

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Laboratory Counsel/General Law

DATE: September 11, 1989
IN REPLY REFER TO: LC/GL:89-767
MAIL STOP: A187
TELEPHONE: (505) 667-3766

RECEIVED

SEP 13 1989

PUBLIC HEALTH DIVISION
DIRECTOR'S OFFICE

Mr. Walter Youngblood
New Mexico Environmental
Improvement Division
Harold Runnels Building
1190 St. Francis Drive
Santa Fe, NM 87503

**Re: Correction of the Record for the Hazardous Waste Permit Hearing
Held July 18, 19, and 20, 1989**

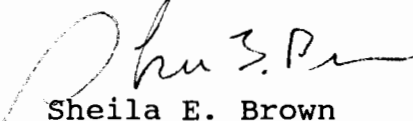
Dear Mr. Youngblood:

In reviewing the record of the permit hearing, we discovered that Exhibit No. 3 of the DOE's comments submitted to the New Mexico Environmental Improvement Division during the hearing contains a copying error.

Enclosed is a correct copy of Exhibit No. 3 with all pages included in order to complete the record.

We are sorry for any inconvenience this may have caused you. If you have any questions, please do not hesitate to call Marja Shaner, Laboratory Counsel/General Law, at 667-3766.

Sincerely,


Sheila E. Brown
Staff Attorney

SEB:MS:jm

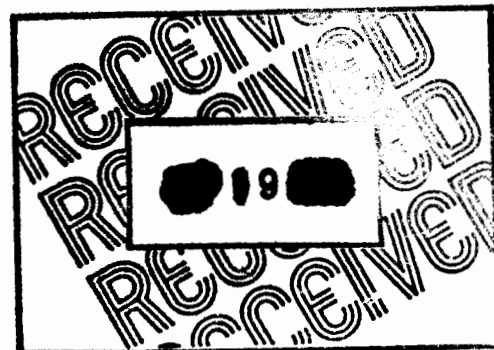
Enclosure: Exhibit No. 3 to DOE Comments on the Hazardous Waste Permit, submitted during July, 1989 hearing.

Cy: Joyce Laeser, DOE CNSL, w/o enc., MS A316
Ken Hargis, HSE-9, w/o enc., MS K490
Jim White, HSE-8, w/o enc., MS K490
Hazardous Waste Bureau, NMEID, w/o enc.
CRM-4 (1), w/o enc., MS A150 (1441-1452)
LC Records (1), w/o enc., MS A187
File (2)



8619

California



ORIGINAL Submission

Note: BACK of pages not copied

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

memorandum

TO Ken Hargis, HSE-8, MS K490

DATE May 25, 1989

FROM Jim Griffin, Emergency Management
Coordinator

MAIL STOP/TELEPHONE K496/7-6211

SYMBOL EM-89-114
om-1

SUBJECT RECOMMENDED CHANGES TO DRAFT RCRA OPERATING PERMIT

In review of the subject document, Emergency Management request you consider making the following changes to reflect current organizational structure and title changes.

Under Attachment D. paragraph D.2, add new paragraph to read:

D.2.1.11 Operational Management Group I (Emergency Management) a group within the Operational Management Office, responsible for providing a 24 hour duty officer; Laboratory Emergency Duty Officer (LEDO), to respond to all credible emergencies to include hazardous materials releases. The LEDO is the On-Scene Commander (OSC) for all emergencies, to include hazardous materials, when an On-Scene Control Group (OSCG) is formed. Emergency Management maintains the site Emergency Operations Center (EOC) in operational ready status should such a center be required.

I have taken the opportunity of marking up some pages from attachment D to assist your update.

yar

cc: CRM-4 (2), MS A150
EM File

02711

The Fire Department personnel make regular tours of the Laboratory facilities to detect and discuss hazards associated with individual facilities and are instructed in hazardous material handling and emergency procedures. They are aware of the hazardous waste practices at the Laboratory, and are well equipped to handle any credible emergency situation.

D.2.1.7 Mason & Hanger Protective Force (Pro-Force)

The Pro-Force consists of more than 300 personnel who are responsible for Laboratory security. The security force is provided by Mason & Hanger, Silas Mason, under contract to the Laboratory.

During an emergency, the Pro-Force activities include maintenance of security, direction of traffic within the Laboratory, and control of access to the emergency site. The Pro-Force maintains the necessary equipment to perform these functions such as crowd control equipment, patrol cars, etc.

D.2.1.8 PAWS

PAWS provides a maintenance support force on contract to the Laboratory. This support force is under the Laboratory's direction in an emergency. PAWS conducts inspections of Laboratory equipment, maintains equipment, and participates in emergency cleanup.

D.2.1.9 Los Alamos County Police

In keeping with the principle of handling emergencies internally, the Los Alamos County Police have only a minimal interaction with the Laboratory in an emergency. That interaction is limited to traffic control on DOE roads with public access. The limits of interaction are included in a signed agreement, a copy of which is included as an attachment to this document. There are no agreements with other agencies.

D.2.1.10 WX and M Division Personnel

Personnel in WX and M Divisions are trained to safely handle and dispose of highly reactive materials (High Explosives). Any spill or uncontrolled release of material at the burning grounds (TA-14 and -16) or the detonation pads (TAs 14, 15, 36, and 39) will be cleaned up by personnel from these divisions. The Fire Department may be called to respond if a burn or detonation results in an uncontrolled fire.

New Paragraph D. 2.1.11-

D.2.2 Emergency Equipment

A list of emergency equipment for use at the Laboratory and the location of this equipment can be found in Table D-3. The equipment immediately available for use is located at TA-54, Area L, the TA-50 batch treatment system and modular container storage buildings, the TA-50 waste incinerator and Room 117 storage, the TA-16 incinerator, and the TA-50 storage pads.

In addition, PAWS, the Fire Department, and HSE-2 maintain emergency equipment. Major emergency facilities are shown in Figure D-4.

D.2.3 Communications

Effective emergency response at Los Alamos National Laboratory requires an efficient communication system which will integrate all personnel into the emergency response procedure.

There are two central alarm systems (CAS) at the Laboratory; an emergency CAS and a mechanical CAS. The emergency CAS is activated by:

Telephone communication (9-911)

Automatic fire alarms

Manual pull alarms

D.3 NONSUDDEN RELEASES

Nonsudden releases include those incidences which, if uncontrolled, impact the environment over a long period of time. Such incidences include minor leaks of containers, loss of integrity of secondary containment, incomplete treatment, and leachate migration from disposal areas.

D.3.1 Responsibility

Correction of nonsudden release shall be the responsibility of the operating group and can be handled with normal maintenance and management procedures. Correction methods for nonsudden releases that have resulted in environmental contamination shall be coordinated with the New Mexico Environmental Improvement Division (NMEID).

D.3.2 Credible Nonsudden Releases

Not all failures can be predicted. In general, the response to nonsudden release will (1) contain the release, (2) correct the cause of the release, and (3) clean up any release to a level that protects health and the environment.

D.3.3 Nonsudden Release Surveillance

In addition to routine inspection and site-specific sampling and testing, the Laboratory maintains an area-wide environmental monitoring network maintained by HSE-8. Routine monitoring for radiation, radioactive materials, and chemical substances on the Laboratory site helps to fulfill the Laboratory's policy to protect the general public, employees, and the environment.

Monitoring and sampling locations for various types of measurements are organized into three main groups. Regional monitoring stations are located within the five counties surrounding Los Alamos County. They are placed up to 80 kilometers (50 miles) from the Laboratory, and serve to determine background conditions. Perimeter stations are located within approximately four kilometers (2.5 miles) of the Laboratory boundary, and document conditions in residential areas surrounding the Laboratory. On-site stations are within the Laboratory boundary, and most are accessible only to employees during work hours.

The types of routine surveillance conducted at these stations includes radiation measurements and collection of air particulates, waters, soils, sediments, and foodstuffs for subsequent analysis.

Additional samples are collected to gain information about particular events such as major runoff events and nonroutine releases. Data are used for comparison with standards, background radiation levels, and dose calculations.

D.4 SUDDEN RELEASES

This section deals with incidents involving sudden release such as spills, fires, or explosions which pose a significant threat to human health or the environment and includes the release of hazardous materials and hazardous wastes. Hazardous materials are chemical substances that become a regulated waste as the result of the incident and can include hazardous raw materials that are spilled, products of combustion, and products of uncontrolled reactions.

D.4.1 Hazardous Waste Emergency Coordination

The ~~EP&S~~ is responsible for coordinating all emergency response measures involving sudden releases of hazardous wastes with the exception of the open burning and open detonation units at TA-14, 15, 16, 38, and 39. HE waste handling is the responsibility of M and WX divisions, who have developed Standard Operating Procedures (SOPs) based on safe handling practices designed to eliminate the risk of fire and explosions. Unplanned detonation or combustion of HE renders the HE waste non-toxic. In some cases, residuals contain barium. Cleanup of barium contaminated areas due to unplanned detonations shall be coordinated with the

~~EP&S~~

L=DO

D.4.2.2 Emergency Notification

LEDO Immediately upon discovery of an imminent or actual incident involving hazardous wastes or hazardous materials, the EPODO will be notified first. In the case of fire involving hazardous wastes or hazardous materials, this is superseded by the Laboratory fire alarm system. A fire is reported by dialing 9-911, activation of automatic alarms, or activation of a fire pull box. All fire alarms simultaneously alert the CAS Dispatcher, the Fire Department, and the Mason and Hanger Pro-Force. For fire involving hazardous wastes, hazardous materials, or hazardous waste units, the CAS Dispatcher shall contact the EPODO (Figure D-5). Orange 1 LEDO signs on buildings which contain HE are a warning to fire fighters not to approach or enter the building without obtaining information from WX or M Division personnel about the nature and location of HE materials in the building.

During off hours, all incidents involving hazardous wastes or hazardous materials shall be reported to the CAS Dispatcher, who will contact the on-call EPODO. LEDO

LEDO
LEDO The EPODO shall proceed to the incident and assess the nature of the problem. On an as-needed basis, the EPODO shall contact response groups directly or instruct the CAS Dispatcher to contact them or contact the HSE-Duty Officer (HSE-DO) who will notify the appropriate HSE groups. Table D-2 shows the assistance available from each emergency response group. The EPODO will use this list as criteria to determine which groups to contact in an emergency. LEDO

Each response group maintains an on-call person and/or a call-down procedure to answer emergencies.

LEDO Because the initial observer may not be able to recognize the involvement of hazardous materials, the EPODO shall be notified of any incident as described in Section D.4.1. The EPODO shall use whatever means available including the assistance of other response groups, computer data searches, and sampling to determine if a hazardous waste is generated. HSE-5 and HSE-8 have the expertise to determine the nature and extent of contamination, the chemicals involved in the incident, and the characteristics of the hazardous waste.

D.4.2.3 EPODO Actions

LEDO Upon notification of an incident, the EPODO shall:

1. Proceed directly to the site;
2. Assess the nature of the incident, and quantities and types of hazardous wastes or hazardous materials involved; and
3. Based on the guidelines in Section D.4.2.1 of the Contingency Plan, determine if implementation of the HWF Emergency Contingency Plan is warranted.

LEDO Upon the decision to implement the HWF Emergency Contingency Plan, the EPODO shall perform, in this order, the following actions:

1. Assess the hazards to human health and the environment including both direct and indirect effects such as generation of toxic, irritating, or asphyxiating gases, hazards of runoff of fire water or treatment chemicals. The EPODO will use the guidelines in Section D.4.2.1 to assess the hazards to human health and the environment. If any of the criteria under Section D.4.2.1 are met, evacuation of the immediate area will be initiated. LEDO

6. Within 15 days of the incident, submit to the Regional Administrator and Environmental Improvement Division the report described in Section D.10.

D.5 SPECIFIC EMERGENCY RESPONSE PROCEDURES FOR HAZARDOUS WASTE UNITS

The following section summarizes the guidelines for handling emergencies.

D.5.1 Chemical Spills

Hazardous wastes are handled and stored in small containers, lab packs, 55-gal. drums, and dumpster tanks. The individual volumes handled are small. Handling of hazardous materials may involve truckload quantities of material such as solvents, fuels, acids, and bases.

The general steps in handling hazardous wastes are:

Containment including spreading of absorbents or forming of temporary dikes,

Waste pickup and packaging in sound containers, and

Decontamination followed by testing to assure adequate clean-up.

The emergency preparedness procedures related to flammable organic solvent spills call for stabilization of the spilled material with the organic solvent spill kit. Other chemical spills are to be stabilized using the acid and caustic spill kits or by the addition of absorbents such as vermiculite. Personnel protective equipment will be worn during spill control and cleanup. The stabilized material will be treated as hazardous waste. Runoff which might occur from spills outside containment areas during precipitation must be contained and handled as a hazardous waste unless analyzed and found to be nonhazardous. Temporary dikes can be constructed to contain runoff.

D.5.1.1 Spill Control Procedures

Vermiculite or Pell-O-Cell will be used to control all chemical spills except hydrofluoric acid spills. Vermiculite and Pell-O-Cell are compatible with all chemicals except fluorine and hydrofluoric acid. Hydrofluoric acid is generally only handled in very small volumes, in small containers, so that a spill would be limited to a very small volume (less than 1 gallon). A hydrofluoric acid spill will be neutralized by carefully adding calcium hydroxide or other caustic to the spill. After an excess of caustic has been added and the reaction has ceased, the resulting solution will be cleaned up using vermiculite. Vermiculite and caustic are stored at all the TSD units at the Laboratory.

DOT approved drums will be used to collect all spilled material and contaminated absorbent. There are many drums of this type, located at all treatment and storage facilities at the laboratory. For corrosives, the drums will be lined with polyethylene drum liners. The list of emergency equipment (Table D-3) shows the equipment available at each area to be used to control a spill. The ultimate disposition of any contaminated absorbent or waste material will be decided by HSE-7 according to permit conditions and RCRA standards. The material will be temporarily stored at TA-64, Area L.

Decontamination will be accomplished at the spill site. After the spilled material has been absorbed by vermiculite or Pell-O-Cell, the material will be drummed. If the spill occurs on a cemented area, water or an appropriate solvent will be used to clean the area and this liquid will be adsorbed onto vermiculite or Pell-O-Cell and drummed.

Other potential chemical exposures will necessitate evacuation if anyone notices any of the following conditions:

 Irritation of the eyes, breathing passages or skin,
 Dimicury in breathing, or
 Nausea, light-headedness, vertigo, or blurred vision.

The affected person will be transferred to the Medical Department and the HSE-5 Group representative will attempt to ascertain what, if any, chemical exposure occurred and what corrective measure is appropriate.

D.5.5 Flood

The U.S. Army Corps of Engineers has documented that Los Alamos National Laboratory's waste management facilities are not located within the 100-year floodplain. This documentation has been included as an attachment to this document.

D.6. EVACUATION

A facility will be evacuated upon the voice command of 'evacuate the area,' or upon the sounding of the evacuation alarm, or upon the fire alarm.

D.6.1 Evacuation Plan

Emergency situations may warrant the shutdown and evacuation of an area(s) or building(s) in order to protect personnel and property, to anticipate the emergency condition, or to enhance the appropriate response. Table D-8 shows the criteria for evacuation, persons responsible for initiating evacuations, and ready conditions.

To initiate building evacuation, the evacuation alarm is sounded and/or the public address system is used. The evacuation alarm, which is more suitable for evacuation of the whole facility, is a steady, continuous, audible signal. This alarm cannot be silenced and reset by site personnel. The Fire Alarm Maintenance Section at 667-4027 and the Fire Department Platoon Chief at 667-7026 can silence and reset the alarm.

To evacuate a portion of the building, the public address system is more appropriate. The PA system will notify the occupants of the area to be evacuated, and additionally, will advise personnel in the rest of the facility of the existence of a problem in that specific area.

Upon initiation of an evacuation, either via the PA or evacuation alarm, all personnel are to leave the specified area and go to the muster area, turning off all equipment that could contribute to the hazard if left unattended.

In the event of an evacuation of only a portion of the building, one of the out buildings, or outlying work areas, the Group Leader will designate a control point at the closest and/or the most convenient location. This area will be outside the affected area and will serve as a muster point and provide control of the affected area to prevent further spread of the hazard.

Sweep Team personnel will remain in the area for a visual inspection of all the affected work areas, laboratories, and offices. At least two persons will do the sweep to insure that if an injured person is found or if a single person is fighting a small fire, turning off equipment or activating fire suppression systems, one sweep team member can give assistance while the other reports to the muster area or control point to obtain additional aid.

Allow the reactor mixer to operate unless its operation poses a unique hazard (operation helps remove heat and prevents stratification).

D.6.2.2 TA-50 Waste Incinerator

If a fire or evacuation alarm sounds during the operation of the controlled air incineration process, the operating crew will initiate a process shutdown in accordance with the current operating instructions. Three logic sequences are provided to shut down the process in a safe and orderly manner.

Controlled Shutdown - Initiated when there is potential for significant damage to minor process components. This is also the normal shutdown mode at the completion of a run. When controlled shutdown is initiated, feeding of waste to the incinerator is stopped and a programmable set-point generator is activated that directs remote set-point inputs to the temperature controllers, causing a gradual decrease in chamber temperatures. Switches internal to the set-point generator cause an orderly-timed shutdown of process components.

Fast Shutdown - Initiated for conditions that could likely result in loss of containment or damage to major process components. Waste feeding is stopped. Following a two-minute timed interval following the last feeding of solid waste (immediate, if feeding liquid waste), the upper and lower chamber burners are shut down and the system valves and dampers are positioned so as to maintain a negative pressure in the system while minimizing flow through the system. Snuffing steam is introduced into the lower chamber. The two-minute delay when feeding solid waste allows for the ignition of pyrolytic gases formed immediately after feeding.

Scram Shutdown - Initiated at the discretion of an operator. The chain of events are identical to the fast shutdown except that the sequence is not delayed when feeding solid waste. Scram buttons are located at the incinerator and in the control room.

The last two shutdown modes are potentially destructive to the incinerator refractory and are initiated only when the consequences of not shutting down are greater than the consequences to the incinerator during a scram or fast shutdown. It is the responsibility of the operating personnel and the process lead engineer to assess any situation and initiate the proper process shutdown sequence.

D.6.2.3 TA-16 Industrial Incinerator

If a fire or evacuation alarm sounds during the operation of the TA-16 Industrial Incinerator, the operating crew will initiate a process shutdown. The TA-16 incinerator is equipped with automatic and manual controls for shutdown of burners. Burners may be shut down manually by tripping a single switch. Automatic shutdown of the burners will occur on occurrence of a power failure, limit failure, or flame failure.

**TABLE D-6
EVACUATION DETERMINATION AND REENTRY**

<u>Reason for Evacuation</u>	<u>Determination Made By</u>	<u>Reentry Conditions</u>
Fire	Fire or Evacuation Alarm; Group Leader; Alternate; Lead Engineer, Senior Staff Member present, or HVEC	Following survey by the Chief Fire Officer, HSE-1 and/or HSE-5, and R&D Supervision <i>Approved by EDO</i>
Explosion	Same as above	Same as above plus HSE-3 <i>and Survey by EDO</i>
Loss of Ventilation	Group Leader, Alternate, Senior Staff Member, Lead Engineer, or Senior Technician	Following survey by HSE-1 and/or HSE-5, and R&D Supervision
Loss of Electric Power	Same as above	Same as above
Extensive Contamination	Same as above or HSE-1 Representative	Same as above
Airborne Contamination	Same as above or Rad Monitor	Same as above
Escape or Release of Toxic or Hazardous Gas or Fumes	Group Leader, Alternate, Senior Staff Member, Lead Engineer, Senior Technician, or HVEC	Same as above plus HSE-5
Bomb Threat	HSE-3 or Protective Force Representative, R&D Section Leader, Alternative, Senior Staff Member or Lead Engineer, <i>E EDO</i>	Following determination by HSE-3 or Protective Force Representative and R&D Supervision <i>Following determination of the Hazardous Services Unit and E EDO only.</i>

MVA 11 1973

**TABLE D-2
HAZARDOUS WASTE EMERGENCY RESPONSE GROUPS**

<u>Laboratory Controlled Response Group</u>	<u>Emergency Telephone</u>	<u>Assistance Available</u>
HSE-2 Occupational Medicine	667-7878 (8 am - 5 pm)	Emergency medical treatment
HSE-3 Safety	988-0539 off-duty hours	Reviews and approves fire protection procedures. May assist in process shutdown and evacuation
HSE-5 Industrial Hygiene		Site evaluation - field testing to determine the nature and extent of contamination (nonradiological) Specify protective clothing and equipment Information services regarding hazards of wastes and treatment for exposure
HSE-7 Waste Management		Hazardous waste cleanup, handling, treatment, and disposal
HSE-8 Environmental Surveillance		Field surveys to determine spread of contamination and adequacy of clean up Meteorological information Geohydrologic support
HSE-9 Health and Environmental Chemistry		Chemical analytical services
Fire Department	9-911	Firefighting personnel and equipment Ambulance and paramedic service
Mason & Hanger Protective Force (Pro Force)	667-4437	Traffic Control Security
EMERGENCY Management Group	667-6211 (8am - 5pm) 667-7070 (off-duty hours)	24-hour Duty Officer (EPA) On-Scene Command & Control, Resource Reporting procedures and operations critique

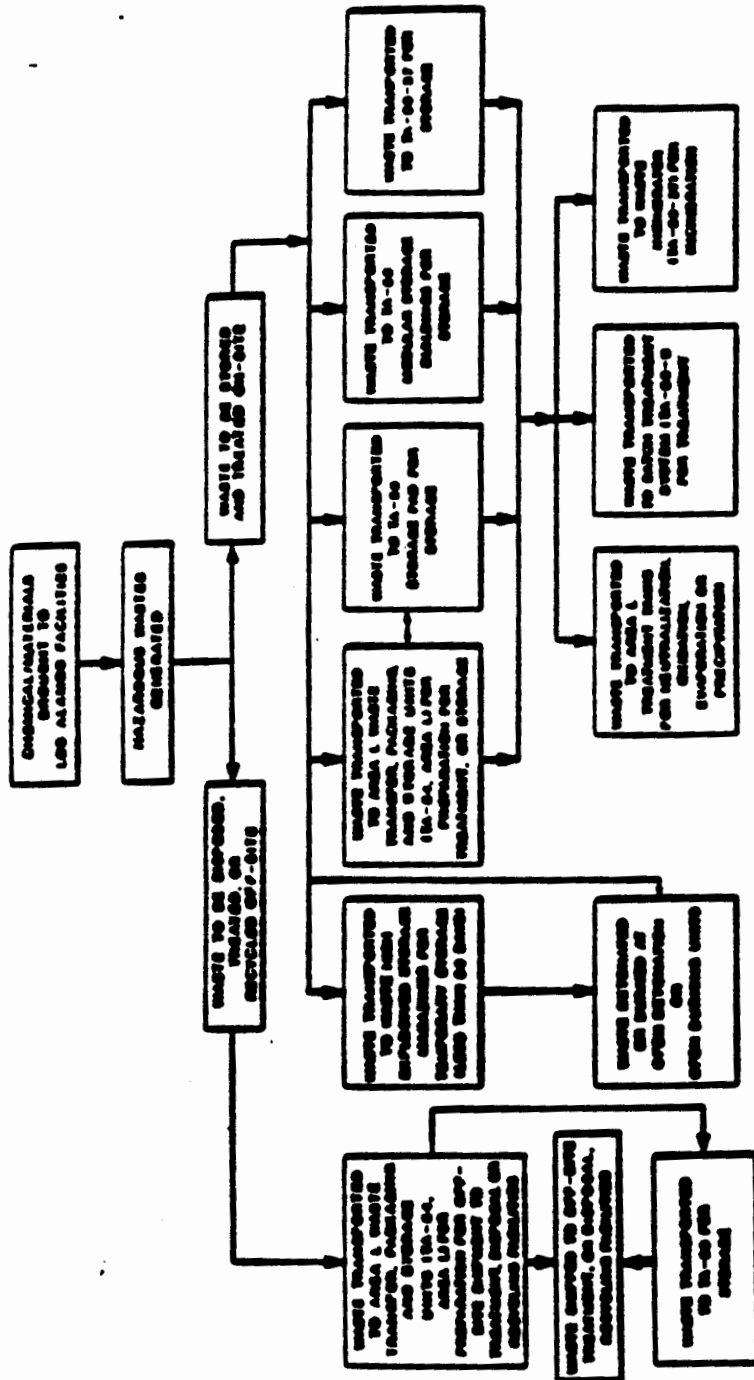


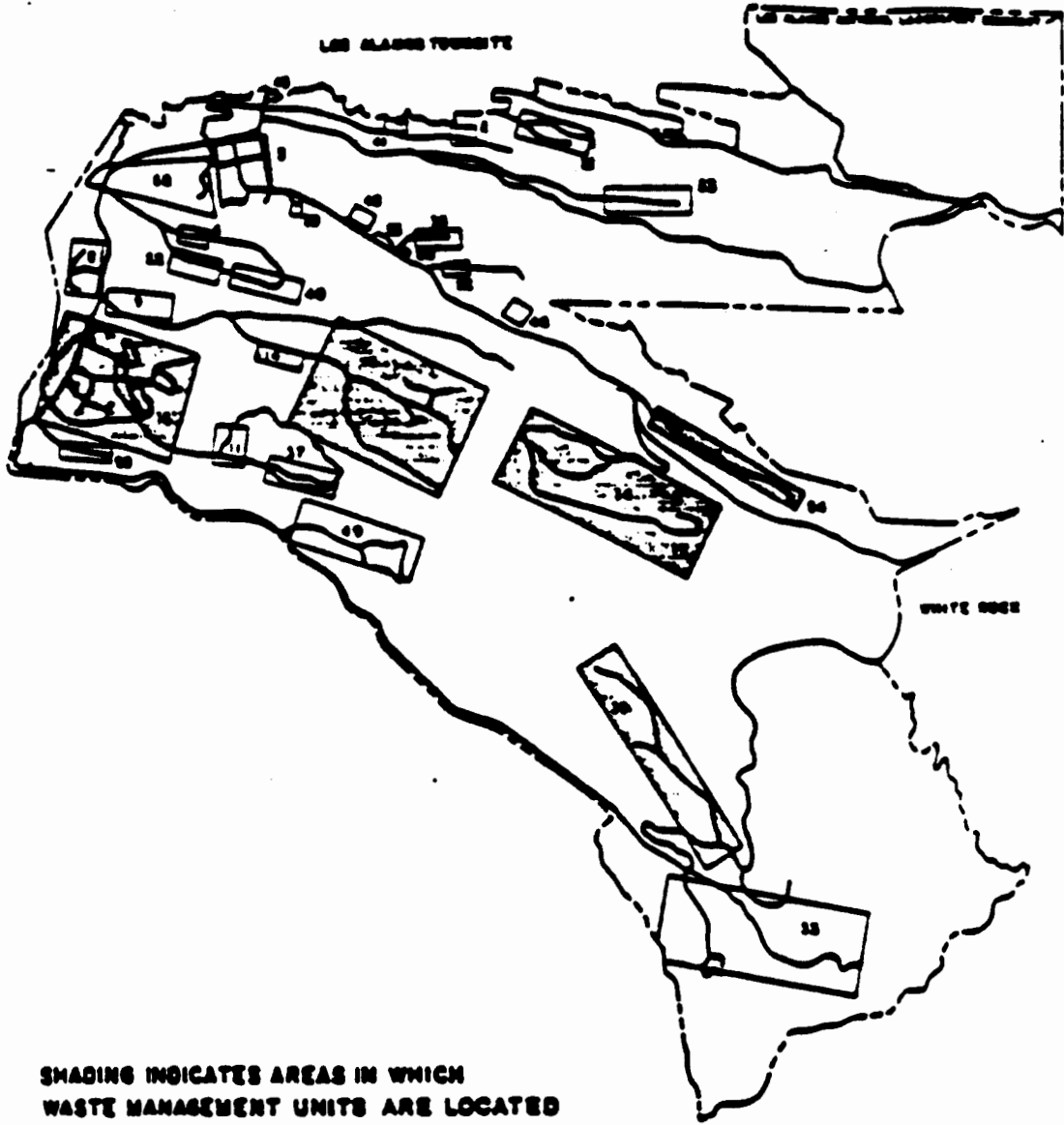
Figure D-3
 SCHEMATIC DIAGRAM OF
 LOS ALAMOS HAZARDOUS
 WASTE MANAGEMENT ACTIVITIES
 PERFORMED FOR
 LOS ALAMOS NATIONAL LABORATORY
 LOS ALAMOS, NEW MEXICO



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LOCKHEED MARTIN CORPORATION
 4800 WILLOW CREEK DRIVE
 PITTSBURGH, PA 15206

DRAWN BY: []
 CHECKED BY: []
 APPROVED BY: []
 DRAWING NUMBER: 000000 00 00 00



[] SHADING INDICATES AREAS IN WHICH
 WASTE MANAGEMENT UNITS ARE LOCATED

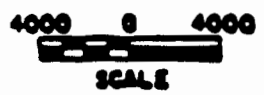
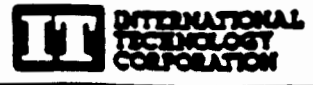


Figure D-1
 LOS ALAMOS
 TECHNICAL AREAS

PREPARED FOR
 LOS ALAMOS
 NATIONAL LABORATORY
 LOS ALAMOS, NEW MEXICO



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Do Not Scale This Drawing
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D.7 SALVAGE AND CLEANUP

The affected area will be surveyed by appropriate representatives from HSE Groups before salvage, cleanup and return to normal operations. Visual inspections of the affected area will be supplemented by sampling to determine whether cleanup is complete. After determination of any existing hazards from toxic or hazardous gases or fumes, electrical hazards, or other unsafe conditions, personnel or selected teams, equipped with proper breathing apparatus and protective clothing, will reenter the area to perform designated tasks to effect decontamination, repairs, and salvage to allow the return to normal operations. After an emergency, the EPSCO will:

LEDD

Provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion. Contaminated material will be treated as a hazardous waste and temporarily stored at one of the permitted hazardous waste storage areas at the laboratory. HSE-7 will be responsible for determining the final disposition of the waste. This determination will be made in compliance with the permit and RCRA standards.

Remain at the site to ensure that no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed.

Ensure that emergency equipment is cleaned and fit for its intended use before operations are resumed. Equipment will be visually inspected and sampled to determine the type and degree of contamination and appropriate cleanup measures will be used.

Prior to resuming operations, appropriate local authorities will be notified that cleanup procedures are completed and emergency equipment is cleaned and fit for its intended use.

LEDD
Damage assessment and recovery shall be performed within the reporting and investigative requirements of DOE Order 5484.1. The EPSCO has general responsibility for coordinating post-emergency actions, particularly during the time period immediately after the emergency. Such actions include cleanup operations, repair of vital equipment, or interim hazard-removing operations (such as demolition of unstable walls). The services of the affected operational organizations, HSE Division, the PAWS, and other on-site talent will also be utilized to estimate cleanup costs and operational impact. The EPSCO declares the end of the emergency; an Incident Report is filled out, and the Group Leader and his staff review emergency actions.

D.8 POST-EMERGENCY ASSESSMENT

When the emergency is over, the causes of the emergency and the effectiveness of the response are investigated, in order that future emergencies may either be prevented, or that the response to them may be more effective. Following each event requiring the implementation of the HWF Contingency Plan, the EPSCO shall meet with representatives of all response functions to determine the adequacy of the response. *LEDD*

D.9 EMERGENCY RECORDS

The details of any incident that requires implementation of the HWF Emergency Contingency Plan must be noted in that unit's log book. This record must include the time, date, and full description of the incident.

See page 14?