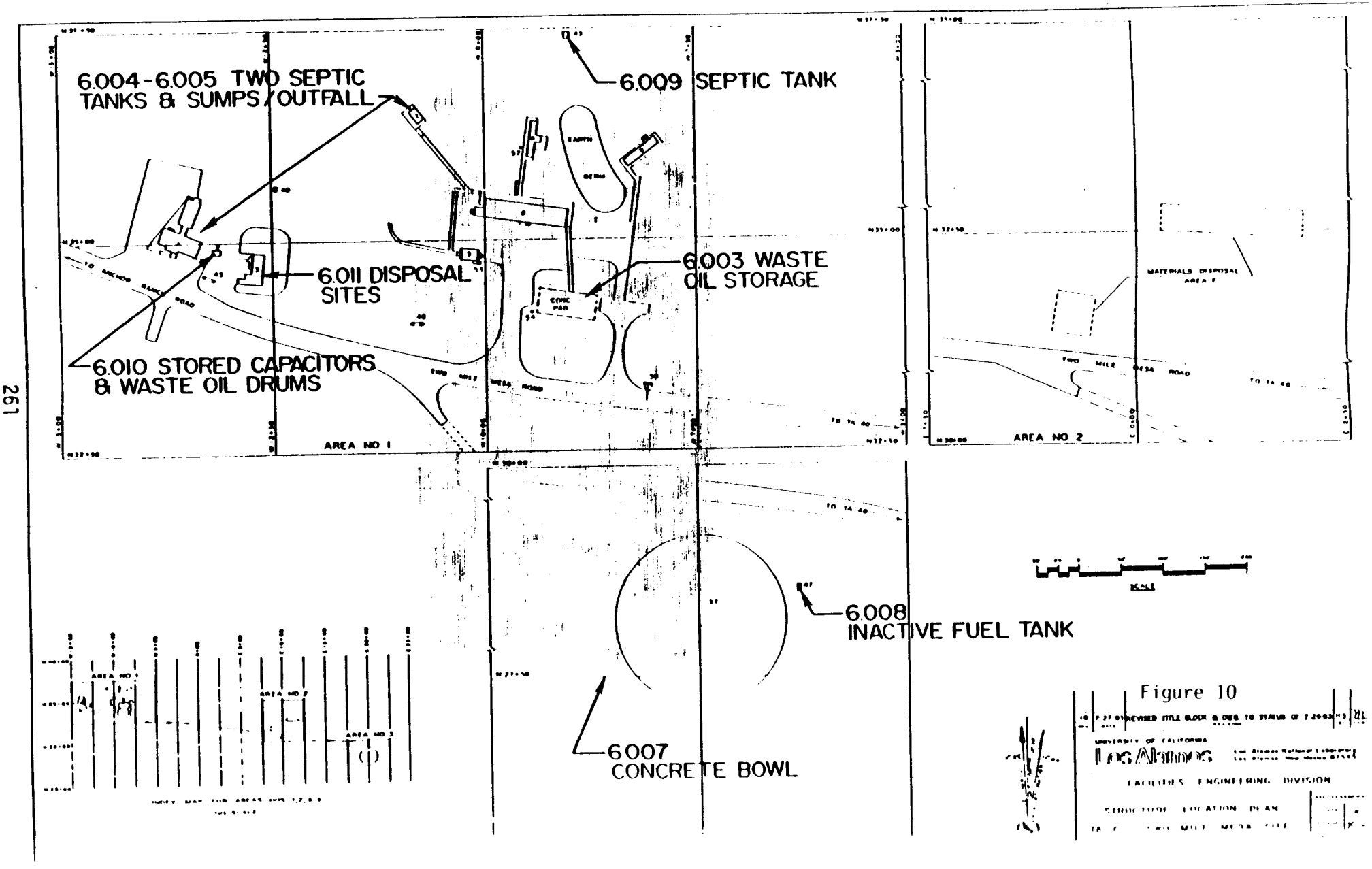

6.004-6.005 TWO SEPTIC TANKS & SUMPS/OUTFALL
6.009 SEPTIC TANK
6.011 DISPOSAL SITES
6.003 WASTE OIL STORAGE
6.010 STORED CAPACITORS & WASTE OIL DRUMS
AREA NO 1
AREA NO 2
MATERIALS DISPOSAL AREA F
TWO MILE MESA ROAD
TO TA 40
6.008 INACTIVE FUEL TANK
6.007 CONCRETE BOWL
SCALE
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN

Figure 10

Unit Number: 6.001-6.002 Unit Name. AREA F MATERIAL DISPOSAL PITS

Location: TA-6 References: VSI LOG BOOK

A. Fenced Area in Left Background Contains Covered Pit No. 1, Used to Dispose of Segregated Wastes. See Additional Photo on Following Page.

B. Fenced Area Contains Covered Pit No. 2
Used for Segregated Waste Disposal.

Unit Number: 6.001-6.002

A. DESCRIPTION

Unit Type: COVERED PITS (FENCED-IN AREA, 1/4 MILE FROM TA-6-6)

Period of Operation: 1944 - 1946

Dimensions/Volume: VOLUME/DIMENSIONS OF PITS ARE NOT KNOWN. UNIT IS FENCED WITHIN A 40'X 60' AREA.

Material of Construction: EXCAVATED HOLES

Underlain by:	Concrete:	Asphalt:	Gravel:
	Grass:	Soil: X	

Environmental:

Indoors:	Close to Surface Water:	In Ground:
Outdoors: X	Close to Drinking Water:	Aboveground:
Covered: X	Residences:	Belowground: X

Purpose of Unit: UNIT COMPRISED OF SEGREGATED WASTE IN SOIL-COVERED PITS.

B. CLOSURE INFORMATION

Active:	Inactive/Physically Present: X
Inactive/Removed or Dismantled:	Closed Under State or EPA:
Regulatory Status:	

Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 6.001-6.002

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases: X	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES MIXED HIGH EXPLOSIVE WASTES AND LOW LEVEL RADIOACTIVE WASTES.

Source of Waste: HIGH EXPLOSIVE WASTES AND LOW LEVEL RADIOACTIVE WASTES.

Disposition of Waste: BURIED

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

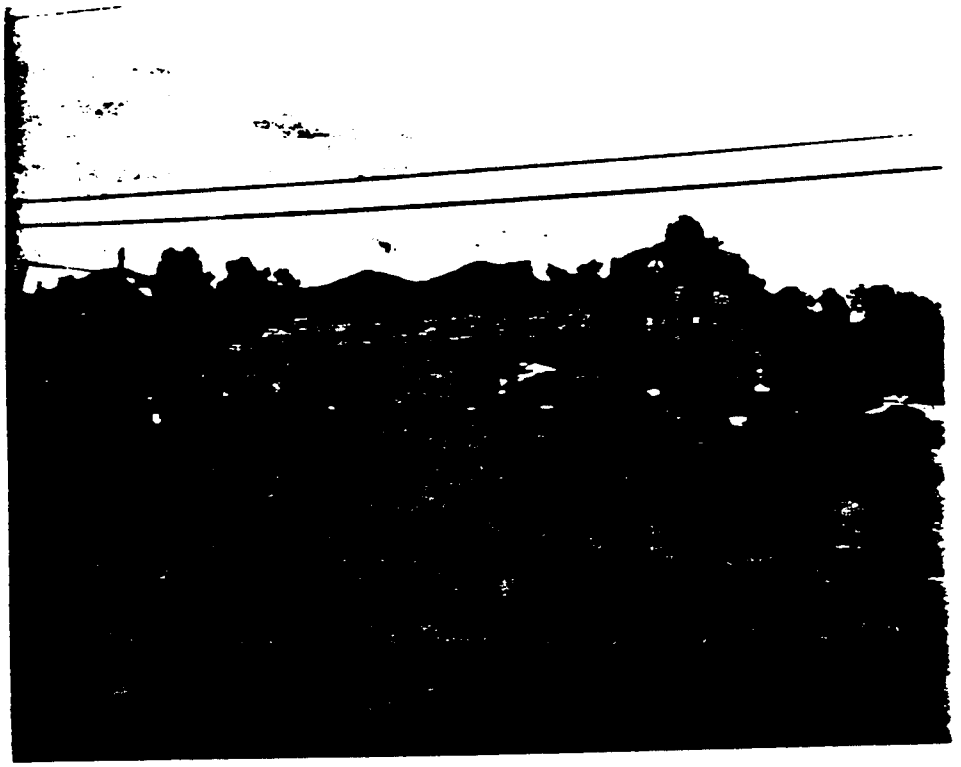
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

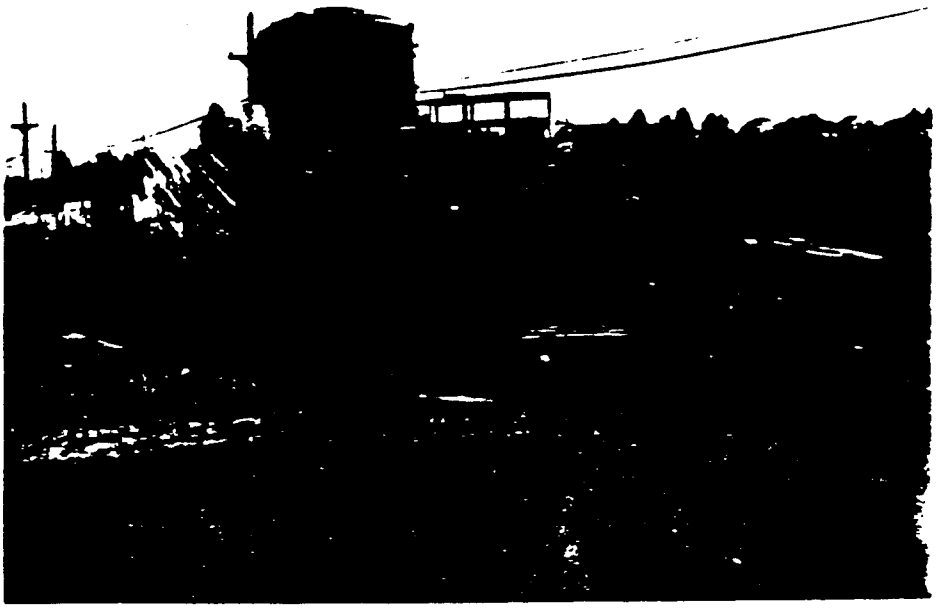
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED. UNINTERPRETED DATA IS AVAILABLE FROM TWO MONITORING WELLS MANAGED WITHIN THE AREA.

Unit Number: 6.003 Unit Name: WASTE OIL DRUM STORAGE

Location: TA-6-6 References: VSI LOG BOOK



A. Waste Oil Drums and Other Materials in the Waste Oil Drum Storage Area.
See Additional Photo on Following Page.



B. Waste Oil Drum Storage Area. Tanks and Drums Contain Waste Capacitor Oil.

Unit Number: 6.003

A. DESCRIPTION

Unit Type: UNIT COMPONENTS: WASTE OIL DRUM STORAGE; CONTAINER STORAGE AND OTHER MATERIALS (OLD DEBRIS); 10 DRUMS LOCATED OUTSIDE OF CONCRETE PAD; RIVERLET AND DRAINAGE AREA ADJACENT; 2 OLD FIRING BLDGS EMPTY (MAYBE) AND ABANDONED IN AREA.

Period of Operation: 4 TO 5 YEARS

Dimensions/Volume: 30'X 60'

Material of Construction: STEEL DRUMS OVER A CONCRETE PAD.

Underlain by: Concrete: X Asphalt: Gravel:
Grass: X Soil: X

Environmental: UNIT IS ADJACENT TO A DRAINAGE CANAL.

Indoors: Close to Surface Water: X In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: WASTE OIL FROM CAPACITORS CONTAINED IN 55 GAL. DRUMS AND CAPACITOR TANKS. UNIT IS ALSO A BONEYARD FOR CONTROLLED NUCLEAR REACTIONS. JIM WHITE, LANL, SAID ALL MATERIAL WITHIN THIS UNIT CONTAINS NO PCB'S.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 3.049

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable: X	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: USED CRANKCASE AND LUBRICATING OIL FROM SMALL ENGINE MOTORS.

Source of Waste: LAWN MOWERS, SMALL ENGINE LUBRICATING OILS.

Disposition of Waste: WASTE OIL IS PERIODICALLY COLLECTED BY PAN AM AND SENT OFF SITE FOR RECYLCLING AND/OR DISPOSAL.

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: SMALL DIKES ARE AROUND THREE OF THE FOUR DRUMS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

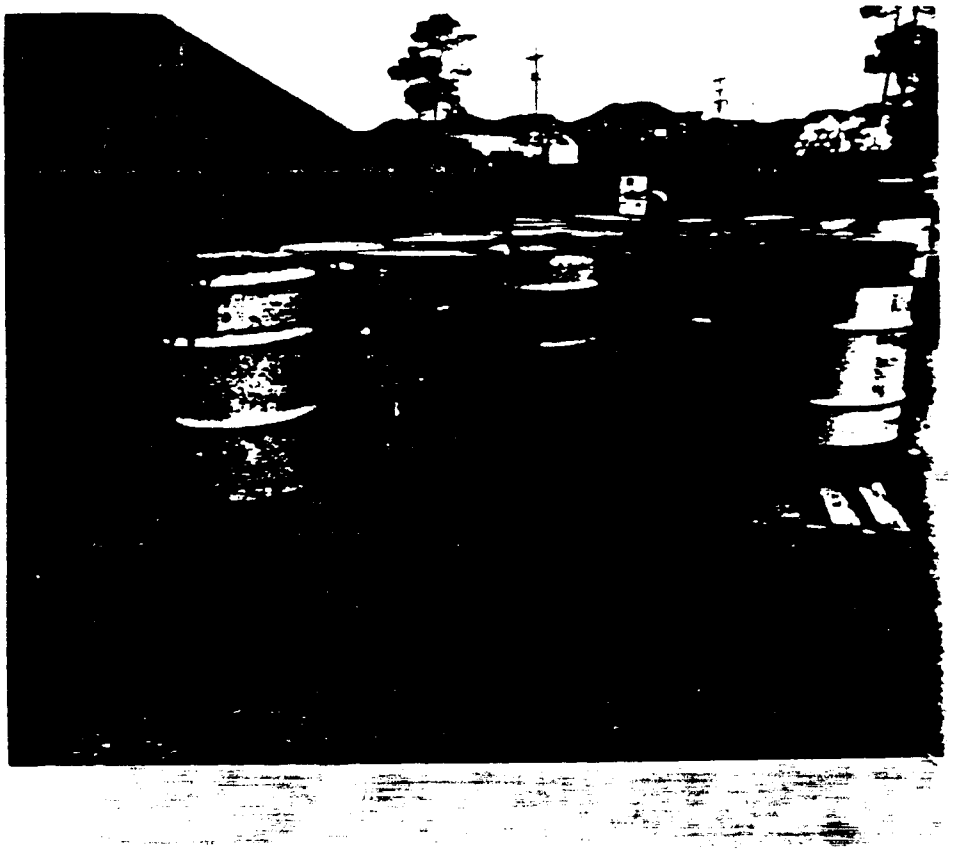
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.050 Unit Name: TEMPORARY DRUM STORAGE #4

Location: TA-3 References: VSI LOG BOOK

A. Drums Stored on Pallets in Corner of Temporary Drum Storage Area. Note Soil Discoloration and Stains on Drums. See Additional Photos on Following Page.

B. Drums Used to Store Waste Sand/Solvent Mixtures in the Temporary Drum Storage Area. Note Oily Sheen on Damp Soil.



C. Sand/Solvent Storage Drums in the Temporary Drum Storage Area. Note Stressed Vegetation in the Area.

D. Drums in Temporary Drum Storage Area.
Note Lack of Release Controls.

Unit Number: 3.050

A. DESCRIPTION

Unit Type: TEMPORARY STORAGE OF 15 TO 20 DRUMS.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: STORAGE AREA IS 20 SQUARE FEET; DRUMS ARE 55 GALLONS EACH.

Material of Construction: STEEL DRUMS OVER CONCRETE PAD WITHOUT DIKING.

Underlain by:	Concrete:	Asphalt:	Gravel:
	Grass:	Soil: X	

Environmental:

Indoors:	Close to Surface Water:	In Ground:
Outdoors: X	Close to Drinking Water:	Aboveground: X
Covered:	Residences:	Belowground:

Purpose of Unit: UNIT IS DESIGNED TO STORE SAND/ ASPHALT MIXTURES.

B. CLOSURE INFORMATION

	Active: X	Inactive/Physically Present:	
Inactive/Removed or Dismantled:		Closed Under State or EPA:	
Regulatory Status:			

Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.050

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS SAND/ ASPHALT MIXTURES WITHIN DRUMS. NO INFORMATI ON ADDITIONAL CHARACTERISTICS/CONSTITUENTS AVAILABLE.

Source of Waste: ASPHALT BATCH PLANT.

Disposition of Waste: DISPOSITION OF WASTE IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: OILY SHEEN WAS OBSERVED ON STANDING WATER ARO UNIT. FLOW OF RAINWATER FROM PAD IS TO NEARBY SLOPED AREA. VEGETATION WAS STRESSED.

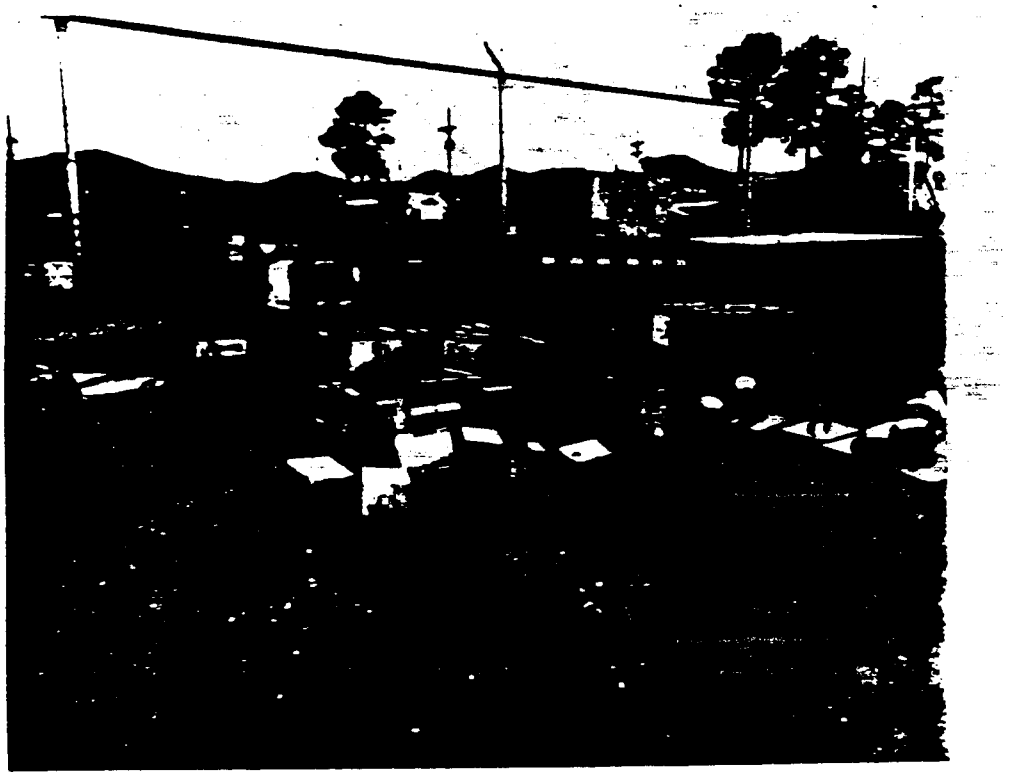
Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 3.051

Unit Name: SPENT BATTERY STORAGE

Location: TA-3

References: VSI LOG BOOK



Batteries and Emergency Lights in Spent Battery Storage Area. Note Some Batteries are Tipped Over and Leaking. See Additional Photos on Following Page

B. Spent Battery Storage Area in TA-3.

Unit Number: 3.051

A. DESCRIPTION

Unit Type: SPENT BATTERY STORAGE AREA.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: APPROXIMATELY 10 SQUARE FEET.

Material of Construction: BATTERIES ARE ON SOIL OR WOODEN PALLETS.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS DESIGNED AS A TEMPORARY STORAGE AREA FOR SPENT BATTERIES PRIOR TO RECYCLING.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.051

C. WASTES MANAGED

Solids: X	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: SPENT BATTERIES CONTAINING LEAD/ACID SOLUTIONS.

Source of Waste: VEHICLES.

Disposition of Waste: WASTE IS REPORTEDLY RECYCLED.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS AREA.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: SOME BATTERIES TIPPED OVER AND CONTENTS WERE OBSERVED TO BE LEAKING FROM THE BATTERIES.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 3.052 Unit Name: KEROSENE WASTE DRUM

Location: TA-3 References: VSI LOG BOOK

Kerosene Waste Storage Drum in Southeast Corner of Parking Lot Behind Pesticide Storage Area. See Additional Photos on Following Page.

B. Kerosene Waste Storage Drum in Southeast Corner of Parking Lot Behind Pesticide Shed.

Unit Number: 3.052

A. DESCRIPTION

Unit Type: STEEL DRUM LABELLED "KEROSENE WASTE" LOCATED AT THE SOUTHEAST CORNER OF PARKING LOT BEHIND PESTICIDE SHED.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: ONE 55 GALLON DRUM.

Material of Construction: STEEL DRUM OVER SOIL.

Underlain by: Concrete: Asphalt: Gravel: X
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS USED FOR STORAGE OF KEROSENE WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.052

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable: X	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: KEROSENE.

Source of Waste: SOURCE OF WASTE IS UNKNOWN.

Disposition of Waste: DISPOSITION OF WASTE IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: DRUM IS LOCATED WITHIN AN UNPAVED PARKING LOT WITH RUN-OFF CONTROL.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.053 Unit Name: MOTORPOOL FLOOR DRAINS

Location: TA-3-382 References: VSI LOG BOOK

Floor Drains Along Wall of Motorpool Building 382 in TA-3.

Unit Number: 3.053

A. DESCRIPTION

Unit Type: FLOOR DRAIN.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: APPROXIMATELY 30 FEET LONG BY 3 FEET WIDE.

Material of Construction: PROBABLY CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: X Close to Surface Water: In Ground: X
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO COLLECT SPILLED OIL AND CHEMICALS FRO' T-. MOTORPOOL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.053

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THIS UNIT MANAGES OIL AND CHEMICALS.

Source of Waste: BUILDING 382.

Disposition of Waste: DISPOSITION OF WASTE IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.054-3.057 Unit Name: FOUR OIL/WATER SEPARATORS

Location: TA-3-38S References: VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 3.054-3.057

A. DESCRIPTION

Unit Type: FOUR OIL/WATER SEPARATORS IN THE MOTORPOOL.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: DATA NOT AVAILABLE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT IS DESIGNED TO COLLECT SPILLED OIL AND CHEMICALS FROM MOTORPOOL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA IS AVAILABLE AT THIS TIME.

Unit Number: 3.054-3.057

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SPILLED OIL AND CHEMICALS.

Source of Waste: BUILDING 382.

Disposition of Waste: DISPOSITION OF WASTE IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.058

Unit Name: OIL/WATER SEPARATOR WITH DRAIN

Location: TA-3

References: VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 3.058

A. DESCRIPTION

Unit Type: OIL/WATER SEPARATOR WITH DRAIN IN THE MOTORPOOL.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: CONCRETE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT DESIGNED FOR SEPARATING OIL/WATER FROM ANY SPILLS AT T-. MOTORPOOL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.058

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT COLLECTS OIL EMULSIONS.

Source of Waste: UNIT COLLECTS WASTE FROM FLOOR DRAINS IN BLDG. 382.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

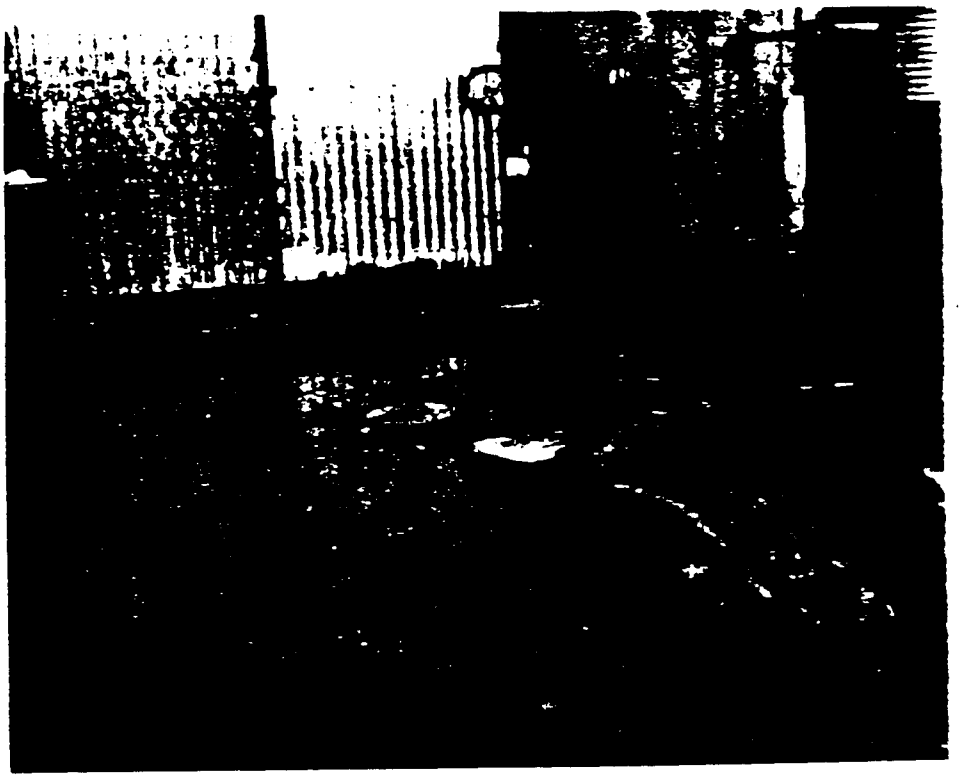
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.059

Unit Name: UNDERGROUND STORAGE TANK #1

Location: TA-3-382

References: VSI LOG BOOK



Access to Underground Oil Storage Tank Outside Building 382.

Unit Number: 3.059

A. DESCRIPTION

Unit Type: UNDERGROUND STORAGE TANK, OUTSIDE BUILDING 382.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 20,000 GALLON TANK.

Material of Construction: DATA NOT AVAILABLE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground: X

Purpose of Unit: UNIT IS REPORTEDLY DESIGNED FOR THE STORAGE OF USED OIL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.059

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES USED OIL.

Source of Waste: MOTORPOOL.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI; HOWEVER, BECAUSE THE UNIT IS BELOWGROUND, THE CONDITION OF THE UNIT COULD NOT BE DETERMINED.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.060

Unit Name: LESS THAN 90 DAY MISCELLANEOUS STORAGE

Location: TA-3

References: VSI LOG BOOK

Typical Drum in the Less Than 90 Day Drum Storage Area.

Unit Number: 3.060

A. DESCRIPTION

Unit Type: DRUM STORAGE.

Period of Operation: DATA IS UNAVAILABLE.

Dimensions/Volume: ONE 55 GALLON DRUM, IN A 20 SQUARE FOOT AREA.

Material of Construction: STEEL DRUMS ON A CONCRETE PAD.

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: MISCELLANEOUS STORAGE - SPENT HYDRAULIC FLUID - <90 DAYS

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.060

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT STORES SPENT HYDRAULIC FLUID.

Source of Waste: SOURCE OF WASTE IS THE MOTORPOOL.

Disposition of Waste: WASTE GOES TO THE SALVAGE YARD.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: CONCRETE PAD WITH NO DIKING.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.061 Unit Name: LAWN MOWER STORAGE AREA

Location: TA-3 References: VSI LOG BOOK

A. Two Drums in the Lawn Mower Storage Area.

Unit Number: 3.036

A. DESCRIPTION

Unit Type: SATELLITE DRUM AND TANK STORAGE, SIGMA BUILDING, OUTSIDE RM P-10[illegible].

Period of Operation: DATA UNAVAILABLE.

Dimensions/Volume: 2 - 250 GAL. POLY-PLASTIC TANKS FOR ACID AND CAUSTIC WASTES. SEVERAL OTHER 55 GAL. DRUMS.

Material of Construction: PLASTIC TANKS AND STEEL DRUMS OVER AN ASPHALT PAD.

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT USED FOR 3 DAY STORAGE OF WASTES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.036

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS WASTE LIQUIDS FROM ELECTROPLATING PROCESSES. LI[illegible] CONTAIN LEAD, ZINC, NICKEL, CYANIDE, ACIDS.

Source of Waste: ELECTROPLATING PROCESSES

Disposition of Waste: WASTE IS TRANSFERRED TO TA-50 OR TA-54.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE NOTED DURING VSI, BUT ALL DRUMS AND TANKS [illegible] CLOSED. THE TWO LARGE 250 GAL. TANKS WERE ENCLOSED IN A METAL CASE.

E. RELEASE HISTORY

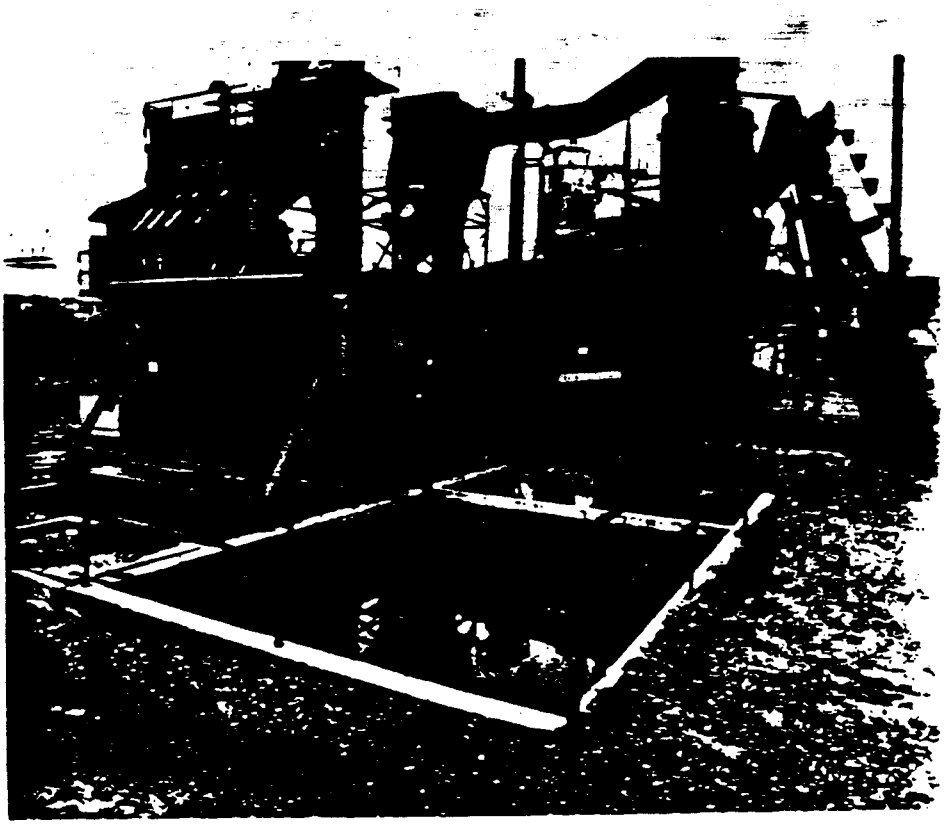
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.037 Unit Name: ASPHALT BATCH PLANT-CONCRETE BASIN

Location: TA-3 References: VSI LOG BOOK; 98, P. 3



Concrete Water Retention Basin at the Asphalt Batch Plant. Note Discolored Soil in Foreground.

Unit Number: 3.037

A. DESCRIPTION

Unit Type: WATER RETENTION BASIN (CONCRETE).

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 12' X 25', DEPTH UNKNOWN

Material of Construction: CONCRETE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS USED TO COLLECT DUST FROM THE BLENDING OF SAND AND ASPHALT.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.037

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT COLLECTS DUST FROM ASPHALT / SAND BLENDING.

Source of Waste: ASPHALT BATCH PLANT.

Disposition of Waste: RECYLCLED BACK TO ASPHALT BATCH PLANT.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: SOME STAINING OF SOIL AROUND UNIT WAS NOTED DURING THE VSI.

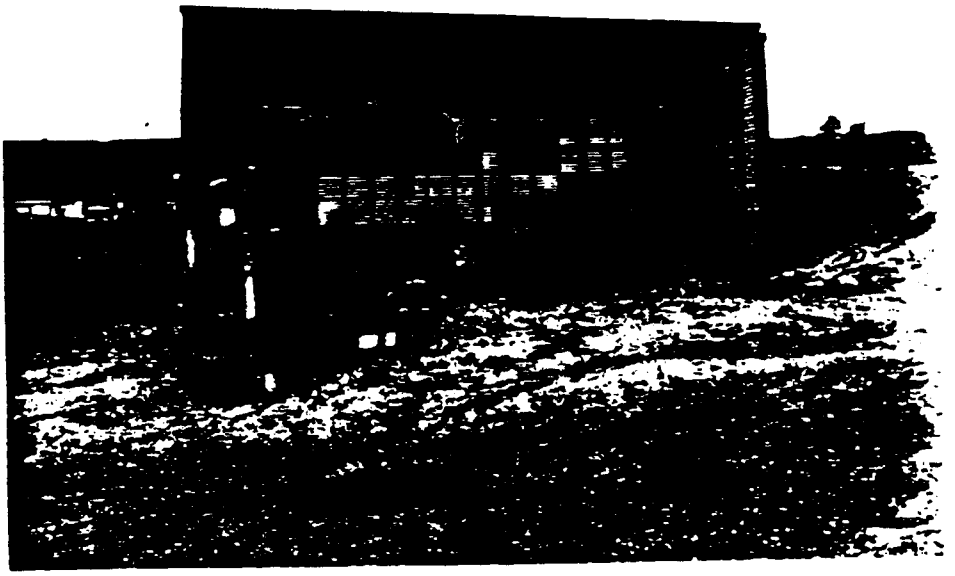
Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 3.038

Unit Name: SAND BLAST SHED - DRUM STORAGE

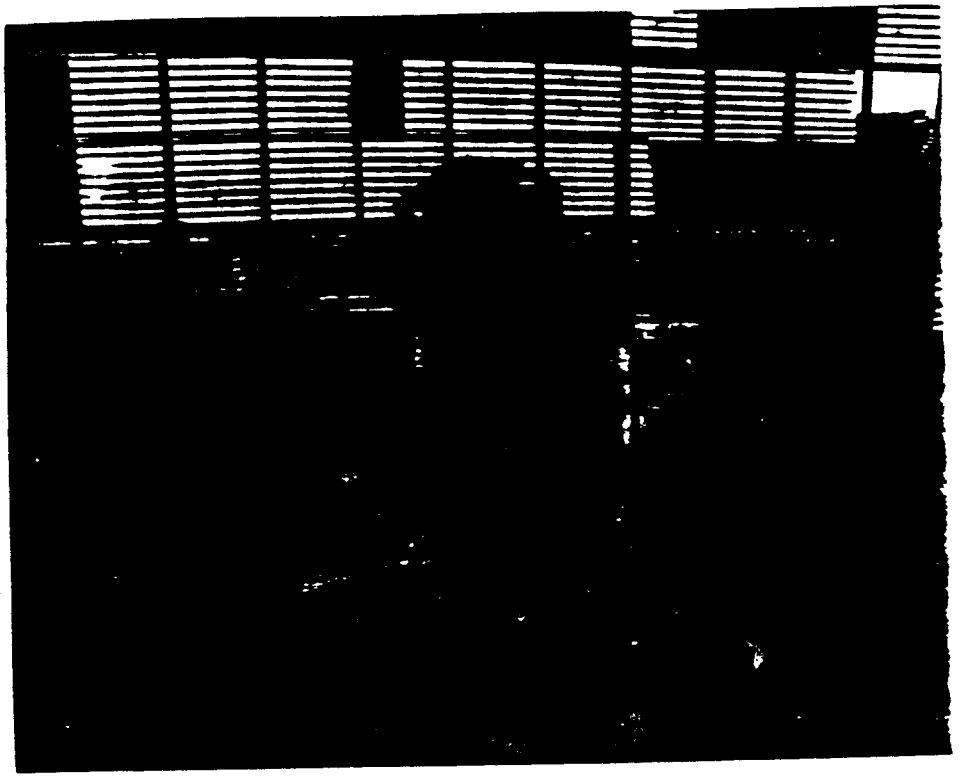
Location: TA-3

References: VSI LOG BOOK



A. Front View of the Sand Blast Shed. See Additional Photos on Following Page.

B. Drums Used For Waste Solvent Storage in the Sand Blast Shed at the Asphalt Batch Plant. Note that Soil Appears Damp and Drums are Stained.



C. Typical Drums Used for Solvent Storage at the Asphalt Batch Plant Sand Blast Shed. Note Liquid Stains on Drums and Damp Soil Surrounding the Drums.

Unit Number: 3.038

A. DESCRIPTION

Unit Type: STORAGE OF STEEL DRUMS AT SAND BLAST SHED.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: SAND BLAST SHED IS 40' X 30'; HEIGHT IS UNKNOWN. THREE 55 GALLON DRUMS WERE OBSERVED DURING THE VSI.

Material of Construction: THE SHED IS A 3-WALLED ENCLOSURE OF CORRUGATED FIBER-GLASS, AND THE DRUMS ARE MADE OF STEEL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: X Residences: Belowground:

Purpose of Unit: UNIT IS USED TO SAND-BLAST EQUIPMENT BUT ALSO CONTAINS DRUMS MARKED AS SOLVENT WASTE. LENGTH OF DRUM STORAGE IS UNKNOWN.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.038

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT IS USED FOR SAND BLASTING BUT HAS DRUMS LABELED AS SOLVENT WASTE.

Source of Waste: SOURCE OF WASTE IS UNKNOWN.

Disposition of Waste: WASTE SOLVENTS ARE REPORTEDLY COLLECTED AND INCINERATED TA-54. CONTAMINATED SAND IS REUSED IN SAND BLASTING OPERATIONS.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: THE UNIT HAS A ROOF AND 3 SIDES.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: SAND AROUND DRUMS APPEARED DAMP. THERE ARE STAINS ON THE OUTSIDE OF THE DRUMS.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 3.039

Unit Name: CHLORINE DOSING CHAMBER

Location: TA-3-166

References: VSI LOG BOOK; 86, P. 5

No Photo is Available for This Unit.

Unit Number: 3.039

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - CHLORINE DOSING CHAMBER.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS USED FOR THE CHLORINATION (DISINFECTION) OF EFFLUENT

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.039

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SANITARY SEWAGE AND INDUSTRIAL WASTE CONSTITUENTS.

Source of Waste: SECONDARY CLARIFIERS (UNIT NOS. 3.029 AND 3.043)

Disposition of Waste: CHLORINE CONTACT CHAMBER (UNIT NO. 3.040)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: ADDITIONAL DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

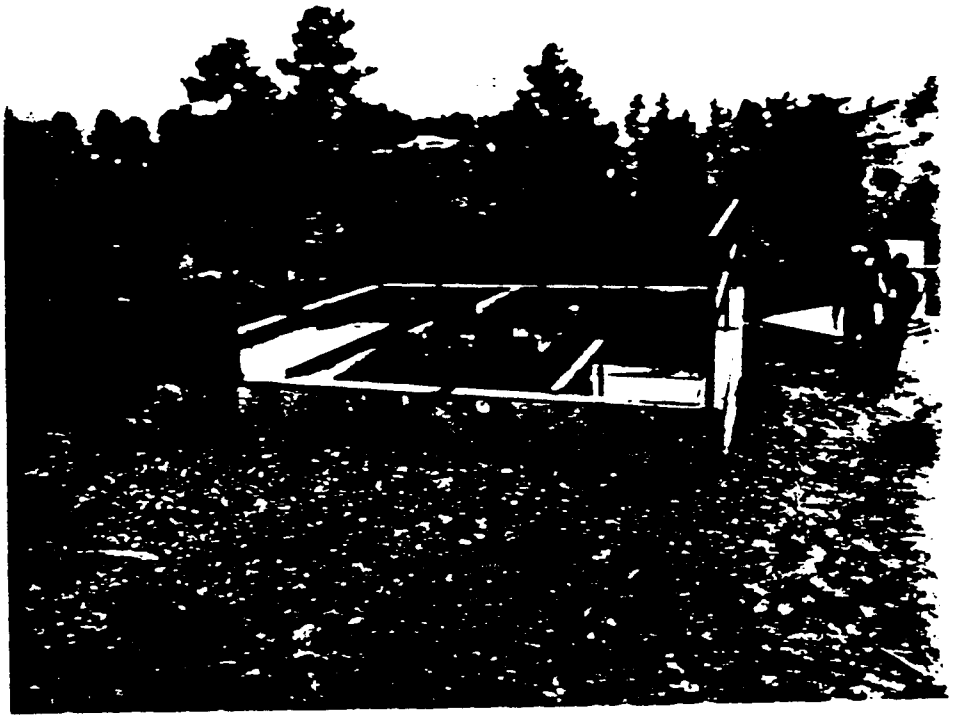
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.040

Unit Name: CHLORINE CONTACT CHAMBER

Location: TA-3

References: VSI LOG BOOK; 86, P. 5



Chlorine Contact Chamber at the Waste Water Treatment Plant in TA-3. Note Heavy Sudsing of Water in Far Left Section of Chamber.

Unit Number: 3.040

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - CHLORINE CONTACT CHAMBER, BELOW CHLORINE DOSING CHAMBER.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 15 FEET WIDE BY 15 FEET LONG AND 6 FEET DEEP.

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS DESIGNED TO ASSURE THAT CHLORINE CONTACTS WASTEWATER FOR A SUFFICIENT PERIOD OF TIME.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.040

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES BIOLOGICALLY TREATED EFFLUENT.

Source of Waste: CHLORINE DOSING CHAMBER (UNIT NO. 3.039).

Disposition of Waste: FLOW WEIR (UNIT NO. 3.041).

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: ADDITIONAL DATA NOT AVAILABLE.

E. RELEASE HISTORY

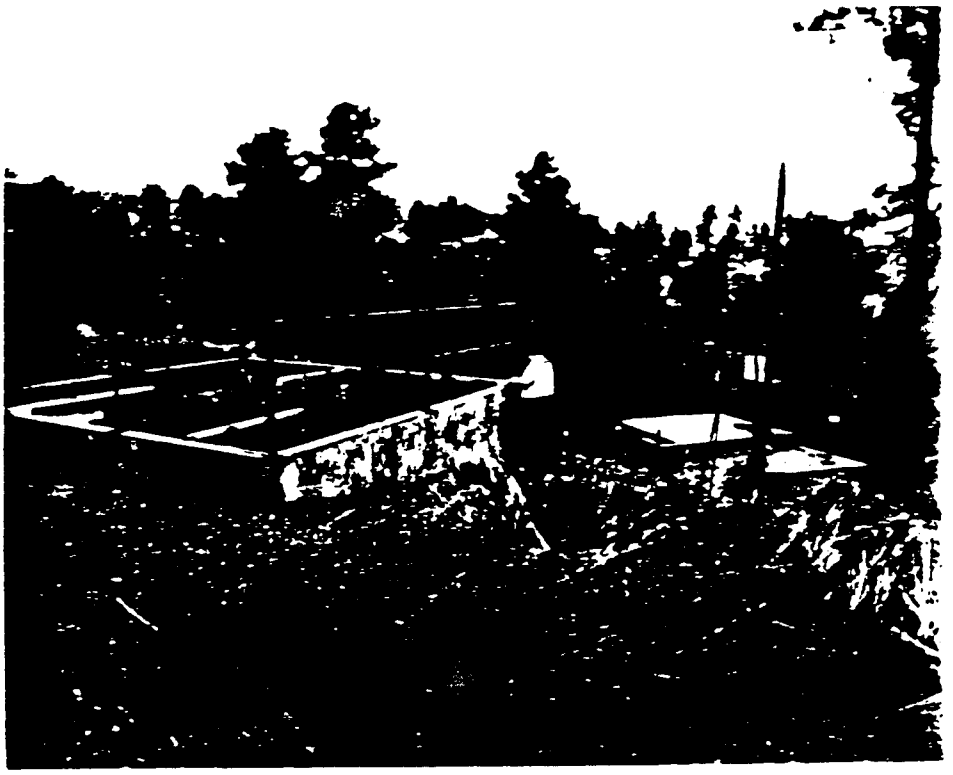
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: HEAVY SUDSING WAS NOTED DURING VSI, THOUGH NO OVERTOPPING WAS OBSERVED.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.041 Unit Name: FLOW WEIR

Location: TA-3 References: VSI LOG BOOK; 86, P. 5



View of Chlorine Contact Chamber Including Flow Weirs. Note Heavy Sudsing of water.

Unit Number: 3.041

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - FLOW WEIR.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: APPROXIMATELY 225 SQUARE FEET WITH A DEPTH OF 8 FEET.

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: X In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT REGULATES FLOW FROM CHLORINE CONTACT CHAMBER.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: PART OF TREATMENT PROCESS THAT DISCHARGES THROUGH A NPDES OUTFALL.

Unit Number: 3.041

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES TREATED EFFLUENT.

Source of Waste: CHLORINE CONTACT CHAMBER (UNIT NO. 3.040)

Disposition of Waste: OUTFALL (NPDES).

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: EFFLUENT FLOWS BY GRAVITY TO A NPDES OUTFALL.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.: X	VSI Noted Release to S.W.: X
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: HEAVY SUDSING WITHIN UNIT WAS NOTED, THOUGH NO OVERTOPPING WAS OBSERVED. UNIT DISCHARGES TO SURFACE WATER THROUGH NPDES OUTFALL.

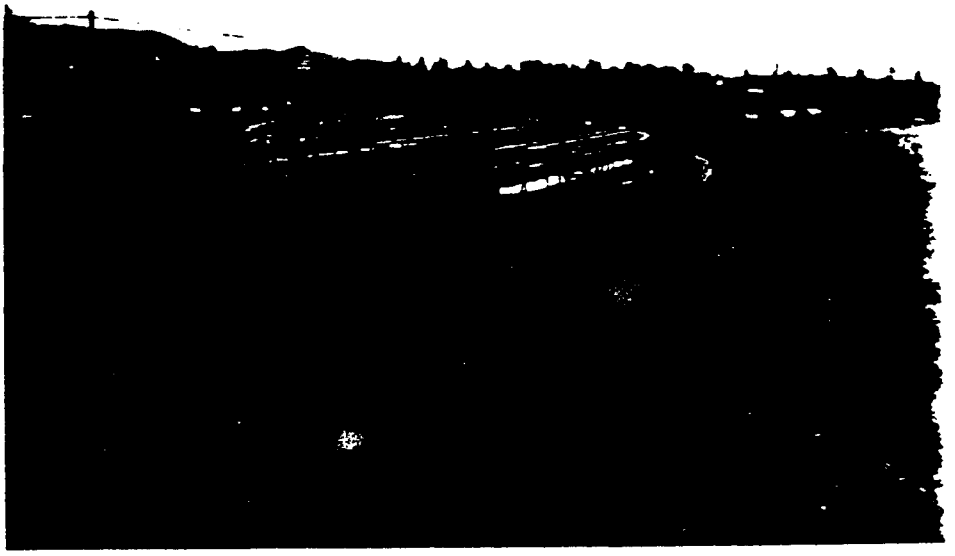
Detail of Past Releases: UNIT DISCHARGES TO SURFACE WATER THROUGH NPDES OUTFALL

Unit Number: 3.042

Unit Name: IMHOFF TANK #2

Location: TA-3-192

References: VSI LOG BOOK; 86, P. 5



Imhoff Tank Used for Biological Degradation of Organics in Wastewater Treatment Process.

Unit Number: 3.042

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - IMHOFF TANK

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 30 FOOT RADIUS BY 12 FEET DEEP.

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT USED FOR THE BIOLOGICAL TREATMENT OF WASTERWATER.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: PART OF TREATMENT PROCESS THAT DISCHARGES THROUGH A NPDES OUTFALL.

Unit Number: 3.042

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SANITARY SEWAGE AND INDUSTRIAL WASTE CONSTITUENTS.

Source of Waste: BAR SCREEN AND COMMINUTOR (UNIT NO. 3.033)

Disposition of Waste: EFFLUENT FLOWS VIA GRAVITY TO DOSING SIPHON #2 (UNIT NO. 3.043)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: ADDITIONAL DATA NOT AVAILABLE AT THIS TIME.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.043

Unit Name: DOSING SIPHON #2

Location: TA-3-193

References: VSI LOG BOOK; 86, P. 5

No Photo is Available for This Unit.

Unit Number: 3.043

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - DOSING SIPHON

Period of Operation: DATA IS NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT REGULATES FLOW INTO TRICKLING FILTERS.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: PART OF TREATMENT PROCESS THAT DISCHARGES THROUGH A NPDES OUTFALL.

Unit Number: 3.043

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SANITARY SEWAGE AND INDUSTRIAL WASTE CONSTITUENTS.

Source of Waste: IMHOFF TANKS (UNIT NO. 3.042)

Disposition of Waste: TRICKLING FILTERS (UNIT NO. 3.045)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: EFFLUENT FLOWS VIA GRAVITY TO THE TRICKLING FILTER.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.044

Unit Name: SECONDARY CLARIFIERS #2

Location: TA-3-193

References: VSI LOG BOOK; 86, P. 5

No Photo is Available for This Unit.

Unit Number: 3.044

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - SECONDARY CLARIFIERS.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: CONCRETE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT INVOLVED IN THE SETTLING AND POLISHING OF WASTEWATER.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: PART OF TREATMENT PROCESS THAT DISCHARGES THROUGH A NPDES OUTFALL.

Unit Number: 3.044

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SANITARY SEWAGE AND INDUSTRIAL WASTE CONSTITUENTS.

Source of Waste: TRICKLING FILTERS (UNIT NO. 3.045)

Disposition of Waste: CHLORINE DOSING CHAMBER (UNIT NO. 3.039)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: EFFLUENT FLOWS VIA GRAVITY TO CHLORINE DOSING CHAMBER.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.045

Unit Name: TRICKLING FILTER #2

Location: TA-3-194

References: VSI LOG BOOK; 86, P. 5

Same Photo and Description as Unit Number 3.030.

Unit Number: 3.045

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - TRICKLING FILTER.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: UNIT HAS A 30 FOOT RADIUS AND IS APPROXIMATELY 10 FEET DEE

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS INVOLVED WITH THE BIOLOGICAL TREATMENT OF WASTEWATER.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: PART OF TREATMENT PROCESS THAT DISCHARGES THROUGH A NPDES OUTFALL.

Unit Number: 3.045

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SANITARY SEWAGE AND INDUSTRIAL WASTE CONSTITUENTS.

Source of Waste: DOSING SIPHON (UNIT NO. 3.043)

Disposition of Waste: SECONDARY CLARIFIERS (UNIT NO. 3.044)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: EFFLUENT FLOWS VIA GRAVITY TO SECONDARY CLARIFIERS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.046

Unit Name: SLUDGE DRYING BEDS #1

Location: TA-3-196

References: VSI LOG BOOK; 86, P. 5

Sludge Drying Beds for the Wastewater Treatment Plant in TA-3.

Unit Number: 3.046

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - SLUDGE DRYING BEDS.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 35 FEET LONG BY 10 FEET WIDE.

Material of Construction: SAND BED ON SOIL - NO LEACHATE COLLECTION.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS INVOLVED WITH SLUDGE STABILIZATION AND DEWATERING.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.046

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES SLUDGES FROM WASTEWATER TREATMENT PLANT.

Source of Waste: IMHOFF TANKS AND SECONDARY CLARIFIERS (UNIT NOS. 3.029, 3.032, 3.042, AND 3.044)

Disposition of Waste: WASTE IS DISPOSED OF AT TA-54.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: LEACHATE IS ALLOWED TO INFILTRATE INTO THE UNDERLYING SOIL.

Detail of Past Releases: UNIT IS DESIGNED TO LEACH DIRECTLY INTO SOIL.

Unit Number: 3.047 Unit Name SLUDGE DRYING BEDS #2

Location: TA-3-197 References: VSI LOG BOOK; 86, P. 5

Three Sludge Drying Beds for the Wastewater Treatment Plant in TA-3.

Unit Number: 3.047

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - SLUDGE DRYING BEDS.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 3 BEDS; EACH 40 FEET LONG BY 20 FEET WIDE.

Material of Construction: SAND BED ON SOIL - NO LEACHATE COLLECTION.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS DESIGNED FOR SLUDGE STABILIZATION AND DEWATERING.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA IS AVAILABLE AT THIS TIME.

Unit Number: 3.047

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES SLUDGES FROM WASTEWATER TREATMENT PLANT.

Source of Waste: IMHOFF TANKS AND SECONDARY CLARIFIERS (UNIT NOS. 3.029, 3.03[illegible], 3.041, AND 3.045.

Disposition of Waste: WASTE IS DISPOSED OF AT TA-54.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: LEACHATE IS ALLOWED TO INFILTRATE INTO THE UNDERLYING SOIL.

Detail of Past Releases: UNIT IS DESIGNED TO LEACH DIRECTLY INTO SOIL.

Unit Number: 3.048 Unit Name: TEMPORARY WASTE OIL STORAGE #2

Location: TA-3-223 References: VSI LOG BOOK

Drums in the Temporary Waste Oil Storage Area. Note Lack of Release Controls for this Unit.

Unit Number: 3.048

A. DESCRIPTION

Unit Type: LINE SHOP - USED OIL COLLECTION; TEMPORARY STORAGE IN 55 GAL. STEEL DRUMS (APPROXIMATELY 7 DRUMS).

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 55 GALLON DRUMS.

Material of Construction: STEEL DRUMS OVER SOIL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO SERVE AS A SATELLITE OIL COLLECTION AREA.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.048

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable: X	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES OIL. NO INFORMATION ON ADDITIONAL CHARACTERISTICS CONSTITUENTS AVAILABLE.

Source of Waste: LINE SHOP.

Disposition of Waste: POSSIBLY TO SALVAGE YARD.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

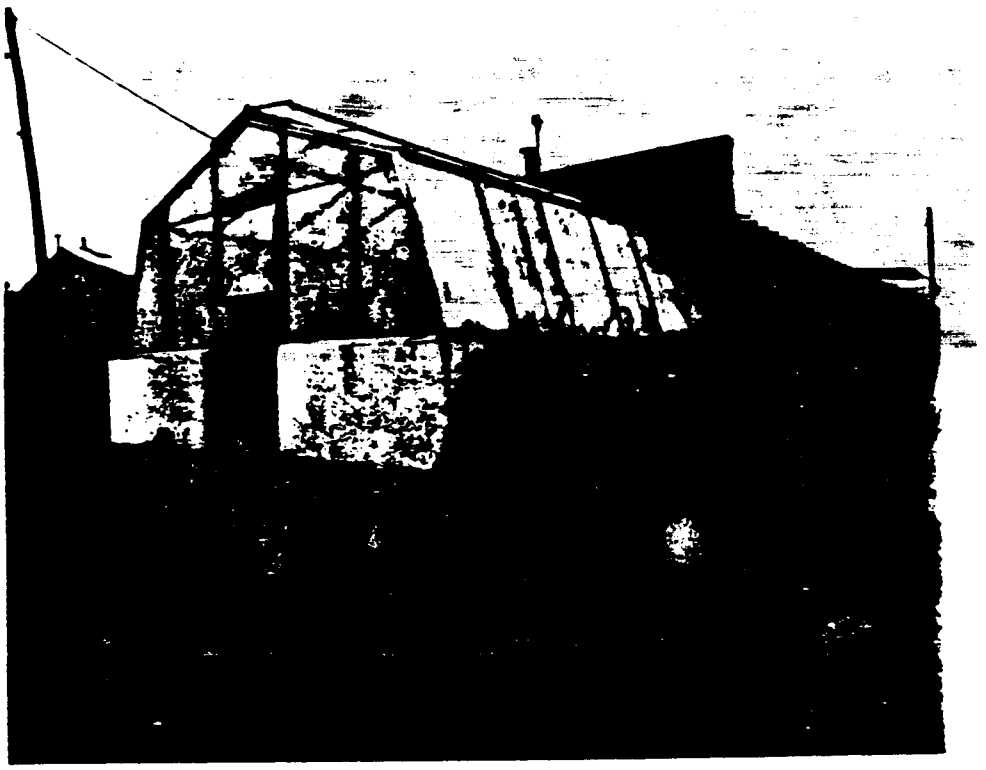
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.: X
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: SOIL STAINS WITH SURFACE DRAINAGE PATH TO NEAR CANYON WERE NOTED DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 3.049 Unit Name: SMALL ENGINE OIL DRUMS

Location: TA-3 References: VSI LOG BOOK



Oil Storage Drums in the Small Engine Oil Collection Area.

Unit Number: 3.049

A. DESCRIPTION

Unit Type: SMALL ENGINE OIL COLLECTION AREA COMPRISED OF 55 GAL. STEEL DRUMS.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DRUMS ARE 55 GALLONS EACH; CONCRETE PAD IS 3' X 12', THERE ARE APPROXIMATELY 5 TO 10 DRUMS IN THE AREA.

Material of Construction: STEEL DRUMS ON A CONCRETE PAD.

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

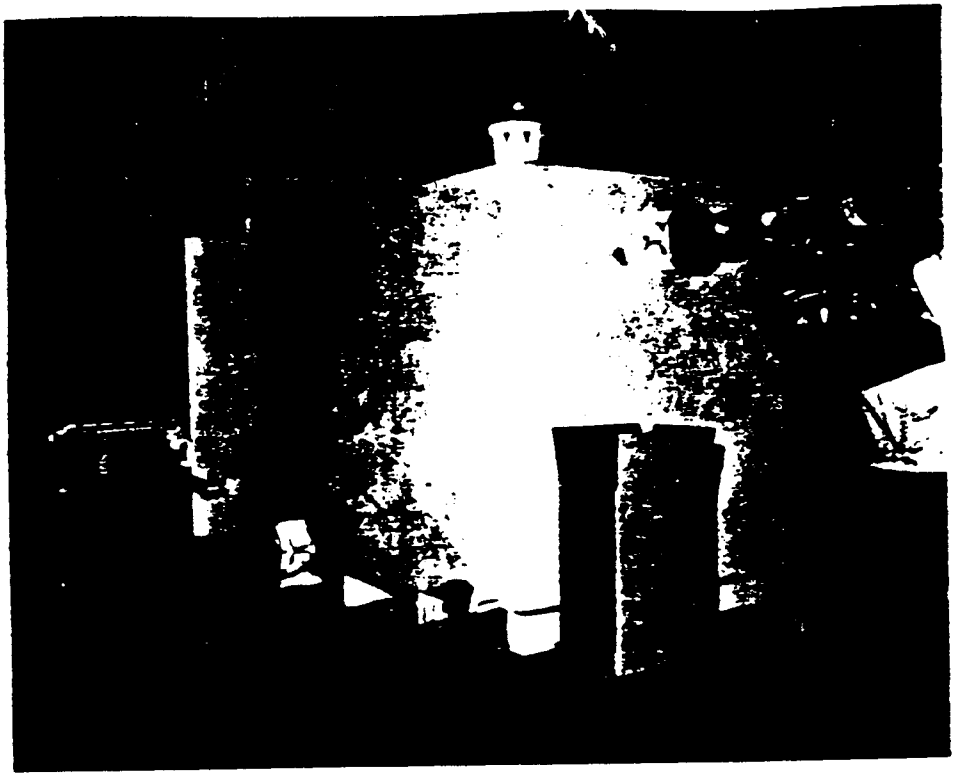
Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: STORAGE OF USED OIL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.



B. Pump Tank No. 1 : Same as Preceding Photo.

Unit Number: 3.023-3.024

A. DESCRIPTION

Unit Type: TWO PUMP TANKS, LOCATED IN THE BASEMENT OF WING NO.4 USED FOR RADIO-ACTIVE WASTE TO TA-58.

Period of Operation: 1982 TO PRESENT

Dimensions/Volume: 700 GAL.

Material of Construction: FIBERGLASS

Underlain by: Concrete: X Aspnalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED AS A HOLDING TANK AND TEMPORARY STORAGE TANK F. PUMPING.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.023-3.024

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE LIQUID WASTE.

Source of Waste: WING NO.4

Disposition of Waste: WASTE IS PIPED THROUGH SEWAGE LINES TO TA-50.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps: X	Ind. Sewer: X
Level Controls: X	Overflow Controls: X	Leak Detection: X	

Details: UNIT CONTAINS AN ALARM SYSTEM. FLOOR DRAINS GO TO FIBERGLASS TANKS CONTAINED IN SUMP AND THEN BACK TO PUMP TANKS. SUMP TANKS OF 200-300 GAL. CAPACITY ARE LOCATED BELOW GROUND IN WINGS 4 AND 5 ONLY.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.025

Unit Name: TEMPORARY WASTE OIL STORAGE #1

Location: TA-3-29

References: VSI LOG BOOK; 12, P. 3-2; 13, P. 3-2

Temporary Drum Storage Area for Waste Oils Generated Within Building 29. Note Oily Stains on Concrete and Solico Absorbent on Floor Beneath Left Black Drum.

Unit Number: 3.025

A. DESCRIPTION

Unit Type: TEMPORARY WASTE OIL STORAGE AREA THAT IS LOCATED IN THE BASEMENT WING NO.2.

Period of Operation: 1951 TO PRESENT

Dimensions/Volume: THERE ARE 5 TO 6 - 55 GALLON DRUMS IN THIS 20 SQUARE FOOT AREA

Material of Construction: 55 GAL. STEEL DRUMS

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS USED FOR THE TEMPORARY STORAGE OF WASTE OILS GENERATED WITHIN THE BUILDING. ASSORTED 1 GAL. AND MISCELLANEOUS CANS OF WASTE WERE ALSO NOTED. UNIT IS SCHEDULED FOR TESTING OF HAZARDOUS CONSTITUENTS.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.025

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS WASTE OILS. OIL IS REPORTEDLY CHECKED FOR THE ABSENCE OF PCB's.

Source of Waste: WASTE OILS GENERATED FROM VACUUM PUMPS AND TRANSFORMERS.

Disposition of Waste: DRUMS ARE REMOVED TO TA-54.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: IT WAS NOTED THAT SOME OF THE DRUMS WERE SITUATED ON A WOODEN PALLET. ALL THE DRUMS WERE CLOSED.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: ABSORBANT WAS OBSERVED AT THE BASE OF ONE DRUM DURING THE VSI. HOWEVER, THE UNIT IS LOCATED INDOORS AND NO EVIDENCE OF RELEASE TO THE ENVIRONMENT WAS NOTED.

Detail of Past Releases: NO PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 3.026

Unit Name: TEMPORARY DRUM STORAGE #1

Location: TA-3-29

References: VSI LOG BOOK; 12, P. 3-2; 13, P. 3-2

Temporary Waste Storage Drums Along Hallway of Wing No. 2, Building 29.

Unit Number: 3.026

A. DESCRIPTION

Unit Type: UNIT COMPRISED OF TEMPORARY STORAGE DRUMS SITUATED IN HALLWAY ALONG THE WALLS OF THE BASEMENT IN WING NO. 2 OUTSIDE ROOM 4041.

Period of Operation: 1951 TO PRESENT

Dimensions/Volume: 18 - 55 GAL. DRUMS

Material of Construction: 55 GAL. STEEL DRUMS OVER A CONCRETE PAD

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: DRUMS ARE FILLED WITH MATERIAL UNTIL CAPACITY IS REACHED. WHEN CAPACITY IS REACHED, THE DRUMS ARE REMOVED AND DISPOSED OF (30-45 DAYS).

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.026

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable: X	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE.

Source of Waste: CONTAMINATED PAPER AND GLASS FROM LABORATORY.

Disposition of Waste: WASTES ARE SCHEDULED TO GO TO TA-54 (AREA G) ONCE CAPACI IS REACHED.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:
Level Controls:	Overflow Controls:	Leak Detection:

Ind. Sewer: X

Details: ALL DRUMS WERE COVERED AND LOCKED.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.027

Unit Name: TEMPORARY DRUM STORAGE #2

Location: TA-3-29

References: VSI LOG BOOK; 12, P. 3-2; 13, P. 3-2

Typical Drums in Temporary Waste Storage Area, Room 2005, Building 29.

Unit Number: 3.027

A. DESCRIPTION

Unit Type: UNIT IS COMPRISED OF 13 CLOSED DRUMS TO BE USED FOR THE TEMPORARY STORAGE OF WASTE. DRUMS ARE LOCATED IN RM. 2005 ADJACENT TO THE EXTENSION OF THE HALLWAY STORAGE AREA WITHIN THE SAME WING BASEMENT.

Period of Operation: 1951 TO PRESENT

Dimensions/Volume: 13 - 55 GAL. DRUMS - ADJACENT IN RM 2005.

Material of Construction: 55 GAL. DRUM OVER A CONCRETE PAD

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: WASTES ARE STORED IN DRUMS UNTIL CAPACITY IS REACHED. AFTER CAPACITY IS REACHED, THE WASTE IS REMOVED AND DISPOSED (30-45 DAYS).

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.027

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable: X	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE.

Source of Waste: CONTAMINATED PAPER AND GLASS FROM LABORATORY.

Disposition of Waste: WASTES GO TO TA-54 (AREA G) ONCE CAPACITY IS REACHED.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: ALL DRUMS OBSERVED WERE COVERED AND LOCKED.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

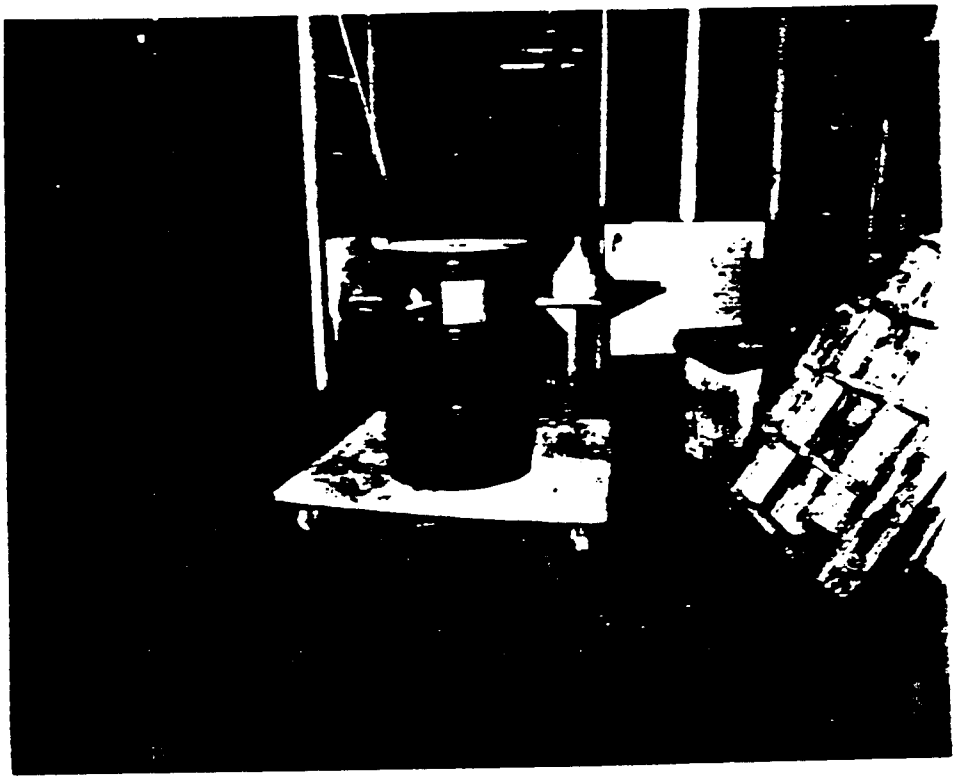
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.028

Unit Name: TEMPORARY DRUM STORAGE #3

Location: TA-3-38

References: VSI LOG BOOK; 65, PP.1-1 TO 1-21, 90, 40 PAGES



A. Steel Drum Used for Temporary (Less Than 90 Days) Storage of Wastes from Spray Shop/Paint Booth. Note Waste Spillage on Drum.

B. Typical Drums in Paint - Related Waste Storage Area at TA-3-38.

Unit Number: 3.028

A. DESCRIPTION

Unit Type: STEEL DRUMS USED FOR TEMPORARY STORAGE (<90 DAYS) OF WASTES FROM SPRAY SHOP/ PAINT BOOTH.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: THERE ARE 5 - 55 GALLON DRUMS IN THIS 15 SQUARE FOOT AREA.

Material of Construction: STEEL DRUMS/WATER FILTER ON CONCRETE PAD.

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: TEMPORARY STORAGE OF PAINT-RELATED WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.028

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable: X	Inorganics:
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES LACQUER TYPE SOLVENTS AND WASTE PAINT.

Source of Waste: PAINTING OPERATIONS.

Disposition of Waste: SPILLS GO TO FLOOR DRAIN CONNECTED TO STORM SEWER. DRUMS GO TO TA-54.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: INDOORS WITH FLOOR DRAIN TO STORM SEWER.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.: X	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

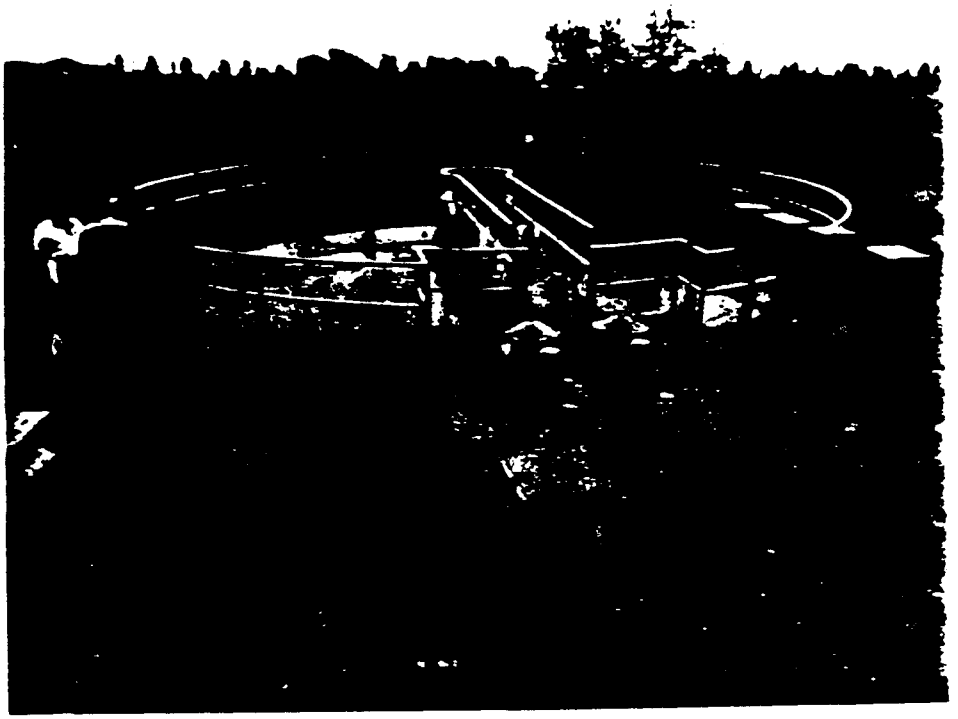
Detail of Past Releases: DISCHARGES FROM THIS UNIT ARE RELEASED FROM OUTFALL NO.095 WHICH HAD EXCESSIVE NPDES VIOLATIONS IN 1986. (REFERENCE 90, 40 PAGES

Unit Number: 3.029

Unit Name: SECONDARY CLARIFIERS #1

Location: TA-3-46

References: VSI LOG BOOK; 86, P. 5



TA-3 Wastewater Treatment Plant Secondary Clarifier.

Unit Number: 3.029

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT-SECONDARY CLARIFIERS.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 20 FOOT RADIUS BY APPROXIMATELY 10 FEET DEEP.

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS USED FOR SETTLING AND POLISHING WASTE WATER.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 3.029

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SANITARY SEWAGE AND INDUSTRIAL WASTE CONSTITUENTS.

Source of Waste: TRICKLING FILTERS (UNIT NO. 3.030).

Disposition of Waste: CHLORINE DOSING CHAMBER (UNIT NO. 3.039).

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: ADDITIONAL DATA NOT AVAILABLE.

E. RELEASE HISTORY

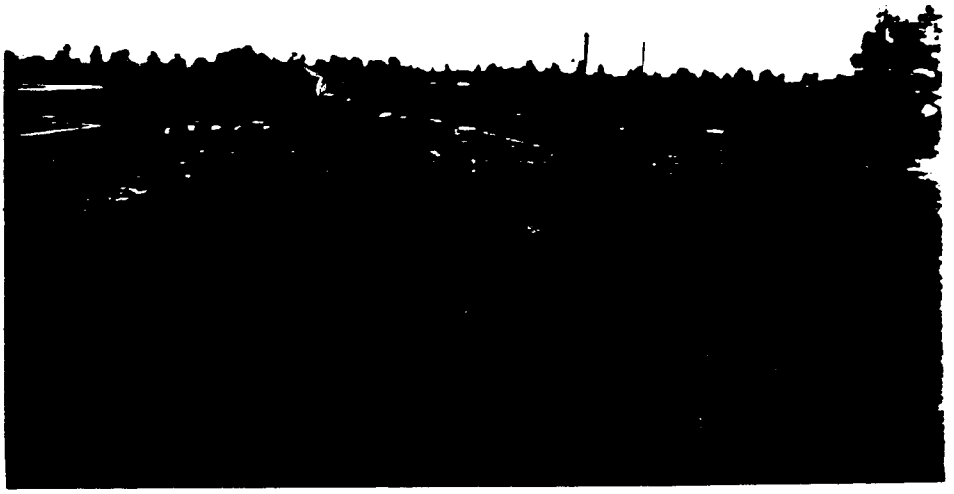
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.030 Unit Name: TRICKLING FILTER #1

Location: TA-3-47 References: VSI LOG BOOK; 86, P. 5



TA-3 Wastewater Treatment Plant Trickling Filter Units.

Unit Number: 3.030

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - TRICKLING FILTER.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: APPROXIMATELY 20 FEET IN RADIUS AND 10 FEET DEEP.

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS USED FOR THE BIOLOGICAL TREATMENT OF WASTEWATER.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.030

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SANITARY SEWAGE AND INDUSTRIAL WASTE CONSTITUENTS.

Source of Waste: DOSING SIPHONS (UNIT NO. 3.031)

Disposition of Waste: SECONDARY CLARIFIERS (UNIT NO. 3.029)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: ADDITIONAL DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.031

Unit Name: DOSING SIPHON #1

Location: TA-3-48

References: VSI LOG BOOK; 86, P. 5

No Photo is Available for this Unit.

Unit Number: 3.031

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - DOSING SIPHON.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT REGULATES FLOW INTO TRICKLING FILTERS.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.031

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SANITARY SEWAGE AND INDUSTRIAL WASTE CONSTITUENTS.

Source of Waste: IMHOFF TANKS (UNIT NO. 3.032)

Disposition of Waste: TRICKLING FILTERS (UNIT NO. 3.030)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: ADDITIONAL DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.032 Unit Name: IMHOFF TANK #1

Location: TA-3-49 References: VSI LOG BOOK; 86, P. 5

Imhoff Tank at the Wastewater Treatment Plant in Ta-3. This Unit is Used for the Biological Degradation of Organics in the Sewage Treatment Process.

Unit Number: 3.032

A. DESCRIPTION

Unit Type: WASTEWATER TREATMENT PLANT - IMHOFF TANK.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: APPROXIMATELY 20 FEET WIDE BY 40 FEET LONG BY 10 FEET DEEP.

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS USED FOR THE BIOLOGICAL TREATMENT OF WASTEWATER.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.032

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SANITARY SEWAGE AND INDUSTRIAL WASTE CONSTITUENTS.

Source of Waste: BAR SCREEN AND COMMINUTOR (UNIT NO. 3.033)

Disposition of Waste: DOSING SIPHON (UNIT NO. 3.031)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: ADDITIONAL DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.033

Unit Name: SPLITER BOX, BAR SCREEN AND COMMINUTOR

Location: TA-3-50

References: VSI LOG BOOK; 86, P. 5

Splitter Box, Bar Screen, and Comminutor at the Wastewater Treatment Plant in TA-3.

Unit Number: 3.033

A. DESCRIPTION

Unit Type: SPLITTER BOX, BAR SCREEN AND COMMINUTOR AT THE WASTEWATER TREATMENT PLANT.

Period of Operation: DATA IS UNAVAILABLE.

Dimensions/Volume: 4' X 12', DEPTH IS UNKNOWN.

Material of Construction: CONCRETE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT SEPARATES INFLUENT INTO TWO PARALLEL TREATMENT TRAINS.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: PART OF TREATMENT PROCESS THAT DISCHARGES THROUGH A NPDES OUTFALL.

Unit Number: 3.033

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SANITARY SEWAGE AND INDUSTRIAL CONSTITUENTS.

Source of Waste: BUILDINGS IN TA-3 AREA.

Disposition of Waste: IMHOFF TANKS (UNIT NOS. 3.033 AND 3.042)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: GRAVITY FEED TO NEXT UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.034-3.035

Unit Name. TWO EMERGENCY STORAGE TANKS, S[illegible] BUILDING

Location: TA-3-66

References: VSI LOG BOOK; 13, P. 3-2; 36, P. [illegible]

Tank Used for Emergency Storage of Cyanide and Acid-Concrete, Located in the Basement of the Sigma Building, TA-3-66.

Unit Number: 3.034-3.035

A. DESCRIPTION

Unit Type: TWO EMERGENCY STORAGE TANKS FOR CYANIDE AND ACID-CONCRETE. TANKS ARE UNDERGROUND.

Period of Operation: 1960 TO PRESENT

Dimensions/Volume: 4,500 GAL.

Material of Construction: CONCRETE

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT USED FOR THE EMERGENCY STORAGE OF CYANIDE AND ACID - CONCRETE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 3.034-3.035

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic: X	

Particulars: UNIT MANAGES CYANIDE AND OTHER PROCESS AREA OVERFLOWS.

Source of Waste: PROCESS AREA

Disposition of Waste: ACID WASTE NEUTRALIZED AND PUMPED OUT TO TA-50. CYANIDE IS DILUTED AND PUMPED OUT TO TA-50. SEPARATE PUMPS FOR CYANIDE AND ACID; FIBER-GLASS TANKS AS IN TA-3-29 WINGS 4 & 5 ARE PLANNED FOR PUMP SYSTEM.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer: X
Level Controls: X	Overflow Controls:		Leak Detection:

Details: UNIT IS CONTAINED IN A CONCRETE VAULT. UNIT CONTAINS A pH DETECTION SYSTEM THAT IS MONITORED AT TA-50.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

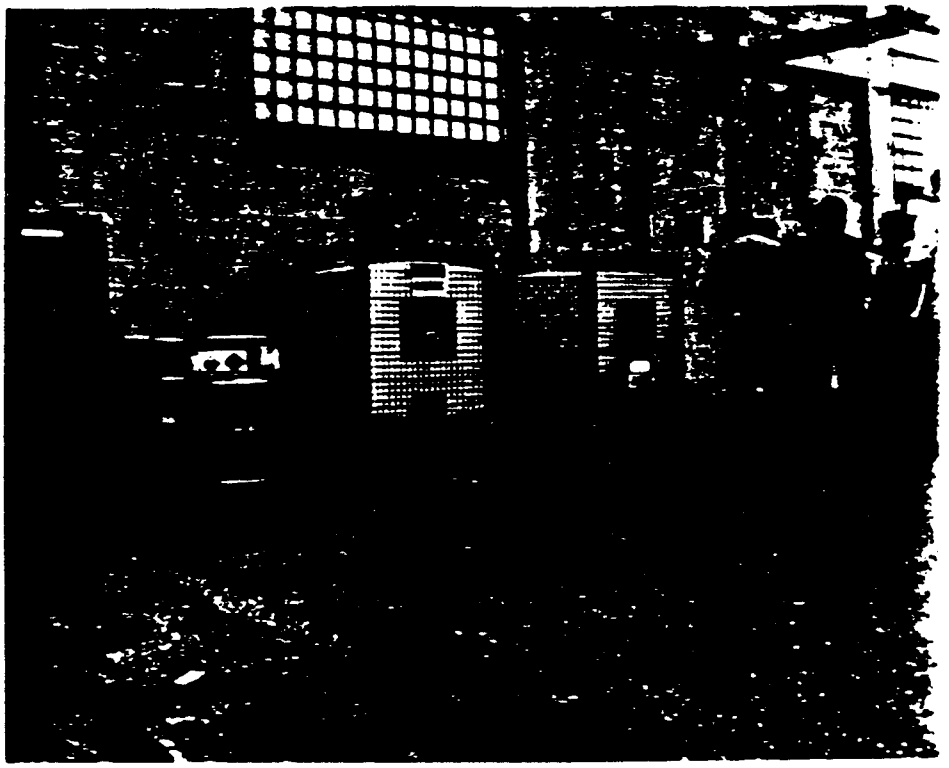
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 3.036

Unit Name: SATELLITE DRUM AND TANK STORAGE

Location: TA-3-66

References: VSI LOG BOOK; 13, P. 3-2; 36, P.



Drums and Tanks in the Satellite Drum Storage Area Outside Room P-100 of the Sigma Building.

Unit Number: 3.023-3.024

Unit Name: TWO PUMP TANKS

Location: TA-3-29

References: VSI LOG BOOK; 12, P. 3-2; 13, P. 3-2

A. Pump Tank No. 1 Located in Basement of Wing No. 4, TA-3-29, Used for Temporary Storage and Pumping of Radioactive Waste. See Additional Photos on Following Page.

Unit Number: 6.003

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: NO RADIOACTIVE WASTE IS MANAGED IN THIS UNIT. LANL PERSONNEL DENY THE EXISTENCE OF PCB'S IN THIS AREA; SEVERAL DRUMS HAD "NO PCS's" LABELS. P.R. INDICATES THAT THIS IS NOT TRUE.

Source of Waste: DRAINED OIL FROM TRANSFORMERS, CAPACITORS AND FROM ELECTRIC POWER SUPPLY.

Disposition of Waste: RECYCLED AT TA-54, AREA L

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: THERE IS A 4 INCH CURB PARTIALLY SURROUNDING STORAGE AREA.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.: X
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: ORGANIC SHEENS ON CONCRETE AND ON SOILS NEXT TO CONCRETE WERE OBSERVED DURING VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 6.004-6.005 Unit Name TWO SEPTIC TANKS AND SUMPS/OUTFALL

Location: TA-6-1 References: 98, P. 5; 10, P. 2-2

No Photos are Available for these Units. Units were not seen During the VSI.

Unit Number: 6.004-6.005

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AREAS AS "SEPTIC TANK/SUMP". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DATA NOT AVAILABLE

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 6.004-6.005

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP INDICATED THAT THE WASTES HANDLED WERE HAZARDOUS WASTES RADIOACTIVE WASTES, RADIONUCLIDES, AND EXPLOSIVES.

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE.

Unit Number: 6.006

Unit Name: PARTIALLY COVERED TANK

Location: TA-6-9

References: 98, P. 5

No Photo is Available for this Unit. Unit was not seen During the VSI.

Unit Number: 6.006

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "PARTIALLY COVERED TANK". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVA ABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: STORAGE OF WASTES

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 6.006

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THIS AS AN UNDERGROUND STORAGE TANK AND THE WASTES HANDLED AS RADIOACTIVE WASTE, HAZARDOUS WASTE, (NEAR TA-6-5) EXPLOSIVES, AND RADIONUCLIDES.

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT OBSERVED DURING THE VSI.

Detail of Past Releases: DATA NOT AVAILABLE.

UNIT 6.007: CONCRETE BOWL - This active unit was seen during the VSI and operated between 1943 and 1945. The unit is constructed of concrete and steel and is bowl shaped with a diameter of approximately 150 ft. and was designed for the recovery of radioactive wastes and is presently inactive. This bowl shaped unit was used for the recovery of uranium wastes from an experimental area. All uranium recovered is thought to be expended. There are no release controls associated with the unit and no releases were observed during the VSI.

Concrete Bowl Used for the Recovery of Uranium Wastes.
Note Collection of Rainwater in Center of Bowl.

UNIT 6.008: TANK - This active unit was identified during the VSI to be a half covered tank. The tank, constructed of concrete and steel, has a capacity of 1,000 gallons and was used as an in-ground uranium fuel storage unit. This unit is underlain by soil and was used from 1943 to 1945. There are no release controls associated with the unit. No obvious signs of release were noted during the VSI. No photo is available for this unit.

UNIT 6.009: SEPTIC TANK - This unit which was seen during the VSI is assumed to be constructed of concrete. The septic tank has a volume of 780 gallons and is underlain by soil. The tank is belowground, covered and inactive. This unit was designed for the treatment of domestic sewage from building TA-6-6. There are no release controls associated with this unit and overflow is released into a trench.

Underground Septic Tank in TA-6 Used for Treatment of Domestic Sewage.

UNIT 6.010: STORED CAPACITORS AND WASTE OIL DRUMS - This active unit (98, p. 5) is used to store capacitors and waste oil drums. The area is suspected to be contaminated and may contain hazardous waste, petroleum products, PCB's, organics, and oils. No photo is available for this unit.

UNIT 6.011-6.014: FOUR CONTAMINATED DISPOSAL AREAS - These four units (98, p. 5) include a disposal area, a disposal pit, an asphalt pad and a contaminated area. Since each area contains hazardous constituents, they are potential SWMUs. It is not known whether or not these units are one in the same. No photos are available for these units.

TA-7, Gomez Ranch Site

Two firing pits were located at this inactive technical area, but no former structures have been identified. The site was abandoned in 1945.

According to the Comprehensive Environmental Assessment and Response Program (CEARP) (June 1986), there may be sites at this technical area where there is a likelihood of potential release(s) of hazardous waste or constituents.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 7

SWMUs	
7.001	Gomez site burn pit

AOC	
7.002-7.003	Two contaminated areas

Unit Number: 7.001

Unit Name: GOMEZ SITE BURN PITS

Location: TA-7

References: VSI LOG BOOK; 10, P. 3-1

No Photo is Available for this Unit.

Unit Number: 7.001

A. DESCRIPTION

Unit Type: BURN PIT.

Period of Operation: 1944 TO 1945

Dimensions/Volume: 30 FT. DIAMETER, 6 FT. DEEP

Material of Construction: TWO BERMED PITS; ONE BERMED AREA WITH STEEL PIPES.

Underlain by: Concrete: Asphalt: Gravel:
Grass: X Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED AS A BURN PIT (FIRING PIT) FOR DESTRUCTION OF OLD DETONATORS.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 7.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable: X	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNITS CONTAIN HIGH EXPLOSIVE RESIDUES. ONE BERMED AREA CONTAINS 5 PIPES APPROXIMATELY 4 IN. IN DIAMETER, THAT EXTRUDE APPROXIMATELY 18 IN. FROM BERM. PIPES EXTEND ABOUT 30 FT. TO END. COULD SEE LIGHT THROUGH PIPES.

Source of Waste: REPORTEDLY FROM DESTRUCTION OF OLD DETONATORS.

Disposition of Waste: IN SITU

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ASSOCIATED WITH AREA EXCEPT IN BERMS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: OBSERVED SCRAP METAL STREWN AROUND AREA DURING [illegible]

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

TA-7: AREAS OF CONCERN

UNIT 7.002-7.003: TWO CONTAMINATED AREAS: These two units (98, p. 5, and 10, p. 3-1) are described as contaminated areas. One of the areas contains hazardous waste and the other contains radioactive waste, hazardous waste, explosives and radionuclides. It is not known whether or not these units are one in the same. No photos are available for these units.

TA-8, GT Site (or Anchor Site West)

TA-8 is a nondestructive testing site operated as a service facility for the entire LANL. It maintains capability in all modern nondestructive testing techniques for ensuring the quality of material, ranging from test weapon components to checking of high pressure dies and molds. Principal tools include radiographic techniques (X-ray machines capable of providing up to 1 MeV X-rays and a 24-MeV betatron), radioisotopes, ultrasonic testing, penetrant testing and electromagnetic methods.

Within TA-8 is a small pit identified as Area Q, which is approximately 30 sq. ft. in area and located near TA-8-1. The pit contains gun barrels, inert projectiles, steel blocks with holes in their centers and 3-in. projectiles embedded in them, 3- and 6-in. expended casings and some Little Boy bomb parts; some of this material may be contaminated with high explosives.

According to the Comprehensive Environmental Assessment and Response Program (CEARP) (June 1986), there may be sites at this technical area where there is a likelihood of potential release(s) of hazard waste or constituents. Figure 11 is a map of TA-8. Figure 12 is a schematic of the wastewater system at TA-8.

Units which may be associated with the handling of hazardous constituents (e.g., NPDES outfalls) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 8

SWMUs	
8.001	Area Q landfill

AOC	
8.002	Old lagoon
8.003	GT anchor site west
8.004	Oxidation pond

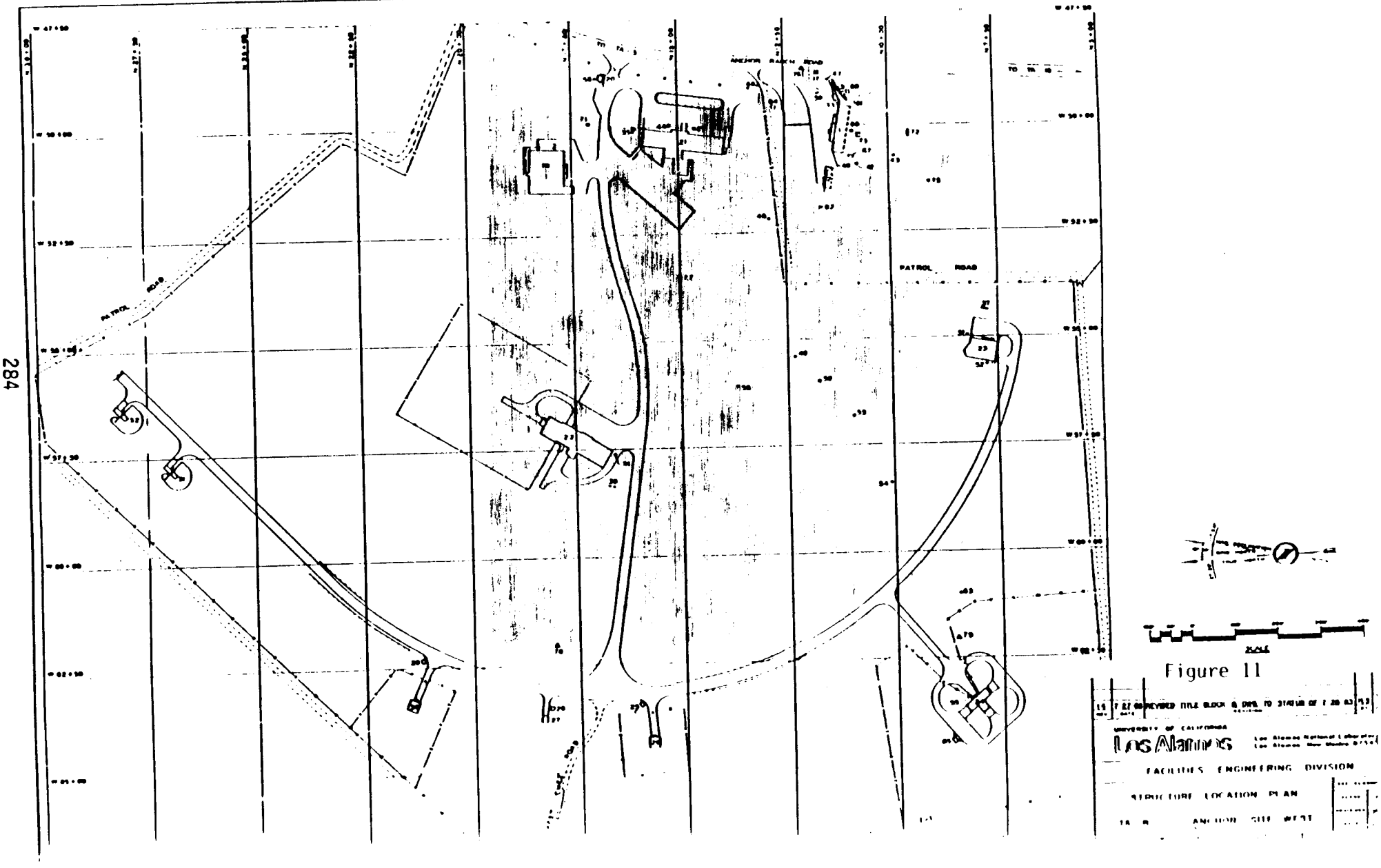
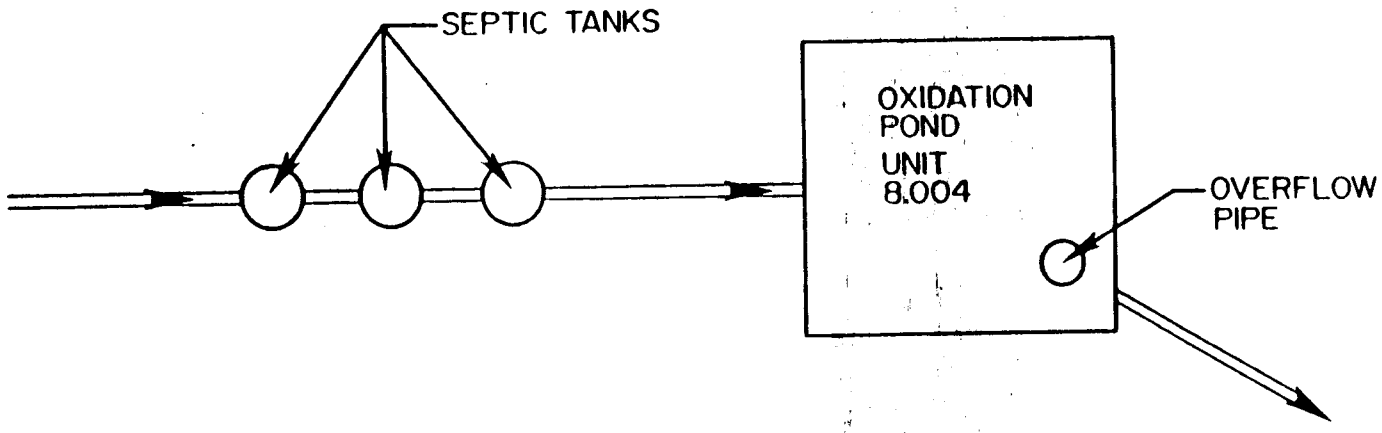

PATROL ROAD
PATROL ROAD
SCALE
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN

Figure 11


SEPTIC TANKS
OXIDATION
POND
UNIT
8.004
OVERFLOW
PIPE

Unit Number: 8.001

Unit Name: AREA Q-LANDFILL

Location: TA-8

References: 10, P. 3-4

No Photo is Available for this Unit. Unit was not seen During the VSI.

Unit Number: 8.001

A. DESCRIPTION

Unit Type: IDENTIFIED IN SITE CHARACTERIZATION REPORT AS A LANDFILL AND PIT (10, P.3-4)

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: 30' X 32'

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: USED TO BURY METAL OBJECTS INCLUDING GUNS, METAL PROJECTILES, AND "LITTLE BOY BOMB" PARTS.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 8.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: GUNS, PROJECTLIES IMBEDDED IN STEEL; LITTLE BOY BOMB PARTS; MAYBE EXPLOSIVES; POSSIBLE URANIUM CONTAMINATION OF SOME COMPONENTS (10, P. 3-4).

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

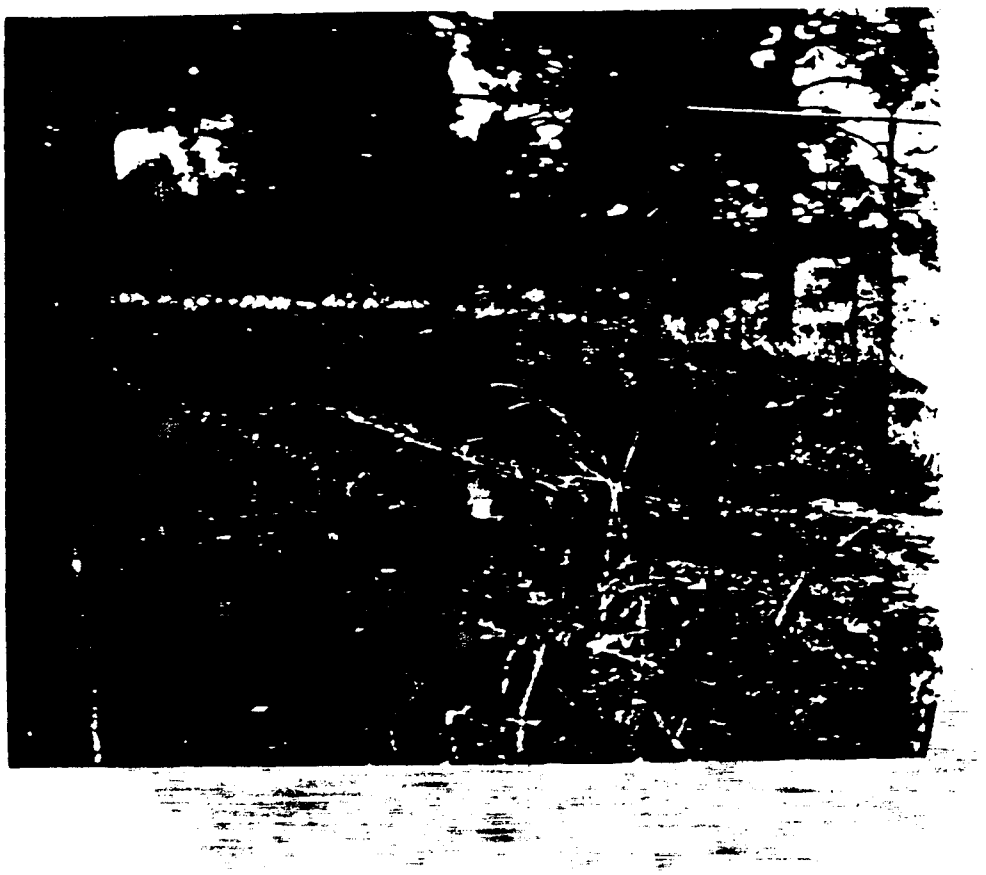
E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE NOTED DURING THE VSI

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED

UNIT 8.002: OLD LAGOON - This inactive unit is an old oxidation pond which was seen during the VSI and began operation in the 1950's. The pond, designed for the oxidation of domestic sewage, is approximately 50 ft. wide, 150 long, and 7 ft. deep, and has been excavated into natural soil. Wastes formerly managed in the unit are now managed at the TA-9 oxidation pond. No releases were observed during the VSI; however, LANL personnel stated during the VSI that the unit may have been overloaded in the past.



A. Inactive Oxidation Pond Used for Oxidation of Domestic Sewage.

B. Inactive Oxidation Pond Used for Oxidation of Domestic Sewage.

UNIT 8.003: GT/ANCHOR SITE WEST: This unit (10, p.3-1) is described as a testing site where a large strontium contamination incident was cleaned up in 1954. No photo is available for this unit.

UNIT 8.004: OXIDATION POND: This unit (86, p. 26) is an excavated pit designed for the biological treatment of unknown liquids. The unit is active, in-ground, and underlain by soil. The pond treats septic tank wastes by complete evaporation. No photo is available for this unit.

TA-9, Anchor Site East

At TA-9, scientists explore fabrication feasibility and physical properties of explosives. New organic compounds are investigated for their possible usefulness as explosives; storage and stability problems are also evaluated.

Many former high explosives-contaminated structures have been removed from TA-9.

Figure 13 is a map of the TA-9 area. Figure 14 is a schematic of the wastewater treatment system at TA-9.

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks, NPDES outfalls, HE sumps, 90 day storage) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 9

SWMUs	
9.001-9.002	Two temporary satellite drum storage areas
9.003	Sumps from high explosive processing
9.004	Aluminum settling basin
9.005-9.019	Fifteen waste settling tanks

AOC	
9.020-9.022	Oxidation pond and two sand filters
9.023-9.026	Four outfall/sump areas

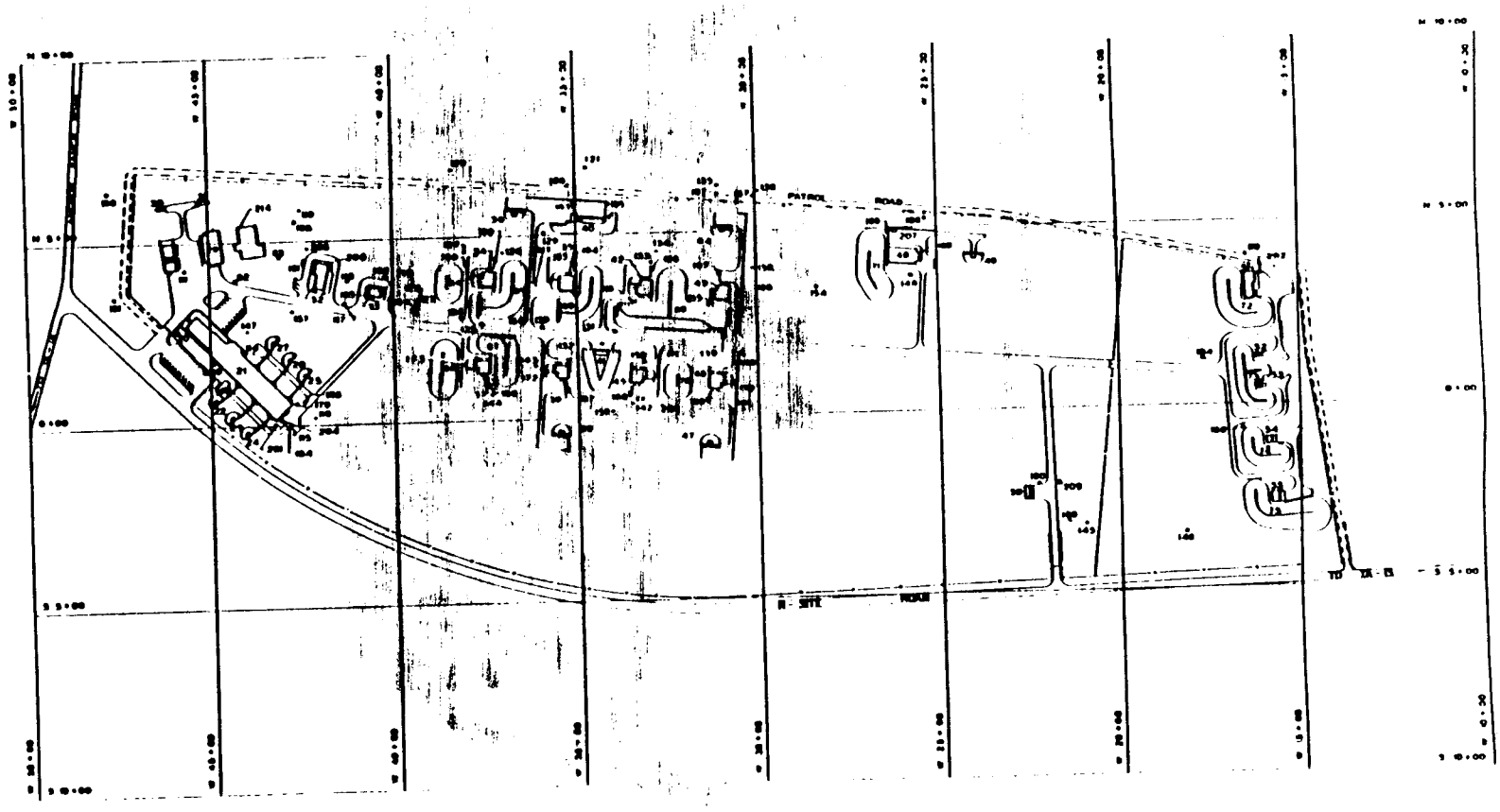


Figure 13

UNIVERSITY OF CALIFORNIA
Los Alamos

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN

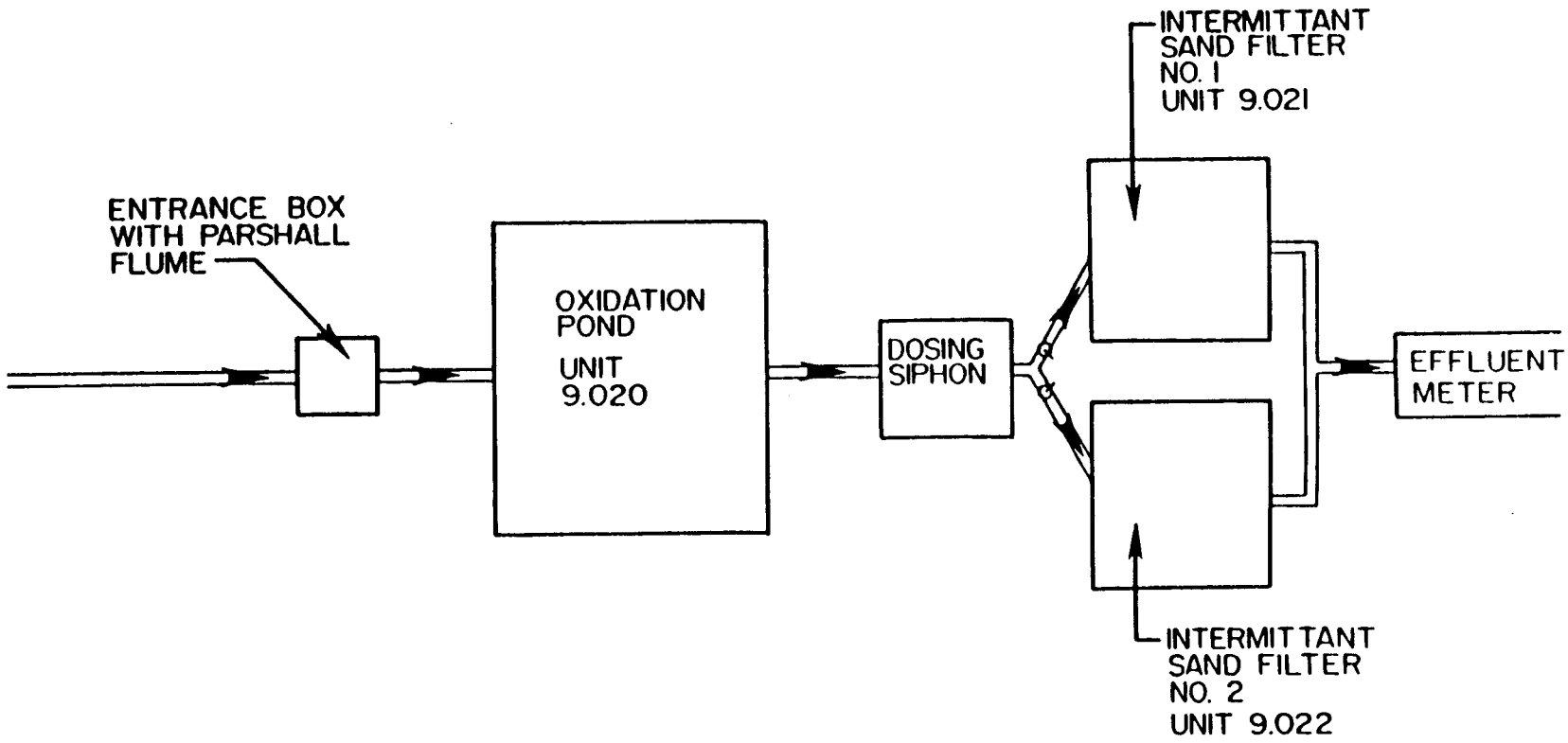


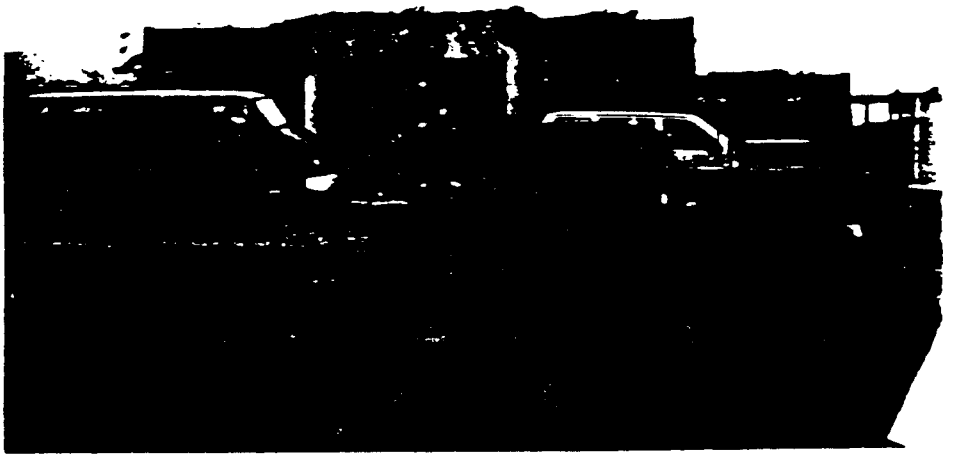
FIGURE 14. EXHIBIT SCHEMATIC OF TA-9 PLANT.

Unit Number: 9.001-9.002

Unit Name: TWO TEMPORARY SATELLITE DRUM STORAGE AREAS

Location: TA-9-39

References: VSI LOG BOOK; 6



Drums in the Temporary Satellite Drum Storage Area Used to Store High Explosive Contaminated Waste. Note a Part of the Area is Covered with Plastic.

Unit Number: 9.001-9.002

A. DESCRIPTION

Unit Type: TEMPORARY WASTE STORAGE

Period of Operation: 1950 TO PRESENT

Dimensions/Volume: 5'X 15' OUTDOORS; 30'X 15' ROOM INDOORS. NUMBER OF DRUMS IS UNKNOWN.

Material of Construction: METAL DRUMS OVER A CONCRETE PAD PARTIALLY COVERED BY A POLYETHYLENE COVER.

Underlain by:	Concrete:	Asphalt: X	Gravel: X
	Grass:	Soil:	

Environmental:

Indoors: X	Close to Surface Water:	In Ground:
Outdoors: X	Close to Drinking Water:	Aboveground: X
Covered:	Residences:	Belowground:

Purpose of Unit: UNITS WERE DESIGNED FOR THE TEMPORARY STORAGE OF HIGH EXPLOSIVE CONTAMINATED WASTE. WASTE IS FLASHED AT TA-16 TO REMOVE HIGH EXPLOSIVE CONTAMINATES AND THEN TAKEN TO AREA J AT TA-54.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 9.001-9.002

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES HIGH EXPLOSIVE WASTES.

Source of Waste: CONTAMINATED PAPER, ETC.

Disposition of Waste: WASTE IS FLASHED AT TA-16 AND THEN TAKEN TO TA-54 AREA C.

D. RELEASE CONTROLS

Liner: X	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: RELEASES MAINTAINED BY AN ASPHALT LINER WITHIN A BUILDING.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES OF WASTE WERE NOTED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 9.003

Unit Name: SUMPS FROM HIGH EXPLOSIVE PROCESSING

Location: TA-9-187

References: VSI LOG BOOK

Access to Typical Sump Used To Collect High Explosive Process Effluent in TA-9.

Unit Number: 9.003

A. DESCRIPTION

Unit Type: SUMP TO COLLECT HIGH EXPLOSIVE EFFLUENT; 15 SUMPS LOCATED THROUGH TA-9

Period of Operation: 1950 TO PRESENT

Dimensions/Volume: 5'X 20', 6'DEEP

Material of Construction: STEEL AND CONCRETE

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground:

Purpose of Unit: UNIT WAS DESIGNED TO RECEIVE HIGH EXPLOSIVE EFFLUENT FROM HIGH EXPLOSIVE PROCESS AREA.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 9.003

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: WASTES CONTAIN SOME SLUDGES AND SOLIDS.

Source of Waste: EFFLUENT FROM HIGH EXPLOSIVES PROCESS AREA.

Disposition of Waste: NPDES-REGULATED OUTFALL; SLUDGE GOES TO TA-16

D. RELEASE CONTROLS

Liner:	Diking:	Sumps: X	Ind. Sewer: -
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE NOTED DURING VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO SPILLAGE OF WASTES WAS NOTED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 9.004

Unit Name: ALUMINUM SETTLING BASIN

Location: TA-9

References: 98, P. 6

No Photo is Available for this Unit. Unit was not seen During the VSI.

Unit Number: 9.004

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "SUMP". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground: X
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF EXPLOSIVE PROCESS EFFLUENTS.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 9.004

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES HANDLED AS HAZARDOUS WASTES, EXPLOSIVES, AND CHEMICALS.

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT OBSERVED DURING VSI.

Detail of Past Releases: DATA NOT AVAILABLE.

Unit Number: 9.005-9.019

Unit Name: FIFTEEN WASTE SETTLING TANKS

Location: TA-9

References: 10, P. 3-1

No Photos are Available for these Units. Units were not seen During the VSI.

Unit Number: 9.005-9.019

A. DESCRIPTION

Unit Type: IDENTIFIED IN SITE CHARACTERIZATION REPORT AS TANKS (10, P.3-1)

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: TREATMENT OF INDUSTRIAL WASTES

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: DATA NOT AVAILABLE

Unit Number: 9.005-9.019

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTES WERE IDENTIFIED AS INDUSTRIAL (10, P. 3-1); NO OTHER DATA WAS AVAILABLE

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

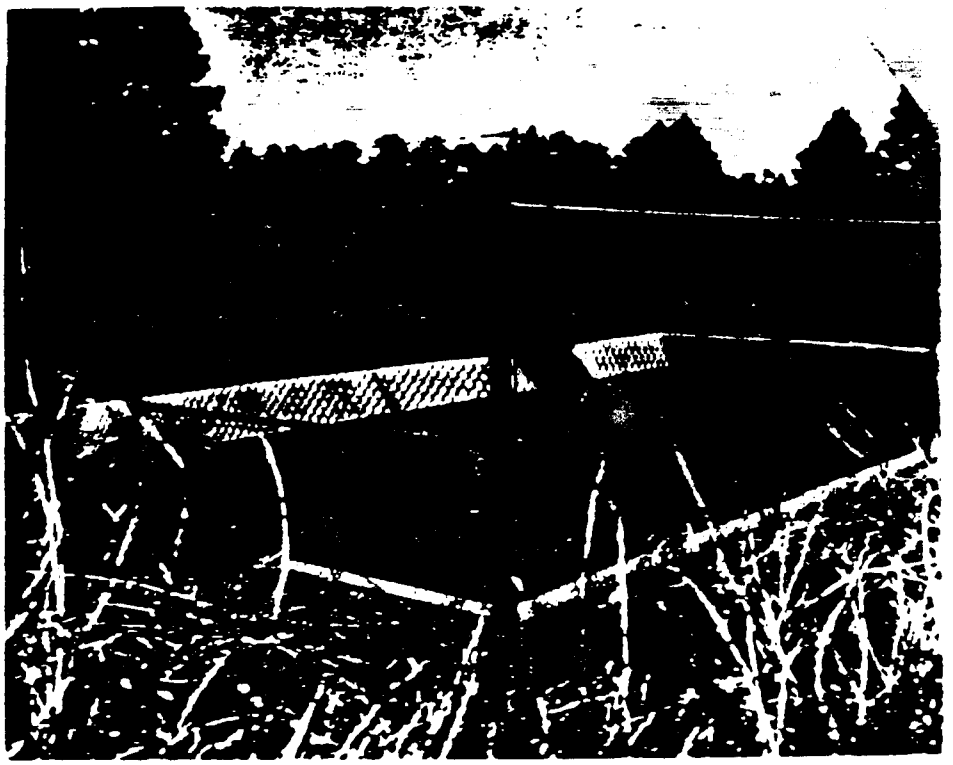
E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

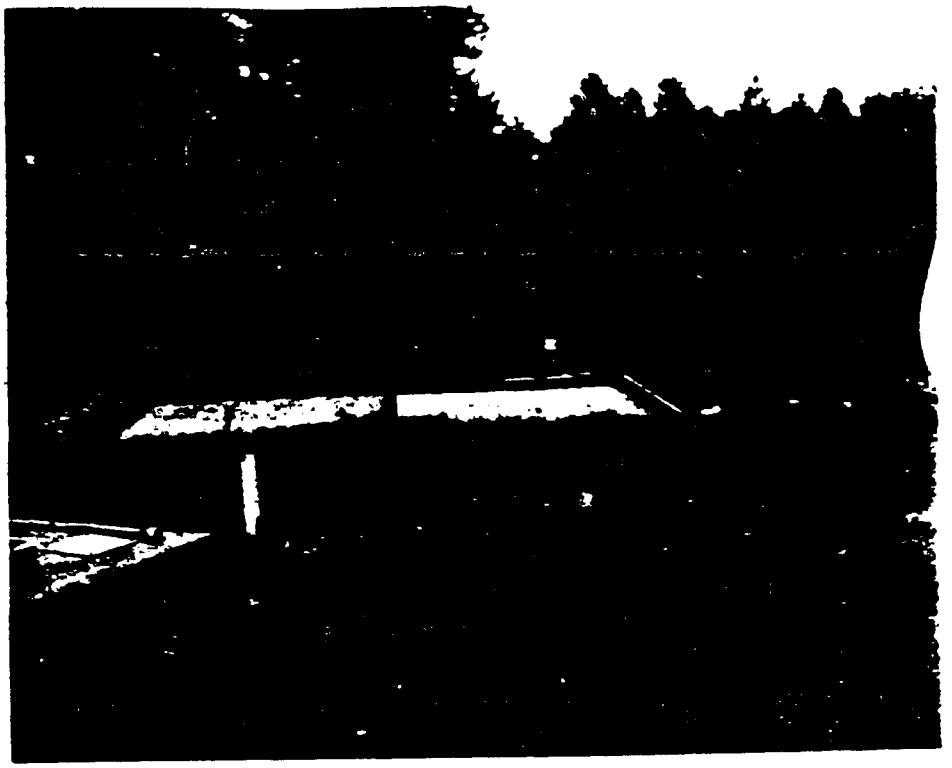
VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE.

UNIT 9.020-9.022: OXIDATION POND AND TWO SAND FILTERS: These active, in-ground units (86, p. 9) were seen during the VSI and are designed for the oxidation and filtration of domestic waste. The pond is constructed of concrete and is 30 ft. wide by 70 ft. long. The pond is underlain by soil and is an active in-ground unit. Diking is used to control any overflow and/or spillage from the pond. The pond is surrounded by a chain link fence topped with barbed wire. The pond discharges to the sand filters which are constructed of sand and concrete and are 60 ft. long by 30 ft. wide. The sand filters contain flexible membrane liners, are underlain by concrete, and discharge into a NPDES regulated outfall.



A. Concrete Walled Oxidation Pond Presently Used for the Oxidation of Domestic Waste.



B. Sand Filter Used for the Filtration of Domestic Waste.

UNIT 9.023-9.026: FOUR OUTFALL/SUMP AREAS - These units (98, p. 6) are described as sumps, septic tanks, and outfalls associated with explosives operations suspected of containing hazardous constituents and explosives. No photos are available for these units.

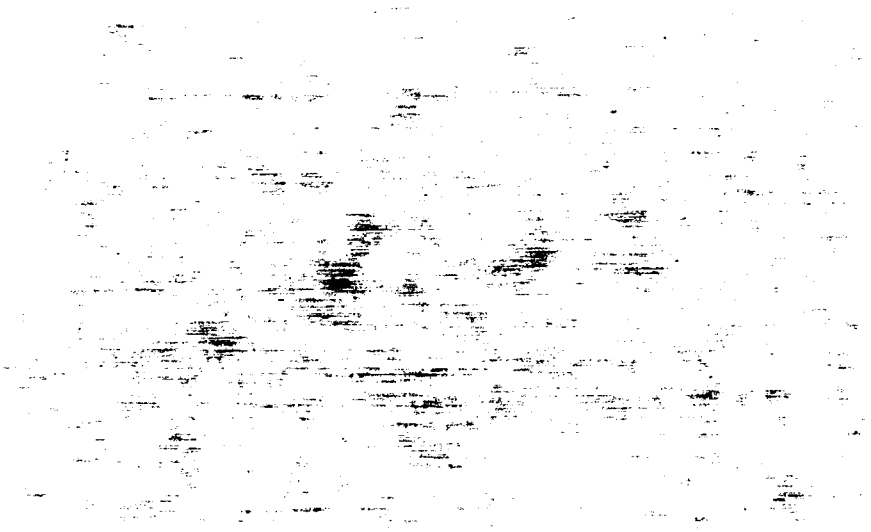
This technical area is suspected to have several sites which may have potential for the release of hazardous constituents. This TA was released to the public following a "completed action" investigation (10, p. 6-1). However, no final disposition has been determined on the status of remedial activities. There is no map available for this technical area.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 10

SWMUs	
10.001	Pit and drainage field

AOC	
10.002	Bayo Canyon



Unit Number: 10.001 Unit Name: PIT AND DRAINAGE FIELD

Location: TA-10 References: VSI LOG BOOK; 10, 6-1

A. Pit and Drainage Field in TA-10, Used to Dispose of Radiostrontium Contaminated Waste. See Additional Photo on Following Page.

B. Pit and Drainage Field Behind Old Chemistry Building.
Markers Designate Pit Location.

Unit Number: 10.001

A. DESCRIPTION

Unit Type: PIT AND DRAINAGE FIELD (BEHIND OLD CHEMISTRY BUILDING)

Period of Operation: 1947 TO 1952

Dimensions/Volume: APPROXIMATELY 40 ACRES.

Material of Construction: OPEN TRENCH IN NATURAL SOIL

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DATA NOT AVAILABLE AT THIS TIME.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 10.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTES CONTAINED RADIOSTRONTIUM.

Source of Waste: FISSION PRODUCT.

Disposition of Waste: MUCH STRONTIUM WAS REMOVED AND TAKEN TO TA-50, AREA C OR TA-54, AREA G

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: THE UNIT WAS DESIGNED TO BE USED AS AN AREA TO WHICH WASTES WERE RELEASED.

UNIT 10.002: BAYO CANYON - This inactive unit consists of an open canyon, was seen during the VSI, and was used for munitions testing from 1945 to 1961. The canyon is suspected to contain shrapnel remaining from munitions detonation using 140-lanthium. There was no visible evidence of releases noted during the VSI; however, unexploded munitions may be present in the canyon since by-products of munitions detonation were released on-site and are suspected to remain in situ (10, p. 6-1).

Open Canyon Used to Test Munitions Detonated With 140-Lanthium.

TA-11, K Site

Facilities in TA-11 are used for testing explosive components and systems under a variety of extreme physical environments. These facilities are arranged so testing may be controlled and observed remotely, and so that devices containing explosives or radioactive materials (as well as nonhazardous materials) may be tested.

An area within TA-11, called Area S, is a "ten foot square area located approximately 80 ft. southeast of Magazine K-36." In 1965, twelve different types of high explosives were deliberately buried at Area S in designated locations. Samples of these buried explosives are periodically excavated and analyzed to determine their rates of decomposition in soil.

LANL has indicated that this technical area may include areas (e.g., burn unit) affected by strontium contamination. The adequacy of remedial activities remains unknown (10, p. 3-2). Figure 15 is a map of TA-11.

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks, NPDES outfalls, and HE sumps) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 11

SWMUs	
11.001-11.002	Two sand burn pads
11.003-11.005	Three sumps
11.006	Magazine
11.007	Testing area

AOC	
11.008	Firing sites
11.009	Septic tank

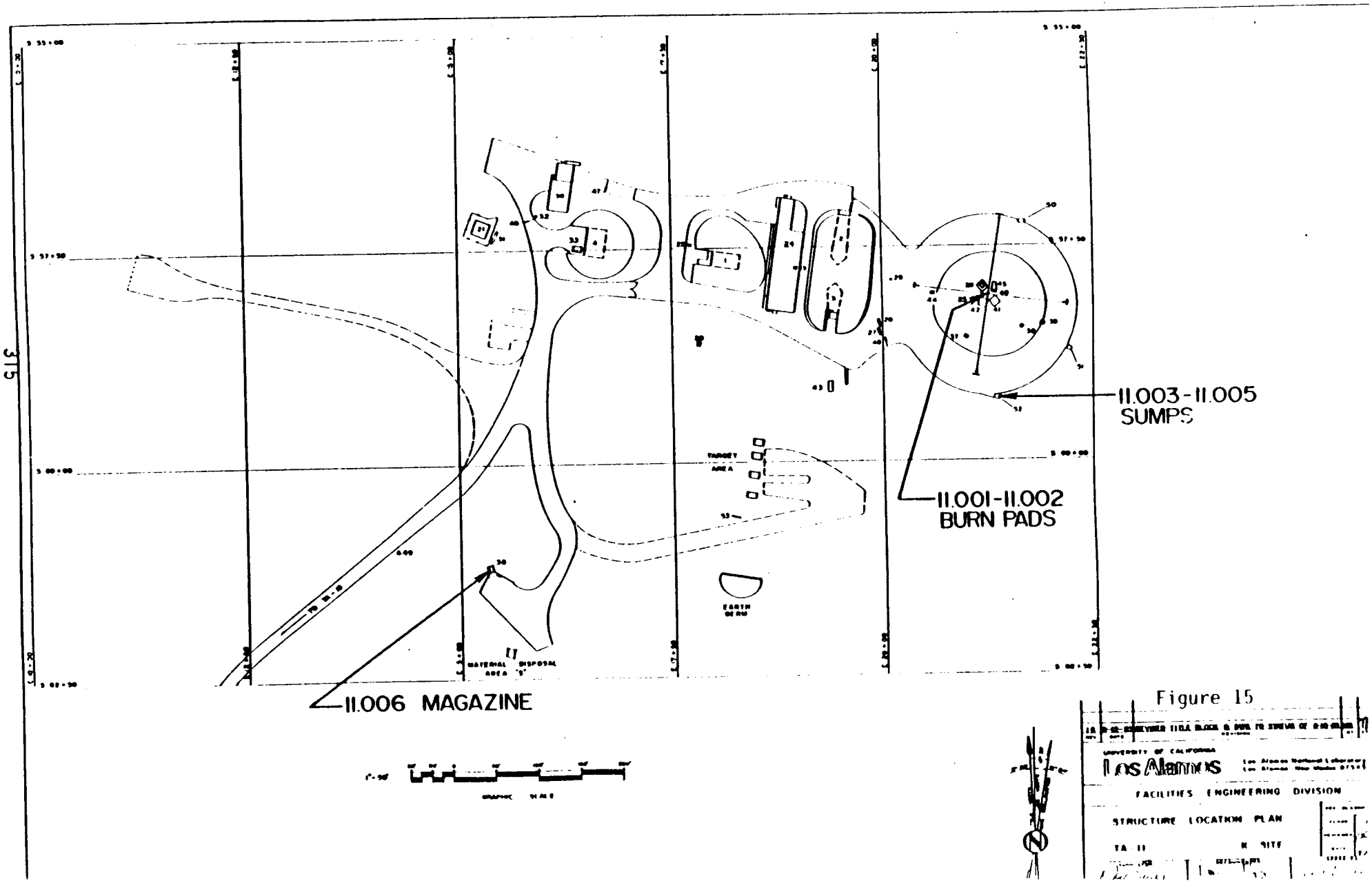

11.003-11.005
SUMPS
11.001-11.002
BURN PADS
11.006 MAGAZINE
TARGET AREA
EARTH BERM
MATERIAL DISPOSAL AREA "B"
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA 11
K SITE

Figure 15

Unit Number: 11.001-11.002 Unit Name: TWO SAND BURN PADS

Location: TA-11-25 References: VSI LOG BOOK

Sand Burn Pad Used to Destroy Propellant and High Explosive Residue. Note Solid Residue Throughout Area.

Unit Number: 11.001-11.002

A. DESCRIPTION

Unit Type: SAND BURN PAD.

Period of Operation: BURN PADS WERE USED ONLY ONCE IN THE EARLY 1980'S;

Dimensions/Volume: 10'X 4'

Material of Construction: SAND.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: ONE TIME USE OF UNIT WAS TO DESTROY PROPELLANT AND POSSIBLY SOME HIGH EXPLOSIVE RESIDUE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 11.001-11.002

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: EXPLOSIVE WASTES.

Source of Waste: DETONATION OF HIGH EXPLOSIVES.

Disposition of Waste: BURNED.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

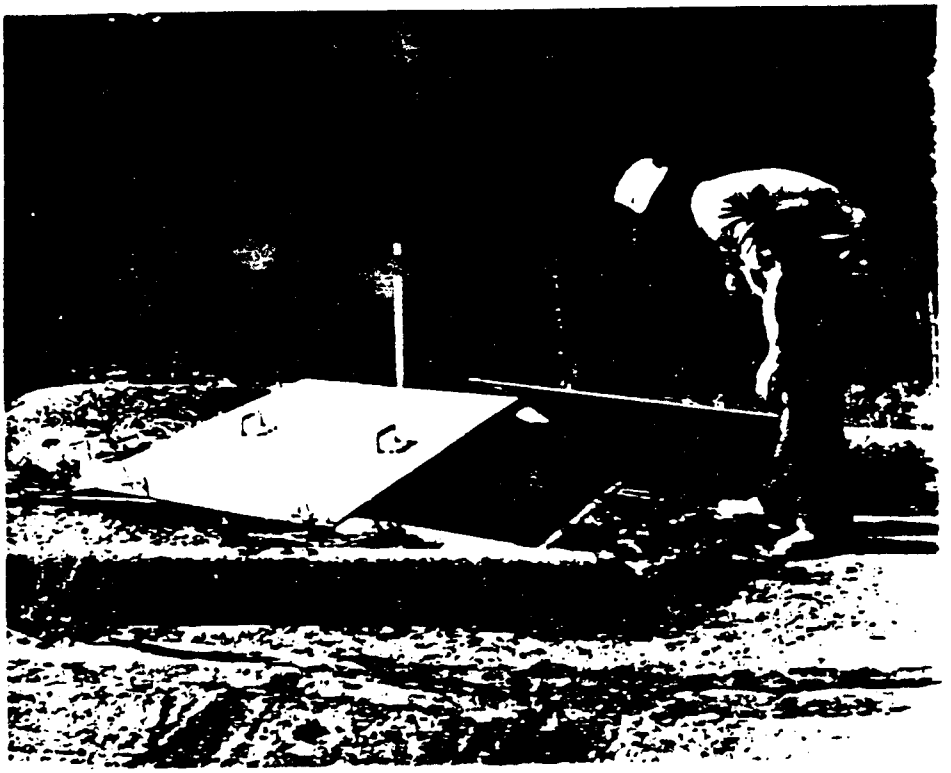
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: VISIBLE SOLID RESIDUE WAS OBSERVED THROUGHOUT THE AREA DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL RELEASES HAVE BEEN REPORTED.

Unit Number: 11.003-11.005 Unit Name: THREE SUMPS

Location: TA-11-52 References: VSI LOG BOOK



Typical Sump Used to Collect Washdown Water After Detonation of High Explosives.

Unit Number: 11.003-11.005

A. DESCRIPTION

Unit Type: SUMPS

Period of Operation: LATE 1950'S

Dimensions/Volume: 3' WIDE X 6' LONG X 3' DEEP

Material of Construction: CONCRETE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT COLLECTS WASHDOWN WATER AFTER DETONATION OF EXPLOSIVES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 11.003-11.005

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: UNIT POSSIBLY MANAGES HIGH EXPLOSIVE CONTAMINANTS AND SMALL METAL SCRAPS.

Source of Waste: WASHDOWN AFTER DETONATION OF HIGH EXPLOSIVES.

Disposition of Waste: LIQUID IS DISCHARGED THROUGH NPDES OUTFALL. METAL SCRAP IS SENT TO TA-16.

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: AREA IS BERMED.

E. RELEASE HISTORY

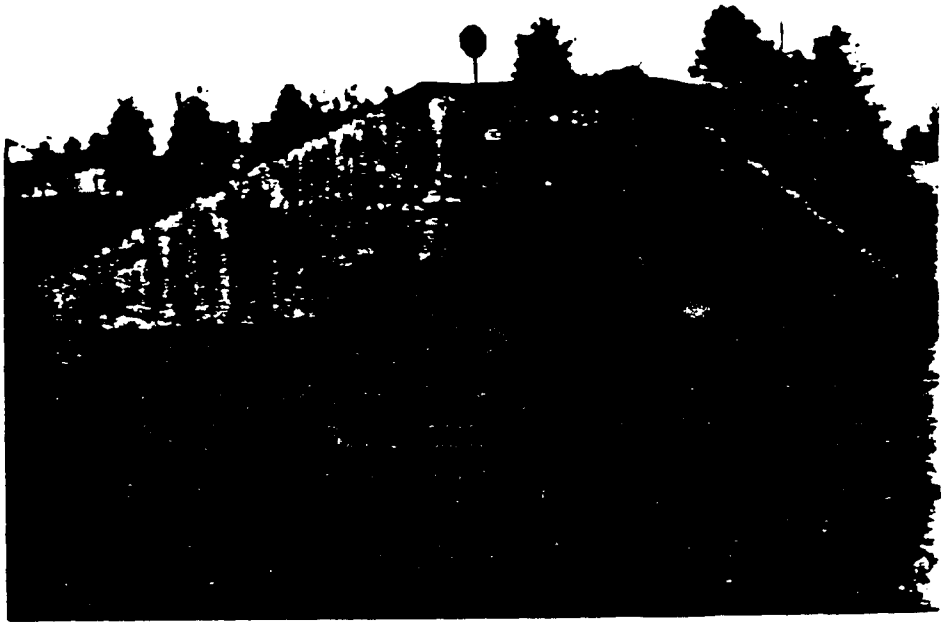
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 11.006 Unit Name: MAGAZINE

Location: TA-11-36 References: VSI LOG BOOK



Magazine, Located in TA-11-36, Used to Store Explosive Waste.

Unit Number: 11.006

A. DESCRIPTION

Unit Type: MAGAZINE

Period of Operation: LATE 1950'S TO PRESENT

Dimensions/Volume: APPROXIMATELY 200 SQUARE FEET.

Material of Construction: CONCRETE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground:

Purpose of Unit: UNIT WAS DESIGNED TO STORE EXPLOSIVE FRAGMENTS.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 11.006

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES EXPLOSIVE WASTES.

Source of Waste: SOURCE OF WASTE IS UNKNOWN.

Disposition of Waste: WASTES GO TO TA-16.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE NOTED DURING THE VSI.

E. RELEASE HISTORY

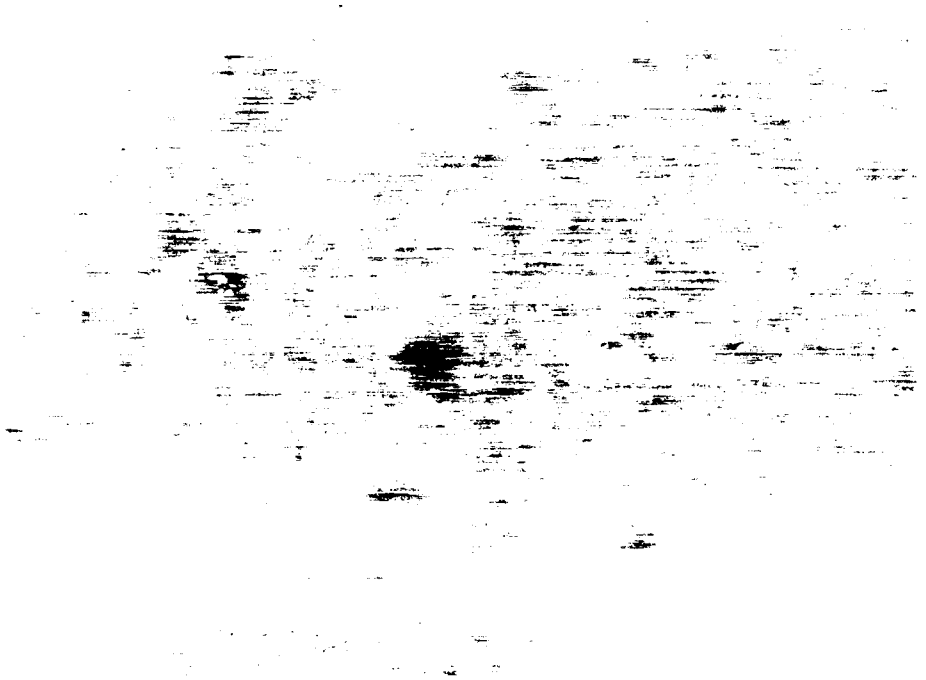
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 11.007 Unit Name: TESTING AREA

Location: TA-11 References: 10, P. 2-4



No Photo is Available for this Unit. Unit was not seen During the VSI.

Unit Number: 11.007

A. DESCRIPTION

Unit Type: THIS UNIT IS IDENTIFIED IN THE SITE CHARACTERIZATION REPORT AS A TESTING AREA. NO OTHER DISCRIPTIVE INFORMATION IS PROVIDED.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: DATA NOT AVAILABLE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: TESTING FOR SENSITIVITY OF HIGH EXPLOSIVES IN THE ENVIRONMENT

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER INFORMATION IS AVAILABLE AT THIS TIME.

Unit Number: 11.007

C. WASTES MANAGED

Solids:	Corrosive:	Organic
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: HIGH EXPLOSIVES

Source of Waste: DATA NOT AVAILABLE.

Disposition of Waste: DATA NOT AVAILABLE.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

UNIT 11.008: FIRING SITES - This is an inactive contaminated area (98, p. 7) suspected of containing radioactive/hazardous waste, explosives, and depleted uranium. No photo is available for this unit.

UNIT 11.009: SEPTIC TANK - This unit (98, p. 7) is an active septic tank suspected of containing hazardous waste and explosives. No photo is available for this unit.

TA-12, L-Site

An abandoned firing pit is located at this inactive technical area and possibly some strontium-contaminated parts from an old exposure device which was abandoned in 1953. The contamination status of this area is presently unknown. There is no map of this technical area.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

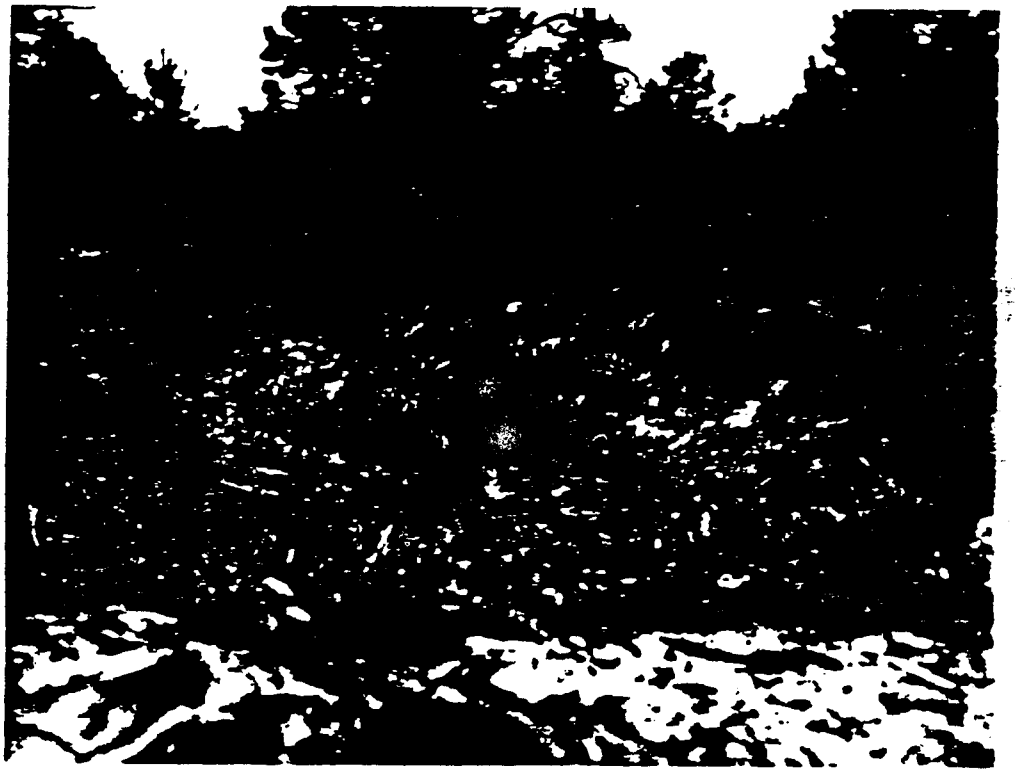
TA - 12

SWMUs	
12.001	L-site burn site

AOC	
12.002	L-site firing site
12.003	Strontium research area
12.004-12.005	Two firing pits

Unit Number: 12.001 Unit Name: L-SITE BURN SITE

Location: TA-12-5 References: VSI LOG BOOK



A. Site Used to Burn High Explosive Contaminated Buildings L-5 and L-1. High Explosive Residues May Remain. See Additional Photos on Following Page.

B. Remains of Building L-1 After Burning.

Unit Number: 12.001

A. DESCRIPTION

Unit Type: BURN SITE, BUILDINGS L-5 AND L-1

Period of Operation: 1944 TO 1949

Dimensions/Volume: 50 ACRES

Material of Construction: OLD BUILDINGS THAT WERE CONTAMINATED WITH HIGH EXPLOSIVE MATERIAL AND SUBSEQUENTLY BURNED.

Underlain by: Concrete: Asphalt: Gravel:
Grass: X Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: LAB BUILDING CONTAMINATED WITH HIGH EXPLOSIVES THAT WAS BURNED. UNIT IS ALSO THE SITE OF THE CONTROL BUILDING.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 12.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: UNIT POSSIBLY CONTAINS HIGH EXPLOSIVES RESIDUES AND SCRAP METAL.

Source of Waste: HIGH EXPLOSIVE CONTAMINATED BUILDINGS WERE BURINED IN PLACE.

Disposition of Waste: WASTE RESIDUALS ON SITE.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

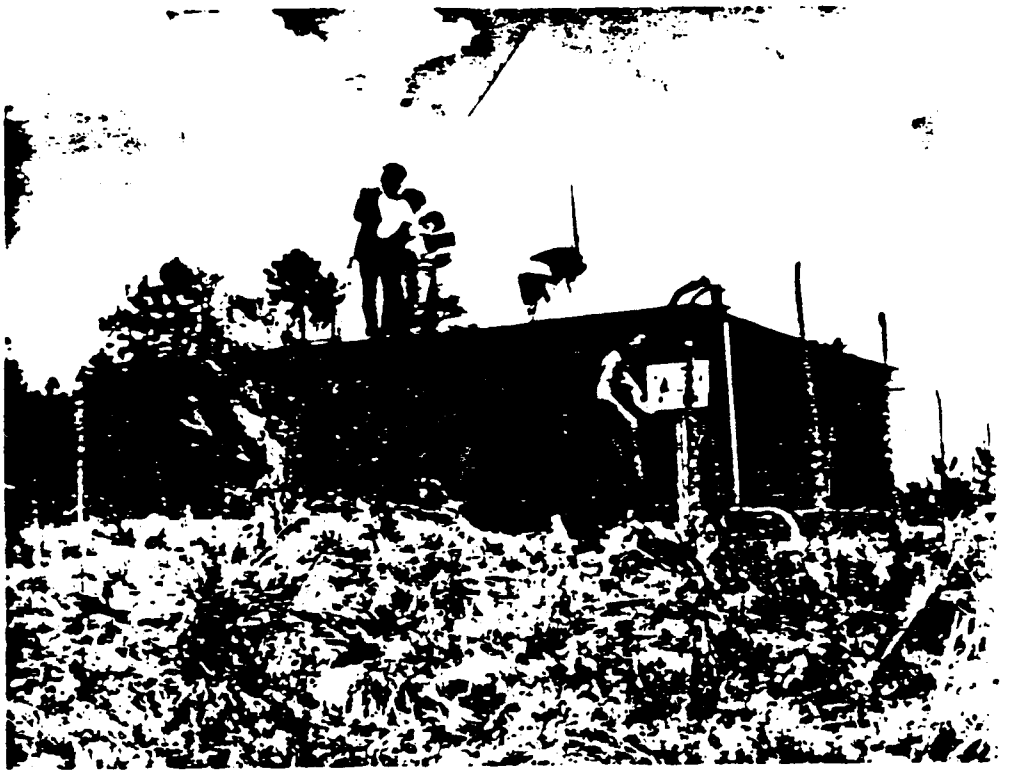
E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: UNIT CONTAINS OLD SCRAP METAL.

UNIT 12.002: L-SITE FIRING AREA - This inactive unit was seen during the VSI and consists of a metal encased firing pit 30 ft. wide by 40 long by 20 ft. deep. The top of the pit extends six ft. above the ground. The pit is constructed of steel, is underlain by soil, and was designed for use as a firing pit. This unit is suspected to have contained high explosives waste which was possibly radioactive. Strontium contaminated parts from old exposure devices were known to exist on-site. The pit operated from 1944 to 1953.



Metal Firing Pit Suspected of Containing High Explosive Waste.

UNIT 12.003: STRONTIUM RESEARCH AREA - The unit, which operated in the late 1940's, was believed to have included the strontium experimental research building (Building L-8). This unit was observed during the VSI to consist of an old wooden building and bunker covered with soil. The building was 50 ft. by 30 ft. by 6 ft. high and was designed for strontium experimentation. LANL personnel stated during the VSI that strontium contamination presently exists throughout the area as a result of the past experimentation activities. A diversion ditch designed for run-on and runoff control was observed adjacent to the unit.

Old Wooden Building and Bunker Designed for Strontium Research.
Bunker is Covered With Soil and Strontium
Contamination is Suspected to Exist Throughout the Area.

UNIT 12.004-12.005: TWO FIRING PITS - These two units (98, p.7 and 10, p. 3-2) are described as contaminated areas. Both units are inactive, outdoor units underlain by soil and are suspected to have contained radioactive waste, hazardous waste, depleted uranium and explosives. These areas are designated as areas of concern; however, since hazardous constituents may be present, they are potential SWMUs. Since these units were not visited during the VSI additional information may identify them as units 12.001 and 12.002, the L-site burn site and the L-site firing site, respectfully. No photos are available for these units.

This technical area is suspected to contain a single site which may have the potential to release hazardous constituents. There is no map available of this technical area.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 13

SWMUs
None

AOC
13.001 Contaminated area

TA-13: AREAS OF CONCERN

UNIT 13.001: CONTAMINATED AREA - This inactive unit (98, p. 7) consists of a canyon shelf suspected of containing radioactive wastes and radionuclides. No photo is available for this unit.

TA-14, Q Site

This is a firing site that is used for running various tests on relatively small explosive charges and for fragment impact tests.

In 1973, TA-14-2, "closed chamber", which contained uranium and high explosives contamination was removed from TA-14. Figure 16 is a map of TA-14.

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks, HE sumps) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 14

SWMUs	
14.001-14.002	Two thermal treatment facilities
14.003	Temporary drum storage
14.004	Incinerator
14.005	High explosive sump

AOC	
14.006	Closed chamber

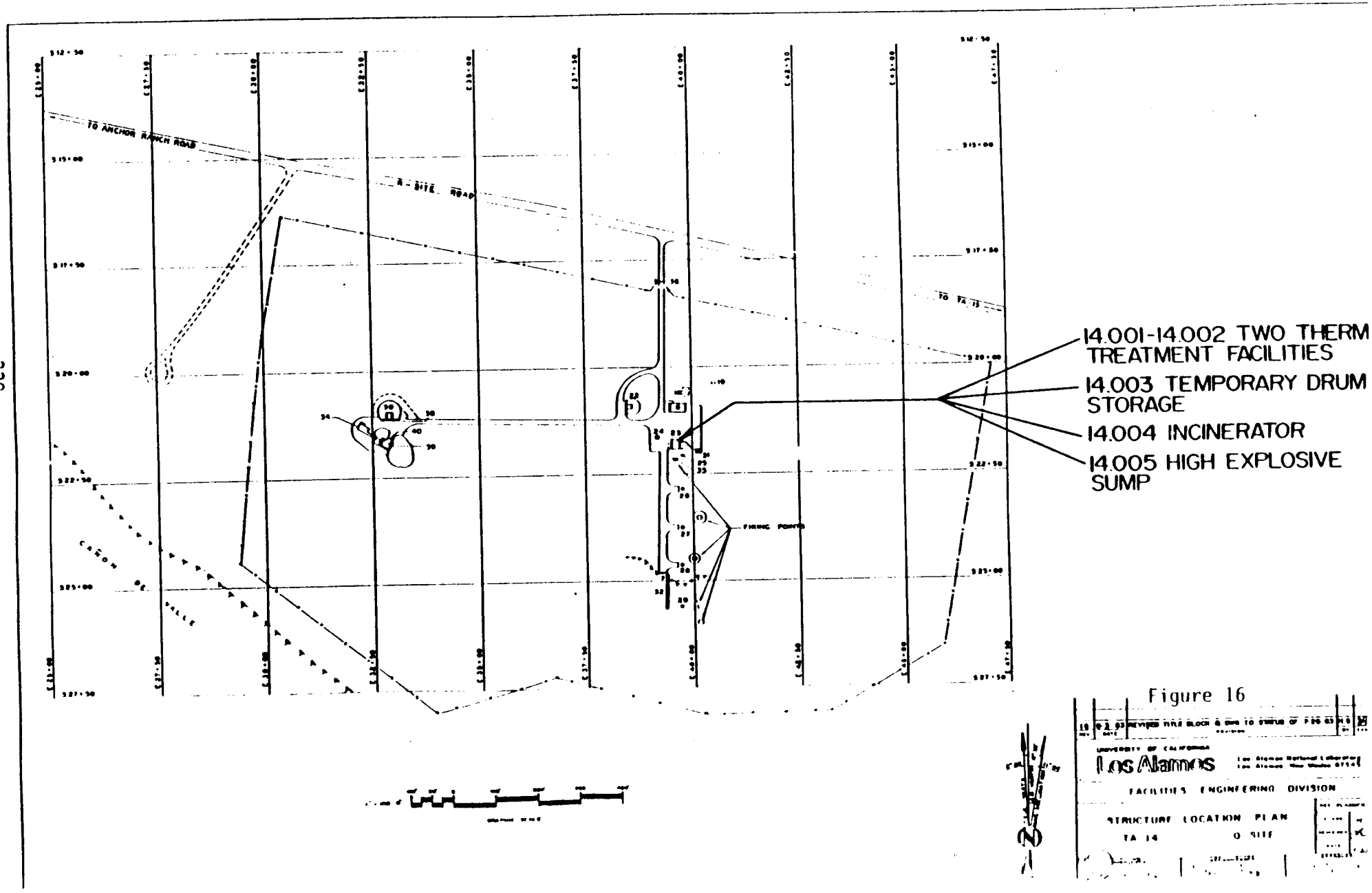

TO ANCHOR RANCH ROAD
R-SITE ROAD
CANYON DE VALLE
FIRING POINTS
14.001-14.002 TWO THERM TREATMENT FACILITIES
14.003 TEMPORARY DRUM STORAGE
14.004 INCINERATOR
14.005 HIGH EXPLOSIVE SUMP
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA 14
O SITE

Figure 16

Unit Number: 14.001-14.002

Unit Name: THERMAL TREATMENT FACILITIES

Location: TA-14

References: 57,P.9-4;65-MASTER TABLE; VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 14.001-14.002

A. DESCRIPTION

Unit Type: 2 THERMAL TREATMENT AREAS CONTAINING METAL CANISTERS USED TO BURN HIGH EXPLOSIVES WASTES.

Period of Operation: 1950 TO PRESENT

Dimensions/Volume: 3 FOOT HIGH CYLINDER, 1 FOOT DIAMETER

Material of Construction: METAL

Underlain by: Concrete: Asphalt: Gravel: X
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNITS ARE DESIGNED FOR EXPERIMENTAL TRASH DISPOSAL

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 14.001-14.002

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive: X	Metals:
Sludges:	EP Toxic:	

Particulars: UNITS CONTAIN RDX, HMX AND OTHER HIGH EXPLOSIVE WASTES AND FAILED EXPERIMENTAL DETONATIONS.

Source of Waste: CONTAMINATED PAPER; FAILED DETONATIONS.

Disposition of Waste: GOES TO TA-16

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THESE UNITS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: SOME CHARRED SOIL AROUND UNITS WAS OBSERVED DURING VSI.

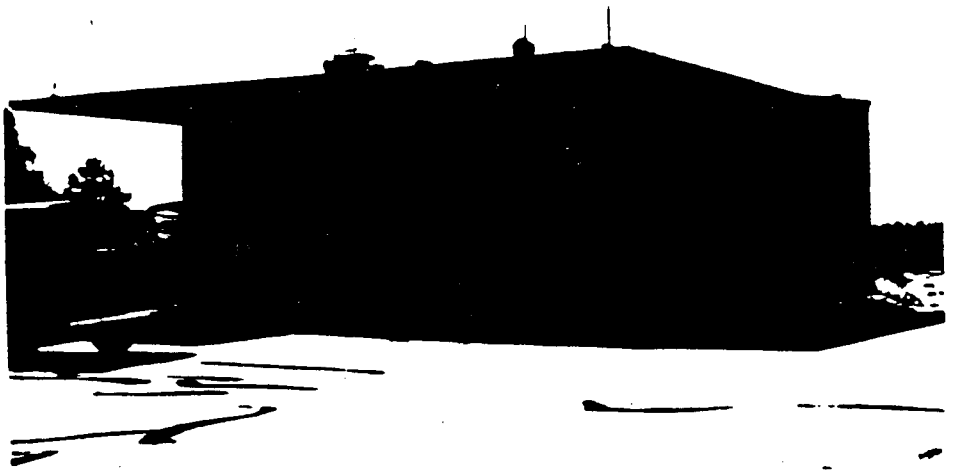
Detail of Past Releases: EXPLOSIVE WASTES ARE DETONATED DIRECTLY ON THE GROUND.

Unit Number: 14.003

Unit Name: TEMPORARY DRUM STORAGE

Location: TA-14

References: VSI LOG BOOK; 101, p. 4-1; 6



Building Used as a Temporary Storage Facility for RDX, HMX, and High Explosive Drummed Waste.

Unit Number: 14.003

A. DESCRIPTION

Unit Type: TEMPORARY STORAGE SATELLITE AREA

Period of Operation: 1950 TO PRESENT

Dimensions/Volume: THERE ARE APPROXIMATELY 20 TO 30 - 55 GALLON DRUMS ON A 40 SQUARE FOOT CONCRETE PAD OUTSIDE THE BUILDING IN THE PHOTOGRAPH.

Material of Construction: STEEL DRUMS ON CONCRETE, PARTIALLY COVERED

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: X Residences: Belowground:

Purpose of Unit: UNIT DESIGNED AS A TEMPORARY STORAGE FACILITY.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 14.003

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS RDX, HMX AND HIGH EXPLOSIVE WASTES AND CONTAMINATED PAPER.

Source of Waste: USED FOR STORAGE OF EXPLOSIVE WASTES AND CONTAMINATED PAPER.

Disposition of Waste: DISPOSED OF AT TA-16.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: REMOVAL OF A "CLOSED CHAMBER" CONTAINING ALPHA (URANIUM) AND HIGH EXPLOSIVE (HE) CONTAMINATION WAS COMPLETED IN 1973. ALSO, THERE WAS A CONTAMINATED SUMP ASSOCIATED WITH THIS AREA.

Unit Number: 14.004 Unit Name: INCINERATOR

Location: TA-14 References: 98, p.8

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 14.004

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS UNIT AS AN "INCINERATOR". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: DATA NOT AVAILABLE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DATA NOT AVAILABLE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 14.004

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES MANAGED AS HAZARDOUS AND SOLVENTS

Source of Waste: SOURCE IS UNKNOWN.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT VISITED DURING VSI.

Detail of Past Releases: DETAIL OF PAST RELEASES IS UNKNOWN.

Unit Number: 14.005

Location: TA-14-31

Unit Name

Refer

Disposition of Waste.

D. RELEASE CONTROLS

Liner:

Level Controls:

Details: DATA NOT AVAILABLE.

Diking:

Overflo

E. RELEASE HISTORY

Past Release to Air:

Past Release to Soil/GW:

Past Release to S.W.:

Past Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT VISITED DURI

VSI Noted R

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Detail of Past Releases: DETAIL OF PAST RELEASES IS UNKNOWN.

348

Access to High Explosive Contaminated Waste Sump.

Unit Number: 14.005

A. DESCRIPTION

Unit Type: SUMP WITH BASKETS TO CATCH HIGH EXPLOSIVE SLUDGE AND CHUNKS.

Period of Operation: 1950 TO PRESENT

Dimensions/Volume: 4'X 5'X 8' DEEP

Material of Construction: STEEL AND CONCRETE

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: X Aboveground:
Covered: X Residences: Belowground: X

Purpose of Unit: HIGH EXPLOSIVE WASTES

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 14.005

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: HIGH EXPLOSIVE CONTAMINATED WASTES

Source of Waste: WASH DOWNS

Disposition of Waste: NPDES OUTFALL

D. RELEASE CONTROLS

Liner:	Diking:	Sumps: X	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: 20 FT. UNDERGROUND LINE LEADS FROM BUILDING TO SUMP.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: RELEASES TO SURFACE WATER THROUGH NPDES PERMITTED OUTFALL

TA-14: AREAS OF CONCERN

UNIT 14.006: CLOSED CHAMBER - This unit (10, p. 4-1) was removed in 1973. The chamber unit is suspected to have contained high explosives and uranium. There is also a sump contaminated with high explosives believed to be associated with this unit. No photo is available for this unit.

TA-15, R Site

TA-15 is the location of PHERMEX, a multiple cavity electron accelerator capable of producing a very large flux of X-rays for use in the development and testing of certain weapons. This technical area (Figure 17) is also used for the investigation of weapon-functioning and weapon system behavior in non-nuclear tests, principally by electronic recording means.

Within TA-15 is an inactive Area Z, southeast of TA-15-183, where waste material has been pushed over a bank. Some of this material is covered by soil, but construction debris, sandbags and heavy woven cables are visibly evident.

Another disposal area in TA-15, Area N, is a pit "containing remnants of several structures from R-Site which had been exposed to explosives or chemical contamination." Its area is estimated at 0.10 acre.

Tons of uranium and multikilogram quantities of beryllium, mercury and lead have been expended in hydrodynamic testing in TA-15. Some detailed studies in the 1970s estimate that between 3,000 to 4,000 kg of uranium remain in the 0 to 5 cm soil layer within 200 m of the firing point, some of which has been transported from the site by rainwater runoff events.

Units which may be associated with the handling of hazardous constituents (e.g., underground storage tanks, sanitary tanks, NPDES outfalls, thermal treatment units, storage facilities) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 15

SWMUs	
15.001	Area N material disposal site
15.002	Acid sump
15.003	Thermal treatment facility
15.004	Landfill near 184

AOC	
15.005	Septic tank; Outfall J
15.006	Firing site
15.007	Ector site firing area
15.008-15.016	Nine contaminated areas
15.017	EF-site
15.018-15.021	Four oil storage tanks; Max Planck

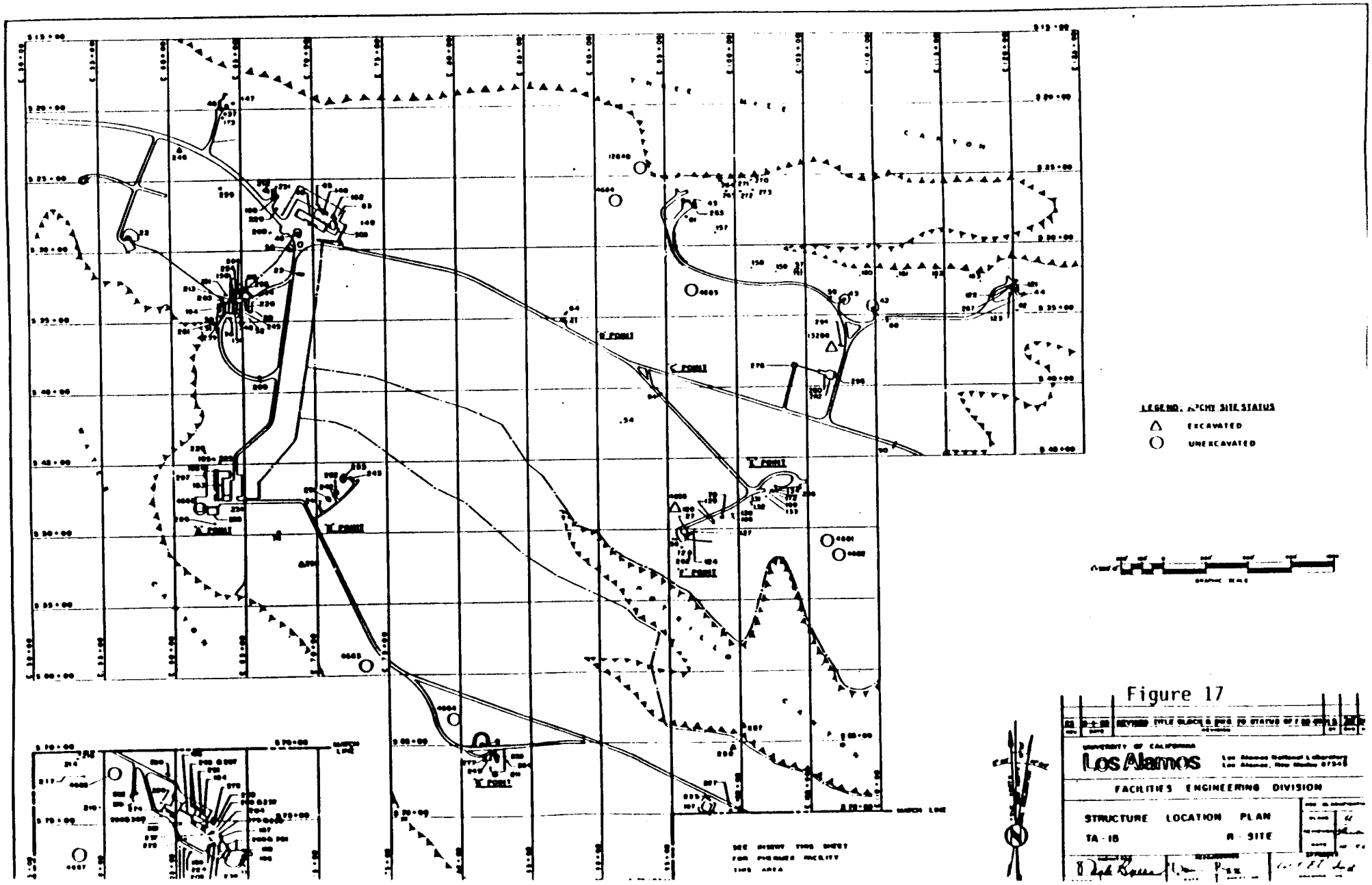

LEGEND: ACHE SITE STATUS
EXCAVATED
UNEXCAVATED
GRAPHIC SCALE
CANYON
"E" POND
"C" POND
"A" POND
"B" POND
"D" POND
MARKER LINE
SEE INSERT THIS SHEET FOR PHOENIX FACILITY THIS AREA
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA-18
R-SITE

Figure 17

Unit Number: 15.001 Unit Name: AREA N MATERIAL DISPOSAL SITE

Location: TA-15-R23 References: VSI LOG BOOK;10, p. 3-4

Markers in Photo Line a Soil and Grass Covered Trench Used in the Late 1940's to Late 1950's for the Disposal of Demolished Structures Contaminated with Chemicals and Explosives.

Unit Number: 15.001

A. DESCRIPTION

Unit Type: MATERIAL DISPOSAL AREA (BURIED PIT)

Period of Operation: LATE 1940'S, LATE 1950'S

Dimensions/Volume: 120' LONG X 5' WIDE

Material of Construction: SOIL COVERED TRENCH

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground: X

Purpose of Unit: UNIT DESIGNED FOR MATERIAL DISPOSAL OF DEMOLISHED STRUCTURES EXPOSED TO EXPLOSIVES OR CHEMICAL CONTAMINATION.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 15.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS CONSTRUCTION DEBRIS AND UNKNOWNS WITH POSSIBLE HIGH-EXPLOSIVE AND CHEMICAL CONTAMINATION.

Source of Waste: CONCRETE, BURNED LUMBER FROM DEMOLITION OF BUILDINGS.

Disposition of Waste: LEFT IN PLACE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE OBSERVED DURING VSI.

E. RELEASE HISTORY

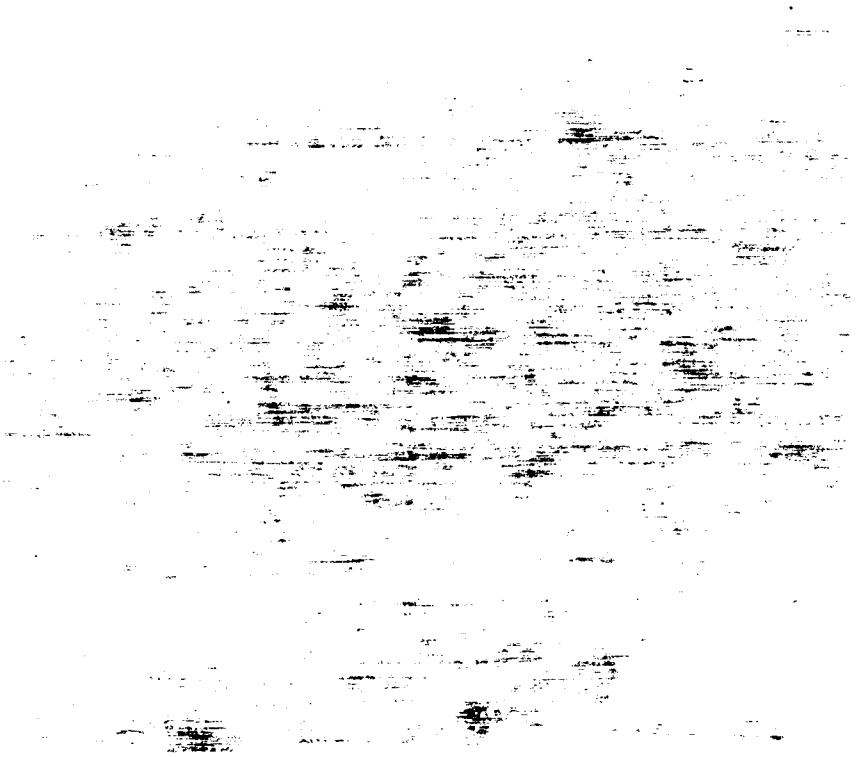
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 15.002 Unit Name: ACID SUMP

Location: TA-15 References: 98, P. 8



No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 15.002

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "SUMP". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS WASTES AND CHEMICALS.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 15.002

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES HANDLED AS HAZARDOUS AND CHEMICAL

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT OBSERVED DURING THE VSI.

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 15.003

Unit Name: THERMAL TREATMENT FACILITY

Location: TA-15

References: 57, P. 9-4; 65; MASTER TABLE

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 15.003

A. DESCRIPTION

Unit Type: THIS UNIT WAS IDENTIFIED AS ONE OF FOUR WASTE HIGH EXPLOSIVES DETONATION SITES (OTHER SITES REPORTEDLY LOCATED IN TA-14, 36 AND 39). THE SITE CONSISTS OF A FIRING PAD.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: ACCORDING TO CLOSURE PLAN ESTIMATES, THE MAXIMUM INVENTORY OF HAZARDOUS WASTE AT EACH THERMAL TREATMENT AREA IS 35 CUBIC FEET.

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: ROUTINE DETONATION OF SCRAP HIGH EXPLOSIVES, FAILED EXPERIMENTAL DETONATIONS, UNNEEDED CLASSIFIED EXPLOSIVES SHAPES, AND EXCESS HIGH EXPLOSIVES AND REACTIVE WASTES.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO DATA AVAILABLE

Unit Number: 15.003

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive: X	Metals:
Sludges:	EP Toxic:	

Particulars: WASTE AND SCRAP HIGH EXPLOSIVES, WASTE CLASSIFIED EXPLOSIVES SHAPES, FAILED EXPERIMENTAL DETONATIONS, AND REACTIVE WASTES.

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DETONATED AT UNIT

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: REFERENCES SUGGEST THAT RELEASE CONDITIONS MAY CAUSE SIGNIFICANT ENVIRONMENTAL IMPACT

Unit Number: 15.004 Unit Name: LANDFILL NEAR 184

Location: TA-15 References: 98, P. 9

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 15.004

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "LANDFILL". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF RADIOACTIVE WASTES, URANIUM

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO DATA AVAILABLE

Unit Number: 15.004

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENDITIFED THE WASTES HANDLED AS RADIOACTIVE WASTES AND URANIUM

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: IN PLACE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

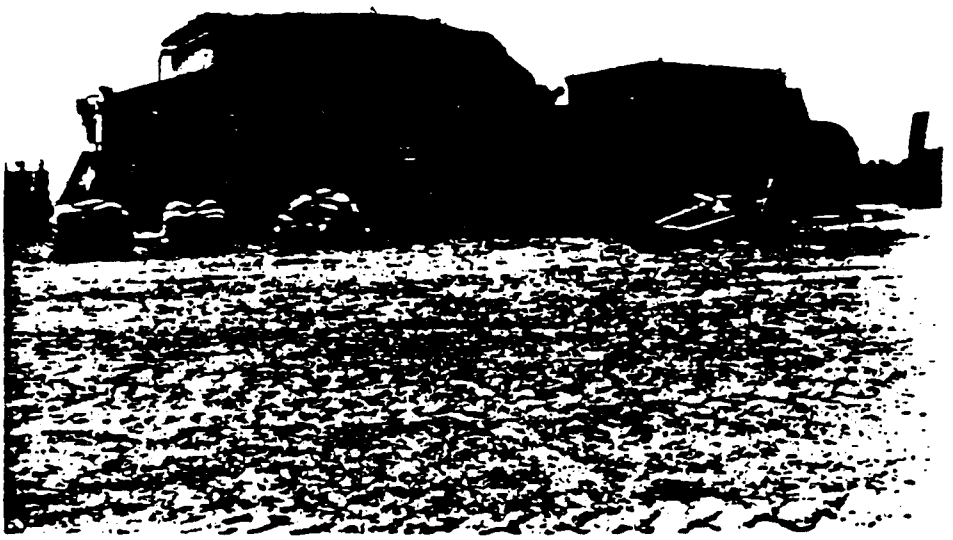
UNIT 15.005: SEPTIC TANK OUTFALL J - This unit (98, p. 9) is an inactive outfall suspected of having contained radionuclides and explosives. No photo is available for this unit.

UNIT 15.006: FIRING SITE - This active unit was identified during the VSI to be an open area firing site covering 1/4 acre of soil and grass. This unit was opened in 1950 and designed for the detonation of high explosives. This unit is constructed of sandbags and is suspected to contain residual radioactive metal from firing stands including old depleted uranium derived from the detonation of high explosives. Metal scraps and plastic chunks were noted at the canyon bottom during the VSI. Firing pads at the unit are suspected to have been contaminated with uranium, beryllium, mercury, and lead.

High Explosive Firing Site Containing Radioactive Metal
From Firing Stands and Old Uranium.
Note Scattered Debris (Sand Bags, etc.) in Left-Center of Photo.

UNIT 15.007: ECTOR SITE FIRING AREA - This active unit (98, p. 6) was identified during the VSI as an open area firing site for explosives, and contains x-ray machine films and explosion projectiles. This unit began operation in 1981 and is constructed of steel, sandbags and used (i.e., oily) elevator cables; containers of ethylene glycol and oil were observed

in the area. Spillage into secondary containment was noted during the VSI, in addition to an uncontrolled oily sheen that was observed on drainage water coming from the firing area. An estimated 25,000 cubic meters of soil are suspected to have been contaminated in this area (101, p. 2-2). Detailed studies in the 1970's indicated estimated quantities of 3000 to 4000 kilograms of uranium remaining in the 0 to 5 centimeter soil layer within 200 meters of the firing point. There are no present estimates available for the amount of beryllium, mercury, and lead, remaining in this area.



Sand Bags, Metal Buildings, and Used Elevator Cable
at an Active Explosives Firing Site.

UNIT 15.008-15.016: NINE CONTAMINATED AREAS - These units are described in the references as contaminated areas and it is unclear if these units are one in the same. These contaminated areas include an inactive vacuum pump oil disposal area (98, p. 8) suspected of containing pump oil, mercury, tritium, hazardous and radioactive waste; an inactive burn pit (98, p. 9) suspected of containing radioactive waste, hazardous waste, explosives, and radionuclides; a contaminated area (98, p. 8) at the IJ Site suspected of containing uranium, lead, beryllium, and hazardous and radioactive waste; and an inactive dry well (98, p. 8) suspected at being contaminated with chemical and hazardous waste. In addition, Area Z firing site/burn pad (10, p. 3-5) suspected of containing contaminated firing site debris; an active PHERMEX firing pad (6; 89, p.25; 98, p. 9) suspected of containing

x-rays, uranium, thorium, mercury, lead, beryllium, and hazardous and radioactive wastes; and other firing areas, test holes, and bunkers (98, p. 8; 98, p. 8;) suspected of being contaminated areas containing hazardous, radioactive, and explosive wastes. No photos are available for these units.

UNIT 15.017: EF-SITE - This inactive unit (10, p. 2-2, 98, p. 8) is a contaminated area. Unlike the Ector Site Firing Area, the EF-Site was described as being designed for hydrodynamic testing. No photo is available for this unit.

UNIT 15.018-15.021: FOUR OIL STORAGE TANKS; MAX PLANCK - This unit which was seen during the VSI consists of four tanks adjacent to the Max Planck area, and ranging in volume from 15 to 20,000 gallons. The tanks contain mineral oil and possibly ethylene glycol and are underlain by gravel and soil. Each unit is contained in a single excavated area surrounded by sand bags and concrete.

Four Oil Storage Tanks on an Excavated Pad Adjacent to Max Planck Area.

TA-16, S Site

TA-16 (Figures 18 and 19) is used for a variety of scientific investigations, including development, engineering design, pilot manufacture, environmental testing and stockpile production liaison for nuclear weapon warhead systems. In extensive facilities comprising this TA, the development and testing of high explosives, plastics and adhesives is developed.

Many scientific studies have been performed in TA-16 over the years in which Los Alamos National Laboratory has been operative. The former technical areas TA-13, TA-24 and TA-25 are now part of this area. Structures removed from TA-16 had known high explosives, uranium, strontium and radium contamination. In addition, a number of buildings contaminated with high explosives were simply abandoned. Poorly documented drainage fields full of high explosives have been removed, but others probably exist.

Water associated with sand filters used for dewatering high explosive sludge is discharged in the TA-16 area. High explosives settle out in a sump forming a sludge that is removed with a vacuum truck. The sludge is then transported to two sand filters, TA-16-401 and TA-16-406, where it is trapped, while the water drains to a lined holding pond. After the sand is dried, the high explosives are burned. Figure 20 is a schematic of the wastewater treatment system at TA-16.

Area P is a 6.7-acre site located in TA-16 at the edge of Canyon de Valle. Its principal use has been for the disposal of noncombustible debris remaining from burning structures which had been exposed to high explosive chemical contamination. The structures include old magazines and explosives buildings from TA-6, TA-9, TA-11 and TA-16. A number of other materials have been added over the years, including ashes from an incinerator in which combustible materials from TA-16 were burned, items which were suspected of being contaminated with high explosives (such as chemical bottles and buckets from operations at TA-16) and other general trash. This site is in the process of being closed in accordance with New Mexico Hazardous Waste Regulations.

Area R is a 2.27-acre site located at TA-16. It is described as follows: "The area was used as a burning ground for waste explosives prior to construction of the 132 Group Buildings and the present burning area. During the course of new construction, the ground surface was graded and pushed into the canyon."

Units which may be associated with the handling of hazardous constituents (e.g., underground storage tanks, sanitary tanks, NPDES outfalls, thermal treatment units, landfills, surface impoundments, HE sumps) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 16

SWMUs

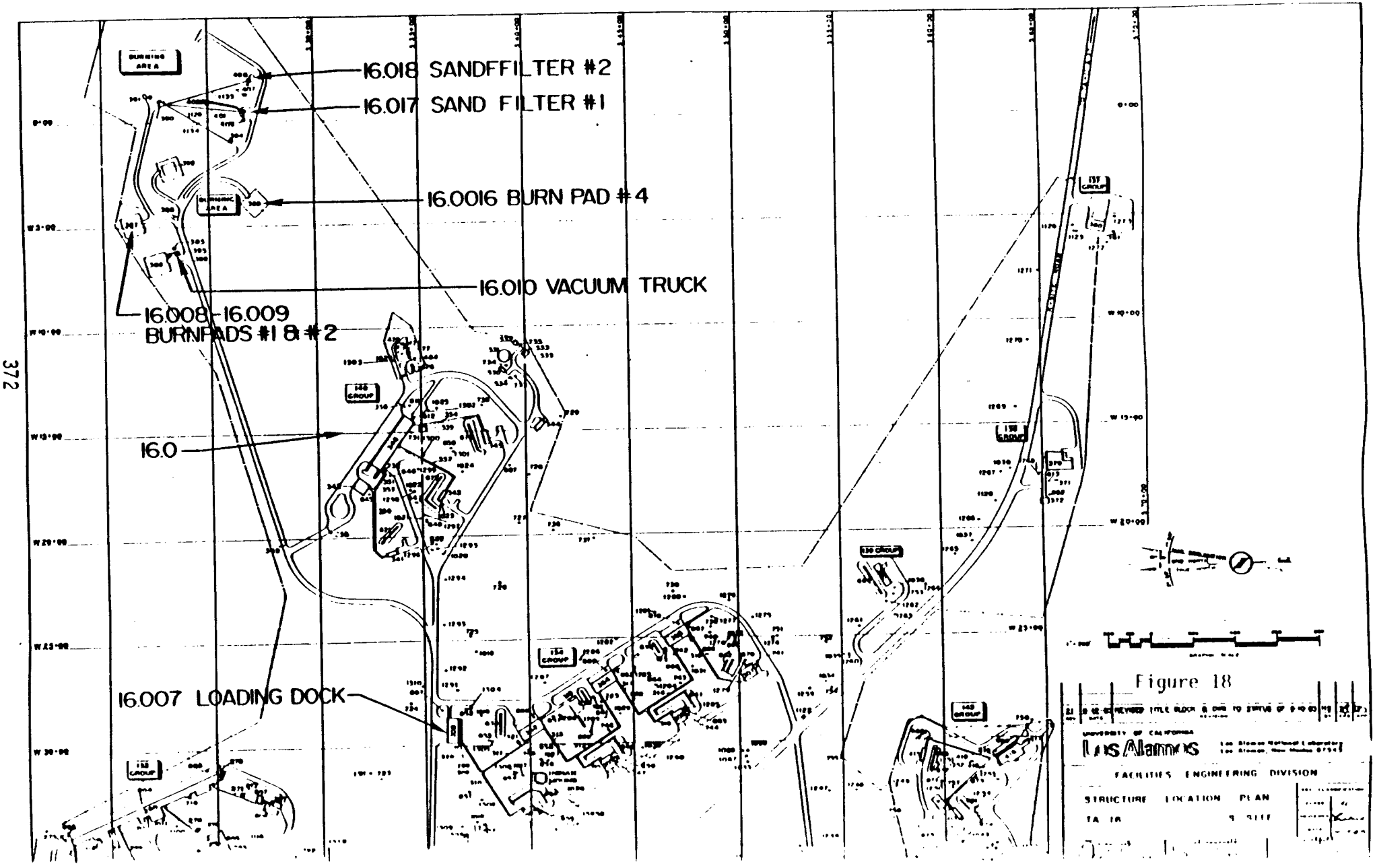
16.001-16.004	Four evaporation ponds
16.005	Lagoon #1
16.006	Lagoon #2
16.007	Loading dock of Bldg. 300
16.008-16.009	Burn pads #1 and #2
16.010	Vacuum truck
16.011	Incinerator
16.012	HE sludge sump
16.013	S-site sumps
16.014	Temporary storage area
16.015	Sand burn pad #3
16.016	Sand burn pad #4
16.017	Sand filter #1
16.018	Sand filter #2
16.019	Lagoon #3
16.020-16.021	Two solvent burn pads
16.022-16.027	Six solvent sumps
16.028**	Area P landfill
16.029	Old ponds

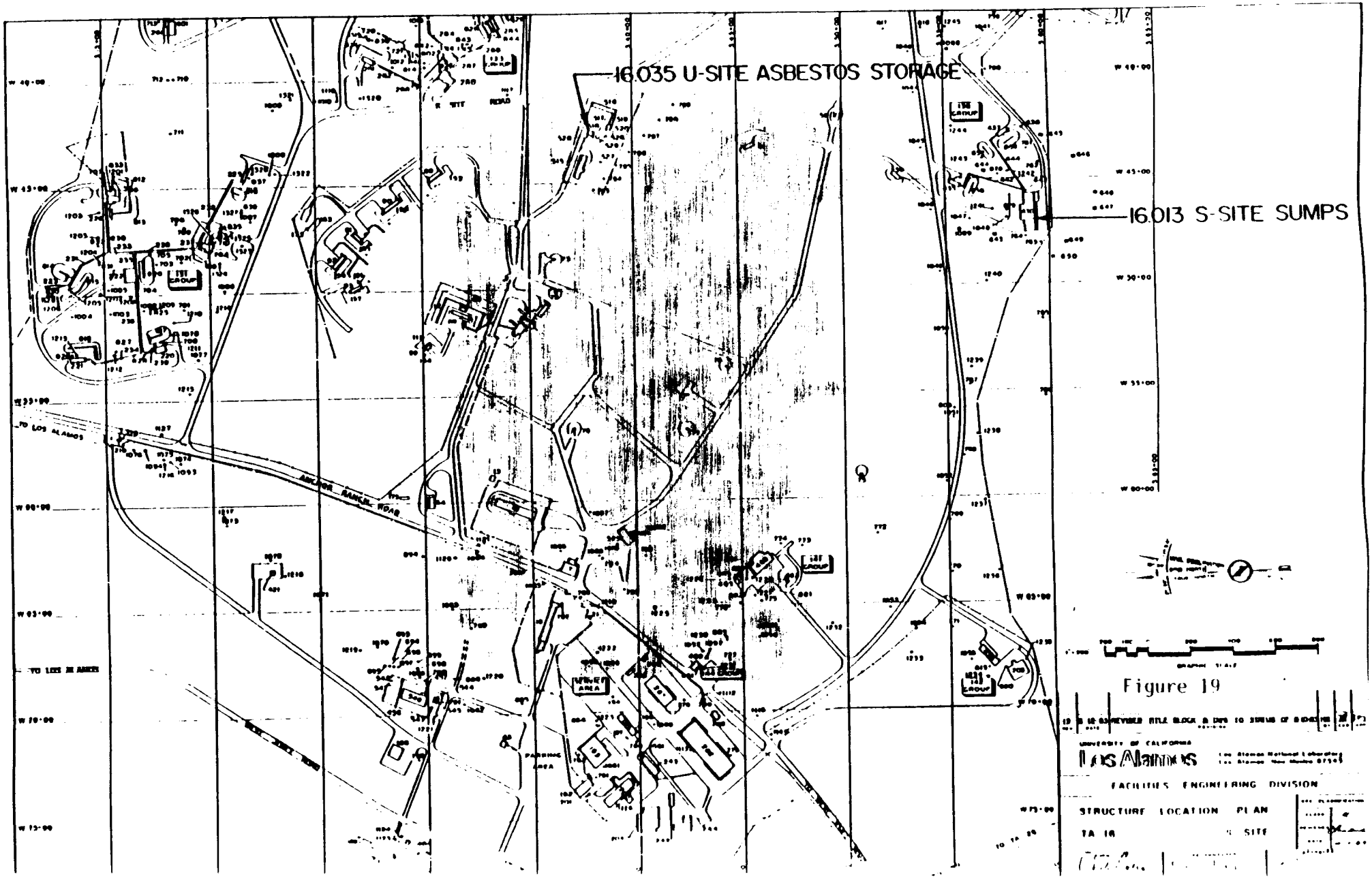
AOC

16.030	Septic tank
16.031-16.033	Three burn pit areas
16.034	Hydraulic fluid drum storage
16.035	U-site asbestos storage
16.036	Several contaminated areas
16.037	Firing sites
16.038-16.039	Sumps and outfalls
16.040	Dry wells
16.041-16.046	Six storage tanks
16.047	Shafts
16.048	Wastewater treatment plant
16.049-16.060	12 NPDES outfalls
16.061	Chemical storage
16.062	S-site

** Closure Plan Submitted

A closure plan has been submitted for a surface impoundment in this technical area. It could not be identified which unit this plan pertains to.


16.018 SANDFFILTER #2
16.017 SAND FILTER #1
16.0016 BURN PAD #4
16.010 VACUUM TRUCK
16.008-16.009
BURNPADS #1 & #2
16.0
16.007 LOADING DOCK
Figure 18
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA 16


16.035 U-SITE ASBESTOS STORAGE
16.013 S-SITE SUMPS
TO LOS ALAMOS
ANCHOR RANCH ROAD
TO LOS ALAMOS
Figure 19
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA 16
S SITE

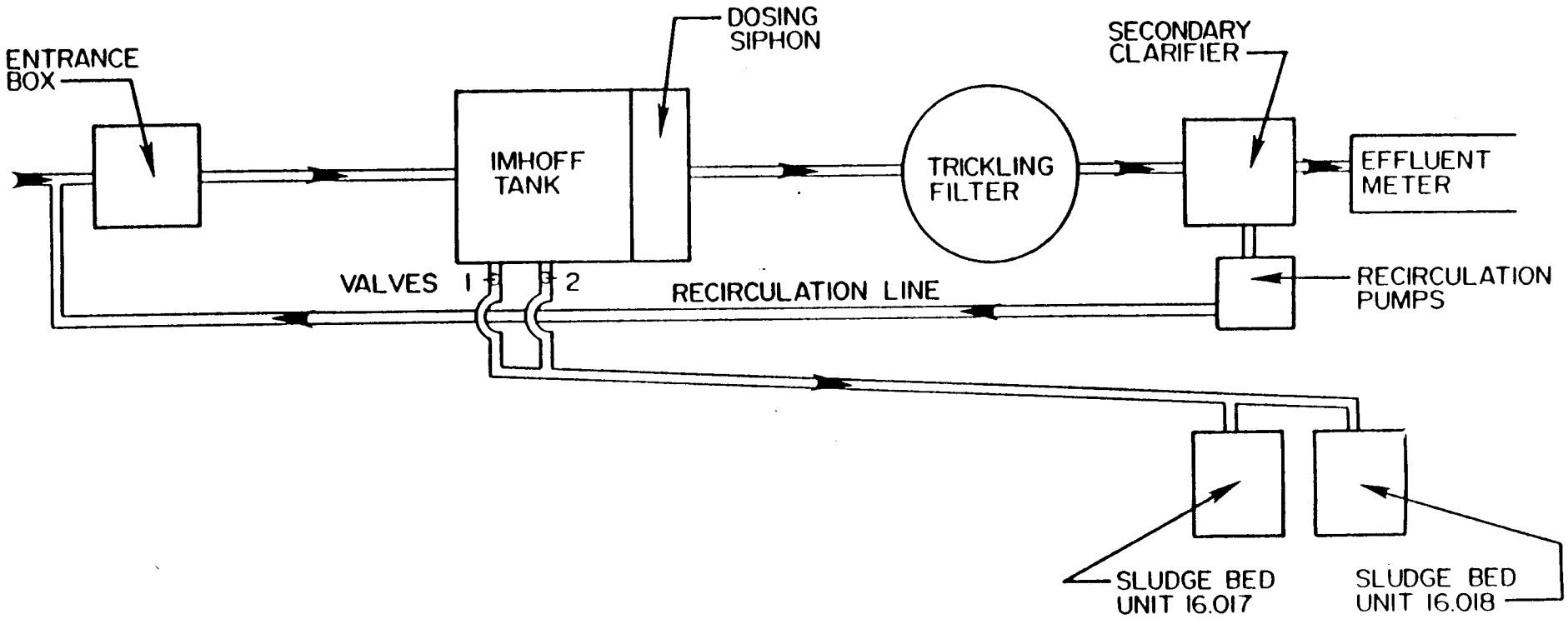


FIGURE 20. EXIBIT SCHEMATIC OF TA-16 PLANT

Unit Number: 16.001-16.004 Unit Name: FOUR EVAPORATION PONDS

Location: TA-16 References: VSI LOG BOOK

Four Ponds Used to Collect Explosive and Chemical Waste Effluent from the X-ray Building.

Unit Number: 16.001-16.004

A. DESCRIPTION

Unit Type: FORMER EVAPORATION PONDS, NO OUTFLOW, PRESENTLY A GRASS FIELD.

Period of Operation: LATE 1940'S.

Dimensions/Volume: ESTIMATED TO BE 50 TO 75 SQ. FT.

Material of Construction: EXCAVATED EARTH.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR COLLECTING EFFLUENT OF EXPLOSIVE/CHEMICAL WASTES FROM X-RAY BUILDINGS (OLD FABRICATION BUILDING).

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: NOT TESTED FOR REMOVAL OF WASTES.

Unit Number: 16.001-16.004

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTE WATERS FROM EXPLOSIVE, CHEMICAL AND X-RAY STUDIES.

Source of Waste: OLD FABRICATION BUILDING.

Disposition of Waste: DIRECT DISCHARGE, POSSIBLY EVAPORATION/PERCOLATION.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air: X	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: UNIT WAS DESIGNED FOR EVAPORATION/PERCOLATION OF WASTES

Unit Number: 16.005 Unit Name: LAGOON #1

Location: TA-16-89 References: VSI LOG BOOK

Remains of a Lagoon (Center, Behind Fence) Which Was Used to Collect Effluent From Explosive Fabrication Building.

Unit Number: 16.005

A. DESCRIPTION

Unit Type: LAGOON, PRESENTLY A PARTIALLY VEGETATED DEPRESSION.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 100' X 250'

Material of Construction: SOIL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT COLLECTED EFFLUENT FROM EXPLOSIVE FABRICATION BUILDING.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.005

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGED EXPLOSIVES AND WASTE WATERS.

Source of Waste: OLD FABRICATION BUILDING.

Disposition of Waste: EVAPORATION/PERCOLATION.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air: X	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: UNIT WAS DESIGNED FOR EVAPORATION/PERCOLATION OF WASTES.

Unit Number: 16.006 Unit Name: LAGOON #2

Location: TA-16-93 References: VSI LOG BOOK

No Photo is Available for this Unit. Photo of Similar Lagoon is in Unit 16.005.

Unit Number: 16.006

A. DESCRIPTION

Unit Type: LAGOON

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 100' X 250'

Material of Construction: SOIL

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT COLLECTS EFFLUENT FROM EXPLOSIVES FABRICATION BUILDING.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.006

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES EXPLOSIVES.

Source of Waste: ASSUMED TO BE FROM EXPLOSIVE FABRICATION BUILDING.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS NOTED DURING VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.007 Unit Name: LOADING DOCK OF BUILDING 300

Location: TA-16-300 References: VSI LOG BOOK

Loading Dock at Building 300. Steel Drums are Used to Store Barium Nitrate Waste.

Unit Number: 16.007

A. DESCRIPTION

Unit Type: LOADING DOCK, STORAGE OF BARIUM NITRATE WASTE DRUMS

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: LOADING DOCK IS 10' X 100'; DRUMS ARE 55 GALLONS.

Material of Construction: CONCRETE LOADING DOCK SURROUNDED BY ASPHALT; DRUMS ARE STEEL.

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE STORAGE OF WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.007

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: BARIUM NITRATE WASTE.

Source of Waste: TA-16.

Disposition of Waste: DATA NOT AVAILABLE; POSSIBLE DISPOSITION POINT IS TA-54.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT IS SURROUNDED BY ASPHALT PARKING LOT; NO OTHER RELEASE CONTROLS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.008-16.009 Unit Name: BURN PADS #1 AND #2

Location: TA-16-387

References: VSI LOG BOOK; 6 P. 4; 11, P. 2-2; 57, P. 9-5, 9-6; 96, ENCL. 20, ATTCH. 5, P. 1

Burn Pads Used to Flash Burn High Explosive Contaminated Material. Note Lack of Release Controls in the Area.

Unit Number: 16.008-16.009

A. DESCRIPTION

Unit Type: TWO BURN PADS

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 8' X 8'

Material of Construction: SAND WITH SHEETS OF METAL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO FLASH BURN HIGH EXPLOSIVE CONTAMINATED MATERIAL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.008-16.009

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES EXPLOSIVES AND HIGH EXPLOSIVE CONTAMINATED MATERIAL.

Source of Waste: TA-16.

Disposition of Waste: BURNED, RESIDUE LEFT IN PLACE; CONTAMINATED EQUIPMENT IS DISPOSED OF AT AREA P (PIPE, ETC.).

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.010 Unit Name: VACUUM TRUCK

Location: TA-16-389 References: VSI LOG BOOK

Truck on Right Used to Vacuum High Explosive Contaminated Liquids from Sumps at TA-16 and TA-11.

Unit Number: 16.010

A. DESCRIPTION

Unit Type: VACUUM TRUCK.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 600 GALLONS.

Material of Construction: STAINLESS STEEL.

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: TRUCK IS PARKED ON ASPHALT PRIOR TO REMOVAL OF HIGH EXPLOSIVE CONTAMINATED WATER.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.010

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable: X	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: HIGH EXPLOSIVE CONTAMINATED LIQUIDS.

Source of Waste: PUMP DIRECTED FROM SUMPS AT TA-16 AND TA-11.

Disposition of Waste: BURN PADS AND SAND FILTER IN TA-16.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.011

Unit Name: INCINERATOR

Location: TA-16-412

References: VSI LOG BOOK; 88 p.3; 65, MASTER TABLE, P. 3-3;98, P. 10; 88, P. 3; 101, ATTCH. 2, P. 3

Incinerator with Cage, Used to Burn Explosives and Contaminated Paper Products.

Unit Number: 16.011

A. DESCRIPTION

Unit Type: INCINERATOR.

Period of Operation: LATE 1950'S TO PRESENT.

Dimensions/Volume: 20' X 20' X 6'

Material of Construction: BASE IS THE REMAINS OF A CONCRETE BUILDING BASEMENT.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE BURNING OF EXPLOSIVES ALONG WITH PAPER AND CARDBOARD WHICH HAD BEEN IN CONTACT WITH HIGH EXPLOSIVES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.011

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: EXPLOSIVES, PAPER, CARDBOARD, ELECTRICAL WIRES, FURNITURE

Source of Waste: TA-16

Disposition of Waste: BURNED; DISPOSITION OF ASH IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: A CAGE OVER THE TOP OF THE UNIT TO MINIMIZE THE DISPERSAL OF WIND-BLOWN PARTICULATES.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI; HOWEVER, UNIT WAS OBSERVED DURING A NON-OPERATIONAL PERIOD, AND ACTUAL CONDITIONS DURING OPERATION ARE UNKNOWN.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.012

Unit Name: HIGH EXPLOSIVES SLUDGE SUMP

Location: TA-16-1026

References: VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 16.012

A. DESCRIPTION

Unit Type: SUMP (FORMERLY P-SITE AND TA-13).

Period of Operation: 1943 TO 1947

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO COLLECT HIGH EXPLOSIVE SLUDGE FROM TESTING OF NEW HIGH EXPLOSIVE FORMULATION, MACHINING OPERATION.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.012

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINED SCRAP HIGH EXPLOSIVES.

Source of Waste: FORMULATION OF HIGH EXPLOSIVES.

Disposition of Waste: WASTES WERE SIPHONED FROM THE SUMP AND BURNED.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.013 Unit Name: S-SITE SUMPS

Location: TA-16-430 References: VSI LOG BOOK

Unit Designed to Collect Explosive Powder/Water From Building 430. Unit is Surrounded by Paved Parking Lot.

Unit Number: 16.013

A. DESCRIPTION

Unit Type: SUMPS.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 4'DEEP X 4'WIDE X 10'LONG

Material of Construction: CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO COLLECT EXPLOSIVE POWDER/WATER FOR DISPOSAL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.013

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT CONTAINS EXPLOSIVES.

Source of Waste: BUILDING 430.

Disposition of Waste: VACUUM SIPHONED INTO TANK AND DISPOSED OF AT TA-16 BURN AREA.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: SURROUNDED BY PAVED PARKING LOT; NO OTHER RELEASE CONTROLS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES FROM THE SUMPS ARE KNOWN TO HAVE OCCURRED. HOWEVER, AT S-SITE THERE ARE REPORTS OF POORLY DOCUMENTED DRAINFIELDS CONTAINING HIGH EXPLOSIVES THAT HAVE BEEN REMOVED FROM THE AREA, AND THE POSSIBILITY OF OTHERS EXISTS. THERE ARE ALSO ABANDONED BUILDINGS CONTAMINATED WITH HIGH EXPLOSIVES (101, P. 2-3).

Unit Number: 16.014

Unit Name: TEMPORARY STORAGE AREA

Location: TA-16

Reference: VSI LOG BOOK

Photo is with Unit No. 16.016 Description.

Unit Number: 16.014

A. DESCRIPTION

Unit Type: STORAGE AREA FOR ASH FROM BURN AREA, LESS THAN 90 DAYS DRUM STORAGE, NEXT TO S-401; SIMILAR AREAS ARE LOCATED AT EACH OF THE SIX BURN PADS.

Period of Operation: EARLY 1950'S TO PRESENT.

Dimensions/Volume: 4'X 6' AREA, 55 GALLON DRUMS.

Material of Construction: STEEL DRUMS ON SOIL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED AS A TEMPORARY (<90 DAYS) STORAGE FOR ASH FROM BURN AREA. ORIGINALLY ONLY 2 BURN PADS, BUT EXPANDED TO PRESENT DAY OPERATION.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.014

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES ASH RESIDUE FROM EXPLOSIVE BURNS.

Source of Waste: TANK SLURRIES RECEIVED FROM TA-16 AND NEIGHBORING SITES.

Disposition of Waste: WATER TO LAGOON; EXPLOSIVES BURNED ON SAND PAD.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ASSOCIATED WITH THIS UNIT; DRUMS ARE CLOSED.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.015

Unit Name: SAND BURN PAD #3

Location: TA-16-S389

References: VSI LOG BOOK; 11, P. 2-2; 57, P. 9-5, 9-6; 96, ENCL. 20, ATTCH. 5, P. 1

Photo is with Unit No. 16.016 Description.

Unit Number: 16.015

A. DESCRIPTION

Unit Type: BURN PAD.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: APPROXIMATELY 12 SQ. FEET.

Material of Construction: BRICK LINED WITH SAND.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO BURN FRAGMENTS OF HIGH EXPLOSIVES IGNITED WITH KEROSENE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.015

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic: X	

Particulars: UNIT CONTAINS EXPLOSIVES, POSSIBLY RESIDUAL KEROSENE FROM IGNITION. SAND FROM BURN PAD IS EP TOXIC FOR BARIUM.

Source of Waste: TA-16 AND ADJACENT AREAS.

Disposition of Waste: BURNED; RESIDUE IS DRUMMED, SAMPLED AND SENT TO TA-54.

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: SMALL DIKE AROUND UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.016

Unit Name: SAND BURN PAD #4

Location: TA-16-S388

References: VSI LOG BOOK; 6 p.4; 11, P. 2-2; 57, P. 9-5, 9-6; 96, ENCL. 20, ATTCH. 5, P. 1

Sand Burn Pad Surrounded by Brick, Used to Burn High Explosive Fragments. Note Small Dike Around the Unit. The Drums Located Behind and to the Left of the Unit are used for Temporary Storage of Ash Collected from the Burn Pad.

Unit Number: 16.016

A. DESCRIPTION

Unit Type: BURN PAD.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: APPROXIMATELY 12 SQ. FEET.

Material of Construction: BRICK LINED WITH SAND.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO BURN FRAGMENTS OF HIGH EXPLOSIVES IGNITED WITH KEROSENE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.016

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic: X	

Particulars: UNIT CONTAINS EXPLOSIVES, POSSIBLY RESIDUAL KEROSENE FROM IGNITION. SAND FROM BURN PAD IS EP TOXIC FOR BARIUM.

Source of Waste: TA-16 AND ADJACENT AREAS.

Disposition of Waste: WASTE IS BURNED. RESIDUE IS DRUMMED, SAMPLED AND TAKEN TO TA-54; CONTAMINATED SAND WAS PREVIOUSLY DISPOSED OF AT AREA P.

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: SMALL DIKE AROUND UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.017

Unit Name: SAND FILTER #1

Location: TA-16-S401

References: VSI LOG BOOK; 6 p.4

Photo is with Unit No. 16.018 Description.

Unit Number: 16.017

A. DESCRIPTION

Unit Type: SAND FILTER USED FOR THERMAL DESTRUCTION

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: CIRCULAR, 4' RADIUS X 8'CIRCUMFERENCE

Material of Construction: STEEL LINED WITH BRICK.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT BURNS EXPLOSIVES FROM SUMPS THROUGHOUT TA-16 AND TA-11.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.017

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS EXPLOSIVES FROM SUMPS.

Source of Waste: SUMPS THROUGHOUT TA-16 AND TA-11.

Disposition of Waste: EXPLOSIVES ARE BURNED; CONTAMINATED SOLIDS ARE LANDFILLED; LIQUIDS ARE DISPOSED OF IN A LAGOON.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

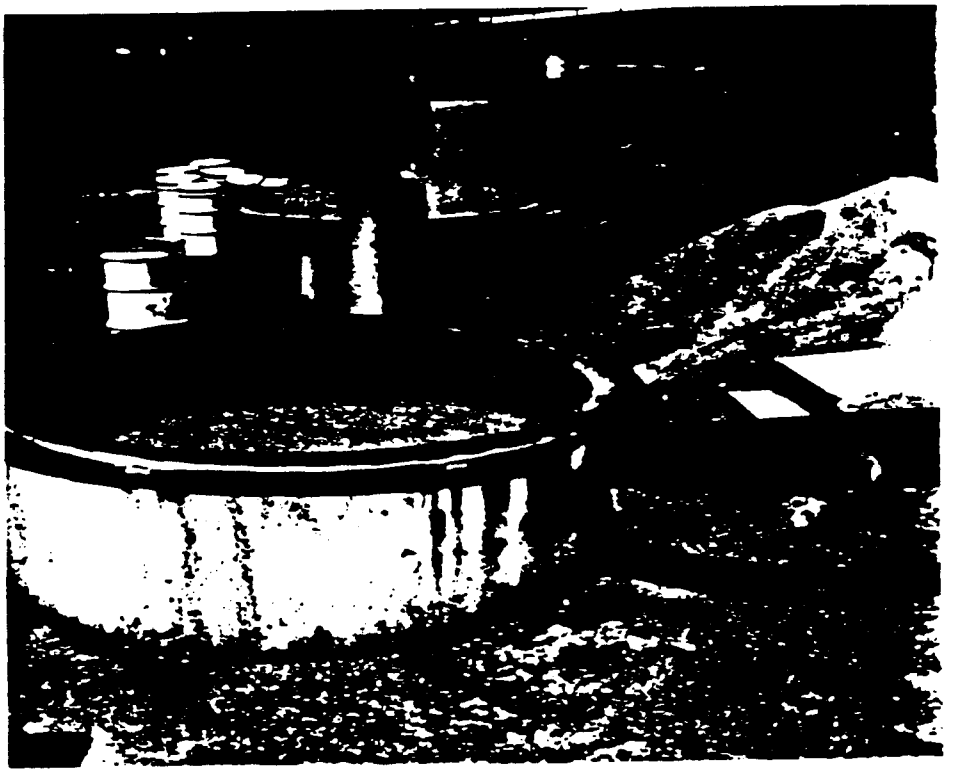
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.018 Unit Name: SAND FILTER #2

Location: TA-16-S406 References: VSI LOG BOOK; 6 p.4



Circular Sand Filter Used to Burn Explosive Solids and Liquids from Sumps in TA-16 and TA-11. Note Lack of Release Controls Around Unit.

Unit Number: 16.018

A. DESCRIPTION

Unit Type: SAND FILTER USED FOR THERMAL DESTRUCTION.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: CIRCULAR, 4' RADIUS X 8'CIRCUMFERENCE

Material of Construction: STEEL LINED WITH BRICK.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT BURNS EXPLOSIVES FROM SUMP THROUGHOUT TA-16 AND TA-11.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.018

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES EXPLOSIVES FROM SUMP.

Source of Waste: SUMPS THROUGHOUT TA-16 AND TA-11.

Disposition of Waste: EXPLOSIVES ARE BURNED; CONTAMINATED SOLIDS ARE LANDFILLED; LIQUIDS ARE DISPOSED OF IN A LAGOON.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.019

Unit Name: LAGOON #3

Location: TA-16

References: VSI LOG BOOK; 66, P. 1; 96, ENCL. 20, ATTCH. 5, P. 3

A. Lined Lagoon Containing Liquids from High Explosive Slurries Drained from Burn Pads. Note that Liquid is Removed by Siphoning. See Additional Photo on the Following Page.

B. Sides of Hypalon Lined Lagoon

Unit Number: 16.019

A. DESCRIPTION

Unit Type: LAGOON LINED WITH HYPALON.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 60'LONG X 35'WIDE X 4'DEEP

Material of Construction: EXCAVATED SOIL LINED WITH HYPALON.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT RECEIVES LIQUIDS DRAINED THROUGH SAND FILTERS AT BURN PADS.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: CLOSURE PLAN; NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.019

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: LIQUIDS FROM HIGH EXPLOSIVE SLURRIES.

Source of Waste: WATER FROM WATER/HIGH EXPLOSIVES SLURRIES IN SAND FILTERS (TA-16-S406, S401).

Disposition of Waste: NPDES PERMITTED DISCHARGE (SIPHONED)

D. RELEASE CONTROLS

Liner: X	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT IS LINED BY HYPALON; THERE IS NO DISCHARGE PIPE; UNIT IS DRAINED BY SIPHONING.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

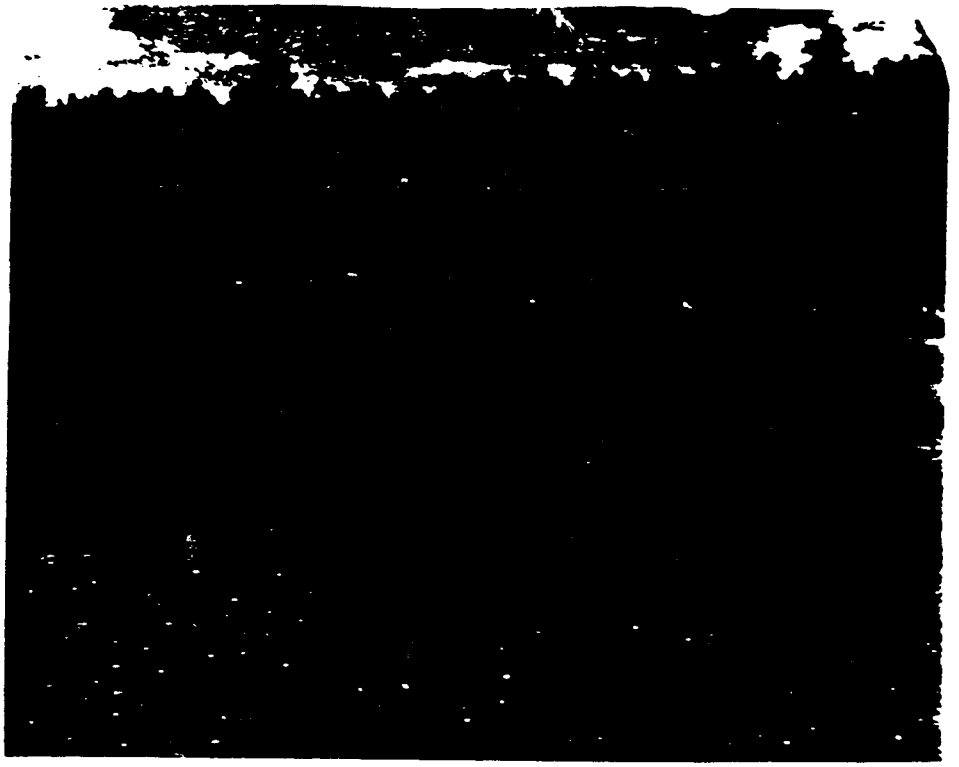
VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.020-16.021 Unit Name: TWO SOLVENT BURN PADS

Location: TA-16 References: VSI LOG BOOK; 6 p.4

A. Burn Pads Covered with Steel and Lined with Brick. Drum in Right Foreground Stores Barium Contaminated Equipment. See Additional Photo on Following Page.



B. Access Road to Burn Pads. Note Staining on Asphalt.

Unit Number: 16.020-16.021

A. DESCRIPTION

Unit Type: BURN PADS (2)

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 20 FEET BY 40 FEET, 1 - 55 GALLON DRUM ON SOIL.

Material of Construction: SAND PADS, STEEL LINED WITH BRICK.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT BURNS HIGH EXPLOSIVES CONTAMINATED SOLVENTS AND HYDRAULIC OIL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.020-16.021

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable: X	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: HIGH EXPLOSIVES CONTAMINATED SOLVENTS AND HYDRAULIC OIL.

Source of Waste: TA-16 AND ADJACENT AREAS.

Disposition of Waste: WASTE IS BURNED, DRUMMED, TESTED, THEN TAKEN TO TA-54. ONE DRUM WAS LABLED "BARIUM"; CONTAMINATED EQUIPMENT, PIPE, ETC. IS DISPOSED OF AT AREA P.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: OTHER DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: STAINING ON ROAD LEADING TO UNIT OBSERVED DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 16.022-16.027 Unit Name: SIX SOLVENT SUMPS

Location: TA-16-340 References: VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 16.022-16.027

A. DESCRIPTION

Unit Type: SUMPS (6)

Period of Operation: DATA NOT AVAILABLE, HOWEVER, UNITS ARE CURRENTLY INACTIVE.

Dimensions/Volume: EACH IS APPROXIMATELY 2'WIDE X 4'LONG X 2'DEEP

Material of Construction: CONCRETE.

Underlain by:	Concrete:	Asphalt:	Gravel:
	Grass:	Soil: X	

Environmental:

Indoors:	Close to Surface Water:	In Ground: X
Outdoors: X	Close to Drinking Water:	Aboveground:
Covered:	Residences:	Belowground:

Purpose of Unit: UNIT FORMERLY COLLECTED SOLVENT-CONTAMINATED WATER FROM BUILDING 340; HIGH EXPLOSIVE RESIDUE MAY ALSO HAVE BEEN PRESENT.

B. CLOSURE INFORMATION

Active:	Inactive/Physically Present: X
Inactive/Removed or Dismantled:	Closed Under State or EPA:
Regulatory Status:	

Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 16.022-16.027

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: SOLVENT-CONTAMINATED WATER.

Source of Waste: PRESUMED TO BE BUILDING 340.

Disposition of Waste: DATA NOT AVAILABLE.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE OBSERVED DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 16.028

Unit Name: AREA P LANDFILL

Location: TA-16

References: 6, p.4; 69, p.1; 77, p.1,24; 78, p.2; VSI LOG BOOK

Edge of Canyon (Right) witn Area P Landfill on Left. Note Material Pushed Over Side of Canyon.

Unit Number: 16.028

A. DESCRIPTION

Unit Type: LANDFILL.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: SEVERAL ACRES.

Material of Construction: SOIL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT DESIGNED FOR THE DISPOSAL OF WASTES (BUILDINGS DISMANTLED FROM AREA) AND ASH PRIOR TO 1985. UNIT IS IN THE PROCESS OF BEING CLOSED IN ACCORDANCE WITH NEW MEXICO HAZARDOUS WASTE REGULATIONS.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: CLOSURE PLAN HAS BEEN SUBMITTED; NO OTHER DATA AVAILABLE.

Unit Number: 16.028

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic: X	

Particulars: UNIT CONTAINS EXPLOSIVES WITH POSSIBLE BARIUM CONTENT, CONSTRUCTION MATERIAL AND ASH.

Source of Waste: BUILDINGS DISMANTLED FROM AREA; CONTAMINATED SAND FROM TA-16-388 AND 399; CONTAMINATED EQUIPMENT FROM FLASH BURNING AT TA-16.

Disposition of Waste: IN PLACE.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: MATERIAL FALLING INTO CANYON WAS OBSERVED DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 16.029

Unit Name: OLD PONDS

Location: TA-16

References: 98, P. 9; 53, P. 2; 65, MASTER TABLE, P. 3-2; 77, ENCL. 11

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 16.029

A. DESCRIPTION

Unit Type: REFERENCES IDENTIFIED THIS AS "SURFACE IMPOUNDMENTS"; NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS WASTES, EXPLOSIVES, AND EFFLUENT FROM SAND FILTERS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 16.029

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: HAZARDOUS WASTE, EXPLOSIVES (UP TO 20% BY WEIGHT); EFFLUENT FROM SAND FILTERS

Source of Waste: SOME WASTE FROM SAND FILTERS; SOURCE OF OTHER WASTE UNKNOWN

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: REFERENCES SUGGEST THAT RELEASE CONDITIONS MAY CAUSE SIGNIFICANT ENVIRONMENTAL IMPACT

UNIT 16.030: SEPTIC TANK - This part active, part inactive unit is identified as a septic tank used for the disposal of sanitary wastes (98, p. 10). Nevertheless, the existence of hazardous constituents at this unit are suspected. No photo is available for this unit.

UNIT 16.031-16.033: BURN PIT AREAS - These units are identified as three burnpit areas (58, p. 2; 69; 66, pp. D1,1). It is suspected that hazardous constituents may be found in this unit. It is unknown whether or not these three units are one in the same. No photos are available for these units.

UNIT 16.034: HYDRAULIC FLUID DRUM STORAGE - As seen during the VSI, this unit is a concrete loading dock on which steel drums containing hydraulic fluid are placed. The dimensions of the loading dock are 50 ft. by 12 ft. and it is underlain by both asphalt and soil. This unit was in operation from 1952 to 1953 and is currently active. The source of the waste is Building 430 and the disposition of this waste is unknown. The unit is surrounded by asphalt, but there is free drainage. Stains were observed on the loading dock and the surrounding concrete, and also on the road leading to the unit.

Asphalt Road Leading to Hydraulic Fluid Drum Storage.
Note Stains on Asphalt (in Center of Picture).

UNIT 16.035: U-SITE ASBESTOS STORAGE - This unit identified during the VSI is a wooden structure with asbestos (non-friable) shingles, and is located within the U-site. This structure is underlain by soil, and the purpose of this inactive unit is unknown. No photo is available for this unit.

UNIT 16.036: SEVERAL CONTAMINATED AREAS - This part active and part inactive unit is identified as "contaminated areas" (98, p. 9). Nevertheless, uncontained hazardous constituents are suspected at this unit. No photo is available for this unit.

UNIT 16.037: FIRING SITES - This unit is identified as a contaminated area (98, p. 9) suspected of having contained hazardous constituents and explosives. The unit is inactive. No photo is available for this unit.

UNIT 16.038-16.039: SUMPS AND OUTFALLS - These part active and part inactive units are identified as sumps and outfalls (98, p. 10). Uncontained hazardous constituents, explosives and chemicals, including silver, are suspected at these units. No photos are available for these units.

UNIT 16.040: DRY WELLS - These active units are identified as a contaminated area (98, SDF10), and are suspected to contain hazardous constituents. Although these units are listed as AOCs, they are possible SWMUs. No photo is available for this unit.

UNIT 16.041-16.046: SIX STORAGE TANKS - These unit tanks are identified as underground storage tanks including S-site, steam plant, and service station (98, p. 10). These units are part active and part inactive. The materials in these tanks may contain hazardous constituents. No photo is available for this unit.

UNIT 16.047: SHAFTS - These units consist of an unspecified number of 6' x 60' deep shafts (88, p. 4). Wastes managed are boiler blowdown (i.e., which may contain hazardous constituents) from building 540. Although this unit is listed as an AOC, it is a potential SWMU. No photo is available for this unit.

UNIT 16.048: WASTEWATER TREATMENT PLANT - This active unit is identified as a treatment facility for wastewater and may contain hazardous constituents (86, p. 11). No photo is available for this unit.

UNIT 16.049-16.060: NPDES OUTFALLS - These are identified as NPDES outfalls TA-16-380, 410, 406, 340, 260, 400, 265, 300, 280, 342, 430, and 460. High explosives, treated cooling water, and non-contact cooling water are suspected to be found at these outfall areas. No photos are available for these units.

UNIT 16.061: CHEMICAL STORAGE - The unit type is identified as a storage area for undefined, unspecified chemicals (69). No photo is available for this unit.

UNIT 16.062: S-SITE - This unit consists of former TA's 13, 24, 25, and drain fields. There are abandoned structures suspected of being contaminated with high explosives, uranium, strontium, and radium. No photo is available for this unit.

TA-18, Pajarito Laboratory

The Pajarito Laboratory is used for the study of the fundamental behavior of nuclear chain reactions with simple, low-power reactors called "critical assemblies." Experiments are operated by remote control and observed by closed circuit television. The machines are housed in buildings known as "kivas" and are used primarily to provide a controlled means of assembling a critical amount of fissionable materials. This is done in order to study the effects of various shapes, sizes and configurations. These machines are also used as a source of fission neutrons in large quantities for experimental purposes.

Figure 21 is a map of TA-18. Figure 22 is a schematic of the wastewater system used for the treatment of sanitary waste and possible photographic process effluent.

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks, NPDES outfalls) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 18

SWMUs	
18.001-18.002	Two lagoons
18.003-18.004	Two waste pits
18.005-18.066	62 shafts; Area T
18.067-18.070	Four absorption beds; Area T
18.071-18.072	Two Area U absorption beds
18.073-18.075	Three Area V absorption beds
18.076	Gamma site trench

AOC	
18.077	Septic tank
18.078-18.080	Three firing sites
18.081	Photoprocessing drain fields
18.082	Underground storage tanks

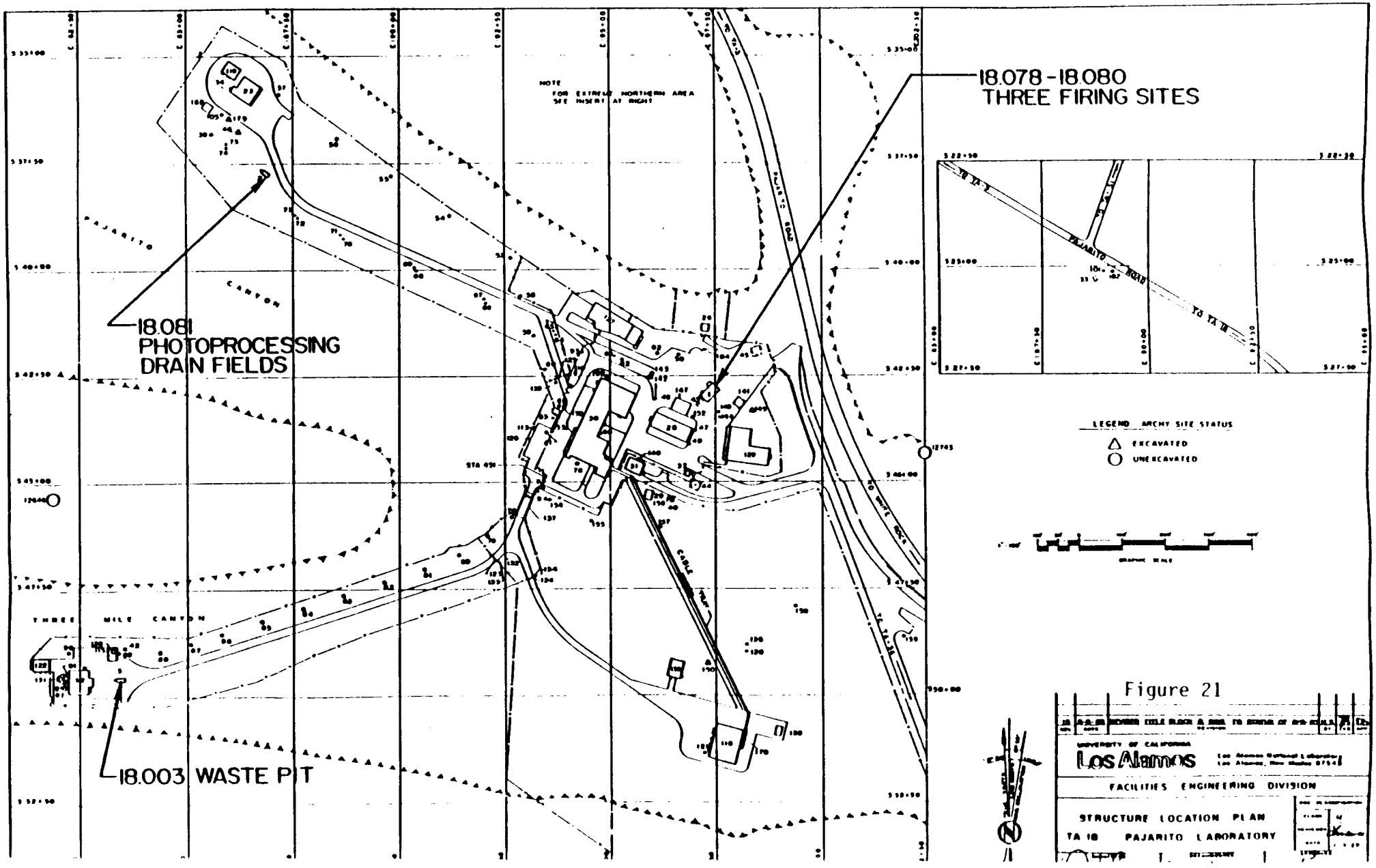

18.078-18.080
THREE FIRING SITES
18.081
PHOTOPROCESSING
DRAIN FIELDS
18.003 WASTE PIT
THREE MILE CANYON
PAJARITO CANYON
PAJARITO ROAD
CABLE TRAY
TO TA 18
LEGEND ARCHY SITE STATUS
EXCAVATED
UNEXCAVATED
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA 18 PAJARITO LABORATORY

Figure 21

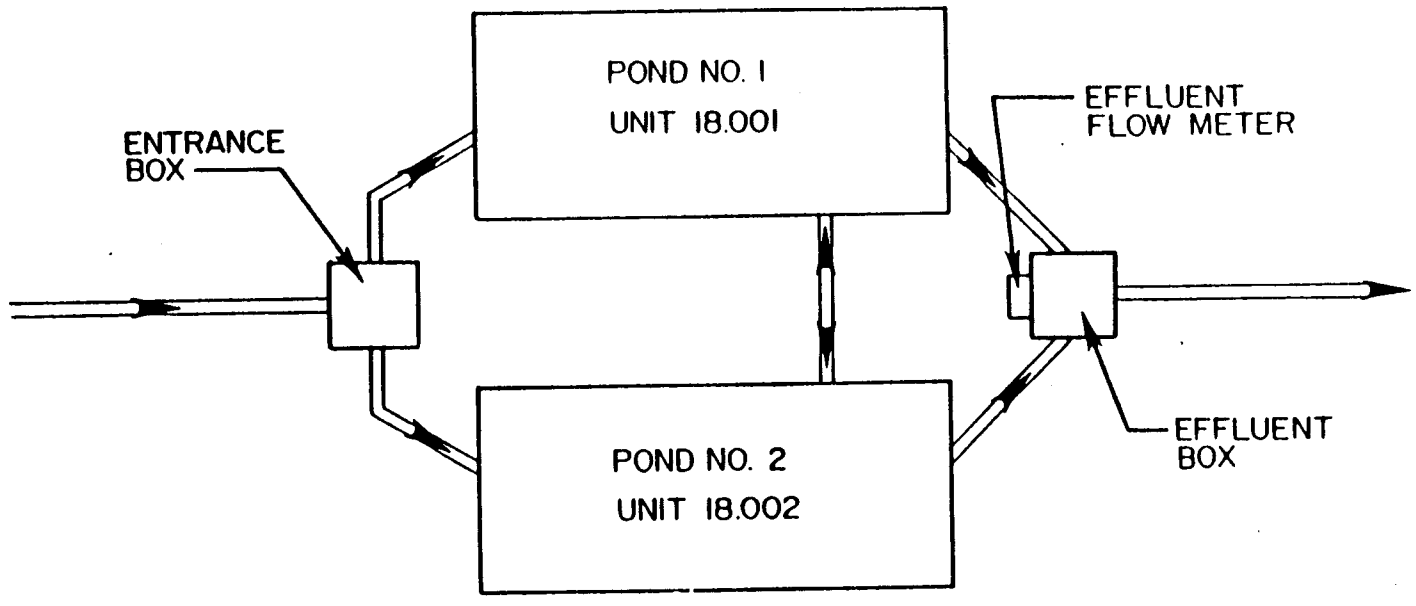
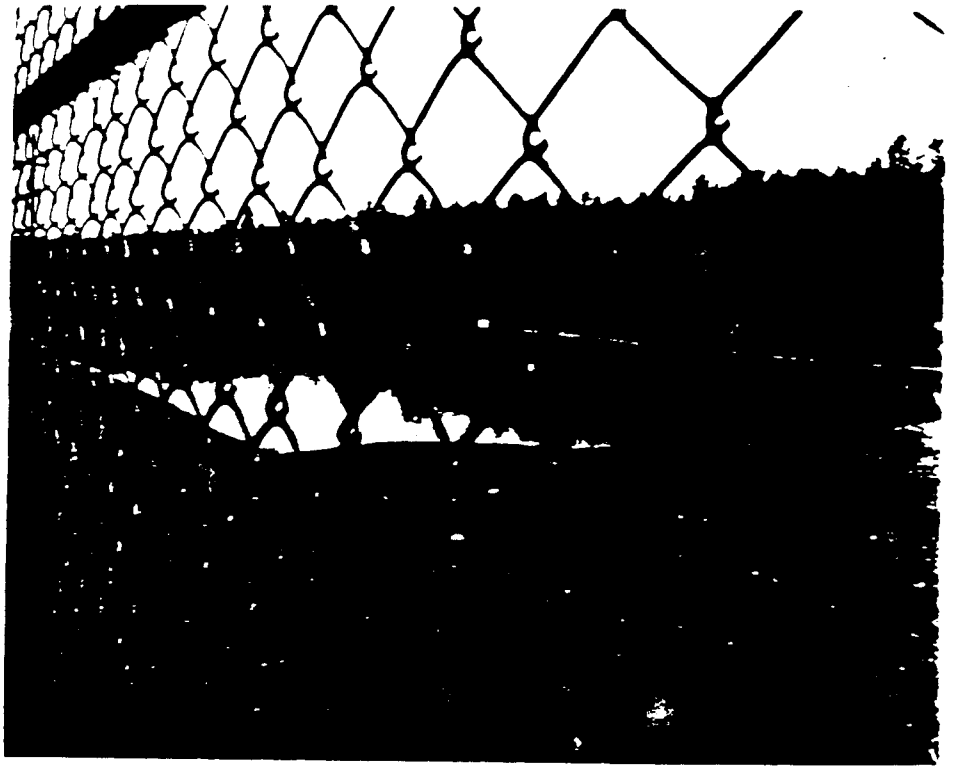


FIGURE 22 EXHIBIT SCHEMATIC OF TA-18 PLANT.

Unit Number: 18.001-18.002 Unit Name: TWO LAGOONS

Location: TA-18-162 References: VSI LOG BOOK; 86, P. 14



Two Lagoons (One in Center and One to Far Right of Photo) Designed to Store Sanitary and Possibly Paint or Photographic Wastes.

Unit Number: 18.001-18.002

A. DESCRIPTION

Unit Type: LAGOON WITH NO FILTER.

Period of Operation: 1975 TO PRESENT

Dimensions/Volume: 40' X 60'

Material of Construction: GUNNITE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR HANDLING SANITARY WASTE AND POSSIBLY PAINT AND PHOTOGRAPHIC WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 18.001-18.002

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS SANITARY WASTES, POSSIBLY PAINT OR PHOTOGRAPHIC WASTE

Source of Waste: TA-18.

Disposition of Waste: DISCHARGED INTO CANYON THROUGH NPDES OUTFALL.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 18.003-18.004 Unit Name: TWO WASTE PITS

Location: TA-18 References: 98, P. 10

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 18.003-18.004

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS "TWO WASTE PITS". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF HAZARDOUS WASTE AND CHEMICALS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE

Unit Number: 18.003-18.004

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES HANDLED AS HAZARDOUS AND CHEMICAL

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNITS NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 18.005-18.066 Unit Name: 62 SHAFTS; AREA T

Location: TA-18 References: 82, P. 23; 84, P. 6

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 18.005-18.066

A. DESCRIPTION

Unit Type: SHAFTS 1 TO 62; IDENTIFIED BY REFERENCE ONLY; NOT SEEN DURING VSI, WERE NOT GRANTED ACCESS TO AREA

Period of Operation:

Dimensions/Volume: 6-8' X 65' DEEP

Material of Construction: ASPHALT COATED

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: IN 1968 LIQUID WASTES FROM PLUTONIUM AND AMERICIUM RECOVERY WERE MIXED WITH CEMENT AND DISPOSED OF IN SHAFTS.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: DATA NOT AVAILABLE

Unit Number: 18.005-18.066

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: PLUTONIUM-238, AMERICIUM-241, STRONTIUM-90, CESIUM-132, URANIUM

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: IN PLACE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: ASPHALT COATED SHAFTS; NO OTHER KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNITS NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 18.067-18.070 Unit Name: FOUR ABSORPTION BEDS; AREA T

Location: TA-18 References: 82, P. 22, 84, P. 6

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 18.067-18.070

A. DESCRIPTION

Unit Type: ABSORPTION BEDS 1 TO 4; IDENTIFIED BY REFERENCES ONLY; NOT SEEN DURING VSI, WERE DENIED ACCESS TO AREA

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: 115' LONG X 920' WIDE X 4' DEEP

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: SUBSURFACE DISPOSAL OF LIQUID WASTES FROM PLUTONIUM, AMERICIUM RECOVERY (1945 TO 1967)

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: DATA NOT AVAILABLE

Unit Number: 18.067-18.070

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: 10 CURIES OF TRANSURANIC WASTE (PLUTONIUM-238, AMERICIUM-241), STRONTIUM-90, CESIUM-13, URANIUM

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE; ASSUMED TO BE ABSORBED/EVAPORATED

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNITS NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 18.071-18.072 Unit Name: TWO AREA U ABSORPTION BEDS

Location: TA-18 References: 82, P. 23; 84, P. 7

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 18.071-18.072

A. DESCRIPTION

Unit Type: ABSORPTION BEDS 1 AND 2; IDENTIFIED BY REFERENCE ONLY; NOT SEEN DURING VSI, WERE DENIED ACCESS TO AREA

Period of Operation: 1945 TO 1968

Dimensions/Volume: 1800 SQ. FOOT SURFACE, VOLUME = 150,000 CUBIC FEET

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: SUBSURFACE DISPOSAL OF LIQUID WASTES CONTAMINATED BY ACTINIUM

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 18.071-18.072

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals
Sludges:	EP Toxic:	

Particulars: ACTINIUM CONTAMINATION

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE; ASSUMED TO BE ABSORBED/EVAPORATED

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNITS NOT OBSERVED DURING VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 18.073-18.075 Unit Name: THREE AREA V ABSORPTION BEDS

Location: TA-18 References: 82, P. 23; 84, P. 7

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 18.073-18.075

A. DESCRIPTION

Unit Type: ABSORPTION BEDS 1 TO 3; IDENTIFIED BY REFERENCE ONLY; NOT SEEN DURING VSI, WERE DENIED ACCESS TO AREA

Period of Operation: 1945 TO 1961

Dimensions/Volume: SURFACE: 15,000 SQ. FEET; VOLUME: 150,000 CUBIC FEET

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: RECEIVED LAUNDRY WASTEWATER

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: DATA NOT AVAILABLE

Unit Number: 18.073-18.075

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: 3 CURIES OF STRONTIUM-90, BARIUM-140, LANTHANUM, PLUTONIUM

Source of Waste: LAUNDRY WASTEWATER

Disposition of Waste: DATA NOT AVAILABLE; ASSUMED TO BE ABSORBED/EVAPORATED

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

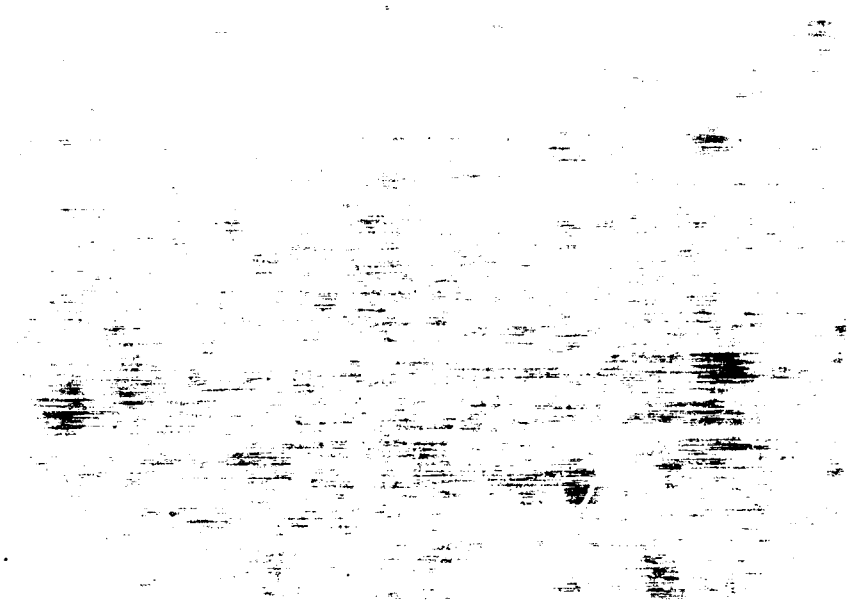
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNITS NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 18.076 Unit Name: GAMMA SITE TRENCH

Location: TA-18 References: VSI LOG BOOK



No Photo is Available for this Unit.

Unit Number: 18.076

A. DESCRIPTION

Unit Type: TRENCH NEAR GAMMA SITE LOCATED BETWEEN TWO TREES.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: ASSUMED TO BE EXCAVATED.

Underlain by:	Concrete:	Asphalt:	Gravel:
	Grass:	Soil: X	

Environmental:

Indoors:	Close to Surface Water:	In Ground:
Outdoors: X	Close to Drinking Water:	Aboveground:
Covered:	Residences:	Belowground: X

Purpose of Unit: UNIT DESIGNED FOR THE BURIAL OF USED GUNS.

B. CLOSURE INFORMATION

Active:	Inactive/Physically Present: X
Inactive/Removed or Dismantled:	Closed Under State or EPA:
Regulatory Status:	

Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 18.076

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS BURIED GUNS.

Source of Waste: SOURCE IS UNKNOWN.

Disposition of Waste: DISPOSITION ASSUMED TO BE IN GROUND.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO OTHER DATA AVAILABLE AT THIS TIME.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

UNIT 18.077 SEPTIC TANK - This inactive unit is identified as a septic tank designed for the disposal of sanitary waste (98, p. 10). It is suspected that radioactive and hazardous constituents, including uranium and beryllium, may be found at this site. No photo is available for this unit.

UNIT 18.078-18.080: THREE FIRING SITES - Hazardous and radioactive wastes, explosives, cadmium, lead, beryllium , and uranium were suspected to have been released at these contaminated firing sites (98, p. 10). These units are currently inactive. No photos are available for these units.

UNIT 18.081: PHOTOPROCESSING DRAINFIELDS - This outfall is suspected to have been involved in the release of solutions containing hazardous and radioactive wastes, silver and uranium into the surrounding area (98, p. 10). This unit is currently inactive. No photo is available for this unit.

UNIT 18.082: UNDERGROUND STORAGE TANKS - These unit components were designed for the storage of petroleum products, which may be associated with hazardous constituents (98, p. 10). This unit is physically present, but inactive. No photo is available for this unit.

TA-19, East Gate Laboratory

This inactive technical area site was located east of the main gate (now Philomena's Restaurant in Santa Fe County). Electronics work was done here. Also, sealed sources were used for various purposes, including monkey irradiation experiments with sealed RaLa (radioactive lanthanum) sources. At one time, some low-level uranium contamination was found on some shelves. After this area was no longer needed for LANL purposes, the buildings were turned over to the Los Alamos Radio Club. The buildings were eventually removed and the site was sold. Since that time various owners have done extensive reshaping of the land surface (10, p. 5-1). There is no map of this technical area.

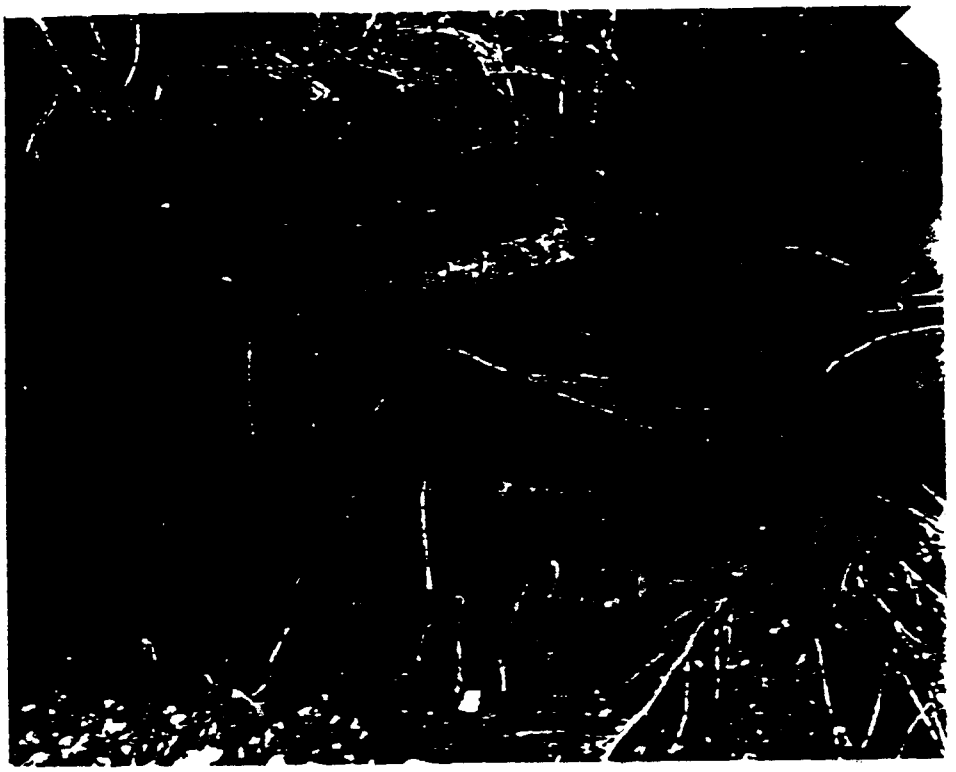
SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 19

SWMUs
None

AOC
19.001 Underground septic tank

UNIT 19.001: UNDERGROUND SEPTIC TANK - As observed during the VSI, this unit was designed for use as a domestic septic tank. It was in operation from 1946 to 1960 and was constructed of concrete and corrugated metal pipe. The source of the wastes is the TA-19 area. This unit is currently inactive. There is the possibility that radioactive constituents exist in the waste and that the waste may drain into Pueblo Canyon.



Access to Underground Domestic Septic Tank.
Note Lack of Release Controls in the Area.

TA-20, Sandia Canyon Site

This inactive technical area site is located along the present truck route to Los Alamos. The east end is marked by the support buildings used for the security force firing range and the west end is marked by the point where the present road starts to rise out of the canyon bottom to the mesa top. The site was developed for testing of initiators for implosion devices and was actively used for this purpose from the autumn of 1944 to May 1945. Testing involved implosion tests in a steel-lined pit and gun firing in two locations. There are three possible waste disposal areas here, possibly containing metal scrap, buried gun barrels and cut-up 3 to 5 inch guns. Contamination in the area is probably due to uranium, some low-level strontium-90 and high explosives (10, p. 1-1). There is no map of this technical area.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 20

SWMUs	
20.001-20.003	Three disposal pits
20.004	Inactive firing site

AOC	
20.005	Steel-lined pit
20.006	Storage in Indian cave

Unit Number: 20.001-20.003 Unit Name: THREE DISPOSAL PITS

Location: TA-20 References: 98, P. 11; 10, P. 1-1

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 20.001-20.003

A. DESCRIPTION

Unit Type: CONTAMINATED AREA; MENTIONED BY FACILITY REPRESENTATIVES DURING THE VSI, BUT NOT SEEN

Period of Operation: 1944-1945

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: WASTE DISPOSAL

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITONAL DATA AVAILABLE

Unit Number: 20.001-20.003

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: RADIOACTIVE WASTE, HAZARDOUS WASTES; URANIUM, EXPLOSIVES, BERYLLIUM POLONIUM, STRONTIUM, HIGH EXPLOSIVES

Source of Waste: METAL SCRAP, BURIED GUN BARRELS, CUT-UP GUNS

Disposition of Waste: POLONIUM SHOULD HAVE DECAYED, HIGH EXPLOSIVE SCRAPS PICKED UP UNTIL 1973

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

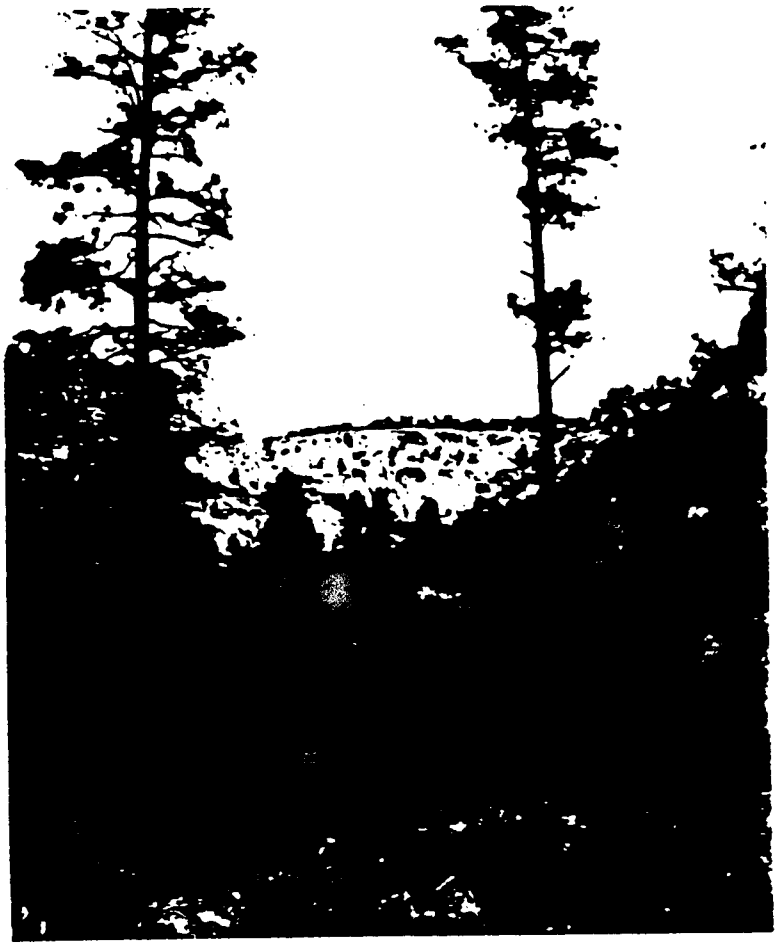
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 20.004 Unit Name: INACTIVE FIRING SITE

Location: TA-20 References: VSI LOG BOOK; 10 p.1-1; 98, P. 11;



Firing Site and Burial Area for High Explosive and Radioactive Material. Gun Parts Contaminated with Polonium and Possibly Uranium are also Buried Here.

Unit Number: 20.004

A. DESCRIPTION

Unit Type: FIRING SITE

Period of Operation: LATE 1944 TO 1945

Dimensions/Volume: 6 TO 7 ACRES

Material of Construction: OPEN SITE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED AS A FIRING SITE AND BURIAL AREA. INITATORS FOR IMPLOSION DEVICES WERE TESTED FROM 1944 TO 1945.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 20.004

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS VARIOUS ARMAMENTS AND GUN CASEMENTS, HIGH EXPLOSIVE AND RADIOACTIVE MATERIAL. CUT-UP 3 TO 5 IN. GUNS CONTAMINATED BY POLONIUM AND POSSIBLY URANIUM, STRONTIUM, AND BERYLLIUM.

Source of Waste: IMPLOSION DEVICE TESTING

Disposition of Waste: IN PLACE - UNKNOWN IF EXCAVATED; POLONIUM SHOULD HAVE DECAYED, HIGH EXPLOSIVES SCRAPS PICKED UP UNITL 1975

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

UNIT 20.005: STEEL-LINED PIT - This unit is identified in reference 10, p. 1-1. It was designed for implosion testing and was in operation from 1944 to 1945. Uncontained metal scraps, high explosives, and gun barrels, which all contained polonium and strontium 90, are suspected at this site. The high explosives scraps are described to have been collected until 1973 and the polonium is said to be decayed by this time.

UNIT 20.006: INDIAN CAVE - This inactive unit is identified as being used for storage of RaLa sources (10, p. 1-1). Past releases, leakages, of the RaLa sources have been reported from this unit.

TA-21, DP Site

Two primary research areas, DP West and DP East, are located in TA-21 (Figures 23 and 24). DP West is concerned with chemistry research. DP East is the high temperature chemistry and tritium site (10, p. 7-1).

An inactive material disposal site, called Area A, is located at TA-21, and consists of five pots and two storage tanks. The latter are known as the "General's Tanks." Waste solutions containing plutonium and americium were stored in these tanks with hope that chemical recovery processes would someday improve so that the plutonium in them could be recovered. Liquids in these tanks were removed for processing in 1983, but the tanks still contain a few inches of semisolid residue as well as rainwater.

A second inactive material disposal area, called Area B, is located south of DP Road near TA-21. An imprecise number of pits exist in Area B, which were used to dispose of radioactive solids like plutonium, polonium, uranium, americium, curium and actinium; at least one truck contaminated with fission products; and old bottles of organics, perchlorates, ethers, solvents, etc.

Another inactive material disposal area, Area T, is a set of four absorption beds at TA-21. Fourteen million gallons of untreated waste from processing plutonium were released from 1945 to 1952. The absorption beds are trenches 115 ft. long by 20 ft. wide by 4 ft. deep. They were backfilled with coarse material, grading from 8-in. boulders at the bottom trough gravel to fine sand at the surface. Studies have concluded that the plutonium in the waste has migrated from the beds to at least 20 ft. below their surfaces. Monitoring studies on Area T are continuing.

Finally, Areas U and V are inactive material disposal areas in TA-21. Area U contains two absorption beds similar to those in Area T. These beds were used for the subsurface disposal of contaminated liquid wastes between 1945 and 1968. In 1985, the piping associated with the beds was removed, but soil contamination still remains. Area V contains three absorption beds similar to those in Area T, which were used for the disposal of contaminated liquid waste from laundry operations from 1945 to 1961. Areas U and V are being monitored to ascertain the extent of contamination of hazardous and nonhazardous constituents. Figure 25 is a schematic of the wastewater treatment system at TA-21.

Units which may be associated with the handling of hazardous constituents (e.g., underground storage tanks, NPDES outfalls) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 21

SWMUs	
21.001	Area B landfill
21.002	Area T landfill
21.003-21.004	Two Area U absorption beds
21.005	Area V landfill
21.006-21.009	Four vertical storage tanks; wastewater treatment facility
21.010-21.013	Four clarifiers; wastewater treatment facility
21.014-21.015	Two secondary containment tanks
21.016	PCB storage
21.017	Area A underground storage tanks; "Generals" storage tanks; landfill
21.018	Drum storage area
21.019	Acid digester pit
21.020-21.021	Two container storage areas
21.022	Temporary waste storage

AOC	
21.023	Septic tanks
21.024	Surface disposal areas
21.025-21.028	Four sludge beds; wastewater treatment facility
21.029	Abandoned drums
21.030-21.036	Seven contaminated areas
21.037-21.043	Seven underground storage tanks
21.044	Plutonium processing plant
21.045	Robinson Coke storage
21.046	Extended aeration tank
21.047	DP Road tank farm

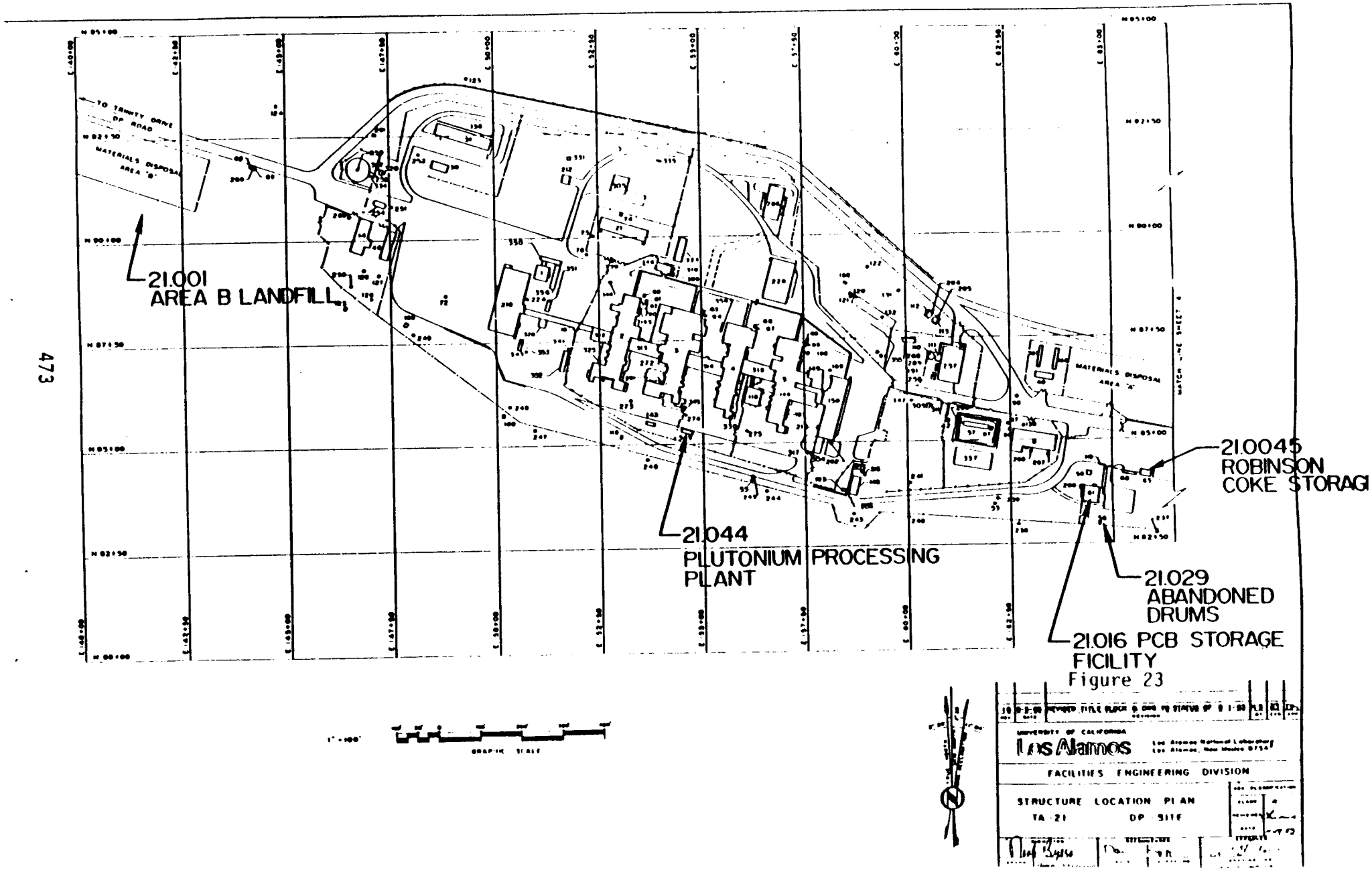

21.001
AREA B LANDFILL
21.044
PLUTONIUM PROCESSING
PLANT
21.0045
ROBINSON
COKE STORAGE
21.029
ABANDONED
DRUMS
21.016 PCB STORAGE
FICILITY
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA-21 DP SITE

Figure 23

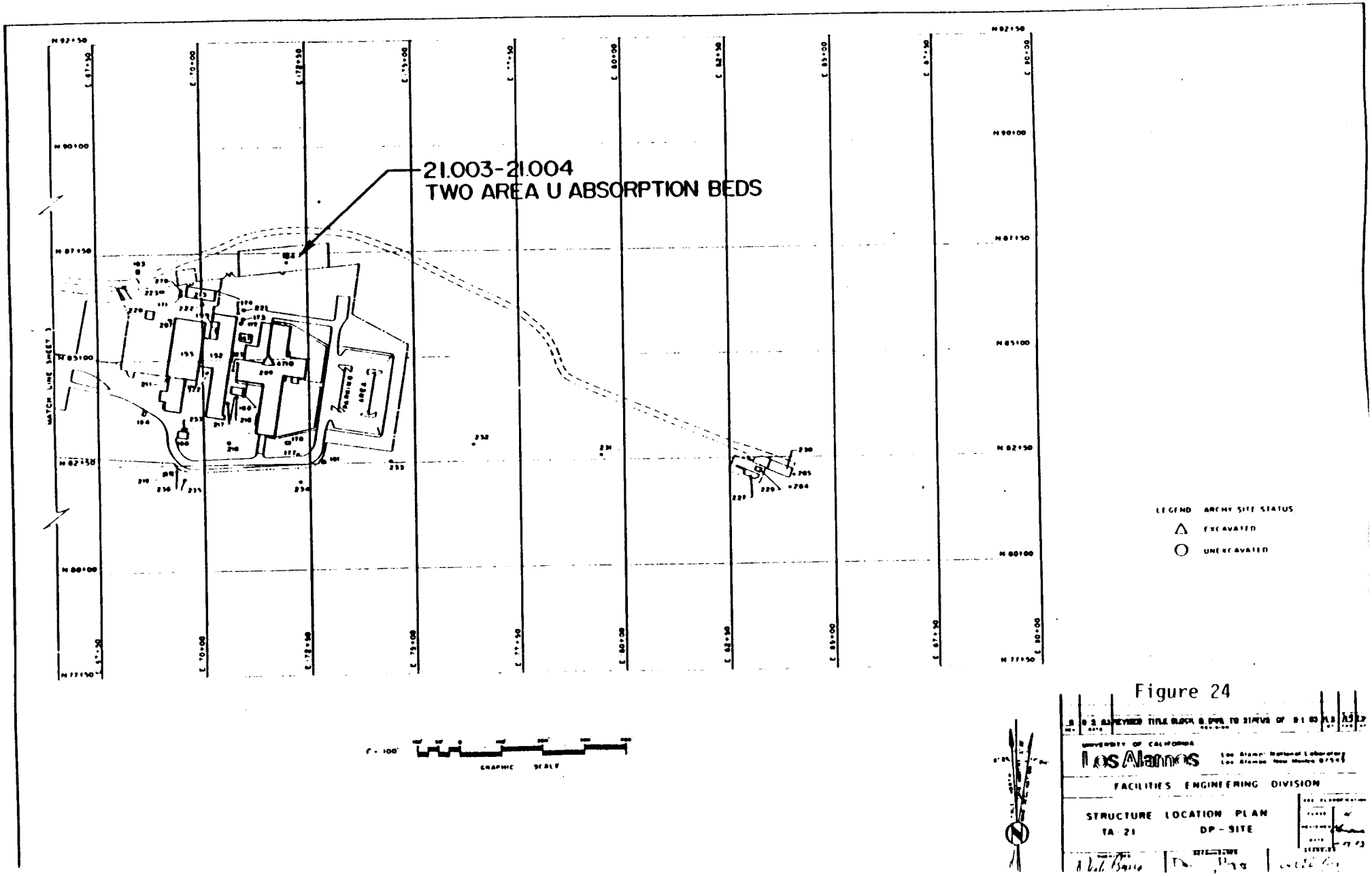

21.003-21.004
TWO AREA U ABSORPTION BEDS
LEGEND ARCHY SITE STATUS
EXCAVATED
UNEXCAVATED
GRAPHIC SCALE
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA-21
DP-SITE

Figure 24

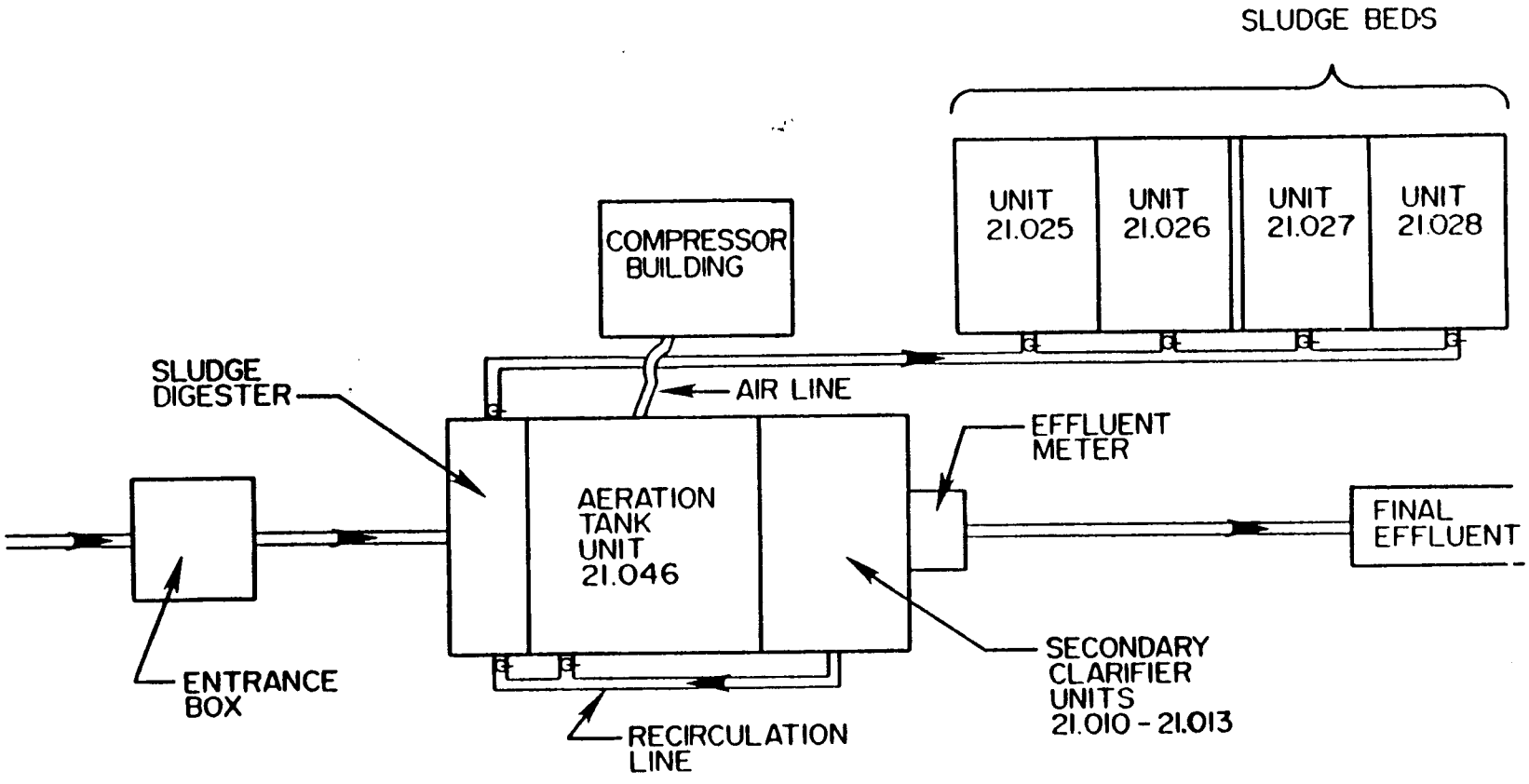


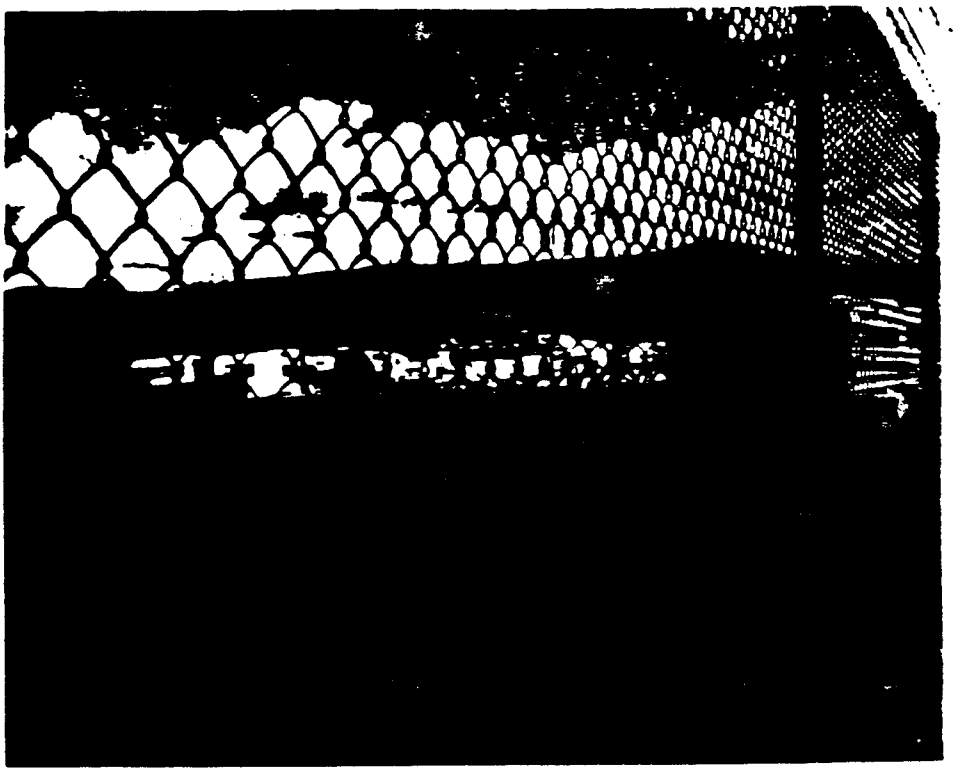
FIGURE 25 EXHIBIT SCHEMATIC OF TA-21 PLANT.

Unit Number: 21.001

Unit Name: AREA B LANDFILL

Location: TA-21

References: 82,p.19; 84,p.2; 10,p.7-4; VSI LOG BOOK



A. Portion of Area B Landfill That has been Resurfaced with Asphalt.
See Additional Photos on Following Page.

B. Portion of Area B Landfill that has not been Resurfaced with Asphalt.

Unit Number: 21.001

A. DESCRIPTION

Unit Type: BURIED WASTE TRENCHES (50,000 SQ.FT. EACH)

Period of Operation: 1946 TO 1948

Dimensions/Volume: 6 ACRES

Material of Construction: EXCAVATED SOIL

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT DESIGNED AS A LANDFILL THAT STORES INACTIVE AND ACTIVE RAD-WASTE. LANDFILL RESURFACED (APPROXIMATELY HALF COVERED BY ASPHALT) AND USED FOR A PARKING LOT.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: UNIT IS PARTIALLY RESURFACED IN ASPHALT AND USED AS A PARKING LOT.

Unit Number: 21.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges: X	EP Toxic:	

Particulars: WASTES INCLUDED WITHIN THIS UNIT ARE AS FOLLOWS: TRANSURANIC WASTE, RADIONUCLIDES, HAZARDOUS WASTES (CHEMICALS, GAS CYLINDERS), PLUTONIUM, RAD-WASTE TRENCHES CONTAINING ASSORTED WASTE ARE ALSO WITHIN THIS UNIT.

Source of Waste: SOURCE IS UNKNOWN.

Disposition of Waste: IN PLACE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: RELEASE CONTROLS ARE NOT ASSOCIATED WITH THIS AREA. ASPHALT COVERS HALF OF THIS AREA.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

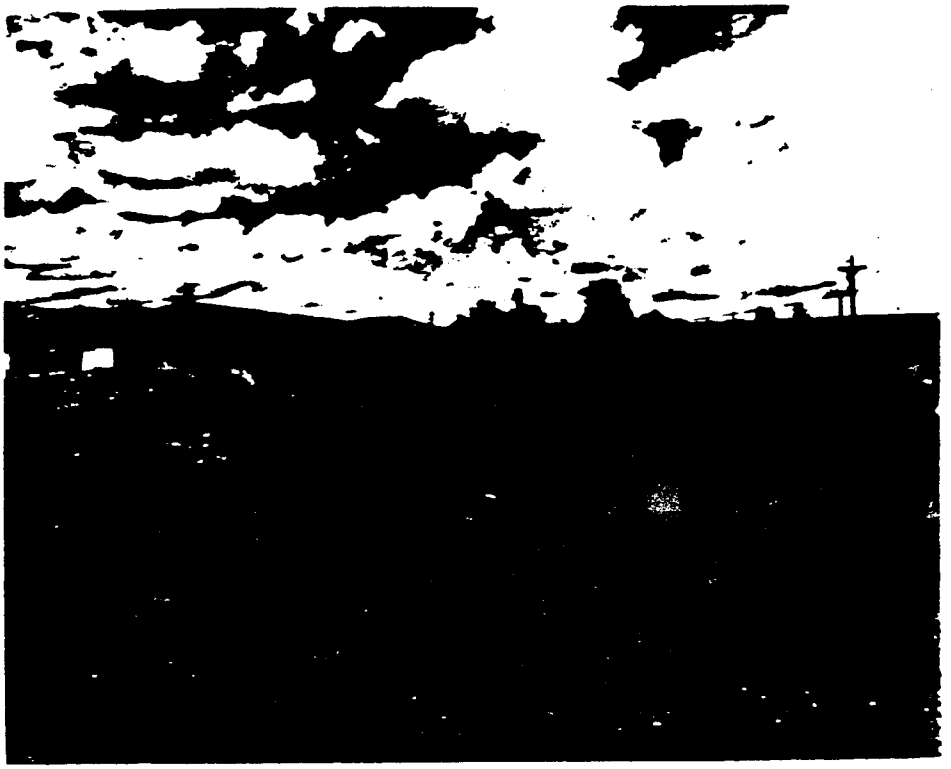
Detail of Past Releases: LANDFILL HAS BEEN INVESTIGATED IN THE PAST.

Unit Number: 21.002

Unit Name: AREA T LANDFILL

Location: TA-21

References: 10, p.7-5; 82, p.22,23; 84, p.5,6; VSI LOG BOOK



Area T Landfill Containing Radioactive Contaminated Waste.

Unit Number: 21.002

A. DESCRIPTION

Unit Type: ABSORPTION BEDS AND SHAFTS FOR RAD-WASTE (LANDFILL)

Period of Operation: 1950'S TO EARLY 1980'S; ABSORPTION BEDS - 1945 TO 1967
SHAFTS - 1966 TO 1980'S

Dimensions/Volume: ABSORPTION BEDS: 115'X 920'X 4'DEEP
SHAFTS: 65' DEEP; 6-8' DIAMETER TOTAL VOLUME: 248,000 CF.

Material of Construction: LANDFILL: SHAFTS ARE ASPHALT LINED
ABSORPTION BEDS ARE EXCAVATED IN TUFF, BACKFILLED WITH COURSE, GRADED MATERIAL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED AS A LANDFILL FOR WASTEWATER TREATMENT PLANT SLUDGE (RADIOACTIVE WASTE). CEMENTED SLUDGE POURED INTO SHAFTS, ALSO CULVERTS WITH CEMENTED SLUDGE (SEVERAL CULVERTS WERE REMOVED IN SUMMER, 1986).

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: PARTIALLY REMOVED; SURFACE STABILIZATION COMPLETE BY END OF SUMMER, 1987

Unit Number: 21.002

C. WASTES MANAGED

Solids:	Corrosive: 7	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: SHAFTS CONTAIN SOLIDIFIED SLUDGES COMPOSED OF RADIOACTIVE WASTE. ABSORPTION BEDS CONTAIN LIQUID WASTES COMPOSED OF PLUTONIUM, AMERICIUM, EFFLUENT FROM LIQUID WASTE TREATMENT PLANT. (OVERFLOWS, INADEQUATELY TREATED WASTES)

Source of Waste: ABSORPTION BED WASTES COME FROM WASTE WATER TREATMENT PLANT (RAD-WASTE). SHAFTS WASTE COME FROM TA-21-257.

Disposition of Waste: IN PLACE; SOME MATERIAL REMOVED TO TA-54; HIGH LEVEL WASTE REMOVED, INTEND TO SHIP TO WIP SITE IN CARLSBAD, NEW MEXICO.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ASSOCIATED WITH THIS UNIT. SOME BERMED AREAS LIE WITHIN UNIT WHICH CONTRIBUTE TO THE POSSIBILITY OF RUNOFF.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: UNIT HAS BEEN INVESTIGATED IN THE PAST.

Unit Number: 21.003-21.004 Unit Name: TWO AREA U ABSORPTION BEDS

Location: TA-21-164 References: 10,p.7-1; 82,p.23; VSI LOG BOOK; 98, p. 12

Absorption Beds for Radioactive Waste, Located within Area U.

Unit Number: 21.003-21.004

A. DESCRIPTION

Unit Type: ABSORPTION BEDS FOR RADIOACTIVE WASTE

Period of Operation: 1945 TO 1968

Dimensions/Volume: 1/4 ACRE; 1,800 SQ.FT.; VOLUME = 18,000 CU.FT.

Material of Construction: LANDFILL COMPOSED OF EXCAVATED TUFF BACKFILLED WITH COURSE GRADED MATERIAL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: ABSORPTION BEDS DESIGNED TO COLLECT WASTE FROM DP EAST (HIGH-TEMPERATURE CHEMISTRY AND TRITIUM SITE).

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 21.003-21.004

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE, INCLUDING ACTINIUM AND URANIUM, RADIONUCLIDES, CHEMICALS

Source of Waste: DP EAST (HIGH TEMPERATURE CHEMISTRY AND TRITIUM SITE).

Disposition of Waste: IN PLACE.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASE OBSERVED DURING VSI; SOME EROSION OF SURFACE SOIL OBSERVED. TRENCH OUTSIDE FENCED AREA - UNKNOWN IF WASTE OUTSIDE OF FENCE. LARGE QUANTITIES OF STORMWATER OUTFALLS (NON-NPDES) INTO CANYON NOTED.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 21.005 Unit Name: AREA V LANDFILL

Location: TA-21 Reference:: 10,p.7-1; 84,p.6; VSI LOG BOOK

Area V Landfill Containing Contaminated Wastes.

Unit Number: 21.005

A. DESCRIPTION

Unit Type: LANDFILL; 3 ABSORPTION BEDS

Period of Operation: 1945 TO 1961

Dimensions/Volume: APPROXIMATELY 1 ACRE; 15,000 SQ.FT.; VOLUME = 150,000 CU.FT.

Material of Construction: LANDFILL - ABSORPTION BEDS CONTAINED IN EXCAVATED TUFF AND BACKFILLED WITH COURSE GRADED MATERIAL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT CONTAINS LAUNDRY WASH WATER WITH SOME RADIOACTIVE CONTAMINATION.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 21.005

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: RAD-WASTE CLOTHES; LIQUIDS FROM LANDRY OPERATIONS; SANITARY SLUDGES WILL BE USED TO AID REVEGETATION OF UNIT SCHEDULED FOR THIS SUMMER (1987).

Source of Waste: LAUNDRY WASH WATER - RADIOACTIVE CLOTHING

Disposition of Waste: IN PLACE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ASSOCIATED WITH THIS AREA.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: UNIT HAS BEEN INVESTIGATED IN THE PAST.

Unit Number: 21.006-21.009

Unit Name: WASTEWATER TREATMENT FACILITY FOUR VERTICAL STORAGE TANKS

Location: TA-21

References: VSI LOG BOOK; 10, P. 7-1

A. Vertical Storage Tanks #1 and #2, Located at the Wastewater Treatment Facility of TA-21. See Additional Photos on the Following Page.

B. Vertical Storage Tanks #3 and #4, Located at the Wastewater Treatment Facility of TA-21.

C. NPDES Outfall From Wastewater Treatment Facility of TA-21. Note Creek in Upper Right Corner.

Unit Number: 21.006-21.009

A. DESCRIPTION

Unit Type: VERTICAL STORAGE TANK

Period of Operation: 1950'S TO PRESENT

Dimensions/Volume: APPROXIMATELY 20' HIGH WITH 10' DIAMETER

Material of Construction: STEEL TANKS ON CONCRETE PAD

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT TREATS RADIOACTIVE LIQUID WASTE FROM TA-21. PLANT RUNS 2 DAYS A WEEK. TREATMENT PLANT HAS BEEN RENOVATED AND A NEW PIPELINE BUILT.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 21.006-21.009

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE LIQUID WASTES, INCLUDING URANIUM AND TRITIUM.

Source of Waste: SOURCE IS FROM TA-21.

Disposition of Waste: WASTE PIPED TO TA-50

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: RELEASE CONTROLS CONSIST OF DIKING AROUND TANK.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: TREATED RADIOACTIVE EFFLUENT IS RELEASED FROM A DRAINAGE PIPE AT THE BOTTOM OF A CANYON.

Unit Number: 21.010-21.013

Unit Name: WASTEWATER TREATMENT FACILITY FOUR CLARIFIERS

Location: TA-21

References: VSI LOG BOOK; 10, P. 7-1

No Photos are Available for this Unit.

Unit Number: 21.010-21.013

A. DESCRIPTION

Unit Type: CLARIFIER FOR LIQUID WASTEWATER TREATMENT PLANT.

Period of Operation: 1950'S TO PRESENT

Dimensions/Volume: NOT PERMITTED ACCESS FOR VISUAL INSPECTION

Material of Construction: NOT PERMITTED ACCESS FOR VISUAL INSPECTION

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT TREATS WASTE FROM TA-21. PLANT IS RUN TWO DAYS A WEEK. TREATMENT PLANT HAS BEEN RENOVATED AND A NEW PIPELINE BUILT.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 21.010-21.013

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS RADIOACTIVE LIQUID WASTES, INCLUDING URANIUM AND TRITIUM.

Source of Waste: SOURCE IS FROM TA-21.

Disposition of Waste: WASTE PIPED TO TA-50

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNITS CONTAINED INSIDE A BUILDING.

E. RELEASE HISTORY

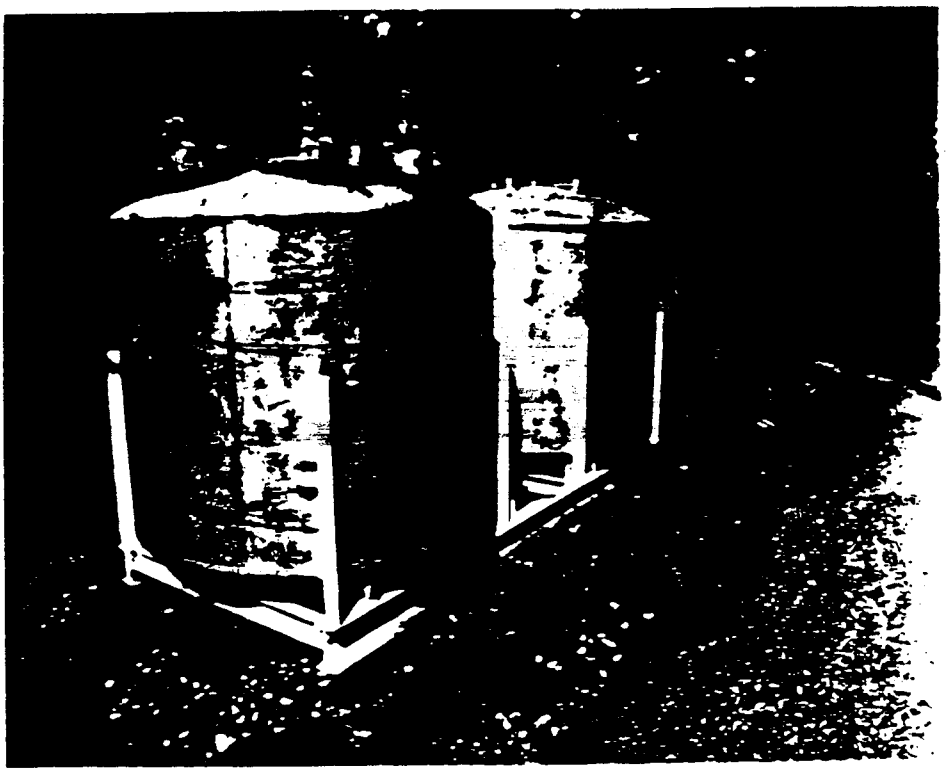
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NOT PERMITTED ACCESS FOR VISUAL INSPECTION.

Detail of Past Releases: TREATED RADIOACTIVE EFFLUENT IS RELEASED FROM DRAINAGE PIPE AT THE BOTTOM OF A CANYON.

Unit Number: 21.014-21.015 Unit Name: TWO SECONDARY CONTAINMENT TANKS

Location: TA-21-346 References: VSI LOG BOOK



Two Secondary Containment Tanks Used for the Storage of Spills From TSTA Building.

Unit Number: 21.014-21.015

A. DESCRIPTION

Unit Type: VERTICAL TANK

Period of Operation: 1978 TO PRESENT

Dimensions/Volume: 6,000 GALLONS

Material of Construction: STAINLESS STEEL.

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR CONTAINMENT OF SPILLS FROM TSTA BUILDING.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 21.014-21.015

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS RADIOACTIVE WASTE.

Source of Waste: TSTA PLANT IN TA-21

Disposition of Waste: PUMPED OUT AND SENT TO WASTE WATER TREATMENT PLANT (TA-21-257).

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT IS LOCATED IN EXCAVATED AREA LINED WITH ASPHALT.

E. RELEASE HISTORY

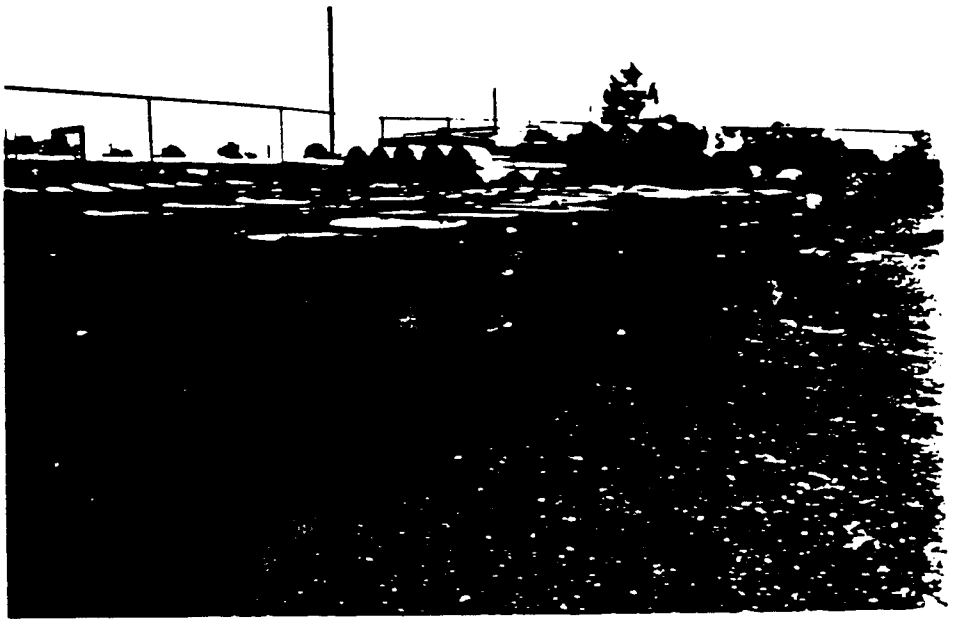
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 21.016 Unit Name: PCB STORAGE FACILITY

Location: TA-21-61 References: VSI LOG BOOK



A. Fifty-Five Gallon Drums Used for the Storage of PCB-Contaminated Oil, Located Outside of Building DPW-16. See Additional Photos on Following Pages.

B. Old Transformers containing PCB Contaminated Oil Located Outside Building DPW-61. Note Newness of Concrete Berm and Stains on Soil at Outlet of Valve.

C. Large Storage Tanks, 55 Gallon Drums and Old Transformers Containing PCB Contaminated Oil. Note Stains on Berm in Foreground.

D. Fifty-five Gallon Drums Containing PCB Contaminated Oil Located Within Building DPW-61.

Unit Number: 21.016

A. DESCRIPTION

Unit Type: PCB STORAGE, INCLUDES BUILDING DPW-61, OUTDOOR CONCRETE PAD, 55 GAL. DRUMS, LARGE TANKS AND OLD TRANSFORMERS

Period of Operation: 1980 TO PRESENT

Dimensions/Volume: APPROXIMATELY 80' LONG X 30' WIDE WITH 8" PATCHED ASPHALT BERM WITH SPIGOT

Material of Construction: 55 GALLON DRUMS ON CONCRETE PAD.

Underlain by: Concrete: X Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR STORAGE OF PCB CONTAMINATED OIL FOR ENTIRE FACILITY.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 21.016

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: PCB CONTAMINATED OIL AND WASTE OIL FROM ENTIRE FACILITY; SOME SLUDGES, MOSTLY LIQUIDS.

Source of Waste: PROCESSES THROUGHOUT FACILITY.

Disposition of Waste: SOME PCB CONTAMINATED OIL IS SHIPPED TO INCINERATOR IN EL DORADO, ARKANSAS (ENSCO).

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT LOCATED ON CONCRETE; CRACKS OBSERVED IN 4" ASPHALT CURB.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: SOME OIL SHEEN ON SOIL; ABSORBANT NEAR CURB ON EXTERIOR OF BERM (POSSIBLE SEEPAGE BELOW CURB); STAINS ON STANDING WATER INSIDE CURB; INSIDE BLDG. NO SIGNS OF RELEASE (NO STAINS ON FLOOR)

Detail of Past Releases: RAINWATER REPORTEDLY WAS DRAINED FROM THE CONCRETE PAD ONTO THE ADJACENT SOIL.

Unit Number: 21.017

Unit Name: AREA A UNDERGROUND STORAGE TANKS, "GENERALS" STORAGE TANKS; LANDFILL

Location: TA-21

References: 84, P. 2; 10, P. 7-4; 82, P. 19; VSI LOG BOOK

Area A Landfill, Comprised of Five Burial Pits and Two Underground Storage Tanks.

Unit Number: 21.017

A. DESCRIPTION

Unit Type: INACTIVE DISPOSAL AREA

Period of Operation: 1945 TO 1978

Dimensions/Volume: 2 ACRES TOTAL AREA; 2 TANKS ARE 50,000 GALLONS EACH

Material of Construction: AREA IS SOIL; TANK CONSTRUCTION IS UNKNOWN.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: THIS UNIT WAS A DISPOSAL AREA AND MAY INCLUDE 5 BURIAL PITS, 2 UNDERGROUND STORAGE TANKS, "GENERAL'S" TANKS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA IS AVAILABLE AT THIS TIME.

Unit Number: 21.017

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: PLUTONIUM CONTAMINATED WASTES, POLONIUM, OTHER RADIOACTIVE WASTES AND INDUSTRIAL WASTE

Source of Waste: CONSTRUCTION DEBRIS, INDUSTRIAL LIQUIDS, RADIOACTIVE WASTES

Disposition of Waste: IN PLACE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE SEEN DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI. HOWEVER, BECAUSE THE TANKS ARE BELOW GROUND, THE INTEGRITY OF THE TANKS COULD NOT BE DETERMINED.

Detail of Past Releases: GROUNDWATER MONITORING DATA MAY BE AVAILABLE.

Unit Number: 21.018 Unit Name: DRUM STORAGE AREA

Location: TA-21 References: VSI LOG BOOK

Drum Storage Area of TA-21 Wastewater Treatment Facility. Drums Contain Treated, Radioactive Sludge. Note Tarp Covering Drums.

Unit Number: 21.018

A. DESCRIPTION

Unit Type: DRUM STORAGE AREA

Period of Operation: 1950'S TO PRESENT

Dimensions/Volume: 100'LONG X 70' WIDE

Material of Construction: AREA IS ASPHALT; 55 GALLON STEEL DRUMS

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: X Residences: Belowground:

Purpose of Unit: UNIT IS USED FOR STORAGE OF SLUDGE FROM TA-21 WASTEWATER TREATMENT PLANT.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 21.018

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: RADIOACTIVE WASTES

Source of Waste: WASTEWATER TREATMENT PLANT, TA-21

Disposition of Waste: SLUDGE TAKEN TO TA-54

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: TARP OBSERVED COVERING DRUMS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 21.019 Unit Name: ACID DIGESTER PIT

Location: 21.19 References: 98, P. 11

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 21.019

A. DESCRIPTION

Unit Type: PIT

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS AND RADIOACTIVE WASTE, RADIONUCLIDES, CHEMICALS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 21.019

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: CONTAMINATED AREA; HAZARDOUS/RADIOACTIVE WASTE; RADIONUCLIDES, CHEMICALS

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 21.020-21.021 Unit Name: TWO CONTAINER STORAGE AREAS

Location: TA-21 References: 98, P. 11, 12

No Photos are Available for These Units. Units Were Not Seen During the VSI.

Unit Number: 21.020-21.021

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THESE AS "CONTAINER STORAGE" AREAS. NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: CONTAINER STORAGE FOR HAZARDOUS WASTE, CHEMICALS, AND OIL CONTAMINATED WITH PCBs

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 21.020-21.021

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THIS AS A CONTAMINATED AREA AND THE WASTES HANDLED AS HAZARDOUS, CHEMICALS AND WASTE OIL CONTAMINATED WITH PCBs

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 21.022 Unit Name: TEMPORARY WASTE STORAGE

Location: TA-21 References: 98, P. 12

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 21.022

A. DESCRIPTION

Unit Type: TEMPORARY SUMP STORAGE TANK, PRIOR TO TRANSFER TO TA-50

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: TEMPORARY STORAGE OF HAZARDOUS AND RADIOACTIVE WASTES, RADIONUCLIDES, AND CHEMICALS

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 21.022

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: HAZARDOUS/RADIOACTIVE WASTE; RADIONUCLIDES, CHEMICALS

Source of Waste: SUMPS

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

TA-21: AREAS OF CONCERN

UNIT 21.023: SEPTIC TANK - This unit is identified as a septic tank designed for the handling of sanitary waste (98, p. 11). It is suspected that hazardous and radioactive constituents, radionuclides and chemicals may be present in this unit. No photo is available for this unit.

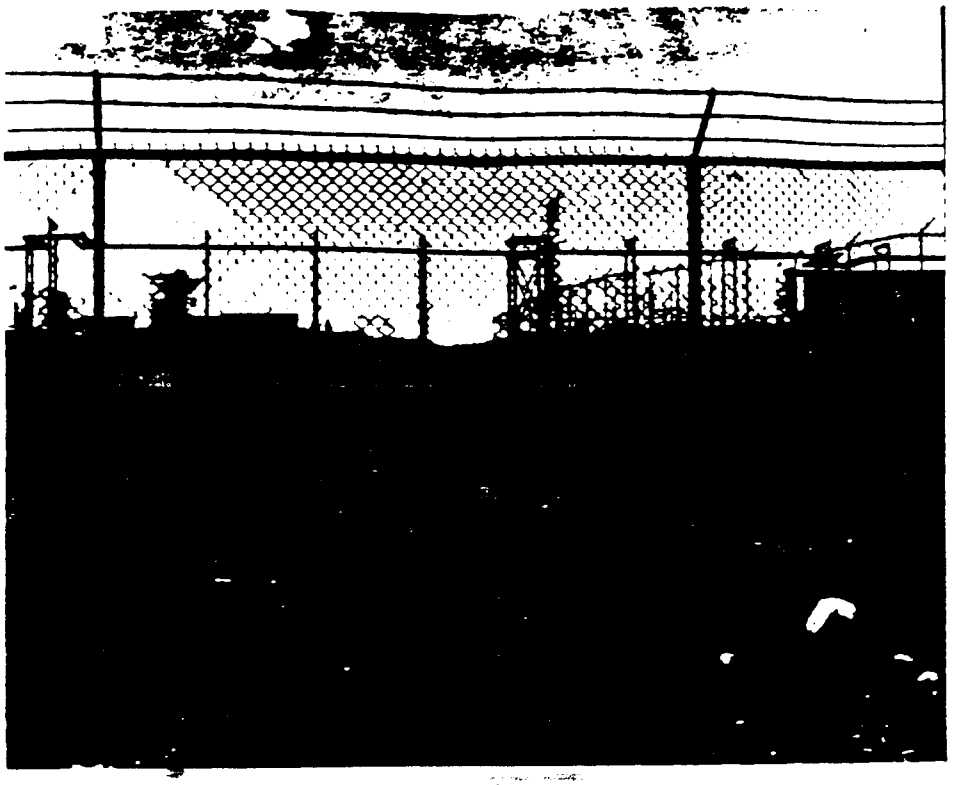
UNIT 21.024: SURFACE DISPOSAL AREAS - This inactive unit is described as a landfill used for the disposal of unspecified and undefined wastes (98, p. 12). Hazardous and radioactive constituents, solid waste, radionuclides, and chemicals are suspected to be found at this unit. No photo is available for this unit.

UNIT 21.025-21.028: FOUR SLUDGE BEDS - These units identified during the VSI as surface impoundments are designed for use as a sludge drying bed. These units consist of sand beds contained within concrete curbs. These active units have been in operation since the mid 1960's. They are each 15' wide and 30' long and are of unknown depth. The units receive sanitary sewage from TA-21, which is processed and then taken to TA-54 and buried. Wastewater from these units goes to the NPDES outfall into DP canyon. It is undetermined whether hazardous constituents are associated with the sanitary waste.

A. Four Large Drying Beds Used in the Treatment of Sanitary Sewage from TA-21.

B. NPDES Outfall Where Wastewater From the Four Sludge Beds Drains Into DP Canyon.

UNIT 21.029: ABANDONED DRUMS - This unit identified during the VSI, was observed to have several old 55 gallon drums of undefined purpose lying on their sides inside a fenced area. These drums are believed to be empty. They are underlain by soil and grass. See photo on the following page.



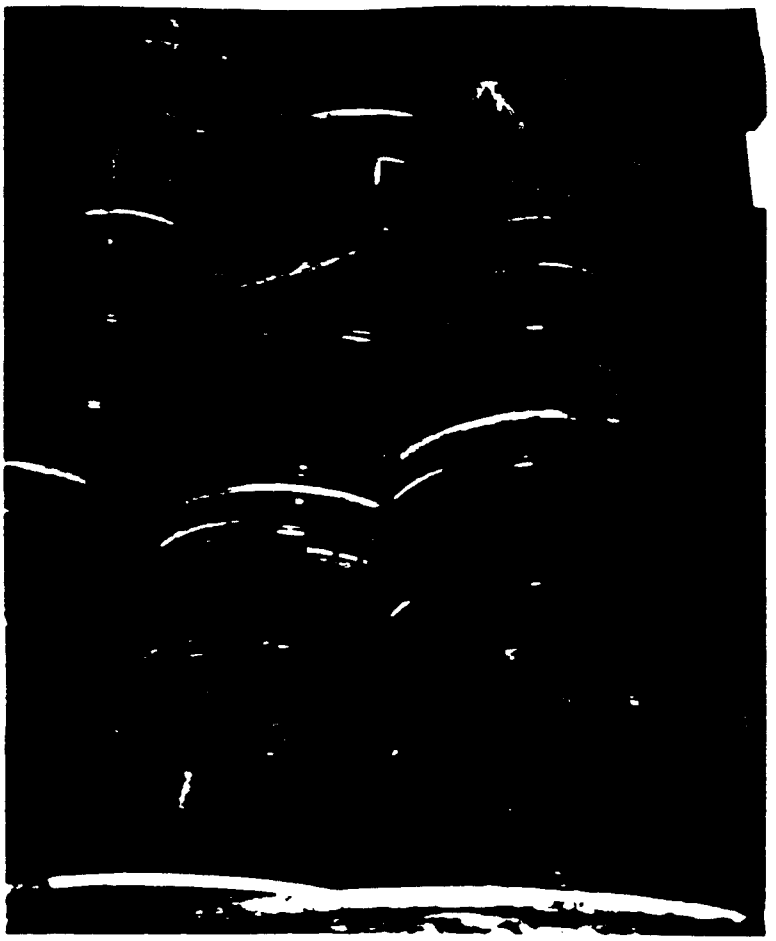
Abandoned Drums Located Within Fenced Area.
Drums are Perceived to be Empty.

UNIT 21.030-21.036: CONTAMINATED AREAS - These inactive units are identified as "contaminated areas" (98, p. 11-12; 65). The wastes managed may include hazardous/radioactive constituents, radionuclides, asbestos, and chemicals. No photos are available for these units.

UNIT 21.037-21.043: UNDERGROUND STORAGE TANKS - These active units are identified as underground tanks used for the storage of petroleum products, organics, diesel, and other unspecified, undefined solids (98, p. 12; 65). No photos are available for these units.

UNIT 21.044: PLUTONIUM PROCESSING PLANT - The wastes managed in this unit include the constituents plutonium, uranium, and tritium. This unit is physically present, but inactive. No photo is available for these units.

UNIT 21.045: ROBINSON COKE STORAGE - This unit was identified during the VSI as a building designed for product storage. It has been in operation since the late 1940's and has dimensions of 40 ft. by 40 ft. by 8 ft. high. This concrete floored building houses 55-gallon drums of Robinson coke. Although no waste is found at this unit, the Robinson coke is suspected to contains polynuclear aromatics (PNAs). These drums were observed to be stacked haphazardly and should they fall, they could release PNAs into the surrounding area. See photo on the following page.



Drums Used for Product Storage of Robinson Coke.
Note How Drums are Stacked on Top of Each Other.

UNIT 21.046: EXTENDED AERATION TANK - This active unit (86.14) is a component of the wastewater treatment system. Waste generated from this unit is sent to the secondary clarifiers (Units 21.010 - 21.013).

UNIT 21.047: DP-ROAD TANK FARM - This unit was identified during the VSI as an abandoned area containing an unknown number of above and below ground tanks. The unit operated from 1945 to 1980 and was designed for gasoline/diesel storage. The unit is inactive and consists of 10,000 gallon tanks underlain by soil. The tanks have been pumped dry and reportedly contained lead at one time. No past releases are known to have occurred; however, during the VSI, LANL personnel stated that this unit is currently being monitored. See photo on the following page.

An In-Ground Septic Tank (Benind Fence) in the DP Road Tank Farm.

TA-22, TD Site

TA-22 (Figure 26) is one of three areas regularly used at Los Alamos National Laboratory for developing special detonators which initiate high explosive systems. Fundamental and applied research in support of this activity includes investigation of phenomena associated with the initiation of high explosives, and research in rapid shock-induced reactions using shock tubes (10, p. 2-2).

Within TA-22, TA-22-1 and TA-22-34 are used for the storage of high explosives. Furthermore, TA-22-24 and TA-22-96 are both used as container storage areas for hazardous wastes and constituents.

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks, NPDES outfalls, container storage, HE sumps, (90 day storage) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 22

SWMUs	
22.001	High explosive storage facilities
22.002	Less than 90-day storage
22.003-22.005	Three storage areas
22.006	Dry wells
22.007	Pit
22.008	Sumps
22.009	Disposal pit
22.010-22.011	Two wells

AOCs	
22.012	Septic tanks
22.013-22.014	Two outfalls

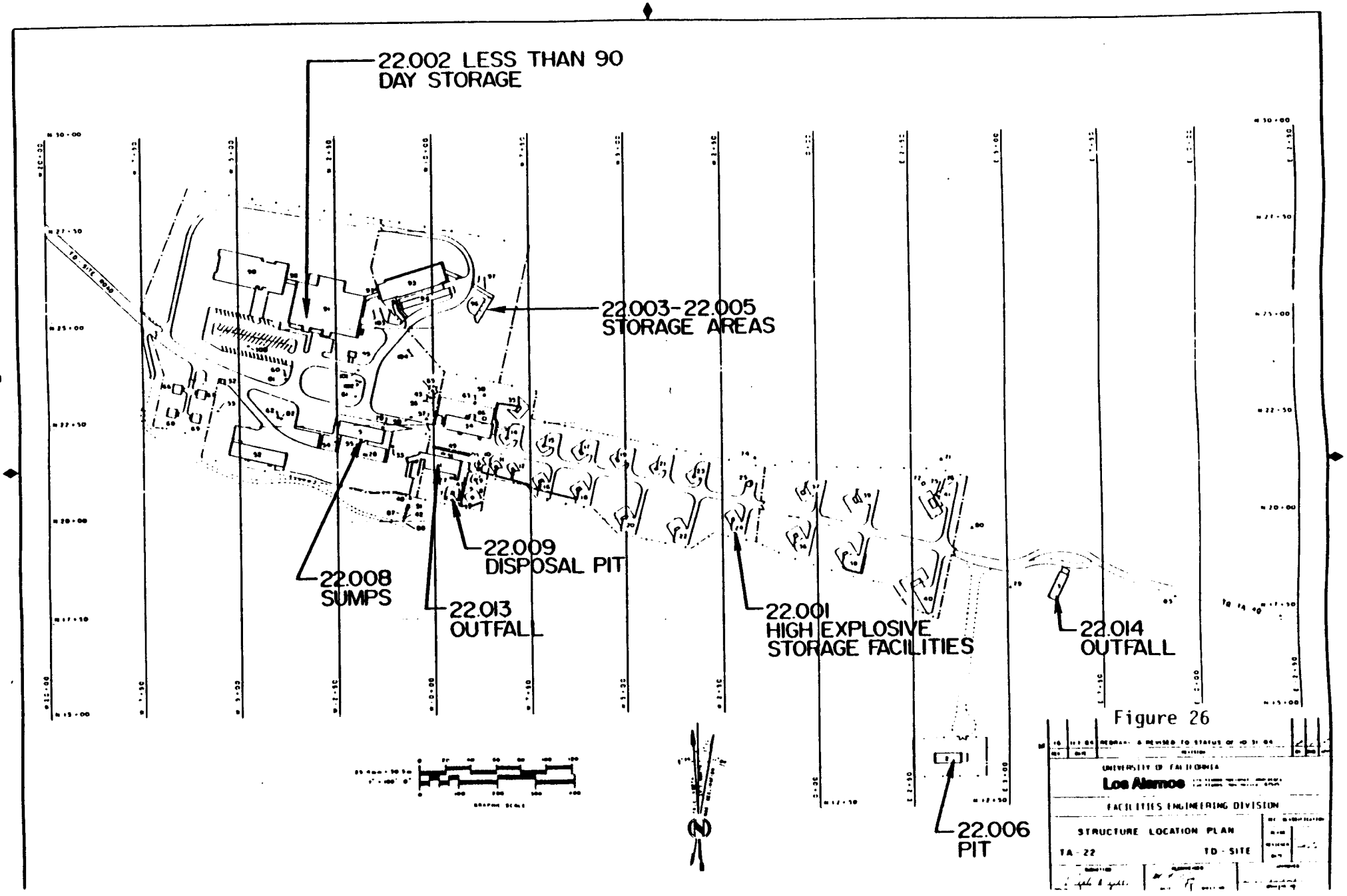

22.002 LESS THAN 90 DAY STORAGE
22.003-22.005 STORAGE AREAS
22.009 DISPOSAL PIT
22.008 SUMPS
22.013 OUTFALL
22.001 HIGH EXPLOSIVE STORAGE FACILITIES
22.014 OUTFALL
22.006 PIT
N
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA - 22
TD - SITE

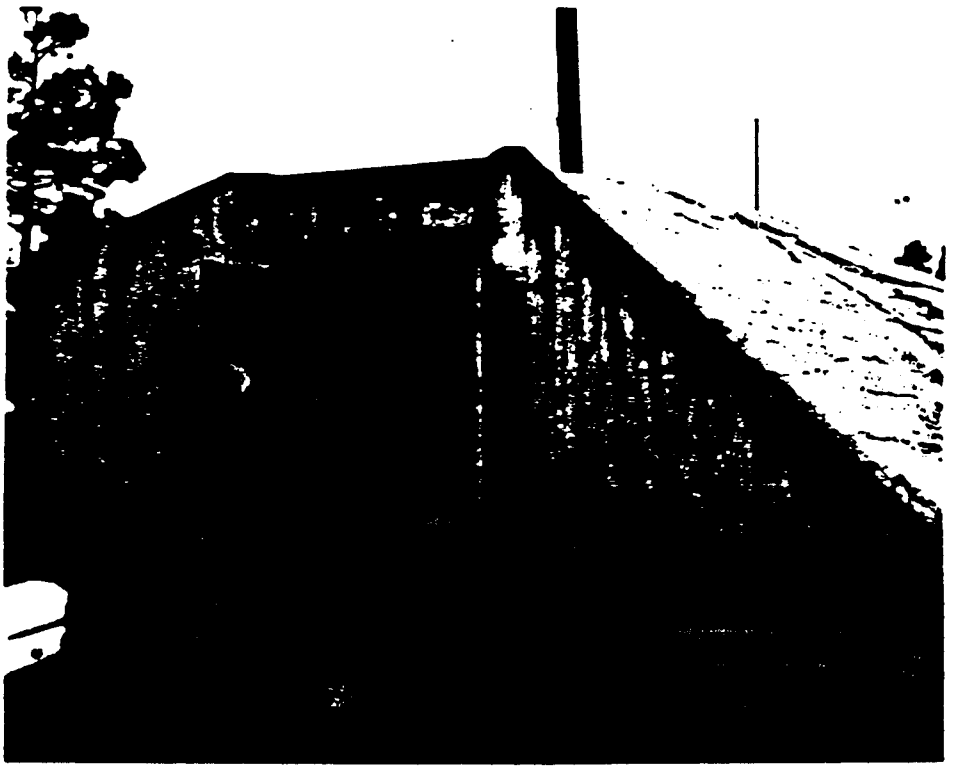
Figure 26

Unit Number: 22.001

Unit Name: HIGH EXPLOSIVE STORAGE FACILITIES

Location: TA-22-24

References: 74; 75; 77; VSI LOG BOOK



Storage Facility to be Used for the Containment of High Explosives-Contaminated Waste. Unit is Presently Empty.

Unit Number: 22.001

A. DESCRIPTION

Unit Type: RCRA-REGULATED STORAGE AREA; BUNKERS COVERED BY SOIL

Period of Operation: USED DURING THE EARLY 1950'S; IT IS UNKNOWN WHEN IS BECAME INACTIVE

Dimensions/Volume: ROOM 10' X 10'; HEIGHT IS UNKNOWN

Material of Construction: CONCRETE AND SOIL

Underlain by:	Concrete: X	Asphalt:	Gravel:
	Grass:	Soil:	

Environmental:

Indoors:	Close to Surface Water:	In Ground: X
Outdoors: X	Close to Drinking Water:	Aboveground:
Covered: X	Residences:	Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE STORAGE OF HIGH EXPLOSIVES-CONTAMINATED WASTE.

B. CLOSURE INFORMATION

Active:	Inactive/Physically Present: X
Inactive/Removed or Dismantled:	Closed Under State or EPA:
Regulatory Status:	

Other: CLOSURE OF THE UNIT IS PLANNED. CLOSURE PLANS HAVE BEEN SUBMITTED.

Unit Number: 22.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINED HIGH EXPLOSIVE WASTES BUT IS PRESENTLY EMPTY.

Source of Waste: SOURCE IS UNKNOWN.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT IS ENCLOSED WITH BUNKERS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

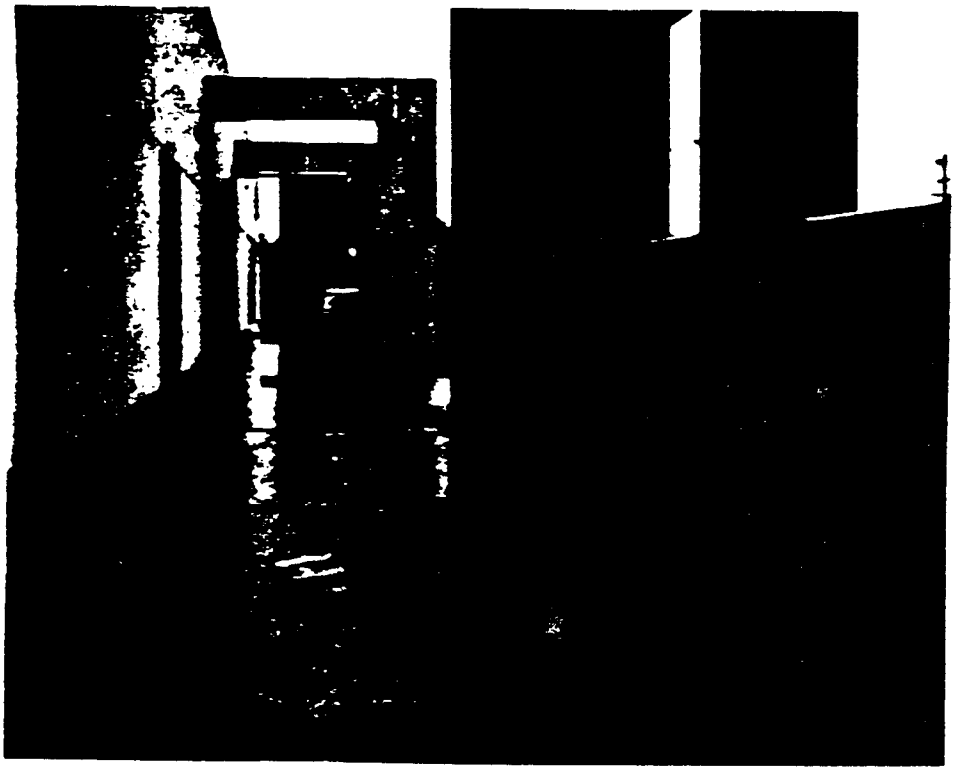
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 22.002

Unit Name: LESS THAN 90 DAY STORAGE

Location: TA-22-91

References: VSI LOG BOOK



Temporary (One Day) Storage of Corrosive Liquid Wastes. Note Stains on Concrete Floor Along Wall in Right Foreground.

Unit Number: 22.002

A. DESCRIPTION

Unit Type: TEMPORARY STORAGE FOR DRUMMED WASTE

Period of Operation: 1983 TO PRESENT

Dimensions/Volume: 40' X 15' AREA; 55 GALLON DRUMS

Material of Construction: CONCRETE FLOOR; STEEL DRUMS

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR ONE DAY STORAGE OF LIQUID WASTES IN DRUMS.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 22.002

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS CORROSIVE LIQUID WASTES. WASTE IS STORED FOR LESS THAN 90 DAYS.

Source of Waste: ETCHING PROCESSES

Disposition of Waste: LANL INDICATED THAT THE WASTE WAS TAKEN TO TA-54.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT SITS OUTSIDE OF BUILDING ON CONCRETE PAD.

E. RELEASE HISTORY

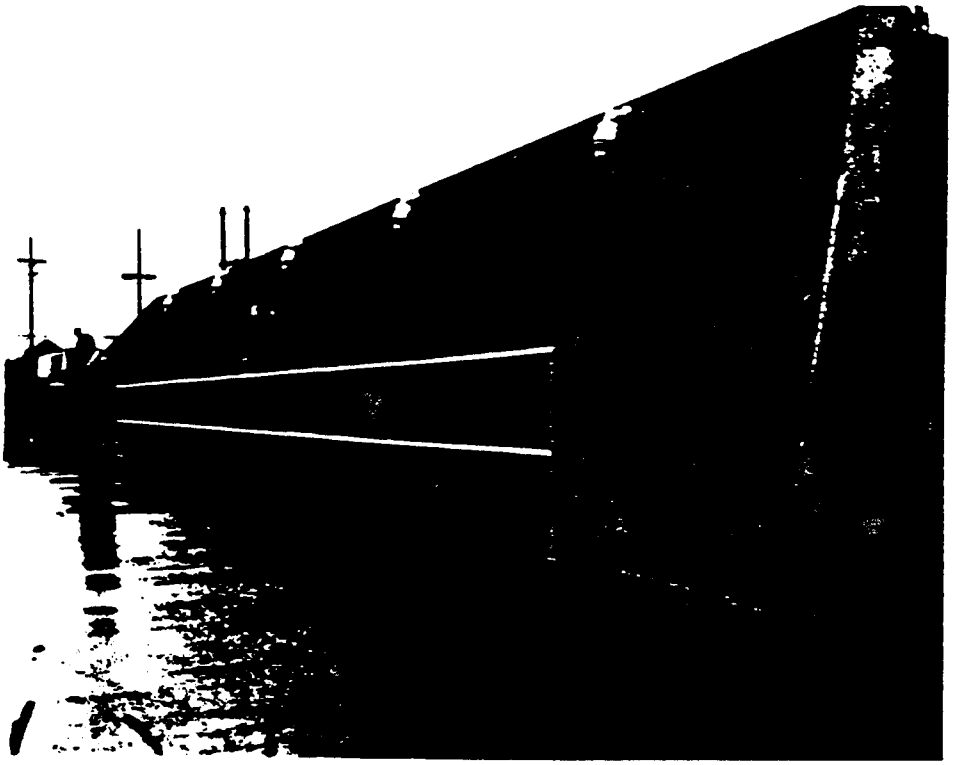
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: VSI NOTED STAINS ON CONCRETE. HOWEVER, NO STAINING WAS OBSERVED ON SOILS ADJACENT TO THE UNIT.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 22.003-22.005 Unit Name: THREE STORAGE AREAS

Location: TA-22-96 References: VSI LOG BOOK; 65, P. 3-3



Concrete Storage Bunker with Three Compartments Used for One Day Storage of High Explosives Waste.

Unit Number: 22.003-22.005

A. DESCRIPTION

Unit Type: THREE CONCRETE STORAGE BUNKERS; WASTE IS CONTAINERIZED BEFORE STORAGE.

Period of Operation: 1983 TO PRESENT

Dimensions/Volume: 30 KGS. CAPACITY

Material of Construction: CONCRETE AND ALUMINUM

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR ONE DAY STORAGE OF HIGH EXPLOSIVES WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 22.003-22.005

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids:	Flammable: X	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS HIGH EXPLOSIVE WASTES.

Source of Waste: BUILDINGS TA-22-93 AND TA-22-34

Disposition of Waste: SOME GO TO "S" SITE (TA-16); OTHERS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT IS ENCLOSED BY REINFORCED CONCRETE AND HAS LOCKED COMPARTMENTS.

E. RELEASE HISTORY

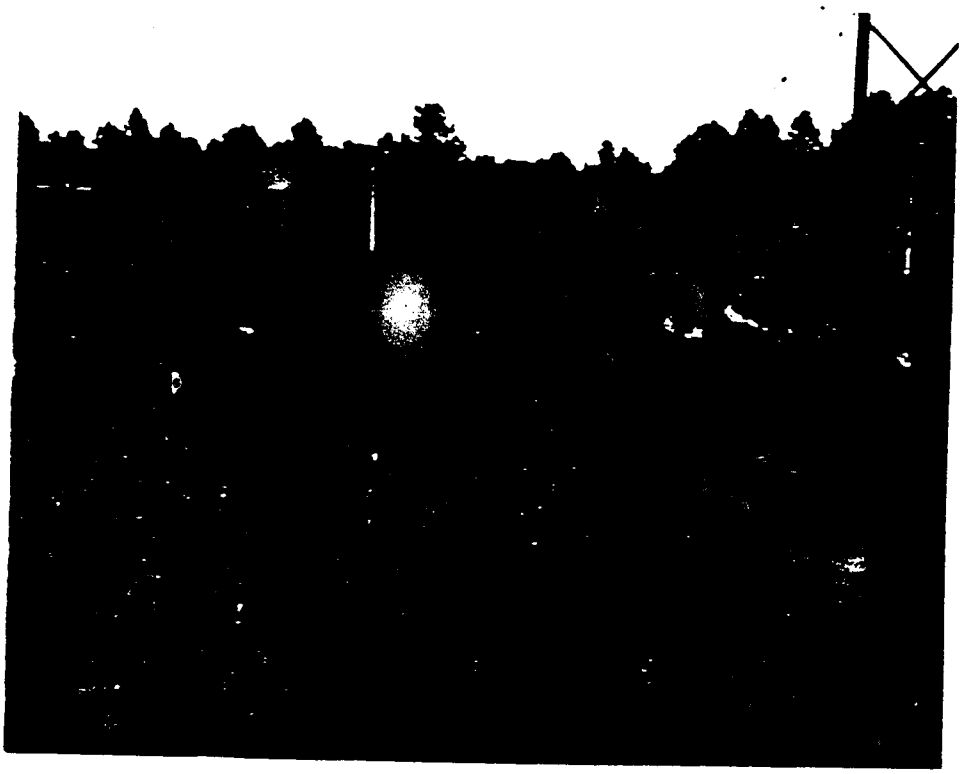
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

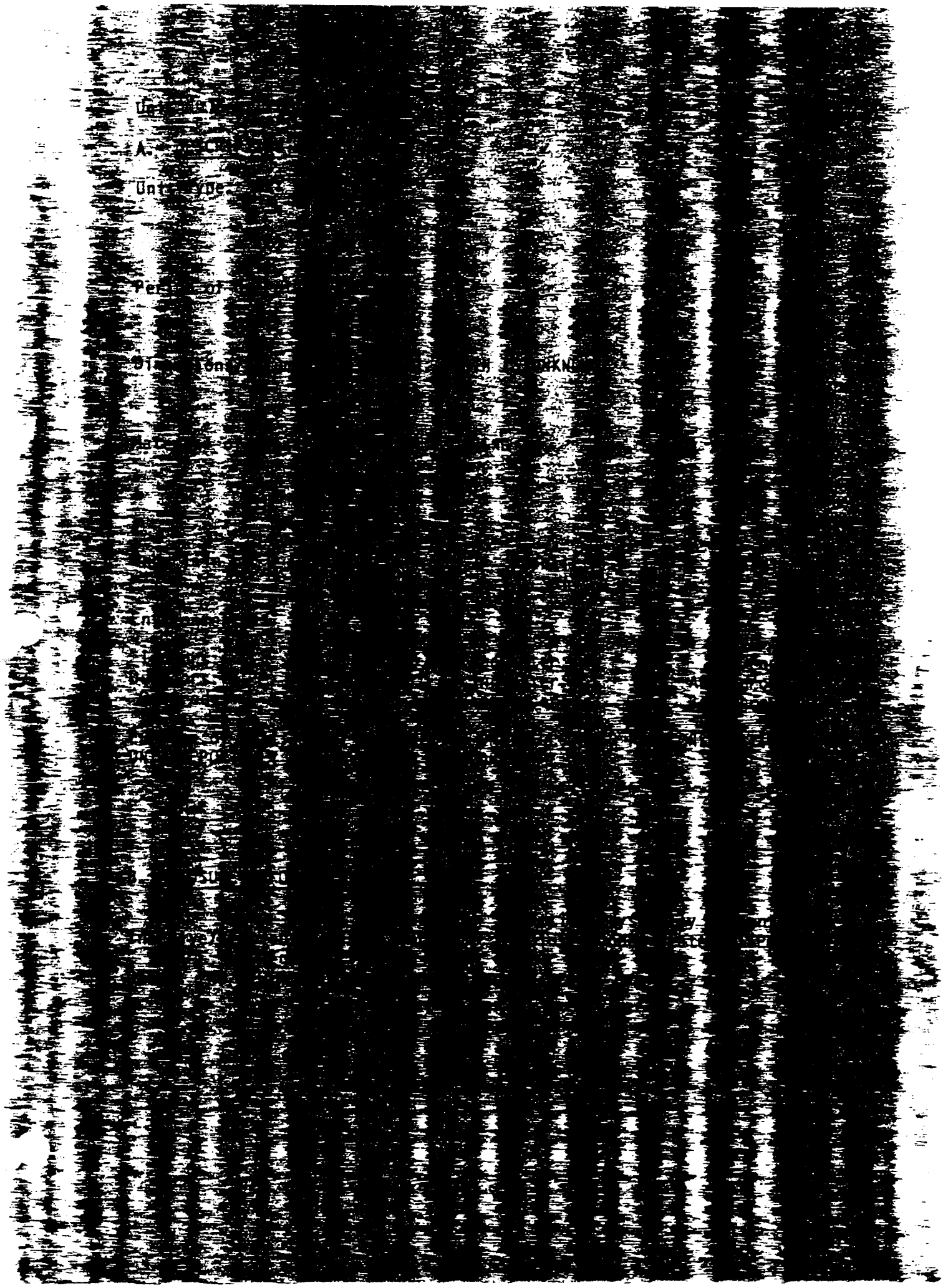
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 22.006 Unit Name: DRY WELLS

Location: TA-22 References: VSI LOG BOOK; 98, P. 12



Dry Wells used for the Containment of Construction Effluents.



Unit Number: 22.006

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: MAY INCLUDE TRACE METALS, SOLVENTS, AND PHOTO ETCH SOLUTIONS.

Source of Waste: PRINTED CIRCUIT PROCESS FROM TA-22-91 OR ETCHING PHOTOGRAPHIC PROCESS

Disposition of Waste: WASTE GOES TO NPDES OUTFALL (NUMBER IS UNKNOWN).

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.: X	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: WELLS HAVE EXPERIENCED A PAST, UNEXPECTED OVERFLOW TO SOIL; FOLLOWING WHICH, THE WELLS WERE TAKEN OUT OF SERVICE.

Unit Number: 22.007

Unit Name: PIT

Location: TA-22

References: 98, P. 12

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 22.007

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "PIT". NO OTHER DESCRIPTIVE INFORM-ATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DATA NOT AVAILABLE

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE.

Unit Number: 22.007

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THIS AS A "CONTAMINATED AREA" AND THE WASTES HANDLED AS HAZARDOUS WASTES AND EXPLOSIVES.

Source of Waste: DATA NOT AVAILABLE.

Disposition of Waste: DATA NOT AVAILABLE.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 22.008

Unit Name: SUMPS

Location: TA-22

References: 98, P. 12; 10 P. 2-2

No Photos are Available for these Units. Units Were Not Seen During the VSI.

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Unit Number: 22.008

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "SUMP". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: DATA NOT AVAILABLE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DATA NOT AVAILABLE

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: PARTIALLY ACTIVE

Unit Number: 22.008

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDETNIFIED THE WASTES HANDLED AS HAZARDOUS WASTE AND EXPLOSIVES.

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASES CONTROLS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI.

Detail of Past Releases: NO DATA AVAILABLE

Unit Number: 22.009

Unit Name: DISPOSAL PIT

Location: TA-22

References: 98, P. 13; 10 P. 2-2

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 22.009

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "LANDFILL". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF RADIOACTIVE AND HAZARDOUS WASTE, EXPLOSIVES, AND URANIUM

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 22.009

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES MANAGED AS RADIOACTIVE, HAZARDOUS, EXPLOSIVES, URANIUM

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 22.010-22.011 Unit Name: TWO WELLS

Location: TA-22 References: 88, P. 4

No Photos are Available for These Units. Units Were Not Seen During the VSI.

Unit Number: 22.010-22.011

A. DESCRIPTION

Unit Type: TWO WELLS

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: EACH WELL IS 4 FT. IN DIAMETER AND 20 FT. DEEP.

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: UNCONFIRMED, BUT PROBABLY LOCATED OUTDOORS.

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: RECEIVE RINSE WATER FROM PRINTED CIRCUIT BOARD OPERATION.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: DATA NOT AVAILABLE

Unit Number: 22.010-22.011

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: NO SPECIFIC WASTE ANALYSIS DATA AVAILABLE. HOWEVER, RINSE WATER FROM PRINTED CIRCUIT BOARD MANUFACTURING TYPICALLY INCLUDES COPPER, FLUORIDES, TIN, PHOSPHOROUS, PALLADIUM, AND CHELATING AGENT IS TYPICALLY ACIDIC (88, P.4).

Source of Waste: PRINTED CIRCUIT BOARD OPERATION.

Disposition of Waste: IN SITU

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING VSI.

Detail of Past Releases: DATA NOT AVAILABLE.

TA-22: AREAS OF CONCERN

UNIT 22.012: SEPTIC TANKS - These units (98, p. 12; 10, p. 2-2) are part active, part inactive and used for the treatment of hazardous waste, explosives, and chemicals. No photo is available for this unit.

UNITS 22.013-22.014: TWO OUTFALLS - These inactive units are identified as outfalls (98, p. 12). These outfalls may be involved in the release of hazardous constituents, including chromium, gold, lead, copper, zinc, and nickel. No photos are available for these units.

This technical area is located near the main laboratory (TA-3). This area is inactive and only one unit was confirmed during the VSI. There is no map of this technical area.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 26

SWMUs
None

AOCs
26.001 Old vault area

TA-26: AREAS OF CONCERN

UNIT 26.001: OLD VAULT AREA - This unit was identified during the VSI as a special nuclear material storage area or vault. The unit operated from 1944 to 1946 and has since been removed. The unit was constructed of concrete and was 20 ft. long by 20 ft. wide. The unit was designed for the storage of radioactive material and is associated with a septic tank. During the VSI, LANL personnel stated that past releases to the soil/groundwater may have occurred. No obvious signs of release were noted during the VSI. LANL personnel also stated that contaminated soil (radioactive) was pushed over the edge of an adjacent cliff onto the shelf of the Los Alamos Canyon wall and covered with dirt.

Old Vault Area Designed for the Product Storage of Nuclear Materials.

TA-27, Gamma Site

This inactive technical area site was used as a transitional firing site from 1946 to 1948 (between the shutdown of TA-4 and TA-5 and the start-up of activities at TA-15). Both depleted and natural uranium were probably used at this site. Additionally, the military conducted some high explosive sensitivity testing here (firing 50-caliper bullets into high explosives, etc.). There are rumors of the existence of a 600 ft. x 10 ft. trench which was dug using a bulldozer and used to dispose of Navy gun barrels, old live ammunition and possibly some natural uranium. The location of the trench remains unknown. The area is contaminated with uranium, but the extent of contamination is unknown (19, p. 1-2).

From 1949 to 1962, there was extensive excavation in this area. The excavated material was used as a road base for Pajarito Road, and possibly other roads within the facility.

The broad area expanse of this technical area in conjunction with the inability of the LANL personnel to identify specific areas where past activities had occurred precluded visual inspection by the VSI team.

There is no map of this technical area.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 27

SWMUs	
27.001	Burial pit with live ammunition

AOCs	
27.002	Firing pits
27.003	Impact zone
27.004	Contaminated roadside area

Unit Number: 27.001

Unit Name: BURIAL PIT WITH LIVE AMMUNITION

Location: TA-27

References: 98, P. 13; 10, P. 1-2

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 27.001

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "LANDFILL". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: 600' LONG X 10' FEET DEEP

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSE OF NAVY GUN BARRELS, OLD LIVE AMMUNITION, NATURAL URANIUM

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO DATA AVAILABLE

Unit Number: 27.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES HANDLED AS HAZARDOUS AND RADIOACTIVE WASTES, EXPLOSIVES, AND URANIUM.

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT OBSERVED DURING THE VSI.

Detail of Past Releases: NO KNOWN PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

TA-27: AREAS OF CONCERN

UNIT 27.002: FIRING PITS - This inactive unit is identified as an undefined "contaminated area" (98, p. 13). It is suspected that hazardous and radioactive constituents, explosives, and uranium may be found at this unit. No photo is available for this unit.

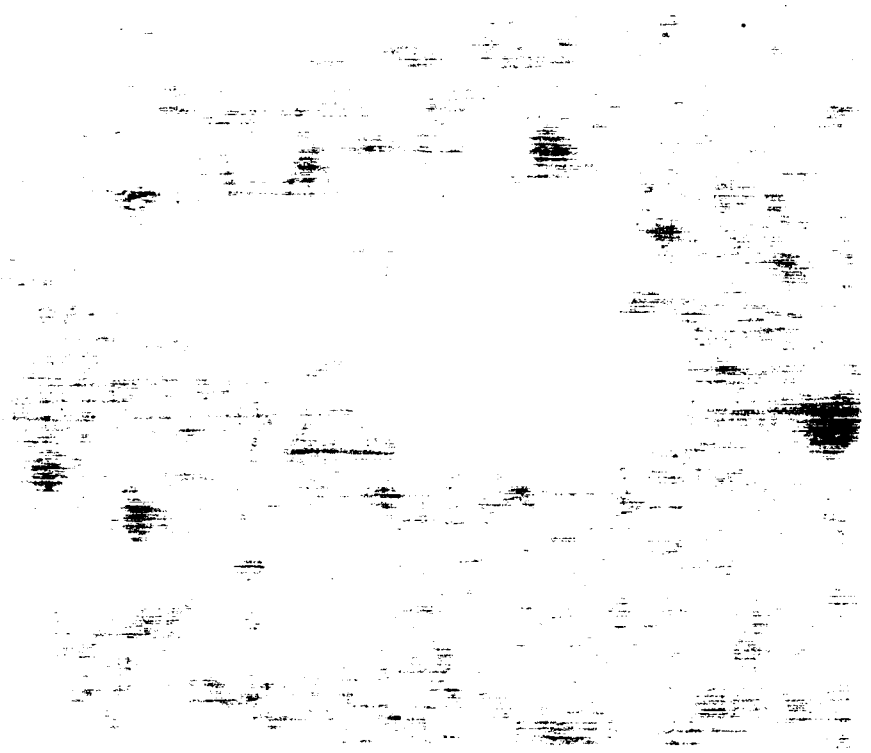
UNIT 27.003: IMPACT ZONE - This inactive unit is identified as an undefined "contaminated area" (98, p. 13). Hazardous constituents and spent firing shells are believed to be found at this unit. No photo is available for this unit.

UNIT 27 004: CONTAMINATED ROADSIDE AREA - This unit (10, p. 1-2) is suspecte to be a fenced off area on the south side of the adjacent roadway where s l pieces of HE are said to be found. It is undetermined if additiona contamination exists. No photo is available for this unit.

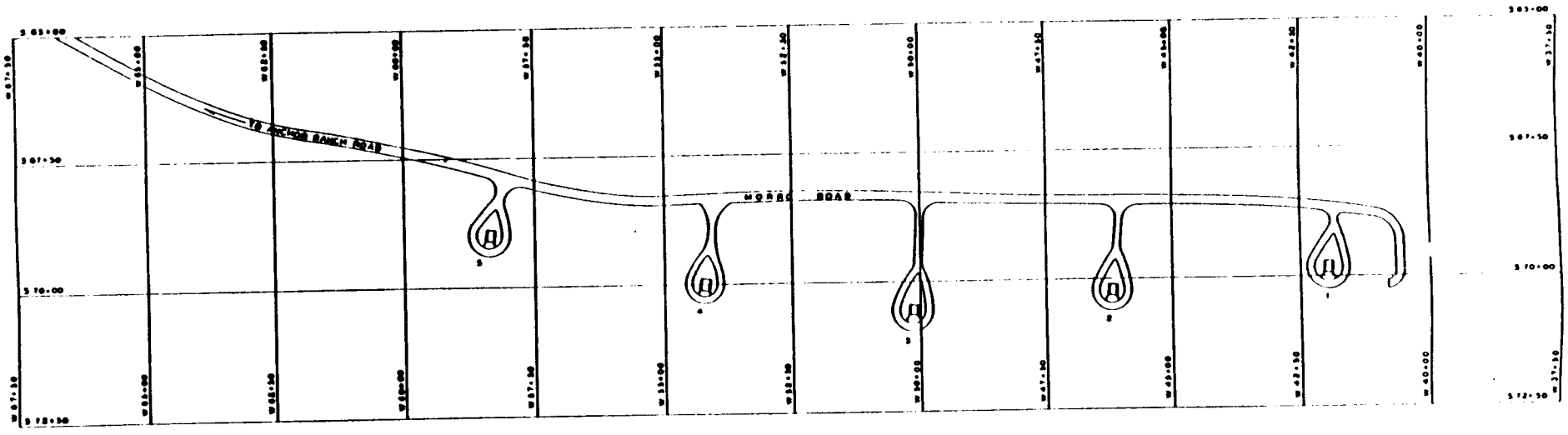
TA-28, Magazine Area "A"

This inactive technical area was intended for the storage of high explosives (10, p. 4-2). All structures are reportedly gone. Figure 27 is a map of the TA-28 area.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE



STRUCTURE NUMBER	STRUCTURE DESIGNATION	STRUCTURE NOMENCLATURE	REMARKS	APPROXIMATE GRID LOCATION
TA 28 1	MAA 1	MAGAZINE	FORMERLY S 61	S70.00 W42.50
TA 28 2	MAA 2	MAGAZINE	FORMERLY S 62	S70.00 W45.00
TA 28 3	MAA 3	MAGAZINE	FORMERLY S 63	S70.00 W50.00
TA 28 4	MAA 4	MAGAZINE	FORMERLY S 64	S70.00 W55.00
TA 28 5	MAA 5	MAGAZINE	FORMERLY S 65	S70.00 W57.50
TA 28 6	MAA 6	ROAD BLOCK	REMOVED 1950	



1"=100'

GRAPHIC SCALE

Figure 27

UNIVERSITY OF CALIFORNIA
Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87544

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA-28 MAGAZINE AREA - A

TA-29, Magazine Area "B"

This inactive technical area was a magazine area for the storage of high explosives (10, p. 4-2). It was abandoned in 1957. A map of this technical area is not available.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE

TA-30, Electronics Test Area

As the name implies, this inactive technical area was an electronics test area (10, p. 5-1). It was located in the vicinity of the present wellness center in TA-3 and was removed in 1946. There is no map of this technical area.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE

TA-31, East Receiving Yard

This inactive technical area site, removed in 1954, was located near the intersection of East Road and Canyon Road, at the location of the present Christian Church. It was apparently used for receiving shipments to the laboratory. A septic tank associated with this location may still exist. This tank is suspected to have handled industrial/hazardous wastes. There is no map available for this area.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

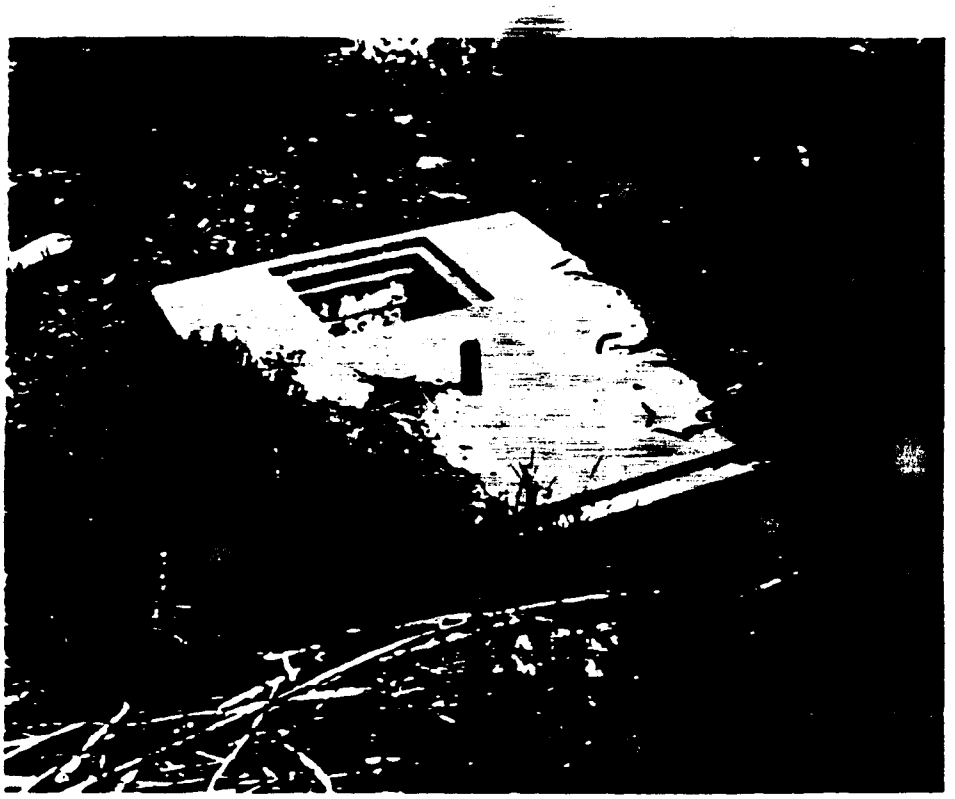
TA - 31

SWMUs	
31.001	Septic tank

AOCs	
31.002	East receiving yard

Unit Number: 31.001 Unit Name: SEPTIC TANK

Location: TA-31 References: 98,P.13; 10,P.5-2; VSI LOG BOOK



Septic Tank Designed for the Storage of Domestic and Hazardous Waste.

Unit Number: 31.001

A. DESCRIPTION

Unit Type: IN-GROUND SEPTIC TANK

Period of Operation: NOT KNOWN BY LANL.

Dimensions/Volume: 8' X 10' TOP, DEPTH UNKNOWN.

Material of Construction: CONCRETE TOP.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT DESIGNED FOR THE STORAGE OF DOMESTIC AND POSSIBLY INDUSTRIAL/HAZARDOUS WASTE.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 31.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT CONTAINS SANITARY AND HAZARDOUS WASTE.

Source of Waste: EAST GATE RECEIVING AREA.

Disposition of Waste: NOT KNOWN BY LANL.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE KNOWN TO BE ASSOCIATED WITH THIS UNIT.

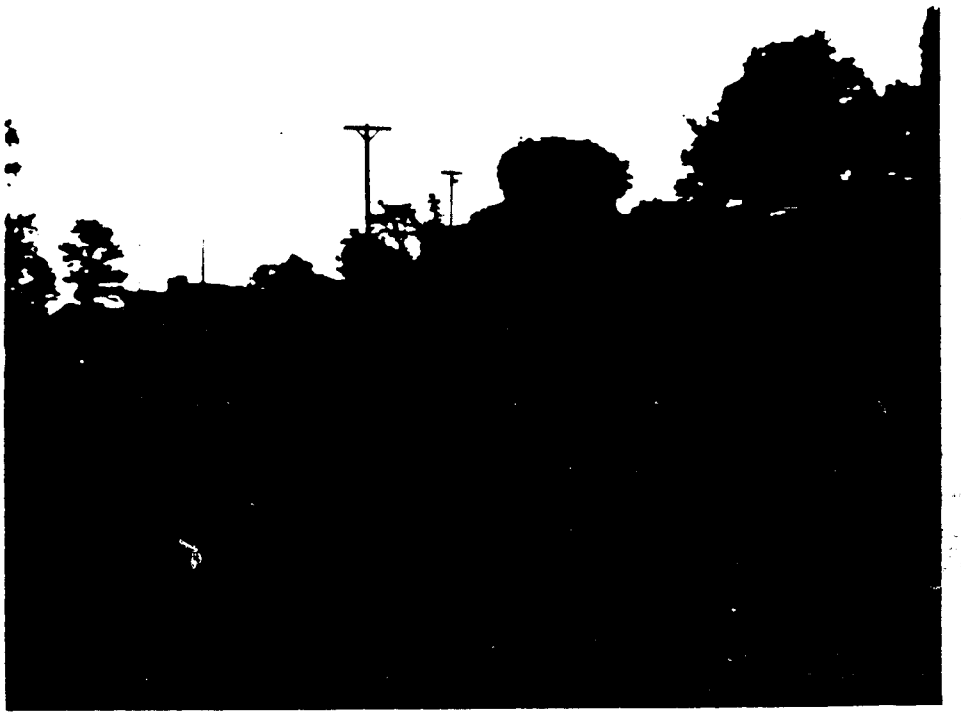
E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

UNIT 31.002: EAST RECEIVING YARD - This unit, identified during the VSI as a lab receiving area, was removed in 1954, and is presently the site of a grass field. No contamination was observed in the area. The unit was said to have contained sanitary waste and may have been used on undetermined lab product drum storage.



East Lab Receiving Area of TA-31.

TA-32, Medical Research Laboratory

This inactive technical area laboratory was located in the area of the present school administration building. It was a barracks-type building, where some monkey irradiation experiments were done as well as industrial hygiene-type activities. Two septic tanks, which possibly handled radioactive waste, were located here, but it is unknown if they were ever removed. A map is not available for this area.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 32

SWMUs
None

AOCs

32.001-32.002	Two septic tanks MRL-8
32.003	Septic tank outfall
32.004	Medical research lab

TA-32: AREAS OF CONCERN

UNIT 32.001-32.002: TWO SEPTIC TANKS MRL-8 - These units were identified during the VSI as inactive concrete tanks designed to treat waste from the old Medical Research Laboratory. These units operated from 1944 to 1946 and are in-ground, outdoor tanks, underlain by soil. Medical research wastes, some possibly radioactive, were disposed of in this unit. There are no release controls associated with this unit. Note the unit is adjacent to the County Motor Vehicle parking lot, where oil stains and spills have been identified.

Septic Tank From Old Medical Research Laboratory.

UNIT 32.003: SEPTIC TANK OUTFALL - This unit is identified as an inactive outfall suspected to contain radioactive constituents, such as radionuclides (98, p. 13). No photo is available for this unit.

UNIT 32.004: MEDICAL RESEARCH LABORATORY - This unit was used for monkey irradiation experiments and industrial hygiene-type activities and was abandoned in 1954 (10, p. 5-2). Waste management operation details were not available. No photo is available for this unit.

TA-33, HP Site

This is the location of a major high-pressure tritium handling facility. In addition, a laboratory and office space are provided in TA-33 for the Geosciences Division related to the Hot Dry Rock Geothermal Project.

In the past, TA-33 (Figure 28) was used for the test firing of projectiles and large implosions. On the surface, pieces of shrapnel have been observed and uranium contamination has been reported in this area (10, p. 1-3).

An inactive material disposal area, called Area E, is located at TA-33. While the identity is not entirely clear, it apparently consisted of six pits and a test shaft. The latter was used for a weapons component test; beryllium would remain today as a contaminant.

Another inactive material disposal area in TA-33, called Area D, consisted of two 6 ft. x 8 ft. concrete-lined shafts which are 46 ft. deep. At the bottom of each shaft is an octagonal room to one side, which was used for tests on weapons components. Beryllium contamination is suspected.

Finally, a material disposal area in TA-33, called Area K, is composed of one or two sump pits that serve Bldg. TA-33-86. The principal contaminant from this building is tritium, and uranium may also be present. The chemical constituents of the wastes are not known. The sump(s) are scheduled for removal when TA-33-86 is decommissioned (in either FY 1987 or 1988).

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks, NPDES outfalls) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 33

SWMUs	
33.001	Drum storage in vehicle maintenance area
33.002	Septic tank
33.003	Waste oil storage
33.004-33.005	Two material disposal shafts; Area D
33.006	Drilling storage yard
33.007	Drum storage area
33.008	Landfill areas
33.009	Disposal trench near Area E
33.010	Burning pits
33.011	Area K

AOCs	
33.012	Septic tanks
33.013	Area E detonation chamber
33.014	"Suspect trench"
33.015	Operation releases and accidental spills
33.016-33.018	Three outfalls
33.019	Firing sites

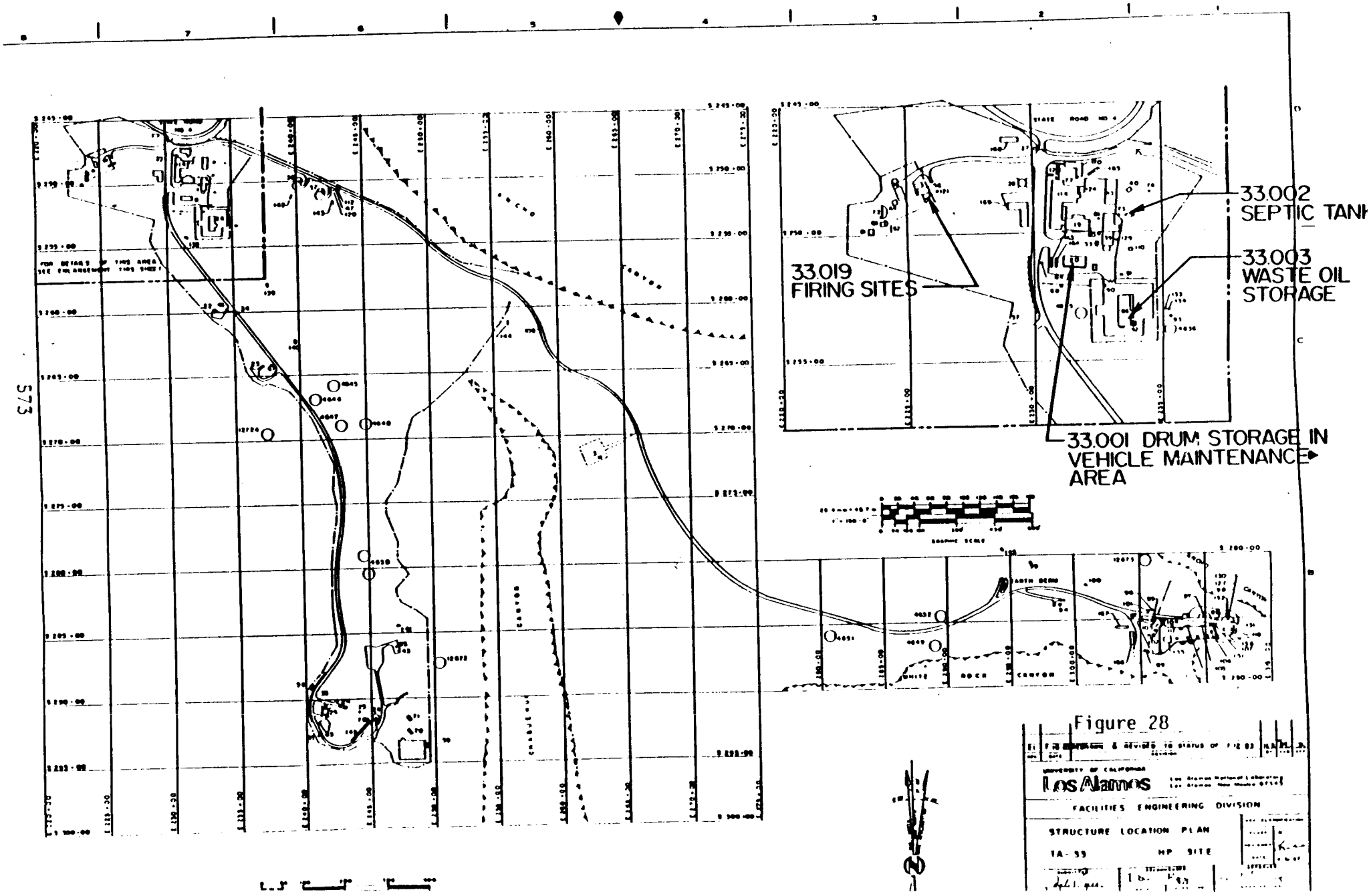

33.002
SEPTIC TANK
33.003
WASTE OIL
STORAGE
33.019
FIRING SITES
33.001 DRUM STORAGE IN
VEHICLE MAINTENANCE
AREA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA-33
HP SITE

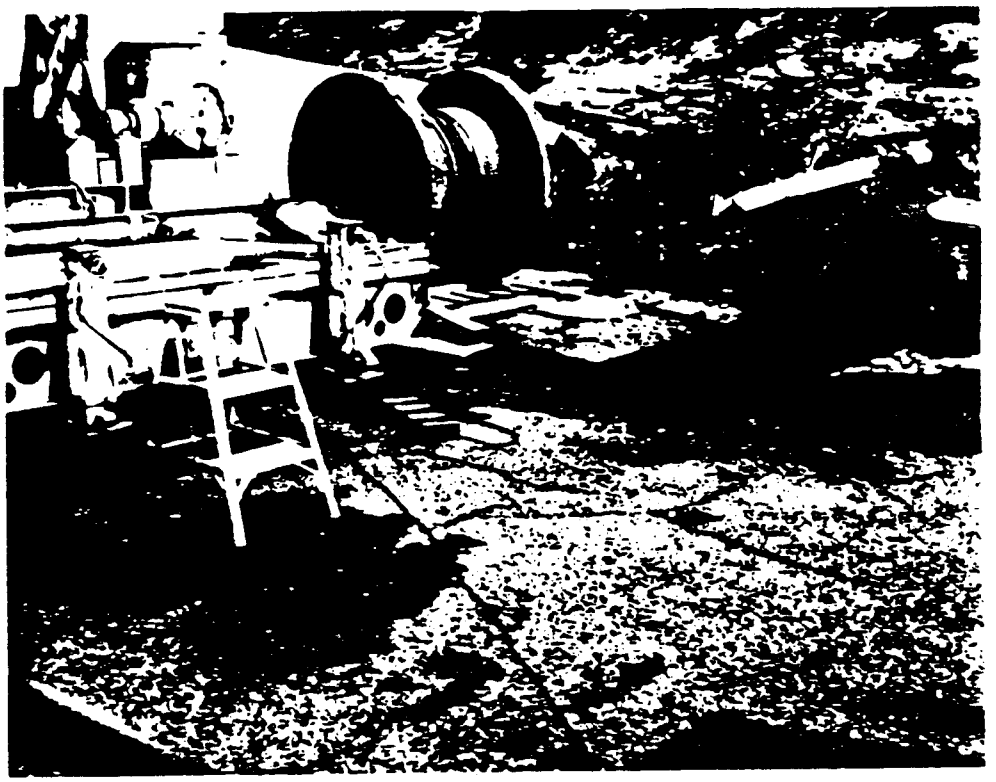
Figure 28

Unit Number: 33.001

Unit Name: DRUM STORAGE IN VEHICLE MAINTENANCE AREA

Location: TA-33

References: VSI LOG BOOK



Drum Storage Located in Venicle Maintenance Area of TA-33. Note Stains on Asphalt from Oil Spills.

Unit Number: 33.001

A. DESCRIPTION

Unit Type: DRUM STORAGE AREA

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: AREA COVERS APPROXIMATELY 1/8 ACRE; DRUMS ARE 55 GALLON

Material of Construction: DRUMS ARE STEEL; STROAGE AREA IS ASPHALT

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: AREA IS DESIGNED FOR STORAGE OF WASTES GENERATED FROM VEHICLE MAINTENANCE AND EQUIPMENT REPAIR.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 33.001

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: MOTOR OIL, VEHICLE LUBRICANTS.

Source of Waste: EQUIPMENT MAINTENANCE.

Disposition of Waste: DISCHARGED ONTO ASPHALT SURFACE.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: ASPHALT SURFACE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: VSI NOTED MULTIPLE OIL STAINS AROUND THIS UNIT.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 33.002 Unit Name: SEPTIC TANK

Location: TA-33-31 References: VSI LOG BOOK; SEPTIC TANK REPORT

Septic Tank Designed for the Treatment of Sanitary Sewage and Possibly Industrial Waste.

Unit Number: 33.002

A. DESCRIPTION

Unit Type: SEPTIC TANK, POSSIBLY USED FOR INDUSTRIAL WASTES

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: 1360 GALLONS

Material of Construction: MOST LIKELY EITHER STEEL OR CONCRETE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT DESIGNED AS A SEPTIC TANK FOR SANITARY SEWAGE, POSSIBLY INDUSTRIAL WASTES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 33.002

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES SANITARY WASTES, POSSIBLY INDUSTRIAL WASTES.

Source of Waste: TA-33.

Disposition of Waste: GOES TO LEACH FIELD.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls: X		Leak Detection:

Details: POTENTIAL OVERFLOW IS DIRECTED TO A SEEPAGE PIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 33.003 Unit Name: WASTE OIL STORAGE

Location: TA-33-86 References: VSI LOG BOOK

Waste Oil Drum Storage Located Outside of Fenced Area. Note Staining on Badly Deteriorated Asphalt.

Unit Number: 33.003

A. DESCRIPTION

Unit Type: WASTE OIL STORAGE OUTSIDE OF FENCED AREA

Period of Operation: LATE 1960'S TO PRESENT

Dimensions/Volume: 10' X 10' AREA; 55 GALLON DRUMS

Material of Construction: STEEL DRUMS; STORAGE AREA IS ASPHALT

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR STORAGE NEXT TO RECEIVING SITE FOR TRITIUM.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 33.003

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES TRITIUM CONTAMINATED WASTE OIL.

Source of Waste: TA-33.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: VISIBLE STAINING ON ASPHALT AND BADLY DETERIORATED ASPHALT WERE OBSERVED DURING THE VSI. IT IS UNKNOWN IF UNDERLYING SOIL WAS STAINED.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 33.004-33.005

Unit Name: TWO MATERIAL DISPOSAL SHAFTS (AREA D)

Location: TA-33

References: 10,P.7-4; VSI LOG BOOK; 101, P. 7-4; 84, P. 3; 98, P. 14

Area D Disposal Shafts Containing Polonium-210 and Possibly Uranium Wastes.

Unit Number: 33.004-33.005

A. DESCRIPTION

Unit Type: TWO TEST SHAFTS.

Period of Operation: 1948

Dimensions/Volume: 6' X 8', 46' DEEP

Material of Construction: CONCRETE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground: X

Purpose of Unit: UNIT USED AS A RADIOACTIVE WASTE SITE TO TEST WEAPON EXPLOSIVES.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: UNIT HAS BEEN BACK-FILLED.

Unit Number: 33.004-33.005

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE CONTAINING POLONIUM-210, POSSIBLY URANIUM, BERYLLIUM, LEAD, AND EXPLOSIVES.

Source of Waste: DETONTATION OF EXPERIMENTAL DEVICES

Disposition of Waste: IN SITU

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE SEEN DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: AREA D IS AN INACTIVE RAD-WASTE SITE THAT IS ACTUALLY SEVERAL TEST SHAFTS THAT ARE PRINCIPALLY CONTAMINATED WITH POLONIUM-210.

Unit Number: 33.006 Unit Name: DRILLING STORAGE YARD

Location: TA-33 References: VSI LOG BOOK

A. Steel Drum Storage Located Within Drilling Storage Yard. Note Haphazard Stacking of Drums. See Additional Photo on Following Page.

B. Steel Drum Storage Located Within Drilling Storage Yard.

Unit Number: 33.006

A. DESCRIPTION

Unit Type: DRUM STORAGE AREA

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DRUMS ARE 55 GALLONS EACH AND COVERS AN AREA OF 1/4 ACRE.

Material of Construction: STEEL DRUMS, SOME DRUMS ON PALLETS BUT MOST ARE ON SOIL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: UNIT UNDERLAIN BY A SOIL PAD.

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR STORAGE OF WASTE OILS FOR REUSE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 33.006

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTE OILS STORED PRIOR TO REUSE.

Source of Waste: POSSIBLY TA-33

Disposition of Waste: REUSED

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: SOIL TESTED 1-2 ppm PCB's (LANL).

Unit Number: 33.007 Unit Name: DRUM STORAGE AREA

Location: TA-33 References: VSI LOG BOOK

Drum Storage, Used for the Storage of Tritium Contaminated Liquids.

Unit Number: 33.007

A. DESCRIPTION

Unit Type: DRUM STORAGE

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: THE AREA COVERS APPROXIMATELY 50 SQUARE FEET AND CONTAINS 20 TO 30 - 55 GALLON DRUMS.

Material of Construction: STEEL DRUMS ON ASPHALT

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT USED FOR STORAGE OF TRITIUM CONTAMINATED WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 33.007

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: TRITIUM CONTAMINATED LIQUIDS.

Source of Waste: TA-33-86.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: DRUMS ARE IN A FENCED AREA.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 33.008

Unit Name: LANDFILL AREAS

Location: TA-33

References: 98, P. 14

No Photos are Available for These Units. Units Were Not Seen During the VSI.

Unit Number: 33.008

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "LANDFILL". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF SOLID AND HAZARDOUS WASTE, DEBRIS, BERYLLIUM

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 33.008

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES MANAGED AS SOILD, HAZARDOUS, DEBRIS AND BERYLLIUM

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

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RCRA FACILITY ASSESSMENT (RFA)
PRELIMINARY REVIEW/VISUAL SITE INSPECTION (PR/VSI) REPORT
OF THE LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO
I.D. NUMBER NM0890010515

prepared for

U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue
Dallas, Texas 75202

by

A. T. Kearney
699 Prince Street
Alexandria, VA 22313

and

K. W. Brown & Associates, Inc.
6 Graham Road
College Station, TX 77840

EPA Contract Number 68-01-7374
A. T. Kearney Work Assignment Number R26-01-12

August, 1987

Volume II

Unit Number: 33.009

Unit Name: DISPOSAL TRENCH NEAR AREA E

Location: TA-33

References: 10 P. 1-3

No Photo is Available for This Unit.

Unit Number: 33.009

A. DESCRIPTION

Unit Type: THIS UNIT HAS BEEN IDENTIFIED BY LANL AS A POSSIBLE EXTRA DISPOSAL TRENCH LOCATED NEAR AREA E. THIS TRENCH HAS NOT BEEN IDENTIFIED OR CONFIRMED. GENERAL AREA WAS SEEN DURING THE VSI.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: EXCAVATED EARTH

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF DEBRIS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: DATA NOT AVAILABLE

Unit Number: 33.009

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: SUSPECTED TO CONTAIN METAL DEBRIS AND POSSIBLY URANIUM

Source of Waste: METAL DEBRIS

Disposition of Waste: ASSUMED TO BE IN PLACE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 33.010 Unit Name: BURNING PITS

Location: TA-36 References: 98, P. 14

No Photos are Available for These Units. Units Were Not Seen During the VSI.

Unit Number: 33.010

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THESE AS "BURNING PITS". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: BURNING OF RADIOACTIVE AND HAZARDOUS WASTE, URANIUM, AND EXPLOSIVES

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 33.010

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THIS AREA AS CONTAMINATED AND THE WASTES MANAGED AS RADIOACTIVE, HAZARDOUS, URANIUM, AND EXPLOSIVES

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 33.011 Unit Name: AREA K

Location: TA-33 References: 10, P. 1-3

No Photo is Available for This Unit. Unit Was Not Observed During the VSI.

Unit Number: 33.011

A. DESCRIPTION

Unit Type: WASTE DISPOSAL SUMP

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: WASTE DISPOSAL SUMP

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: DATA NOT AVAILABLE

Unit Number: 33.011

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: POTENTIAL TRITIUM AND URANIUM CONTAMINATION

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

TA-33: AREAS OF CONCERN

UNIT 33.012: SEPTIC TANKS - This part active, part inactive unit is identified as septic tanks used for the disposal of sanitary waste (98, p. 14). It is suspected that radioactive constituents and radionuclides may be found at this unit. No photo is available for this unit.

UNIT 33.013: AREA E DETONATION CHAMBER - This active unit was identified during the VSI as a one chambered, detonation area with four buried pits. The volume of this unit is 12,000 cu. ft. It operated from 1949 until the mid 1960's and was designed to be used for the detonation testing of explosives. It is suspected that the unit may contain material that may be contaminated with uranium 239, beryllium, and polonium 210, all of which LANL personnel stated was to have decayed. No photo is available for this unit.

UNIT 33.014: "SUSPECT" TRENCH - This active unit was identified during the VSI as a "suspect" trench, which was near a chambered fence area and presently an open field.

"Suspect" Trench Located at TA-33.

UNIT 33.015: OPERATIONAL RELEASES AND ACCIDENTAL SPILLS - This unit is identified as a "contaminated area" with radioactive constituents, including tritium (98, p. 14). The unit is active. No photo is available for this unit.

UNIT 33.016-33.018: OUTFALLS - These units are identified as outfall/sumps (98, p. 14; 10, P. 1-3). The unit is part active and part inactive. The wastes include radioactive and hazardous constituents, such as tritium, uranium, beryllium, and organics. No photos are available for these units.

UNIT 33.019: FIRING SITES - This is identified as a contaminated area (98, p. 14) with hazardous and radioactive constituents, including uranium and explosives. The unit is currently inactive. No photo is available for this unit.

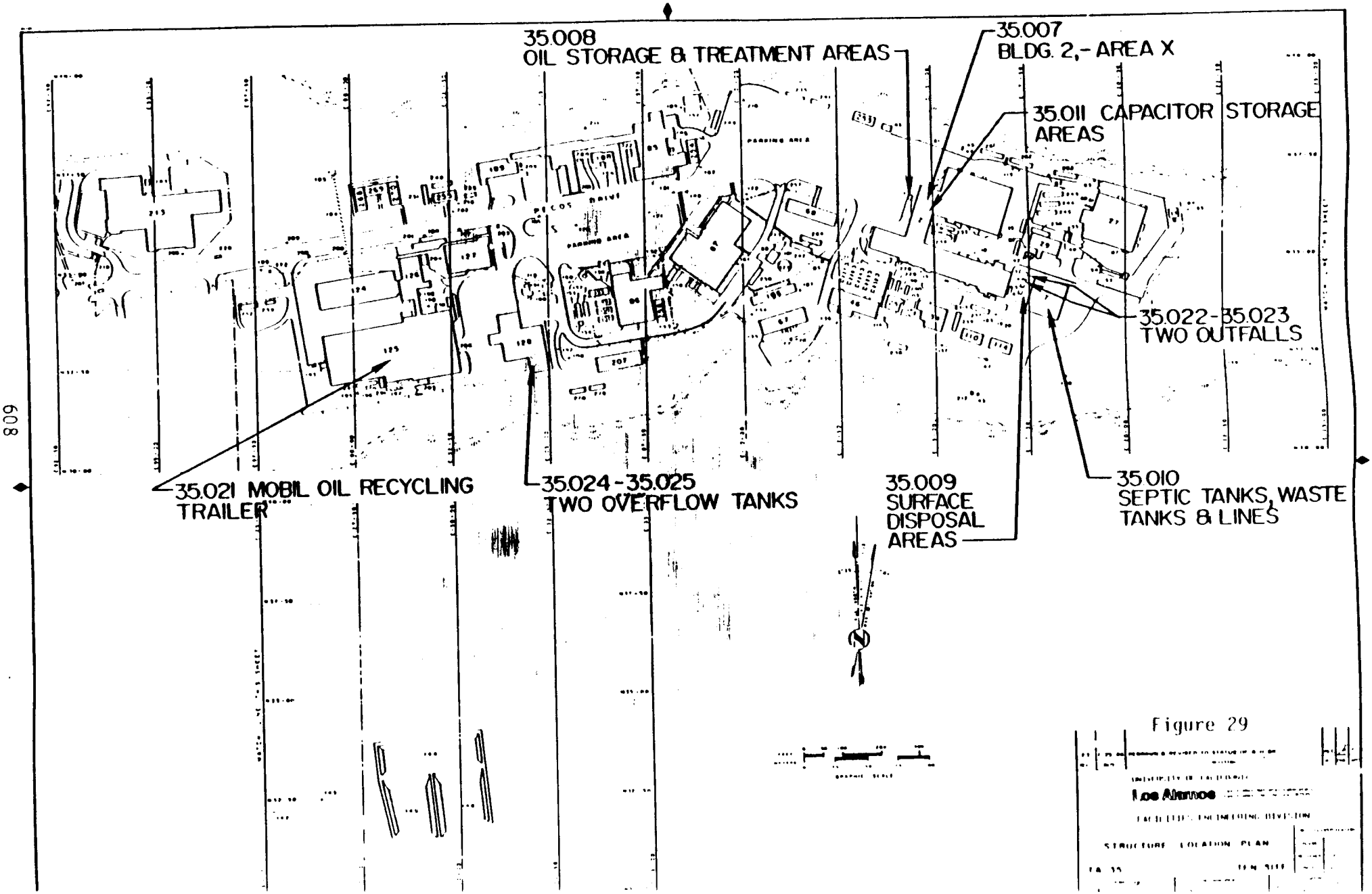

35.008
OIL STORAGE & TREATMENT AREAS
35.007
BLDG. 2,- AREA X
35.011 CAPACITOR STORAGE
AREAS
35.022-35.023
TWO OUTFALLS
35.021 MOBIL OIL RECYCLING
TRAILER
35.024-35.025
TWO OVERFLOW TANKS
35.009
SURFACE
DISPOSAL
AREAS
35.010
SEPTIC TANKS, WASTE
TANKS & LINES
Los Alamos
STRUCTURE LOCATION PLAN

Figure 29

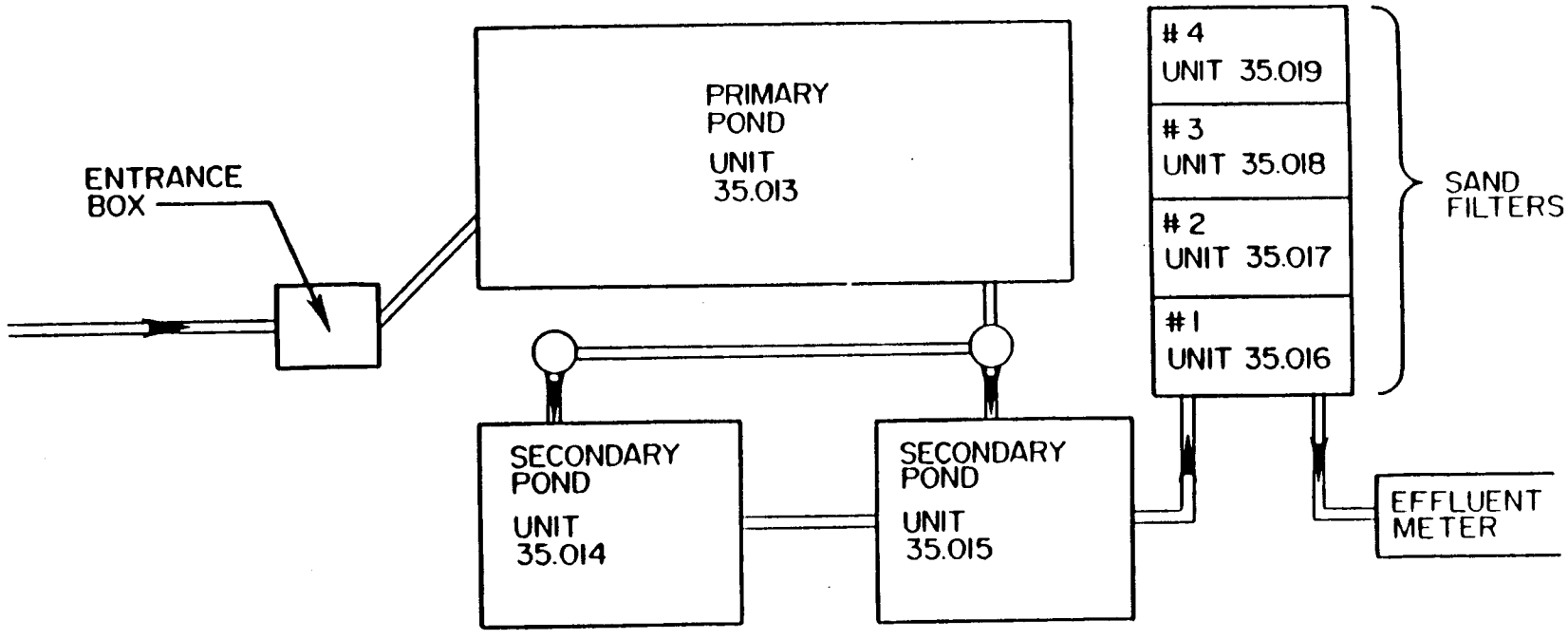


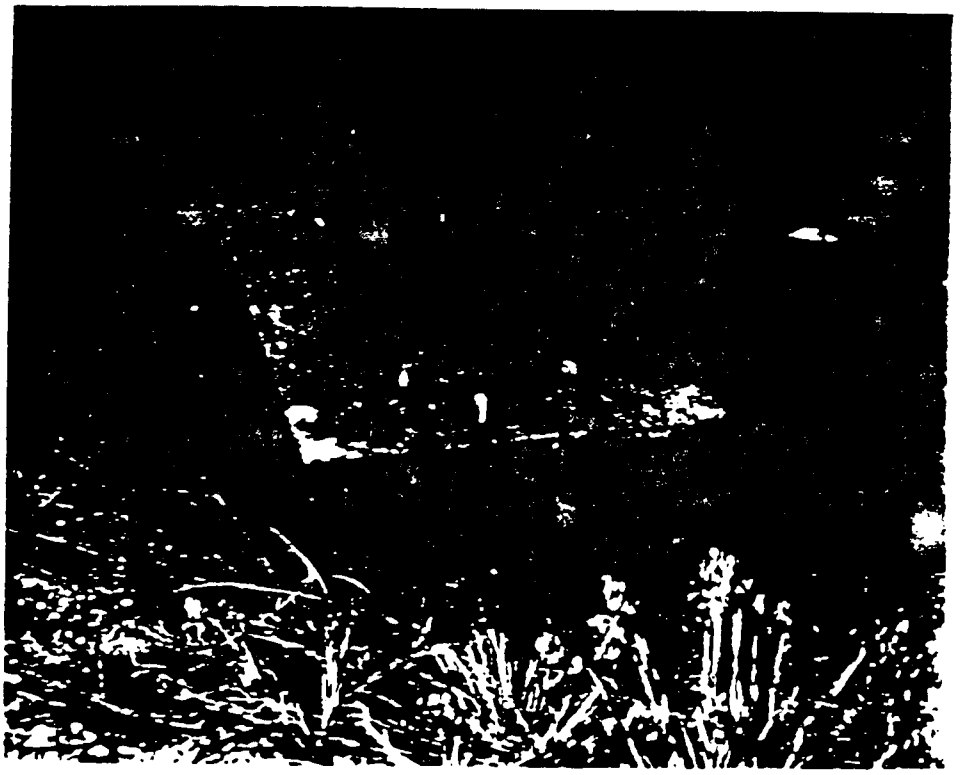
FIGURE 30 EXHIBIT SCHEMATIC OF TA-35 PLANT.

Unit Number: 35.001-35.002

Unit Name: AREA W DISPOSAL, TWO VERTICAL SHAFTS

Location: TA-35

References: 10,P.2-4 & 2-5; VSI LOG BOOK; 82, P. 24; 84, P. 7; 10 P. 2-4 & 2-5



Area W Vertical Disposal Shafts Entombed in Concrete.

Unit Number: 35.001-35.002

A. DESCRIPTION

Unit Type: DISPOSAL AREA, DOUBLY LINED VERTICAL SHAFTS (2).

Period of Operation: 1963 TO 1979

Dimensions/Volume: 8" DIAMETER, 100" LONG; 30 GALLON CAPACITY

Material of Construction: ENTOMBED IN CONCRETE; LINED BY CARBON STEEL SLEEVES

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT USED FOR STORAGE OF SLIGHTLY-CONTAMINATED SODIUM (PLUTONIUM AND FISSION PRODUCTS).

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 35.001-35.002

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: SODIUM CONTAMINATED WITH PLUTONIUM AND FISSION PRODUCTS; IRRADIATED METALLIC SODIUM, CONTAMINATED WITH CESIUM-137, SODIUM-22, PLUTONIUM-239.

Source of Waste: LAMPRE REACTOR (DISMANTLED IN 1963)

Disposition of Waste: WASTE IS ENCASED WITHIN THIS UNIT.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT IS ENCASED.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.: X	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: KNOWN STRONTIUM, PLUTONIUM, AND CESIUM CONTAMINATION IN THE OUTFALL AREA OF THIS UNIT AND THE PROBABILITY OF MIGRATION OF THESE CONTAMINANTS TO THE MORTANDAD CANYON IS HIGH.(101, P. 2-5).

Unit Number: 35.003

A. DESCRIPTION

Unit Type: ION EXCHANGE COLUMN WITH STORAGE TANK; STRONTIUM-90; POSSIBLY CHEMICAL WASTE TANKS; SOIL COLUMN REMOVED; RADIATION SAMPLING DONE

Period of Operation: 1950'S (DECOMMISSIONED IN LATE 1970'S)

Dimensions/Volume: TWENTY ACRE AREA

Material of Construction: RECLAIMED

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT USED FOR LIQUID TREATMENT WITH ION EXCHANGE COLUMN AND STORAGE TANKS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: RECLAIMED

Unit Number: 35.003

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: OUTFALL FROM FACILITY HAS STRONTIUM, PLUTONIUM AND CESIUM CONTAMINATION

Source of Waste: SOURCE IS UNKNOWN.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE SEEN DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

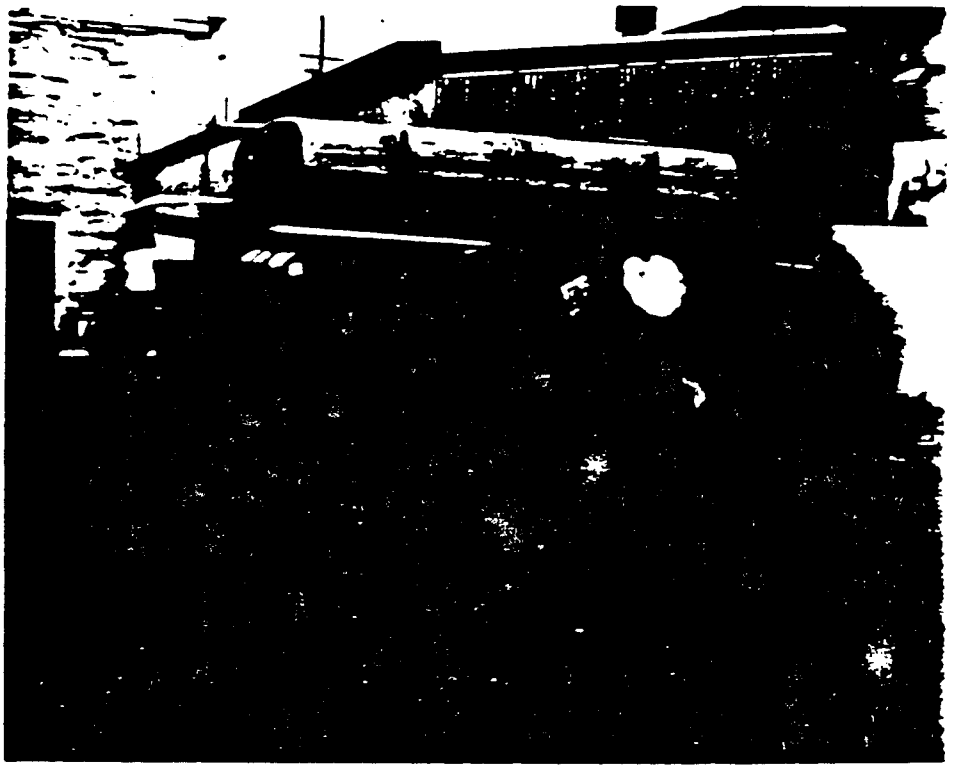
Detail of Past Releases: OUTFALL HAS STRONTIUM, PLUTONIUM AND CESIUM CONTAMINATION (10, P. 2-5)

Unit Number: 35.004

Unit Name: SATELLITE STORAGE AT BUILDING 58

Location: TA-35

References: VSI LOG BOOK; 98, P. 15



Satellite Drum Storage Located Outside of Building 58. Note Absorbant on Asphalt in Foreground in Front of Drums.

Unit Number: 35.004

A. DESCRIPTION

Unit Type: DRUM STORAGE.

Period of Operation: 1982 TO PRESENT

Dimensions/Volume: 55 GALLON DRUMS IN AREA APPROXIMATELY 20'LONG X 4' WIDE

Material of Construction: STEEL DRUM ON AN ASPHALT PAD

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE STORAGE OF USED SOLVENT AND OIL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 35.004

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable: X	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES USED SOLVENT, OIL, PCBs, AND HAZARDOUS WASTES.

Source of Waste: OPERATIONS IN TA-35.

Disposition of Waste: TA-54.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

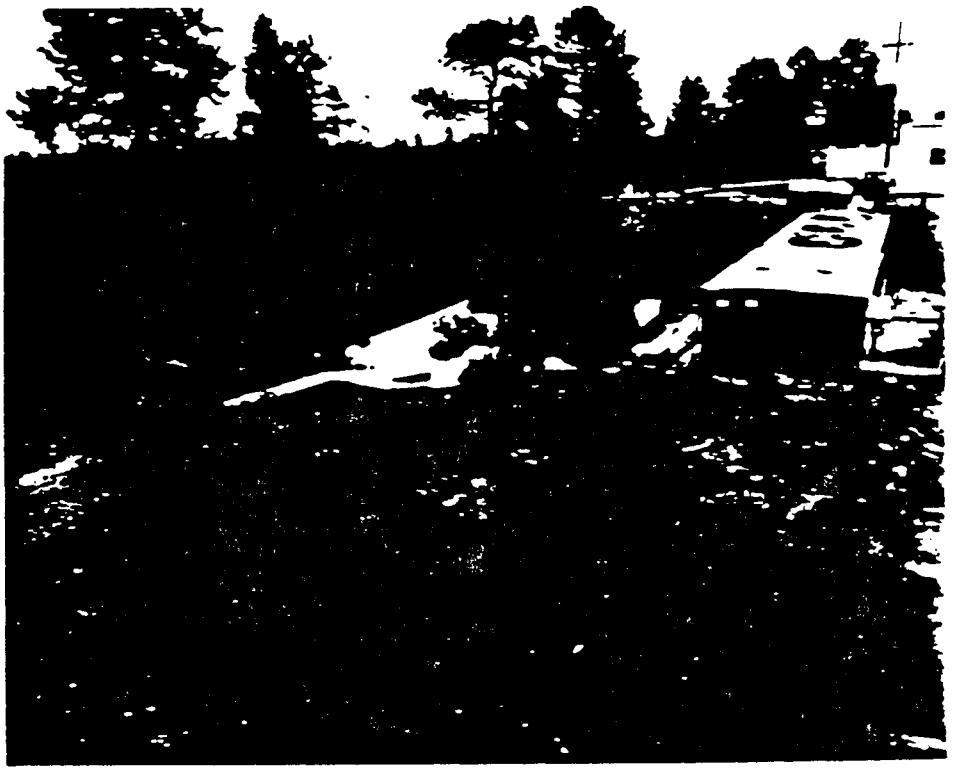
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: RELEASES AND ABSORBENT WERE OBSERVED ON SURROUNDING CRACKED ASPHALT DURING THE VSI

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 35.005-35.006 Unit Name: TWO BERMED BASINS

Location: TA-35 References: VSI LOG BOOK



Gunnite-lined Bermed Basin Used to Collect Oil Spills and Possibly Runoff from Surrounding Area.

Unit Number: 35.005-35.006

A. DESCRIPTION

Unit Type: BERMED BASIN FOR COLLECTION OF OVERFLOW OIL FROM UNDERGROUND STORAGE TANK OR SPILLS/LEAKS IN THE AREA.

Period of Operation: 1986 TO PRESENT

Dimensions/Volume: 20'WIDE X 40'LONG

Material of Construction: GUNNITE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO COLLECT SPILLS AND POSSIBLY RUN-OFF.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 35.005-35.006

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES SPILLED OIL, POSSIBLY RUN-OFF IN AREA.

Source of Waste: SPILLS, RUN-OFF FROM SURROUNDING AREA.

Disposition of Waste: DATA NOT AVAILABLE.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: SMALL BERM AROUND BASIN; NO OTHER RELEASE CONTROLS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: OIL STAINS AND OVERFLOW INTO CANYON WERE OBSERVED FROM ONE OF THE BERMED BASINS DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 35.007

Unit Name: BUILDING 2, AREA X

Location: TA-35

References: VSI LOG BOOK; 10, P 3-5; 82, P. 24

No Photo is Available for this Unit.

Unit Number: 35.007

A. DESCRIPTION

Unit Type: TANKS, PUMP PIT, LAPRE II REACTOR, 2 PITS

Period of Operation: 1955-56; 1964 TO PRESENT

Dimensions/Volume: APPROXIMATELY 1/2-ACRES

Material of Construction: TANKS ARE METAL; PITS 200' FROM EDGE OF BLDG. 2

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground: X

Purpose of Unit: AREA USED AS A DISPOSAL SITE

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 35.007

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: SUBSURFACE STORAGE OF THE LAPRE REACTOR VESSEL. CONTAINS (ESTIMATED) LONGER LIFE ACTIVATION PRODUCTS; 235-U; LASL IS PLANNING ON REMOVING THE REACTOR VESSEL TO BURIAL IN AREA G.

Source of Waste: LAPRE REACTOR VESSEL

Disposition of Waste: THE CHEMICAL WASTE WAS COVERED WITH ASPHALT, 200 FT. FROM EDGE OF BLDG. 2

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE SEEN DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 35.008

Unit Name: OIL STORAGE AND TREATMENT AREAS

Location: TA-35

References: 98, P. 14

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 35.008

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS AN "OIL STORAGE AND TREATMENT" AREA

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS WASTES, PCBs, AND ORGANICS

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA IS AVAILABLE

Unit Number: 35.008

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THIS AS A CONTAMINATED AREA AND THE WASTES MANAGED AS HAZARDOUS, PCBs, ORGANICS

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: REFERENCES SUGGEST THAT RELEASE CONDITIONS MAY CAUSE SIGNIFICANT ENVIRONMENTAL IMPACT

Unit Number: 35.009

Unit Name: SURFACE DISPOSAL AREAS

Location: TA-35

References: 98; P. 15

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 35.009

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "LANDFILL". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF SOLID WASTE AND DEBRIS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 35.009

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES MANAGED AS SOLIDS AND DEBRIS

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: ASSUMED TO BE IN PLACE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

TA-35: AREAS OF CONCERN

UNIT 35.010: SEPTIC/WASTE TANKS AND LINES - This is an active unit (98, p. 15) suspected to be designed for the treatment and storage of unspecified hazardous waste, PCB's, and petroleum products (i.e., waste oils). No photo is available for this unit.

UNIT 35.011: CAPACITOR STORAGE AREA - This is an active storage area (98, p. 14) suspected to be designed for containment of contaminated hazardous waste, consisting of PCB's and organics. No photo is available for this unit.

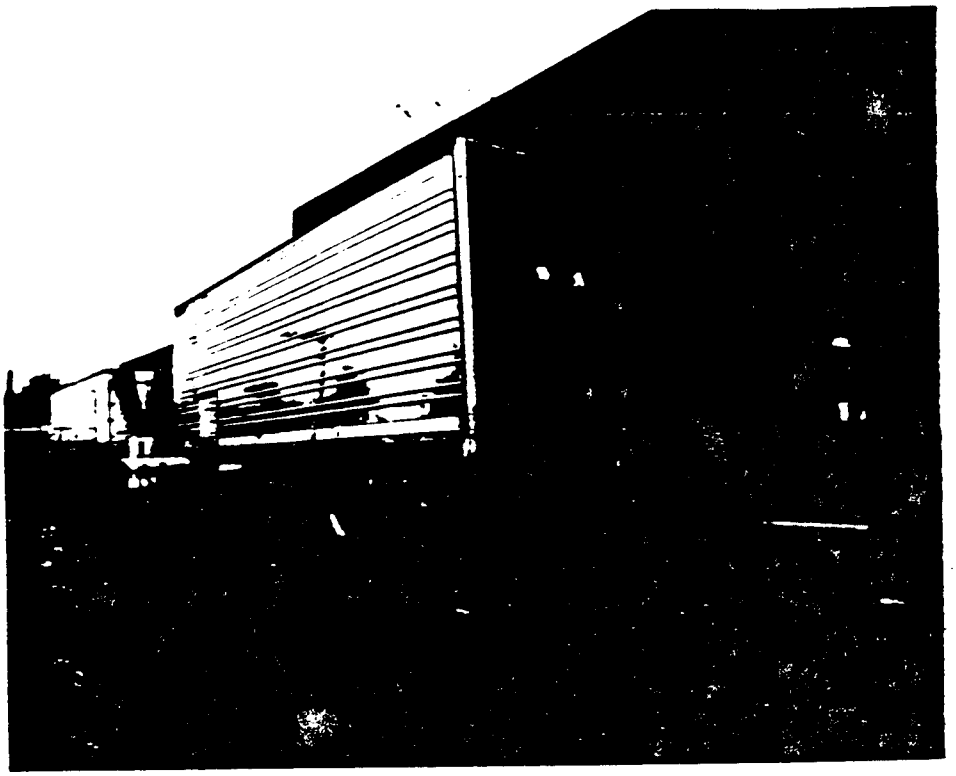
UNIT 35.012: SURFACE AND SUBSURFACE PIPING AND DUCTS - This is an inactive storage area suspected to be designed for the containment of radioactive wastes (98, p. 15). No photo is available for this unit.

UNIT 35.013-35.015: THREE LAGOONS - As observed during the VSI, this unit is designed for the biological treatment of sanitary sewage. It is unknown if hazardous constituents are present. All three lagoons are gunnite lined and measure 100 ft. by 100 ft. No photos are available for these units.

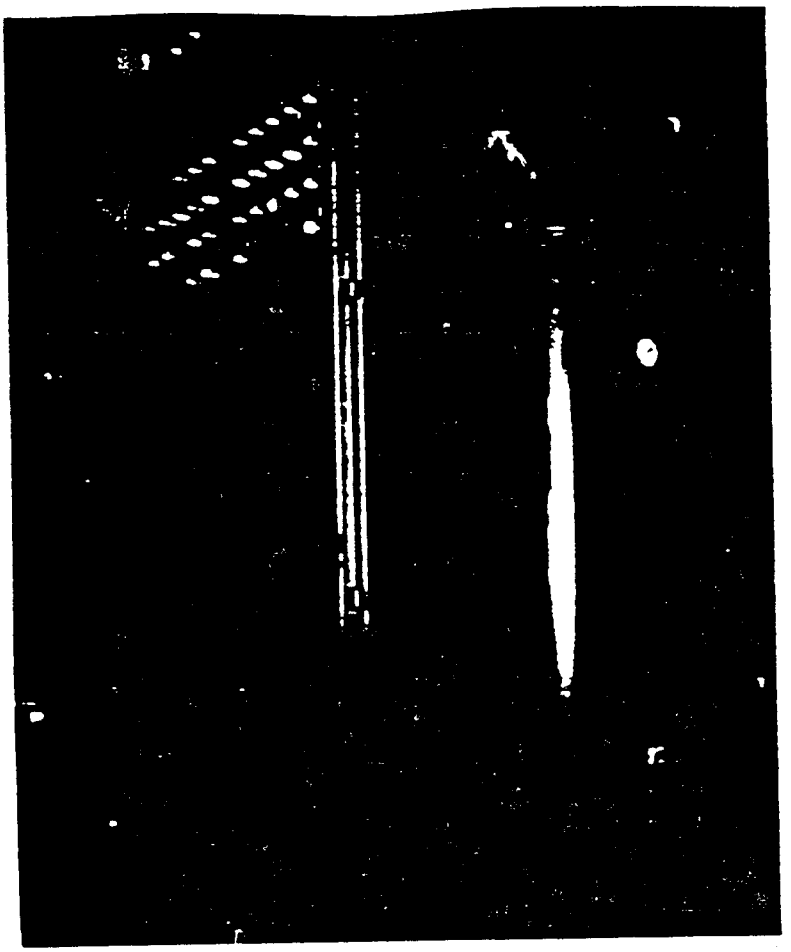
UNIT 35.016-35.019: FOUR SAND FILTERS - As seen during the VSI, this unit is designed for the treatment of sanitary sewage. These filters are plastic lined and measure 50 ft. by 50 ft. Waste had been previously discharged to the adjacent canyon directly from lagoons (35.013-35.015). No photos are available for these units.

UNIT 35.020: UNDERGROUND STORAGE TANK #1 - As observed during the VSI, this is an underground storage tank made of steel with a capacity of approximately 9,000 gallons. This unit was designed for the storage of unspecified waste generated at TA-35. No photo is available for this unit.

UNIT 35.021: MOBILE OIL RECYCLING TRAILER - As observed during the VSI, this is an oil recycling unit enclosed in a mobile trailer. This unit contains unspecified waste oil from Building 125. See photos on following page.



A. Mobile Oil Recycling Trailer, Used for Recycling Waste Oil from Building 125.



B. Interior of Mobile Oil Recycling Trailer.

UNIT 35.022-35.023: TWO OUTFALLS - These outfalls include a partially active unit which is suspected of discharging effluent containing hazardous wastes (i.e., chemicals and organics), and an inactive unit that has deposited radioactive wastes containing strontium, plutonium, tritium, and fusion products into the surrounding area (98, p. 14). No photo is available for this unit.

UNIT 35.024-35.025: TWO OVERFLOW TANKS - This active unit was identified during the VSI as being comprised of two steel tanks (20,000 gallons each) designed for the collection of overflow oil originating from Building 128. The unit manages product, not waste. Nevertheless, hazardous constituents may be present in this product. No photo is available for this unit.

TA-36, Kappa Site

In TA-36 (Figure 31), various explosive phenomena, such as detonation velocity, are investigated. Many tests involving explosives have been conducted here, some of which have spread uranium around the firing points. The present extent of the contamination, and determination of any other types of contamination is unknown (10, p. 3-2).

A material disposal area, called Area AA, is located near TA-36-12 in a section called "Lower Slobbovia." It consists of three burning pits for high explosives. These pits were used to burn firing site debris (cables, wooden tables and paper wipes) which could have been contaminated with high explosives. One open pit remains in use as described.

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks, NPDES outfalls, container storage, thermal treatment, HE sumps) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 36

SWMUs	
36.001	Minie site bunker boneyard
36.002	Burning trench
36.003	Sump pit
36.004	Septic tanks
36.005	Area AA

AOC	
36.006	Burning areas
36.007	Photoprocessing outfall
36.008-36.009	Two firing sites
36.010	Thermal treatment facility

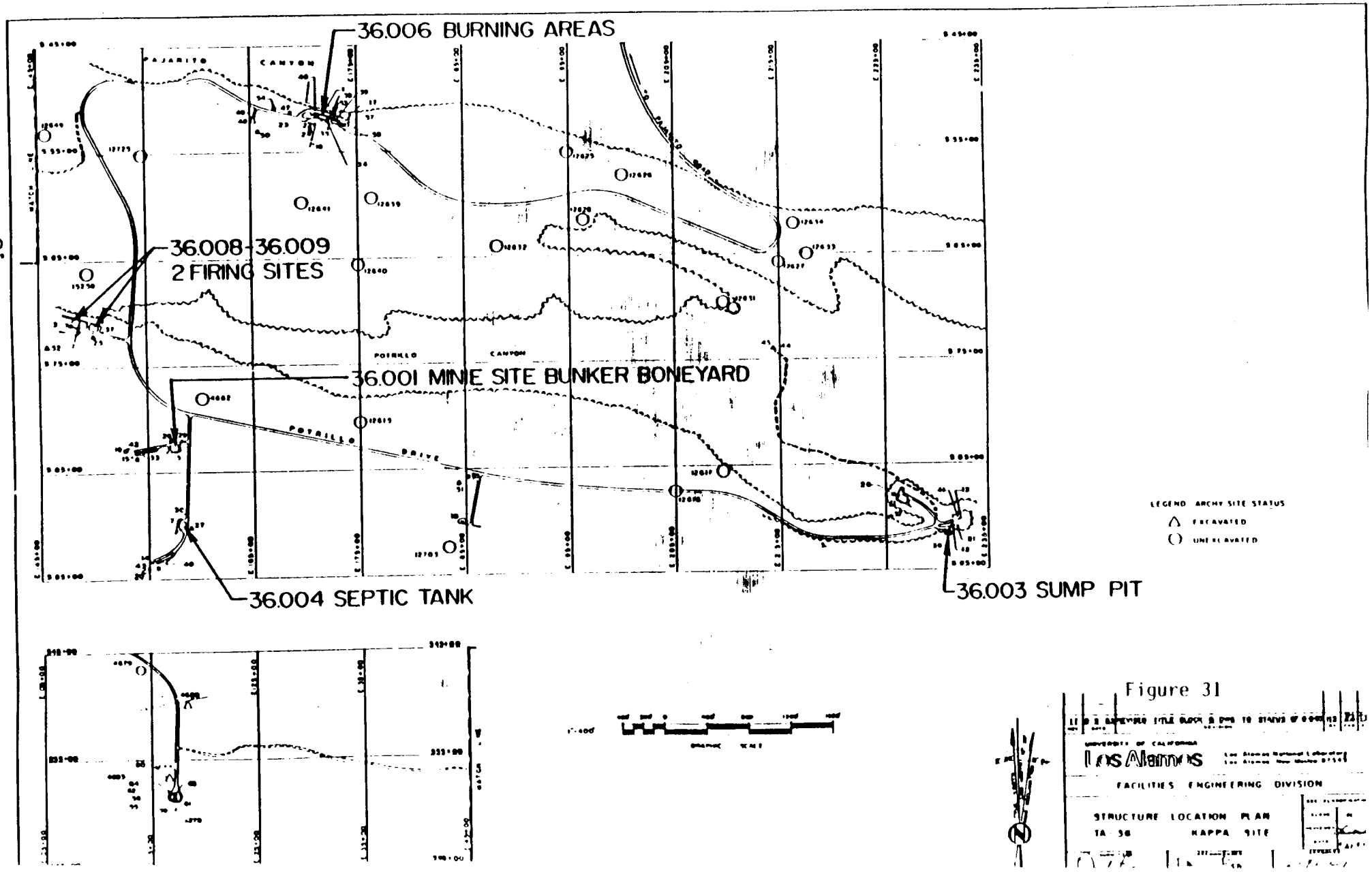

36.006 BURNING AREAS
36.008-36.009
2 FIRING SITES
36.001 MINE SITE BUNKER BONEYARD
36.004 SEPTIC TANK
36.003 SUMP PIT
LEGEND ARCHY SITE STATUS
EXCAVATED
UNEXCAVATED
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA 36 KAPPA SITE

Figure 31

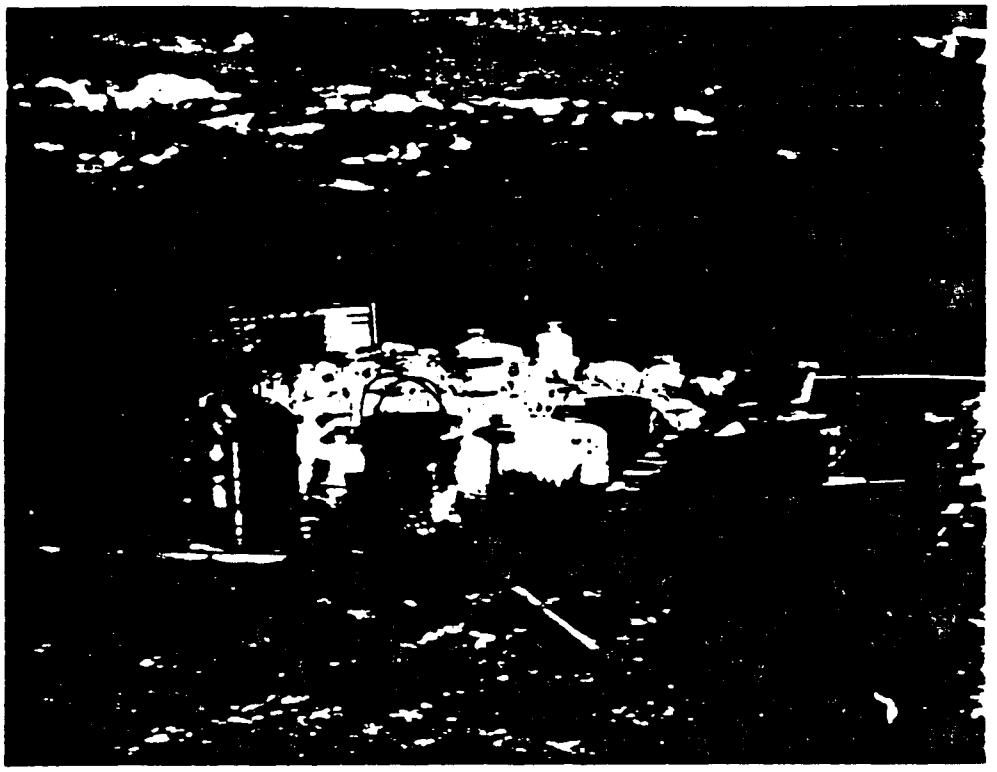
Unit Number: 36.001

Unit Name: MINIE SITE BUNKER BONEYARD

Location: TA-36

References: VSI LOG BOOK; 98, P. 15

A. Open Dump (Boneyard) Located Across Road From Bunker 7. See Additional Photo on Following Page.



B. Open Dump (Boneyard) Containing a Variety of Solid Materials.

Unit Number: 36.001

A. DESCRIPTION

Unit Type: OPEN DUMP (BONEYARD) ACROSS ROAD FROM BUNKER 7.

Period of Operation: AT LEAST 1978 TO PRESENT.

Dimensions/Volume: SEVERAL ACRES.

Material of Construction: ON GROUND.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE STORAGE OF WITNESS PLATES. HOWEVER, UNIT HAS BEEN USED UNOFFICIALLY AS AN OPEN DUMP OF A VARIETY OF SOLID WASTES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 36.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases: X	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WITNESS PLATES MAY CONTAIN BITS OF DEPLETED URANIUM OR EXPLOSIVES. CONTAINERS OF FREON AND VARIOUS SOLID WASTES ARE LOCATED WITHIN THIS UNIT.

Source of Waste: NEARBY FIRING SITES AND TA-36.

Disposition of Waste: DISPOSITION ASSUMED TO BE IN PLACE.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: RELEASE CONTROLS ARE NOT ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 36.002 Unit Name: BURNING TRENCH

Location: TA-36 References: VSI LOG BOOK

A. Burning Trench at "Lower Slobbovia". See Additional Photo on Following Page.

B. Same as Preceeding Photo.

Unit Number: 36.002

A. DESCRIPTION

Unit Type: BURNING TRENCH AT LOWER SLOBBOVIA.

Period of Operation: 1960'S TO PRESENT.

Dimensions/Volume: 30'WIDE X 200'LONG, DEPTH UNKNOWN.

Material of Construction: TRENCH DUG IN SOIL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO BURN TABLES, ETC. WHICH MAY BE CONTAMINATED BY HIGH EXPLOSIVES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 36.002

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS TABLES, LUMBER, ETC. THAT MAY BE CONTAMINATED BY HIGH EXPLOSIVES.

Source of Waste: FIRING SITES IN TA-36.

Disposition of Waste: BURNED IN PLACE.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air: X	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: DESIGNED TO RELEASE TO AIR.

Unit Number: 36.003 Unit Name: SUMP PIT

Location: TA-36 References: 98, P. 15; 10, P. 3-3

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 36.003

A. DESCRIPTION

Unit Type: SUMP

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS AND RADIOACTIVE WASTE, EXPLOSIVES AND URANIUM

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 36.003

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: REF. 98, P. 15 LIST WASTES MANAGED AS HAZARDOUS AND RADIOACTIVE, EXPLOSIVES, AND URANIUM. REF. 10, P. 3-3 STATES THAT CONTENTS OF SUMP PIT ARE UNKNOWN

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 36.004

Unit Name: SEPTIC TANKS

Location: TA-36

References: 98, P. 16

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 36.004

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS "SEPTIC TANKS". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS AND RADIOACTIVE WASTES, EXPLOSIVES AND URANIUM

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 36.004

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES MANAGED AS HAZARDOUS, RADIOACTIVE, EXPLOSIVES, AND URANIUM

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: CEARP DOES NOT INDICATE STATUS OF UNIT (E.G., IF WASTES WERE REMOVED)

Unit Number: 36.005

Unit Name: AREA AA

Location: TA-36

References: 10, P. 3-3

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 36.005

A. DESCRIPTION

Unit Type: 2 PITS

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: WASTE DISPOSAL

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: DATA NOT AVAILABLE

Unit Number: 36.005

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: ASH FROM FIRES IN WHICH TUBALLOY WAS BURNED

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

UNIT 36.006: BURNING AREAS - This unit (98, p. 15) is suspected to be a contaminated area containing hazardous and radioactive wastes comprised of explosives and uranium, respectively. No photo is available for this unit.

UNIT 36.007: PHOTOPROCESSING OUTFALL - This unit is an active outfall that is suspected of discharging liquids that may contain hazardous wastes and constituents (98, p. 15). No photo is available for this unit.

UNIT 36.008-36.009: TWO FIRING SITES - This is suspected to be an active contaminated area that contains explosives, contaminated wastes, and radioactive wastes comprised of uranium (98, p. 36; 10, p. 3-3). No photo is available for this unit.

UNIT 36.010: THERMAL TREATMENT FACILITY - This unit (65, p. 3-1) could possibly be a SWMU. Facility representatives provided no information that thermal treatment has ever occurred in TA-36. No photo is available for this unit.

TA-37, Magazine Area "C"

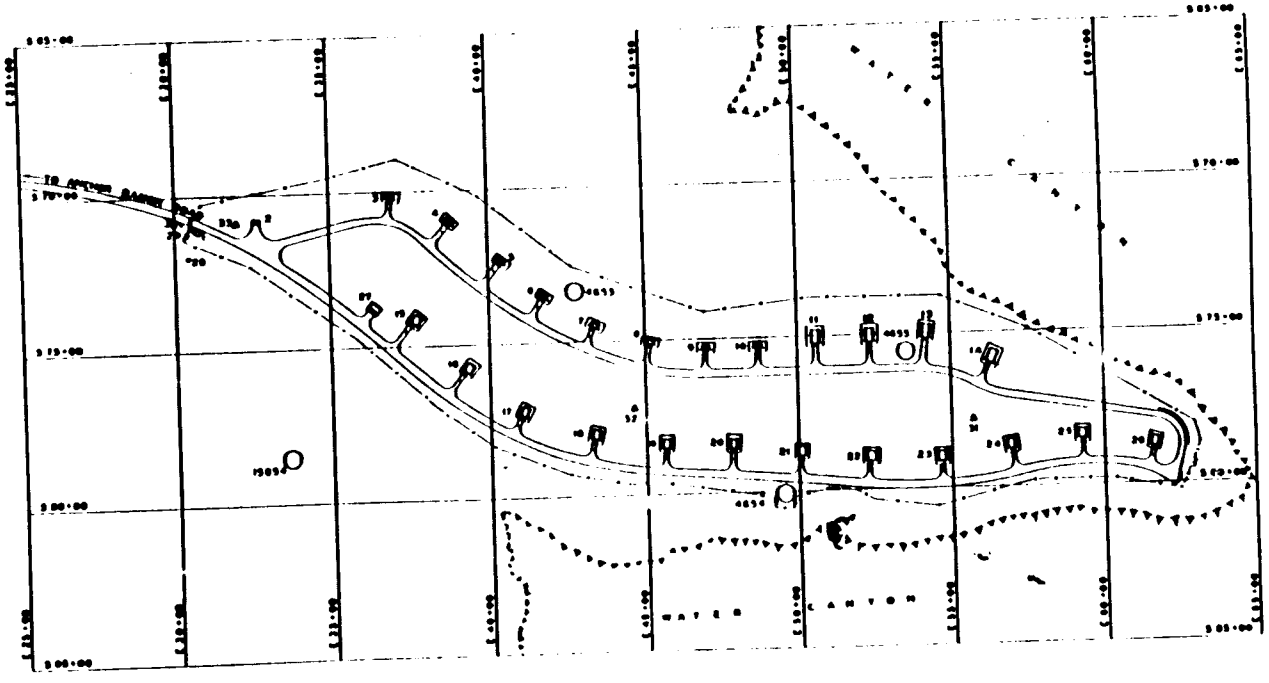
This inactive technical area was intended for the storage of high explosives (10, p. 4-2). All structures associated with this area are reportedly gone. Figure 32 is a map of TA-37.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 37

SWMUs
None

AOC
37.001 Magazine Area C



LEGEND - ARCHY SITE STATUS

△ EXCAVATED

○ UNEXCAVATED

1" = 200'

GRAPHIC SCALE

Figure 32

UNIVERSITY OF CALIFORNIA

Los Alamos

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN

TA - 37 MAGAZINE AREA C

TA-39, Ancho Canyon Site

TA-39 (Figure 33) is a fairly remote location where non-nuclear weapon behavior is currently studied, primarily by photographic techniques. Early tests at this location resulted in uranium, lead, mercury and beryllium contamination. Investigations are also made into various phenomenological aspects of explosives, the interaction of explosives and explosions involving other materials (10, p. 2-4).

A material disposal area, called Area Y, is located at TA-39. It consists of a long pit containing firing debris such as cables, test stand remains and other waste, such as packing boxes and office-type trash generated in normal activities at firing points. Area Y is full and has been covered over, but a new pit has been started just south of it.

Also located at TA-39 are the following: TA-39-6 and TA-39-57, thermal treatment units: TA-39-4, a storage tank" and TA-39-39, a less than 90-day storage tank.

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks, container storage, thermal treatment, <90 day storage) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 39

SWMUs	
39.001	Active trench
39.002	Drum storage area
39.003	Oil storage area
39.004-39.005	Two alleged burial pits
39.006	Photoprocessing septic tanks

AOC	
39.007-39.008	Firing pad/burn area
39.009	Incinerator

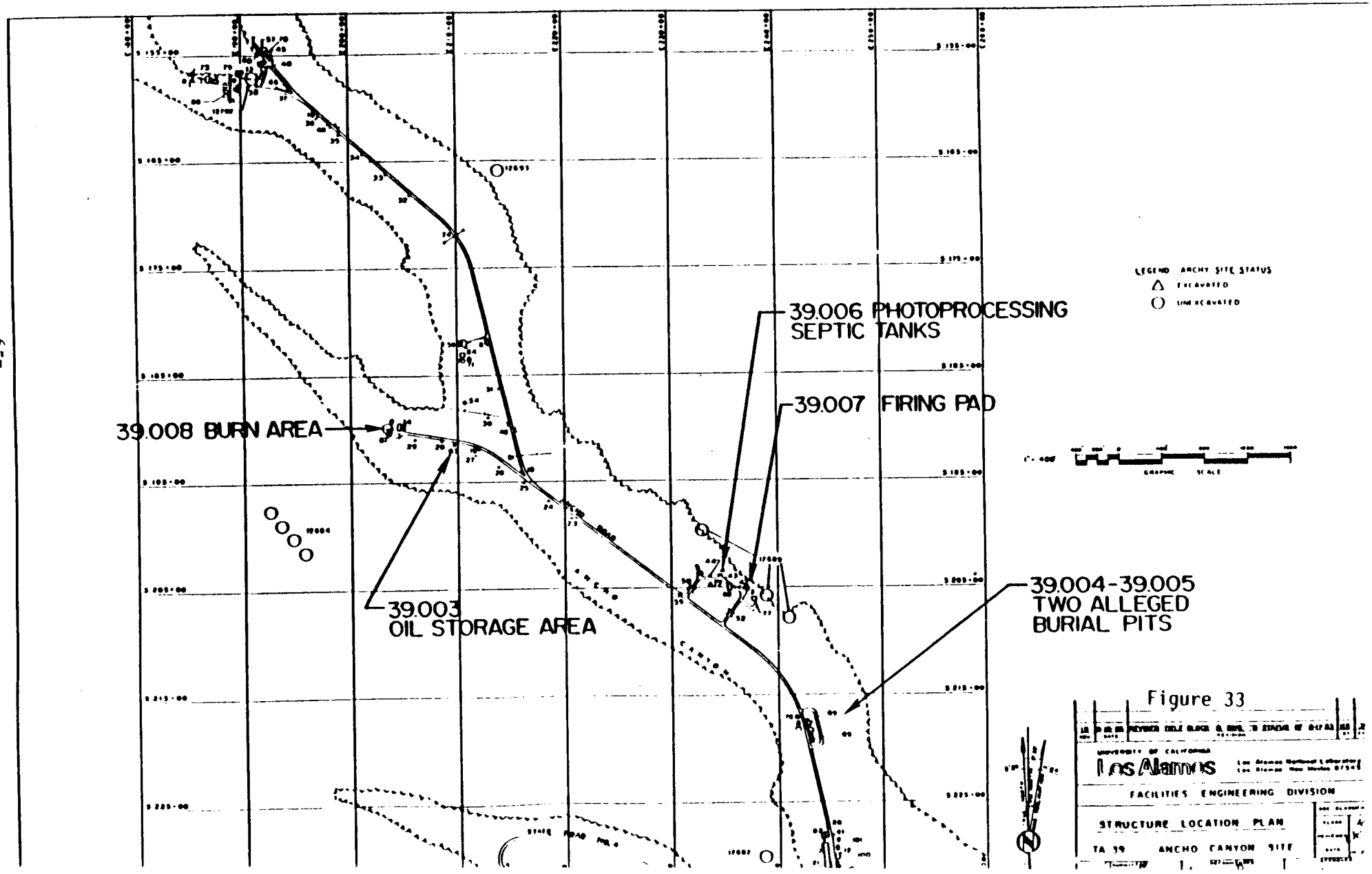

39.006 PHOTOPROCESSING SEPTIC TANKS
39.007 FIRING PAD
39.008 BURN AREA
39.003 OIL STORAGE AREA
39.004-39.005 TWO ALLEGED BURIAL PITS
LEGEND ARCHY SITE STATUS
EXCAVATED
UNEXCAVATED
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA 39 ANCHO CANYON SITE

Figure 33

Unit Number: 39.001

Unit Name: ACTIVE TRENCH

Location: TA-39

References: VSI LOG BOOK; 98, P. 16; 10, P. 2-4

Trench used for the Burial of Tables, etc., Which May Have Been Contaminated with High Explosives.

Unit Number: 39.001

A. DESCRIPTION

Unit Type: LANDFILL, ACTIVE TRENCH

Period of Operation: 10 TO 12 YEARS

Dimensions/Volume: 200'LONG X 25'WIDE X 30'DEEP

Material of Construction: EXCAVATED EARTH.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE BURIAL OF TABLES, ETC. WHICH MAY HAVE BEEN CONTAMINATED WITH HIGH EXPLOSIVES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: PARTS BURIED; NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 39.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES LUMBER, METAL SCRAPS, CARDBOARD, PLASTIC, ETC., ALL POSSIBLY CONTAMINATED WITH HIGH EXPLOSIVES, LEAD, MERCURY, BERYLLIUM, AND URANIUM

Source of Waste: TA-39, EXPLOSIVES TESTING

Disposition of Waste: BURIED.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

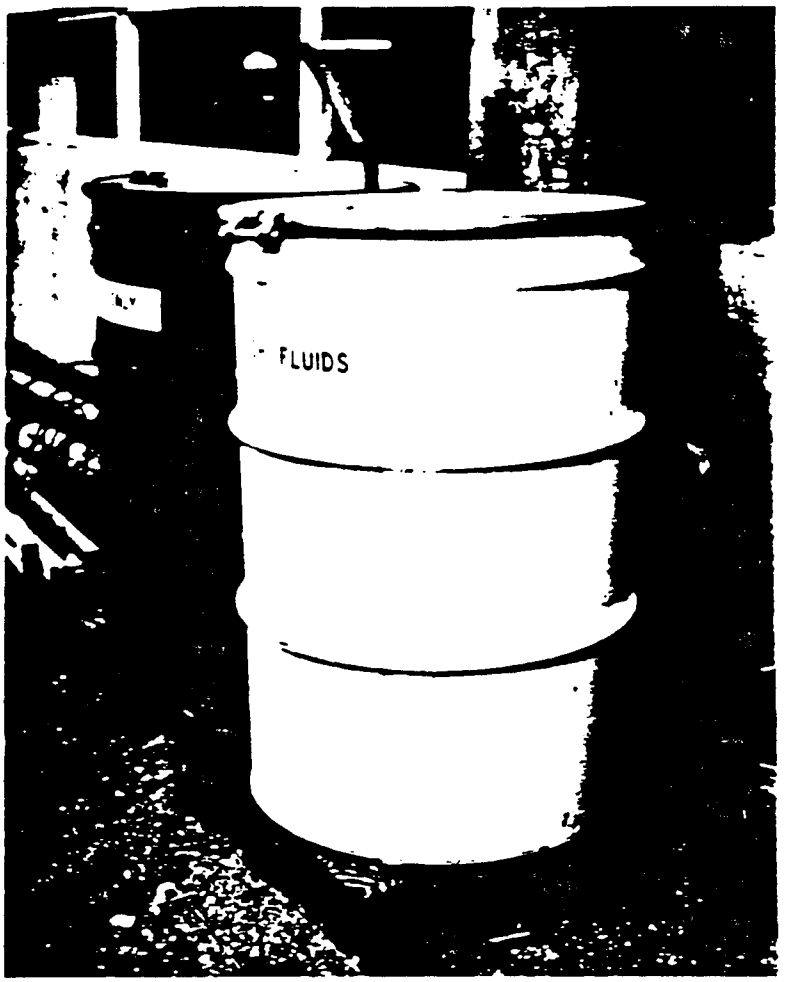
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 39.002 Unit Name: DRUM STORAGE AREA

Location: TA-39-AC2 References: VSI LOG BOOK



Drum Storage Area Used for the Containment of Waste Oil and Unknown Fluid Wastes.

Unit Number: 39.002

A. DESCRIPTION

Unit Type: STORAGE AREA - 2 DRUMS.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 55 GALLON DRUMS IN AN AREA APPROXIMATELY 5 SQUARE FEET.

Material of Construction: STEEL DRUMS ON WOODEN PALLETS.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: DRUM STORAGE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 39.002

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: ONE DRUM CONTAINS WASTE OIL; UNKNOWN WHAT OTHER DRUM CONTAINS. NO INFORMATION ON ADDITIONAL CHARACTERISTICS/CONSTITUENTS AVAILABLE.

Source of Waste: TA-39-2.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

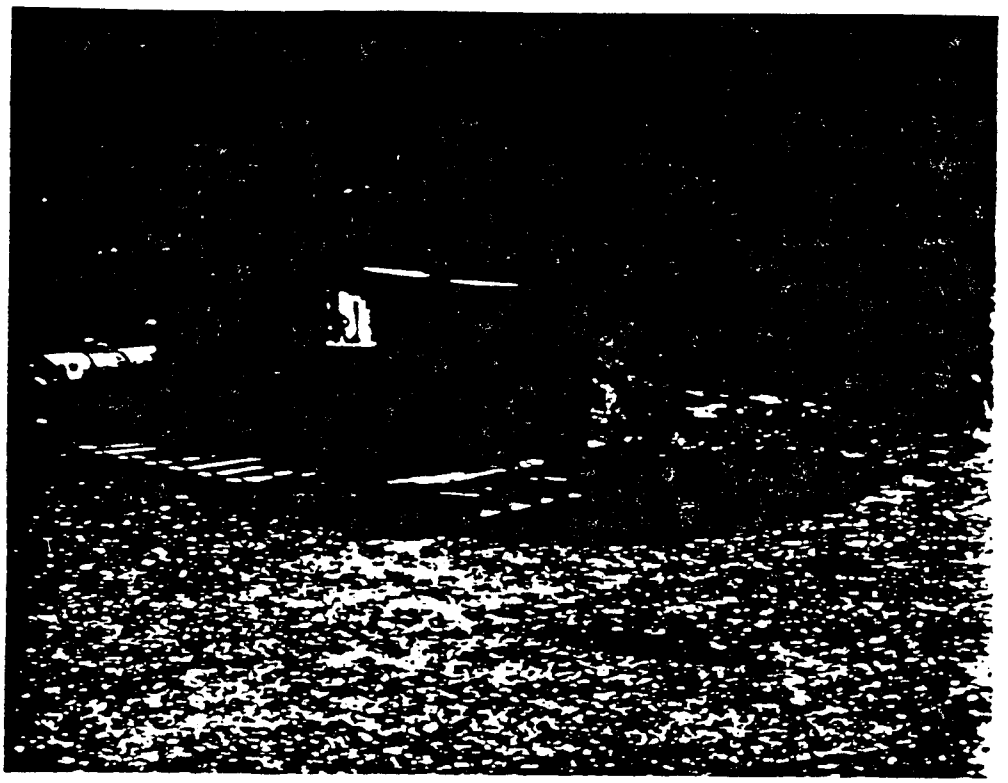
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: STAIN ON SOIL UNDERNEATH DRUM WAS OBSERVED DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 39.003 Unit Name: OIL STORAGE AREA

Location: TA-39-63 References: VSI LOG BOOK



Oil Storage Area Used for the Containment of Used Oil.

Unit Number: 39.003

A. DESCRIPTION

Unit Type: OIL STORAGE AREA, STEEL DRUMS ON PALLETS.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 55 GALLON DRUMS IN AN AREA APPROXIMATELY 12 SQUARE FEET.

Material of Construction: STEEL DRUMS ON PALLETS; PALLETS ON BARE SOIL.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO STORE USED OIL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 39.003

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES WASTE OIL. NO INFORMATION ON ADDITIONAL CHARACTERISTICS/CONSTITUENTS AVAILABLE.

Source of Waste: TA-39.

Disposition of Waste: ACCORDING TO LANL DETONATED WITH EXPLOSIVES.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: STAINS ON SOIL WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 39.004-39.005

Unit Name: TWO ALLEGED BURIAL PITS

Location: TA-39-69

References: VSI LOG BOOK; 98, P. 16; 10, P. 2-4

Alleged Burial Pits Containing Solid Wastes Contaminated with High Explosives. Area has been Filled and Partially Covered with Asphalt.

Unit Number: 39.004-39.005

A. DESCRIPTION

Unit Type: ALLEGED BURIAL PITS.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: ACTUAL WASTE AREA COULD NOT BE DETERMINED, COVERED WITH 70' X 100' ASPHALT PAD.

Material of Construction: EXCAVATED PIT, NOW FILLED IN AND PARTIALLY COVERED WITH ASPHALT.

Underlain by:	Concrete:	Asphalt:	Gravel:
	Grass:	Soil: X	

Environmental:

Indoors:	Close to Surface Water:	In Ground:
Outdoors: X	Close to Drinking Water:	Aboveground:
Covered:	Residences:	Belowground: X

Purpose of Unit: UNIT DESIGNED FOR THE DISPOSAL OF MISCELLANEOUS SOLID WASTES POSSIBLY CONTAMINATED WITH HIGH EXPLOSIVES.

B. CLOSURE INFORMATION

	Active:	Inactive/Physically Present:	
Inactive/Removed or Dismantled: X		Closed Under State or EPA:	
	Regulatory Status:		

Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 39.004-39.005

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: MISCELLANEOUS SOLID WASTES POSSIBLY CONTAMINATED WITH HIGH EXPLOSIVES.

Source of Waste: TA-39.

Disposition of Waste: BURIED.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: ASPHALT PAD COVERS PART OF UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 39.006

Unit Name: PHOTOPROCESSING SEPTIC TANKS

Location: TA-39

References: 98, P. 16

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 39.006

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "SEPTIC TANK". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS WASTE AND CHEMICALS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: PARTIALLY ACTIVE

Unit Number: 39.006

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE AREA AS PARTIALLY ACTIVE, PARTIALLY INACTIVE, AND THE WASTES MANAGED AS HAZARDOUS AND CHEMICALS

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: CEARP DOES NOT INDICATE STATUS OF UNIT (E.G., IF WASTES WERE REMOVED)

TA-39: AREAS OF CONCERN

UNIT 39.007-39.008: FIRING PAD/BURN AREA - This is suspected to be an active contaminated area containing hazardous and radioactive wastes comprised of uranium, explosives, beryllium, mercury, lead, and copper (6; 98, p. 16; 65, p. 3-2; 10, p. 2-4). No photo is available for this unit.

UNIT 39.009: INCINERATOR - This inactive unit (98, p. 16) was suspected to be designed for the incineration of solid wastes, possibly containing hazardous constituents originating from TA-39. No photo is available for this unit.

TA-40, DF Site

TA-40 (Figure 34) is one of three sites regularly used at Los Alamos National Laboratory for developing special detonators which initiate high explosive systems. Fundamental and applied research in support of this activity includes investigation of phenomena associated with the initiation of high explosives, and research in rapid shock-induced reactions using shock tubes (10, p. 3-3).

Located within TA-40 are the following: TA-40-2, a container storage area; a thermal treatment unit; a scrap detonation pit; TA-40-SDS, which was used to detonate high explosives and burn high explosives-contaminated wastes.

The laboratory has submitted a closure plan for the TA-40 area to the New Mexico Environmental Improvement Division; nevertheless, it plans to put the area back into service following closure as a detonation site. To note, a detonation site is not regulated under RCRA.

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks, NPDES outfalls, container storage, thermal treatment) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 40

SWMUs	
40.001	Magazine 2, container storage area
40.002	Temporary storage area
40.003	Scrap material disposal site
40.004	Burn pit; DF site
40.005	Hazardous waste areas
40.006	Sump

AOC	
40.007	Outfalls
40.008	Gas gun facility

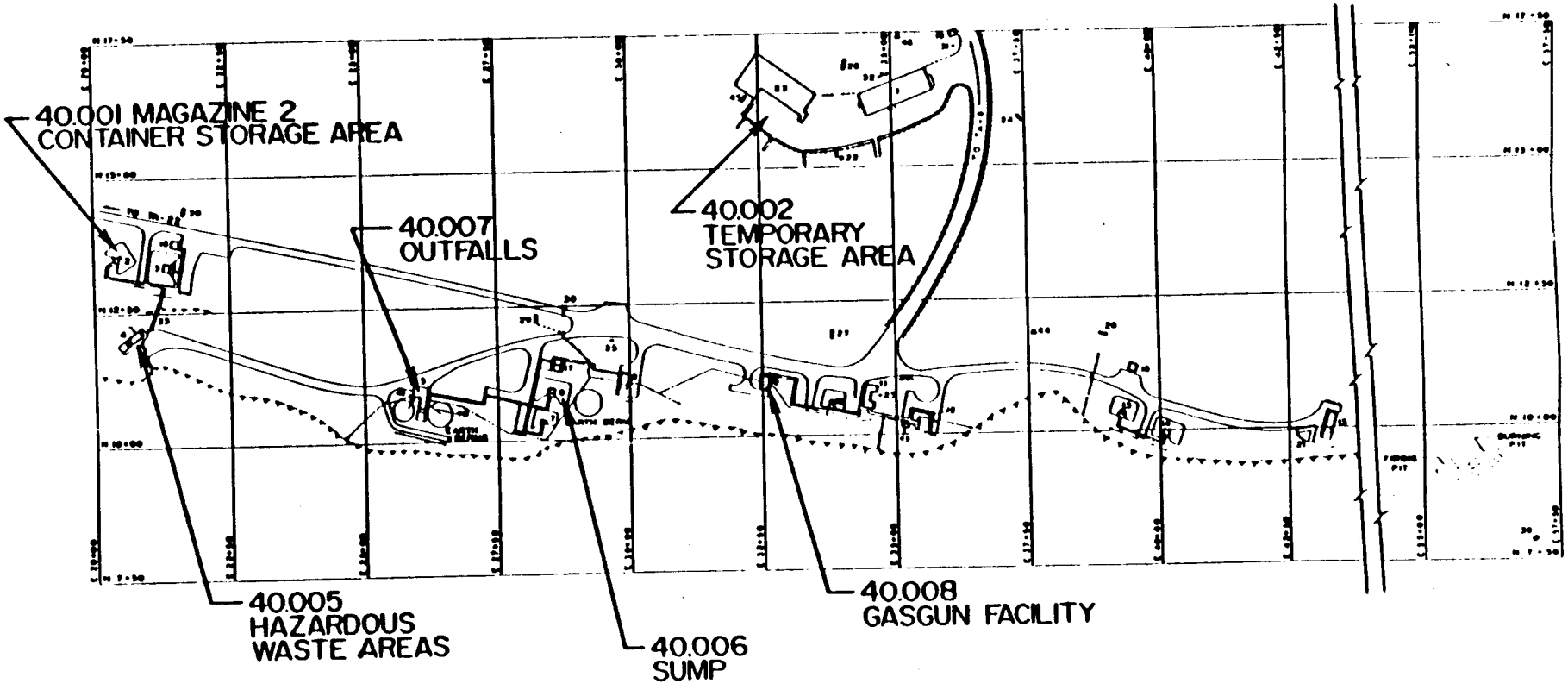


Figure 34

UNIVERSITY OF CALIFORNIA
Los Alamos

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN
TA 40 DF - SITE

Unit Number: 40.001

Unit Name: MAGAZINE 2, CONTAINER STORAGE AREA

Location: TA-40-2

References: 70,P.1; 77,P.1; 75,P.1; VSI LOG BOOK

High Explosives Magazine Used for the Storage of Scrap Detonators and High Explosives-Contaminated Wastes.

Unit Number: 40.001

A. DESCRIPTION

Unit Type: HIGH EXPLOSIVES MAGAZINE, STORAGE

Period of Operation: 1950 TO PRESENT

Dimensions/Volume: 10'LONG X 6'WIDE, 7' HIGH

Material of Construction: CONCRETE

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: STORAGE OF SCRAP DETONATORS; TAKEN OUT OF SERVICE FOR SCRAP MATERIAL IN 1985; STORAGE FOR HIGH EXPLOSIVE CONTAMINATED WASTES

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 40.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: PREVIOUSLY CONFIDENTIAL DENTONATORS, LIVE CHARGES; HIGH EXPLOSIVES

Source of Waste: OUTDATED COMPONENTS; HIGH EXPLOSIVES CONTAMINATED PAPER.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT IS LOCATED INDOORS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 40.002

Unit Name: TEMPORARY STORAGE AREA

Location: TA-40-23

References: VSI LOG BOOK; 6, LAST PAGE

Temporary Drum Storage Area Containing Waste Oil and Solvents.

Unit Number: 40.002

A. DESCRIPTION

Unit Type: STORAGE AREA - 30 GALLON DRUMS

Period of Operation: MARCH 1987 TO PRESENT

Dimensions/Volume: 15'LONG X 6'WIDE

Material of Construction: CLOSED, STEEL DRUMS ON ASPHALT PAD

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE TEMPORARY STORAGE ORGANIC/OILY WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 40.002

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable: X	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTE OIL; SOLVENTS

Source of Waste: TA-40 OPERATIONS

Disposition of Waste: TA-54

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE OBSERVED DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

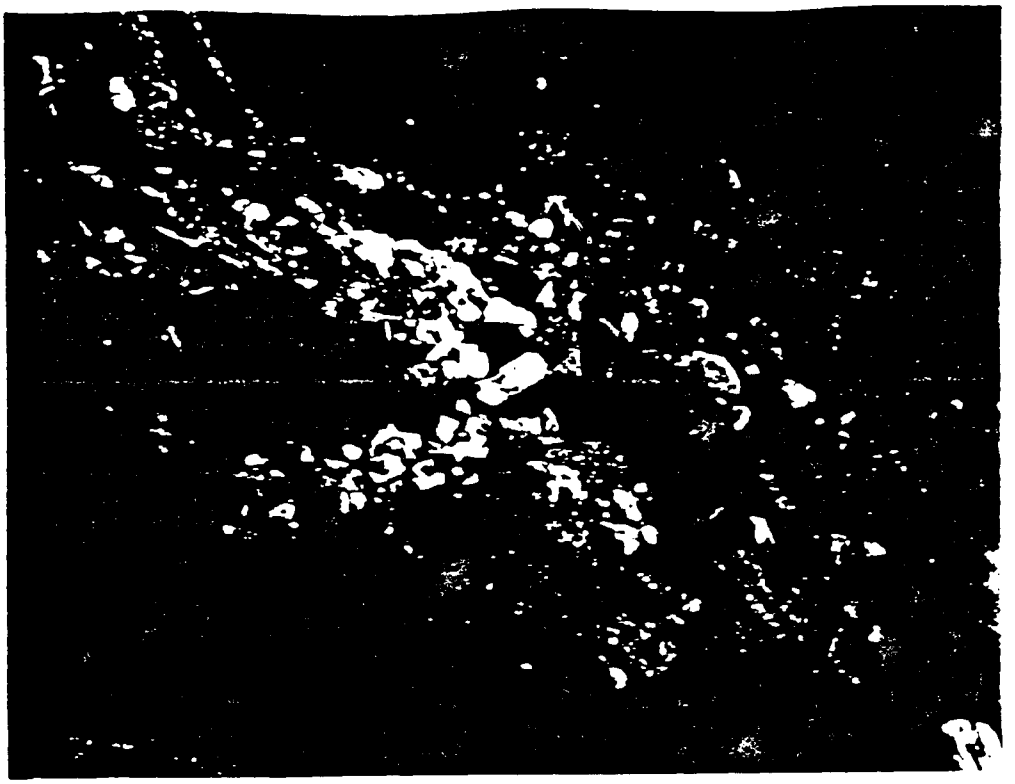
VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

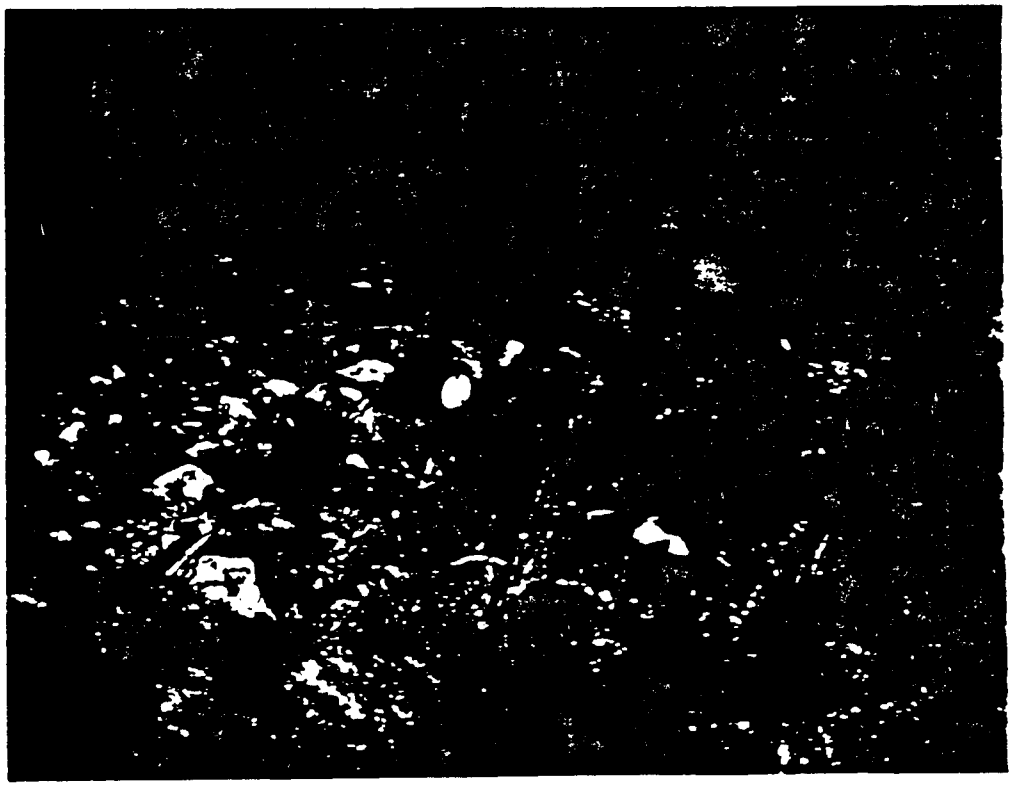
Unit Number: 40.003 Unit Name: SCRAP MATERIAL DISPOSAL SITE

Location: TA-40-39 References: VSI LOG BOOK

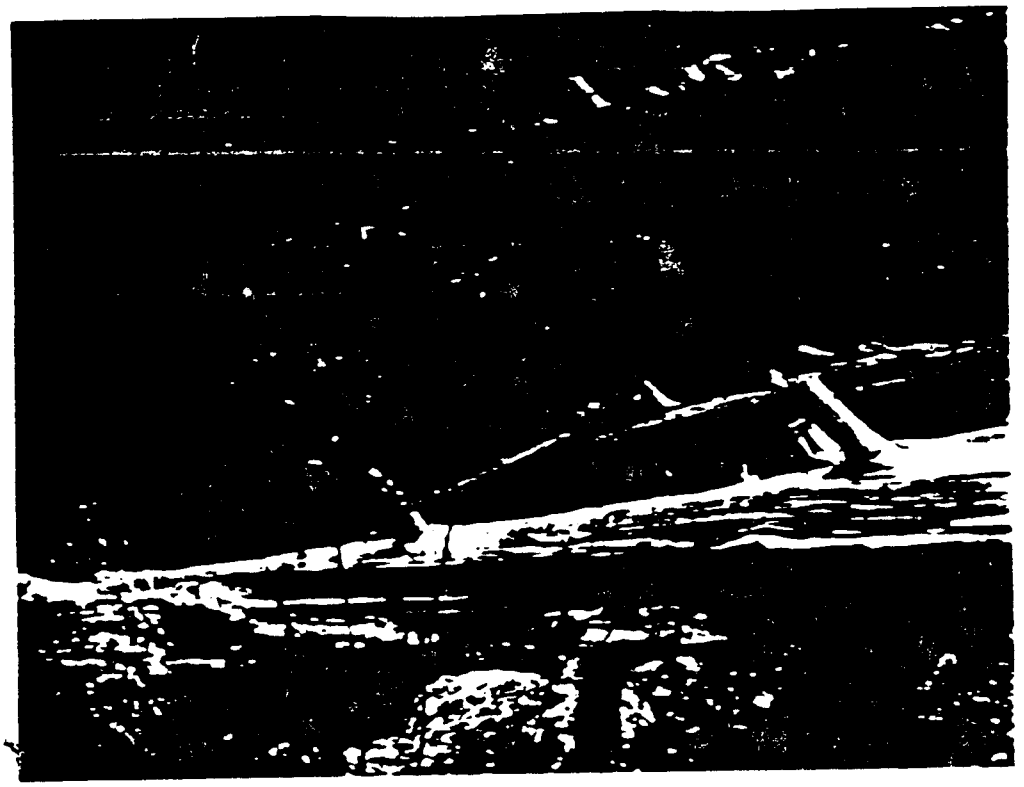
A. Scrap Material Disposal Site Used for Burning or Detonation of Confidential Components. See Additional Photos on Following Page.



B. Waste Drum Pushed into Canyon Adjacent to Scrap Material Disposal Site.



C. Canyon Adjacent to Scrap Material Disposal Site. Note Black Waste Drum in Center of Photo.



D. View of Canyon Adjacent to Material Disposal Site.
Note Red Waste Drum in Center of Photo.

Unit Number: 40.003

A. DESCRIPTION

Unit Type: BURN OR DETONATION SITE

Period of Operation: 1950's TO 1985

Dimensions/Volume: 2 ACRES

Material of Construction: OPEN SITE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT USED FOR BURNING OR DETONATION OF CONFIDENTIAL COMPONENTS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 40.003

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: TRINITROTOLUENE (TNT), PLASTICS IN DETONATOR CABLES (CAPTON)

Source of Waste: UNIDENTIFIED LABORATORY EQUIPMENT

Disposition of Waste: DETONATED OR BURNED

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air: X	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: LANL REPORTED THAT RESIDUALS FROM DETONATION REMAIN IN THE SOIL AND GROUNDWATER.

Unit Number: 40.004

Unit Name: BURN PIT; DF SITE

Location: TA-40-1

References: 98, P. 16; 10, P. 3-3; 75, P. 2-2, 1-1; 65, P. 3-3

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 40.004

A. DESCRIPTION

Unit Type: DETONATION SITE FOR SCRAP HIGH EXPLOSIVES

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF HAZARDOUS WASTES AND EXPLOSIVES

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: CLOSURE PLANS HAVE BEEN SUBMITTED

Unit Number: 40.004

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive: X	Metals: X
Sludges:	EP Toxic:	

Particulars: CONTAMINATED AREA; HAZARDOUS WASTE; EXPLOSIVES

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: REFERENCES SUGGEST THAT RELEASE CONDITIONS MAY CAUSE SIGNIFICANT ENVIRONMENTAL IMPACT

Unit Number: 40.005

Unit Name: HAZARDOUS WASTE AREAS

Location: TA-40

References: 98, P. 16, 17

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 40.005

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "LANDFILL". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF HAZARDOUS WASTES AND EXPLOSIVES

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA IS AVAILABLE

Unit Number: 40.005

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES HANDLED AS HAZARDOUS AND EXPLOSIVE

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT WAS NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 40.006 Unit Name: SUMP

Location: TA-40 References: 98, P. 17

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 40.006

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "SUMP". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF HAZARDOUS WASTE AND EXPLOSIVE

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: ADDITIONAL DATA NOT AVAILABLE

Unit Number: 40.006

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTE HANDLED AS HAZARDOUS AND EXPLOSIVE

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

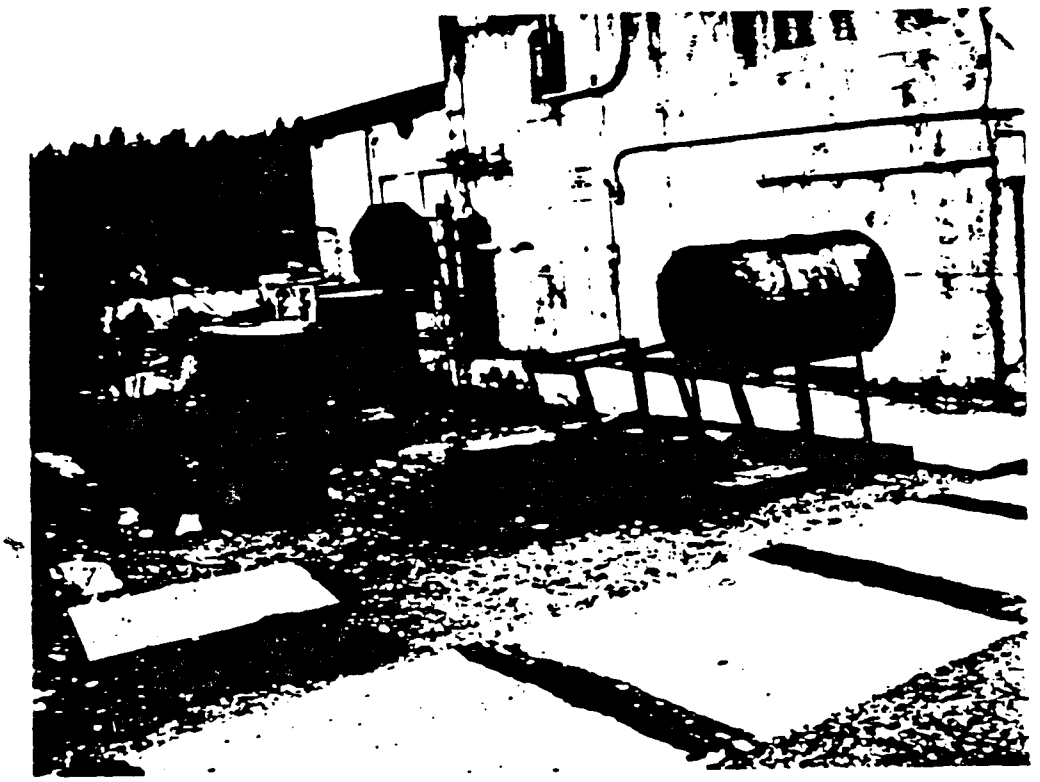
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

UNIT 40.007: OUTFALLS - This unit is a partially active outfall that is suspected to discharge effluent, which may contain constituents, including silver, and also explosives residue (98, p. 16). No photo is available for this unit.

UNIT 40.008: GAS GUN FACILITY - As observed during the VSI, this unit is designed for the product storage of chloroethane and vacuum pump oil. Unit is located outdoors and confined within a 15 ft. by 15 ft. area. Oily stains were observed on soil and wooden pallets that underlie the drums.



Product Storage of the Gas Gun Facility Located at TA-40.
Note Oily Stains (Chloroethane) on Soil and Wooden Pallet.

Personnel at this site are engaged primarily in engineering design and development of nuclear components, including fabrications and evaluation of test materials for weapons (10, p. 4-1).

Over the years, TA-41 (Figure 35) has been used as the site of offices for engineering support of weapons-related activities. Some tritium-related work was also performed here. Additionally, a large vault was built into the nearby hillside.

During the early operational days of TA-41, the stream in Los Alamos Canyon received effluents containing trace amounts of plutonium and polonium. Trace amounts of plutonium, strontium-90 and cesium-137 have been detected in samples taken from this stream.

Figure 36 is a schematic of the wastewater treatment system at this technical area.

Units which may be associated with the handling of hazardous constituents (e.g., sewage treatment) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 41

SWMUs	
41.001	Septic tanks
41.002	Chlorinator
41.003	Imhoff tanks
41.004	Drying beds

AOC	
41.005	Contaminated area

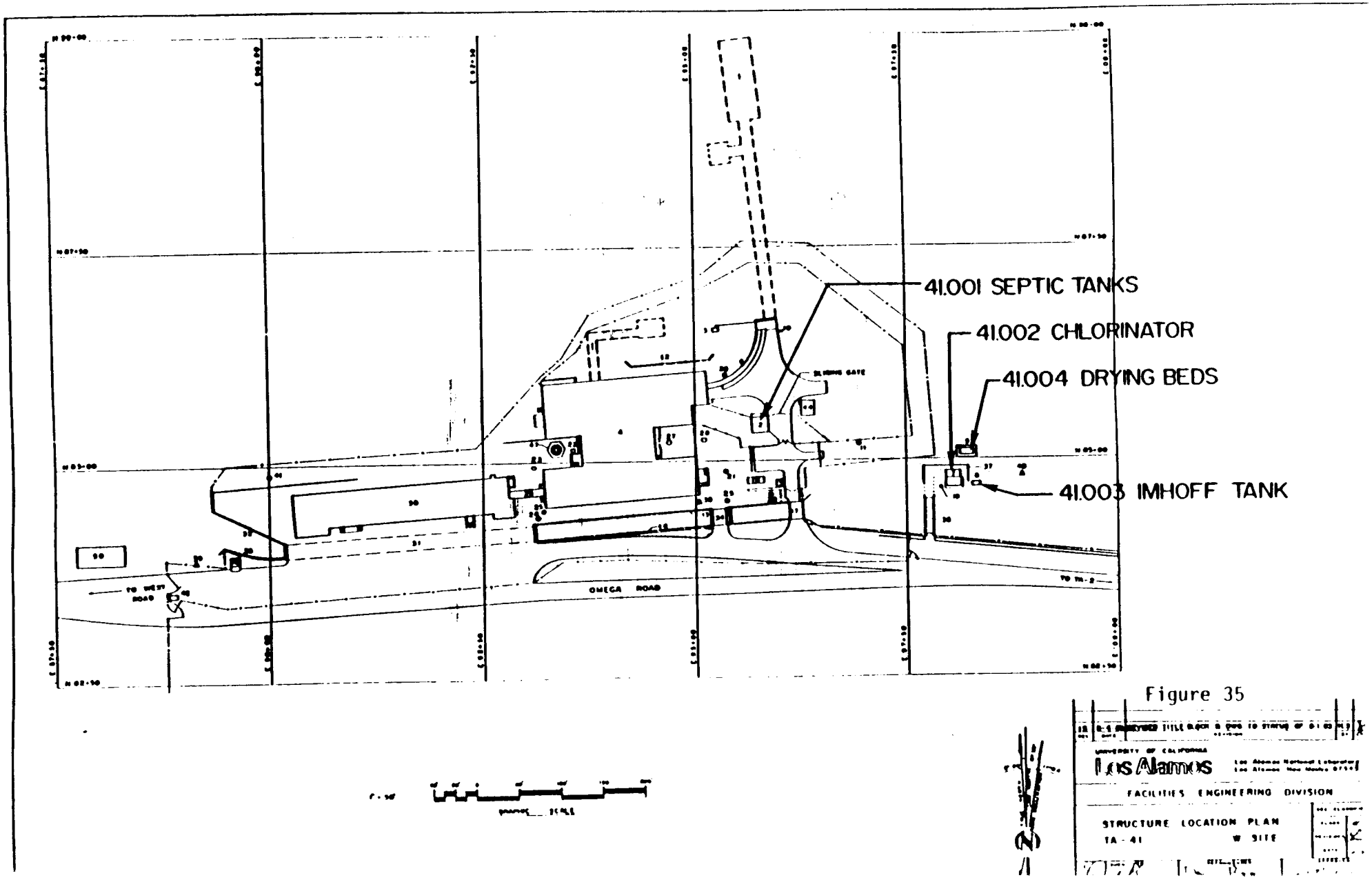

41.001 SEPTIC TANKS
41.002 CHLORINATOR
41.004 DRYING BEDS
41.003 IMHOFF TANK
OMEGA ROAD
TO WEST ROAD
SLIDING GATE
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA - 41
W SITE

Figure 35

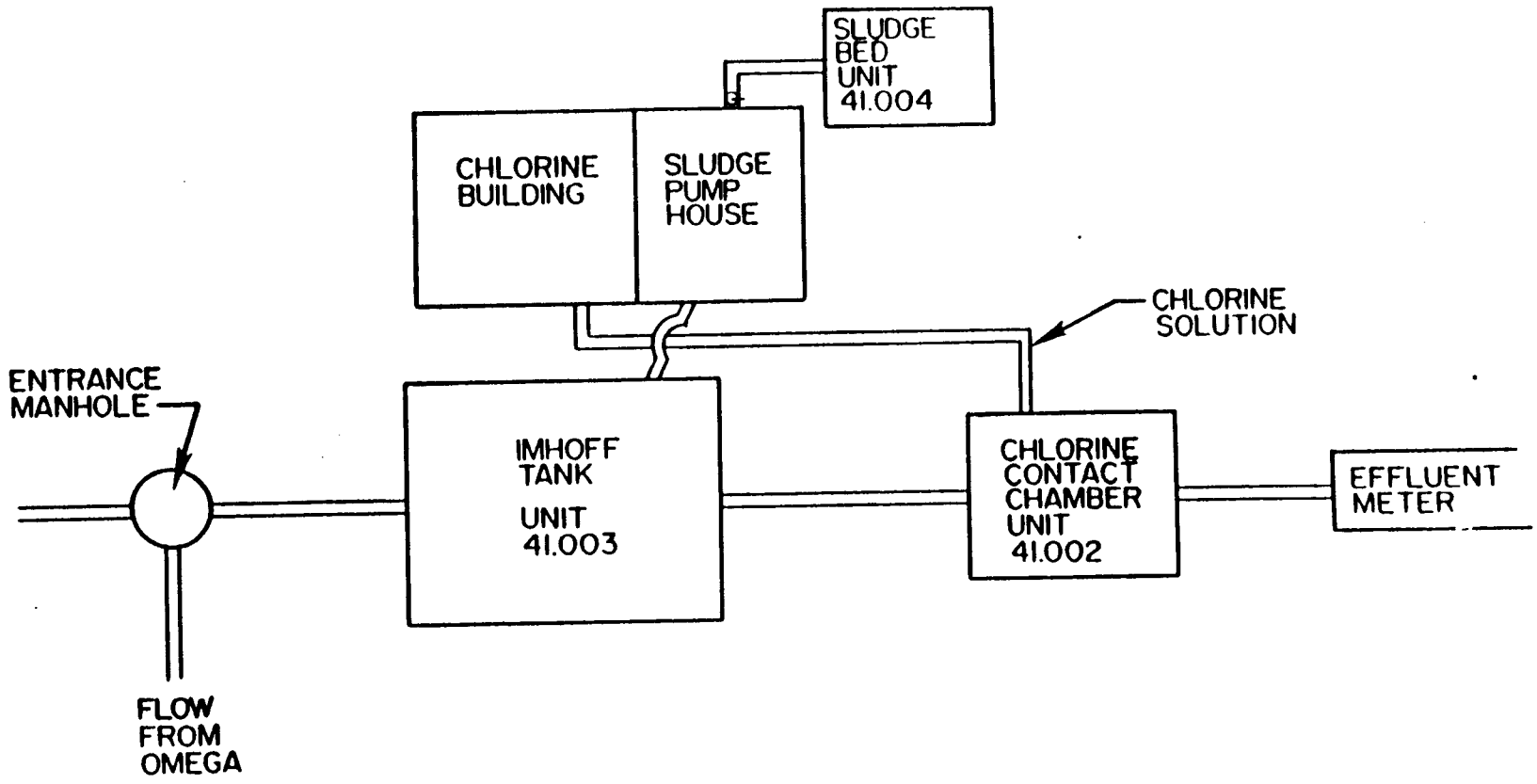


FIG. 5.76 EXHIBIT SCHEMATIC OF TA-41 PLANT.

Unit Number: 41.001 Unit Name: SEPTIC TANKS

Location: TA-41 References: 98, P. 17

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 41.001

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "SEPTIC TANK". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF RADIOACTIVE WASTE, RADIONUCLIDES, AND POSSIBLY HAZARDOUS WASTE

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 41.001

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES MANAGED AS RADIOACTIVE AND RADIONUCLIDES, POSSIBLE HAZARDOUS WASTE

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 41.002

Unit Name: CHLORINATOR

Location: TA-41-7

References: VSI LOG BOOK; 98, P. 17

Chlorinator of Wastewater Treatment Facility Located at TA-41.

Unit Number: 41.002

A. DESCRIPTION

Unit Type: CHLORINATOR

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: 10' X 8' X 10' DEEP

Material of Construction: CONCRETE

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS AND RADIOACTIVE WASTES AND RADIO-NUCLIDES

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 41.002

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: HAZARDOUS AND RADIOACTIVE WASTES, AND RADIONUCLIDES

Source of Waste: SOURCE IS UNKNOWN.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 41.003

Unit Name: IMHOFF TANK

Location: TA-41-8

References: VSI LOG BOOK; 98, P. 17

No Photo is Available for this Unit.

Unit Number: 41.003

A. DESCRIPTION

Unit Type: IMHOFF TANK

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: DATA NOT AVAILABLE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS AND RADIOACTIVE WASTES, AND RADIO-NUCLIDES

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 41.003

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: HAZARDOUS AND RADIOACTIVE WASTES, RADIONUCLIDES.

Source of Waste: SOURCE IS UNKOWN.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 41.004

Unit Name: DRYING BEDS

Location: TA-41-9

References: VSI LOG BOOK; 98, P. 17

No Photo is Available for this Unit.

Unit Number: 41.004

A. DESCRIPTION

Unit Type: DRYING BEDS

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: DATA NOT AVAILABLE.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS AND RADIOACTIVE WASTES, AND RADIO-NUCLIDES

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE AT THIS TIME.

Unit Number: 41.004

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: HAZARDOUS AND RADIOACTIVE WASTES, AND RADIONUCLIDES.

Source of Waste: SOURCE IS UNKNOWN.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

TA-41: AREAS OF CONCERN

UNIT 41.005: CONTAMINATED AREA - This partially active unit (98, p.17) is suspected to contain radioactive waste and hazardous constituents. No photo is available for this unit.

TA-43, Health Research Laboratory

TA-43 (Figure 37) is essentially a building which houses the Biomedical Research Group. Personnel associated with the Biomedical Research Group perform research in the areas of cellular radiogeology, molecular radiobiology, biophysics, mammalian radiobiology and mammalian metabolism. A large medical library, special counters used to measure radioactivity in humans and animals and animal quarter for dogs, mice and donkeys are also located in this building (10, p. 7-2). Time constraints, increased security clearance procedures, and the indoor location of these units prompted the VSI team to preclude this TA from visible inspection.

Units which may be associated with the handling of hazardous constituents (e.g., NPDES outfalls) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 43

SWMUs
None

AOC
43.001 Sealed underground piping

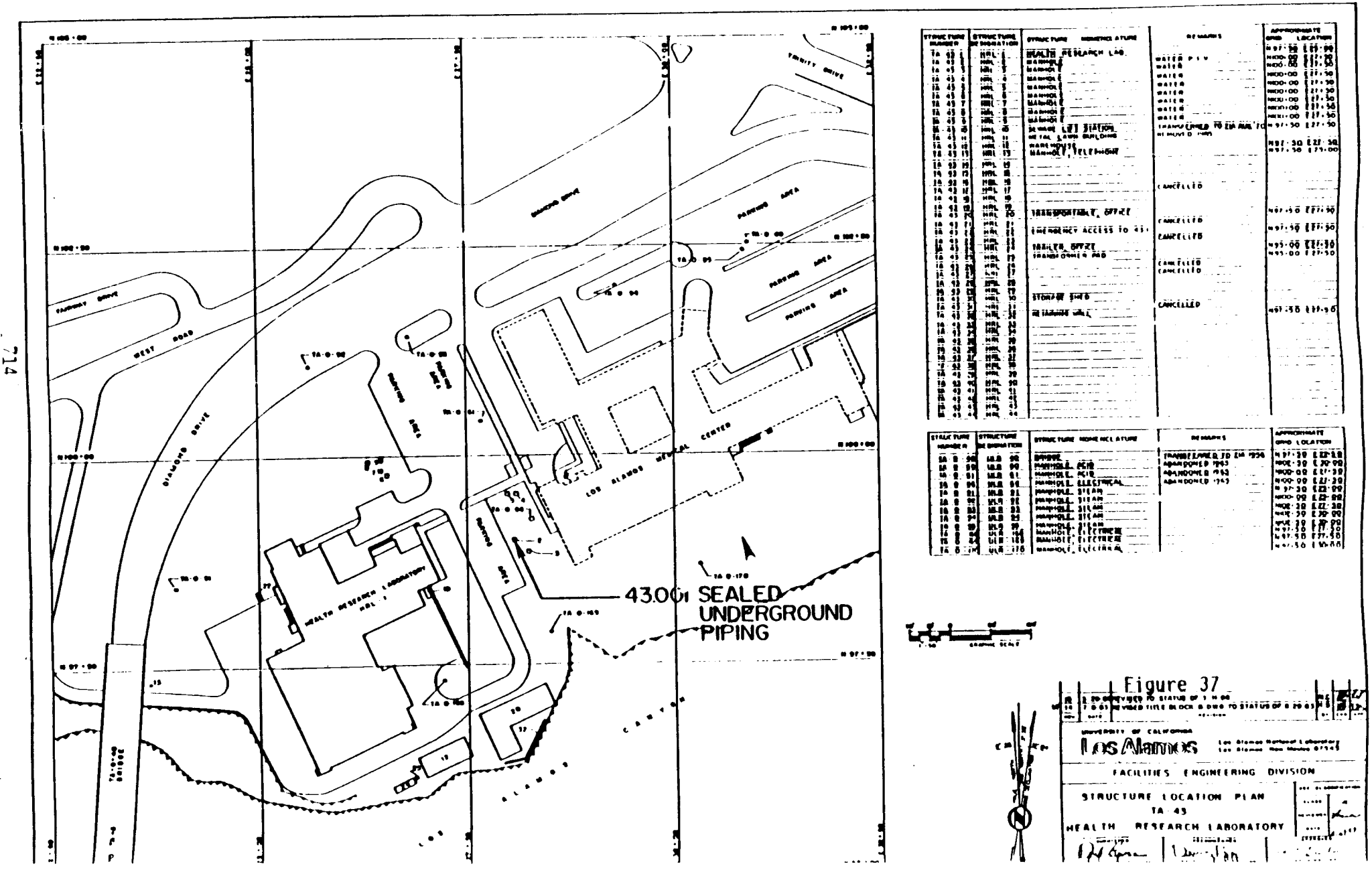

43.001 SEALED UNDERGROUND PIPING
HEALTH RESEARCH LABORATORY
LOS ALAMOS MEDICAL CENTER
DIAMOND DRIVE
WEST ROAD
PARKING AREA
TRINITY DRIVE
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA-43
HEALTH RESEARCH LABORATORY

Figure 37

UNIT 43.001: SEALED UNDERGROUND PIPING - This inactive unit is identified as a "contaminated area" (98, P. 17). It is suspected that radioactive constituents and radionuclides may be present in this unit. No photo is available for this unit.

TA-44, Los Angeles Shop

This inactive technical area machine shop in Los Angeles, California was apparently used around 1945 when a fire in the C-Shop cut down on the machining which could be done at TA-1. The LANL facility suspects that there is no contamination, but this has never been verified (10, p. 3-3).

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE

TA-46, WA Site

In TA-46 (Figure 38), applied photochemistry is investigated, which includes the development of the technology for laser isotope separation and laser-enhancement of chemical processes. Solar energy research, particularly in the area of passive solar heating for residences, is also conducted here (10, p. 4-2).

TA-46 contains the following: an oxidation pond; a less than 90-day container storage area; and a storage tank (TA-46-88). Figure 39 is a schematic of the wastewater treatment system at this technical area.

Small amounts of hazardous materials have been reportedly used in TA-46, but the only known environmental release involved uranium hexafluoride.

The VSI team encountered security restrictions at several points adjacent to the storage area. For this reason, the photograph had to be taken from outside the fenced area.

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks, NPDES outfalls, (90 day tank storage) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 46

SWMUs	
46.001-46.002	Two acid storage tanks
46.003	Lagoon
46.004	Sand filter
46.005	Waste acid tank
46.006	Drum storage #1
46.007	Septic tank and drains
46.008	Drum storage #2
46.009	Sumps

AOC	
46.010	Experimental solar ponds
46.011	WA site
46.012	Temporary drum storage
46.013-46.016	Four outfalls
46.017	Spills and releases

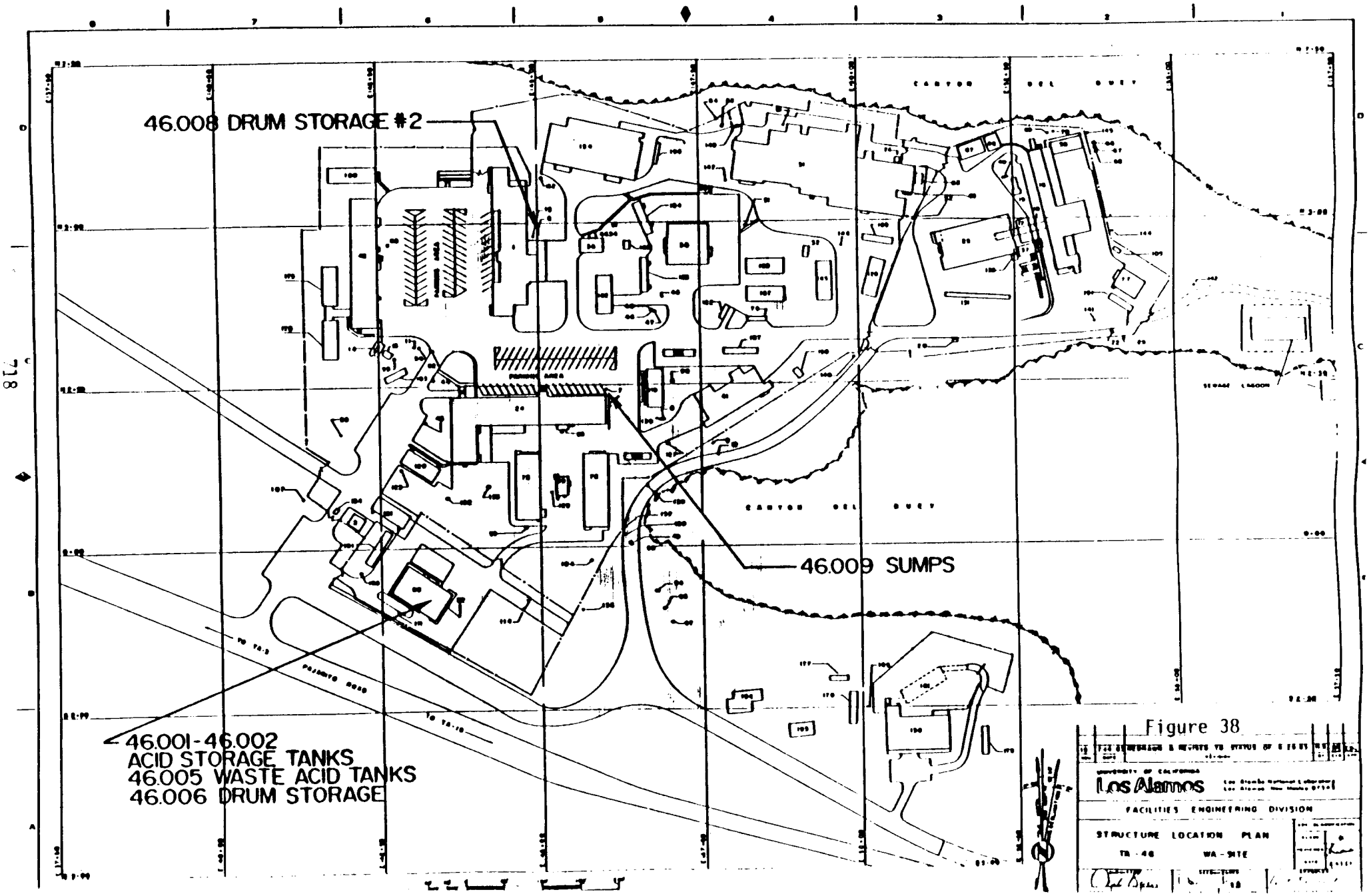

46.008 DRUM STORAGE #2
46.009 SUMPS
46.001-46.002
ACID STORAGE TANKS
46.005 WASTE ACID TANKS
46.006 DRUM STORAGE
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA-46 WA-SITE

Figure 38

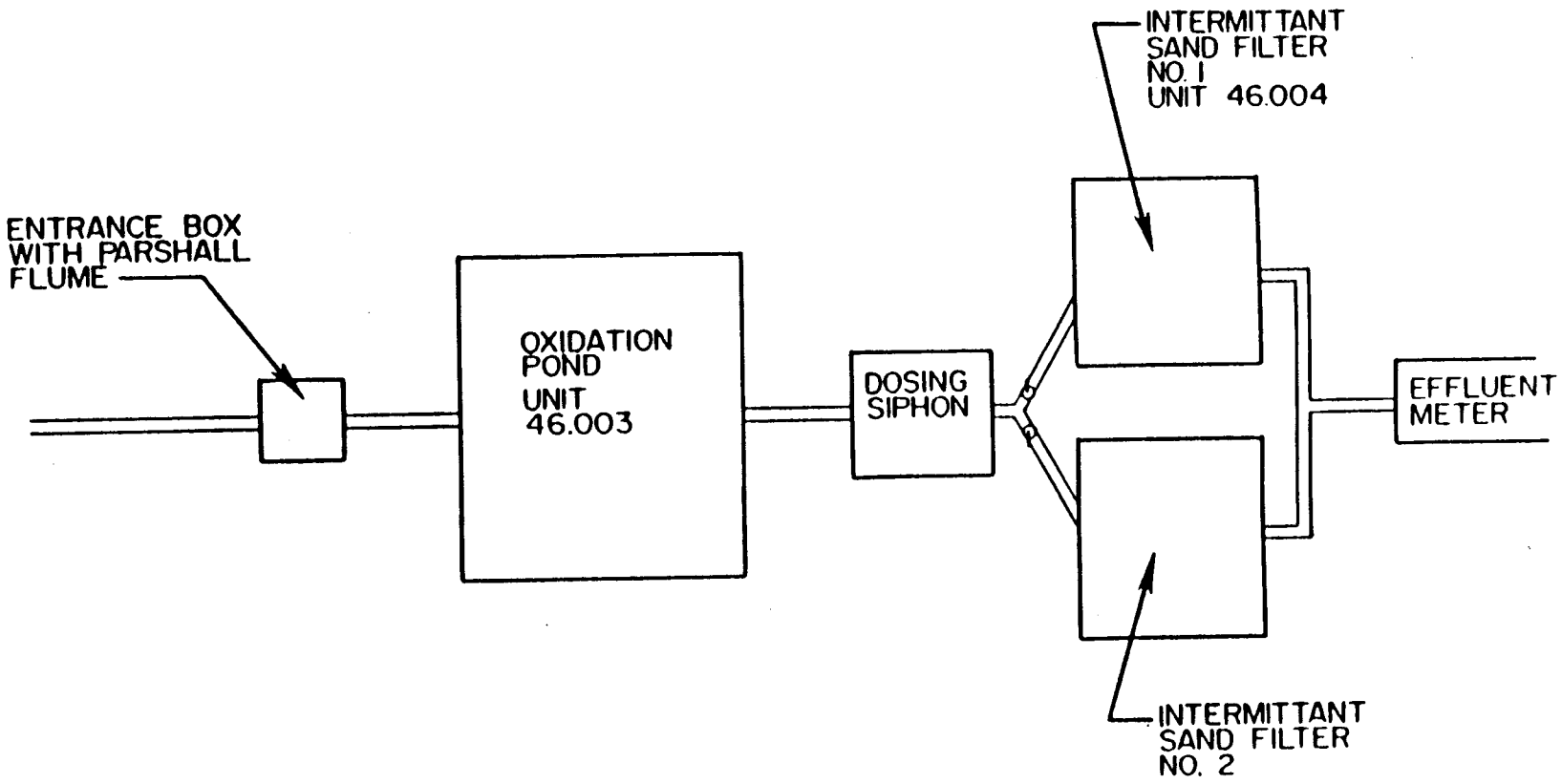
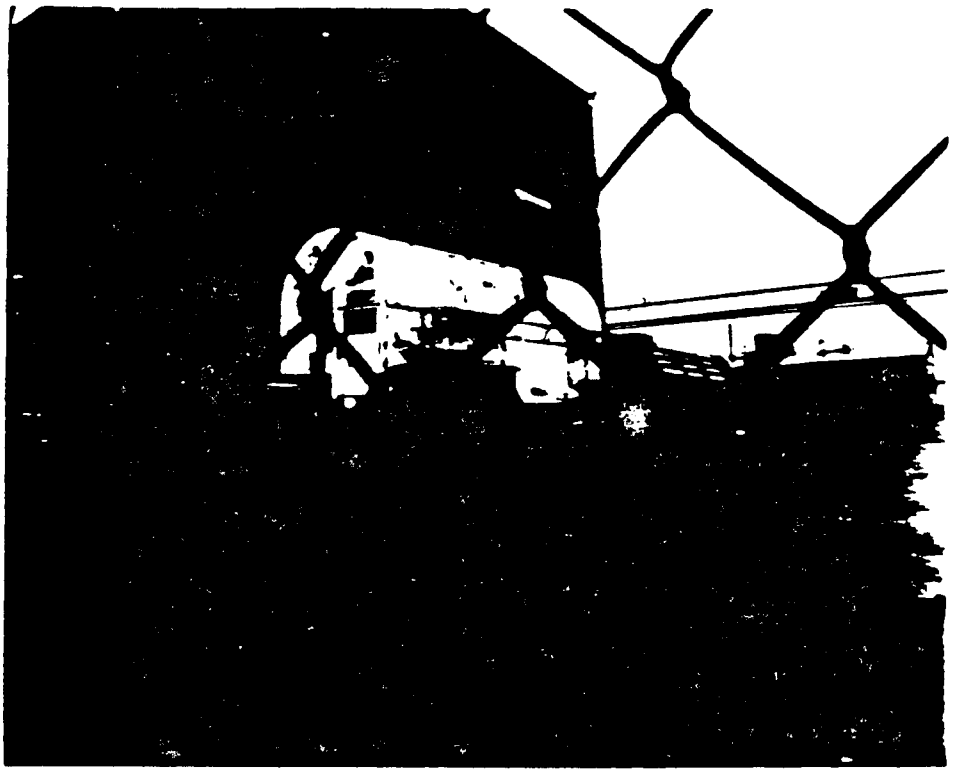


FIGURE 39. EXHIBIT SCHEMATIC OF TA-46 PLANT.

Unit Number: 46.001-46.002 Unit Name: TWO ACID STORAGE TANKS

Location: TA-46-88 References: VSI LOG BOOK



Portable Acid Storage tanks Used for the Temporary (<90 Day) Storage of Waste Acids. Tanks are located at the Right and Left-Center of Photograph.

Unit Number: 46.001-46.002

A. DESCRIPTION

Unit Type: ACID STORAGE TANK, PORTABLE, LESS THAN 90 DAYS.

Period of Operation: 1979 TO PRESENT.

Dimensions/Volume: 3'HIGH X 6'LONG X 6'WIDE

Material of Construction: PLASTIC.

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS DESIGNED FOR TEMPORARY (<90 DAY) STORAGE OF WASTE ACID

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 46.001-46.002

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES WASTE ACIDS (HNO3).

Source of Waste: SOURCE IS UNKNOWN.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE OBSERVED DURING THE VSI.

E. RELEASE HISTORY

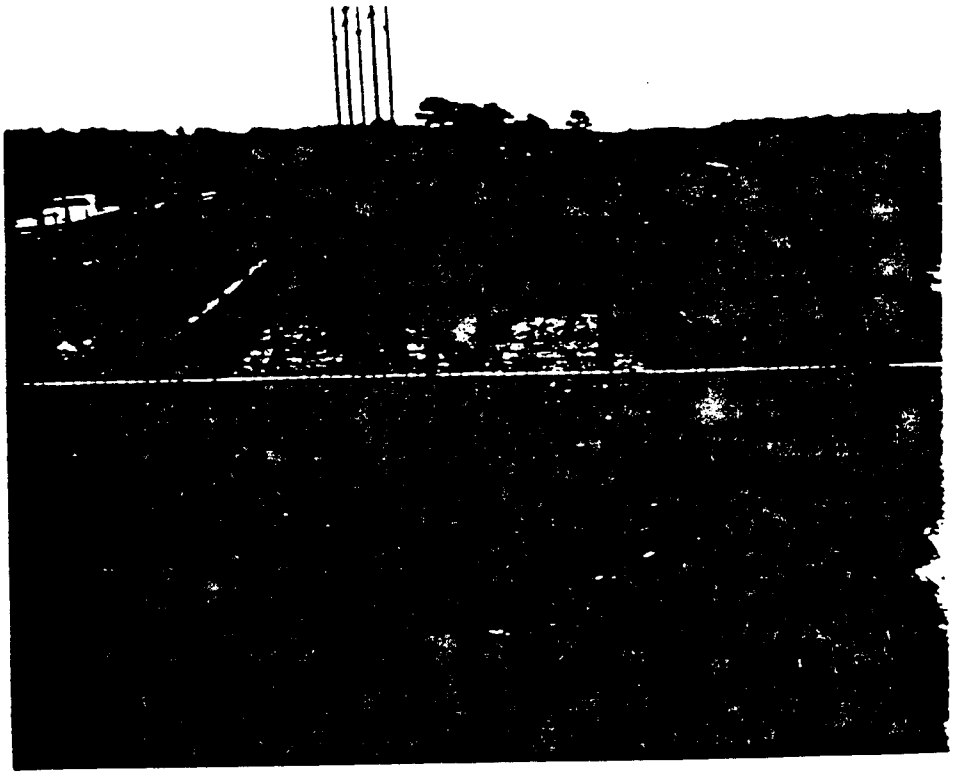
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 46.003 Unit Name: LAGOON

Location: TA-46 References: VSI LOG BOOK; 98, P. 18



Gunnite-Lined Lagoon Used for the Biological Treatment of Sanitary Sewage and Possibly Industrial Wastes from TA-46.

Unit Number: 46.003

A. DESCRIPTION

Unit Type: LAGOON

Period of Operation: 1978 TO PRESENT

Dimensions/Volume: 90'LONG X 40'WIDE, DEPTH UNKNOWN

Material of Construction: GUNNITE SURROUNDED BY FENCING

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE BIOLOGICAL TREATMENT OF SANITARY SEWAGE AND POSSIBLY INDUSTRIAL WASTES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 46.003

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: SANITARY SEWAGE TREATMENT (BIOLOGICAL) AND POSSIBLY HAZARDOUS AND RADIOACTIVE WASTES, RADIONUCLIDES AND CHEMICALS.

Source of Waste: TA-46.

Disposition of Waste: GOES TO SAND FILTER (UNIT NO. 46.004).

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls:		Leak Detection:

Details: GRAVITY OVERFLOW INTO SAND FILTER.

E. RELEASE HISTORY

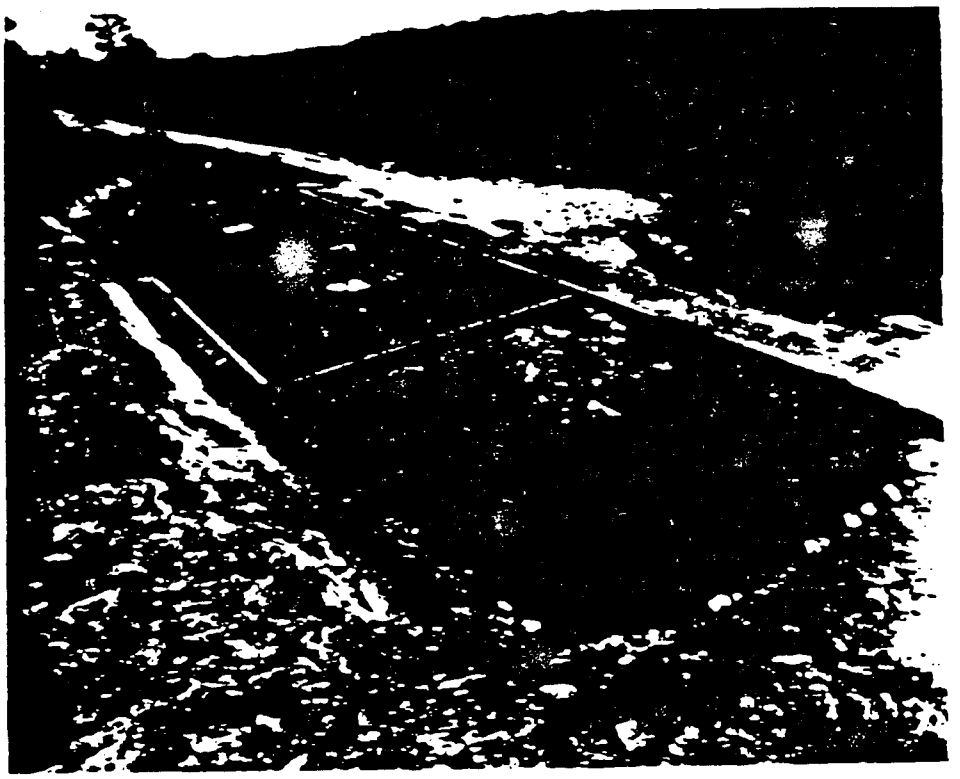
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 46.004 Unit Name: SAND FILTER

Location: TA-46 References: VSI LOG BOOK



Sand Filter with Three Compartments used for the Filtration of Treated Domestic Waste and Possibly Industrial Wastes from TA-46.

Unit Number: 46.004

A. DESCRIPTION

Unit Type: 3 COMPARTMENT SAND FILTER.

Period of Operation: 1978 TO PRESENT.

Dimensions/Volume: 40' X 40' EACH COMPARTMENT.

Material of Construction: CONCRETE DIKE WITH PLASTIC LINER.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR FILTRATION OF TREATED DOMESTIC WASTE AND POSSIBLY INDUSTRIAL WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 46.004

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES TREATED DOMESTIC WASTE AND POSSIBLY INDUSTRIAL WASTE.

Source of Waste: WASTE COMES FROM LAGOON AND DOSING SIPHON OF WASTEWATER TREATMENT PLANT IN TA-46

Disposition of Waste: DISCHARGE THROUGH NPDES OUTFALL.

D. RELEASE CONTROLS

Liner: X	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: PLASTIC LINER.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 46.005

Unit Name: WASTE ACID TANK

Location: TA-46-88

References: VSI LOG BOOK

Refer to Photograph at Unit No. 46.001-46.002. Waste Acid Storage Tank Located at Center of Photograph (Steel Tank).

Unit Number: 46.005

A. DESCRIPTION

Unit Type: WASTE ACID TANK.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 4' DIAMETER X 10' LONG.

Material of Construction: STEEL.

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR STORAGE OF WASTE ACID.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 46.005

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTE ACIDS.

Source of Waste: OPERATIONS CONDUCTED IN TA-46

Disposition of Waste: WASTE ACID IS EITHER DIRECTLY TRANSPORTED OFF-SITE FOR TREATMENT AND/OR DISPOSAL, OR FIRST TRANSPORTED TO TA-50 FOR TEMPORARY STORAGE, AFTER WHICH IT IS TRANSPORTED OFF-SITE FOR TREATMENT AND/OR DISPOSAL.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASE ARE KNOWN TO HAVE OCCURRED.

Unit Number: 46.006

Unit Name: DRUM STORAGE #1

Location: TA-46-88

References: VSI LOG BOOK

Refer to Photograph at Unit No. 46.001-46.002. Waste Acid Storage Contained in 55 Gallon Drums Located Next to Waste Acid Storage Tank (Unit 46.005).

Unit Number: 46.006

A. DESCRIPTION

Unit Type: DRUM STORAGE.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 55 GALLON DRUMS; AREA DIMENSIONS ARE UNKNOWN.

Material of Construction: STEEL.

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS ASSUMED TO BE FOR STORAGE OF WASTE ACID.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA IS AVAILABLE AT THIS TIME.

Unit Number: 46.006

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: ASSUMED TO BE WASTE ACIDS.

Source of Waste: OPERATIONS CONDUCTED IN TA-46

Disposition of Waste: WASTE ACID IS EITHER DIRECTLY TRANSOPORTED OFF-SITE FOR TREATMENT AND/OR DISPOSAL, OR FIRST TRANSPORTED TO TA-50 FOR TEMPORARY STORAGE, AFTER WHICH IT IS TRANSPORTED OFF-SITE FOR TREATMENT AND/OR DISPOSAL.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 46.007

Unit Name: SEPTIC TANKS AND DRAINS

Location: TA-46

References: 98, P. 18

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 46.007

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS "SEPTIC TANKS". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS AND RADIOACTIVE WASTE, BERYLLIUM AND URANIUM

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 46.007

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES HANDLED AS HAZARDOUS AND RADIOACTIVE, BERYLLIUM AND URANIUM

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: CEARP DOES NOT INDICATE STATUS OF UNIT (E.G., IF WASTES WERE REMOVED)

Unit Number: 46.008

Unit Name: DRUM STORAGE #2

Location: TA-46

References: 98, P. 18

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 46.008

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "DRUM STORAGE" AREA. NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: STORAGE OF HAZARDOUS WASTE, PETROLEUM PRODUCTS, OILS AND PCBs

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 46.008

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THIS AS A CONTAMINATED AREA, AND THE WASTES MANAGED AS HAZARDOUS, PETROLEUM PRODUCTS, OILS AND PCB's

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 46.009 Unit Name: SUMPS

Location: TA-46 References: 98, P. 18

No Photos are Available for these Units. Units Were Not Seen During the VSI.

Unit Number: 46.009

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS "SUMPS". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: MANAGEMENT OF HAZARDOUS AND RADIOACTIVE WASTES, PETROLEUM PRODUCTS, BERYLLIUM, ACIDS, URANIUM, AND OILS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 46.009

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES MANAGED AS HAZARDOUS AND RADIOACTIVE WASTES, PETROLEUM PRODUCTS, BERYLLIUM, ACIDS, URANIUM, AND OILS

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

UNIT 46.010: EXPERIMENTAL SOLAR PONDS - This unit is identified as a surface impoundment (98, p. 18), physically present, but inactive. It is suspected that hazardous constituents may be found at this unit. No photo is available for this unit.

UNIT 46.011: WA SITE - This unit is identified as the WA site used for 90-day storage (65, p. 3-4; 10, p. 4-2). Small amounts of hazardous constituents and UF6 gas are suggested to be present at this unit. No photo is available for this unit.

UNIT 46.012: TEMPORARY DRUM STORAGE - This active unit was identified during the VSI as an area designed for the temporary storage of drums. This unit is aboveground and is underlain by soil. The drums are reported to be empty, but are labeled as containing kerosene, oil, and pyrol; it is unknown whether these drums contain chemical waste. The disposition of these drums is also unknown, but it is thought that it is sent to TA-54. No releases were observed during the VSI and no past releases are thought to have occurred.

Temporary Drum Storage at TA-46.
Drums are Reportedly Empty but are Labeled as Kerosene, Oil and Pyrol.

UNIT 46.013-46.016: OUTFALLS - These part active, part inactive units are defined as outfalls (98, p. 17-18). They are suspected of containing hazardous and radioactive constituents, such as plutonium, uranium, beryllium, lithium hydroxide, and unspecified chemicals. No photo is available for these units.

UNIT 46.017: SPILLS AND RELEASES - This part active, part inactive unit is identified as a "contaminated area" (98, p. 19) suspected of containing hazardous and radioactive constituents, petroleum products, uranium, acids and oils. No photo is available for this unit.

TA-47, BR-Site

This inactive technical area was the Bruns Railhead in Santa Fe, New Mexico. Apparently, it was the end of a spur line for the Santa Fe Railroad and was used as a receiving point for materials to be shipped to Los Alamos. It is understood to be located in the vicinity of the present intersection of St. Michael's Drive and Cerrillos Road in Santa Fe. This technical area is not on property contiguous with the operations of the LANL facility, therefore, it was not visibly inspected.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE

TA-48, Radiochemistry Site

Laboratory scientists and technicians at TA-48 (Figure 40) study the nuclear properties of radioactive materials by using techniques of analytical and physical chemistry. Measurements of radioactive substances are made and "hot" cells are used for remote handling of radioactive materials (10, p. 7-2). Time constraints, increased security clearance procedures, and the indoor location of these units prompted the VSI team to preclude this technical area from visible inspection.

Units which may be associated with handling of hazardous constituents (e.g., sanitary tanks, NPDES outfalls) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE

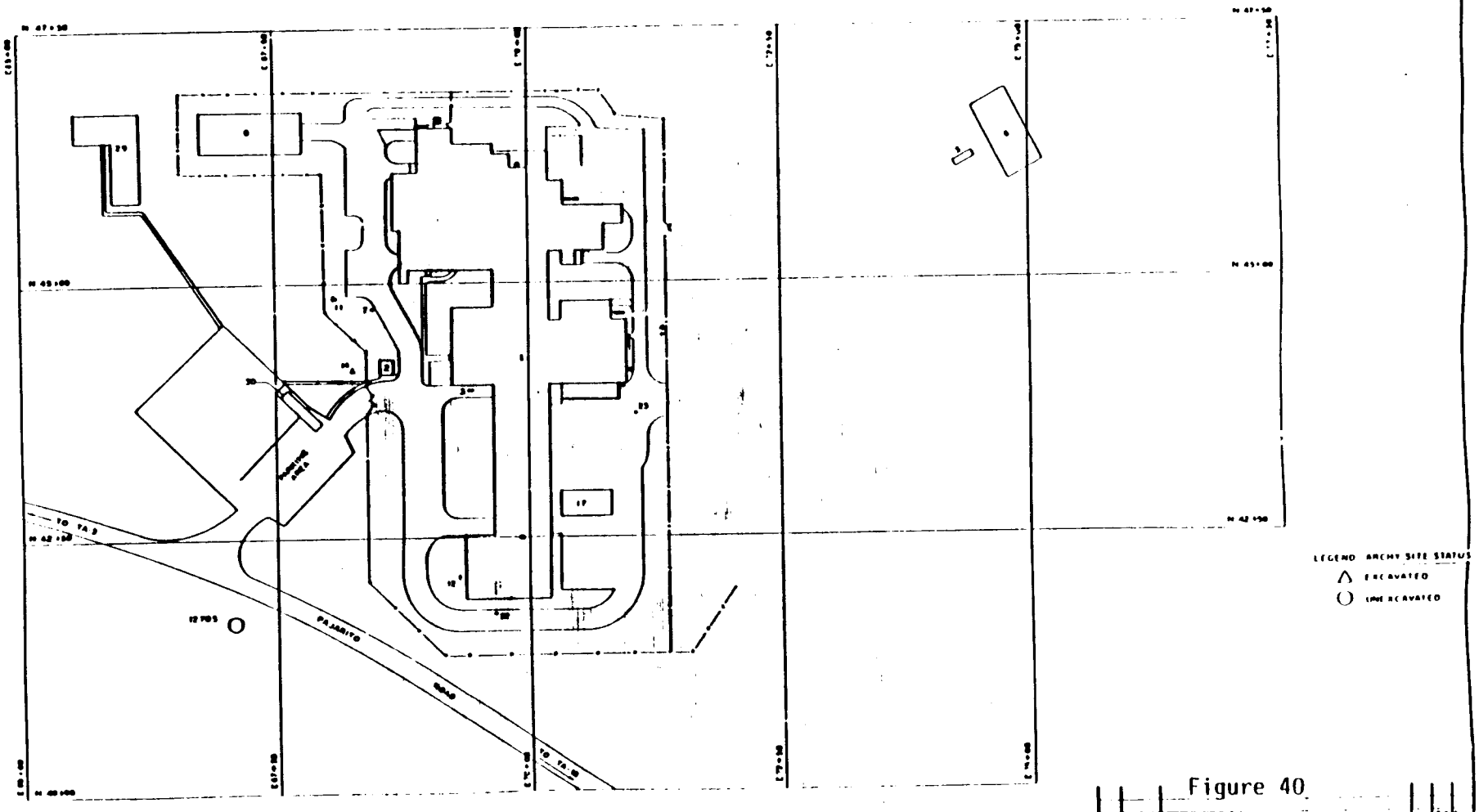

LEGEND ARCHY SITE STATUS
EXCAVATED
UNEXCAVATED
PARKING AREA
PAJARITO ROAD
TO TA 3
TO TA 18
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA 48
RADIOCHEMISTRY SITE

Figure 40

TA-49, Frijoles Mesa

This inactive technical area (Figures 41, 42, and 43) is an abandoned site which includes towers for atmospheric effects studies. Several deep test wells to the underlying groundwater aquifer, used for routine monitoring, are located here (10, p. 7-2).

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 49

SWMUs	
49.001	Experimental shaft
49.002	Debris pit, disposal Area AB
49.003-49.004	Former radiochemistry lab drainfield and seepage pit

AOC	
49.005	Area 2
49.006	Trash burning area

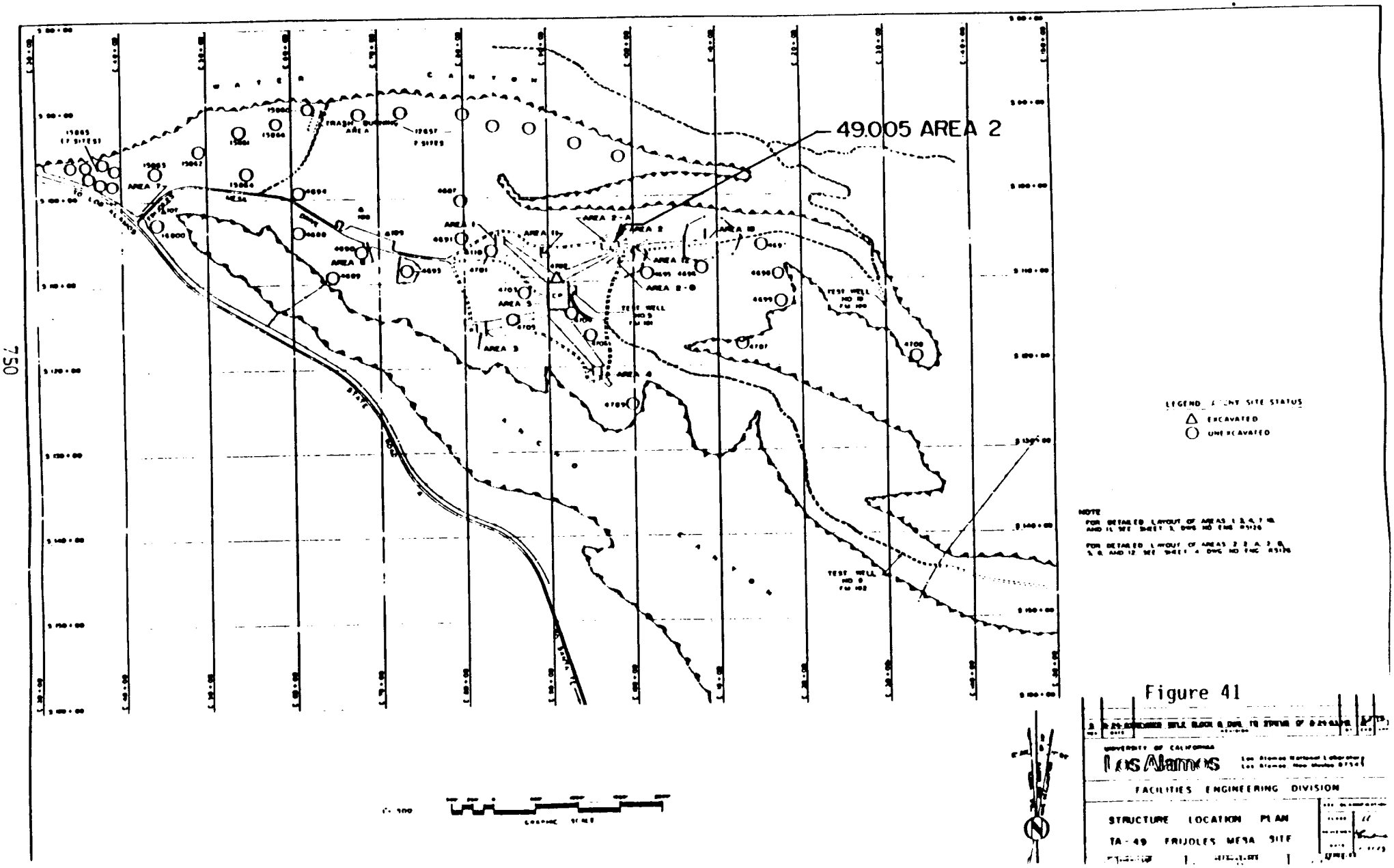
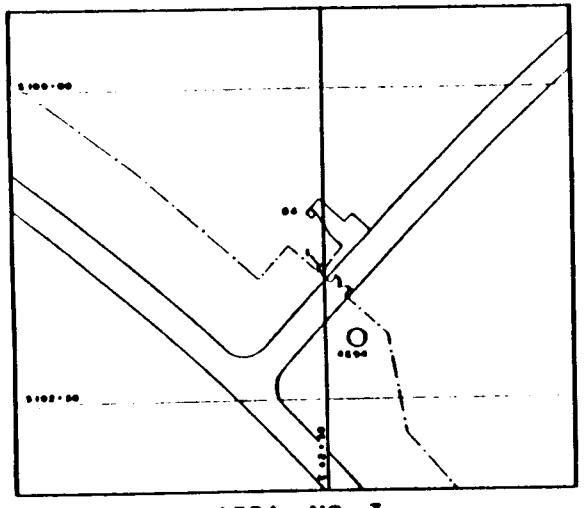
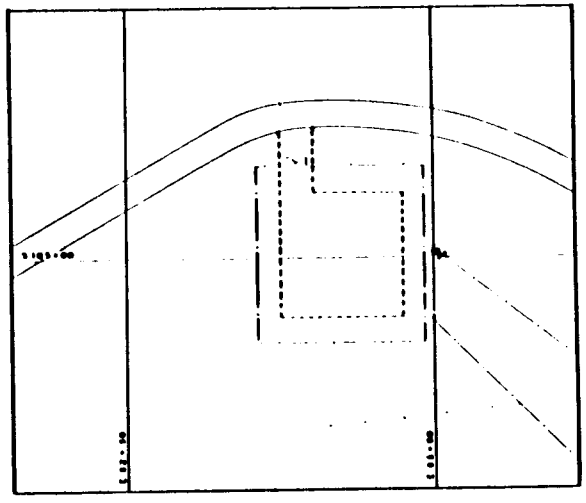

49.005 AREA 2
LEGEND
EXCAVATED
UNEXCAVATED
NOTE
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA-49 FRIJOLES MESA SITE

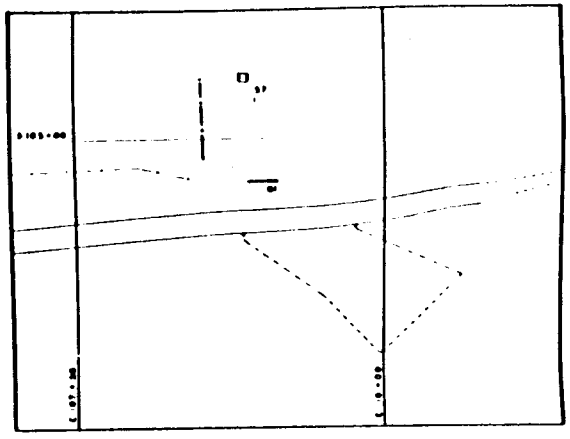
Figure 41



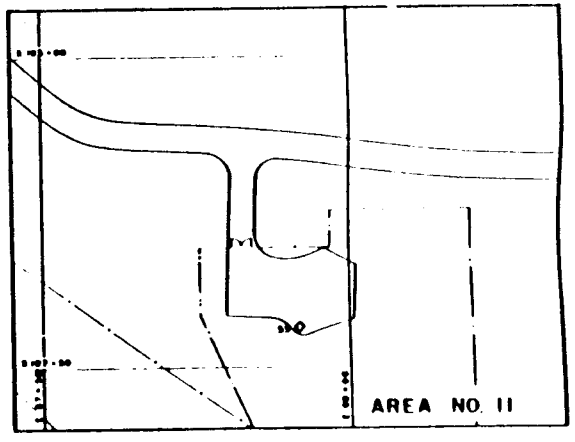
AREA NO. 7



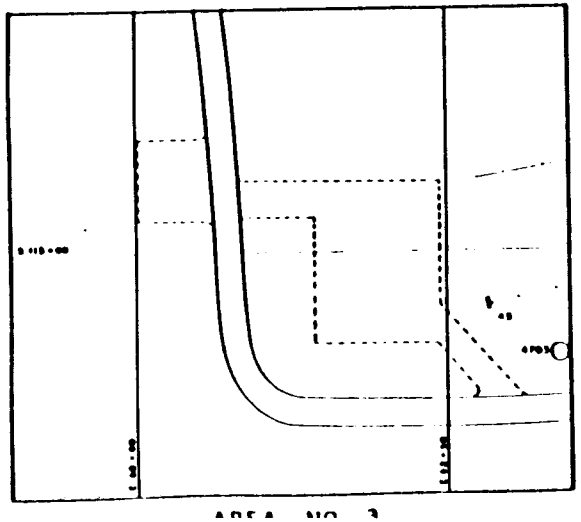
AREA NO. 1



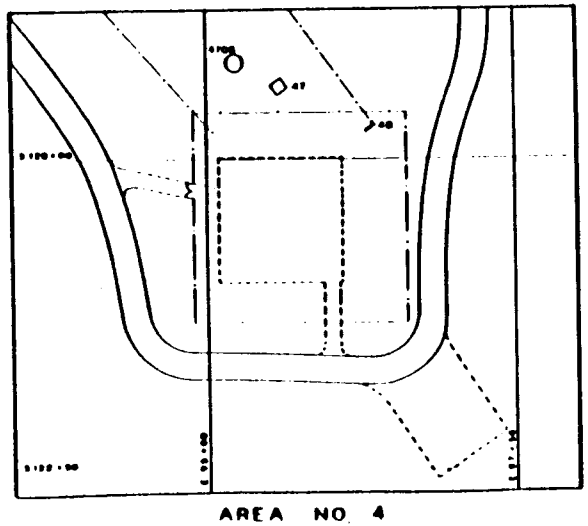
AREA NO. 10



AREA NO. 11



AREA NO. 3



AREA NO. 4

LEGEND ARCHY SITE STATUS

Δ EXCAVATED

O UNEXCAVATED

Figure 42

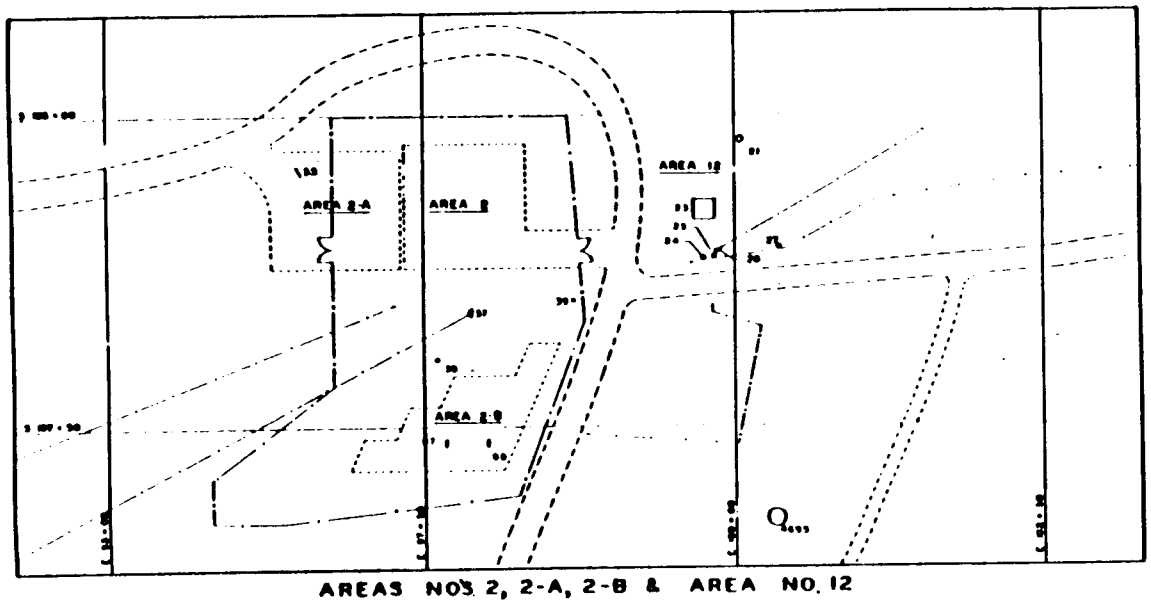
UNIVERSITY OF CALIFORNIA

Los Alamos

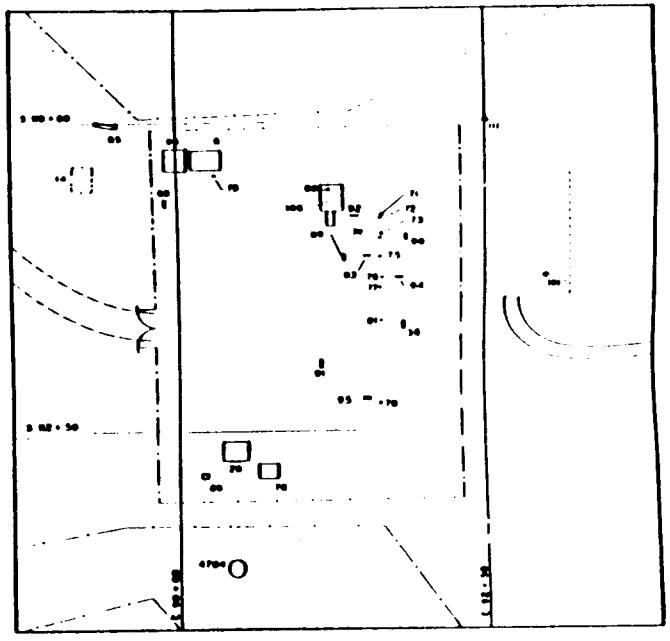
FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN

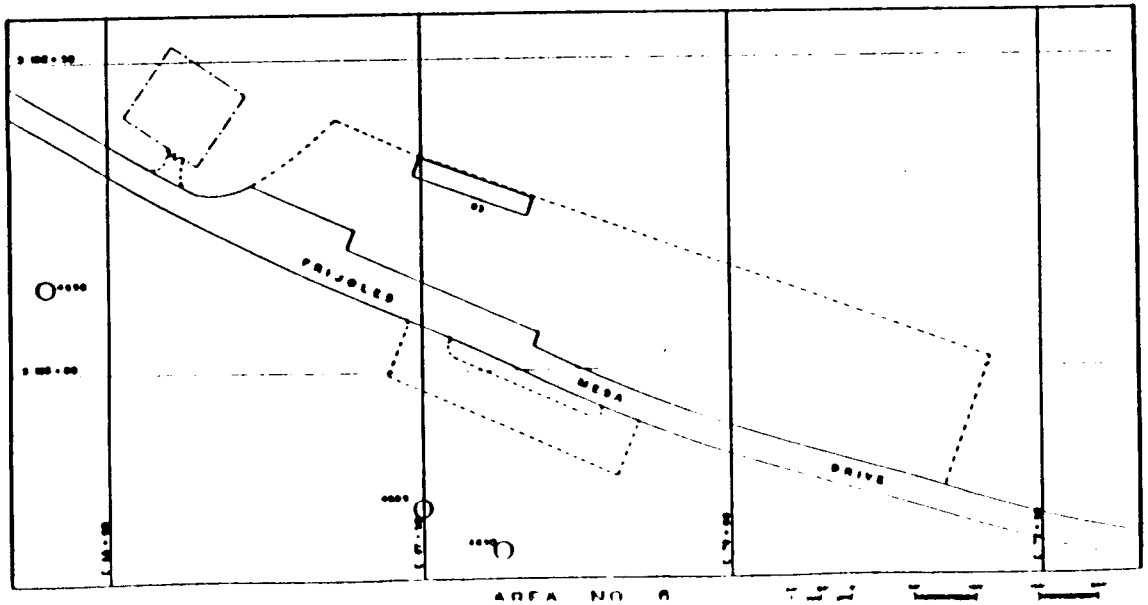
TA 49 FRIJOLES MESA SITE



AREAS NOS. 2, 2-A, 2-B & AREA NO. 12



AREA NO. 5



AREA NO. 6

LEGEND ARCHY SITE STATUS

△ EXCAVATED

○ UNEXCAVATED

Figure 43

UNIVERSITY OF CALIFORNIA
Los Alamos

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN

TA-49 FRIJOLES MESA SITE

Unit Number: 49.001

Unit Name: EXPERIMENTAL SHAFT

Location: TA-49

References: VSI LOG BOOK; "MATERIAL DISPOSAL AREAS", CEARP PHASE 1 WORKING DRAFT, p.MDA AB-1

Experimental Shaft Designed for the Detonation of Nuclear Munitions.

Unit Number: 49.001

A. DESCRIPTION

Unit Type: SHAFT

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: VARIABLE, BUT AT LEAST 20 ft DEEP

Material of Construction: SURROUNDING TUFF, CAPPED WITH CONCRETE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: UNIT IS UNDERLAIN BY TUFF.

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS ONE OF SEVERAL SHAFTS DESIGNED FOR THE EXPERIMENTAL DETONATION OF NUCLEAR MUNITIONS.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 49.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: PRIOR TO 1980, APPROXIMATELY 33 lb OF BERYLLIUM WERE DISPOSED OF IN THE COMBINATION OF SEVERAL SHAFTS IN TA-49, OF WHICH THIS UNIT IS ONE.

Source of Waste: STUDIES CONCERNING THE DETONATION OF MUNITIONS

Disposition of Waste: WASTE PRODUCTS ARE CONFINED IN SITU

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: TEST WELLS WHICH REACH TO THE MAIN AQUIFER AND 1,000 TO 2,000 ft BELOW THE SURFACE HAVE BEEN MONITORED FOR A STANDARD LIST OF RADIOCHEMICAL AND INORGANIC CHEMICAL CONSTITUENTS. (BERYLLIUM WAS NOT INCLUDED ON THE LIST.) NO ABOVE BACKGROUND CONCENTRATIONS HAVE BEEN NOTED FOR THESE CONSTITUENTS IN WATER FROM THE MAIN AQUIFER.

Unit Number: 49.002

Unit Name: DEBRIS PIT, DISPOSAL AREA AB

Location: TA-49

References: VSI LOG BOOK; 98, P. 19

No Photo is Available for this Unit.

Unit Number: 49.002

A. DESCRIPTION

Unit Type: PIT NEAR DRAIN FIELD FROM FORMER RADIOCHEMISTRY BUILDING - AREA 11

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: DATA NOT AVAILABLE.

Material of Construction: EXCAVATED IN NATURAL SOIL

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: UNIT IS EXCAVATED INTO TUFF.

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF RADIOACTIVE WASTE, RADIONUCLIDES.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 49.002

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: RADIOACTIVE WASTES, RADIONUCLIDES.

Source of Waste: SOURCE IS UNKNOWN.

Disposition of Waste: DISPOSITION IS UNKNOWN.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE SEEN DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 49.003-49.004

Unit Name: FORMER RADIOCHEM LAB DRAINFIELD AND SEEPAGE PIT

Location: TA-49

References: VSI LOG BOOK; 98, P. 19

Drainfield of Former Radiochemistry Laboratory Located at TA-49

Unit Number: 49.003-49.004

A. DESCRIPTION

Unit Type: DRAINAGE FIELD FROM RESEARCH AND DEVELOPMENT ACTIVITIES ASSOCIATED WITH A RADIOCHEMISTRY LABORATORY THAT HAS NOW BEEN DISMANTLED AND REMOVED.

Period of Operation: 1950 TO 1960

Dimensions/Volume: APPROXIMATELY 1/4-ACRE

Material of Construction: SOIL

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: WASTES GENERATED IN RADIOCHEMISTRY LABORATORY DRAINED THROUGH PIPING INTO THIS AREA.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 49.003-49.004

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: RADIOCHEMISTRY LAB WASTES INCLUDING HAZARDOUS/RADIOACTIVE WASTES, CHEMICALS, AND RADIONUCLIDES

Source of Waste: RADIOCHEMISTRY LABORATORY NOW DISMANTLED.

Disposition of Waste: WASTES REMAIN IN SITU; SOME WASTE MAY HAVE BEEN REMOVED DURING BUILDING DISMANTLING.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE SEEN DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

UNIT 49.005: AREA 2 - This inactive unit was identified during the VSI as a former area of radiochemical contamination. The 150 ft. by 180 ft. contaminated area was observed to have been covered with 6 ft. of base material and then covered with asphalt. The asphaltic surface appeared to have cracked and been later sealed to prevent entrenchment by water. The unit was in operation from 1950 to 1960. It is thought that this unit was the site of one or more munition detonation tests, which may have resulted in plutonium contamination. No releases were observed during the VSI.

Asphaltic Surface Layer Covering Former Radiochemically Contaminated Area at TA-49. Note Cracks in Asphalt that had to be Sealed to Prevent Entrenchment of Water into Underlying Soil.

UNIT 49.006: TRASH BURNING AREA - This inactive unit was identified during the VSI as an area designated for the burning of waste that was stated by LANL to be free of high explosives. This area, which was aboveground and underlain by soil, was 150 ft. by 20 ft. and in operation from 1959 to 1984. The disposition of the burnt wastes is not known. No releases were observed during the VSI.

Trash Burning Area Used to Burn Uncontaminated Wastes.
Unit is Located Between Pipes in Foreground and Background of Photograph.

TA-50, Waste Management Site

Laboratory personnel at TA-50 (Figure 44) have responsibility for treating and disposing of most industrial liquid waste received from the various technical areas located throughout the laboratory, for developing improved methods of solid waste treatment, and for containment of radioactivity removed by treatment. Laboratory-generated radioactive liquid waste is piped from many of the technical areas to TA-50 for subsequent treatment. The resulting radioactive nonhazardous sludges are thereafter solidified with cement and buried at Area G in TA-54 (10, p. 7-2).

TA-50 is the site of the laboratory's Controlled Air Incinerator (TA-50-37), as well as batch treatment (neutralization, metal precipitation and cyanide destruction) and container storage of industrial wastes (TA-50-1). Figure 45 is a schematic of the wastewater treatment system at this technical area.

An inactive material disposal area in TA-50, called Area C, is an 11.8-acre site located on the north side of Pajarito Road. It was opened in 1948 and is composed of six radioactive waste pits, a chemical pit and 107 numbered shafts. pit disposal ended in 1964 and shaft disposal ended in 1969. Studies in the late 1970's identified several problems with Area C, including animal intrusion into the waste. The area has been covered with top soil, recontoured, and seeded with native grasses. Area C is currently being monitored for radioactivity.

Units which may be associated wit the handling of hazardous constituents (e.g., underground storage tanks, NPDES outfalls, container storage) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 50

SWMUs	
50.001	Neutralization tank #1
50.002	Clariflocculator
50.003	Treated waste storage tank
50.004-50.005	Two sludge storage tanks
50.006-50.007	Two clariflocculators
50.008-50.009	Two flash mixers
50.010-50.011	Two gravity filters
50.012	Rotary drum vacuum filter
50.013	pH adjustment tank
50.014	Neutralization tank #2
50.015-50.018	Four ion exchange columns
50.019	Decant storage tank
50.020-50.021	Two prefilters
50.022	Wiped film evaporator
50.023	Evaporator storage tank
50.024	Cementation unit
50.025	Temporary storage area
50.026*	Batch waste treatment tank

50.027	Batch waste treatment blowdown tank
50.028	Electroplating storage tank
50.029	Raw-waste storage tank
50.030-50.031	Two treated waste storage tanks
50.032	Sludge storage tank
50.033	Temporary storage
50.034	Area C landfill
50.035*	Transuranic waste incinerator
50.036	Feed area for incinerator

AOC

50.037	Underground storage tanks
50.038-50.039*	Batch treatment storage areas

* RCRA Regulated

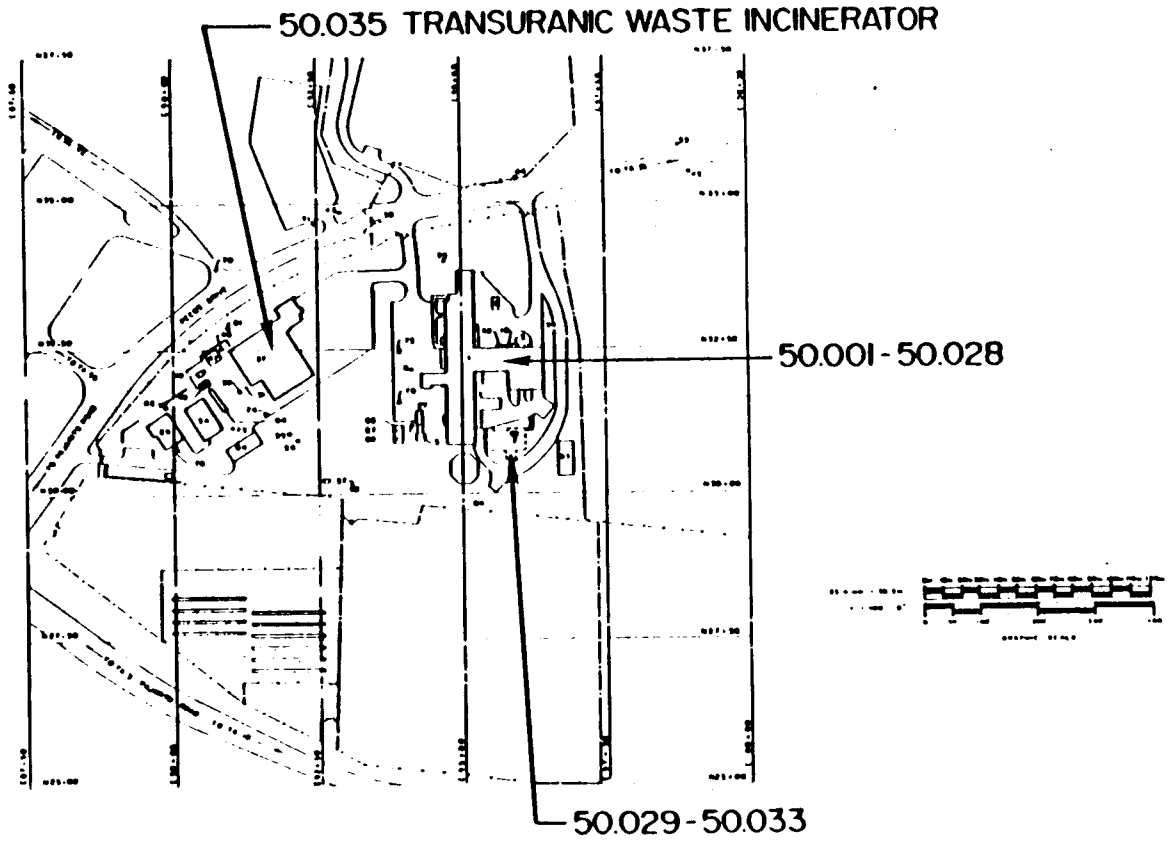


Figure 44

Los Alamos

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN

766

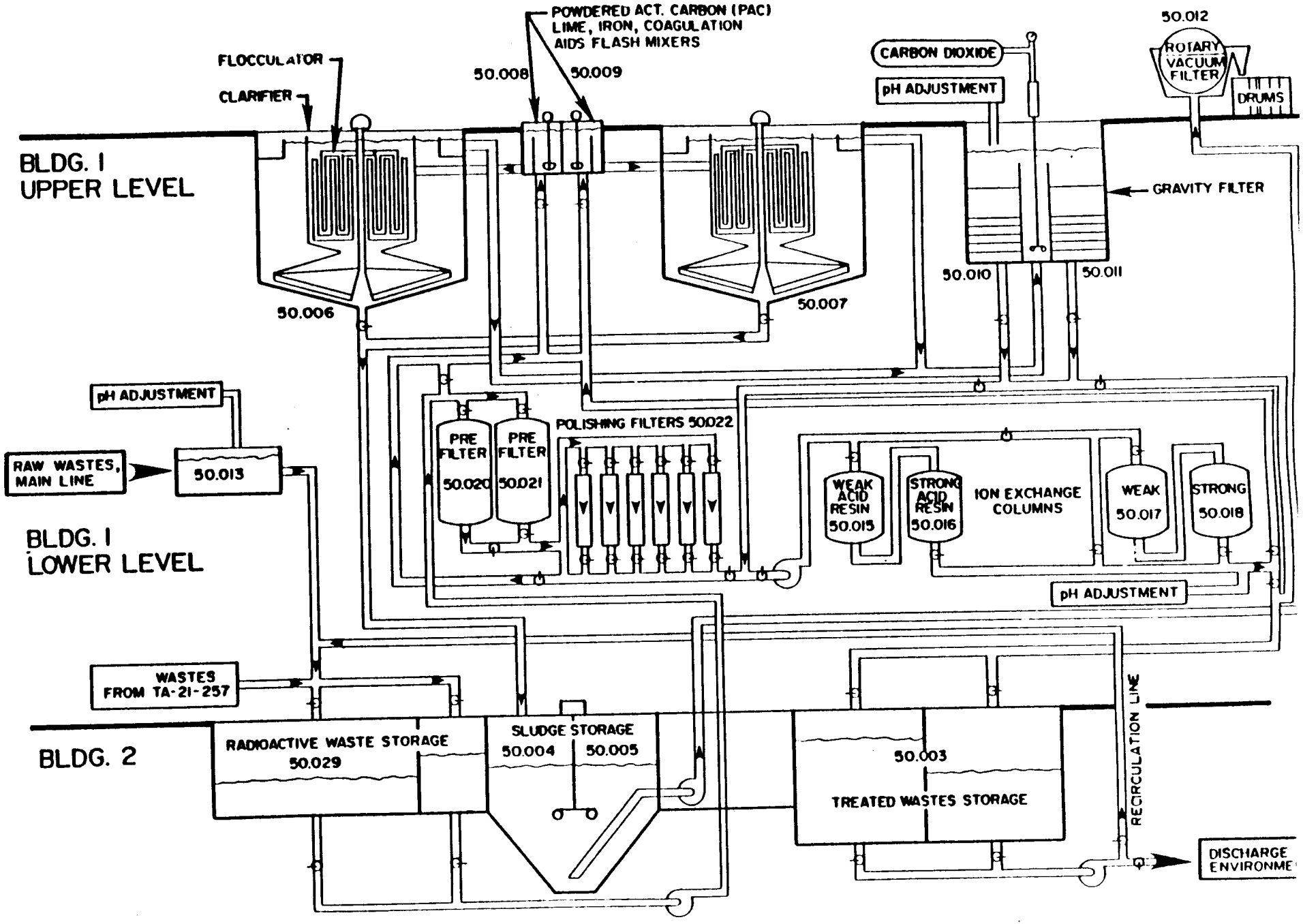


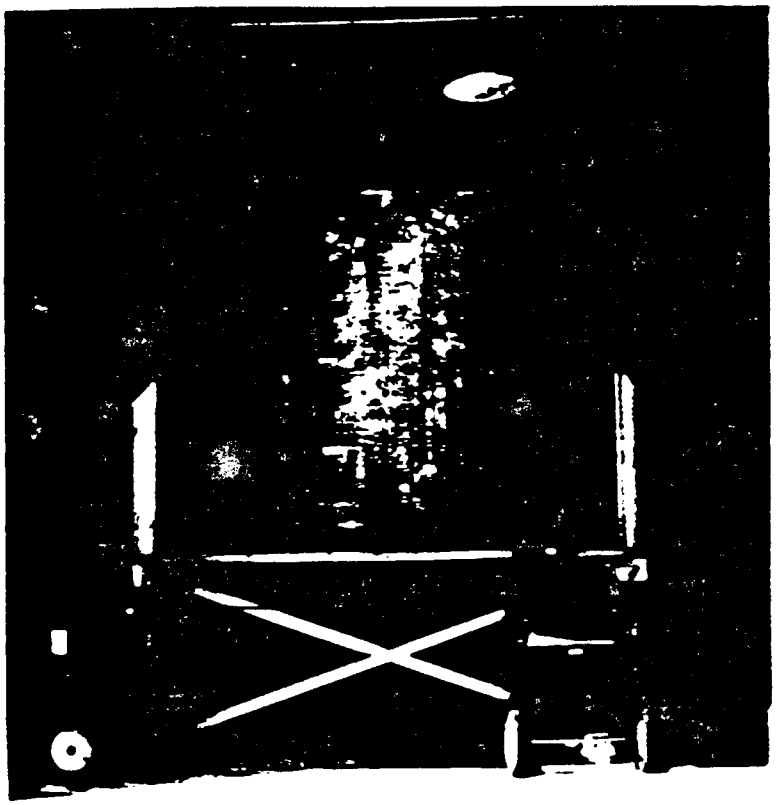
FIGURE 45. LIQUID WASTE TREATMENT FACILITY TA-50.

Unit Number: 50.001

Unit Name: NEUTRALIZATION TANK NO. 1

Location: TA-50-1

References: VSI LOG BOOK



Neutralization Tank Used for the Processing of Plutonium. Unit is Located in Building 1 of the Pretreatment Plant at TA-50.

Unit Number: 50.001

A. DESCRIPTION

Unit Type: NEUTRALIZATION TANK IN BUILDING 1, ROOM 60 OF PRETREATMENT PLANT

Period of Operation: 1983 TO PRESENT

Dimensions/Volume: 600 GALLON

Material of Construction: STAINLESS STEEL

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE TREATMENT OF HIGHER RADIOACTIVE WASTES (PROCESSING OF PLUTONIUM).

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.001

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTE OR CONSTITUENTS

Source of Waste: PLUTONIUM PROCESSING FACILITY TA-55

Disposition of Waste: SLUDGE GOES TO CEMENTATION UNIT; EFFLUENT GOES TO RADIOACTIVE WASTE HOLDING TANKS AND GOES THRU TO TA-50 WASTEWATER TREATMENT SYSTEM

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO OTHER DATA AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.002

Unit Name: CLARIFLOCCULATOR

Location: TA-50-1

References: VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 50.002

A. DESCRIPTION

Unit Type: CLARIFLOCCULATOR IN BUILDING 1, ROOM 60 OF PRETREATMENT PLANT

Period of Operation: 1983 TO PRESENT

Dimensions/Volume: 1500 GALLONS

Material of Construction: MILD STEEL

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE TREATMENT OF HIGHER RADIOACTIVE WASTES (PROCESSING OF PLUTONIUM).

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.002

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTES, INCLUDING HAZARDOUS WASTE OR CONSTITUENTS

Source of Waste: PLUTONIUM PROCESSING FACILITY TA-55

Disposition of Waste: SLUDGE GOES TO CEMENTATION UNIT; EFFLUENT GOES TO RADIOACTIVE WASTE HOLDING TANKS AND GOES THRU TA-50 WASTEWATER TREATMENT SYSTEM.

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO OTHER DATA AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.003

Unit Name: TREATED WASTE STORAGE TANK

Location: TA-50-1

References: VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 50.003

A. DESCRIPTION

Unit Type: TREATED WASTE STORAGE TANK IN BUILDING 1, ROOM 60 OF PRETREATMENT PLANT

Period of Operation: 1983 TO PRESENT

Dimensions/Volume: 600 GALLONS

Material of Construction: FIBERGLASS

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground: X
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE TREATMENT OF HIGHER RADIOACTIVE WASTES (PLUTONIUM PROCESSING).

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.003

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTES, INCLUDING HAZARDOUS WASTE OR CONSTITUENTS

Source of Waste: PLUTONIUM PROCESSING FACILITY TA-55

Disposition of Waste: SLUDGE GOES TO CEMENTATION UNIT; EFFLUENT TO RAD-WASTE HOLDING TANKS AND GOES THRU TO TA-50 WASTEWATER TREATMENT SYSTEM

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO OTHER DATA AVAILABLE AT THIS TIME.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.004-50.005 Unit Name: TWO SLUDGE STORAGE TANKS

Location: TA-50-1 References: VSI LOG BOOK

No Photos are Available for these Units.

Unit Number: 50.004-50.005

A. DESCRIPTION

Unit Type: TWO SLUDGE STORAGE TANKS IN BUILDING 1, ROON 60 OF PRETREATMENT PLANT

Period of Operation: 1983 TO PRESENT

Dimensions/Volume: 400 GALLONS

Material of Construction: MILD STEEL

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE TREATMENT OF HIGHER RADIOACTIVE WASTES (PLUTONIUM PROCESSING).

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.004-50.005

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTES, INCLUDING HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: PLUTONIUM PROCESSING FACILITY. TA-55

Disposition of Waste: SLUDGE GOES TO CEMENTATION UNIT; EFFLUENT TO RAD-WASTE HOLDING TANKS AND GOES THROUGH TO TA-50 WASTEWATER TREATMENT SYSTEM

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO OTHER DATA AVAILABLE.

E. RELEASE HISTORY

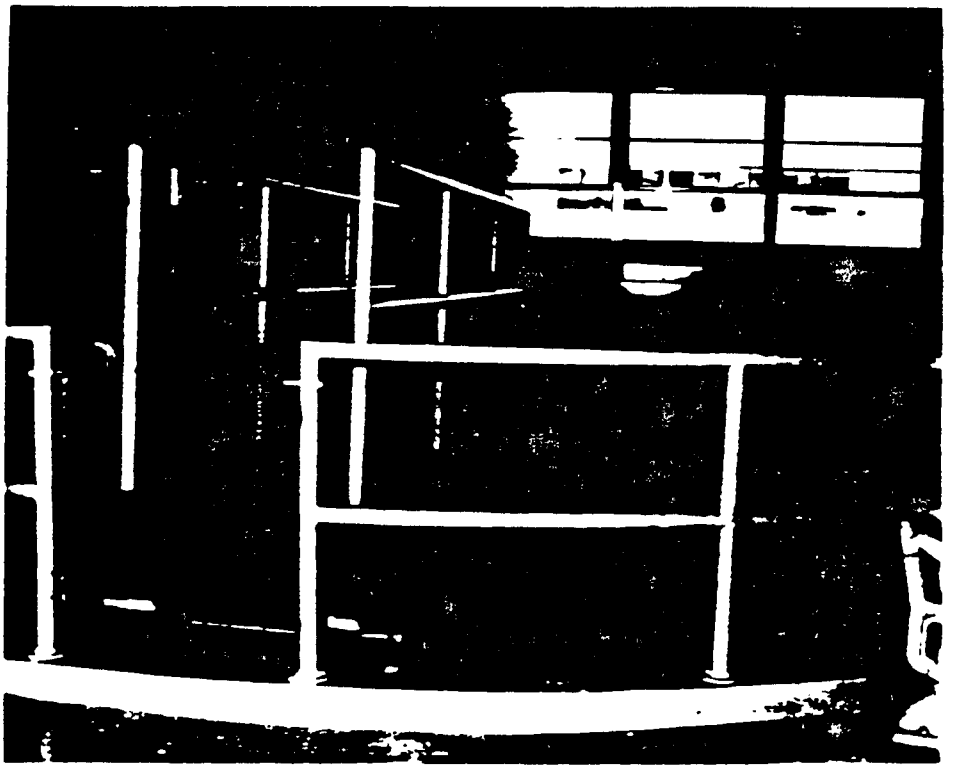
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.006-50.007 Unit Name: TWO CLARIFLOCCULATORS

Location: TA-50-1 References: VSI LOG BOOK



One of Two Flocculators Located at the Pretreatment Plant of TA-50.

Unit Number: 50.006-50.007

A. DESCRIPTION

Unit Type: TWO CLARIFIERS (OUTSIDE ANNULUS); INSIDE ARE FLOCCULATORS IN BUILDING 1, ROOM 116

Period of Operation: 1963 TO PRESENT

Dimensions/Volume: 25,000 GALLONS

Material of Construction: REINFORCED CONCRETE

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE TREATMENT OF WASTEWATER. UNIT RECEIVES WASTE FROM FLASH MIXERS AND THEN SENDS IT TO WASTE FILTER (GRAVITY).

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.006-50.007

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE WITH TRACE OF ORGANICS AND INCLUDES HAZARDOUS WASTE OR CONSTITUENTS

Source of Waste: SOURCE IS FROM FLASH MIXERS (UNITS 50.008 OR 50.009)

Disposition of Waste: GRAVITY FILTER (UNITS 50.010 OR 50.011)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls: X		Leak Detection:

Details: WASTE GOES BACK TO STORAGE TANKS (UNITS 50.004 OR 50.005)

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: AFTER THE TREATMENT PLANT BEGAN OPERATING RELATIVELY HIGH CONCENTRATIONS OF CHLORIDE, NITRATES, AND TOTAL DISSOLVED SOLIDS WERE RECORDED IN SURROUNDING MORTANDAD CANYON.(ENVIRONMENTAL SURVEILLANCE AT LOS ALAMOS DURING 1985, P. 40).

Unit Number: 50.008-50.009 Unit Name: TWO FLASH MIXERS

Location: TA-50-1 References: VSI LOG BOOK

Flash Mixers Used for Chemical Treatment of Radioactive Wastes, Located Inside the Pretreatment Plant at TA-50.

Unit Number: 50.008-50.009

A. DESCRIPTION

Unit Type: TWO WASTE MIXERS; CHEMICAL ADDED FOR TREATMENT; IN BUILDING 1, ROON 116

Period of Operation: 1963 TO PRESENT

Dimensions/Volume: 200 GAL.

Material of Construction: REINFORCED CONCRETE

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR WASTE MIXING WITH CHEMICALS.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.008-50.009

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTE OR CONSTITUENTS

Source of Waste: RADIOACTIVE WASTE STORAGE TANKS (FLOW THROUGH PROCESS)

Disposition of Waste: CLARIFLOCCULATOR

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls: X		Leak Detection:

Details: WASTE FLOWS INTO CLARIFLOCCULATOR.

E. RELEASE HISTORY

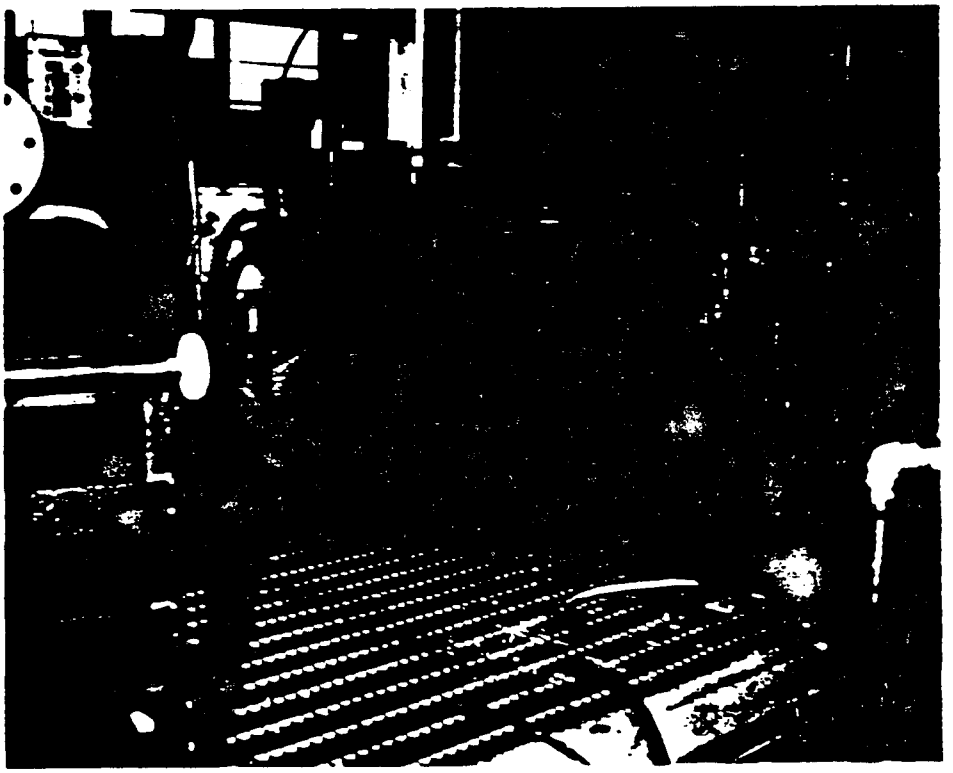
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.010-50.011 Unit Name: TWO GRAVITY FILTERS

Location: TA-50-1 References: VSI LOG BOOK



Gravity Filters of the Pretreatment Plant at TA-50.

Unit Number: 50.010-50.011

A. DESCRIPTION

Unit Type: FILTRATION DEVICES (GRAVITY FILTERS), IN BUILDING 1, ROOM 116

Period of Operation: 1963 TO PRESENT

Dimensions/Volume: 10,000 GALLONS

Material of Construction: REINFORCED CONCRETE

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE FILTRATION OF WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.010-50.011

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable: X	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS A TRACE OF ORGANICS, RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTE OR CONSTITUENTS

Source of Waste: CLARIFLOCCULATOR

Disposition of Waste: TREATED WASTE STORAGE TANKS

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:		Overflow Controls: X	Leak Detection:

Details: WASTE GOES BACK TO CLARIFLOCCULATOR.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.012

Unit Name: ROTARY DRUM VACUUM FILTER

Location: TA-50

References: VSI LOG BOOK

Rotary Drum Vacuum Filter Used for Dewatering Sludge and Chemical Precipitate. Unit is Located Inside the Pretreatment Plant at TA-50.

Unit Number: 50.012

A. DESCRIPTION

Unit Type: FILTER VACUUM IN BUILDING 1, ROOM 116B

Period of Operation: 1963 TO PRESENT.

Dimensions/Volume: 10,000.GALLONS.

Material of Construction: STEEL.

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR DEWATERING SLUDGE OR CHEMICAL PRECIPITATE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.012

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTE OR CONSTITUENTS

Source of Waste: SLUDGE HOLDING TANKS

Disposition of Waste: TA-54 (SW MANAGEMENT AREA)

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer: X
Level Controls: X	Overflow Controls:		Leak Detection:

Details: OTHER DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

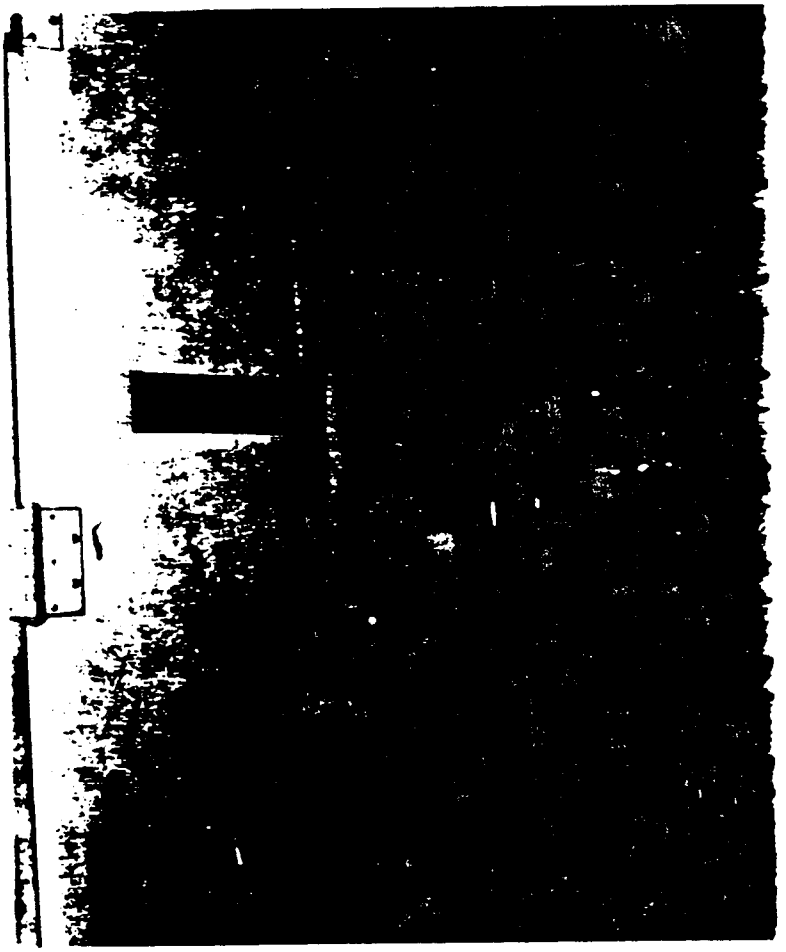
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.013

Unit Name: pH ADJUSTMENT TANK

Location: TA-50-1

References: VSI LOG BOOK



pH Adjustment Tank Enclosed in an Indoor Unit Inside the Pretreatment Plant at TA-50.

Unit Number: 50.013

A. DESCRIPTION

Unit Type: pH ADJUSTMENT TANK (FURTHER ENCLOSED IN AN INDOOR UNIT), IN BUILDING 1, ROOM 16

Period of Operation: 1963 TO PRESENT

Dimensions/Volume: 1500 GALLONS

Material of Construction: REINFORCED CONCRETE

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR pH ADJUSTMENT OF RADIOACTIVE WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.013

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTE OR CONSTITUENTS

Source of Waste: ENTIRE COLLECTION SYSTEM (PIPELINE)

Disposition of Waste: STORAGE TANKS

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls: X		Leak Detection:

Details: OTHER DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.014

Unit Name: NEUTRALIZATION TANK NO. 2

Location: TA-50-1

References: VSI LOG BOOK

No Photo is Available for this Unit. A Similar Unit is Shown in Unit 50.001.

Unit Number: 50.014

A. DESCRIPTION

Unit Type: NEUTRALIZATION TANK IN BUILDING 1, ROOM 60C

Period of Operation: 1986 TO PRESENT

Dimensions/Volume: 10,000 GALLONS

Material of Construction: STAINLESS STEEL

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE NEUTRALIZATION OF ACIDIC WASTE AND RADIOACTIVE WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.014

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE, ACIDS, POSSIBLY METALS, AND HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: ISOTOPE PRODUCTION UNIT (TA-46)

Disposition of Waste: GOES TO EVAPORATION STORAGE TANKS

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls: X		Leak Detection:

Details: UNIT HAS A CATCH BASIN AND LEVEL CONTROLS THAT ARE COMPUTER CONTROLLED.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.015-50.018 Unit Name: FOUR ION EXCHANGE COLUMNS

Location: TA-50-1 References: VSI LOG BOOK

Vertical Ion Exchange Columns Designed for Ion Exchange of Radioactive Waste From the Pretreatment Plant at TA-50. Unit Has Never Been Used.

Unit Number: 50.015-50.018

A. DESCRIPTION

Unit Type: VERTICAL COLUMNS IN BUILDING 1, ROOM 60B

Period of Operation: INSTALLED IN 1985; NEVER USED BUT WILL BE IN THE FUTURE

Dimensions/Volume: 1,000 GALLONS OF RESIN EACH; 1,500 GALLON TANKS

Material of Construction: STAINLESS STEEL

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR ION EXCHANGE OF RADIOACTIVE WASTE. SIMILAR UNITS WERE USED IN 1963 BUT WERE LATER DISMANTLED.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: UNIT HAS NEVER BEEN USED, BUT WILL BE IN THE FUTURE.

Unit Number: 50.015-50.018

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT WILL MANAGE RADIOACTIVE WASTE FROM THE REMOVAL OF STRONTIUM, AND CESIUM, AND MAY MANAGE HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: RADIOACTIVE WASTE HOLDING TANK OR GRAVITY FILTER

Disposition of Waste: DISPOSTITION OF RADIOACTIVE WASTE STORAGE TANK GOES TO FLASH MIXER. DISPOSITION OF GRAVITY FILTER GOES TO TREATED WASTE STORAGE; RESIN GOES TO TA-54.

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: OTHER DATA NOT AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

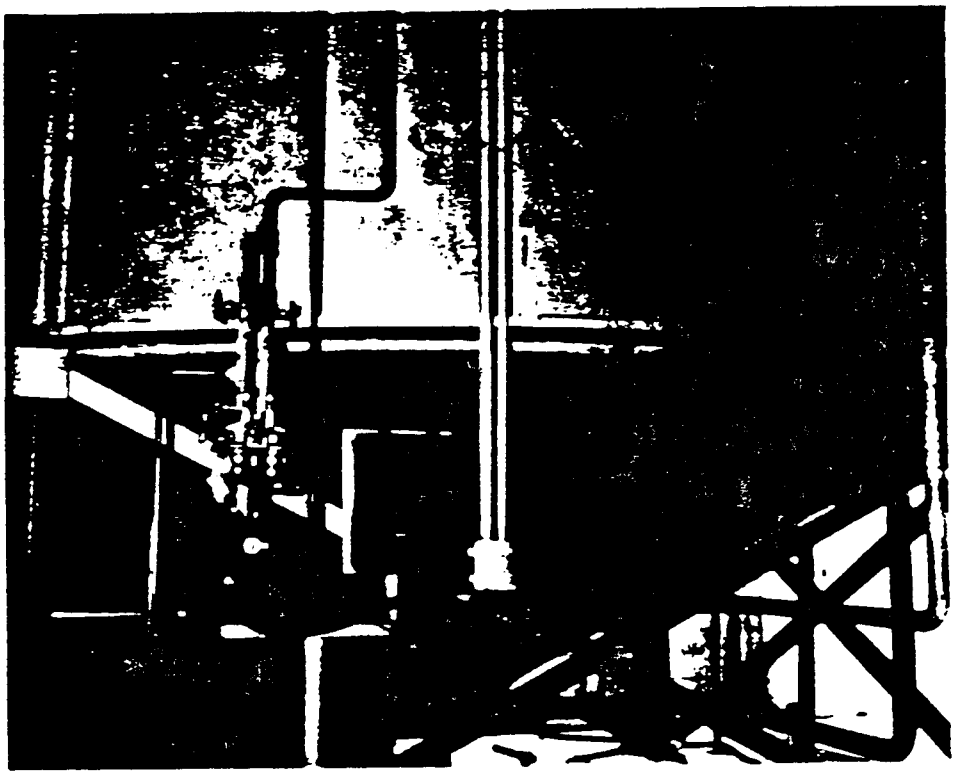
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.019

Unit Name: DECANT STORAGE TANK

Location: TA-50-1

References: VSI LOG BOOK



Decant Storage Tank Used as an Auxillary Sludge Storage Tank at TA-50.

Unit Number: 50.019

A. DESCRIPTION

Unit Type: VERTICAL TANK IN BUILDING 1, ROOM 61

Period of Operation: 1985 TO PRESENT

Dimensions/Volume: 10,000 GALLONS

Material of Construction: MILD STEEL

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED AS AN AUXILLARY SLUDGE STORAGE TANK.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.019

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: CLARIFLOCCULATOR OR GRAVITY FILTERS

Disposition of Waste: GOES TO ROTARY VACUUM FILTER

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO OTHER DATA AVAILABLE.

E. RELEASE HISTORY

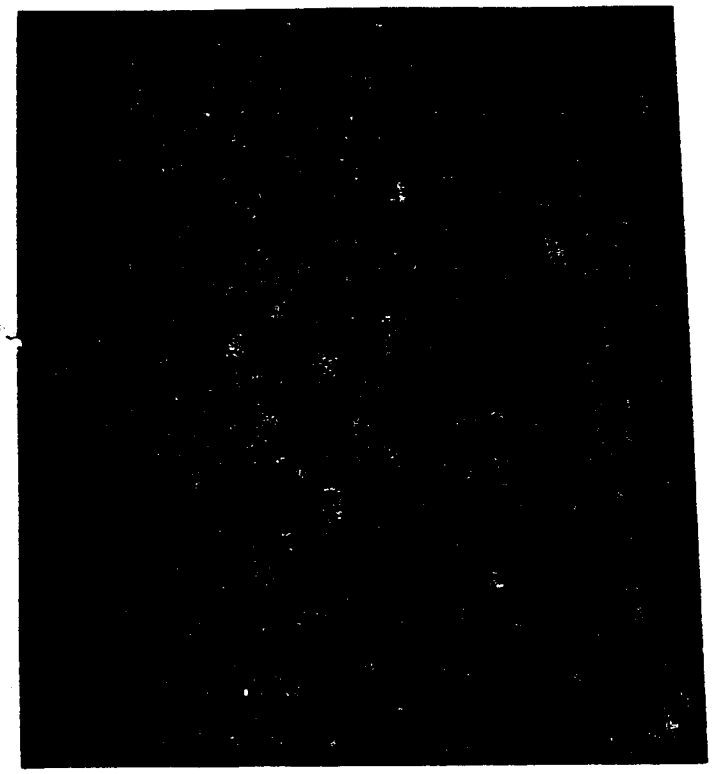
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.020-50.021 Unit Name: TWO PREFILTERS

Location: TA-50-1 References: VSI LOG BOOK



Vertical Filter Tank Designed for the Prefiltration of Radioactive Waste Within the Pretreatment Plant at TA-50. Unit Has Never Been Used.

Unit Number: 50.020-50.021

A. DESCRIPTION

Unit Type: TWO VERTICAL FILTER TANKS IN BUILDING 1, ROOM 72A

Period of Operation: 1985 TO PRESENT; NEVER USED, BUT WILL BE IN FUTURE

Dimensions/Volume: 1,000 GALLONS

Material of Construction: MILD STEEL

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE PREFILTRATION OF WASTE STREAM.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.020-50.021

C. WASTES MANAGED

Solids: X	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT WILL MANAGE RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: RADIOACTIVE WASTE TANK

Disposition of Waste: FLASH MIXERS

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO OTHER DATA AVAILABLE AT THIS TIME.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

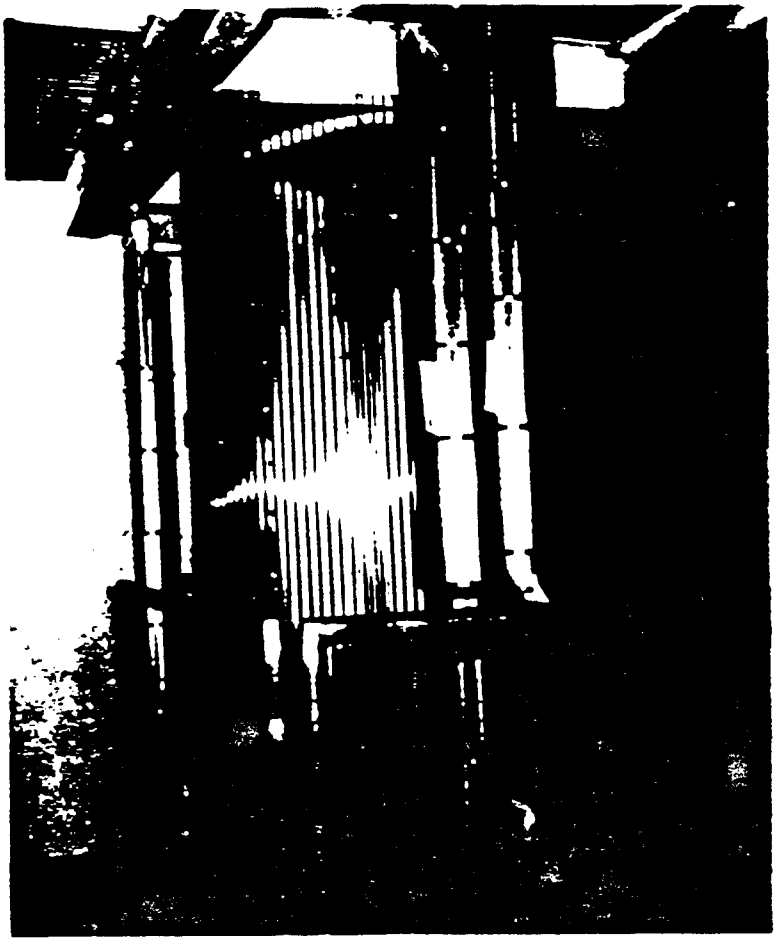
VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES HAVE OCCURRED; UNIT HAS NEVER BEEN USED.

Unit Number: 50.022 Unit Name: WIPED FILM EVAPORATOR

Location: TA-50-1 References: VSI LOG BOOK

A. Lower Half of Wiped Film Evaporator Designed to Concentrate Highly Dissolved Solid Wastes. See Additonal Photo on Following Page.



B. Upper Half of Wiped Film Evaporator Designed to Concentrate Highly Dissolved Solid Wastes.

Unit Number: 50.022

A. DESCRIPTION

Unit Type: DISSOLVED SOLIDS CONCENTRATED THROUGH HEATED EVAPORATION IN BUILDING 1, ROOM 71

Period of Operation: 1985 TO PRESENT

Dimensions/Volume: 10 GAL/MINUTE EVAPORATED; 100 SQ. FT. UNIT

Material of Construction: MILD STEEL

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground: X

Purpose of Unit: UNIT DESIGNED TO CONCENTRATE HIGH DISSOLVED SOLID WASTES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.022

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTES, INCLUDING HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: ISOTOPES UNIT AT TA-46; EVAPORATION STORAGE TANK; NEUTRALIZATION TANK

Disposition of Waste: TA-54; WASTE IS COLLECTED IN 55 GALLON DRUMS

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT HAS A SUBSURFACE AREA (BASEMENT AREA).

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.023 Unit Name: EVAPORATOR STORAGE TANK

Location: TA-50-1 References: VSI LOG BOOK

Horizontal Evaporator Storage Tank Designed for the Storage of Concentrated Solids.

Unit Number: 50.023

A. DESCRIPTION

Unit Type: HORIZONTAL STORAGE TANK IN BUILDING 1, ROOM 70A

Period of Operation: 1985 TO PRESENT

Dimensions/Volume: 30,000 GALLONS

Material of Construction: MILD STEEL

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE STORAGE OF CONCENTRATED SOLIDS COMING FROM NEUTRALIZATION TANK.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.023

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT CONTAINS RADIOACTIVE WASTE AND MAY INCLUDE HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: NEUTRALIZATION TANK

Disposition of Waste: WIPED FILM EVAPORATOR

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls: X		Leak Detection:

Details: UNIT CONTAINS OVERFLOW CONTROLS TO ADDITIONAL TANKS AND A SUBSURFACE BASEMENT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.024

Unit Name: CEMENTATION UNIT

Location: TA-50-1

References: VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 50.024

A. DESCRIPTION

Unit Type: DRUM TUMBLER; ---0 2 - 5,000 GAL. TANKS - REINFORCED CONCRETE, UNDERGROUND ON SOIL; AUXILLARY SLUDGE STORAGE TANKS (30,000 GAL. TANK WOULD OVERFLOW TO THESE) - NO PICTURE IN 60A - TOO HOT; BLDG. 1, ROOM 60A

Period of Operation: 1981 TO PRESENT

Dimensions/Volume: TREATS 2 - 55 GALLON DRUMS AT A TIME

Material of Construction: STAINLESS STEEL

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO CEMENT/SOLIDIFY RADIOACTIVE WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.024

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: ROOM 60 PLANT

Disposition of Waste: STORAGE AT TA-54

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO OTHER DATA AVAILABLE AT THIS TIME.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: ACCORDING TO LANL AUXILLARY SLUDGE STORAGE TANKS PAST OVERFLOW IN 1975 (RADIOACTIVE WASTE). 1963 TO PRESENT UNIT HAS BEEN CONTAINED WITHIN REINFORCED CONCRETE.

Unit Number: 50.025

Unit Name: TEMPORARY STORAGE AREA

Location: TA-50-1

References: VSI LOG BOOK

Temporary Storage Area Used for Containment of Solidified Radioactive Waste.

Unit Number: 50.025

A. DESCRIPTION

Unit Type: STORAGE AREA IN BUILDING 1, ROOM 60D

Period of Operation: SINCE 1986

Dimensions/Volume: 15' X 30'

Material of Construction: CONCRETE FLOOR

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE TEMPORARY STORAGE OF SOLIDIFIED RADIO-ACTIVE WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.025

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT CONTAINS RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: CEMENTING UNIT IN RM. 60A

Disposition of Waste: TA-54

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.026

Unit Name: BATCH WASTE TREATMENT TANK

Location: TA-50

References: 14,P.4-4; 1, P.ii; 11,P.2-3; 18; 65,P.3-2; 96,P.2; VSI LOG BOOK

RCRA Regulated Batch Waste Treatment Tank Designed for the Neutralization and Treatment of Assorted Industrial Wastes.

Unit Number: 50.026

A. DESCRIPTION

Unit Type: BATCH TREATMENT TANK (RCRA REGULATED), 4 MILES OF PIPELINE OF INDUSTRIAL WASTES LEADING TO TA-50 (STAINLESS STEEL); IN ROOM 24; HAD NOT BEEN USED AT THE TIME OF THE VSI, BUT MAY BE IN THE FUTURE.

Period of Operation: 1983 TO PRESENT

Dimensions/Volume: 500 GALLONS, 425 SQ. FT. FLOOR SPACE

Material of Construction: KYNAR LINED TANK

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE NEUTRALIZATION AND TREATMENT OF ASSORTED INDUSTRIAL WASTES, WASTE STREAMS, ACIDS, BASES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: BATCH TANK IS RCRA REGULATED.

Unit Number: 50.026

C. WASTES MANAGED

Solids:	Corrosive: X	Organics: X
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges: X	EP Toxic: X	

Particulars: UNIT WILL CONTAIN TRACE ORGANICS; HEAVY METALS, RADIOACTIVE LIQUID WASTES, CYANIDE, AND CHROMATE INCLUSIVE.

Source of Waste: ELECTROPLATING - CYANIDE, CHROMATE, COPPER ETCHING SOLUTIONS; ELECTROCHEMISTRY WASTES; ISOTOPE SEPARATION, PRINT CIRCUIT BOARD SHOP

Disposition of Waste: LISTED - TREATED EFFLUENT AND SLUDGE GOES TO TA-54 FOR STORAGE AND OFF-SITE DISPOSAL; NON-LISTED - SOLIDIFED AND GOES TO AREA J (IF HAZ GOES OFF-SITE, INTERIM STORAGE AREA L); EFFLUENT - WWTP

D. RELEASE CONTROLS

Liner: X	Diking: X	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: INDUSTRIAL SEWER - ONLY IF NON-HAZARDOUS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI. UNIT HAS NEVER BEEN USED.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED. UNIT HAS NEVER BEEN USED.

Unit Number: 50.027

Unit Name: BATCH WASTE TREATMENT BLOWDOWN TANK

Location: TA-50

References: 14,P.4-4; 1,P.ii; 11,P.2-3; 18; 65,P.3-2; 96,P.2; VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 50.027

A. DESCRIPTION

Unit Type: BLOWNDOWN TANK IN ROOM 24; HAD NOT BEEN USED AT THE TIME OF THE VSI, BUT WILL BE IN THE FUTURE

Period of Operation: 1983 TO PRESENT

Dimensions/Volume: 380 GALLONS; 425 SQ. FT. FLOOR SPACE

Material of Construction: KYNAR LINED TANK

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOT THE NEUTRALIZATION AND TREATMENT OF ASSORTED INDUSTRIAL WASTES, WASTE STREAMS, ACIDS, BASES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.027

C. WASTES MANAGED

Solids:	Corrosive: X	Organics: X
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges: X	EP Toxic: X	

Particulars: UNIT WILL CONTAIN TRACE ORGANICS; HEAVY METALS, RADIOACTIVE LIQUID WASTES, CYANIDE, AND CHROMATE INCLUSIVE.

Source of Waste: ELECTROPLATING - CYANIDE, CHROMATE, COPPER ETCHING SOLUTIONS; ELECTROCHEMISTRY WASTES; ISOTOPE SEPARATION, PRINT CIRCUIT BOARD SHOP

Disposition of Waste: LISTED - TREATED EFFLUENT AND SLUDGE GOES TO TA-54 FOR STORAGE AND OFF-SITE DISPOSAL; NON-LISTED - SOLIDIFED AND GOES TO AREA J (IF HAZ GOES OFF-SITE, INTERIM STORAGE AREA L); EFFLUENT - WWTP

D. RELEASE CONTROLS

Liner: X	Diking: X	Sumps:	Ind. Sewer: X
Level Controls:	Overflow Controls:		Leak Detection:

Details: INDUSTRIAL SEWER ONLY IF NON-HAZARDOUS

E. RELEASE HISTORY

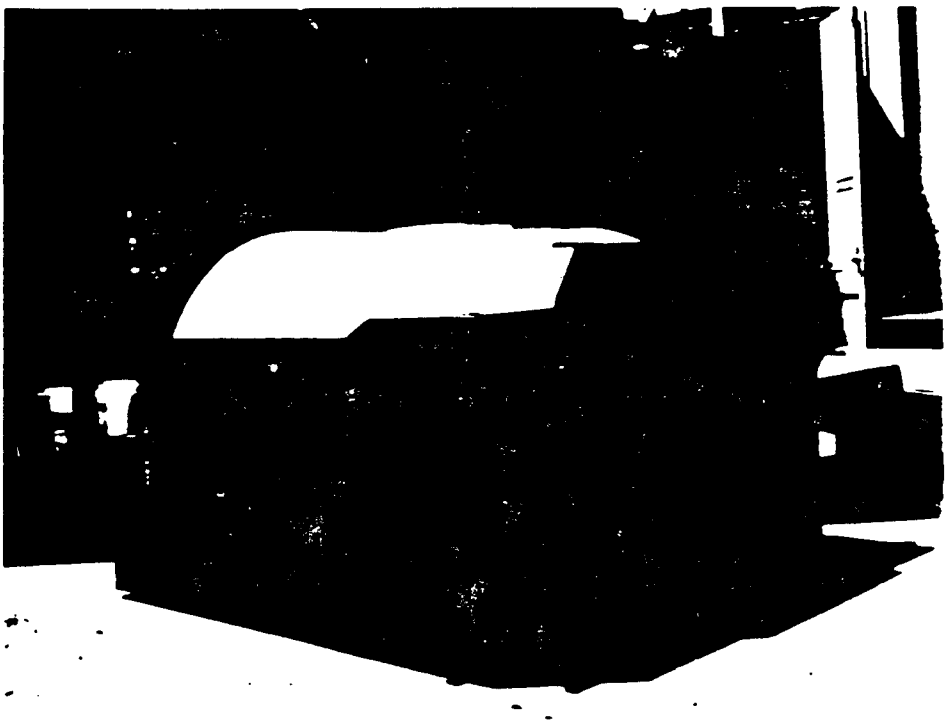
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI. UNIT HAS NEVER BEEN USED.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED. UNIT HAS NEVER BEEN USED.

Unit Number: 50.028 Unit Name: ELECTROPLATING STORAGE TANK

Location: TA-50-1 References: VSI LOG BOOK



Electroplating Storage Tank, Currently Being Used for the Temporary (< 90 Day) Storage of Chemical Wastes.

Unit Number: 50.028

A. DESCRIPTION

Unit Type: LESS THAN 90 DAY STORAGE TANK, OUTDOOR OF RMS 16 AND 24

Period of Operation: 1986 TO PRESENT

Dimensions/Volume: 800 GALLONS

Material of Construction: POLYETHELYENE TANK

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE TEMPORARY STORAGE OF WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.028

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics: X
Gases:	Reactive:	Metals: X
Sludges:	EP Toxic:	

Particulars: ACID/BASE WASTES HEAVILY CONTAMINATED WITH COPPER

Source of Waste: PRINTED CIRCUIT SHOP

Disposition of Waste: GOES TO BATCH TREATMENT

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.029

Unit Name: RAW WASTE STORAGE TANK

Location: TA-50-2

References: VSI LOG BOOK

Underground Raw Waste Storage Tank.

Unit Number: 50.029

A. DESCRIPTION

Unit Type: UNDERGROUND TANK

Period of Operation: 1963 TO PRESENT

Dimensions/Volume: 75,000 GALLONS

Material of Construction: REINFORCED CONCRETE; CONCRETE TOP

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground: X

Purpose of Unit: UNIT IS DESIGNED FOR FLOW THROUGH STORAGE

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.029

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTES, INCLUDING HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: pH ADJUSTMENT TANK

Disposition of Waste: FLASH MIXERS

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls: X		Leak Detection:

Details: UNIT IS COMPUTER MONITORED.

E. RELEASE HISTORY

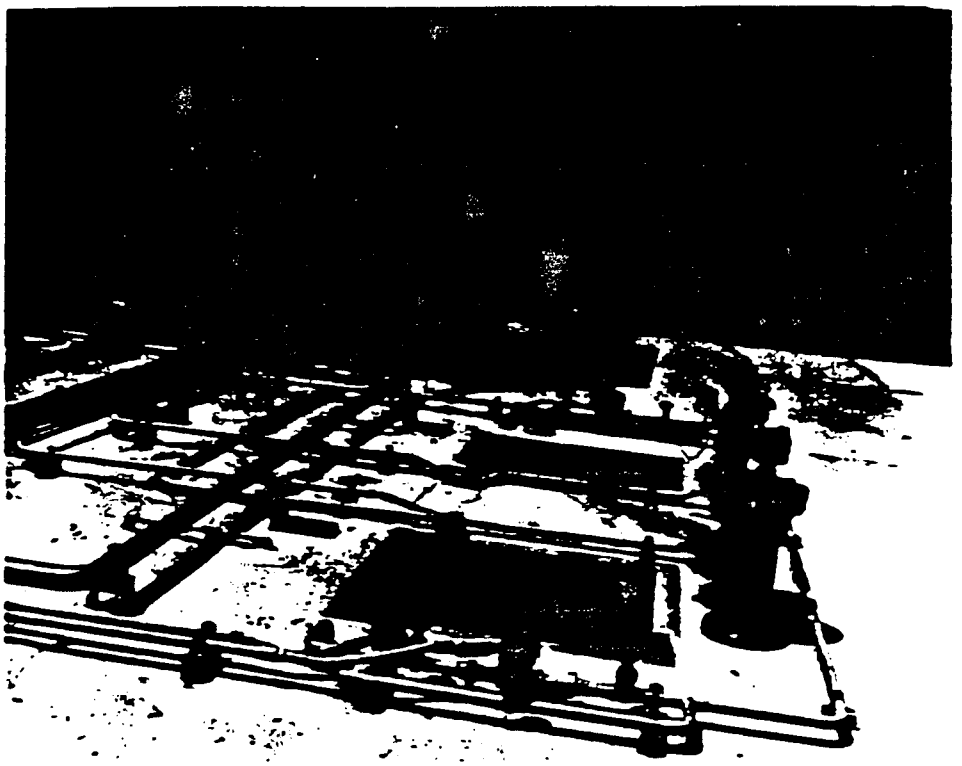
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.030-50.031 Unit Name: TWO TREATED WASTE STORAGE TANKS

Location: TA-50-2 References: VSI LOG BOOK



Two Underground Treated Waste Storage Tanks.

Unit Number: 50.030-50.031

A. DESCRIPTION

Unit Type: UNDERGROUND TANK

Period of Operation: 1963 TO PRESENT

Dimensions/Volume: 25,000 GALLONS

Material of Construction: REINFORCED CONCRETE; CONCRETE TOP

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: X Residences: Belowground: X

Purpose of Unit: UNIT DESIGNED FOR STORAGE OF TREATED RADIOACTIVE WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.030-50.031

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: GRAVITY FILTER

Disposition of Waste: MORTANDAD CANYON NPDES S051

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X		Overflow Controls: X	Leak Detection:

Details: UNIT OVERFLOWS INTO RADIOACTIVE WASTE STORAGE.

E. RELEASE HISTORY

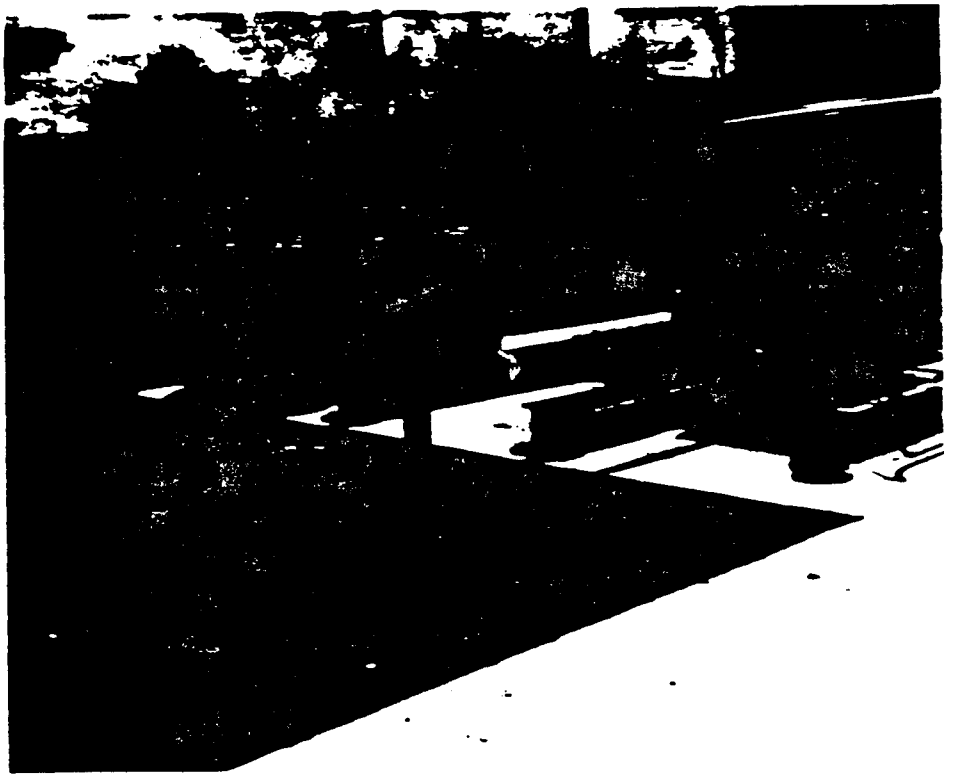
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.032 Unit Name: SLUDGE STORAGE TANK

Location: TA-50-2 References: VSI LOG BOOK



Concrete Sludge Storage Tank Used to Store Radioactive Sludge from Clari-flocculator in Pretreatment Plant.

Unit Number: 50.032

A. DESCRIPTION

Unit Type: SLUDGE STORAGE TANK

Period of Operation: 1963 TO PRESENT

Dimensions/Volume: 20,000 GALLONS

Material of Construction: REINFORCED CONCRETE; CONCRETE TOP

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: X Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR SLUDGE STORAGE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.032

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT MANAGES RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: CLARIFLOCCULATOR

Disposition of Waste: ROTARY VACUUM FILTERS

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls: X	Overflow Controls: X		Leak Detection:

Details: UNIT OVERFLOWS TO RADIOACTIVE WASTE STORAGE TANKS.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.033 Unit Name: TEMPORARY STORAGE

Location: TA-50-2 References: VSI LOG BOOK

A. Temporary (< 90 Day) Storage Area. Drums Store Radioactive Wastes with Possible Hazardous Constituents. See Additional Photo on Following Page.

B. Temporary (Less Than 90 Day) Storage Area. Note how Drums are Setting on Asphalt and not on Concrete.

Unit Number: 50.033

A. DESCRIPTION

Unit Type: TEMPORARY STORAGE AREA

Period of Operation: 1985 TO PRESENT

Dimensions/Volume: 2 - 200 GALLON TANKS AND NUMEROUS 55 GALLON DRUMS

Material of Construction: POLYETHYLENE; SOME DRUMS OBSERVED ON BARE SOIL

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR LESS THAN 90 DAY STORAGE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.033

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS RADIOACTIVE WASTE, INCLUDING HAZARDOUS WASTES OR CONSTITUENTS

Source of Waste: ISOTOPE PROCESSING UNIT (TA-46)

Disposition of Waste: GOES INTO RAD-WASTE TANK OR NEUTRALIZATION TANK

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: SOME TANKS CONTAINED WITHIN A STEEL CAGE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.034

Unit Name: AREA C, LANDFILL

Location: TA-50

References: 82, P. 7-4; 10,P.7-4; 84, P. 3; VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 50.034

A. DESCRIPTION

Unit Type: LANDFILL WITH 7 PITS (ONE DESIGNATED AS A HAZARDOUS CHEMICAL PIT) AND 108 DISPOSAL SHAFTS.

Period of Operation: 1948-49 TO 1969

Dimensions/Volume: 11.8 ACRES; PIT OCCUPY 225,000 SQ. FEET WITH A VOLUME OF 3,650,000 CU. FEET.

Material of Construction: UNDETERMINED NUMBER OF SHAFTS LINED WITH CORRUGATED METAL PIPE; PITS ARE ASSUMED TO BE EXCAVATED.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT IS A MIXED WASTE SITE FOR LAND DISPOSAL OF RADIOACTIVE, CHEMICAL AND INDUSTRIAL WASTES.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA IS AVAILABLE AT THIS TIME.

Unit Number: 50.034

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals: X
Sludges: X	EP Toxic:	

Particulars: RADIOACTIVE/CHEMICAL WASTES INCLUDING ALPHA AND BETA-GAMMA WASTES; ONE SHAFT EXCLUSIVELY USED FOR DISPOSAL OF Sr-90 WASTE. IT IS ESTIMATED THAT 42 SHAFTS MAY CONTAIN TRANSURANIC WASTES.

Source of Waste: DATA NOT AVAILABLE.

Disposition of Waste: ASSUMED TO BE IN PLACE.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: SOME SHAFTS LINED WITH CORRUGATED METAL PIPE. NO OTHER RELEASE CONTROL OBSERVED DURING VSI.

E. RELEASE HISTORY

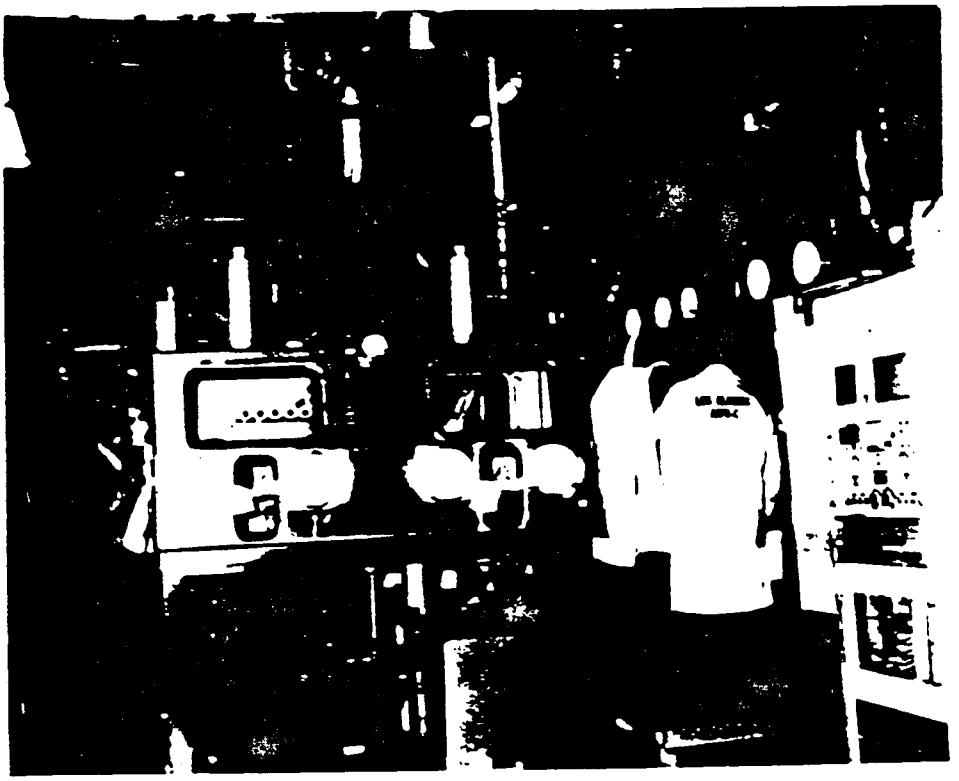
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 5u.035 Unit Name: TRANSURANIC WASTE INCINERATOR

Location: TA-50-37 References: 14,P.4-6; 18; VSI LOG BOOK



A. Transuranic Waste Incinerator Designed to Burn Radioactive and PCB Contaminated Materials (Applied for RCRA Regulation). See Additional Photo on Following Page.

B. Transuranic Waste Incinerator (Applied for RCRA Regulation)

Unit Number: 50.035

A. DESCRIPTION

Unit Type: INCINERATOR IN BUILDING 37, ROOM 112 AND 113

Period of Operation: 1975 TO PRESENT

Dimensions/Volume: 50 KG/HOUR

Material of Construction: HIGH CR-OXIDE "JADE PACK", HYPALON BARRIERS AND INSULATION (MASTIC); OUTDOOR VENT STACK

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED TO BURN RADIOACTIVE AND PCB CONTAMINATED MATERIALS. UNIT HAS A DUAL CHAMBER AND CONTROLLED AIR INCINERATION OF RADIOACTIVE WASTES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: APPLIED FOR RCRA REGULATION

Unit Number: 50.035

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS RADIOACTIVE WASTES, PCB'S, ORGANICS - PVC, AND TRANS-URANIC WASTE.

Source of Waste: CHLORINATED, FLUORINATED HYDROCARBONS, CARCINOGENIC MATERIALS, PLUTONIUM PROCESSING FACILITY

Disposition of Waste: ACTIVATED CARBON FROM INCINERATION FILTER PLACED BACK IN INCINERATOR, ASH GOES TO PLUTONIUM PROCESSING FACILITY; LIQUID EFFLUENT OR BLOWDOWN GOES BACK TO TA-54

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: BACKUP EQUIPMENT (REDUNDANCY OF EQUIPMENT) DRAINS ARE EPOXY PAINTED AND DOUBLE CONTAINED

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE NOTED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 50.036

Unit Name: FEED AREA FOR INCINERATOR

Location: TA-50

References: VSI LOG BOOK; 14, P. 4-7

No Photo is Available for this Unit.

Unit Number: 50.036

A. DESCRIPTION

Unit Type: NO PHOTO - FLASH SETS OFF FIRE SYSTEM; ROOM WITH 55 GALLON DRUMS CONTAINING RADIOACTIVEWASTE AND INDOOR FEED SYSTEM; IN ROOM 114

Period of Operation: COMPOSITING FROM 1978 TO PRESENT

Dimensions/Volume: 600 GAL/MINUTE

Material of Construction: STAINLESS STEEL FEED SYSTEM

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: SCINTILLATION VIALS IN OUTER AREA COMPOSITED AND SENT TO TA-54 AND COME BACK WHEN READY TO BURN AS A SOLID.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 50.036

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS ORGANICS, PCB'S, AND RADIOACTIVE WASTES.

Source of Waste: THROUGHOUT FACILITY

Disposition of Waste: INCINERATOR

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT CONTAINS A HALON FIRE SUPPRESSION SYSTEM AND A VENT SYSTEM, SECONDARY CONTAINMENT CONSISTS OF AN AREA WITH TWO 155 GALLON KYNAR-LINED STEEL TANKS AND CURBING

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

UNIT 50.037: UNDERGROUND STORAGE TANKS - This unit is identified as underground storage tanks (3 UST and 9 USTF) (65). It is suspected that radioactive constituents and solid waste may be found at this site. No photo is available for this unit.

UNITS 50.038-50.039: BATCH TREATMENT STORAGE AREAS - These RCRA regulated units are identified as batch storage areas (14, p. 4-4; 1, p. II; 11, p. 2-3). These units are of different dimensions. One storage area is 4 sq. ft. with a 8-inch concrete curb and the other has a floorspace area of 150 sq. ft. for 850 gallon of liquid. Both units have dikes as release controls. No photos are available for these units.

TA-51, Animal Exposure Facility

In TA-51 (Figure 46), animals are exposed to nonradioactive toxic materials to establish the biological effects of high and low exposures (10, p. 7-3). In addition, during the VSI a unit at this technical area was identified as being suspected of containing high explosive residues.

Units which may be associated with the handling of hazardous constituents (e.g., sanitary tanks) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 51

SWMUs
None

AOC
51.001 Former high explosive magazine

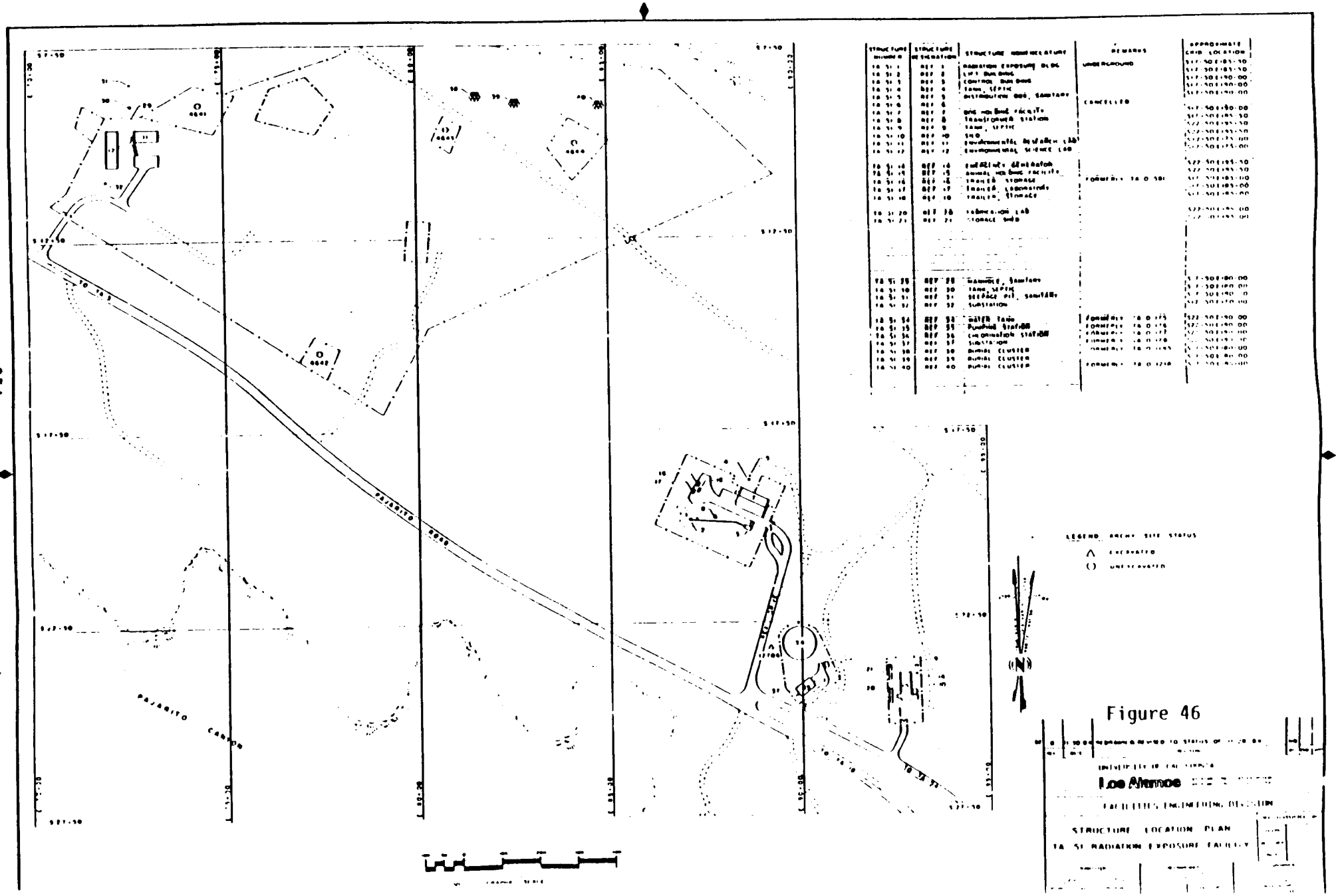

LEGEND
Los Alamos
STRUCTURE LOCATION PLAN
TA 51 RADIATION EXPOSURE FACILITY

Figure 46

TA-51: AREAS OF CONCERN

UNIT 51.001: FORMER HIGH EXPLOSIVE MAGAZINE - This inactive unit was identified during the VSI as an area used for the detonation, flaring, or burning of high explosives generated during research and development. The disposition of the residues is unknown. This 20 ft. by 20 ft. area was in operation from 1946 to 1947 and was formerly a sand pad. No past releases were observed during the VSI, but the disposition of waste high explosives may have resulted in the release of nitrogen dioxide to the atmosphere. This is said to have dissipated. Also, there is the likelihood that unburned high explosive waste may remain within the matrix of the sand pad or have been ejected into the surrounding area. No photo is available for this unit.

This technical area is suspected to have several sites which may have potential for the release of hazardous constituents (10, p. 7-3). These sites include "contaminated areas" (98) including hazardous/radioactive constituents. In addition, a reaction development site is also suspected in this area. However, time constraints and the inability of LANL personnel to identify these potential units precluded visual inspection. Figure 47 is a map of this technical area.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 52

SWMUs	
52.001	Filter pit
52.002	Drains, pipes, sumps, tanks

AOC	
52.003	Outfalls
52.004	Reactor development site

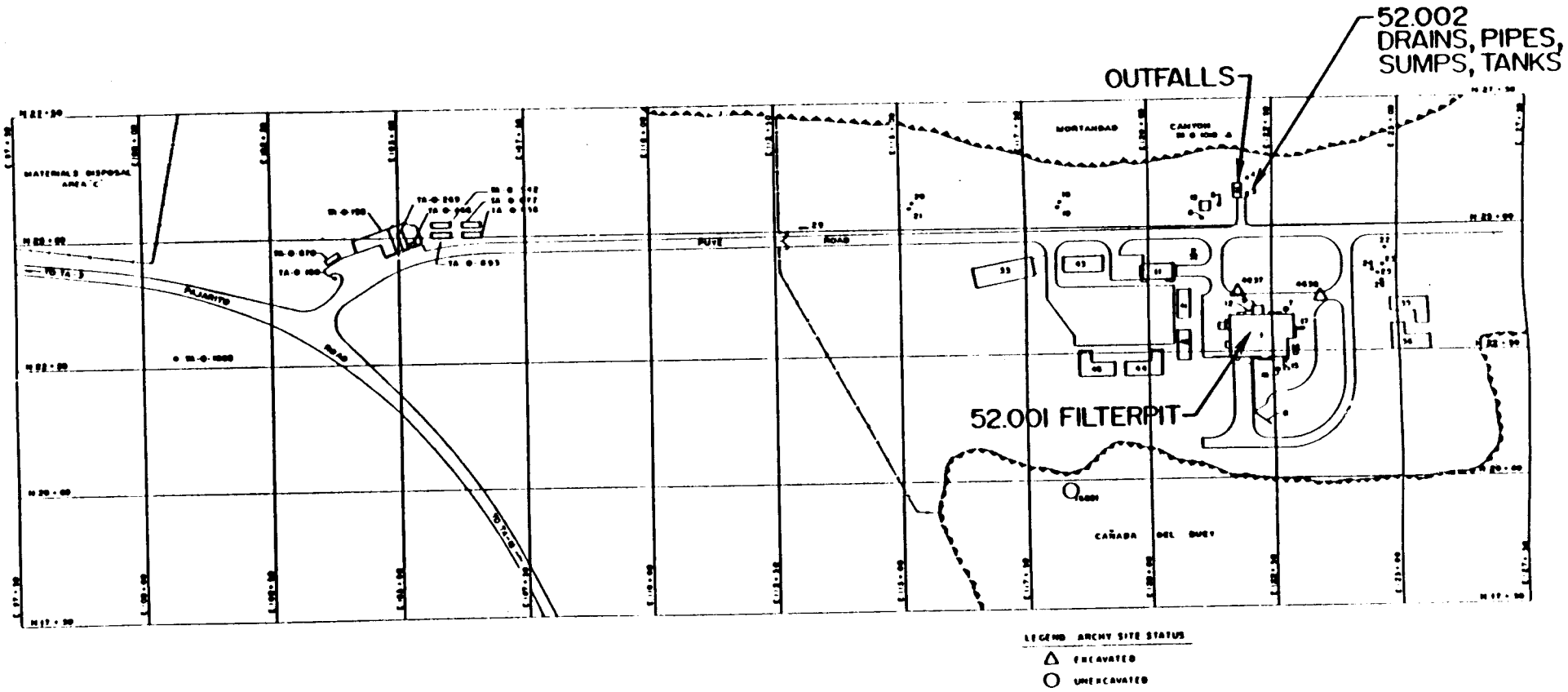
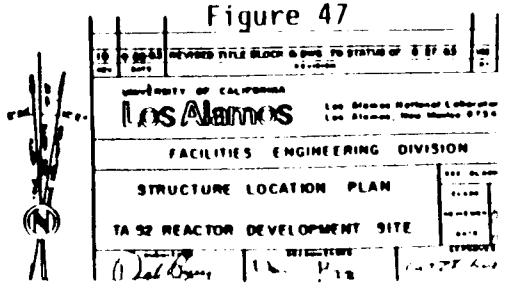

52.002
DRAINS, PIPES,
SUMPS, TANKS
OUTFALLS
52.001 FILTERPIT
MATERIALS DISPOSAL AREA "C"
PUYE
ROAD
PAJARITO
ROAD
MORTANDAD
CANYON
CAÑADA DEL BUEY
LEGEND ARCHY SITE STATUS
EXCAVATED
UNEXCAVATED

Figure 47


REVISED TITLE BLOCK & DWG. TO STATUS OF
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA 52 REACTOR DEVELOPMENT SITE

Unit Number: 52.001 Unit Name: FILTER PIT

Location: TA-52 References: 98, P. 19

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 52.001

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "CONTAMINATED AREA". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED.

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: FILTERING OF RADIOACTIVE WASTE, URANIUM, AND FISSION PRODUCTS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 52.001

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES MANAGED AS RADIOACTIVE, URANIUM, AND FISSION PRODUCTS

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 52.002

Unit Name: DRAINS, PIPES, SUMPS, AND TANKS

Location: TA-52

References: 98, P. 19

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 52.002

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS "UNDERGROUND STORAGE TANKS/SUMPS". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: MANAGEMENT OF RADIOACITVE WASTE, AND RADIOACTIVE AND FISSION PRODUCTS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 52.002

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THE WASTES HANDLED AS RADIOACTIVE AND FISSION PRODUCTS

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

TA-52: AREAS OF CONCERN

UNIT 52.003: OUTFALLS - This part active, part inactive unit is identified as an outfall (98, p. 19). It is suspected that radioactive constituents and radionuclides may be found at this site. No photo is available for this unit.

UNIT 52.004: REACTOR DEVELOPMENT SITE - This inactive unit is identified as a nuclear reactor (10, p. 7-3). It is not known whether hazardous or radioactive constituents exist at this unit. No photo is available for this unit.

TA-53, Meson Physics Facility

The Los Alamos Meson Physics Facility (LAMPF) consists of a linear particle accelerator (i.e., a structure approximately 1 mile in length) which is used to conduct research in the areas of basic physics, cancer treatment, material studies and isotope production, Figures 48 through 55 are maps of the entire TA-53 area.

An oxidation pond and storage tank (TA-53-2) are located in TA-53 (see Figure 56 for a schematic of the wastewater treatment system in this technical area).

Units which may be associated with the handling of hazardous constituents (e.g., underground storage tanks, sanitary tanks, NPDES outfalls, <90 day tank storage, oxidation pond) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 53

SWMUs	
53.001	Temporary (less than 90-day) storage
53.002-53.004	Three oxidation ponds, sewage treatment plant
53.005	Disposal pit
53.006	Waste storage tanks
53.007	Container storage

AOC	
53.008	Oxidation pond boneyard
53.009	Cooling tower outfalls

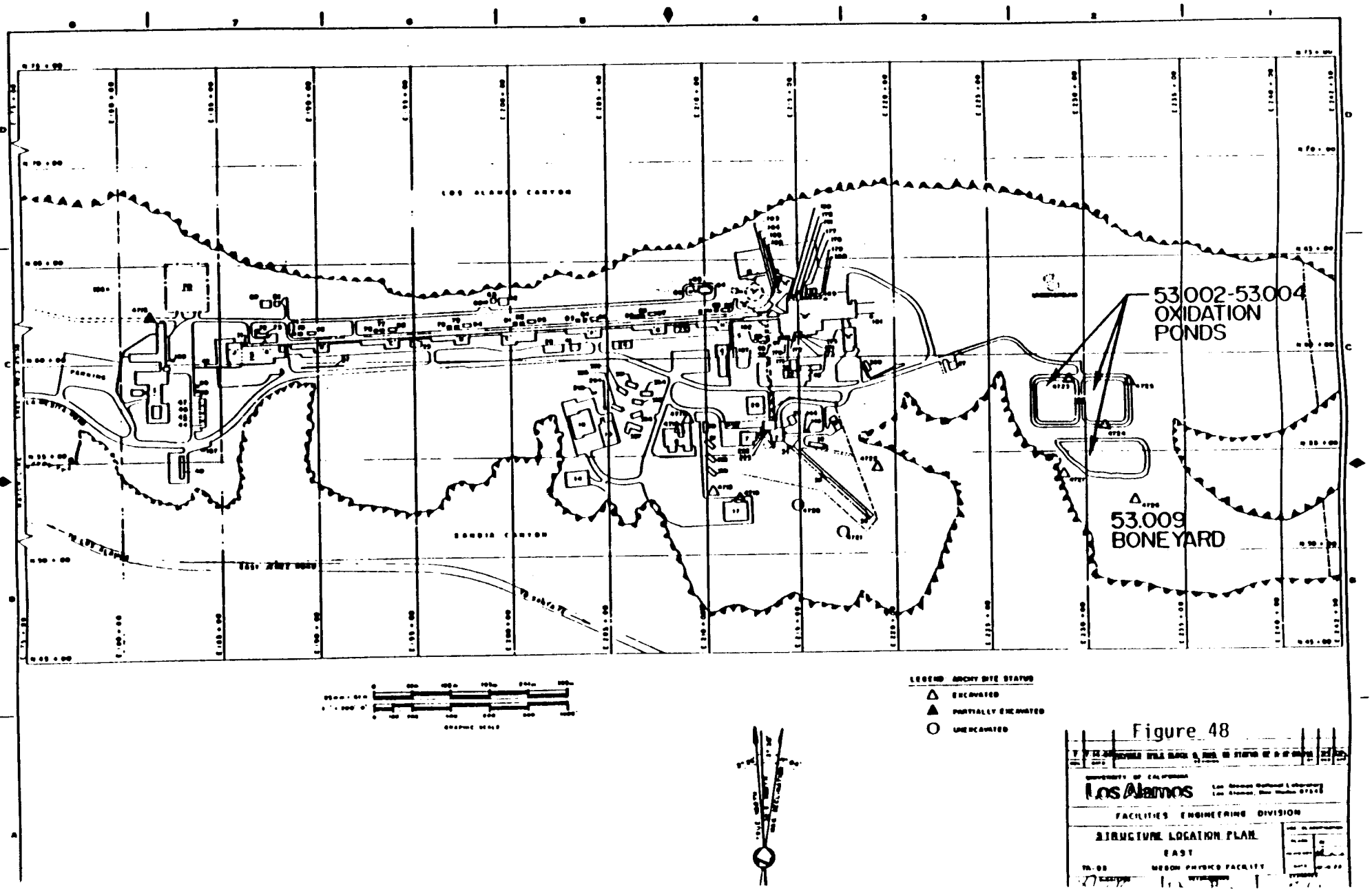

53.002-53.004
OXIDATION
PONDS
53.009
BONEYARD
LEGEND ARCHY SITE STATUS
EXCAVATED
PARTIALLY EXCAVATED
UNEXCAVATED
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
EAST

Figure 48

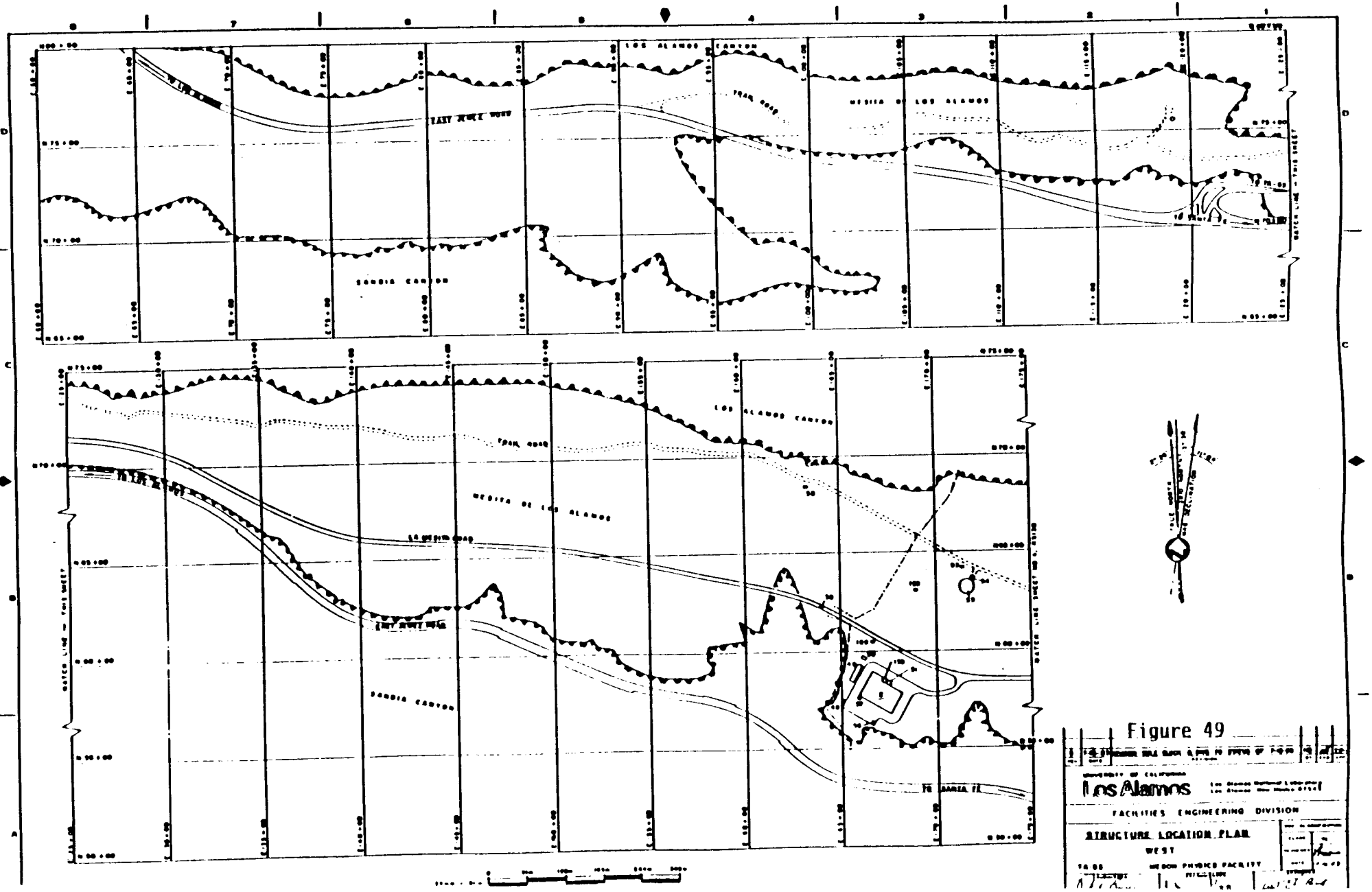

LOS ALAMOS CANYON
MESITA DE LOS ALAMOS
SANDIA CANYON
TRAIL ROAD
EAST JEMEZ ROAD
LA MESITA ROAD
TO SANTA FE
MATCH LINE - THIS SHEET
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
WEST

Figure 49

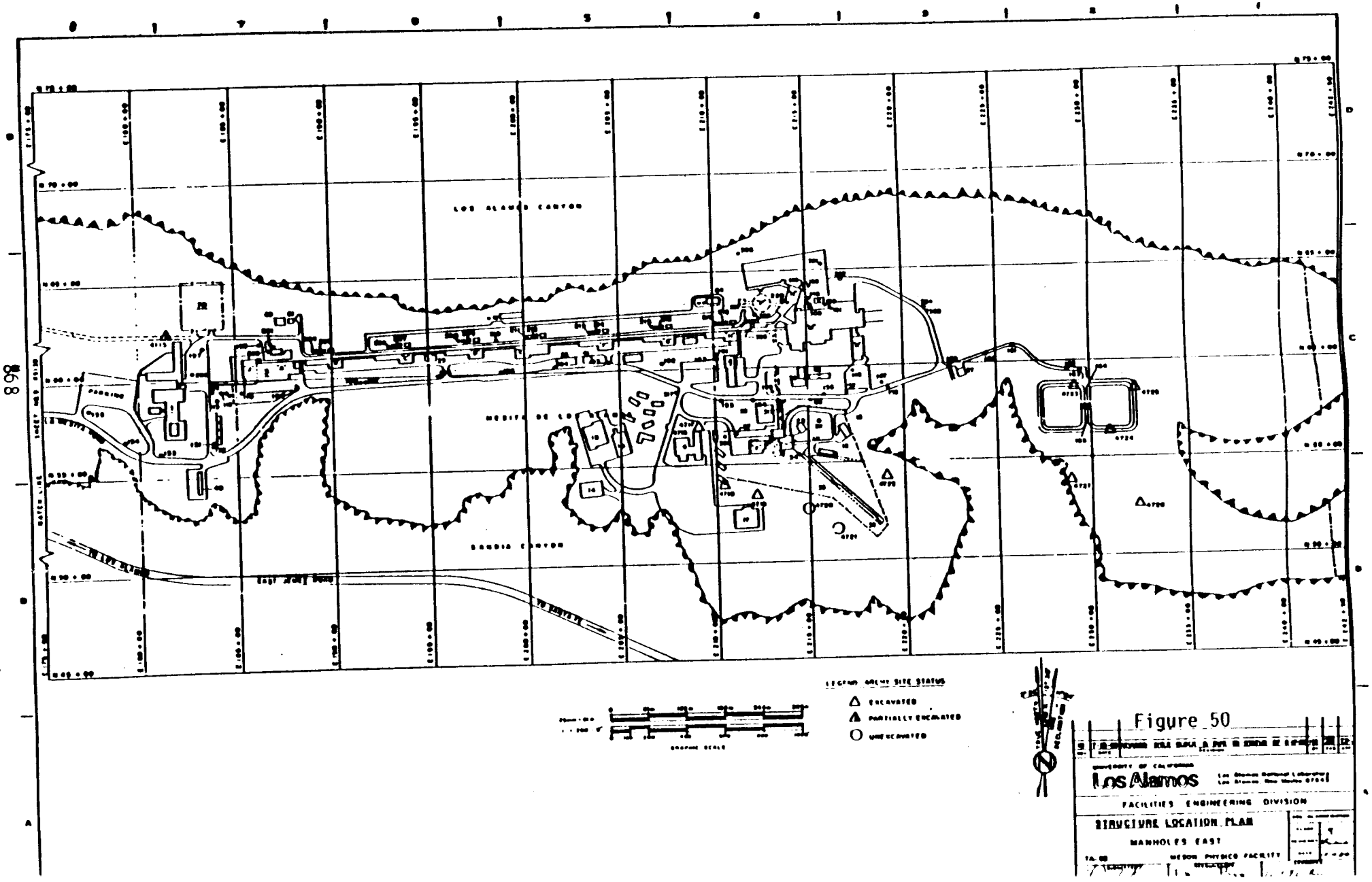

LEGEND ARCHY SITE STATUS
EXCAVATED
PARTIALLY EXCAVATED
UNEXCAVATED
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
MANHOLES EAST

Figure 50

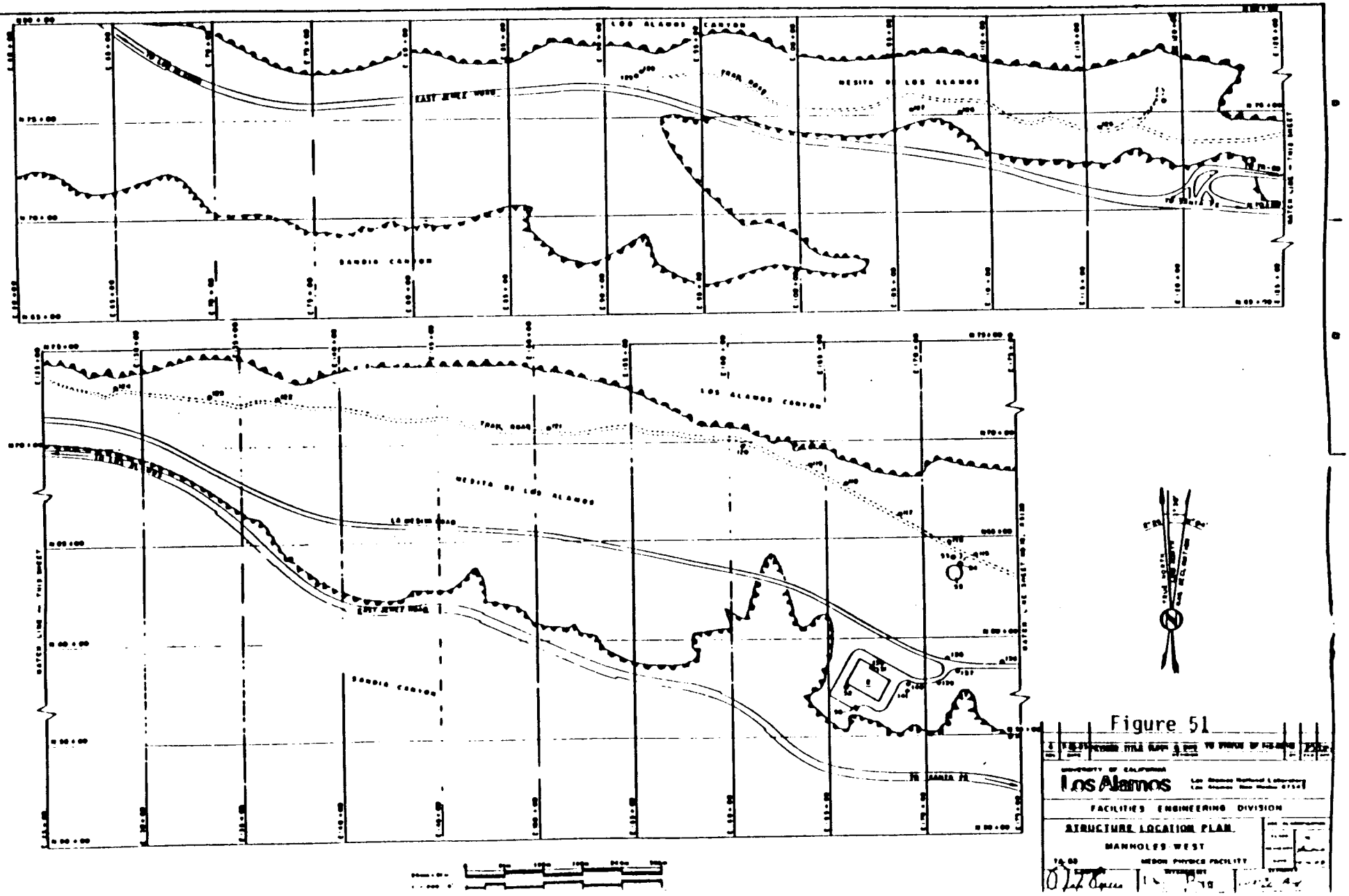
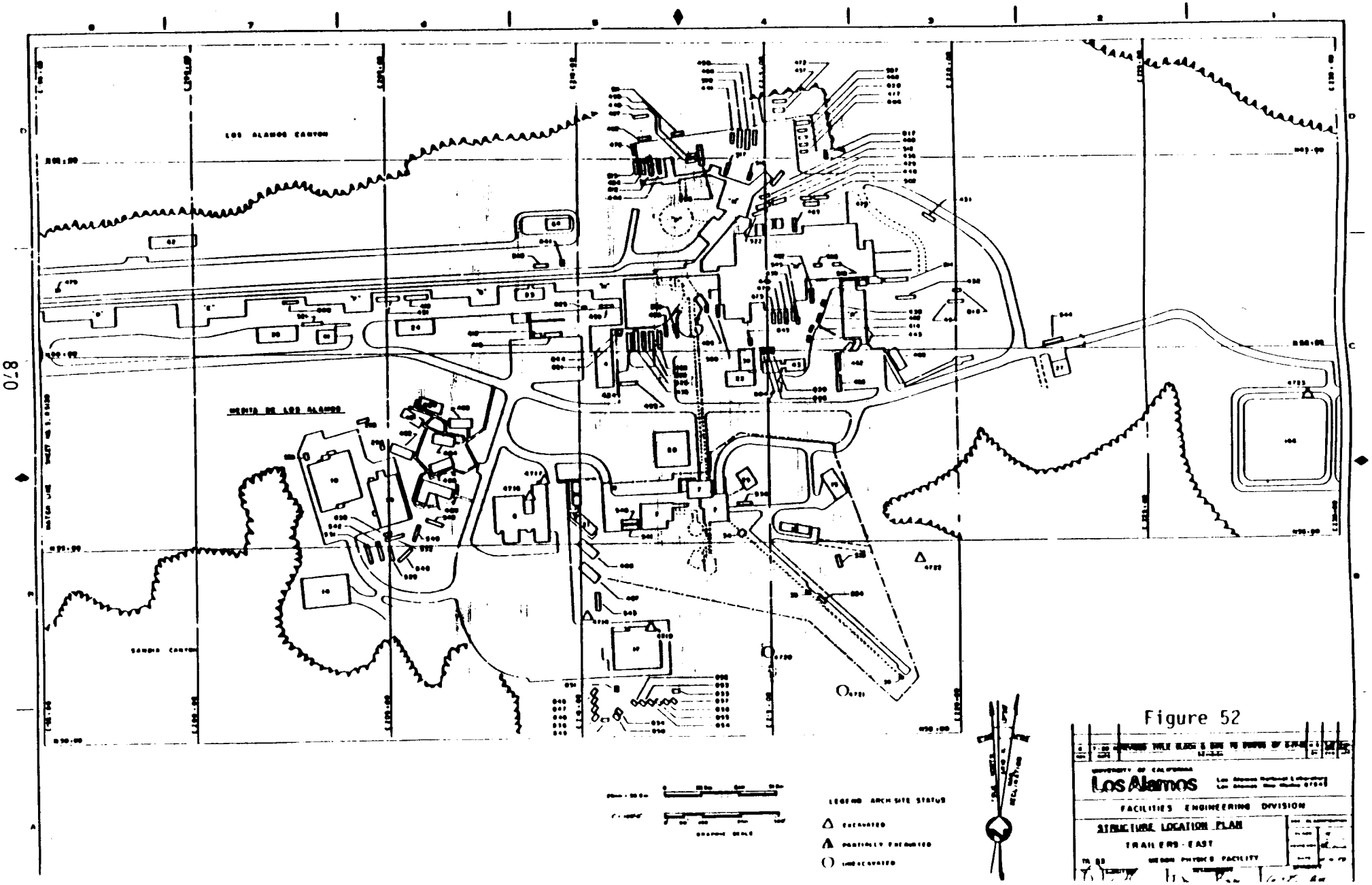

LOS ALAMOS CANYON
EAST JEMEZ ROAD
SANDIA CANYON
WEST OF LOS ALAMOS
TRAIL ROAD
MATCH LINE - THIS SHEET
LOS ALAMOS CANYON
TRAIL ROAD
WEST OF LOS ALAMOS
EAST JEMEZ ROAD
SANDIA CANYON
MATCH LINE - THIS SHEET
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
MANHOLES WEST
MESON PHYSICS FACILITY

Figure 51


LOS ALAMOS CANYON
MESA DE LOS ALAMOS
SANDIA CANYON
LEGEND ARCHSITE STATUS
EXCAVATED
PARTIALLY EXCAVATED
UNEXCAVATED
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STRUCTURE LOCATION PLAN
TRAILERS - EAST

Figure 52

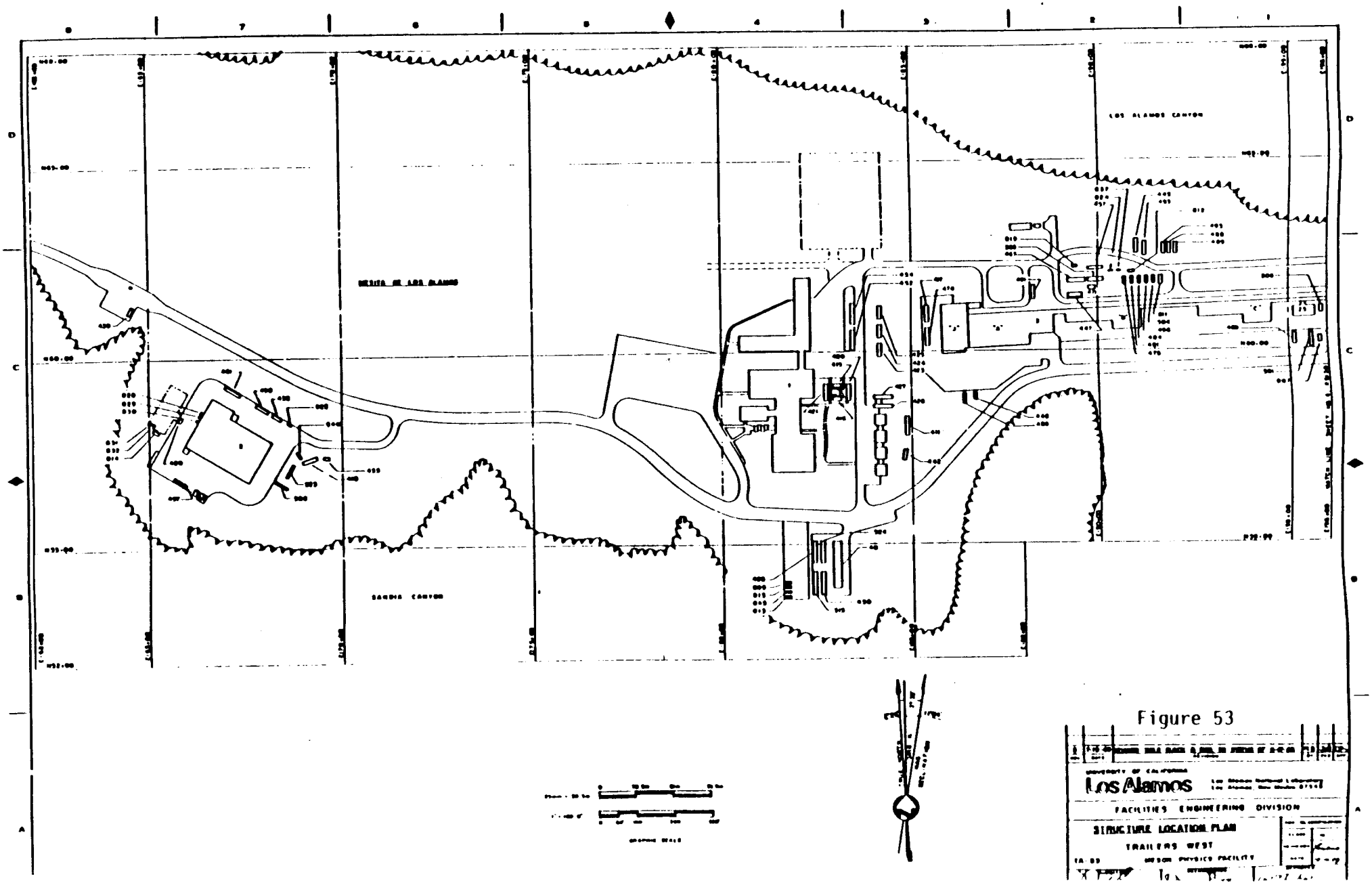

Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TRAILERS WEST

Figure 53

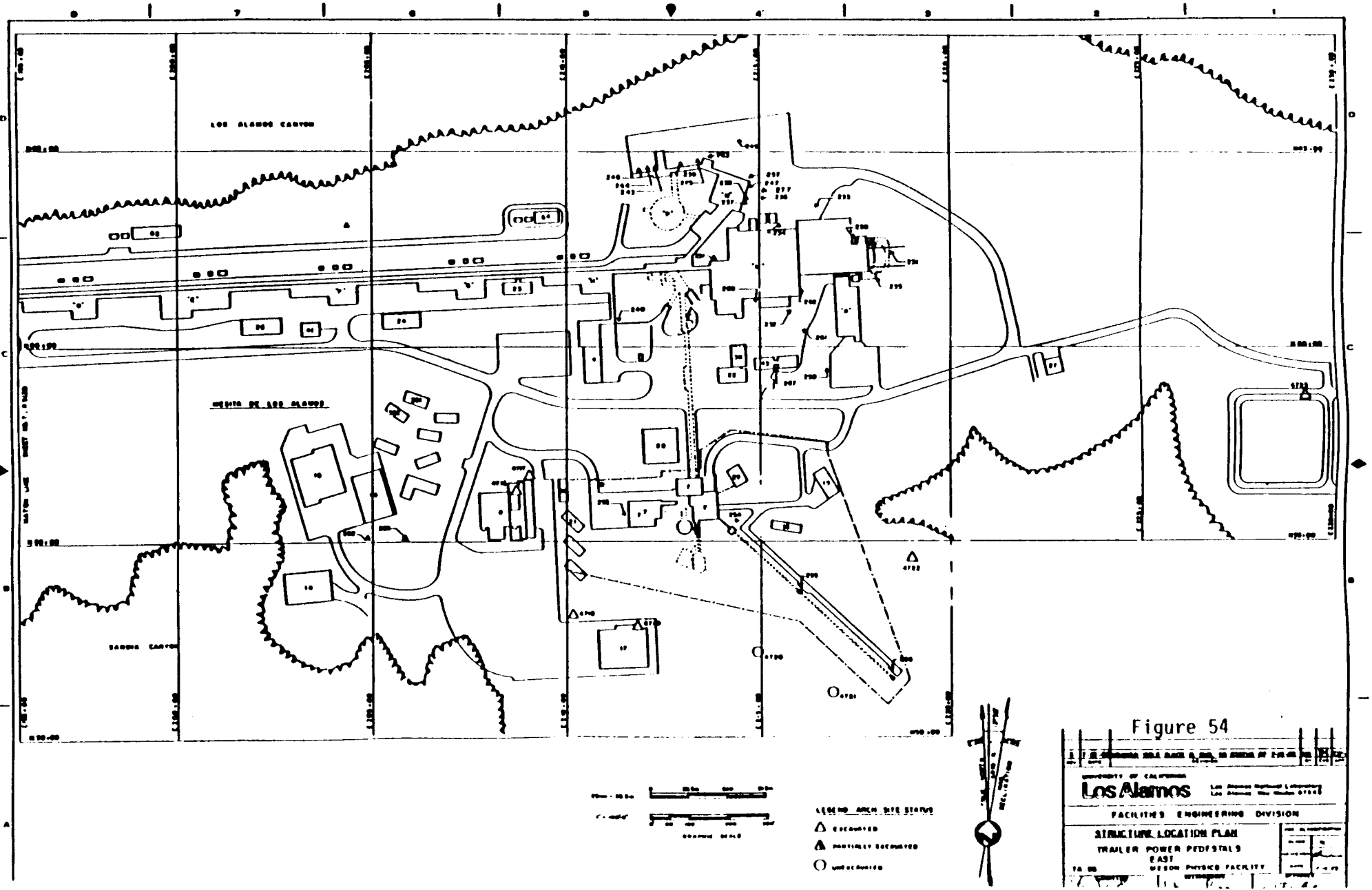

LOS ALAMOS CANYON
MESITA DE LOS ALAMOS
SANDIA CANYON
LEGEND ARCH SITE STATUS
EXCAVATED
PARTIALLY EXCAVATED
UNEXCAVATED
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TRAILER POWER PEDESTALS
EAST
MESON PHYSICS FACILITY

Figure 54

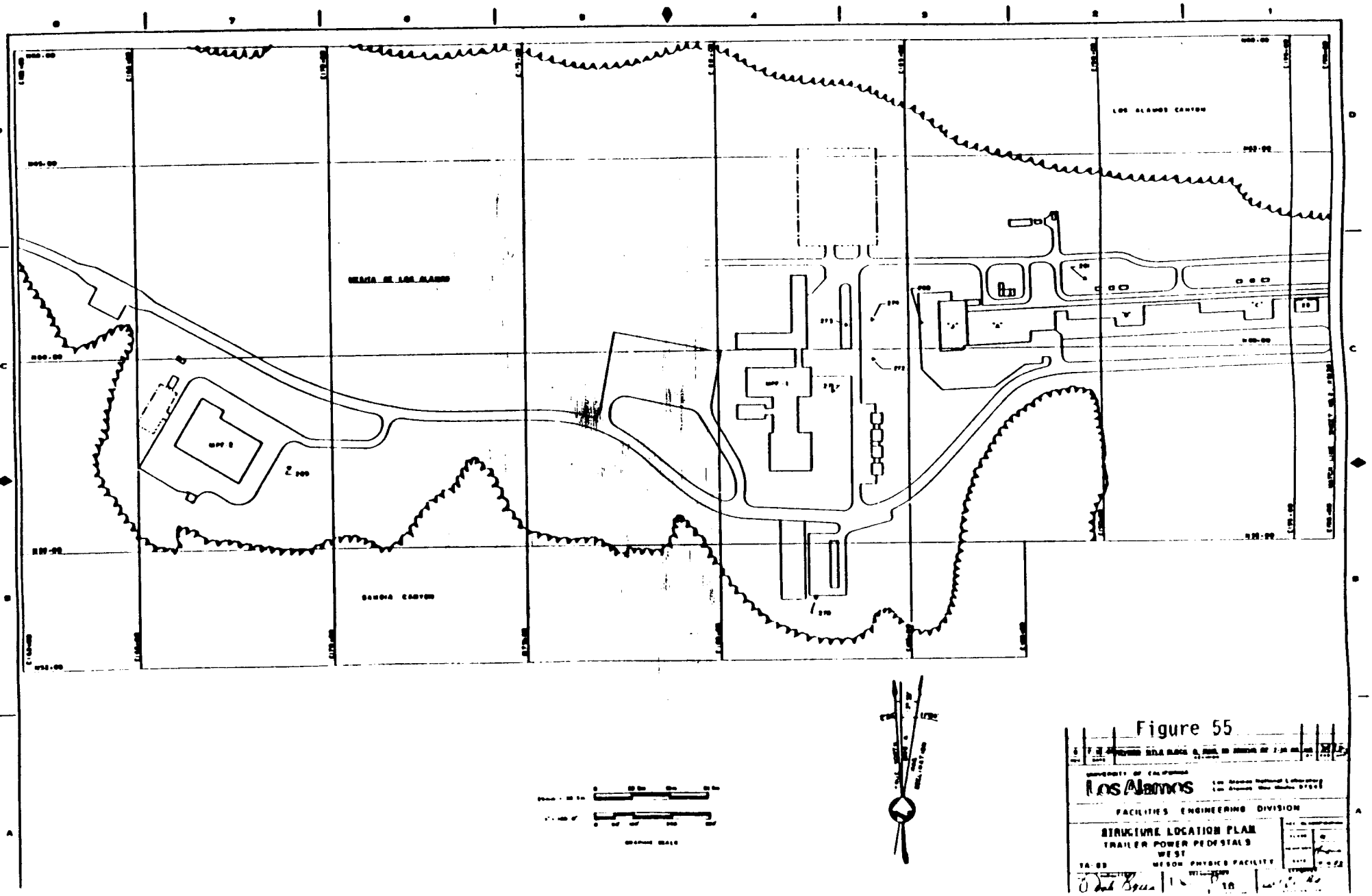

LOS ALAMOS CANYON
MESA DE LOS ALAMOS
SANDIA CANYON
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TRAILER POWER PEDESTALS
WEST
MESON PHYSICS FACILITY

Figure 55

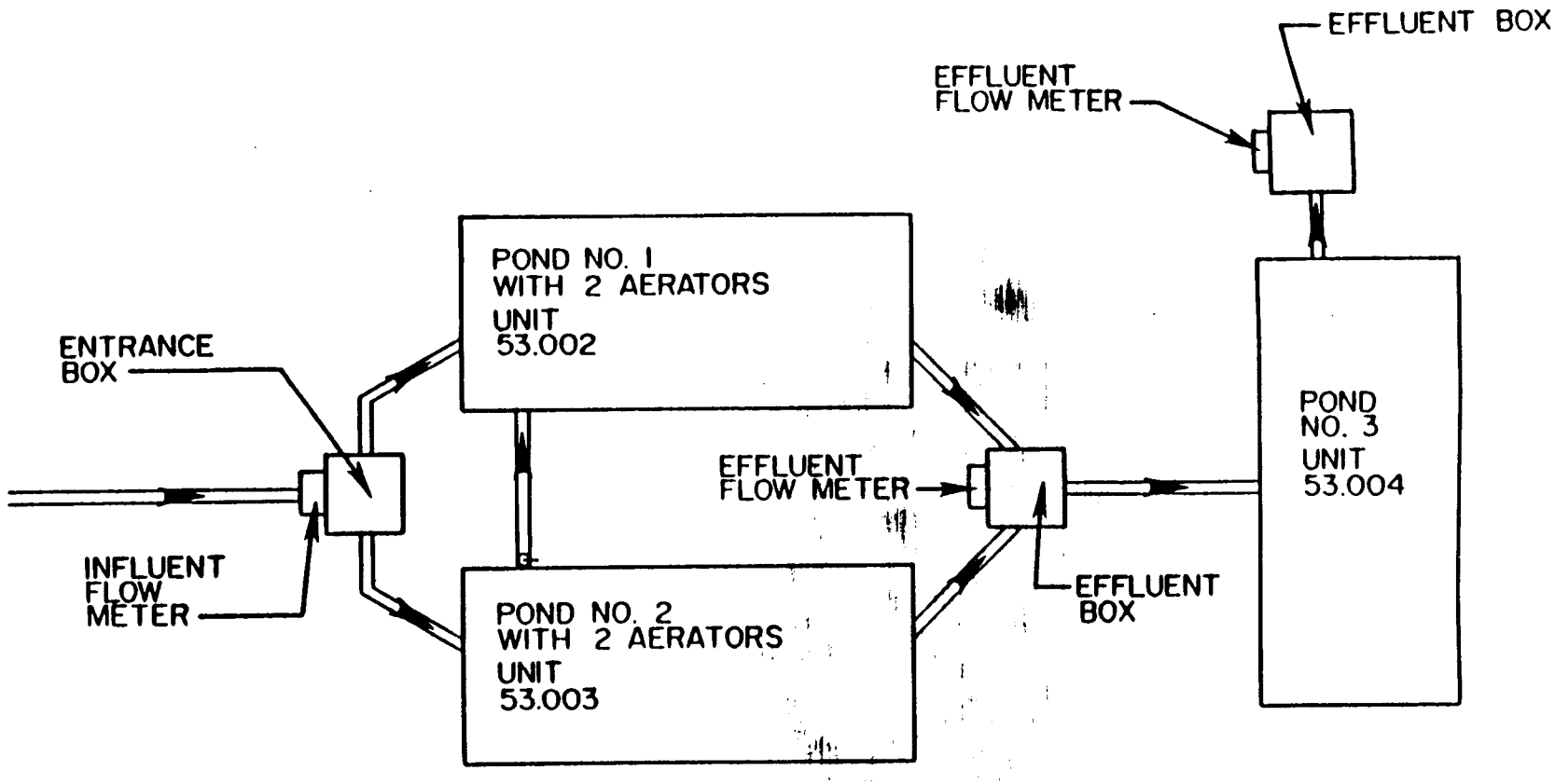


FIGURE 56 EXHIBIT SCHEMATIC OF TA-53 PLANT.

Unit Number: 53.001

Unit Name: TEMPORARY (<90 DAY) STORAGE,

Location: TA-53-2

References: 98, P. 19; VSI LOG BOOK

Less Than 90 Day Storage of Spent Solvents, Acids, and Product. Note Stains on Asphalt.

Unit Number: 53.001

A. DESCRIPTION

Unit Type: STORAGE FOR SPENT SOLVENTS, ACIDS AND PRODUCT

Period of Operation: EARLY 1980'S - PRESENT

Dimensions/Volume: 40' X 40'; 55 GALLON DRUMS

Material of Construction: STEEL DRUMS ON CONCRETE AND ASPHALT PAD

Underlain by: Concrete: X Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR LESS THAN 90 DAY STORAGE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 53.001

C. WASTES MANAGED

Solids:	Corrosive: X	Organics:
Liquids:	Flammable: X	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: UNIT CONTAINS HAZARDOUS WASTE, RADIOACTIVE WASTE, CHEMICALS, RADIONUCLIDES.

Source of Waste: SOURCE IS UNKNOWN.

Disposition of Waste: GOES TO TA-54 AREA L VIA OUTFALL.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS OTHER THAN PAVEMENT

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: STAINS ON ASPHALT WERE SEEN DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

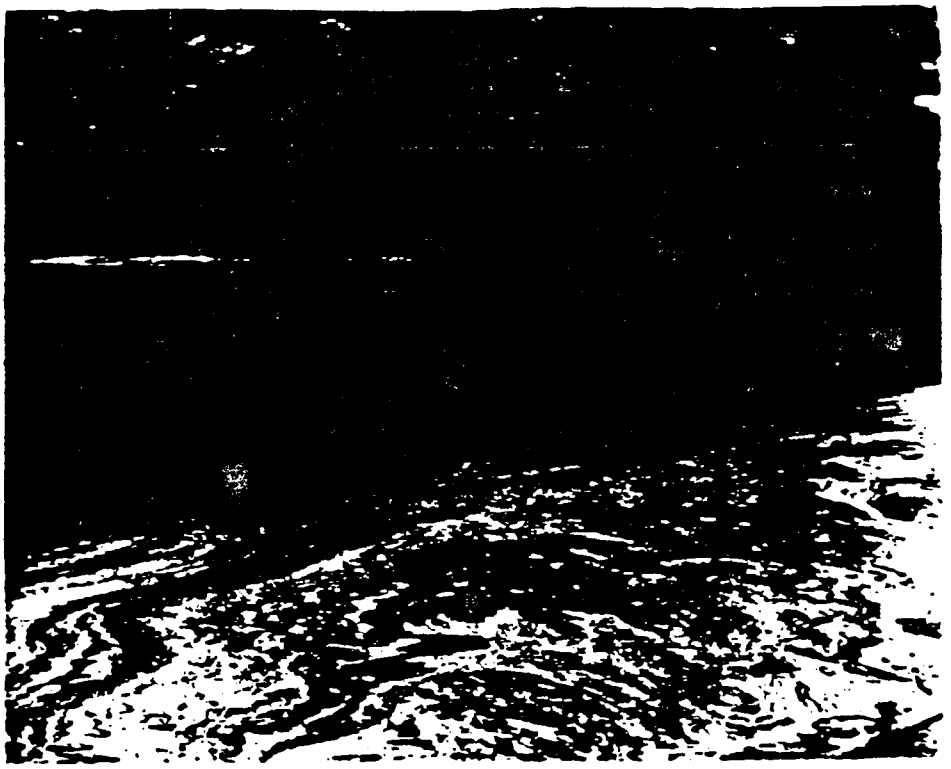
Unit Number: 53.002-53.004

Unit Name: THREE OXIDATION PONDS, SEWAGE TREATMENT PLANT

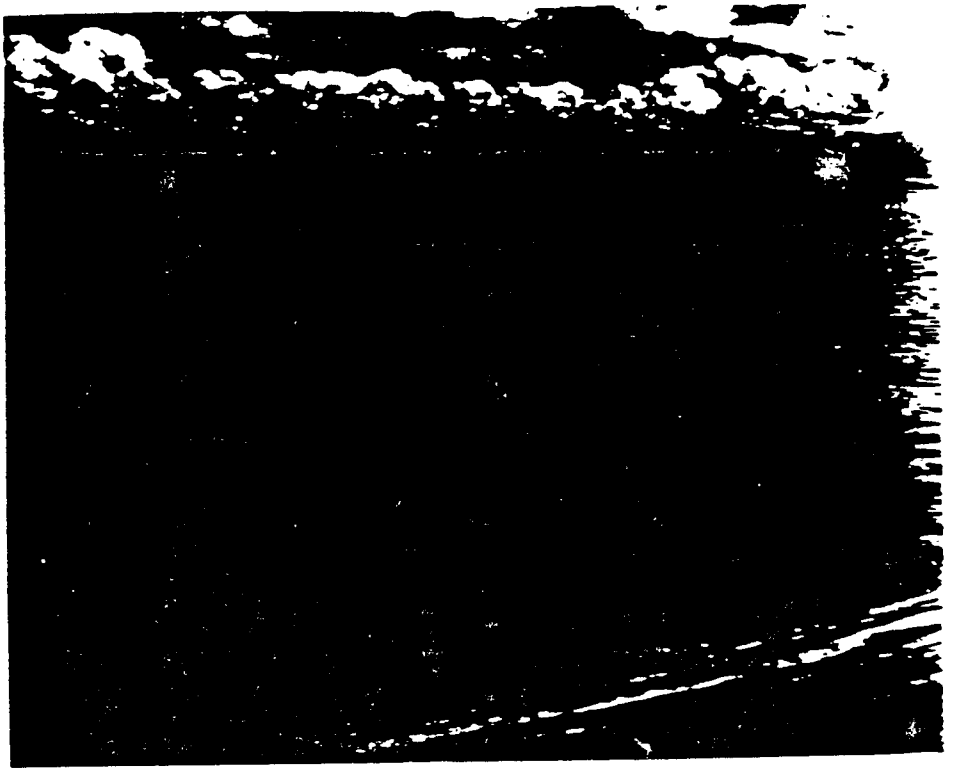
Location: TA-53

References: VSI LOG BOOK

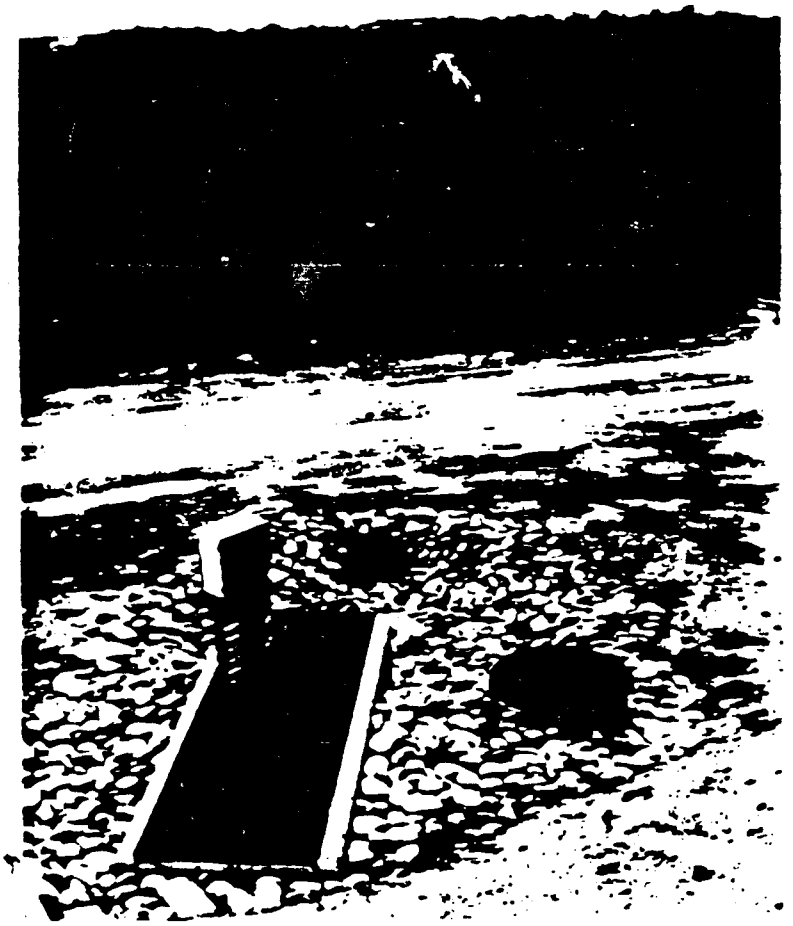
A. One of Three Oxidation Ponds Designed for the Oxidation of Sanitary Wastewater and Cooling Water from TA-53. See Additional Photos on Following Page.



B. Oxidation Pond at TA-53.



C. Oxidation Pond at TA-53.



D. Oxidation Pond Discharge Point. Outflow is Directed toward Canyon Bottom as Illustrated by the Line of Green Grass on Opposite Side of Road.

Unit Number: 53.002-53.004

A. DESCRIPTION

Unit Type: OXIDATION POND (WASTEWATER GOES FROM 1 TO 2 TO 093 NPDES OUTFALL #1)

Period of Operation: EARLY 1960'S TO PRESENT

Dimensions/Volume: 1-1/2 ACRES, 5-6 FT. DEEP

Material of Construction: EXCAVATED TUFF AND GUNNITE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT DESIGNED FOR THE OXIDATION OF SANITARY WASTEWATER AND COOLING WATER FROM TA-53; SOME INDUSTRIAL WASTE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 53.002-53.004

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: UNIT CONTAINS SANITARY AND INDUSTRIAL WASTES WITH SOME RADIOACTIVITY. SLUDGES HAVE NEVER BEEN REMOVED.

Source of Waste: TA-53

Disposition of Waste: NPDES OUTFALL (SEE PHOTO #53.002-53.004D OF OUTFALL) RELEASE RADIOACTIVE WASTES; SLUDGE WOULD GO TO TA-54

D. RELEASE CONTROLS

Liner: X	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: UNIT HAS THREE FEET OF FREEBOARD.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NPDES OUTFALL HAS SIGN INDICATING RADIOACTIVITY - GOES INTO CANYON (TRIBUTARY OF LOS ALAMOS CANYON)

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED

Unit Number: 53.005 Unit Name: DISPOSAL PIT

Location: TA-53-2 References: 98, P. 19

No Photo is Available for this Unit. Unit Was Not Observed During the VSI.

Unit Number: 53.005

A. DESCRIPTION

Unit Type: THE CEARP IDENITFIED THIS AS A "DISPOSAL PIT". NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: DISPOSAL OF HAZARDOUS WASTE, ORGANICS, CHEMICALS

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA PROVIDED

Unit Number: 53.005

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENITFIED THIS AREA AS CONTAMINATED AND THE WASTES HANDLED AS HAZARDOUS, AND ORGANICS AND CHEMICALS

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: REFERENCES SUGGEST THAT RELEASE CONDITIONS MAY CAUSE SIGNIFICANT ENVIRONMENTAL RISK

Unit Number: 53.006

Unit Name: WASTE STORAGE TANKS

Location: TA-53

References: 98, P. 20

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 53.006

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS "WASTE STORAGE TANKS". NO OTHER DESCRIPTIVE DATA WAS PROVIDED

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: STORAGE OF HAZARDOUS AND RADIOACTIVE WASTES, ORGANICS, AND RADIOACTIVE MATERIAL

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE

Unit Number: 53.006

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THIS AREA AS CONTAMINATED AND THE WASTES MANAGED AS HAZARDOUS/RADIOACTIVE, ORGANICS, AND RADIOACTIVE MATERIAL

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: REFERENCES SUGGEST THAT RELEASE CONDITIONS MAY CAUSE SIGNIFICANT ENVIRONMENTAL RISK

Unit Number: 53.007

Unit Name: CONTAINER STORAGE

Location: TA-53

References: 98, P. 20; 65

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 53.007

A. DESCRIPTION

Unit Type: THE CEARP IDENTIFIED THIS AS A "CONTAINER STORAGE" AREA. NO OTHER DESCRIPTIVE INFORMATION WAS PROVIDED

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: DATA NOT AVAILABLE

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: DATA NOT AVAILABLE

Indoors: Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: TEMPORARY (<90 DAY) STORAGE OF HAZARDOUS AND RADIOACTIVE WASTES, ORGANICS, PCBs, AND RADIOACTIVE MATERIALS

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO ADDITIONAL DATA AVAILABLE

Unit Number: 53.007

C. WASTES MANAGED

Solids:	Corrosive:	Organics: X
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: THE CEARP IDENTIFIED THIS AREA AS CONTAMINATED AND THE WASTES MANAGED AS HAZARDOUS/RADIOACTIVE, ORGANICS, PCBs, AND RADIOACTIVE MATERIAL

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

UNIT 53.009: OXIDATION POND BONEYARD - This active unit was identified during the VSI as assorted drums, metal, concrete, construction material and several locked trailers, one of which is TA-53, MPF-494, underlain by soil. The contents of these trailers is unknown. It has been in operation since 1960 and covers an area of approximately 3 to 4 acres. No hazardous constituents were identified. However, some drums were filled with a concrete type material which might contain hazardous constituents, others were locked which precluded additional inspection.

Oxidation Pond Boneyard. No Identified Hazardous Waste Noted.

UNIT 53.010: COOLING TOWER OUTFALLS - This active unit is identified as outfalls (98, p. 20). It is suspected that radioactive constituents may be found in these effluents. No photo is available for this unit.

TA-54, Waste Disposal Site (Mesita Del Buey)

TA-54 (Figure 57) is a waste disposal area for solid radioactive, chemical classified and high explosive wastes (10, p. 7-4).

Area G (77, 82,83, 99) of TA-54 is the main active radioactive solid waste burial/storage site at the laboratory. It has been in use since 1957 and is expected to remain active throughout the foreseeable future to dispose of low-level radioactive waste. The site has been expanded to 63 acres, but further expansion is anticipated. Within Area G are pits, shafts, trenches and pads, all of varying dimensions. Typical wastes include uranium, transuranic wastes including plutonium and fission products, asbestos and chemical wastes. When Area G received interim status under RCRA, Los Alamos ceased to dispose of chemical waste in this area, but did continue to receive radioactive and classified wastes in Area G. In addition, Los Alamos has received authority from USEPA to use Area G as a polychlorinated biphenyls (PCBS) disposal area.

Also within TA-54 is Area L (14, p. 4-11; Environmental Surveillance at Los Alamos, 1986, p. 89), a 2-acre site that was the principal chemical waste disposal area for the laboratory from 1964 to November 1985. Until May 1975, all wastes were put into one pit, which was covered in June 1975. Subsequent disposal was in shafts ranging from 2 to 8 ft. in diameter and up to 65 ft. deep. Different shafts were used for different categories of waste chemicals (organics, inorganics, oils, acids, bases, and reactive metals). Prior to 1982, liquids were disposed of in drums without the addition of absorbents in shafts 2 through 22; from shaft 23 on, absorbents were added to the drums containing fee liquids. The laboratory maintained records identifying the nature and quantity of wastes disposed of in individual shafts, each of which were ultimately filled to capacity and capped with concrete. Chemical wastes are no loner disposed of in Area L, but the area is now used for the storage and treatment of wastes.

The laboratory has requested a long-term permit to continue to treat and store waste at Area L through its RCRA Part B application submitted to the New Mexico Environmental Improvement Division. A closure plan has also been submitted for land disposal in Area L.

Another material disposal area in TA-54 is Area H, which consists of nine shafts 6 ft. in diameter and up to 60 ft. deep. Some radioactive materials (including uranium) were disposed of in these shafts, particularly classified parts contaminated with or containing depleted uranium. Shaft 9 is still being used; it contains 15 lb. of lithium hydride waste, along with beryllium, magnesium, and depleted uranium. A closure plan was submitted for land disposal in Area H.

Finally, Area J is another material disposal area within TA-54. It is a 2.65-acre site which is used for the disposal of equipment wastes in pits, such as those which may be contaminated with undetectable quantities of high explosives.

Units which may be associated with the handling of hazardous constituents (e.g., underground storage tanks, sanitary tanks, landfills), are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN:

TA - 54

SWMUs	
54.001	Drum storage spray area
54.002*	Drum storage area
54.003-54.004**	Pits 32 and 33, Area G
54.005**	Area H landfill
54.006	Drum storage; Area J
54.007	Greater than 90-day storage/treatment
54.008-54.011	Land disposal, pits A to D, underground and portable tank
54.012-54.037	L-shaped shafts and other shafts
54.038	L-shaped shaft
54.039	Drum crusher
54.040-54.044*	Five treatment areas
54.045	Cylinder storage area
54.046	Shaft storage, special waste
54.047	Storage drums
54.048-54.049	Two active pits; Area J landfill
54.050-54.052	Three inactive pits, Area J landfill
54.053-54.054	Two inactive shafts; Area J landfill
54.055	Secondary containment for waste treatment tanks; Area L
54.056**	Area L landfill

AOC	
54.057	Underground tank
54.058	Pad 4 of 1, 2, 3, 4
54.059-54.066	Eight trenches; Area G
54.067-54.185	120 shafts; Area G

* RCRA Regulated
** Closure Plan Submitted

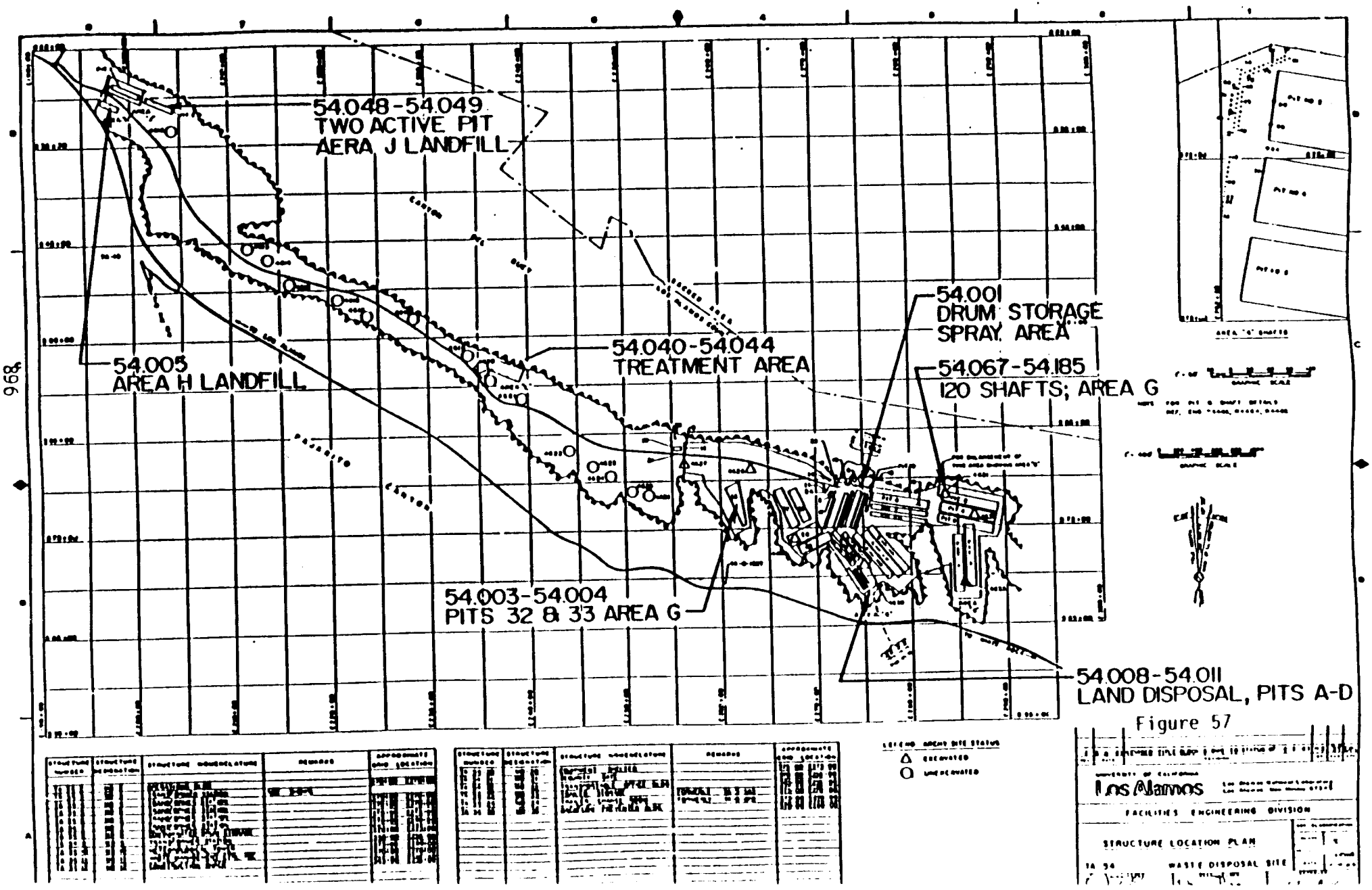

54.048-54.049
TWO ACTIVE PIT
AERA J LANDFILL
54.005
AREA H LANDFILL
54.040-54.044
TREATMENT AREA
54.001
DRUM STORAGE
SPRAY AREA
54.067-54.185
120 SHAFTS; AREA G
54.003-54.004
PITS 32 & 33 AREA G
54.008-54.011
LAND DISPOSAL, PITS A-D
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
WASTE DISPOSAL SITE

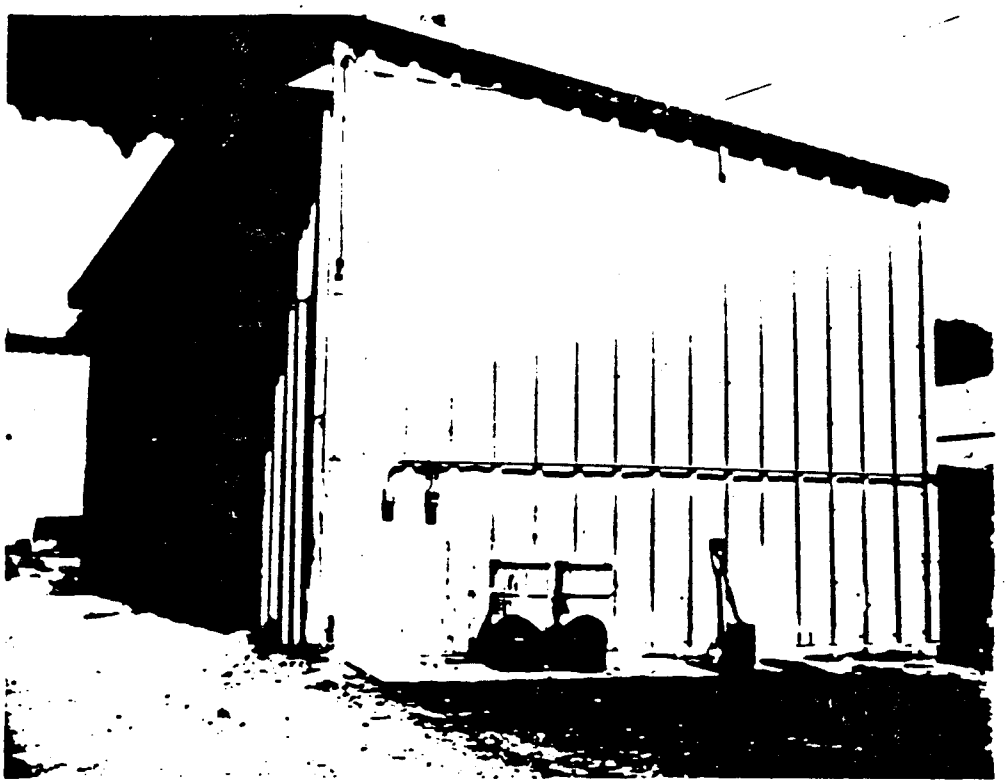
Figure 57

Unit Number: 54.001

Unit Name: DRUM STORAGE, SPRAY AREA

Location: TA-54-8

References: VSI LOG BOOK



Drum Storage, Spray Area - Designed to Store Drums Prior to Spraying with Grease as a Corrosion Inhibitor. Note Stains on Soil in Foreground.

Unit Number: 54.001

A. DESCRIPTION

Unit Type: DRUM STORAGE

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: APPROXIMATELY 4' WIDE X 6' LONG

Material of Construction: STEEL DRUMS ON PLYWOOD

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT USED TO STORE DRUMS PRIOR TO SPRAYING WITH GREASE AS A CORROSION INHIBITOR, SOIL RECEIVES RESIDUE.

B. CLOSURE INFORMATION

Active: x Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 54.001

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges: X	EP Toxic:	

Particulars: DRUM STORAGE - SOME DRUMS LABELLED TRANSURANIC WASTE

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: STAINS OBSERVED ON THE SOIL DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 54.002

Unit Name: DRUM STORAGE AREA

Location: TA-54-32

References: VSI LOG BOOK; 14, P. 4-14; 11, P. 2-4, 2-5; 11, FIG. 2-6

Drum Storage Area with Roof Covering. All Types of Hazardous Wastes are Managed (RCRA Regulated). See Additonal Photo on Following Page.

B. Durm Storage Area with Concrete Floor and Berms.
Note Segregation of Wastes. (RCRA Regulation)

Unit Number: 54.002

A. DESCRIPTION

Unit Type: STORAGE AREA, COVERED W/ROOF; DRUMS ON ROCKS; LEAKS WOULD COLLECT UNDERNEATH IN COVERED CEMENT COLLECTION AREA WHICH INCLUDES 9 SUMPS AND A CONCRETE PAD DIVIDED INTO 6 CELLS.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: 55 GALLON DRUMS; AREA CAN HOLD 304 DRUMS AND ENCOMPASSES 1595 SQUARE FEET.

Material of Construction: METAL ROOF OVER A CONCRETE PAD.

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: X Residences: Belowground:

Purpose of Unit: UNIT MANAGES RCRA WASTES PRIOR TO DISPOSAL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO FIRE EXTINGUISHER. RCRA REGULATED

Unit Number: 54.002

C. WASTES MANAGED

Solids: X	Corrosive: X	Organics: X
L[illegible]ds: X	Flammable: X	Inorganics: X
[illegible]ses: X	Reactive: X	Metals: X
Sludges: X	EP Toxic: X	

Particulars: ALL HAZARDOUS WASTE TYPES MANAGED

Source of Waste: ENTIRE FACILITY (LANL)

Disposition of Waste: OFF-SITE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps: X	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO OTHER DATA AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 54.003-54.004

Unit Name: AREA G, PITS 32 AND 33

Location: TA-54

References: VSI LOG BOOK; 82, P. 21; 84, P. 4&5; 83, P. 2&7; 10, P. 7-4

Landfill at TA-54, Used for Disposal of Radioactive Wastes.

Unit Number: 54.003-54.004

A. DESCRIPTION

Unit Type: PIT, LANDFILL; ONLY PITS 32 AND 33 WERE OBSERVED DURING THE VSI; REFERENCES SUGGEST THAT AT LEAST 19 OTHER PITS EXIST IN AREA G.

Period of Operation: 1957 TO PRESENT

Dimensions/Volume: 100' X 600' X 25' DEEP, LANDFILL COVERS 63 ACRES WITH SMALL PITS OF VARYING DIMENSIONS.

Material of Construction: APPEARS TO BE EXCAVATED TUFF BASED ON VSI OBSERVATIONS

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT USED TO LANDFILL RADIOACTIVE WASTES, AND FOR STORAGE AND BURIAL OF SOLID WASTES

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: CLOSURE PLANS FOR AREA G HAVE BEEN SUBMITTED

Unit Number: 54.003-54.004

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: SOLID WASTE, RADIOACTIVE WASTES, HIGH EXPLOSIVES CONTAMINATED WASTES, CLASSIFIED AND CHEMICAL WASTES; SEVERAL TRENCHES IN AREA USED FOR STORAGE OF TRANSURANIC WASTES

Source of Waste: LANL; WEAPONS DEVELOPMENT

Disposition of Waste: IN SITU

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

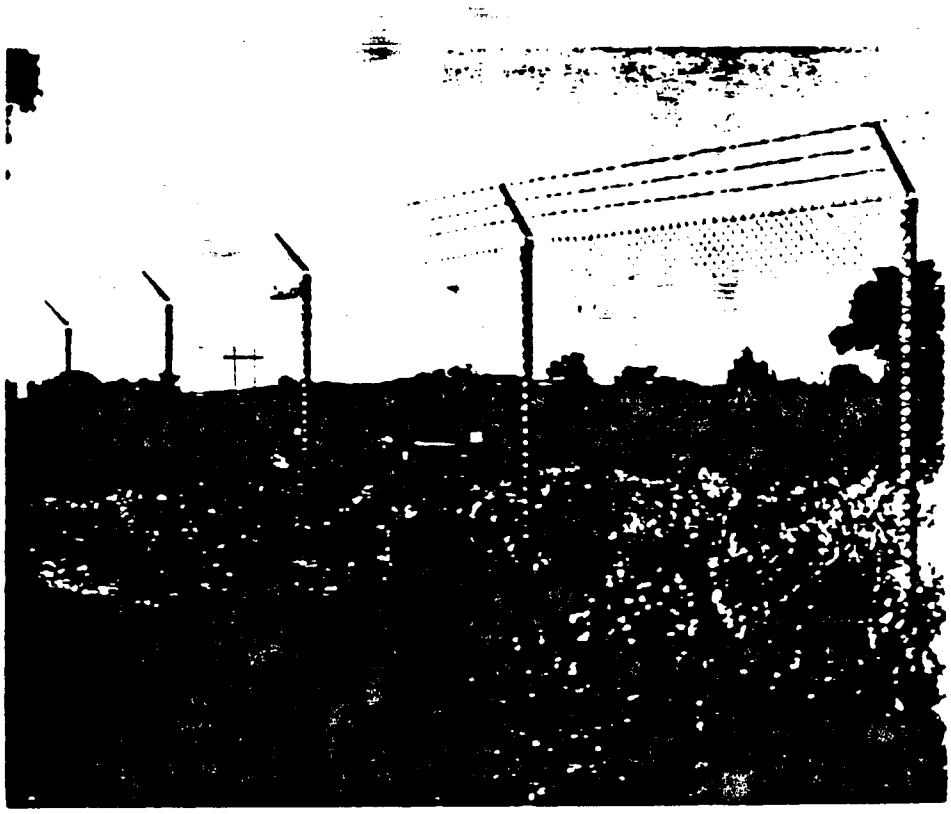
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 54.005

Unit Name: AREA H LANDFILL

Location: TA-54

References: 10, P. 7-5; 65, P. 3-4; 82, P. 22; VSI LOG BOOK



Area H Landfill with Nine Shafts (Not Visible in Photograph).

Unit Number: 54.005

A. DESCRIPTION

Unit Type: LANDFILL WITH 9 SHAFTS.

Period of Operation: MID 1960'S TO 1986

Dimensions/Volume: SHAFTS ARE 6' IN DIAMETER AND 60' DEEP.

Material of Construction: APPEARS TO BE EXCAVATED TUFF BASED ON VSI OBSERVATIONS.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

eve

Environmental: TUFF

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: SHAFTS USED FOR DISPOSAL OF CLASSIFIED AND RADIOACT MATERIALS.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: CLOSURE PLANS HAVE BEEN SUBMITTED FOR AREA H

Unit Number: 54.006

Unit Name: AREA J DRUM STORAGE AREA

Location: TA-54

References: VSI LOG BOOK, 101, P.7-4; 82, P.22

Area J Drum Storage, Used for the Containment of Wastes Prior to Disposal.

Unit Number: 54.006

A. DESCRIPTION

Unit Type: DRUM STORAGE (LOWER LEVEL TOWARD CANYON ALONG FENCE)

Period of Operation: 1966 TO PRESENT

Dimensions/Volume: 30 TO 50 - 55 GALLON DRUMS; SIZE OF AREA UNDETERMINED

Material of Construction: STEEL DRUMS OVER SOIL PAD

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS USED FOR STORAGE PRIOR TO DISPOSAL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA IS AVAILABLE AT THIS TIME.

Unit Number: 54.006

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: NON-RCRA, E.G. SLUDGE FROM TREATMENT OF NH4 BF4

Source of Waste: VARIOUS SOURCES

Disposition of Waste: BURIAL IN AREA J

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: AREA J IS AN ACTIVE BURIAL SITE FOR ITEMS SUSPECTED OF BEING CONTAMINATED WITH HIGH EXPLOSIVES AND/OR RADIOACTIVITY (101, P. 7-4)

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: SOME SPILLAGE AND UNCONTROLLED DRAINAGE WAS OBSERVED DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 54.007

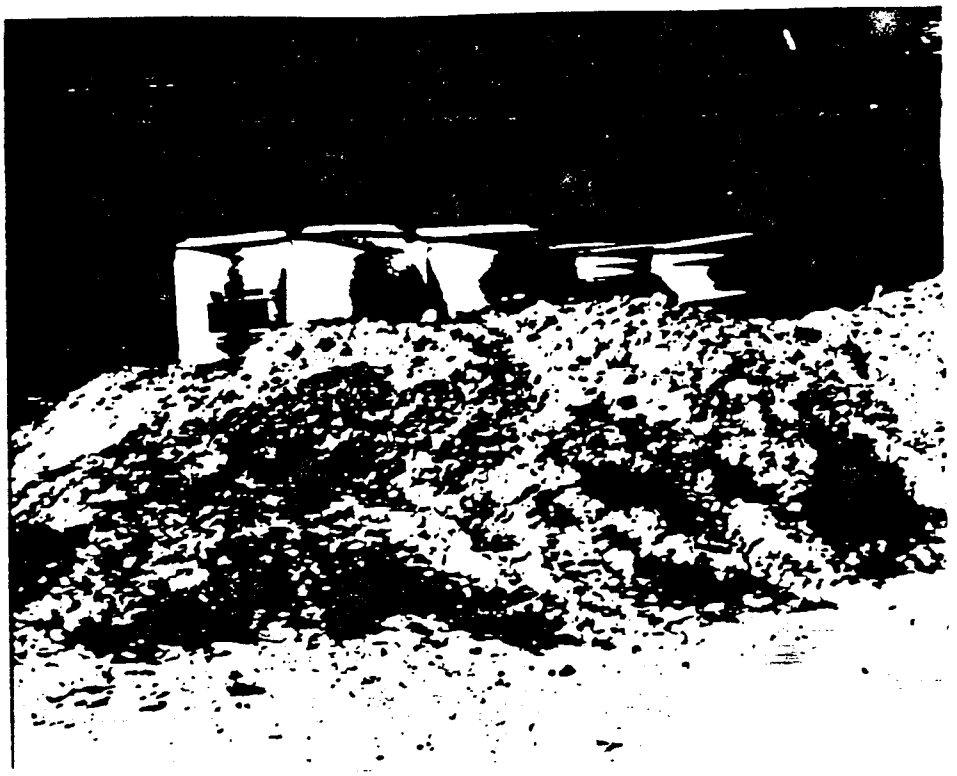
Unit Name: GREATER THAN 90 DAY STORAGE/TREATMENT

Location: TA-54

References: VSI LOG BOOK

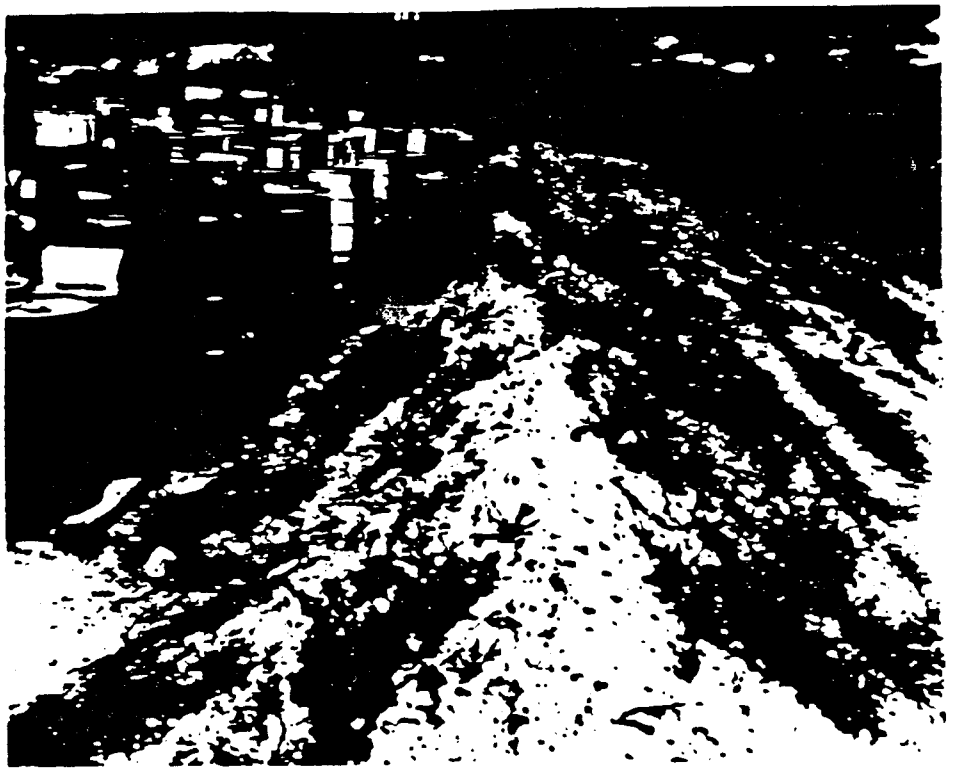
A. Container Storage Prior to Off-Site Disposal. Barrels are on Soil, Not on Wood Pallets. See Additional Pnotos on Following Pages.

B. Inside of Storage Shed Shown in Photo of Unit 54.008.
Note Floor Drains Underneath Drums.



C. Salvage Drums Setting Outside of Bermed Containment Area.

D. Container Storage Area. Note Berms Along Perimeter and Wooden Pallets Underneath Drums.



E. Soil Diking Surrounding Container Storage Area.
Note Drums on Wooden Pallets.

Unit Number: 54.007

A. DESCRIPTION

Unit Type: PAILS, DRUMS ON PALLETS, > 90 DAY STORAGE/TREATMENT, FORMERLY DISPOSAL, CONSTRUCTED ON OLD LAB BURIAL SITE

Period of Operation: 1963 TO PRESENT

Dimensions/Volume: 100+ - 55 GALLON DRUMS; SIZE OF AREA UNKNOWN

Material of Construction: STEEL DRUMS OVER SOIL PAD.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS USED FOR CONTAINER STORAGE PRIOR TO OFF-SITE DISPOSAL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA IS AVAILABLE AT THIS TIME.

Unit Number: 54.007

C. WASTES MANAGED

Solids: X	Corrosive: X	Organics: X
Liquids:	Flammable: X	Inorganics: X
Gases:	Reactive: X	Metals: X
Sludges: X	EP Toxic: X	

Particulars: MOST HAZARDOUS WASTE TYPES ARE MANAGED

Source of Waste: ENTIRE FACILITY

Disposition of Waste: OFF-SITE (NOW)

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO OTHER DATA AVAILABLE.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: LANL PERSONNAL INDICATED PAST RELEASES HAVE OCCURRED, BUT NONE WERE OBSERVED.

Unit Number: 54.008-54.011

Unit Name: LAND DISPOSAL, PITS A TO D, UNDER-GROUND & PORTABLE TANK

Location: TA-54

References: VSI LOG BOOK

Former Disposal Site for Facility. Note Portable Tank (Truck); Storage Drums in Background. Tanks Store Used Oil.

Unit Number: 54.008-54.011

A. DESCRIPTION

Unit Type: DISPOSAL INCLUDING PITS A TO D, SURFACE IMPOUNDMENTS, UNDERGROUND STORAGE TANK (OIL) AND PORTABLE TANK.

Period of Operation: AT LEAST 1966 TO PRESENT.

Dimensions/Volume: PIT AREA OBSERVED APPROXIMATELY 30' X 100'; PORTABLE TANK APPROXIMATELY 10,000 GALLON

Material of Construction: PITS ARE CONSTRUCTED OF EXCAVATED TUFF.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: FORMER DISPOSAL SITE FOR FACILITY (ACTUAL DISPOSAL OF FREE LIQUIDS)-GENERATED WASTE, INCLUDING RAD-WASTE; TANK STORES USED OIL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: PIT A IS INACTIVE, OTHER PITS & TANK ACTIVE.

Unit Number: 54.008-54.011

C. WASTES MANAGED

Solids: X	Corrosive: X	Organics: X
Liquids: X	Flammable: X	Inorganics: X
Gases: X	Reactive: X	Metals: X
Sludges: X	EP Toxic: X	

Particulars: ALL HAZARDOUS WASTE TYPES AND RADIOACTIVE WASTE ARE MANAGED.

Source of Waste: ENTIRE FACILITY

Disposition of Waste: BURIAL IN SITU

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE OBSERVED DURING THE VSI.

E. RELEASE HISTORY

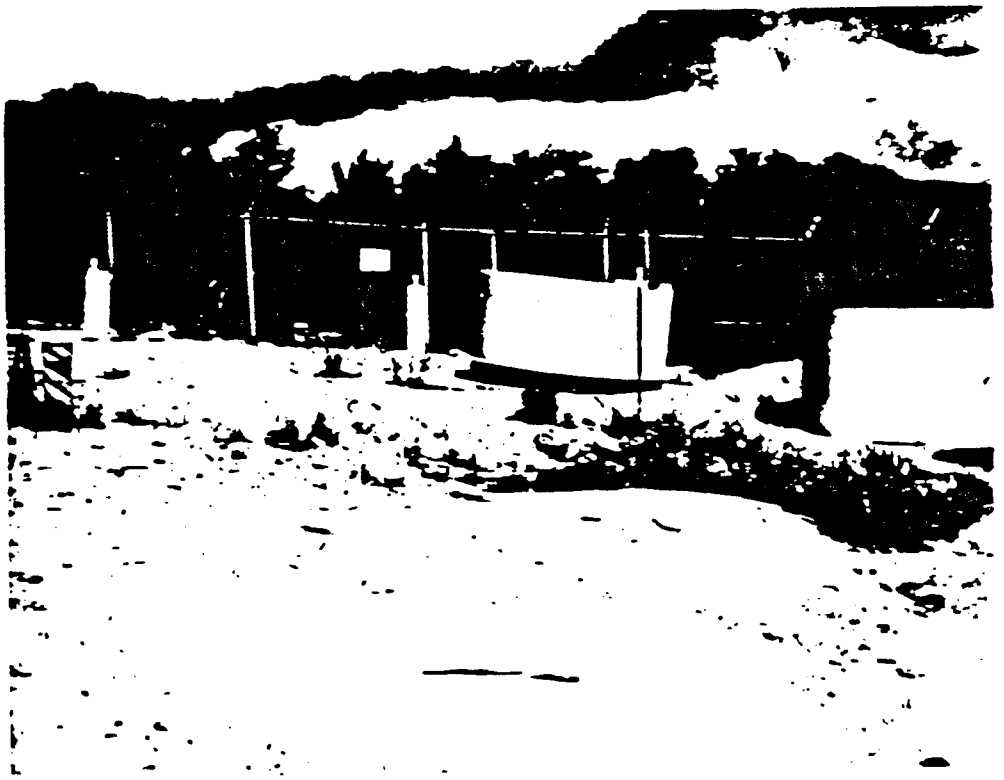
Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 54.012-54.037 Unit Name: L-SHAPED SHAFTS

Location: TA-54 References: 96, ENCL. 21, P. 1; VSI LOG BOOK



A. L-Shaped Shafts Used for the Disposal of Organic, Inorganic and Other Types of Waste. See Additional Photo on Following Page.

B. L-Shaped Shaft Located at Left Top Corner of Photograph.

Unit Number: 54.012-54.037

A. DESCRIPTION

Unit Type: TWENTY-SIX L-SHAPED SHAFTS FOR DISPOSAL, AUGERED, NO LINER; ONLY TWENTY-SIX L-SHAPED SHAFTS WERE SEEN DURING THE VSI; REFERENCES SUGGEST THIRTY-SIX SHAFTS EXIST IN AREA L.

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: UP TO 65' DEEP

Material of Construction: EXCAVATED TUFF

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT IS USED FOR DISPOSAL OF ORGANIC, INORGANIC AND OTHER WASTE TYPES.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: CLOSURE PLANS HAVE BEEN SUBMITTED FOR AREA L

Unit Number: 54.012-54.037

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids: X	Flammable: X	Inorganics: X
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTES ARE REPORTED BY TYPE, FLAMMABLE, ORGANIC, INORGANIC, LAB, AND MIXED WASTES, INCLUDING ETHANOL, METHANOL, METHYLETHYL KETONE, AND 1-1-1-TRICHLORETHANE; NO RADIOACTIVE WASTES.

Source of Waste: ENTIRE FACILITY.

Disposition of Waste: ASSUMED TO BE IN SITU.

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: WASTE DISPOSAL SHAFTS 25 AND 26 IN AREA L CONTAIN ORGANIC COMPOUNDS, SOLVENTS, AND OILS STORED IN LEAKING BARRELS. LIQUID ORGANIC MATERIALS HAVE MIXED WITH TUFF AND VERMICULITE. BENZENE AND TOLUENE ARE MOVING IN THE VAPOR PHASE THROUGH OPEN JOINTS IN THE SHAFTS.(89, ATTCH. 2H).

Unit Number: 54.038 Unit Name: L-SHAPED SHAFT

Location: TA-54 References: VSI LOG BOOK

One of 26 L-Shaped Shafts LANL Excavated. Organic Vapors Were Detected and the Shaft was Consequently Reburied.

Unit Number: 54.038

A. DESCRIPTION

Unit Type: L-SHAPED SHAFT

Period of Operation: DATA NOT AVAILABLE.

Dimensions/Volume: TO 65' DEEP.

Material of Construction: EXCAVATED TUFF.

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT USED FOR DISPOSAL OF ORGANICS, INORGANICS AND OTHER WASTE TYPES.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present:
Inactive/Removed or Dismantled: X Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 54.038

C. WASTES MANAGED

Solids: X	Corrosive:	Organics: X
Liquids: X	Flammable: X	Inorganics: X
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTES REPORTED BY TYPE, FLAMABLE, ORGANIC, INORGANIC, LAB, MIXED WASTES; NO RADIOACTIVE WASTES

Source of Waste: ENTIRE FACILITY

Disposition of Waste: ASSUMED TO BE IN SITU

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: ONE OF THE 26 SHAFTS; LANL DISCOVERED ORGANIC VAPORS AND REBURIED THE SHAFT

Unit Number: 54.039 Unit Name: DRUM CRUSHER

Location: TA-54 References: VSI LOG BOOK

Drum Crusher with Crushed Drums in the Foreground.

Unit Number: 54.039

A. DESCRIPTION

Unit Type: DRUM CRUSHER

Period of Operation: THIS WAS RECENTLY INSTALLED AND IS ACTIVE. NO SPECIFIC DATE WAS AVAILABLE

Dimensions/Volume: 10' X 10'

Material of Construction: METAL CRUSHER ON BARE SOIL

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT CRUSHES "EMPTY" DRUMS.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 54.039

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: REPORTEDLY EMPTY STEEL DRUMS

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE; CRUSHED DRUMS ASSUMED TO BE RECLAIMED FOR METALS

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW: X	VSI Noted Release to Soil/GW: X
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: STAINS OBSERVED ON SOIL DURING THE VSI.

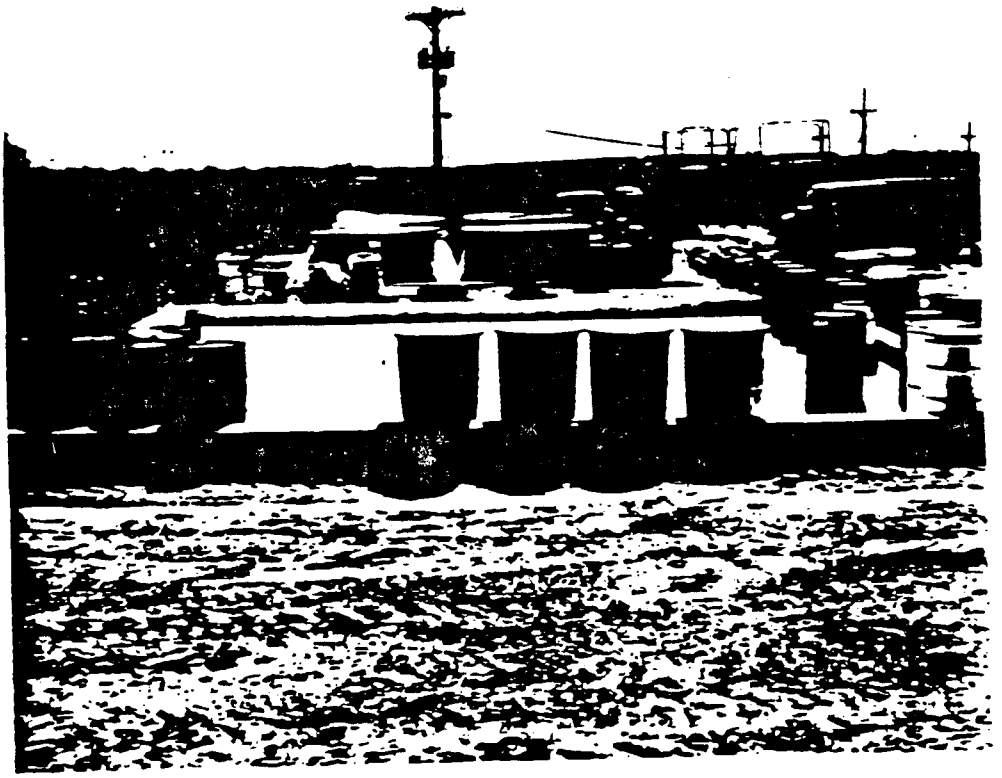
Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 54.040-54.044

Unit Name: FIVE TREATMENT AREAS

Location: TA-54

References: VSI LOG BOOK; 11, P. 2-5; 14, P. 4-18; 11, FIG. 2-9



Four Tanks (White, Covered with Plastic) that Treat Ammonium Bifluoride Solutions Used in the Cleaning of Cooling Towers.

Unit Number: 54.040-54.044

A. DESCRIPTION

Unit Type: FOUR TREATMENT TANKS AND ONE MIXING TANK

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: EACH TREATMENT TANK IS 1665 GALLONS; MIXING TANK IS 210 GALLONS

Material of Construction: TREATMENT TANKS ARE CARBON STEEL LINED WITH PLASTIC; MIXING TANK IS STAINLESS STEEL

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT TREATS AMMONIUM BIFLUORIDE SOLUTIONS FROM CLEANING OF COOLING TOWERS, AND LITHIUM HYDRIDE.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: APPLIED FOR RCRA REGULATION

Unit Number: 54.040-54.044

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: AMMONIUM BIFLUORIDE AND LITHIUM HYDRIDE

Source of Waste: COOLING TOWERS

Disposition of Waste: AREA J

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: TANKS ARE ON BERMED CONCRETE PAD

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

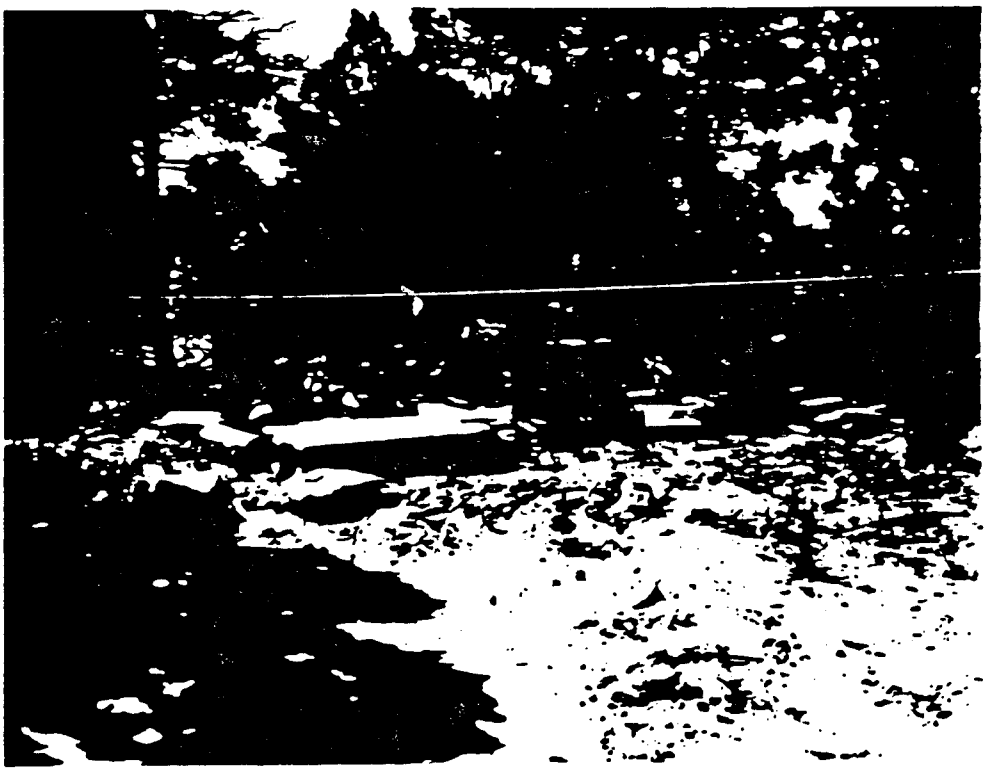
Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 54.045

Unit Name: CYLINDER STORAGE AREA

Location: TA-54

References: VSI LOG BOOK



Gas Cylinder Storage Area. Unknown What Type of Gas is Stored in Cylinders.

Unit Number: 54.045

A. DESCRIPTION

Unit Type: GAS CYLINDERS

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: VARIOUS SIZES

Material of Construction: METAL CYLINDERS ON BARE SOIL

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT USED TO STORE GAS CYLINDERS PRIOR TO DISPOSAL.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 54.045

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases: X.	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: COMPRESSED GASES, VARIOUS TYPES

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DETONATION/BURNING; APPROVED BY STATE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS ARE ASSOCIATED WITH THIS UNIT.

E. RELEASE HISTORY

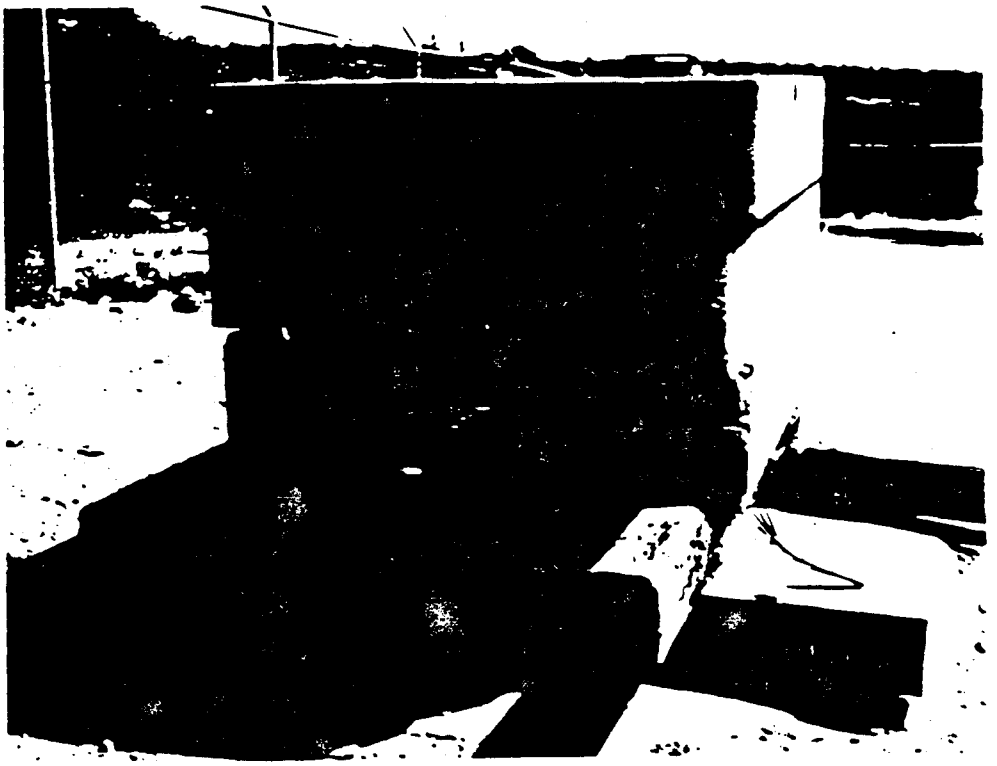
Past Release to Air:	VSI Noted Release to Air: X
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: CYLINDERS MAY BE LEAKING CONTENTS TO AIR WHEN BROUGHT TO AREA

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 54.046 Unit Name: SHAFT STORAGE, SPECIAL WASTE

Location: TA-54 References: VSI LOG BOOK



Storage Shaft Containing Radioactive Lead Stringers.

Unit Number: 54.046

A. DESCRIPTION

Unit Type: STORAGE SHAFT, STEEL RODS FILLED WITH LEAD SHOT

Period of Operation: 1987

Dimensions/Volume: 30' DEEP

Material of Construction: STEEL RODS FILLED WITH LEAD SHOT, RADIOACTIVE WASTE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground: X
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground:

Purpose of Unit: UNIT TO TEMPORARILY STORE (5 YEARS) "LEAD STRINGER", STEEL ENCASED LEAD, VERY HOT-40 R/L.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 54.046

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: RADIOACTIVE "LEAD STRINGERS"

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner: X	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: METAL CONDUIT WITH CONCRETE BOTTOM

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 54.047 Unit Name: STORAGE DRUMS

Location: TA-54 References: VSI LOG BOOK

Waste Oil Drum Storage with Bermed Asphalt. Note Stains on Asphalt.

Unit Number: 54.047

A. DESCRIPTION

Unit Type: STORAGE DRUMS

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: 8'WIDE X 25'LONG

Material of Construction: BERMED ASPHALT

Underlain by: Concrete: Asphalt: X Gravel:
Grass: Soil:

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: UNIT IS USED FOR STORAGE OF WASTE OIL AND PRODUCTS.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 54.047

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTE OIL; NO INFORMATION ON ADDITIONAL CHARACTERISTICS/ CONSTITUENTS AVAILABLE

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: ASPHALT BERM

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: OIL STAINING ON ASPHALT WAS OBSERVED DURING THE VSI.

Detail of Past Releases: NO ADDITIONAL PAST RELEASES HAVE BEEN REPORTED.

Unit Number: 54.048-54.049

Unit Name: AREA J LANDFILL TWO ACTIVE PITS

Location: TA 4

References: 10, P. 7-5; 65, P. 3-5; 82, P. 22; 65, P. 3-4; VSI LOG BOOK

One of Two Active Pits within the Area J Landfill. Pits are Designed for Disposal of Asbestos and High Explosive Contaminated Wastes.

Unit Number: 54.048-54.049

A. DESCRIPTION

Unit Type: LANDFILL PIT

Period of Operation: 1964 TO PRESENT

Dimensions/Volume: TOTAL LANDFILL COVERS 2.65 ACRES

Material of Construction: EXCAVATED TUFF

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental: TUFF

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT USED FOR DISPOSAL OF ASBESTOS AND HIGH EXPLOSIVE CONTAMINATED WASTES.

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME.

Unit Number: 54.048-54.049

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: EQUIPMENT WASTES, HIGH EXPLOSIVE CONTAMINATED WASTES, RADIOACTIVE WASTES, TRITIUM

Source of Waste: THROUGHOUT FACILITY

Disposition of Waste: IN SITU

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE SEEN DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 54.050-54.052

Unit Name: AREA J LANDFILL, THREE INACTIVE PITS

Location: TA-54

References: 10, P. 7-5; 65, P. 3-5; 82, P. 22; VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 54.050-54.052

A. DESCRIPTION

Unit Type: LANDFILL PIT

Period of Operation: 1964 TO UNKNOWN DATE

Dimensions/Volume: ENTIRE LANDFILL AREA IS 2.65 ACRES

Material of Construction: EXCAVATED TUFF

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: TUFF

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT USED FOR DISPOSAL OF ASBESTOS AND HIGH EXPLOSIVE CONTAMINATED WASTES.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA IS AVAILABLE AT THIS TIME

Unit Number: 54.050-54.052

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: EQUIPMENT WASTES, HIGH EXPLOSIVE CONTAMINATED WASTES, RADIOACTIVE WASTES, TRITIUM

Source of Waste: THROUGHOUT FACILITY

Disposition of Waste: IN SITU

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE SEEN DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASES ARE KNOWN TO HAVE OCCURRED.

Unit Number: 54.053-54.054

Unit Name: AREA J LANDFILL, TWO INACTIVE SHAFTS

Location: TA-54

References: 10, P. 7-5; 65, P. 3-5; 82, P. 22; VSI LOG BOOK

No Photo is Available for this Unit.

Unit Number: 54.053-54.054

A. DESCRIPTION

Unit Type: LANDFILL SHAFT

Period of Operation: 1964 TO UNKNOWN DATE

Dimensions/Volume: ENTIRE LANDFILL AREA IS 2.65 ACRES; DIMENSIONS OF THE SHAFTS ARE UNKNOWN

Material of Construction: EXCAVATED TUFF

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil:

Environmental: TUFF

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: UNIT USED FOR DISPOSAL OF INCLUDING ASBESTOS AND HIGH EXPLOSIVE CONTAMINATED WASTES.

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: NO OTHER DATA AVAILABLE AT THIS TIME

Unit Number: 54.053-54.054

C. WASTES MANAGED

Solids: X	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: EQUIPMENT WASTES, HIGH EXPLOSIVE CONTAMINATED WASTES, RADIOACTIVE WASTES, TRITIUM

Source of Waste: THROUGHOUT FACILITY

Disposition of Waste: IN SITU

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO RELEASE CONTROLS WERE SEEN DURING THE VSI.

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: NO RELEASES WERE OBSERVED DURING THE VSI.

Detail of Past Releases: NO PAST RELEASE ARE KNOWN TO HAVE OCCURRED.

Unit Number: 54.055

Unit Name: AREA L, SECONDARY CONTAINMENT FOR WASTE TREATMENT TANKS AND WASTE TRANSFER

Location:

References: 14, P. 4-19; 10, P. 7-5; 11, P. 2-4, 2-5; 14, P. 4-11, 4-12

No Photo is Available for this Unit. Unit Was Not Seen During the VSI.

Unit Number: 54.055

A. DESCRIPTION

Unit Type: STORAGE AND PROCESSING UNIT

Period of Operation: DATA NOT AVAILABLE

Dimensions/Volume: BUILDING OF 196 CUBIC FEET; BUILDING HOLDS 8-55 GALLON DRUMS

Material of Construction: CONCRETE PAD WITH 6" CURB

Underlain by: Concrete: X Asphalt: Gravel:
Grass: Soil:

Environmental:

Indoors: X Close to Surface Water: In Ground:
Outdoors: Close to Drinking Water: Aboveground: X
Covered: Residences: Belowground:

Purpose of Unit: ACCUMULATION, PACKAGING AND STORAGE OF CHEMICAL WASTE CONTAINERS

B. CLOSURE INFORMATION

Active: X Inactive/Physically Present:
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: ADDITIONAL DATA NOT AVAILABLE

Unit Number: 54.055

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids: X	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: HAZARDOUS WASTES

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking: X	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: 6" CONCRETE CURBING

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

Unit Number: 54.056 Unit Name: AREA L LANDFILL

Location: TA-54 References: 65, P. 3-3

No Photo is Available for this Unit. Photos of Shafts in Area L are in Unit No. 54.012-54.037.

Unit Number: 54.056

A. DESCRIPTION

Unit Type: LANDFILL; PRESENTLY SITE OF BERMED CONTAINER STORAGE AREA

Period of Operation: BECAME INACTIVE IN 1985; OTHER DATA NOT AVAILABLE

Dimensions/Volume: LANDFILL APPROXIMATELY 10 ACRES

Material of Construction: DATA NOT AVAILABLE

Underlain by: Concrete: Asphalt: Gravel:
Grass: Soil: X

Environmental:

Indoors: Close to Surface Water: In Ground:
Outdoors: X Close to Drinking Water: Aboveground:
Covered: Residences: Belowground: X

Purpose of Unit: DISPOSAL OF UNKNOWN WASTES

B. CLOSURE INFORMATION

Active: Inactive/Physically Present: X
Inactive/Removed or Dismantled: Closed Under State or EPA:
Regulatory Status:
Other: ADDITIONAL DATA NOT AVAILABLE

Unit Number: 54.056

C. WASTES MANAGED

Solids:	Corrosive:	Organics:
Liquids:	Flammable:	Inorganics:
Gases:	Reactive:	Metals:
Sludges:	EP Toxic:	

Particulars: WASTES UNKNOWN

Source of Waste: DATA NOT AVAILABLE

Disposition of Waste: DATA NOT AVAILABLE

D. RELEASE CONTROLS

Liner:	Diking:	Sumps:	Ind. Sewer:
Level Controls:	Overflow Controls:		Leak Detection:

Details: NO KNOWN RELEASE CONTROLS

E. RELEASE HISTORY

Past Release to Air:	VSI Noted Release to Air:
Past Release to Soil/GW:	VSI Noted Release to Soil/GW:
Past Release to S.W.:	VSI Noted Release to S.W.:
Past Release to S.S.G.:	VSI Noted Release to S.S.G.:

VSI Noted Release Conditions: UNIT NOT OBSERVED DURING THE VSI

Detail of Past Releases: DATA NOT AVAILABLE

UNIT 54.057: UNDERGROUND TANK - This active unit was observed during the VSI and began operating in 1976. The tank is a below ground unit underlain by soil and is designed to collect and store contaminated (radioactive materials) wash water. There are no release controls associated with this unit. No photo is available for this unit.

UNIT 54.058: PAD 4 of 1, 2, 3, 4 - This unit was identified during the VSI as an active in-ground pad underlain by asphalt. This pad, constructed of concrete and asphalt, is designed for the storage/burial of radioactive waste (transuranic). The pad is open ended with a concrete berm on one side. The pad is used to manage liquid transuranic waste.

Storage/Burial Pad Used for the Disposal of Transuranic Waste.

UNIT 54.059-54.066: EIGHT TRENCHES, AREA G - These active units are identified as landfills, 13 ft. by 22 ft. by 9 ft. deep (83, p. 2-8; 10, p. 7-4; 82, p. 21). These units are used for belowground retrievable storage. It is suspected that hazardous constituents along with plutonium-238 and uranium-233 may be found in these units. No photos are available for these units.

UNIT 54.067-54.185: 120 SHAFTS, AREA G - These active units are identified as shafts (82, p. 2; 83, p. 2; 10, p. 7-4). These shafts have a surface area of 6,200 sq. ft. and a total volume of 15,000 cu. ft. It is suspected that trans-uranic and low-level wastes, which may contain hazardous constituents, and radioactive constituents (beta and gamma) may be found in these units. No photos are available for these units.

TA-55, Plutonium Processing Facilities

TA-55 (Figure 58) is used by laboratory personnel for the processing of plutonium and research in plutonium metallurgy.

The research which is performed in TA-55 is classified. Access to it is possible, but only after extensive preparation. During the VSI, LANL stated that no solid waste management units were present in TA-55; therefore, neither team performing the RFA visited TA-55.

Units which may be associated with the handling of hazardous constituents (e.g., underground storage tanks) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE

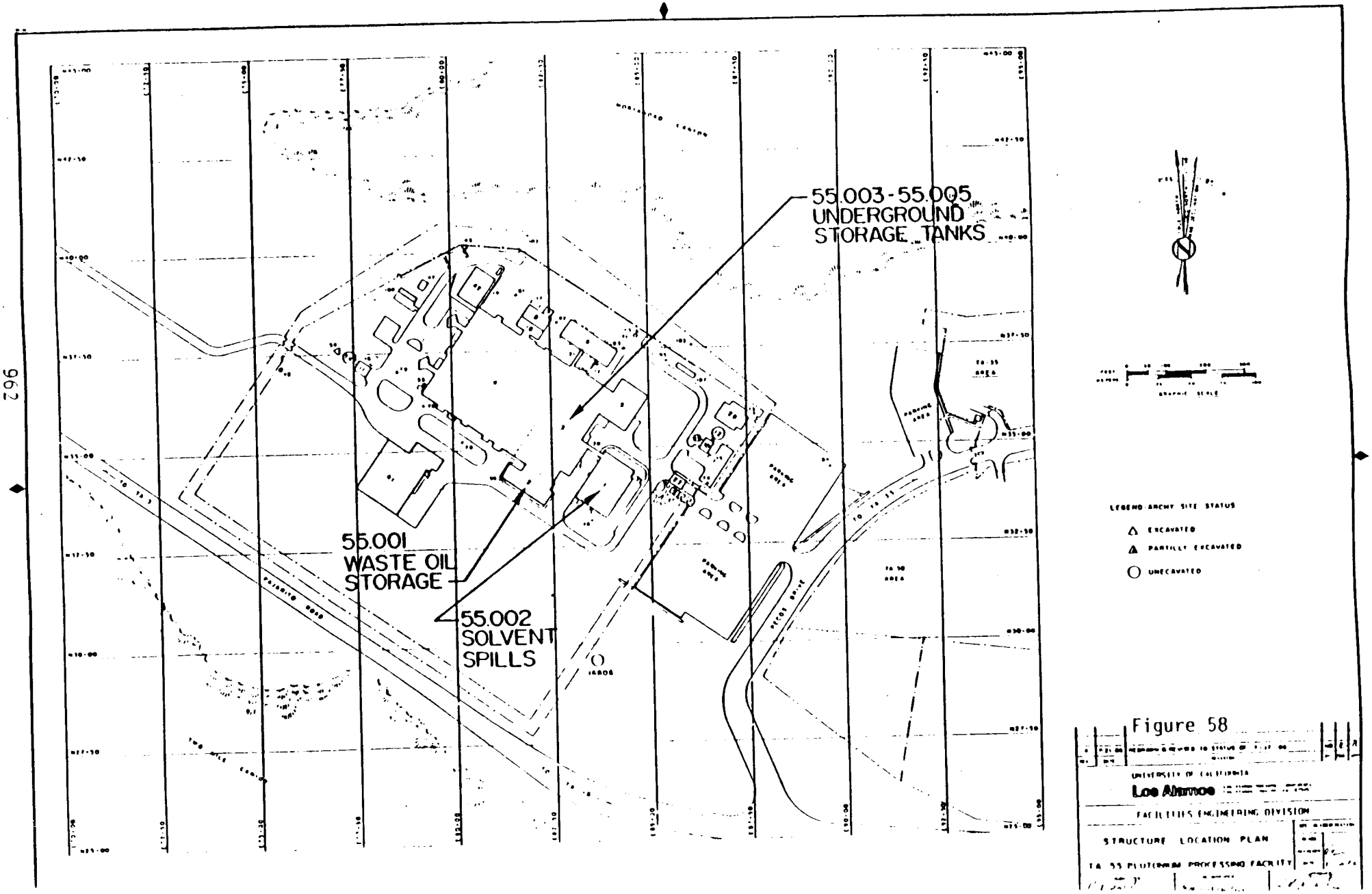

55.003-55.005
UNDERGROUND
STORAGE TANKS
55.001
WASTE OIL
STORAGE
55.002
SOLVENT
SPILLS
LEGEND-ARCHY SITE STATUS
EXCAVATED
PARTIALLY EXCAVATED
UNEXCAVATED
UNIVERSITY OF CALIFORNIA
Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA 55 PLUTONIUM PROCESSING FACILITY

Figure 58

TA-56, Subterrene Basalt Site

Abandoned in 1976, this inactive technical area site was used for testing of the earth penetrator concept, which was an attempt to make holes in the earth by melting rock rather than drilling through it. During the VSI, LANL stated that no solid waste management units were present at this technical area, therefore, neither VSI team performing the RFA visited TA-56.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE

TA-57, Fenton Hill Site

This is the location of the laboratory's Hot Dry Rock geothermal project. It is located 37 miles east of Los Alamos National Laboratory. Here, scientists are studying the possibility of producing energy by circulating water through hot, dry rock located hundreds of meters below the earth's surface. The water is heated and then brought to the surface to drive electric generators.

LANL personnel stated during the VSI that there may be solid waste management units at this technical area; however, TA-57 (Figure 59) was determined to not be contiguous to the main ground of LANL. Therefore, it was determined to be outside the scope of this RFA and was not visited by the teams performing the RFA.

Units which may be associated with the handling of hazardous constituents (e.g., NPDES outfalls) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE

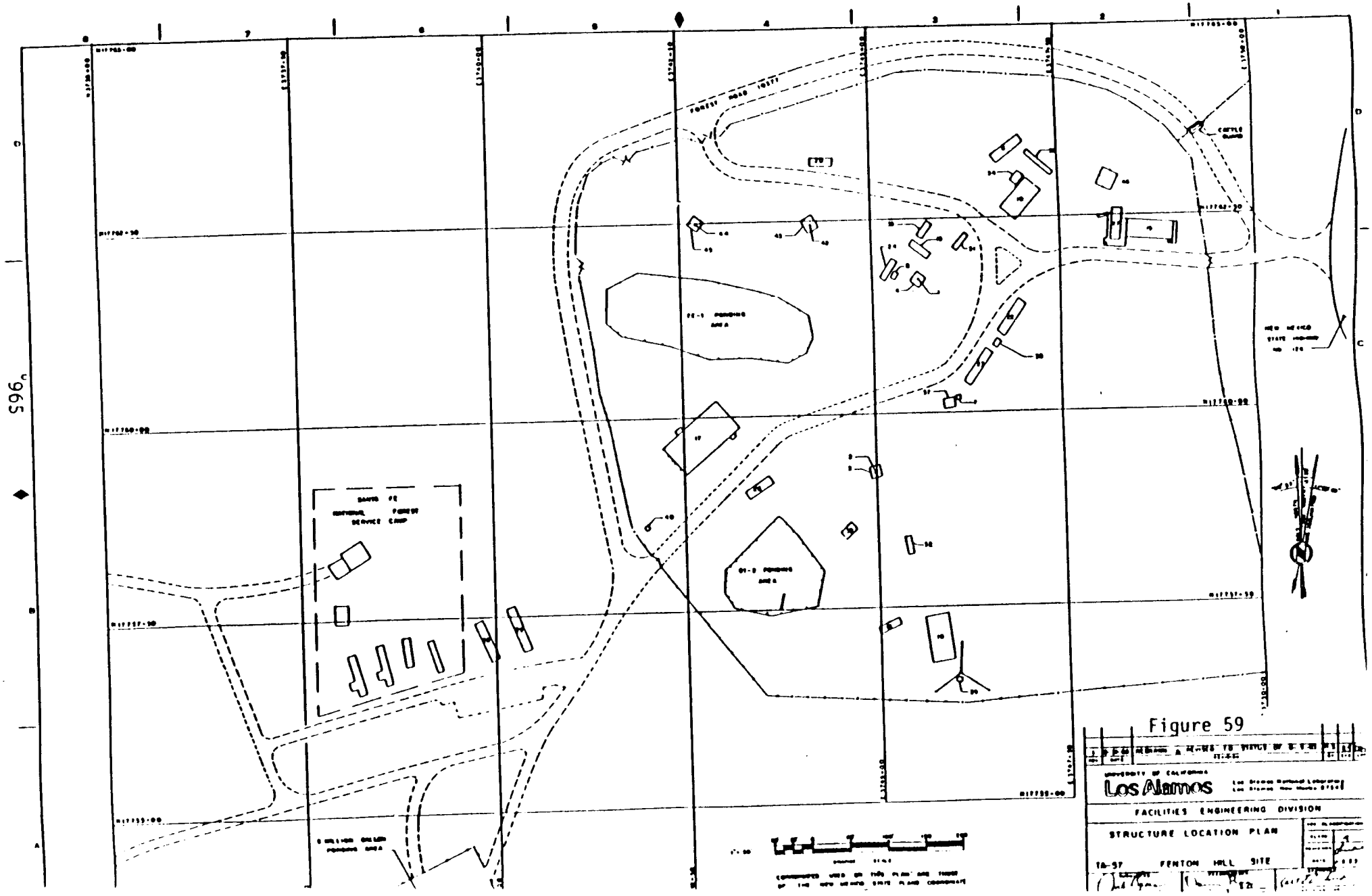

Los Alamos
FACILITIES ENGINEERING DIVISION
STRUCTURE LOCATION PLAN
TA-57 FENTON HILL SITE

Figure 59

TA-58, Two Mile Mesa

This is an undeveloped technical area with no solid waste management units or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE

TA-59, Occupational Health Site

Industrial hygiene, environmental surveillance, environmental research and epidemiology activities are conducted in TA-59 (Figure 60).

Units which may be associated with the handling of hazardous constituents (e.g., NPDES outfalls) are believed to be located at this technical area. Specific units identified during the PR/VSI which are suspected of this condition have been identified, where appropriate, as either SWMUs or areas of concern.

SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN: NONE

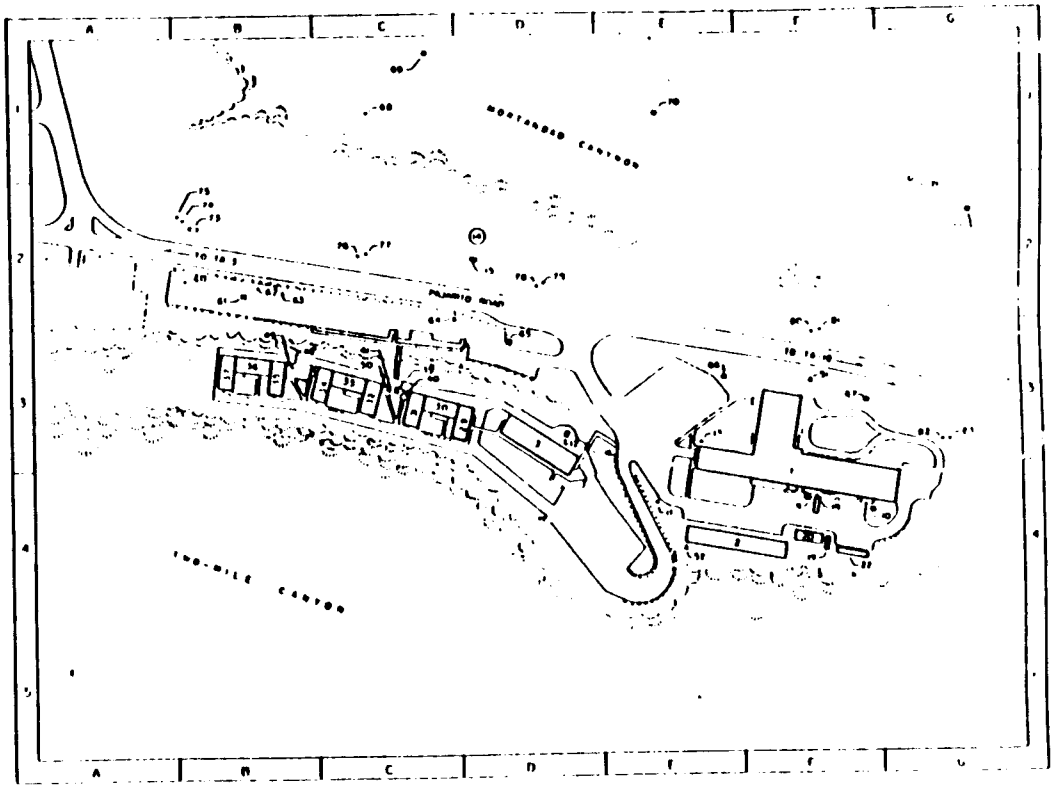


Figure 60

Los Alamos

FACILITIES ENGINEERING DIVISION

STRUCTURE LOCATION PLAN

Other Non-Technical Area Units

There are several component units associated with this broad non-technical area which are suspected of being involved in the potential release of hazardous constituents to the surrounding environment. In addition, these units may also be associated with low levels of radioactivity.

DP ROAD

OTHER AREAS OF CONCERN:

DP Road Tank Farm

LOS ALAMOS AIRPORT

SWMUs:

Airport Landfill ("cold dump")

OTHER AREAS OF CONCERN:

Old Incinerator Building

VII. CONCLUSIONS

GENERAL CONCLUSIONS

An RFA was performed to identify and assess SWMUs at the LANL, Los Alamos, New Mexico. The RFA utilizes a records review, data evaluation, interviews, and a VSI to evaluate the potential for releases of hazardous constituents to the environment from the SWMUs identified during the assessment.

Based on the PR and the VSI, conducted May 18-22, 1987, a total of 775 SWMUs and areas of concern have been identified at the LANL facility. The locations of these SWMUs and areas of concern are shown in their respective technical area descriptions (Section V).

General conditions encountered during the PR/VSI of the LANL facility have influenced the conclusions of this RFA report. These conditions include the following:

1. This facility represents a particularly large area (43 sq. miles), with a topography (finger mesas) which further complicates travel to, from, and within various technical areas. These conditions resulted in not all units being systematically inspected on foot. Specifically, some of the larger areas (e.g., canyons) that were determined during the PR to be suspect sites involving hazardous waste or constituents were only briefly viewed from the best available vantage point during the VSI. In fact, the large spatial expanse of these various suspect affected areas (e.g., in some cases greater than 10 acres) in conjunction with both the immediate absence of visual evidence of contamination at these areas and significant time constraints, directed the VSI team to preclude visual inspection. Instead, visual inspection efforts were directed to technical areas expected to have sites with more salient evidence of waste affected conditions.

2. The possibility of encountering radioactive and/or HE residue conditions exists throughout the LANL facility at sites where hazardous waste and constituents might also be found. These conditions should be considered to represent a significant safety concern for any additional inspection efforts, especially sampling.

3. There are spatially large on-site areas with no visible signs of contamination but, nevertheless, are suspected of having undetermined levels of contamination (e.g., metals) or impact (e.g., radiation). During both the PR and VSI, it was determined that LANL has prepared a Comprehensive Environmental Assessment and Response Program (CEARP) report which, although not provided for the purposes of the RFA program, may contain additional information concerning these sites. In addition, this CEARP report may contain specific details involving characterization and/or remedial efforts at these suspect affected sites. Hence, the CEARP report should be considered if additional characterization is determined to be warranted at these sites.

4. Some units identified during the PR from the various LANL references procured during the file search at Region VI were not visually observed during the VSI, either due to time constraints or the inability of the LANL personnel to identify them.

5. Some areas at the LANL facility have been and may still continue to be involved in the release of hazardous constituents. These areas include:

   - Areas where violation(s) of NPDES permit conditions were identified during the PR and visibly affected conditions were observed during the VSI.

   - Various unlined on-site LANL SWMUs and/or areas of concern which, when considered in conjunction with the active seismic nature of the LANL geologic area, may represent a high potential for release of hazardous constituents to the subsurface.

   - Areas where climatic conditions (i.e., high intensity, short duration rainfall events) may promote surface runoff through unit areas, creating a high potential for release of hazardous constituents to surface waters. To note, purposeful release may be occurring at the PCB storage site (Unit 21.016), where standing water contained within the unit berms is deliberately discharged through a spigot.

The following unit-specific conclusions have been derived following the PR/VSI of the LANL facility. In addition, the LANL unit-specific release potentials to environmental pathways (i.e., soil/groundwater, surface water, air and subsurface gas) is provided in Table 3.

Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
TA - 0						
SWMUs						
0.001	Used oil management area	X				USC-H1, SFA-4
0.002	Sanitary landfill	X				USC-H2, SFA-3
0.003	Temporary storage area	X				USC-H1, SFA-5
0.004-0.006	Three used oil underground storage tanks	X				USC-H1, SFA-4
0.007	Airport landfill "cold" dump	X			X	USC-H2, SFA-3
AOC						
0.008	Boiler condensate tank					USC-L1, SFA-1
0.009	Septic tank #1					USC-H3, SFA-1
0.010	Septic tank #2					USC-H3, SFA-1
0.011	Bailey bridge landfill	X				USC-H2, SFA-1
0.012	Old incinerator building	X		X		USC-M1, SFA-4
TA - 2						
SWMUs						
2.001	Underground waste storage tank					USC-M2
AOC						
2.002	Photoprocessing outfall	PR	PR			USC-H4, SFA-8
2.003-2.005	Three contaminated areas	PR				USC-H2, SFA-2
TA - 3						
SWMUs						
3.001	Drum storage	X				USC-H1, SFA-4
3.002-3.007	Six underground industrial sewer vaults					USC-M2, SFA-1
3.008	West loading dock					USC-M1, SFA-1
3.009-3.010	Two underground stainless steel tanks					USC-L2, SFA-1
3.011-3.012	Two underground concrete tanks					USC-M2, SFA-8

-- Continued --

Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
3.013-3.014	Two underground concrete emergency tanks					USC-M2, SFA-8
3.015-3.016	Two underground emergency storage tanks, wing 3					USC-M2, SFA-8
3.017-3.018	Two underground emergency storage tanks, wing 5					USC-M2, SFA-8
3.019-3.020	Two underground emergency storage tanks, wing 4					USC-M2, SFA-8
3.021-3.022	Two underground emergency storage tanks, wing 2					USC-M2, SFA-8
3.023-3.024	Two pump tanks					USC-M2, SFA-8
3.025	Temporary waste oil storage #1					USC-M2, SFA-1
3.026	Temporary drum storage #1					USC-M1, SFA-1
3.027	Temporary drum storage #2					USC-H3, SFA-1
3.028	Temporary drum storage #3					USC-H3, SFA-1
3.029	Secondary clarifiers #1					USC-M2, SFA-9
3.030	Trickling filter #1					USC-M2, SFA-1
3.031	Dosing siphon #1					USC-M2, SFA-1
3.032	Imhoff tanks #1					USC-L2, SFA-6
3.033	Splitter box, bar screen, and comminutor					USC-L2, SFA-6
3.034-3.035	Two emergency storage tanks, Sigma bldg.					USC-M2, SFA-6
3.036	Satellite drum and tank storage					USC-M2, SFA-1
3.037	Asphalt batch plant-concrete basin	X				USC-H1, SFA-4
3.038	Sand blast shed-drum storage	X				USC-H1, SFA-4
3.039	Chlorine dosing chamber					USC-M2, SFA-6
3.040	Chlorine contact chamber					USC-M2, SFA-6
3.041	Flow weir					USC-L2, SFA-9
3.042	Imhoff tank #2					USC-M2, SFA-9
3.043	Dosing siphon #2					USC-L2, SFA-9
3.044	Secondary clarifiers #2					USC-M2, SFA-9
3.045	Trickling filter #2					USC-M2, SFA-9
3.046	Sludge drying beds #1	X				USC-M1, SFA-5
3.047	Sludge drying beds #2	X				USC-M1, SFA-5
3.048	Temporary waste oil storage #2	X	X			USC-H1, SFA-3

-- Continued --

Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
3.049	Small engine oil drums					USC-M2, SFA-1
3.050	Temporary drum storage #4	X	X			USC-H1-SFA-5
3.051	Spent battery storage	X				USC-H1, SFA-5
3.052	Kerosene waste drum					USC-M2, SFA-6
3.053	Motorpool floor drains					USC-M2, SFA-1
3.054-3.057	Four oil/water separators					USC-M2, SFA-1
3.058	Oil/water separator with drain					USC-M2, SFA-1
3.059	Underground storage tank #1					USC-M2, SFA-8
3.060	Less than 90-day misc. storage					USC-M2, SFA-6
3.061	Lawn mower storage area					USC-M2, SFA-6
3.062	Salvage yard	X				USC-M1, SFA-5
3.063	Solar pond at Sigma Mesa					USC-H3, SFA-2
3.064	Temporary chemical waste storage	PR				USC-H3, SFA-7
3.065-3.066	Two sumps	PR				USC-H3, SFA-7
AOC						
3.067	Capacitor storage	PR				USC-H3, SFA-2
3.068	Waste oil storage					USC-H3, SFA-1
3.069-3.070	Two waste storage tanks with sumps					USC-H3, SFA-1
3.071	Underground storage tank with sump	PR				USC-H3, SFA-7
3.072	Firing pits	PR				USC-H3, SFA-7
3.073	Pesticide storage	X				USC-H1, SFA-5
3.074-3.076	Three gas service station underground tanks	X				USC-M2, SFA-1
3.077-3.079	Three electroplating tanks, Sigma bldg.					USC-L1, SFA-1
3.080-3.081	Two asphalt batch plant storage tanks	X				USC-M1, SFA-4
3.082-3.083	Two cool asphalt storage tanks	X				USC-M1, SFA-4
3.084-3.085	Two insulated storage tanks	X				USC-M1, SFA-4
3.086	Empty drum storage	PR				USC-L2, SFA-9
3.087-3.088	Two outfalls	PR	PR			USC-H4, SFA-8
3.089	Cooling tower	PR				USC-H3, SFA-2
3.090	Vacuum pump	PR				USC-H3, SFA-2
3.091	Van de Graaf accelerator	PR				USC-H3, SFA-2
3.092	Burning site	PR		PR		USC-H3, SFA-7

-- Continued --

Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
3.093	Machine shop/main shops					USC-H3, SFA-7
3.094	Printed circuit board shop					USC-H3, SFA-7
3.095	Container storage	PR				USC-H3, SFA-7
3.096	Lithium hydride, Rm. 118-A					USC-H3, SFA-7
3.097	Central shipping/receiving					USC-H3, SFA-7
TA - 4						
SWMUs						
4.001	Landfill	PR				USC-H3, SFA-2
AOC						
4.002	Photoprocessing outfall	PR				USC-H4, SFA-8
4.003	Firing site	PR				USC-H3, SFA-5
TA - 5						
SWMUs						
5.001	Landfill	PR				USC-H3, SFA-2
AOC						
5.002	Outfall	PR	PR			USC-H4, SFA-2
5.003-5.004	Two firing sites	PR				USC-H3, SFA-2
TA - 6						
SWMUs						
6.001-6.002	Two area F material disposal pits	PR				USC-M1, SFA-1
6.003	Waste oil drum storage	X	X			USC-M1, SFA-4
6.004-6.005	Two septic tanks and sumps/outfall	PR	PR			USC-H3, SFA-7
6.006	Partially covered tank	PR				USC-M1, SFA-7
AOC						
6.007	Concrete bowl					USC-M1, SFA-7
6.008	Tank					USC-L2, SFA-7
6.009	Septic tank					USC-M2, SFA-1
6.010	Stored capacitors and waste oil drums	PR				USC-H3, SFA-7
6.011-6.014	Four contaminated disposal areas	PR				USC-H3, SFA-7

-- Continued --

Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
TA - 7						
SWMUs						
7.001	Gomez site burn pit	X		PR		USC-H1, SFA-3
AOC						
7.002-7.003	Two contaminated areas	PR				USC-H3, SFA-7
TA - 8						
SWMUs						
8.001	Area Q landfill	PR				USC-H3, SFA-7
AOC						
8.002	Old lagoon	X				USC-M1, SFA-1
8.003	GT anchor site west	PR				USC-H3, SFA-7
8.004	Oxidation pond	X				USC-M1, SFA-7
TA - 9						
SWMUs						
9.001-9.002	Two temporary satellite drum storage areas					USC-M1, SFA-1
9.003	Sumps from high explosive processing					USC-M1, SFA-1
9.004	Aluminum settling basin	PR				USC-H3, SFA-7
9.005-9.019	Fifteen waste settling tanks	PR				USC-M1, SFA-7
AOC						
9.020-9.022	Oxidation pond and two sand filters					USC-H3, SFA-1
9.023-9.026	Four outfall/sump areas	PR	PR			USC-H4, SFA-7
TA - 10						
SWMUs						
10.001	Pit and drainage field	X				USC-M1, SFA-1
AOC						
10.002	Bayo Canyon	PR				USC-H2, SFA-2

-- Continued --

Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
TA - 11						
SWMUs						
11.001-11.002	Two sand burn pads	X		X		USC-H1, SFA-3
11.003-11.005	Three sumps					USC-L2, SFA-1
11.006	Magazine					USC-M1, SFA-1
11.007	Testing area	PR				USC-H3, SFA-7
AOC						
11.008	Firing sites	PR				USC-H3, SFA-7
11.009	Septic tank					USC-M1, SFA-7
TA - 12						
SWMUs						
12.001	L-site burn site	PR				USC-H3, SFA-6
AOC						
12.002	L-site firing site	PR				USC-H3, SFA-6
12.003	Strontium research area	PR				USC-H3, SFA-1
12.004-12.005	Two firing pits	PR				USC-H3, SFA-7
TA - 13						
SWMUs						
None						
AOC						
13.001	Contaminated area	PR				USC-H3, SFA-7
TA - 14						
SWMUs						
14.001-14.002	Two thermal treatment facilities	X		PR		USC-H1, SFA-6
14.003	Temporary drum storage					USC-H3, SFA-5
14.004	Incinerator	PR		PR		USC-H3, SFA-7
14.005	High explosive sump					USC-H3, SFA-7

-- Continued --

Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
AOC						
14.006	Closed chamber					USC-H3, SFA-7
TA - 15						
SWMUs						
15.001	Area N material disposal site	PR				USC-H3, SFA-6
15.002	Acid sump					USC-M2, SFA-7
15.003	Thermal treatment facility	PR				USC-H3, SFA-7
15.004	Landfill near 184	PR				USC-H2, SFA-7
AOC						
15.005	Septic tank; Outfall J	PR				USC-H4, SFA-7
15.006	Firing site	X	X			USC-H1, SFA-4
15.007	Ector site firing area	X	X			USC-H1, SFA-4
15.008-15.016	Nine contaminated areas	PR				USC-H3, SFA-7
15.017	EF-site	PR				USC-H3, SFA-7
15.018-15.021	Four oil storage tanks; Max Planck					USC-M2, SFA-6
TA - 16						
SWMUs						
16.001-16.004	Four evaporation ponds	X				USC-H2, SFA-3
16.005	Lagoon #1	X				USC-H2, SFA-3
16.006	Lagoon #2	X				USC-H2, SFA-3
16.007	Loading dock of bldg. 300					USC-L2, SFA-6
16.008-16.009	Burn pads #1 and #2					USC-M1, SFA-6
16.010	Vacuum truck					USC-L2, SFA-1
16.011	Incinerator	X		X		USC-M1, SFA-1
16.012	HE sludge sump					USC-M1, SFA-6
16.013	S-site sumps	X				USC-M1, SFA-3
16.014	Temporary storage area					USC-M1, SFA-6
16.015	Sand burn pad #3	PR		PR		USC-M1, SFA-6
16.016	Sand burn pad #4	PR		PR		USC-M1, SFA-6
16.017	Sand filter #1					USC-M1, SFA-6
16.018	Sand filter #2					USC-M1, SFA-6

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Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
16.019	Lagoon #3					USC-M1, SFA-8
16.020-16.021	Two solvent burn pads	X	X	X		USC-H1, SFA-4
16.022-16.027	Six solvent sumps					USC-M1, SFA-6
16.028**	Area P landfill	X				USC-H1, SFA-8
16.029	Old ponds	PR				USC-H3, SFA-7
AOC						
16.030	Septic tank					USC-H3, SFA-7
16.031-16.033	Three burn pit areas	PR				USC-H3, SFA-7
16.034	Hydraulic fluid drum storage	X				USC-H1, SFA-5
16.035	U-site asbestos storage					USC-H3, SFA-7
16.036	Several contaminated areas	PR				USC-H3, SFA-7
16.037	Firing sites	PR				USC-H3, SFA-7
16.038-16.039	Sumps and outfalls	PR				USC-H3, SFA-7
16.040	Dry wells	PR				USC-H3, SFA-7
16.041-16.046	Six storage tanks					USC-H3, SFA-7
16.047	Shafts	PR				USC-H3, SFA-7
16.048	Wastewater treatment plant					USC-H3, SFA-7
16.049-16.060	12 NPDES outfalls	PR	PR			USC-H3, SFA-7
16.061	Chemical storage	PR				USC-H3, SFA-7
16.062	S-site	PR				USC-H3, SFA-7
TA - 18						
SWMUs						
18.001-18.002	Two lagoons	PR				USC-M1, SFA-9
18.003-18.004	Two waste pits	PR				USC-H3, SFA-7
18.005-18.066	62 shafts; Area T	PR				USC-H3, SFA-7
18.067-18.070	Four absorption beds; Area T	PR				USC-H3, SFA-7
18.071-18.072	Two Area U absorption beds	PR				USC-H3, SFA-7
18.073-18.075	Three Area V absorption beds	PR				USC-H3, SFA-7
18.076	Gamma site trench	X				USC-H2, SFA-6

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Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
AOC						
18.077	Septic tank					USC-H3, SFA-7
18.078-18.080	Three firing sites	PR				USC-H3, SFA-7
18.081	Photoprocessing drain fields	PR				USC-H3, SFA-7
18.082	Underground storage tanks					USC-H3, SFA-7
TA - 19						
SWMUs						
None						
AOC						
19.001	Underground septic tank					USC-M2, SFA-9
TA - 20						
SWMUs						
20.001-20.003	Three disposal pits	PR				USC-H3, SFA-7
20.004	Inactive firing site	PR				USC-H2, SFA-3
AOC						
20.005	Steel-lined pit					USC-H3, SFA-7
20.006	Storage in Indian cave	X				USC-H3, SFA-7
TA - 21						
SWMUs						
21.001	Area B landfill	X				USC-H2, SFA-3
21.002	Area T landfill	X				USC-H2, SFA-3
21.003-21.004	Two Area U absorption beds	X				USC-H2, SFA-3
21.005	Area V landfill	X				USC-H2, SFA-3
21.006-21.009	Four vertical storage tanks; Wastewater treatment facility					USC-L2, SFA-1
21.010-21.013	Four clarifiers; wastewater treatment facility					USC-L2, SFA-1
21.014-21.015	Two secondary containment tanks					USC-L2, SFA-1
21.016	PCB storage	X	X			USC-H4, SFA-8

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Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
21.017	Area A underground storage tanks					USC-H2, SFA-3
	"Generals" storage tanks; landfill	X				USC-H2, SFA-3
21.018	Drum storage area					USC-H3, SFA-7
21.019	Acid digester pit	X				USC-H3, SFA-7
21.020-21.021	Two container storage areas					USC-H3, SFA-7
21.022	Temporary waste storage					USC-H3, SFA-7
AOC						
21.023	Septic tanks					USC-H3, SFA-7
21.024	Surface disposal areas	PR				USC-H3, SFA-7
21.025-21.028	Four sludge beds; wastewater treatment facility					USC-L2, SFA-9
21.029	Abandoned drums					USC-M1, SFA-6
21.030-21.036	Seven contaminated areas	PR				USC-H3, SFA-7
21.037-21.043	Seven underground storage tanks					USC-H3, SFA-7
21.044	Plutonium processing plant					USC-H3, SFA-7
21.045	Robinson Coke storage					USC-L1, SFA-1
21.046	Extended aeration tank					USC-H3, SFA-7
21.047	DP Road tank farm					USC-M4, SFA-6
TA - 22						
SWMUs						
22.001	High explosive storage facilities					USC-L2, SFA-7
22.002	Less than 90-day storage					USC-H1, SFA-5
22.003-22.005	Three storage areas					USC-LAC SFA-1
22.006	Dry wells	PR				USC-H3, SFA-3
22.007	Pit	PR				USC-H3, SFA-7
22.008	Sumps					USC-H3, SFA-7
22.009	Disposal pit	PR				USC-H3, SFA-7
22.010-22.011	Two Wells	PR				USC-H3, SFA-7
AOCs						
22.012	Septic tanks					USC-H3, SFA-7
22.013-22.014	Two outfalls	PR	PR			USC-H4, SFA-7

-- Continued --

Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
TA - 26						
SWMUs						
None						
AOCs						
26.001	Old vault area	PR				USC-H3, SFA-7
TA - 27						
SWMUs						
27.001	Burial pit with live ammunition	PR				USC-H3, SFA-7
AOCs						
27.002	Firing pits	PR				USC-H3, SFA-7
27.003	Impact zone	PR				USC-H3, SFA-7
27.004	Contaminated roadside area	X				USC-H3, SFA-7
TA - 31						
SWMUs						
31.001	Septic tank					USC-M4, SFA-6
AOCs						
31.002	East receiving yard					USC-L2, SFA-6
TA - 32						
SWMUs						
None						
AOCs						
32.001-32.002	Two septic tanks MRL-8					USC-M1, SFA-6
32.003	Septic tank outfall	PR	PR			USC-H4, SFA-7
32.004	Medical research lab					USC-H3, SFA-7

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Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
TA - 33						
SWMUs						
33.001	Drum storage in vehicle maintenance area	X	X			USC-H1, SFA-4
33.002	Septic tank					USC-M3, SFA-9
33.003	Waste oil storage	X				USC-H1, SFA-5
33.004-33.005	Two material disposal shafts; Area D					USC-M1, SFA-6
33.006	Drilling storage yard					USC-M1, SFA-6
33.007	Drum storage area					USC-M1, SFA-6
33.008	Landfill areas	PR				USC-H3, SFA-7
33.009	Disposal trench near Area E	PR				USC-H3, SFA-7
33.010	Burning pits	PR				USC-H3, SFA-7
33.011	Area K	PR				USC-H3, SFA-7
AOCs						
33.012	Septic tanks					USC-H3, SFA-7
33.013	Area E detonation chamber					USC-L1, SFA-1
33.014	"Suspect trench"	X				USC-H2, SFA-3
33.015	Operation releases and accidental spills	PR				USC-H3, SFA-7
33.016-33.018	Three outfalls	PR	PR			USC-H4, SFA-7
33.019	Firing sites	PR				USC-H3, SFA-7
TA - 35						
SWMUs						
35.001-35.002	Two vertical shafts; Area W disposal	PR				USC-H4, SFA-2
35.003	Chemical treatment area, formerly Area W	X				USC-H3, SFA-3
35.004	Satellite storage at bldg. 58					USC-H1, SFA-5
35.005-35.006	Two bermed basins	X				USC-L2, SFA-1
35.007	Building 2 - Area X	X				USC-H1, SFA-3
35.008	Oil storage and treatment areas	PR				USC-H3, SFA-7
35.009	Surface disposal areas	PR				USC-H3, SFA-7

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Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
AOC						
35.010	Septic tanks, waste tanks, and lines					USC-H3, SFA-7
35.011	Capacitor storage area					USC-H3, SFA-7
35.012	Surface and subsurface piping and ducts					USC-H3, SFA-7
35.013-35.015	Three lagoons	PR				USC-H3, SFA-7
35.016-35.019	Four sand filters					USC-L2, SFA-9
35.020	Underground storage tank					USC-M2, SFA-1
35.021	Mobile oil recycling trailer					USC-L2, SFA-1
35.022-35.023	Two outfalls	PR	PR			USC-H4, SFA-7
35.024-35.025	Two overflow tanks					USC-M1, SFA-6
TA - 36						
SWMUs						
36.001	Minie site bunker boneyard	X				USC-H2, SFA-3
36.002	Burning trench	X				USC-H2, SFA-3
36.003	Sump pit					USC-H3, SFA-7
36.004	Septic tanks					USC-H3, SFA-7
36.005	Area AA	PR				USC-H3, SFA-7
AOC						
36.006	Burning areas	PR				USC-H3, SFA-7
36.007	Photoprocessing outfall	PR	PR			USC-H4, SFA-7
36.008-36.009	Two firing sites	PR				USC-H3, SFA-7
36.010	Thermal treatment facility					USC-H3, SFA-7
TA - 37						
SWMUs						
None						
AOC						
37.001	Magazine Area C					USC-H3, SFA-7

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Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
TA - 39						
SWMUs						
39.001	Active trench	X				USC-H2, SFA-3
39.002	Drum storage area	X	X			USC-H1, SFA-4
39.003	Oil storage area	X	X			USC-H1, SFA-4
39.004-39.005	Two alleged burial pits	PR				USC-H2, SFA-3
39.006	Photoprocessing septic tanks					USC-H3, SFA-7
AOC						
39.007-39.008	Firing pad/burn area	PR				USC-H3, SFA-7
39.009	Incinerator		X			USC-H3, SFA-7
TA - 40						
SWMUs						
40.001	Magazine 2, container storage area					USC-L1, SFA-1
40.002	Temporary storage area					USC-M1, SFA-6
40.003	Scrap material disposal site	X				USC-H2, SFA-3
40.004	Burn pit; DF site	PR				USC-H3, SFA-7
40.005	Hazardous waste areas	PR				USC-H3, SFA-7
40.006	Sump					USC-H3, SFA-7
AOC						
40.007	Outfalls	PR	PR			USC-H4, SFA-7
40.008	Gas gun facility	X	X			USC-H1, SFA-4
TA - 41						
SWMUs						
41.001	Septic tanks					USC-H3, SFA-7
41.002	Chlorinator					USC-M1, SFA-6
41.003	Imhoff tanks					USC-M1, SFA-6
41.004	Drying beds					USC-M1, SFA-6
AOC						
41.005	Contaminated area	PR				USC-H3, SFA-7

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Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
TA - 43						
SWMUs						
None						
AOC						
43.001	Sealed underground piping					USC-H3, SFA-7
TA - 46						
SWMUs						
46.001-46.002	Two acid storage tanks					USC-M1, SFA-6
46.003	Lagoon					USC-L2, SFA-1
46.004	Sand filter					USC-L2, SFA-1
46.005	Waste acid tank					USC-M1, SFA-6
46.006	Drum storage #1					USC-M2, SFA-6
46.007	Septic tank and drains					USC-H3, SFA-7
46.008	Drum storage #2					USC-H3, SFA-7
46.009	Sumps					USC-H3, SFA-7
AOC						
46.010	Experimental solar ponds					USC-H3, SFA-7
46.011	WA site	PR				USC-H3, SFA-7
46.012	Temporary drum storage					USC-M1, SFA-6
46.013-46.016	Four outfalls	PR	PR			USC-H4, SFA-7
46.017	Spills and releases	PR				USC-H3, SFA-7
TA - 49						
SWMUs						
49.001	Experimental shaft	PR				USC-H3, SFA-2
49.002	Debris pit, disposal area AB	PR				USC-H3, SFA-6
49.003-49.004	Former radiochemistry lab drainfield and seepage pit	PR				USC-H2, SFA-6
AOC						
49.005	Area 2	X				USC-H2, SFA-3
49.006	Trash burning area			X		USC-M1, SFA-6

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Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
TA - 50						
SWMUs						
50.001	Neutralization tank #1					USC-L1, SFA-1
50.002	Clariflocculator					USC-L1, SFA-1
50.003	Treated waste storage tank					USC-L1, SFA-1
50.004-50.005	Two sludge storage tanks					USC-L1, SFA-1
50.006-50.007	Two clariflocculators					USC-L1, SFA-1
50.008-50.009	Two flash mixers					USC-L1, SFA-1
50.010-50.011	Two gravity filters					USC-L1, SFA-1
50.012	Rotary drum vacuum filter					USC-L1, SFA-1
50.013	pH adjustment tank					USC-L1, SFA-1
50.014	Neutralization tank #2					USC-L1, SFA-1
50.015-50.018	Four ion exchange columns					USC-L1, SFA-1
50.019	Decant storage tank					USC-L1, SFA-1
50.020-50.021	Two prefilters					USC-L1, SFA-1
50.022	Wiped film evaporator					USC-L1, SFA-1
50.023	Evaporator storage tank					USC-L1, SFA-1
50.024	Cementation unit					USC-L1, SFA-6
50.025	Temporary storage area					USC-L1, SFA-8
50.026*	Batch waste treatment tank					USC-L1, SFA-8
50.027	Batch waste treatment blowdown tank					USC-M1, SFA-6
50.028	Electroplating storage tank					USC-M2, SFA-1
50.029	Raw-waste storage tank					USC-M2, SFA-1
50.030-50.031	Two treated waste storage tanks					USC-L2, SFA-1
50.032	Sludge storage tank					USC-M1, SFA-6
50.033	Temporary storage					USC-M1, SFA-6
50.034	Area C landfill	X				USC-H3, SFA-7
50.035*	Transuranic waste incinerator			X		USC-L1, SFA-1
50.036	Feed area for incinerator					
AOC						
50.037	Underground storage tanks					USC-H3, SFA-7
50.038-50.039*	Batch treatment storage areas					USC-H3, SFA-7

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Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
TA - 51						
SWMUs						
None						
AOC						
51.001	Former high explosive magazine					USC-M1, SFA-6
TA - 52						
SWMUs						
52.001	Filter pit	PR				USC-H3, SFA-7
52.002	Drains, pipes, sumps, tanks					USC-H3, SFA-7
AOC						
52.003	Outfalls	PR	PR			USC-H4, SFA-7
52.004	Reactor development site					USC-H3, SFA-7
TA - 53						
SWMUs						
53.001	Temporary (less than 90-day) storage					USC-M1, SFA-6
53.002-53.004	Three oxidation ponds, sewage treatment plant	X	X			USC-H2, SFA-3
53.005	Disposal pit	PR				USC-H3, SFA-7
53.006	Waste storage tanks					USC-H3, SFA-7
53.007	Container storage					USC-H3, SFA-7
AOC						
53.008	Underground storage tanks					USC-H3, SFA-7
53.009	Oxidation pond boneyard					USC-M1, SFA-6
53.010	Cooling tower outfalls	PR	PR			USC-H4, SFA-7

-- Continued --

Ta 3. Release Potential to Environmental Receptors m LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
TA - 54						
SWMUs						
54.001	Drum storage spray area	X	X	X		USC-H1, SFA-4
54.002	Drum storage area	X				USC-L2, SFA-1
54.003-54.004**	Pits 32 and 33, Area G	X				USC-H2, SFA-8
54.005**	Area H landfill	X	X			USC-H2, SFA-8
54.006	Drum storage; Area J					USC-H1, SFA-4
54.007	Greater than 90-day storage/treatment					USC-L2, SFA-1
54.008-54.011	Land disposal, pits A to D, underground and portable tank	X				USC-H2, SFA-3
54.012-54.037	L-shaped shafts and other shafts	X				USC-H2, SFA-3
54.038	L-shaped shaft	X				USC-H2, SFA-3
54.039	Drum crusher	X				USC-H1, SFA-4
54.040-54.044*	Five treatment areas	X	X			USC-H3, SFA-8
54.045	Cylinder storage area					USC-M1, SFA-6
54.046	Shaft storage, special waste					USC-L2, SFA-1
54.047	Storage drums	X	X			USC-H1, SFA-4
54.048-54.049	Two active pits; Area J landfill	X				USC-H2, SFA-3
54.050-54.052	Three inactive pits, Area J landfill	X				USC-H2, SFA-3
54.053-54.054	Two active shafts; Area J landfill	X				USC-H2, SFA-3
54.055	Secondary containment for waste treatment tanks; Area L	X				USC-H3, SFA-7
54.056**	Area L landfill	X			X	USC-H3, SFA-7

-- Continued --

Table 3. Release Potential to Environmental Receptors from LANL Units.

Unit Number	Name	Pathways: Soil/GW*	SW†	Air#	SSG+	Comments***
AOC						
54.057	Underground tank					USC-M2, SFA-6
54.058	Pad 4 of 1, 2, 3, 4	X				USC-M1, SFA-3
54.059-54.066	Eight trenches; Area G	X				USC-H3, SFA-7
54.067-54.185	120 shafts; Area G	PR				USC-H3, SFA-7

* Release potential to soil/groundwater.
† Release potential to surface water.
\# Release potential to air (either gaseous or wind-borne particulates).
\+ Release potential to subsurface gas.
PR - These were unobserved, potential units, whose likelihood for the release of hazardous waste or constituents is suggested mainly on the information collected during the PR. More accurate release potential determinations will be considered following further investigation (e.g., determine if hazardous waste or constituents are present).
X - RCRA regulated unit
XX - Unit for which a closure plan is recognized by EPA to have been submitted. To note, this includes an unidentified PR/VSI TA-16 surface impoundment.
*** Comments refer to Unit Specific Conclusions (USC, Section VII), and Suggested Further Action (SFA, Section VIII). For example: USC-H2, SFA-4, refers to High Potential for Release #2 and Suggested Further Action #4.

UNIT-SPECIFIC CONCLUSIONS

UNITS WITH A HIGH POTENTIAL FOR RELEASE

1. There is a high potential for release associated with these units based on visible conditions observed during the VSI (e.g., surface stains):

TA - 0	
0.001	Used oil management area
0.003	Temporary storage area
0.004 - 0.006	Three used oil underground storage tanks
TA - 3	
3.001	Drum storage
3.037	Asphalt batch plant - concrete basin
3.038	Sand blast shed - drum storage
3.048	Temporary waste oil storage #2
3.050	Temporary drum storage #4
3.051	Spent battery storage
3.073	Pesticide storage
TA - 6	
6.003	Waste oil drum storage
TA - 7	
7.001	Gomez site burn pit
TA - 11	
11.001-11.002	Two sand burn pads
TA - 14	
14.001 - 14.002	Two thermal treatment facilities
TA - 15	
15.006	Firing site
15.007	Ector site firing area
TA - 16	
16.020 - 16.021	Two solvent burn pads
16.028	Area P landfill
16.034	Hydraulic fluid drum storage
TA - 22	
22.002	Less than 90-day storage
TA - 33	
33.001	Drum storage in vehicle maintenance area
33.003	Waste oil storage
TA - 35	
35.004	Satellite storage at Building 58
35.007	Building 2 - Area X

TA - 39	
39.002	Drum storage area
39.003	Oil storage area
TA - 40	
40.008	Gas gun facility
TA - 54	
54.001	Drum storage spray area
54.006	Drum storage; Area J
54.039	Drum crusher
54.047	Storage drums

HIGH-2

2. There is a high potential for release associated with these units based on past waste management practices (e.g., waste in direct contact with soil):

TA - 0:	
0.002	Sanitary landfill
0.007	Airport landfill "cold" dump
0.011	Bailey bridge landfill
TA - 10	
10.002	Bayo Canyon
TA - 15	
15.004	Landfill near 184
TA - 16	
16.001 - 16.004	4 evaporation ponds
16.005	Lagoon #1
16.006	Lagoon #2
TA - 18	
18.076	Gamma site trench
TA - 20	
20.004	Inactive firing site
TA - 21	
21.001	Area B landfill
21.002	Area T landfill
21.003 - 21.004	Two area U absorption beds
21.005	Area V Landfill
21.017	Area A underground storage tanks "Generals" storage tanks; landfill
TA - 33:	
33.014	"Suspect trench"
TA - 36	
36.001	Minie site bunker boneyard
36.002	Burning trench
TA - 39	
39.001	Active trench
39.004 - 39.005	Two alleged burial pits
TA - 40	
40.003	Scrap material disposal site

TA - 49	
49.003 - 49.004	Former radiochemistry lab drainfield and seepage pit
49.005	Area 2
TA - 53	
53.002 - 53.004	Three oxidation ponds, sewage treatment plant
TA - 54	
54.003 - 54.004	Pits 32 and 33; Area G
54.005	Area H Landfill
54.008 - 54.011	Land disposal, Pits A to D, underground and portable tanks
54.012 - 54.037	L-shaped shafts and other shafts
54.038	L-shaped shaft
54.048 - 54.049	Two active pits; Area J landfill
54.050 - 54.052	Three inactive pits; Area J landfill
54.053 - 54.054	Two active shafts; Area J landfill

HIGH-3

3. Units have been identified during the PR (e.g., excerpts from CEARP material) that may be associated with potential release conditions. Although there were no obvious signs of a release noted during the VSI, there may be a high potential for release associated with the units if hazardous constituents (e.g., heavy metals) are present. Consequently, more substantive conclusions might be determined following further unit characterization efforts. These units include:

TA - 0	
0.009	Septic tank #1
0.010	Septic tank #2
TA - 2	
2.003 - 2.005	Three contaminated areas
TA - 3	
3.027	Temporary drum storage #2
3.028	Temporary drum storage #3
3.063	Solar pond at Sigma Mesa
3.064	Temporary chemical waste storage
3.065 - 3.066	Two sumps
3.067	Capacitor storage
3.068	Waste oil storage
3.069 - 3.070	Two waste storage tanks with sumps
3.071	Underground storage tank with sump
3.072	Firing pits
3.089	Cooling tower
3.090	Vacuum pump
3.091	Van de Graaf accelerator
3.092	Burning site
3.093	Machine shop/main shops
3.094	Printed circuit board shop
3.095	Container storage
3.096	Lithium hydride, Rm. 118-A
3.097	Central shipping/receiving
TA - 4	
4.001	Landfill
4.003	Firing site
TA - 5	
5.001	Landfill
5.003 - 5.004	Two firing sites
TA - 6	
6.004 - 6.005	Two septic tanks and sumps/outfall
6.010	Stored capacitors and waste oil drums
6.011 - 6.014	Four contaminated disposal areas
TA - 7	
7.002 - 7.003	Two contaminated areas

TA - 8	
8.001	Area Q landfill
8.003	GT anchor site west
TA - 9	
9.004	Aluminum settling basin
9.020 - 9.022	Oxidation pond and two sand filters
TA - 11	
11.007	Testing area
11.008	Firing sites
TA - 12	
12.001	L-site burn site
12.002	L-site firing site
12.003	Strontium research area
12.004 - 12.005	Two firing pits
TA - 13	
13.001	Contaminated area
TA - 14	
14.003	Temporary drum storage
14.004	Incinerator
14.005	High explosives sump
14.006	Closed chamber
TA - 15	
15.001	Area N material disposal site
15.003	Thermal treatment facility
15.008 - 15.016	Nine contaminated areas
15.017	EF-Site
TA - 16	
16.029	Old ponds
16.030	Septic tank
16.031 - 16.033	Three burn pit areas
16.035	U-Site asbestos storage
16.036	Several contaminated areas
16.037	Firing sites
16.038 - 16.039	Sumps and outfalls
16.040	Dry wells
16.041 - 16.046	Six storage tanks
16.047	Shafts
16.048	Wastewater treatment plant
16.049 - 16.060	12 NPDES outfalls
16.061	Chemical storage
16.062	S-site

TA - 18	
18.003 - 18.004	Two waste pits
18.005 - 18.066	62 shafts; Area T
18.067 - 18.070	Four absorption beds; Area T
18.071 - 18.072	Two Area U absorption beds
18.073 - 18.075	Three Area V absorption beds
18.077	Septic tank
18.078 - 18.080	Three firing sites
18.081	Photoprocessing drain fields
18.082	Underground storage tanks
TA - 20	
20.001 - 20.003	Three disposal pits
20.005	Steel-lined pit
20.006	Storage in Indian cave
TA - 21	
21.018	Drum storage area
21.019	Acid digester pit
21.020 - 21.021	Two container storage areas
21.022	Temporary waste storage
21.023	Septic tanks
21.024	Surface disposal areas
21.030 - 21.036	Seven contaminated areas
21.037 - 21.043	Seven underground storage tanks
21.044	Plutonium processing plant
21.046	Extended aeration tank
TA - 22	
22.006	Dry wells
22.007	Pit
22.008	Sumps
22.009	Disposal pit
22.010 - 22.011	Two wells
22.012	Septic tanks
TA - 26	
26.001	Old vault area
TA - 27	
27.001	Burial pit with live ammunition
27.002	Firing pits
27.003	Impact zone
27.004	Contaminated roadside area
TA - 32	
32.004	Medical research lab
TA - 33	
33.008	Landfill areas
33.009	Disposal trench near Area E
33.010	Burning pits

33.011	Area K
33.012	Septic tanks
33.015	Operation releases and accidental spills
33.019	Firing sites
TA - 35	
35.003	Chemical treatment area, formerly Area W
35.008	Oil storage and treatment areas
35.009	Surface disposal areas
35.010	Septic tanks, waste tanks, and lines
35.011	Capacitor storage area
35.012	Surface and subsurface piping and ducts
35.013 - 35.015	Three lagoons
TA - 36	
36.003	Sump pit
36.004	Septic tanks
36.005	Area AA
36.006	Burning areas
36.008 - 36.009	Two firing sites
36.010	Thermal treatment facility
TA - 37	
37.001	Magazine Area C
TA - 39	
39.006	Photoprocessing septic tanks
39.007 - 39.008	Firing pad/burn area
39.009	Incinerator
TA - 40	
40.004	Burn pit; DF site
40.005	Hazardous waste areas
40.006	Sump
TA - 41	
41.001	Septic tanks
41.005	Contaminated area
TA - 43	
43.001	Sealed underground piping
TA - 46	
46.007	Septic tank and drains
46.008	Drum storage #2
46.009	Sumps
46.010	Experimental solar ponds
46.011	WA site
46.017	Spills and releases
TA - 49	
49.001	Experimental shaft
49.002	Debris pit, disposal Area AB

TA - 50	
50.037	Underground storage tanks
50.038 - 50.039	Batch treatment storage areas
TA - 52	
52.001	Filter pit
52.002	Drains, pipes, sumps, tanks
52.004	Reactor development site
TA - 53	
53.005	Disposal pit
53.006	Waste storage tanks
53.007	Container storage
53.008	Underground storage tanks
TA - 54	
54.040 - 54.044	Five treatment areas
54.055	Secondary containment for waste treatment tanks; Area L
54.056	Area L landfill
54.059 - 54.066	Eight trenches; Area G
54.067 - 54.185	120 shafts; Area G

HIGH-4

4. The outfalls at the LANL facility have been identified to be involved in numerous past violations (Table 1). If hazardous constituents are present in the outfall effluent, there may be a high release potential from these units. These outfalls include:

TA - 2 2.002	Photoprocessing outfall
TA - 3 3.087 - 3.088	Two outfalls
TA - 4 4.002	Photoprocessing outfall
TA - 5 5.002	Outfall
TA - 9 9.023 - 9.026	Four outfall/sump areas
TA - 15 15.005	Septic tank; Outfall J
TA - 21 21.016	PCB storage
TA - 22 22.013 - 22.014	Two outfalls
TA - 32 32.003	Septic tank outfall
TA - 33 33.016 - 33.018	Three outfalls
TA - 35 35.001 - 35.002 35.022 - 35.023	Two vertical shafts; Area W disposal Two outfalls
TA - 36 36.007	Photoprocessing outfall
TA - 40 40.007	Outfalls
TA - 46 46.013 - 46016	Four outfalls
TA - 52 52.003	Outfalls
TA - 53 53.010	Cooling tower outfalls

UNITS WITH A MODERATE POTENTIAL FOR RELEASE

1. There is a moderate potential for release from these units based on visual evidence obtained during the \SI (e.g., sloppy housekeeping, unit design). Precipitation events may promote the generation of contaminant laden surface runoff onto adjacent areas. These units include:

TA - 0	
0.012	Old incinerator building
TA - 3	
3.008	West loading dock
3.026	Temporary drum storage #1
3.046	Sludge drying beds #1
3.047	Sludge drying beds #2
3.062	Salvage yard
3.080 - 3.081	Two asphalt batch plant storage tanks
3.082 - 3.083	Two cool asphalt storage tanks
3.084 - 3.085	Two insulated storage tanks
TA - 6	
6.001 - 6.002	Two area F material disposal pits
6.006	Partially covered tank
6.007	Concrete bowl
TA - 8	
8.002	Old lagoon
8.004	Oxidation pond
TA - 9	
9.001 - 9.002	Two temporary satellite drum storage areas
9.003	Sumps from high explosive processing
9.005 - 9.019	Fifteen waste settling tanks
TA - 10	
10.001	Pit and drainage field
TA - 11	
11.006	Magazine
11.009	Septic tank
TA - 16	
16.008 - 16.009	Burn pads #1 and #2
16.011	Incinerator
16.012	HE sludge sump
16.013	S-site sumps
16.014	Temporary storage area
16.015	Sand burn pad #3
16.016	Sand burn pad #4
16.017	Sand filter #1
16.018	Sand filter #2
16.019	Lagoon #3
16.022 - 16.027	Six solvent sumps

TA - 18	
18.001 - 18.002	Two lagoons
TA - 21	
21.029	Abandoned drums
TA - 32	
32.001 - 32.002	Two septic tanks MRL-8
TA - 33	
33.004 - 33.005	Two material disposal shafts; Area D
33.006	Drilling storage yard
33.007	Drum storage area
TA - 35	
35.024 - 35.025	Two overflow tanks
TA - 40	
40.002	Temporary storage area
TA - 41	
41.002	Chlorinator
41.003	Imhoff tanks
41.004	Drying beds
TA - 46	
46.001 - 46.002	Two acid storage tanks
46.005	Waste acid tank
46.006	Drum storage #1
46.012	Temporary drum storage
TA - 49	
49.006	Trash burning area
TA - 50	
50.028	Electroplating storage tank
50.033	Temporary storage
50.034	Area C landfill
TA - 51	
51.001	Former high explosive magazine
TA - 53	
53.001	Temporary (less than 90 day) storage
53.009	Oxidation pond boneyard
TA - 54	
54.045	Cylinder storage area
54.058	Pad 4 of 1, 2, 3, 4

MOD-2

2. There is a moderate potential for release associated with these units as hazardous constituents are suspected of being actively managed. Consequently, further conclusions might be determined following verification of unit integrity. These units include:

TA - 2	
2.001	Underground waste storage tank #1
TA - 3	
3.002 -3.007	Six underground industrial sewer vaults
3.011 -3.012	Two underground concrete tanks
3.013 -3.014	Two underground concrete emergency tanks
3.015 -3.016	Two underground emergency storage tanks, wing 3
3.017 -3.018	Two underground emergency storage tanks, wing 5
3.019 -3.020	Two underground emergency storage tanks, wing 4
3.021 -3.022	Two underground emergency storage tanks, wing 2
3.023 -3.024	Two pump tanks
3.025	Temporary waste oil storage #1
3.029	Secondary clarifiers #1
3.030	Trickling filter #1
3.031	Dosing siphon #1
3.034 - 3.035	Two emergency storage tanks, Sigma bldg.
3.036	Satellite drum and tank storage
3.039	Chlorine dosing chamber
3.040	Chlorine contact chamber
3.042	Imhoff tank #2
3.044	Secondary clarifiers #2
3.045	Trickling filter #2
3.049	Small engine oil drums
3.052	Kerosene waste drum
3.053	Motorpool floor drains
3.054 - 3.057	Four oil/water separators
3.058	Oil/water separator with drain
3.059	Underground storage tank #1
3.060	Less than 90-day misc. storage
3.061	Lawn mower storage area
3.074 - 3.076	Three gas service station underground tanks
TA - 6	
6.009	Septic tank
TA - 15	
15.002	Acid sump
15.018 - 15.021	Four oil storage tanks; Max Planck
TA - 19	
19.001	Underground septic tank
TA - 21	
21.047	DP road rank farm
TA - 31	
31.001	Septic tank

TA - 33	
33.002	Septic tank
TA - 35	
35.020	Underground storage tank 1
TA - 50	
50.029	Raw-waste storage tank
50.030 - 50.031	Two treated waste storage tanks
TA - 54	
54.057	Underground tank

UNITS WITH A LOW POTENTIAL FOR RELEASE

1. There is a low potential for release from these units based on their location inside a building having adequate release controls (e.g., floor drainage system). These units include:

TA - 0	
0.008	Boiler condensate tank
TA - 3	
3.077 - 3.079	Three electroplating tanks; Sigma Building
TA - 21	
21.045	Robinson Coke storage
TA - 22	
22.003 - 22.005	Three storage areas
TA - 33	
33.013	Area E detonation chamber
TA - 40	
40.001	Magazine 2, container storage area
TA - 50	
50.001	Neutralization tank #1
50.002	Clariflocculator
50.003	Treated waste storage tanks
50.004 - 50.005	Two sludge storage tanks
50.006 - 50.007	Two clariflocculators
50.008 - 50.009	Two flash mixers
50.010 - 50.011	Two gravity filters
50.012	Rotary drum vacuum filter
50.013	pH adjustment tank
50.014	Neutralization tank #2
50.015 - 50.018	Four ion exchange columns
50.019	Decant storage tanks
50.020 - 50.021	Two prefilters
50.022	Wiped film evaporator
50.023	Evaporator storage tank
50.024	Cementation unit
50.025	Temporary storage area
50.026	Batch waste treatment tank
50.027	Batch waste treatment blowdown tank
50.035	Transuranic waste incinerator
50.036	Feed area for incinerator

LOW-2

2. There is a low potential for release from these units based on the absence of visible evidence that would suggest a release, and the presence of adequate release controls (e.g., secondary containment, overflow alarms). These units include:

TA - 3	
3.009 - 3.010	Two underground stainless steel tanks
3.032	Imhoff tanks 1
3.033	Splitter box, bar screen, and comminutor
3.041	Flow weir
3.043	Dosing siphon #2
3.086	Empty drum storage
TA - 6	
6.008	Tank
TA - 11	
11.003 - 11.005	Three sumps
TA - 16	
16.007	Loading dock of building 300
16.010	Vacuum truck
TA - 21	
21.006 - 21.009	Four vertical storage tanks; wastewater treatment facility
21.010 - 21.013	Four clarifiers; wastewater treatment facility
21.014 - 21.015	Two secondary containment tanks
21.025 - 21.028	Four sludge beds; wastewater treatment facility
TA - 22	
22.001	High explosive storage facilities
TA - 31	
31.002	East receiving yard
TA - 35	
35.005 - 35.006	Two bermed basins
35.016 - 35.019	Four sand filters
35.021	Mobile oil recycling trailer
TA - 46	
46.003	Lagoon
46.004	Sand filter
TA - 50	
50.032	Sludge storage tank
TA - 54	
54.002	Drum storage area
54.007	Greater than 90-day storage/treatment
54.046	Shaft storage, special waste

VIII. SUGGESTED FURTHER ACTIONS

GENERAL COMMENTS

An RFA was performed at the LANL utilizing a file review, interviews, and a VSI of the facility. Based on this review, a total of 775 SWMUs and areas of concern have been identified at the LANL facility. The locations of these SWMUs and areas of concern are shown in their respective technical area descriptions (Section V). These units and areas of concern comprise both active and inactive components of individual technical areas.

General suggestions for further action have been considered as a result of the PR/VSI of the LANL facility. These general suggestions include the following:

1. Waste management operations should be centralized. During the VSI, 55-gallon drums were noted throughout the LANL facility grounds. Often, 55-gallon drums were found to be co-stored with other 55-gallon drums containing product material.

2. Proper labeling should be implemented, particularly on 55-gallon drums. During the VSI, it was observed that many drums comprising both SWMUs and areas of concern did not have either clear, definitive labeling, or any labels at all.

3. Effective secondary containment is suggested for various LANL units. In particular, many drum storage areas were located at sites which did not contain berms or dikes designed to control run-on and runoff.

4. Personnel involved in waste management operations should be educated on the potential impact of LANL wastes to human health and the environment. During the VSI, it was observed that waste management conditions in some technical areas were inconsistent with conditions encountered at other technical areas. To note, incidences of sloppy housekeeping (e.g., unkempt drum storage) were observed at various LANL units.

5. The radioactivity often associated with various hazardous constituents encountered at LANL should be used as a "tracer" during subsequent investigation efforts. Therefore, LANL areas where radioactive conditions are found suggest additional characterization for specific hazardous constituents.

6. Subsequent continuing constituent-specific characterization is suggested at various LANL units and potentially affected areas (e.g., canyon bottoms). The unlined nature of many LANL units (e.g., impoundments, landfills) in conjunction with the active seismic conditions encountered in the LANL geologic area may promote a high potential for release of hazardous constituents.

7. It should be verified that all septic tanks located at the LANL facility receive only domestic waste. Past waste management practices at LANL septic tanks have resulted in the commingling of radioactive and domestic wastes. Therefore, future waste management practices should ensure that this condition does not recur.

8. Periodic draining and inspection is suggested of active, below-grade LANL wastewater treatment units. The nature of the wastes managed at the various LANL wastewater treatment systems (i.e., mixed waste) represents a high potential for impact to human health and the environment in the event of a release, warranting periodic verification of unit integrity.

9. Since there is a probability that areas where hazardous constituents may be found would be encountered in conjunction with HE residues and/or radioactivity, this heightened safety concern suggests all additional site or unit characterization efforts be done by LANL facility personnel. Suggested additional characterization should be compared to that proposed in the LANL CEARP document and the various closure plans to ensure that efforts are not duplicated at many of the affected LANL areas.

SUGGESTED FURTHER ACTION AT INDIVIDUAL UNITS

Specific data needs or concerns regarding each SWMU/area of concern are described below.

1. The physical integrity of these units should be verified, and if not already practiced, measures to ensure adequate release control (e.g., overflow alarms, corrosion protection) should be implemented. The type(s) and concentration(s) of hazardous constituents handled at this unit should be determined, and where applicable, the suggested further actions should be referred to the appropriate regulatory authority (e.g., UST). Otherwise, no further action is suggested at this time. These units include:

TA - 0	
0.008	Boiler condensate tank
0.009	Septic tank #1
0.010	Septic tank #2
0.011	Bailey bridge landfill
TA - 3	
3.002 - 3.007	Six underground industrial sewer vaults
3.008	West loading dock
3.009 - 3.010	Two underground stainless steel tanks
3.025	Temporary waste oil storage #1
3.026	Temporary drum storage #1
3.027	Temporary drum storage #2
3.028	Temporary drum storage #3
3.030	Trickling filter #1
3.031	Dosing siphon #1
3.036	Satellite drum and tank storage
3.049	Small engine oil drums
3.053	Motorpool floor drains
3.054 - 3.057	Four oil/water separators
3.058	Oil/water separator with drain
3.068	Waste oil storage
3.069 - 3.070	Two waste storage tanks with sumps
3.074 - 3.076	Three gas service station underground tanks
3.077 - 3.079	Three electroplating tanks, Sigma bldg.
TA - 6	
6.001 - 6.002	Area F material disposal pits
6.009	Septic tank
TA - 8	
8.002	Old lagoon
TA - 9	
9.001 - 9.002	Two temporary satellite drum storage areas
9.003	Sumps from high explosive processing
9.020 - 9.022	Oxidation pond and two sand filters
TA - 10	
10.001	Pit and drainage field

TA - 11	
11.003 - 11.005	Three sumps
11.006	Magazine
TA - 12	
12.003	Strontium research area
TA - 16	
16.010	Vacuum truck
16.011	Incinerator
TA - 21	
21.006 - 21.009	Four vertical storage tanks, Wastewater treatment facility
21.010 - 21.013	Four clarifiers, Wastewater treatment facility
21.014 - 21.015	Two secondary containment tanks
21.045	Robinson Coke storage
TA - 22	
22.003 - 22.005	Three storage areas
TA - 33	
33.013	Area E detonation chamber
TA - 35	
35.005 - 35.006	Two bermed basins
35.020	Underground storage tank
35.021	Mobile oil recycling trailer
TA - 40	
40.001	Magazine 2, container storage area
TA - 46	
46.003	Lagoon
46.004	Sand filter
TA - 50	
50.001	Neutralization tank #1
50.002	Clariflocculator
50.003	Treated waste storage tank
50.004 - 50.005	Two sludge storage tanks
50.006 - 50.007	Two clariflocculators
50.008 - 50.009	Two flash mixers
50.010 - 50.011	Two gravity filters
50.012	Rotary drum vacuum filter
50.013	pH adjustment tank
50.014	Neutralization tank #2
50.015 - 50.018	Four ion exchange columns
50.019	Decant storage tanks
50.020 - 50.021	Two prefilters
50.022	Wiped film evaporator
50.023	Evaporator storage tank
50.024	Cementation unit

50.029	Raw-waste storage tank
50.030 - 50.031	Two treated waste storage tanks
50.032	Sludge storage tank
50.036	Feed area for incinerator

TA - 54

54.002	Drum storage area
54.007	Greater than 90-day storage/treatment
54.046	Shaft storage, special waste

2. These areas were identified during the PR (e.g., excerpts from draft CEARP material) as being areas with potential environmental impact. These areas may require broad-scale reconnaissance sampling to characterize suspected release conditions, and/or continuing contaminant specific characterization to ensure that future releases do not occur. Suggested additional characterization should be compared to that proposed in the LANL CEARP document (not available at the time of this RFA Report), and any pertinent closure plans in order to ensure that efforts are not duplicated at suspect LANL areas. These areas include:

TA - 2:	
2.003 - 2.005	Three contaminated areas
TA - 3:	
3.063	Solar pond at Sigma Mesa
3.067	Capacitor storage
3.089	Cooling tower
3.090	Vacuum pump
3.091	Van de Graaf accelerator
TA - 4:	
4.001	Landfill
TA - 5:	
5.001	Landfill
5.002	Outfall
5.003 - 5.004	Two firing sites
TA - 10	
10.002	Bayo Canyon
TA - 35:	
35.001 - 35.002	Two vertical shafts; Area W disposal
TA - 49	
49.001	Experimental shaft

3. The design (e.g., waste suspected of containing hazardous constituents occurring in direct contact with the soil) of these units suggests additional broad-scale reconnaissance sampling to characterize suspected release conditions, and/or continuing contaminant specific characterization (i.e., identification of hazardous constituents) to ensure that future releases do no occur. To note, these units have not been identified by LANL to warrant concern regarding potential environmental impact (e.g., proposed CEARP document). These units include:

TA - 0:	
0.002	Sanitary landfill
0.007	Airport landfill "cold" dump
TA - 3:	
3.048	Temporary waste oil storage #2
TA - 7:	
7.001	Gomez site burn pit
TA - 11	
11.001 - 11.002	Two sand burn pads
TA - 16	
16.001 - 16.004	Four evaporation ponds
16.005	Lagoon #1
16.006	Lagoon #2
16.013	S-site sumps
TA - 20	
20.004	Inactive firing site
TA - 21	
21.001	Area B landfill
21.002	Area T landfill
21.003 - 21.004	Two Area U absorption beds
21.005	Area V landfill
21.017	Area A underground storage tanks "Generals" storage tanks; landfill
TA - 22	
22.006	Dry wells
TA - 33	
33.014	"Suspect trench"
TA - 35	
35.003	Chemical treatment area, formerly Area W
35.007	Building 2 - Area X
TA - 36	
36.001	Minie site bunker boneyard
36.002	Burning trench

TA - 39	
39.001	Active trench
39.004 - 39.005	Two alleged burial pits
TA - 40	
40.003	Scrap material disposal site
TA - 49	
49.005	Area 2
TA - 53	
53.002 - 53.004	Three oxidation ponds, sewage treatment plant
TA - 54	
54.008 - 54.011	Land disposal, pits A to D, underground and portable tanks
54.012 - 54.037	L-shaped shafts and other shafts
54.038	L-shaped shaft
54.048 - 54.049	Two active pits; Area J landfill
54.050 - 54.052	Three inactive pits; Area J landfill
54.053 - 54.054	Two inactive shafts; Area J landfill
54.058	Pad 4 of 1, 2, 3, 4

4. These are areas with visible evidence suggesting a release (e.g., discolored soil), and may require small-scale sampling in conjunction with cleanup activities (e.g., verification that a small affected area has been cleaned up). Further action which would prevent a recurrence of this condition (e.g., secondary containment) is also suggested. These areas include:

TA - 0:	
0.001	Used oil management area
0.004 - 0.006	Three used oil underground storage tanks
0.012	Old incinerator building
TA - 3:	
3.001	Drum storage
3.037	Asphalt batch plant - concrete basin
3.038	Sand blast shed - drum storage
3.080 - 3.081	Two asphalt batch plant storage tanks
3.082 - 3.083	Two cool asphalt storage tanks
3.084 - 3.085	Two insulated storage tanks
TA - 6:	
6.003	Waste oil drum storage
TA - 15	
15.006	Firing site
15.007	Ector site firing area
TA - 16	
16.020 - 16.021	Two solvent burn pads
TA - 33:	
33.001	Drum storage in vehicle maintenance area
TA - 39	
39.002	Drum storage area
39.003	Oil storage area
TA-40	
40.008	Gas gun facility
TA - 54	
54.001	Drum storage spray area
54.006	Drum storage; Area J
54.039	Drum crusher
54.047	Storage drums

5. These are areas with visible evidence suggesting a release (e.g., sloppy housekeeping), and in which additional small-scale sampling may not be warranted (i.e., release appearing to be adequately contained). Nevertheless, further action which would prevent a recurrence of this condition is suggested in conjunction with cleanup activities (e.g., verification that a small affected area has been cleaned up).

TA - 0:	
0.003	Temporary storage area
TA - 3:	
3.046	Sludge drying beds #1
3.047	Sludge drying beds #2
3.050	Temporary drum storage #4
3.051	Spent battery storage
3.062	Salvage yard
3.073	Pesticide storage
TA - 4:	
4.003	Firing site
TA - 14	
14.003	Temporary drum storage
TA - 16	
16.034	Hydraulic fluid drum storage
TA - 22	
22.002	Less than 90-day storage
TA - 33:	
33.003	Waste oil storage
TA - 35	
35.004	Satellite storage at Building 58

6. These are areas with no visible evidence suggesting a release (e.g., sloppy housekeeping). Nevertheless, further action is suggested to ensure that a release to the environment does not occur. If hazardous consitituents are suspected at this unit, their type(s) and concentration(s) should be determined. These areas include:

TA - 3:	
3.032	Imhoff tanks #1
3.033	Splitter box, bar screen, and comminutor
3.034 - 3.035	Two emergency storage tanks, Sigma bldg.
3.039	Chlorine dosing chamber
3.040	Chlorine contact chamber
3.052	Kerosene waste drum
3.060	Less than 90-day miscellaneous storage
3.061	Lawn mower storage area
TA - 12	
12.001	L-Site burn site
12.002	L-Site firing site
TA - 14	
14.001 - 14.002	Two thermal treatment facilities
TA - 15	
15.001	Area N material disposal site
15.018 - 15.021	Four oil storage tanks; Max Planck
TA - 16	
16.007	Loading dock of building 300
16.008 - 16.009	Burn pads #1 and #2
16.012	HE sludge sump
16.014	Temporary storage area
16.015	Sand burn pad #3
16.016	Sand burn pad #4
16.017	Sand filter #1
16.018	Sand filter #2
16.022 - 16.027	Six solvent sumps
TA - 18	
18.076	Gamma site trench
TA - 21	
21.029	Abandoned drums
21.047	DP Road tank farm
TA - 31:	
31.001	Septic tank
31.002	East receiving area yard
TA - 32	
32.001 - 32.002	Two septic tanks MRL-8
TA - 33	
33.004 - 33.005	2 material disposal shafts; Area D

33.006	Drilling storage yard
33.007	Drum storage area
TA - 35	
35.024 - 35.025	Two overflow tanks
TA - 40	
40.002	Temporary storage area
TA - 41	
41.002	Chlorinator
41.003	Imhoff tanks
41.004	Drying beds
TA - 46	
46.001 - 46.002	Two acid storage tanks
46.005	Waste acid tank
46.006	Drum storage #1
46.012	Temporary drum storage
TA - 49	
49.002	Debris pit, Disposal Area AB
49.003 - 49.004	Former radiochemistry lab drainfield and seepage pit
49.006	Trash burning area
TA - 50	
50.025	Temporary storage area
50.028	Electroplating storage tank
50.033	Temporary storage
50.034	Area C landfill
TA - 51	
51.001	Former high explosive magazine
TA - 53	
53.001	Temporary (less than 90-day) storage
53.009	Oxidation pond boneyard
TA - 54	
54.045	Cylinder storage area
54.057	Underground tank

7. These areas/units were identified during the PR as being suspected of being involved with hazardous waste or constituents. Many of these units were not observed during the VSI as LANL personnel could not identify them. It is suggested that further clarification concerning the existence of these units and their involvement with hazardous wastes or constituents be provided by LANL. These areas/units include:

TA - 3	
3.064	Temporary chemical waste storage
3.065 - 3.066	Two sumps
3.071	Underground storage tank with sump
3.072	Firing pits
3.092	Burning site
3.093	Machine shop/main shops
3.094	Printed circuit board shop
3.095	Container storage
3.096	Lithium hydride, Rm. 118-A
3.097	Central shipping/receiving
TA - 6	
6.004 - 6.005	Two septic tanks and sumps/outfall
6.006	Partially covered tank
6.007	Concrete bowl
6.008	Tank
6.010	Stored capacitors and waste oil drums
6.011 - 6.014	Four contaminated disposal areas
TA - 7	
7.002 - 7.003	Two contaminated areas
TA - 8	
8.001	Area Q landfill
8.003	GT anchor site west
8.004	Oxidation pond
TA - 9	
9.004	Aluminum settling basin
9.005 - 9.019	Fifteen waste settling tanks
9.023 - 9.026	Four outfall/sump areas
TA - 11	
11.007	Testing area
11.008	Firing sites
11.009	Septic tank
TA - 12	
12.004 - 12.005	Two firing pits
TA - 13	
13.001	Contaminated area
TA - 14	
14.004	Incinerator
14.005	High explosive sump

14.006	Closed chamber

TA - 15

15.002	Acid sump
15.003	Thermal treatment facility
15.004	Landfill near 184
15.005	Septic tank; Outfall J
15.008 - 15.016	Nine contaminated areas
15.017	EF-site

TA - 16

16.029	Old ponds
16.030	Septic tank
16.031 - 16.033	Three burn pit areas
16.035	U-site asbestos storage
16.036	Several contaminated areas
16.037	Firing sites
16.038 - 16.039	Sumps and outfalls
16.040	Dry wells
16.041 - 16.046	Six storage tanks
16.047	Shafts
16.048	Wastewater treatment plant
16.049 - 16.060	Twelve NPDES outfalls
16.061	Chemical storage
16.062	S-site

TA - 18

18.003 - 18.004	Two waste pits
18.005 - 18.066	62 shafts; Area T
18.067 - 18.070	Four Adsorption beds; Area T
18.071 - 18.072	Two Area U adsorption beds
18.073 - 18.075	Three Area V adsorption beds
18.077	Septic tank
18.078 - 18.080	Three firing sites
18.081	Photoprocessing drain fields
18.082	Underground storage tanks

TA - 20

20.001 - 20.003	Three disposal pits
20.005	Steel-lined pit
20.006	Storage in Indian cave

TA - 21

21.018	Drum storage area
21.019	Acid digester pit
21.020 - 21.021	Two container storage areas
21.022	Temporary waste storage
21.023	Septic tanks
21.024	Surface disposal areas
21.030 - 21.036	Seven contaminated areas
21.037 - 21.043	Seven underground storage tanks
21.044	Plutonium processing plant
21.046	Extended aeration tank

TA - 22	
22.001	High explosive storage facilities
22.007	Pit
22.008	Sumps
22.009	Disposal pit
22.010 - 22.011	Two wells
22.012	Septic tanks
22.013 - 22.014	Two outfalls
TA - 26	
26.001	Old vault area
TA - 27	
27.001	Burial pit with live ammunition
27.002	Firing pits
27.003	Impact zone
27.004	Contaminated roadside area
TA - 32	
32.003	Septic tank outfall
32.004	Medical research lab
TA - 33	
33.008	Landfill areas
33.009	Disposal trench near Area E
33.010	Burning pits
33.011	Area K
33.012	Septic tanks
33.015	Operation releases and accidental spills
33.016 - 33.018	Three outfalls
33.019	Firing sites
TA - 35	
35.008	Oil storage and treatment areas
35.009	Surface disposal areas
35.010	Septic tanks, waste tanks, and lines
35.011	Capacitor storage area
35.012	Surface and subsurface piping and ducts
35.013 - 35.015	Three lagoons
35.022 - 35.023	Two outfalls
TA - 36	
36.003	Sump pit
36.004	Septic tanks
36.005	Area AA
36.006	Burning areas
36.007	Photoprocessing outfall
36.008 - 36.009	Two firing sites
36.010	Thermal treatment facility
TA - 37	
37.001	Magazine Area C

TA - 39	
39.006	Photoprocessing septic tanks
39.007 - 39.008	Firing pad/burn area
39.009	Incinerator
TA - 40	
40.004	Burn pit; DF site
40.005	Hazardous waste areas
40.006	Sump
40.007	Outfalls
TA - 41	
41.001	Septic tanks
41.005	Contaminated area
TA - 43	
43.001	Sealed underground piping
TA - 46	
46.007	Septic tank and drains
46.008	Drum storage #2
46.009	Sumps
46.010	Experimental solar ponds
46.011	WA Site
46.013 - 46.016	Four outfalls
46.017	Spills and releases
TA - 50	
50.037	Underground storage tanks
50.038 - 50.039*	Batch treatment container storage areas
TA - 52	
52.001	Filter pit
52.002	Drains, pipes, sumps, tanks
52.003	Outfalls
52.004	Reactor development site
TA - 53	
53.005	Disposal pit
53.006	Waste storage tanks
53.007	Container storage
53.008	Underground storage tanks
53.010	Cooling tower outfalls
TA - 54	
54.055	Secondary containment for waste treatment tanks; Area L
54.056	Area L landfill
54.059 - 54.066	Eight trenches; Area G
54.067 - 54.185	120 shafts; Area G

* RCRA Regulated Unit

8. These areas/units have a high potential for the release of hazardous constituents, and are regulated under a designated authority (e.g., RCRA, NPDES, TSCA, UST). Further action at these sites should be determined in conjunction with their respective regulatory authorities and the conditions under which they are permitted to operated. These areas/units include:

TA - 2	
2.002	Photoprocessing outfall
TA - 3	
3.011 - 3.012	Two concrete tanks
3.013 - 3.014	Two underground concrete emergency tanks
3.015 - 3.016	Two emergency storage tanks, wing 3
3.017 - 3.018	Two emergency storage tanks, wing 5
3.019 - 3.020	Two emergency storage tanks, wing 4
3.021 - 3.022	Two emergency storage tanks, wing 2
3.023 - 3.024	Two pump tanks
3.059	Underground storage tank #1
3.087 - 3.088	Two outfalls
TA - 4	
4.002	Photoprocessing outfall
TA - 16	
16.019	Lagoon #3
16.028**	Area P landfill
TA - 21	
21.016	PCB storage
TA - 50	
50.026*	Batch waste treatment tank
50.027	Batch waste treatment blowdown tank
50.035	Transuranic incinerator
TA - 54	
54.003 - 54.004**	Pits 32 and 33, Area G
54.005**	Area H landfill
54.040 - 54.044*	Five treatment areas

* RCRA Regulated Unit
** Closure Plan Submitted

9. It should be verified that no hazardous constituents are managed at these units. Otherwise, the absence of evidence supporting the possibility of a release suggests no further action at this time. These units include:

TA - 3	
3.029	Secondary clarifiers #1
3.041	Flow weir
3.042	Imhoff tank #2
3.043	Dosing siphon #2
3.044	Secondary clarifiers #2
3.045	Trickling filter #2
3.086	Empty drum storage
TA - 18	
18.001 - 18.002	Two lagoons
TA - 19	
19.001	Underground septic tank
TA - 21	
21.025 - 21.028	Four sludge beds; wastewater treatment facility
TA - 33	
33.002	Septic tank
TA - 35	
35.016 - 35.019	Four sand filters

IX. REFERENCES

1. Table of Contents to Part B application.

2. List of Tables that are included in the Part B application.

3. List of Figures that are included in the Part B application.

4. List of Appendices that are included in the Part B application.

5. Introduction portion of the Part B application.

6. Part A portion of the Part B application, signed March 19, 1986.

7. Map of location and plot plan of the chemical storage area L.

8. Map of foundation plan, including structural notes, of the chemical storage area L.

9. Map of the technical areas for Los Alamos.

10. Draft of the site characterization plans for the Los Alamos National Laboratory (Los Alamos) from Priority 1 sites through Priority 5 sites and including Munitions Impact Areas.

11. Section 2 of the Part B permit application - Facility Description of Los Alamos. Also included is a description of the 32 active Technical Areas.

12. Section 3 of the Part B permit application - Waste Characterization and Analysis Plan of RCRA-regulated wastes at Los Alamos.

13. Letter from Harold Valencia (N.M,. Dept. of Energy, Los Alamos, New Mexico) to Denise Fort (N.M. Environmental Improvement Division) transmitting Los Alamos' official amended Part B permit application. It is a revised Waste Analysis Plan.

14. Section 4 of the Part B permit application - Waste Management Practices and Facilities at Los Alamos.

15. Section 5 of the Part B permit application on groundwater monitoring. This section states that groundwater monitoring requirements under 40 CFR, Part 264, subpart F is not applicable to Los Alamos.

16. Section 6 of the Part B permit application - Procedures to Prevent Hazards.

17. Map of the Los Alamos water supply system. It indicates supply lines, storage tanks, well sites technical areas, and the location of waste management facilities.

18. Table showing a summary of hazardous waste facilities at Los Alamos.

19. Table indicating credible non-sudden releases at Los Alamos and corrective actions taken.

20. Summary table of hazardous waste facilities at Los Alamos, including treatment and storage.

21. Letter from Allyn Davis (USEPA, Director of Air and Waste Management Division) to William Crismon (Los Alamos), dated August 11, 1982, stating that Los Alamos has met the requirements of 3005(e) of RCRA for interim status.

22. Conditions of Operation during interim status for Los Alamos, dated August 11, 1982. This information is based on data submitted in the Part A application.

23. Letter from Allyn Davis (USEPA, Director of Air and Waste Management Division) to Donald Kerr (Lab Director of Los Alamos), dated February 22, 1984, concerning a formal request for the Part B permit application under RCRA from Los Alamos.

24. Letter from Peter Pache (State of New Mexico, Acting Program Director of Hazardous Waste Section of the Environmental Improvement Division) to Harold Valencia (Area Manager of Los Alamos), dated April 23, 1984, concerning a joint call-in for the Part B permit application in conjunction with USEPA's request.

25. Letter from Allyn Davis (USEPA, Director of Air and Waste Management Division) to Harold Valencia (Los Alamos), dated August 7, 1984, concerning a formal request for the Part B permit application for those radioactive-mixed hazardous wastes designated by EPA and DOE to be subject to regulation under RCRA.

26. Letter from John Cunico (Dept. of the Army, Corps of Engineers) to M. L. McCorkle (Los Alamos), dated November 20, 1984, concerning floodplain information on areas TA-54, TA-16, and TA-40.

27. Physical characteristics of the Bandelier Tuff.

28. Hydrological characteristics of the Bandelier Tuff.

29. Sample of Waste Disposal Records (Appendix H).

30. Los Alamos' procedure foe identification and segregation of hazardous waste (Appendix L).

31. SOP for the treatment tanks at area L, TA-54.

32. Flow diagram of Batch Treatment System at Los Alamos.

33. Treatment Development Facility showing locations of chemical waste incinerator and support facilities at Los Alamos.

34. Incinerator Process Diagram at Los Alamos.

35. Figure of TA-54, Area L, waste management facilities.

36. Hazardous Waste Contingency Plan for Los Alamos.

37. Letter from DOE to Samuel Nott, USEPA-Superfund Branch, dated October 30, 1984, concerning assurance that the Pantex Plant, Los Alamos National Laboratory, and Sandia National Laboratories will be assessed as required by CERCLA (via the CEARP program). Also, includes a Scope of Work plan that describes the DOE's CEARP.

38. Letter from DOE-LANL to Allyn Davis, USEPA-Air & Waste Mgmt. Div., dated June 6, 1985, transmitting a Notification of Additional Hazardous Waste Activities (NOAHWA).

39. Letter from DOE-LANL to USEPA, dated August 13, 1982, notifying USEPA of LANL's intent to waive its groundwater monitoring requirements under 40 CFR 265.90(c).

40. LANL's USEPA Facility Biennial Hazardous Waste Report for 1983.

41. USEPA-Region VI Memorandum from William Rhea, Hazardous Waste Compliance Branch to Allyn Davis, Hazardous Waste Mgmt. Div., dated January 31, 1986, concerning compliance status and issues at LANL.

42. Letter from DOE-LANL to Allyn Davis, USEPA-Air & Waste Mgmt. Div., dated September 23, 1982, concerning clarification of conditions for Operation During Interim Status for LANL.

43. Text describing Background on Los Alamos. Text was taken from USEPA-Region VI files.

44. Letter from NMEID to DOE-LANL, dated June 22, 1984, transmitting Notice of Violation (NOV) of New Mexico Hazardous Wastes Regulations (HWMR-2) for compliance inspection conducted on May 23 and May 25, 1984 at LANL.

45. Letter from DOE-LANL to Steven Asher, NMEID, dated July 36, 1984, transmitting LANL's response to NMEID's Notice of Violation dated June 22, 1984.

46. Letter from NMEID to DOE-LANL, dated August 26, 1984, transmitting NOV of HWMR-2 for compliance inspection conducted on July 10 and July 11, 1985 at LANL.

47. Text describing Enforcement/Compliance Status at LANL. Text was taken from USEPA-Region VI files.

48. USEPA-Region VI Memorandum, dated September 10, 1985, concerning insufficient data to warrant a waiver of groundwater monitoring requirements for the landfills at Areas G and L, at LANL, under 40 CFR 265.90(c). Memorandum also expresses LANL's concern over possible Loss of Interim Status (LOIS) by November 8, 1985, due to lack of approval of the groundwater monitoring requirement waiver.

49. USEPA-Region VI Memorandum, dated October 17, 1985, concerning the status of the CEARP at LANL.

50. USEPA-Region VI Memorandum, dated September 17, 1985, concerning the status of the PCB landfill and incinerator at LANL.

51. USEPA-Region VI Memorandum from Raymond Magyar, SIP Enforcement Section, to Jim Highland, Federal Assistance Section, dated October 17, 1985, concerning compliance status of LANL.

52. USEPA Memorandum from Oscar Cabra, Jr., Water Supply Branch, to James Highland, Federal Facilities Coordinator, dated October 18, 1985, concerning the status of the public water system at LANL.

53. Letter from USEPA to Peter Pache, NMEID, dated April 9, 1986, transmitting inspection reports completed by Region VI during its lead inspections at LANL on January 27 and January 28, 1986.

54. Organizational chart of the Waste Management Group HSE-7 at LANL, dated June 1984. Includes description of wastes generated and managed at LANL.

55. List of divisions generating hazardous waste. Text was taken from USEPA-Region VI files.

56. Letter from NMEID to Anthony Drypolcher, DOE-LANL dated November 5, 1985, approving waiver of interim status groundwater monitoring requirements for the landfills at Areas G and L.

57. Text describing Closure Plan for Thermal Treatment Facilities. Text was taken from USEPA-Region VI files.

58. New Mexico Hazardous Waste Compliance Inspection Report for inspection conducted on July 10, 1985, at LANL.

59. Letter from NMEID to DOE-LANL, dated October 14, 1986, transmitting list of deficiencies in Part B Permit Application.

60. Ground Water Monitoring Exemption Request, dated November 1, 1984.

61. List of NPDES outfall locations by Technical Area (TA) and effluent origin.

62. Excerpt from RCRA Inspection Report, Surface Impoundments Checklist Subpart K - Surface Impoundments 265.220.

63. RCRA Loss of Interim Status Checklist for Area G landfill, Area L landfill, Area L surface impoundment, Area P landfill, and TA-16 surface impoundment.

64. Table of water quality data from well at Los Alamos.

65. Master table of all areas at Los Alamos describing if the areas are active, inactive, RCRA-regulated, NPDES outfall, type of wastes managed at the area, and releases. In conjunction with this, an explanation or definition table of this nomenclature.

66. Notice of Deficiencies (NOD) at Los Alamos. The deficiencies listed here include information that is needed on the following: SWMUs, potential or known releases from SWMUs, summary of any soil, surface water and/or groundwater analyses, information on NPDES outfalls, certain areas that need to be located on Figure 21 of the Part B dated January 1986, and information on vadose zone monitoring program.

67. Letter from Harold Valencia (Area Manager, Dept. of Energy, Los Alamos, New Mexico) to Denise Fort (New Mexico Environmental Improvement Division), dated November 26, 1986, concerning quarterly results of the perched water table (Task 6). This is in response to Ms. Fort's Division Compliance Order/Schedule dated May 7, 1985.

68. Memo from Suzanne Bell (HSE-9) to Micheline Devaurs (HSE-8), dated August 5, 1986, concerning RCRA quarterly water samples, the quantity of samples received, parameters to be analyzed, methodology, and results.

69. Revised Part A from Harold Valencia (Area Manager, Dept. of Energy, Los Alamos, New Mexico) to Denise Fort (New Mexico Environmental Improvement Division). (Enclosure 1, See Reference 91).

70. Engineering map of upgrading of the industrial liquid waste treatment plant.

71. Engineering map of upgrading of the industrial liquid waste treatment plant - instrument location plan.

72. Engineering map of 132 Building, TA-16 - Burning Areas Plot Plan.

73. Letter from Harold Valencia (Area Manager, DOE, Los Alamos, New Mexico) to Denise Fort (New Mexico Environmental Improvement Division), dated March 27, 1986, concerning the revised Part B and revised Area L Closure Plan. (Enclosure 3, See Reference 91).

74. Letter from Harold Valencia (Area Manager, DOE, Los Alamos, New Mexico) to Denise Fort (N.M. Environmental Improvement Division), dated September 27, 1985, responding to Ms. Fort's NOV letter dated August 26, 1985. (Enclosure 5, See Reference 91).

75. Letter from Harold Valencia (Area Manager, DOE, Los Alamos) to Denise Fort (N.M. Environmental Improvement Division), dated February 18, 1986, concerning Los Alamos' amended closure plans for hazardous waste facilities TA-3-102, TA-22-24, and TA-40-2. (Enclosure 4, See Reference 91).

76. Letter from Harold Valencia (Area manager, DOE, Los Alamos) to Denise Fort (N.M. Environmental Improvement Division), dated November 25, 1985, concerning termination of interim status for land disposal units at Areas L and P on November 8, 1985. Also included are amendments to the Part B application for partial closure of Area L. (Enclosure 6, See Reference 91).

77. Letter from Harold Valencia (Area Manager, DOE, Los Alamos) to Denise Fort (N.M. Environmental Improvement Division), dated September 27, 1985, responding to Ms. Fort's NOV letter dated August 26, 1985. Also included are the closure plans for TA-54, Area G Landfill at Los Alamos. (Enclosure 7, See Reference 91).

78. Letter form William Taylor (Chief, Enforcement Section of USEPA, Region VI) to Peter Pache (N.M. Health and Environmental Dept., Groundwater Improvement Division), dated April 9, 1985, concerning possible violations found during inspections at Los Alamos during January 27 through January 28, 1986.

79. Letter from Carlos Garcia (Director, Environment, Safety and Health Division, DOE) to N.M. Environmental Improvement Division), dated May 5, 1986, concerning notification of underground storage tanks. (Enclosure 12, See Reference 91).

80. Response to NOD Question 13. This reference includes health assessment transmittal letter, Area P closure plan transmittal letter, and transmittal proposed for task order for underground storage tank testing. (Enclosure 13, Attachment 1, See Reference 91).

81. Text describing reconnaissance sampling at TA-16, Area P; TA-40, scrap detonation site; and TA-54, Area L and Area G. (Enclosure 14, Attachment 1 - see Reference 91)

82. "Interim Environmental Surveillance Plan of LASL Radioactive Areas," report by the Environmental Surveillance Group at LANL, dated 1980. (Enclosure 14, Attachment 2 - see Reference 91)

83. "Surface Reconnaissance Through 1980 for Radioactivity at Radioactive Waste Disposal Area G at the Los Alamos National Laboratory," report by Don Mayfield and Wayne Hansen, undated.

84. "Plan for Stabilization of Radioactive Materials Disposal Sites at the Los Alamos National Laboratory," anonymous, July, 1983.

85. Letter from DOE-LANL to Myron Knudsen, USEPA-Region VI, dated April 7, 9186, transmitting consolidated permit reapplication package for LANL's NPDES permit No. NM0028355. Includes a report entitled, "Discharge Plan for Geothermal Operations at Fenton Hill, Sandoval County, N.M.," by LANL, June, 1984. (Enclosure 15 - see Reference 91).

86. Sanitary Wastewater Treatment Facility Operation and Maintenance Guidelines, by The ZIA Company, September 30, 85 and May 8, 1986. (Enclosure 17 - see Reference 91)

87. Part A Permit Application, signed October 15, 1985.

88. Text describing Information Regarding Potential Releases from Solid Waste Management Units at LANL. Text was taken from USEPA-Region VI files.

89. Part A Permit Application, signed November 10, 1986. Includes DOE-LANL Memorandum from W.D. Purtymun, to Karen Balo, dated February 15, 1983, concerning inspection of shafts 25, 26, 27, and 28, Area L, TA-54.

90. NPDES Violation Summary. Many pages.

91. Letter from DOS-LANL to Allyn Davis, USEPA Hazardous Waste Mgmt. Div., dated July 2, 1986, transmitting LANL's response to USEPA's NOD for Part A and Part B Permit Applications, dated May 29, 1986. Contains 31 enclosures.

92. Excerpts from a report entitled, "Environmental Surveillance at Los Alamos During 1985," by LANL.

93. Final Environmental Impact Statement - Los Alamos Scientific Laboratory Site, Los Alamos, New Mexico, December 1979.

94. Background information on Los Alamos, including geographical setting, land use, geology-hydrology, and climatology.

95. Map of Area L.

96. Representative Industrial/Radiation Waste Treatment. (Enclosure 20, Attachment 3 - see reference 91).

97. Comprehensive Environmental Assessment and Response Program - Phase I Installation Assessment, June 1986. (Enclosure 27, Attachment 3 - See Reference 91).

98. Comprehensive Environmental Assessment and Response Program (CEARP) - Potential CEARP Sites, June 1986. (Enclosure 27, Attachment 4 - See Reference 91).

99. History and Environmental Setting of LASL Near-Surface Land Disposal Facilities for Radioactive Wastes (Areas A, B, C, D, E, F, G,and T), June 1977.

100. Response to NOD Question 15 - Environmental Improvement Division Compliance Order/Schedule (Enclosure 22, Attachment 1 - See Reference 91).

101. Information regarding potential releases from SWMUs.

102. Topographical map of Los Alamos showing long range facilities planning. (Enclosure 31, See Reference 91).

103. Map of Los Alamos delineating their boundaries and vicinity.

104. Contour map of Los Alamos indicating the location of the Batch Treatment System, Container Storage Area and the Waste Incinerator.