

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

DATE:

IN REPLY REFER TO:

MAIL STOP:

TELEPHONE:

ADTS

A120

505-667-9390

Tony

cc: HSE-DC

1/27/86

Harold E. Valencia
Area Manager
US Department of Energy
Los Alamos Area Office
Los Alamos, NM 87544

RE: CLOSURE PLANS FOR TA 3-102, TA 22-24 AND TA 40-2

Dear Mr. Valencia:

Enclosed are closure plans for the above referenced storage facilities. The TA 3-102 facility is being converted from a greater than 90 days storage area to one for less than 90 days storage (no permit required). While the same types of wastes will still be stored at TA-3-102, this conversion will reduce regulatory requirements.

The TA-22 and TA-40 areas are being permanently closed as hazardous wastes storage facilities. These will, however, continue to be used for storage of non-hazardous waste items.

These plans are being submitted to the New Mexico Environmental Improvement Division (EID) in accordance with Hazardous Waste Management Regulation 206.

Attachment A is for your information and is not to be sent to the EID. This contains the estimated cost to close each facility and the fiscal year in which the cost is expected to occur.

Sincerely,

Christopher S. Adams, Jr.
Associate Director
for Technical Support

CSA:mc

Enclosures: a/s



H. Valencia

-2-

Cy: A. Tiedman, ADTS, MS A120
J. Aragon, HSE-DO, MS P228
T. Gunderson (HSE8-86-98), HSE-8, MS K490
A. Drypolcher, HSE-8, MS E518
J. White, HSE-8, MS E518 (w/enc.)
R. Gooley, HSE-9, MS K484 (w/enc.)
F. Jackson, M-DO, MS P915 (w/enc.)
E. Gritsko, MEC-1, MS D472 (w/enc.)
CRM-4 (2), MS A150

ATTACHMENT A

Closure of TA 3-102, TA 22-24, TA 40-2 as hazardous waste storage facilities.

| Facility | Estimated Cost to Close | FY |
|----------|-------------------------|----|
| TA-3-102 | \$15K | 86 |
| TA-22-24 | \$15K | 86 |
| TA-40-2 | \$15K | 86 |

TA-3-102 currently has interim status under the Resource Conservation and Recovery Act (RCRA). Since this area will no longer store hazardous waste for greater than 90 days, it is being closed for such purposes and will become a less than 90 days facility (no permit required). The facilities at TAs 22 and 40 will no longer be used for the storage of hazardous waste and are therefore being permanently closed.

Closure of the three facilities will entail removal of the contents of the rooms, cleanup of the floor and walls, sampling of the wash water and return of contents.

D R A F T

Ms. Denise Fort, Director
New Mexico Environmental Improvement Division
P.O. Box 968
Santa Fe, New Mexico 87504-0968

Dear Ms. Fort:

Enclosed are amended closure plans for the Los Alamos National Laboratory's hazardous waste facilities:

- o TA-3-102 Container Storage Area for Lithium Hydride,
- o TA-22-24 Container Storage for High Explosive Contaminated Wastes, and
- o TA-40-2 Container Storage for High Explosive Contaminated Wastes

These amended closure plans supercede all previously submitted closure plans for these three facilities. These plans were amended to reply to oral comments received from representatives of the New Mexico Environmental Improvement Division (NMEID) during an October 29, 1985 meeting with representatives of the Laboratory. The plans were previously referenced in the Department of Energy's (DOE's) response to NMEID's August 26, 1985 Notice of Violation dated September 27, 1985 and contained specific dates for closure activities. By this letter the DOE requests that the public notice process be initiated by your Division for these three closure plans.

It is the intention of the DOE to close these facilities as soon as closure plan approval is received from NMEID. With your cooperation, closure activities can begin late in May of this year.

I would like to again take this opportunity to remind your division that all correspondence should be directed to Department of Energy, Los Alamos Area Office, Los Alamos, NM 87544 not to the Los Alamos National Laboratory. If you have any questions, please contact Avedon Gallegos of my staff at 667-5288.

Sincerely,

Harold E. Valencia
Area Manager

Enclosure: a/s

Cy: A. Tiedman, LANL, ADTS, MS A120
J. Aragon LANL, HSE-DO, MS P228
T. Gunderson (HSE8-86-72), LANL, HSE-8, MS K490
A. Drypolcher, LANL, HSE-8, MS E518
W. Rhea, EPA, 1201 Elm St., Dallas TX 75270

**CLOSURE PLAN FOR
TA-3 BUILDING 102
CONTAINER STORAGE AREA
FOR LITHIUM HYDRIDE**

Facility ID No.: NM0890010515
Facility Name: Los Alamos National Laboratory
Legal Owner: United States Department of Energy
Address: Los Alamos Area Office
City, State: Los Alamos, New Mexico 87545
Phone: (505)667-5061

**SEPTEMBER 1985
Amended December 1985**

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1.0 INTRODUCTION

A portion of the Los Alamos National Laboratory's Technical Area 3 Building 102 (TA-3-102) is used for the containerized storage of lithium hydride (LiH) waste, which is a reactive waste because it reacts violently with water (D003). The container storage area is operated under a Part A Resource Conservation and Recovery Act (RCRA) Permit; a Part B Permit is not being sought. The container storage area will be closed under interim authority, and then put back into service as a short-term (less than 90 days) storage area. The operation of TA-3-102 for short-term storage will not require a Part B Permit (HWMR-204.B.1.)

This document is the closure plan required by the New Mexico Environmental Improvement Division (NMEID) Hazardous Waste Management Regulations (HWMR) 206.C.2. Closure consists of removing the remaining LiH wastes from the storage area, decontaminating the area, and verifying decontamination. LiH waste will then be brought to the area for short-term storage.

2.0 TA-3-102 CONTAINERIZED STORAGE DESCRIPTION

The TA-3-102 container storage area is a 3-m (10 ft)-wide by 3-m (10 ft)-long section of floor space in the northeast corner of Section 118-A, in Building SM-102 (Figure 2-1). Building SM-102 is a major Laboratory machine shop located within the Laboratory's property boundaries. Section 118-A is dedicated to machining LIH. The milling equipment is enclosed in plexiglass boxes, and a dust collection system maintains negative pressure on the boxes during milling operations. The chips collected in the milling boxes and the dust from the collection system are placed in plastic bags, which are placed in drums for storage. The drums are stored on a painted concrete floor. Adjacent walls are sheet rock over cinder block, and the sheet rock is painted with a high gloss enamel. The floor has no cracks or seams and there is a tight finish between the wall and floor.

3.0 WASTE DESCRIPTION

LIH is the only hazardous waste that has been stored in TA-3-102. LIH scraps from milling operations may be contaminated with mineral oil, and waste from cleaning equipment and floors may contain saw dust. The wastes are double-bagged in plastic bags, which are sealed and placed in new steel drums of different sizes, including 55-gallon, 30-gallon, 10-gallon, and 5-gallon drums. The different drums are used to segregate the different contaminated and uncontaminated wastes. Ultimately, these wastes are transported to hazardous waste storage at TA-54-Area L, where they are then treated on-site or shipped to a permitted off-site facility for treatment.

The maximum storage capacity at any given time at TA 3-102 is ten 55-gallon drums (73 cu ft) and is limited by administrative controls. The LIH waste on hand at closure is estimated as follows:

| <u>Drum Size</u> | <u>Number</u> | <u>Contents</u> | <u>\$Full</u> |
|------------------|---------------|---|---------------|
| 55-gallon | 1 | Mineral Oil Contaminated Chips and Dust | 20 |
| 30-gallon | 2 | LIH Pieces | 50 |
| 20-gallon | 1 | LIH Pieces | 50 |
| 10-gallon | 1 | Chips and Dust | 50 |
| 5-gallon | 3 | Chips and Dust | 50 |

4.0 CLOSURE PLANS

4.1 Waste Removal

Before removing the waste, Section 118-A will stop all milling operations. The waste drums in the area will be sealed with drum covers and lid rings and moved out of the storage area with a drum hand truck. The drums will be placed along the north wall of Section 118-A of Building 102 at approximately the center of the room. Adequate space exists between milling equipment and the wall to allow a five foot access aisle.

Following closure, the drums will be moved back into the storage area, where they will be available to receive additional wastes. To document less than 90-day storage, and to designate their contents as hazardous waste, the drums will be affixed with dated tags. Inspections will be conducted as required by the existing Laboratory Inspection schedule.

4.2 Decontamination

Following removal of the waste, the storage area will be decontaminated. The floor and walls will be vacuumed 3 m (10 ft) in each direction from the corner to remove dust. Following vacuuming, the area supervisor will inspect the area to ensure that there are no visual accumulations of LIH dust or chips.

The dust accumulated by vacuuming will be picked up with a dust pan, then double-bagged in plastic bags and placed in a steel drum. The drum will be stored with the other LIH waste drums and

ultimately the dust will be treated on-site or shipped to a permitted off-site facility for treatment. The vacuum sweeper will be wiped clean inside and out with rags and washed with water. When the inspection fails to show visible evidence of LIH, the floor will be scrubbed and the walls wiped with water. Excess water will be picked up with an industrial vacuum sweeper, and the dirty water from cleaning will be poured into an industrial drain that flows to a Laboratory water treatment plant at TA-50-1. This treated water is discharged from the treatment plant under an NPDES permit. The dirty wash water will be sampled to determine adequate decontamination, as defined in Section 4.3.6. If testing of the wash water indicates that decontamination is incomplete, additional washings with water will be repeated until the area is fully decontaminated. After allowing the floor and walls to dry, the waste drums will be moved back into the storage area with a drum hand truck.

The wastes are handled in double-wrapped plastic bags, so the wastes do not contact the drum handling truck, and therefore the cart does not need to be decontaminated. The rags used for cleaning will be packed in plastic bags, placed in drums, and handled the same as the other LIH wastes. The vacuum used for sweeping will be washed with water.

Workers who move the drummed wastes or clean the area will wear coveralls, rubber gloves, safety glasses, and protective booties over their shoes. Coveralls and booties will be washed at the Laboratory's industrial laundry.

4.3 Sampling and Analytical Procedures

4.3.1 General Considerations

The following sections define procedures and methods for sampling, analysis, and documentation applicable to closure. Although specific procedures are defined, alternate methods given in Test Methods for Evaluating Solid Wastes, USEPA, SW 846, most current edition (SW 846) may be used if sampling conditions or experience indicate another method is preferable. The following methods are from SW 846.

4.3.2 Sampler

The Collwasa sampler will be used to sample the clean water for background parameters before washing the area, and the wash water after cleaning the area. The simple design makes the sampler easy to use and allows rapid collection of samples, thus minimizing the exposure of the sample collector to potential hazards from the waste. The recommended model of the Collwasa is shown in Figure 4-1, the main parts consisting of the sampling tube, the closure-locking mechanism, and the closure system.

4.3.3 Cleaning the Sampler

The sampler must be clean before use. The used sampler must be washed with a warm detergent solution (Liquinox or Alconox), rinsed several times with tap water, rinsed with distilled water, drained of excess water, and air-dried or wiped dry. A necessary piece of equipment for cleaning the tube of the Collwasa is a bottle brush that fits tightly inside the diameter of the tube. The brush is connected to a rod of sufficient length to reach the entire length of the sampler tube. Using this ramrod and fiber-reinforced paper towels, the Collwasa tube may be quickly cleaned. Improper cleaning of sample equipment will cause cross-contamination of samples. Contamination is of particular importance in these samples, because they will be taken for regulatory purposes. Clean samplers should be stored in polyethylene plastic tubes or bags in a clean and protected area.

4.3.4 Sampling Procedures

- o Assemble the glass Collwasa sampler according to Figure 4-1.
- o Make sure that the Collwasa sampler is clean.
- o Check to make sure the sampler is functioning properly. Adjust the locking mechanism, if necessary, to make sure the neoprene rubber stopper provides a tight closure.

- o Wear necessary protective clothing and gear and observe required sampling precautions.

- o Put the sampler in the open position by placing the stopper rod handle in the T-position and pushing the rod down until the handle sits against the sampler's locking block.

- o Slowly lower the Collwasa sampler into the liquid. Lower the sampler at a rate that permits the levels of the liquid inside and outside the sampler tube to be about the same. If the level of the liquid in the sampler tube is lower than that outside the sampler, the sampling rate is too fast and will result in a nonrepresentative sample.

- o When the sampler stopper hits the bottom of the liquid container, push the sampler tube downward against the stopper to close the sampler. Lock the sampler in the closed position by turning the T-handle until it is upright and one end rests tightly on the locking block.

- o Slowly withdraw the sampler from the container with one hand while wiping the sampler tube with a disposable cloth or rag with the other hand.

- o Carefully discharge the sample into a glass container by slowly opening the sampler. This is done by slowly pulling the lower end of the T-handle away from the locking block

while the lower end of the sampler is positioned in the glass container.

- o Cap the glass container, attach a label and seal, record in field log book, and complete the sample analysis request sheet and chain of custody record, as described in Section 4.3.5.

- o Unscrew the T-handle of the sampler and disengage the locking block. Clean the sampler on-site or store the contaminated parts of the sampler in a plastic storage tube or bag for subsequent cleaning. Store used rags in plastic bags for subsequent disposal.

- o Deliver the sample to the laboratory for analysis.

4.3.5 Sample Handling

After a sample is transferred into the glass container, the container must be tightly capped as quickly as possible to prevent the loss of volatile components and to exclude possible oxidation from the air. The sample should be refrigerated or treated with preservatives, as required for the analysis and defined in SW 846. To split or withdraw an aliquot of a sample, considerable mixing, homogenization, or quartering is required to ensure that representative or identical portions are obtained. When transferring a sample aliquot, open the glass container as briefly as possible.

Each sample must be properly labeled and sealed immediately after collection.

4.3.5.1 Sample Labels

Sample labels (Figure 4-2) are necessary to prevent misidentification of samples. Gummed paper labels or tags are adequate. The label must include at least the following information:

- o name of collector
- o date and time of collection
- o place of collection
- o collector's sample number, which uniquely identifies the sample.

4.3.5.2 Sample Seals

Sample seals are used to preserve the integrity of the sample from the time it is collected until it is opened in the laboratory. Gummed paper seals can be used as official sample seals. The paper seal must carry information such as:

- o collector's name
- o date and time of sampling
- o collector's sample number. This number must be identical with the number on the sample label.

The seal must be attached in such a way that it is necessary to break it in order to open the glass sample container. An example of a sample seal is shown in Figure 4-3.

4.3.5.3 Field Log Book

All information pertinent to a field survey or sampling must be recorded in a log book, which must be a bound book, preferably with consecutively numbered pages that are 8 1/2 by 11 inches. Entries in the log book must at least include:

- o purpose of sample
- o location of sampling and address
- o name and address of field contact
- o producer of waste and address
- o type of process producing waste
- o type of waste
- o declared waste components and concentrations
- o description of sampling point
- o date and time of collection
- o collector's sample identification number(s)
- o sample distribution
- o references, such as maps or photographs of the sampling site
- o field observations
- o any field measurements made, such as pH, flammability, explosibility.

Sampling situations vary widely. No general rule can be given about the extent of information that must be entered in the log book. A good rule, however, is to record sufficient information

so that someone can reconstruct the sampling situation without relying on the collector's memory. The log book must be protected and kept in a safe place.

4.3.5.4 Chain of Custody Record

To establish the documentation necessary to trace sample possession from the time of collection, a completed chain of custody record must accompany every sample. This record becomes especially important when the sample is to be introduced as evidence in a court litigation. An example of a chain of custody record is illustrated in Figure 4-4. The record must contain the following minimum information:

- o collector's sample number
- o signature of collector
- o date and time of collection
- o place and address of collection
- o waste type
- o signatures of persons involved in the chain of possession
- o inclusive dates of possession.

4.3.5.5 Sample Analysis Request Sheet

The sample analysis request sheet (Figure 4-5) is intended to accompany the sample when it is delivered to the laboratory. The field portion of this form must be completed by the person collecting the sample and should include most of the pertinent in-

formation noted in the log book. The laboratory portion of this form is intended to be completed by the laboratory personnel and to include:

- o name of person receiving the sample
- o laboratory sample number
- o date of sample receipt
- o analyses to be performed.

4.3.5.6 Sample Delivery to the Laboratory

The sample should be delivered to the laboratory for analysis as soon as practicable, usually the same day as the sampling. The sample must be accompanied by the chain of custody record and by a sample analysis request sheet. The sample must be delivered to the person in the laboratory authorized to receive samples.

4.3.5.7 Shipping of Samples

When a sample is shipped to the laboratory, it must be packaged in a proper container to avoid leakage or breakage. Acceptable packing materials include sawdust, crumpled newspapers, vermiculite, polyurethane chips, etc. Other samples that require refrigeration must be packed with reusable plastic packs or cans of frozen gels in molded polyurethane boxes with a sturdy fiberboard protective case. The boxes must be taped closed with masking tape or fiber plastic tape. All packages must be accompanied by

a sample analysis request sheet and chain of custody record. Complete address of the sender and the receiving laboratory must legibly appear on each package.

4.3.6 Sampling Parameters

Each sample will be analyzed for pH, cyanides, toxic metals, and organics, as shown in Table 4-1.

A minimum of two background samples will be collected from the clean water before it is used to wash the area. If repeated washings occur, a minimum of two clean water samples will be taken each time to add to the background data base. The background samples will be analyzed for pH, EP toxic metals, organics, and cyanides and compared to the results from the wash water. The statistical methods described in Test Methods for Evaluation of Solid Waste, USEPA SW 846, will be used to determine a significant increase in regulated constituents in the washwater over the clean water. If the comparison indicates no significant increase, then further cleaning need not to be done. If comparison of the analytical results indicates a significant increase, contamination will be assumed and the area will be cleaned until it is confirmed, by testing, that the contamination has been removed.

4.4 Rationale for Closure

The only hazardous waste present at TA-3-102 is LIH, which is hazardous because it reacts violently with water. The products of the reaction of water and LIH are hydrogen and lithium hydroxide, neither of which is a listed hazardous waste. Lithium hydroxide can be corrosive but the concentrations resulting from the washing operation will have a pH less than 12.5. Assuming that a 1/8th-inch particle was left undetected in the visual inspection, an explosion would not occur. The weight of the LIH particle is 0.026 grams, which when reacted with water, would yield 0.078 grams of lithium hydroxide (LiOH) and 0.0065 grams (0.00257 SCF) of hydrogen. The heat of reaction would be only 0.1 kcal (0.4 BTU). These levels of reaction product and energy release do not present a hazard during the area washdown. The closure decontamination procedure is the same procedure that has successfully been used regularly to clean the LIH shop area. The reaction of LIH is rapid and complete, and because LIH is reactive with water, washing the minute quantities remaining as dust renders the residue nonhazardous.

Dirty water from the area washdown is analyzed for EP toxic metals and selected toxic hydrocarbon constituents to demonstrate that the area was not inadvertently contaminated with other metals and solvents. The pH analysis ensures that LIH residuals are not in sufficient quantities to be corrosive.

The storage area is within an LIH processing area and will be used in the future for short-term storage of the same material that is currently stored. A more rigorous decontamination procedure will serve no purpose.

4.5 Closure Schedule

Upon written approval of the plan by the NMEID, LIH machining in Section 118-A will cease, no further storage of the waste will occur, and closure will commence within 15 days. TA-3-102 will be closed in 1986.

One day is required to move the present waste out of the area. Six weeks are needed to schedule and complete cleaning and analyzing the area. An additional week is allowed to ensure that the area is dry before returning the waste to the storage area. One day is provided to replace the drums in their original location. Total closure time from plan approval to completion will take 51 days.

The owner or operator of the facility will have a copy of this closure plan at the facility until closure is complete and certified. The plan must be amended if any change occurs to affect it, as per [HWMR 206.C.2.c.(2).].

4.6 Certification

An independent registered professional engineer and the owner/operator of the facility shall witness the closure and ensure that it follows this plan. Upon completion of closure, the engineer and the DOE shall prepare a letter certifying that the container storage area has been closed in accordance with this plan. The letter shall be dated and signed by each party and stamped by the registered engineer, and the original copy submitted by the DOE to the Director of the NMEID; one copy shall be maintained at the Building 102 office and one copy maintained by the HSE-8 Regulatory Compliance Group.

4.7 Closure Schedule Summary

| <u>Activity</u> | <u>Duration</u> |
|--|--|
| Discontinue LIH generation and storage | Upon written approval of plan |
| Begin closure operations | Within 15 days of plan approval |
| Remove waste from the area | 1 day |
| Schedule and complete clean-up and analysis | 6 weeks |

Allow area to dry

1 week

Replace drums in original location

1 day

5.0 GENERAL CONSIDERATIONS

5.1 Contact Person

Upon approval of this closure plan, the NMEID and LANL will coordinate, in writing, the respective contact person(s) to organize activities and communications between the parties under the plan. The parties will provide timely written notification of any changes in the designation of contact persons during the term of this plan. LANL will provide a minimum of ten days' advance notice to the NMEID, through the NMEID contact person(s), of any construction, sampling, or activities conducted under this closure plan.

5.2 Quality Assurance

Effectiveness of the programs contained in this plan is specifically dependent on the proper sampling and analytical methods. LANL will use sampling, quality assurance, quality control, and chain of custody procedures that are consistent with the USEPA Regulations throughout all activities contemplated under this plan. All analytical testing will be performed in a laboratory using appropriate USEPA procedures with QA/QC in conformance with USEPA requirements.

5.3 Split Samples

Upon request by authorized representatives of the NMEID, LANL will provide split samples of any samples collected under this plan. If any analysis is made of such samples, a copy of the

results of the analysis shall be furnished promptly to LANL. This includes all relevant technical data generated by the NMEID representatives, their agents, or contractors.

5.4 Facility Access

Upon request, LANL will provide reasonable access to its facility to authorized representatives of the NMEID for the purpose of monitoring, sampling, and observing activities carried out under this plan. NMEID representatives shall comply with established LANL safety and security practices.

5.5 Cooperation

LANL and the EID's representatives will cooperate to the fullest extent possible in the reporting and exchange of data developed under this plan. Copies in LANL's possession of results of all sampling and analyses, and other relevant technical data generated by the parties, or their agents or contractors under this plan, including raw data, field notes, and laboratory bench sheets and reports, will be exchanged as soon as practicable. In the event LANL contracts with a laboratory to perform work and the State of New Mexico requests from the laboratory copies of raw data, field notes, or laboratory bench sheets generated for LANL, LANL shall indicate to the laboratory that it has no objection to the documents being provided to the State of New Mexico.

TABLE 4-1
SAMPLING PARAMETERS
AND METHODS

| EPA Hazardous Waste Number | Metals | EP Toxic Regulated Concentrations | EPA* Analytical Method |
|----------------------------------|-----------|--------------------------------------|------------------------------|
| D004 | Arsenic | 5.0 mg/l | 6010 |
| D005 | Barium | 100.00 | 6010 |
| D006 | Cadmium | 1.0 | 6010 |
| D007 | Chromium | 5.0 | 6010 |
| D008 | Lead | 5.0 | 6010 |
| D009 | Mercury | 0.2 | 7470 or 7471 |
| D010 | Selenium | 1.0 | 6010 |
| D011 | Silver | 5.0 | 6010 |
| - | Nickel | - | 6010 |
| - | Beryllium | - | 6010 |

Organics

| | |
|-------------------------|--------------|
| GC/MS for volatiles | 8240 |
| GC/MS for semivolatiles | 8250 or 8270 |

Other

| | |
|---------|------|
| Cyanide | 9010 |
|---------|------|

*Analytical methods may include any applicable methods found in USEPA SW 846.

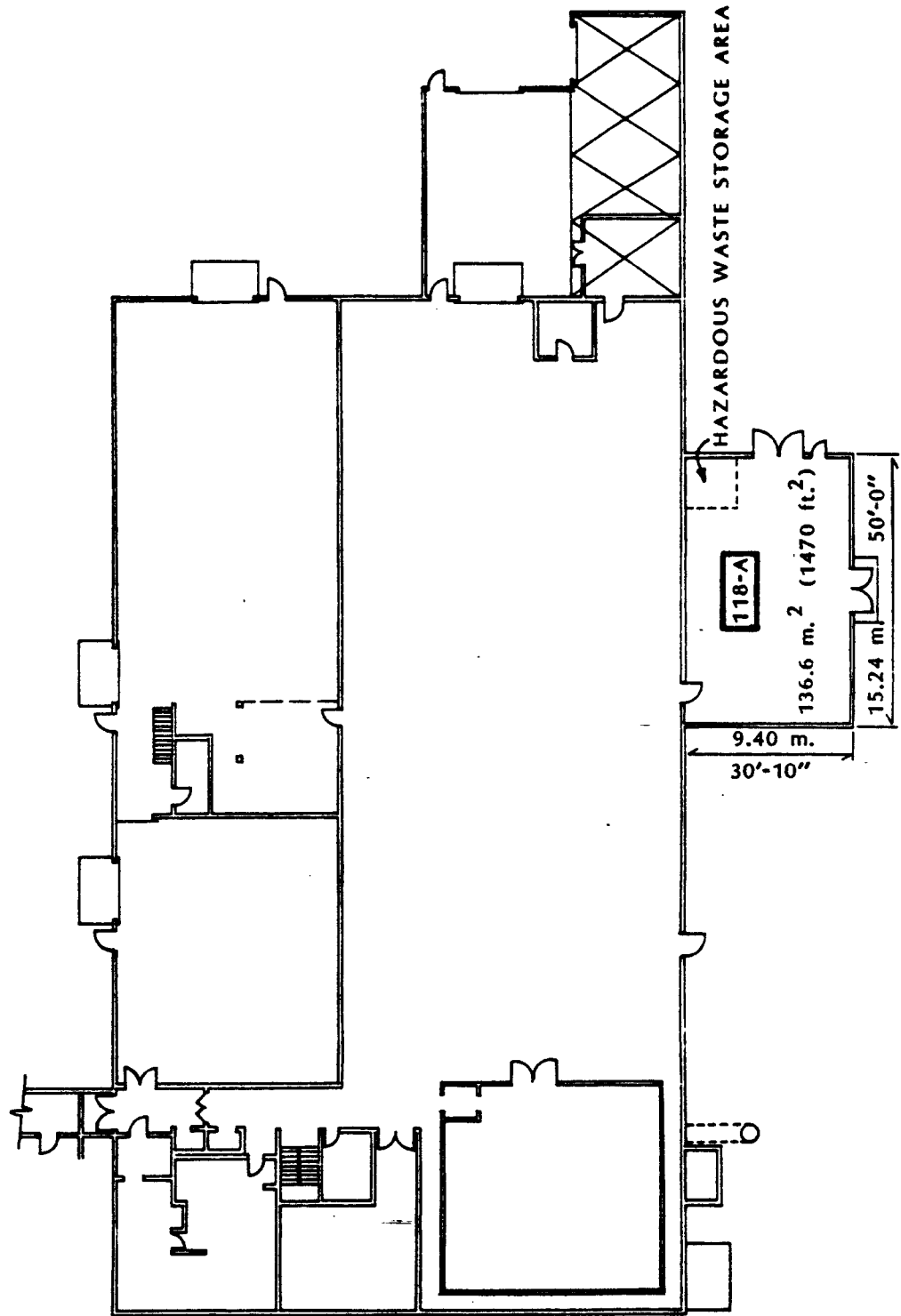


FIGURE 2-1
 TA-3 BUILDING 102
 FLOOR PLAN

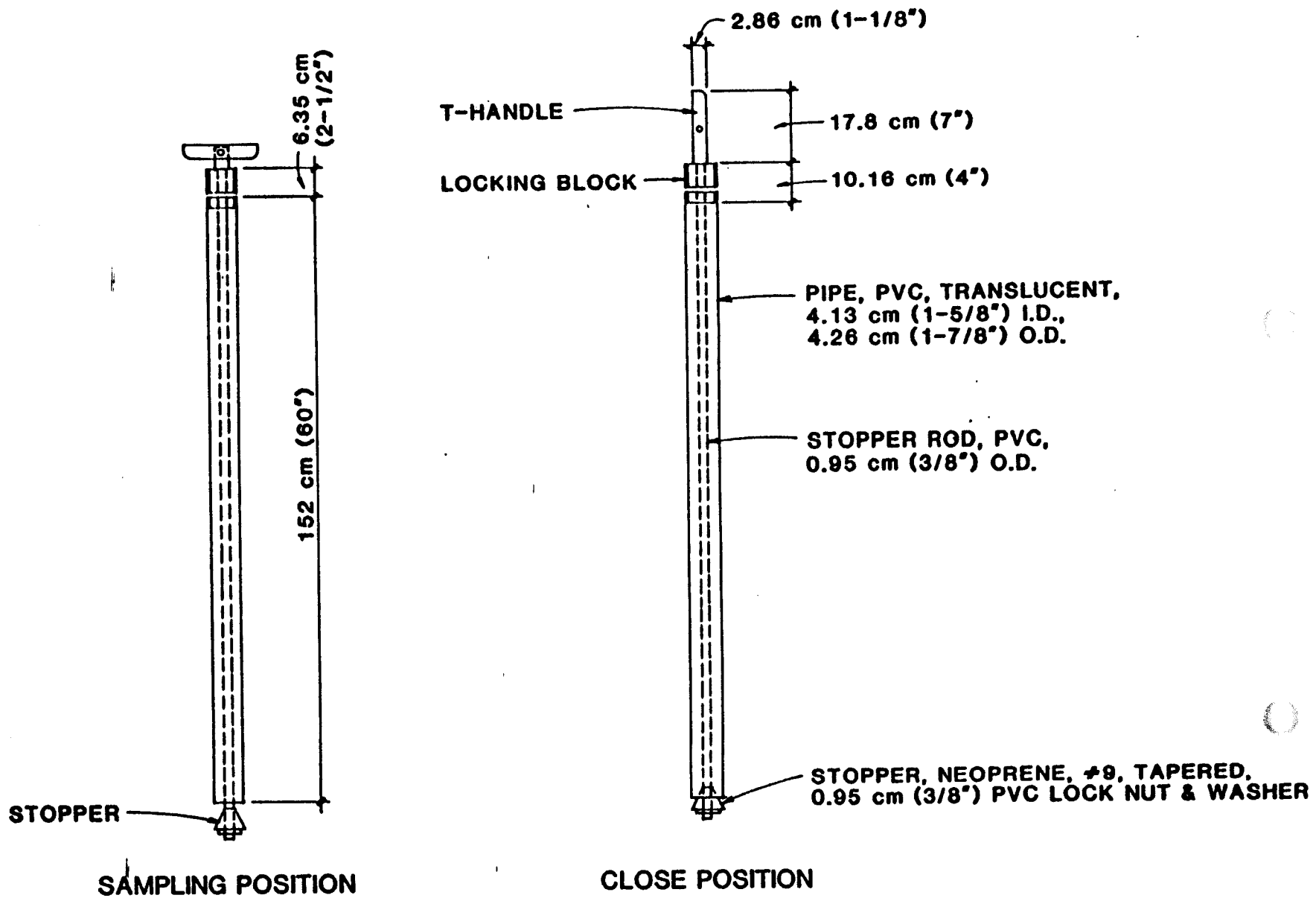


FIGURE 4-1

COMPOSITE LIQUID WASTE SAMPLER (COLIWASA)

**FIGURE 4-2
EXAMPLES OF SAMPLE LABELS**

OFFICIAL SAMPLE LABEL

Collector _____ Collector's Sample No. _____

Place of Collection _____

Date Sampled _____ Time Sampled _____

Field Information _____

ALTERNATE SAMPLE LABEL

DATE _____ **TIME** _____ **SAMPLE NO.** _____ **ORIGIN** _____

LOCATION SAMPLED

DESCRIPTION

REMARKS

REQUESTED ANALYSIS

SAMPLED BY: (PRINT AND SIGN)

TAG NO. _____ **OF** _____

LOG REFERENCE

FIGURE 4-3
EXAMPLE OF SAMPLE SEAL

OFFICIAL SAMPLE SEAL

Collected by _____ Collector's Sample No. _____
(Signature)

Date Collected _____ Time Collected _____

Place Collected _____

**FIGURE 4-5
HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST**

PART I: FIELD SECTION

=====

Collector _____ Date Sampled _____ Time _____ hours

Location of Sampling _____

Address _____ name of company, disposal site, etc.

Telephone (____) _____ street _____ city _____ state _____ zip _____

Company Contact _____

| HML NO. (Lab only) | COLLECTOR'S SAMPLE NO. | TYPE OF SAMPLE* | FIELD INFORMATION |
|-----------------------|---------------------------|--------------------|-------------------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

Analysis Requested _____

Special Handling and/or Storage _____

PART II: LABORATORY SECTION

=====

Received by _____ Title _____ Date _____

Sample Allocation: ___HML ___LBL ___LABL ___SRL Date _____

Analysis Required _____

*Indicate whether sample is sludge, soil, etc.; **Use back of page for additional information.