LONG TERM STORAGE FACILITIES

A LTSF Permit Classification Applies to

any long term storage facilities where
any HM is in, on, or about the facility.

Three Types of Long Term Storage Facilities:

New
Existing
Minimal
SELECTED DEFINITIONS

Long Term Storage Facility
A facility containing HM
not under active shipping papers
not stored or handled incidental to transportation.

Existing Long Term Storage Facility
A facility in existence as of April, 1998, or
for which a building permit was issued prior to April, 1998

New Long Term Storage Facility
LTSF where construction began after April, 1998

Long Term Minimal Storage Facility
A LTSF where quantity of each HM or mixture containing a
HM stored or handled, in aggregate, at any one time during a
reporting year is:
  500 pounds or less for solids
  55 gallons or less for liquids
  200 cu ft or less at STP for gases
SELECTED DEFINITIONS-2

Pipes
means pipeline systems
which are used in connection with the storage of
hazardous materials, exclusively within the
confines of a facility, and
which are not intended to transport hazardous
materials in interstate or intrastate commerce or
to transfer hazardous materials in bulk to or from
a marine vessel.

Segregation of Hazardous Materials
shall have the same meaning as given in 49 CFR
§177.848 and any table or appendix thereto.
REQUIREMENTS FOR NEW LONG TERM STORAGE FACILITIES

New LTSFs must meet standards related to monitoring systems, containment, separation of certain HM classes, and drainage.
MONITORING SYSTEMS

Liquid or solid hazardous materials must be stored with a monitoring system capable of detecting when/if HM moves from primary containment into the secondary containment.

The preferred monitoring method of the primary containment is visual inspection. LFD may require other monitoring, including visual and/or audible alarms.

If secondary containment subject to water intrusion, monitoring for such water is required.
CONTAINMENT

Stored liquid or solid HM must have primary and secondary containment.

Primary containment shall
• be product-tight,
• have overfill protection (device and/or alarm)

Secondary containment shall
• have sufficient integrity not to be structurally weakened from discharged HM, and
• be capable of containing HM long enough to allow recovery of the discharged HM

If only one primary container, secondary containment must contain 110% of the volume of primary container.

If multiple primary containers, secondary container must contain the greater of 150% of volume of largest primary container in it, or 10% of the aggregate of all primary containers.

If secondary containment open to rainfall, it must accommodate the volume of 24-hour rainfall as determined by a 25-year storm history

Laminated, coated, or clad materials are considered single-walled; do not fulfill requirements of both primary and secondary containment.
VARIANCE FROM SECONDARY CONTAINMENT REQUIREMENTS

Variance Application
Applicant may apply for variance from secondary containment requirements if can demonstrate:

- the requirement of secondary containment creates an unusual and particular hardship;
- an equivalent degree of protection is provided by a proposed alternative; and
- alternative is certified as equivalent protection by competent, independent engineer,

Variance requests must be on a form provided by LFD.

Variance Issuance
The Fire Chief may grant a variance based
- only on the special circumstances of the storage facility,
- not on a class or category of storage facilities.

The decision of the Fire Chief shall be according to §33-18.5, §33-18.6, and §33-18.8.

Variance Denial
A variance from secondary containment may be denied. Applicant may appeal a denial decision.
SEPARATION OF MATERIALS

Materials that in combination may cause a fire or explosion, or production of a flammable, toxic, or poisonous gas, or deterioration of a primary or secondary container must be separated in both the primary and secondary containment.
DRAINAGE SYSTEMS

DRAINAGE MUST BE INSTALLED & MAINTAINED SO THAT:

precipitation is controlled to prevent discharge of HM;

all drainage system drain flows can be controlled;

all storage facilities contain a means for owner or operator to remove the water; and

any water removal system provides a means of analyzing removed water for contamination, and a means of disposing of the water at an authorized disposal facility, if contaminated.
REQUIREMENTS FOR EXISTING LTSF

Existing LTSFs must meet standards set forth in §33-18.16A.2. (Same as for New LTSFs)

Provisional Permit.
The provisional permit is an exception to this requirement.

If Fire Chief finds an applicant with an existing LTSF is unable to immediately meet the “new” LTSF standards, he/she may approve a provisional permit instead of denying the application.

This approval is subject to conditions to be imposed by Ordinance & LFD and approval is for six months to allow the permittee to meet the “new” LTSF standards.

Provisional Permit Extension

The provisional permit may be extended for a consecutive period not to exceed six months from the date the previous provisional permit was issued.
Provisional Permit Extension Standards

Fire Chief will not approve a provisional permit, or extension, unless applicant meets 33-18.6A.2, or the following:

Monitoring systems
Storage facilities with liquid or solid HM must have monitoring plan for each HM storage system; include visual inspection, or alternative monitoring.

Alternative monitoring may include pressure testing of piping systems; down gradient & adjacent monitoring well(s) vapor analysis within the well(s) where appropriate; analysis of soil borings at initial installation of well(s). Number, depth and sampling frequency of well(s) to be approved by LFD.

Containment
Liquid/solid HM stored in product-tight, primary containment; Overfill protection (device and/or high level alarm).

Separation of Materials
Separated incompatible materials in storage facility to prevent reactions that cause a fire or explosion; or the production of a flammable, toxic, or poisonous gas; or the deterioration of a primary container.

Drainage Systems
Drainage must
• control precipitation to prevent discharge of HM;
• control all drainage system drain flows;
• provide water removal means for all storage facilities;
• provide for analyzing removed water for contamination, and disposal of contaminated water at an authorized facility.
Provisional Permit Standards, Continued

Provisional Permit is Conditional
- conditioned on no unauthorized discharges
- maintaining provisional standards, and any LFD req’ts

Provisional Permit Continual Review
- Fire Chief may revoke permit if permit conditions not met.

Fire Department Provisional Permit Reviews
- LFD will determine if applicant meets standards for a provisional permit
- LFD will consider
  - age of the storage facility and any storage system;
  - methods of containment;
  - methods of monitoring;
  - feasibility of the realized retrofit;
  - concentration of the HM contained;
  - severity of potential unauthorized discharge;
  - suitability of other long term preventive measures.

No Replacements under Provisional Permits
During provisional permit, a permittee may not replace any storage facility or storage system not in accordance with new LTSF standards

Failure to Comply
If not in compliance with new LTSF standards after provisional permits and extensions have expired, must close the existing LTSF within 2 years of decision not to issue a HM storage and handling permit
HMMP Contents -- General Site Plan

The General Site Plan section shall include:

- A map drawn at a legible scale map that includes:
  - Location of all building and exterior storage facilities;
  - Permanent access ways;
  - Evacuations routes;
  - Chemical loading areas;
  - Parking lots, internal roads;
  - Equipment cleaning areas;
  - Storm and sanitary sewer accesses;
  - Emergency equipment;
  - Adjacent property uses.

- Exterior storage areas identified with:
  - Hazard classes and
  - The maximum quantity per hazard class of HM stored.

LFD may require location of:

- Wells;
- Flood plains;
- Surface water bodies; and
- General land uses within one mile.
**HMMP Contents -- Building Floor Plan**

Building floor plan (legible scale) section shall include:

- location of each HM storage facility or system;
- indication of rooms, doorways, corridors, exits;
- fire related assemblies with their hourly rating;
- location of liquid tight rooms;
- evacuations routes;
- the location of emergency equipment; and
- the general purpose of the other areas.

A map of each storage facility shall include in coded form:

- A floor plan to scale and permit quantity limit;
- Info about each non-waste HM if > specified for LTMSF;
  
  (general chemical name, common/trade name,
  major constituents for mixtures, UN number, CAS number, physical state)
- presence of each waste HM stored in any quantity;
- For all HMs, including wastes, the hazard class & quantity range for each;
- For materials regulated under the Uniform Fire Code but not under 33-18.16A, such as radioactive materials or cryogens, LFD may require that the hazard class or classes and the quantity range of each;
- For tanks, capacity limit tank and information about each HM (general chemical name, common/trade name, major constituents for mixtures, UN or NA number, & physical state; and
- The storage facility map shall be updated annually and with “additional approval” or HMIS amendment
HMMP Contents -- Other

Hazardous Materials Inventory Statement
(covered on OH # 24)

Separation of Materials
Describe methods used to ensure separation and protection of stored HMs to prevent
• fire or explosion;
• production of a flammable, toxic or poisonous gas;
• deterioration of primary or secondly containment.

Monitoring Program
Describe monitoring methods to be used in each storage facility storing HM
• location;
• type;
• manufacturer specifications (if applicable);
• suitability; and
• frequency of permittee inspections of storage facilities.
HMMP Contents –
Record Keeping

Emergency Equipment

Additional Information;

HMMP Alternative

Record Keeping Forms
Inspection check sheet or log to be used with routine inspections.

Check sheet or log used to record
• date and time of inspection and/or monitoring activity
• date and time of any corrective action taken
• name of the inspector
• countersignature of responsible official

Emergency Equipment
Describe emergency equipment, availability, testing, and maintenance

Variation in Information
LFD may require additional information for the HMMP if needed

HMMP Alternative
A plan submitted to another public agency regulating HM &
including same information as required for any part of the HMMP
may be submitted to hazardous materials management permit
office in lieu of such part. LFD may defer to other public agency’s
approval
LONG TERM MINIMAL STORAGE FACILITIES

Short Form HMMP Plan Authorized
An applicant for a permit concerning LTMSF may submit short form HMMP.

Short Form HMMP Contents
A short form HMMP shall include the following.

GENERAL INFORMATION.
• name and address of storage facility
• business phone number of applicant
• names, titles, emergency phone numbers of primary and alternate response persons
• number of employees
• number of shifts
• hours of operation
• principal business activity

LINE DRAWING
A simple line drawing of storage facility showing
• location of the actual storage
• hazard class or classes and physical state of HMs
• indication of any material that is a waste

DESCRIPTION OF STORAGE.
• how HMs will be stored
• how HMs will be contained, separated, & monitored

DESCRIPTION OF EMER. EQUIP. TO BE MAINTAINED

ASSURANCE OF PROPER DISPOSAL OF ANY HM
EMERGENCY RESPONSE PLANS

PLAN SUBMITTAL
Unless the permit concerns LTMSF or a farm, LTSFs containing HM shall
• establish written emergency response plan (ERP).
• file ERP with permit application,
• maintain ERP at LTSF for inspection.
• demonstrate safe ER to a release or threatened release of a hazardous material.

ERP CONTENTS
The ERP shall describe
• ERP & procedures LTSF will take for HM reportable release or threatened release
• include immediate notification to LFD
• procedures for mitigation of a release or threatened release
• evacuation plans and procedures for persons at LTSF including audible notice & warning

ERP ALTERNATIVE
An applicant required to file a pipeline operations contingency plan (per DOT’s 49 CFR Part 195) may file a copy of those plans with the HMMPO instead of filing the ERP.
TRAINING

TRAINING REQUIRED.
• new employees at LTSF trained within 90 days of date of hire or contract.
• other employees working at the LTSF trained annually by refresher courses
  • training by the permit applicant (or agent)

TRAINING CURRICULUM.
Employee training includes
• safety procedures in event of HM release or threatened release
• content and familiarity with the ERP;
• technical and managerial responsibilities of employees;
• training in compliance with the 29 CFR 1910.1200; and
• OSHA required process and workplace safety programs.

ADDITIONAL TRAINING.
• hazmat employees handling non-waste hazardous materials or substances must receive training specified in 49 CFR 172 Subpart H
• hazmat employees engaged in hazardous waste operations and/or emergency response must receive HAZWOPER training per 29 CFR 1910.120 or 29 CFR 1926.65.
HM INVENTORY STATEMENT

Statement Submittal: A LTSF (unless LTMSF) containing HM must file HMIS with permit application

The HMIS Must Include

FOR NON-WASTES
• chemical name, trade name, major constituents for mixtures,
• manufacturer, UN number, CAS number, and hazard class(s)
• MSDS or equivalent information

FOR WASTES
• EPA uniform hazardous waste manifest
• general chemical and mineral composition of waste, probable concentration range
• hazard class(s)

CHEMICAL common names any HM mixture not listed above

THE MAXIMUM AMOUNT of each HM or HM mixture handled at any one time over the year; (Alternative: HMIS may report amount of HM ranges, if ranges provide the information necessary for ER personnel to determine the potential hazard

SUFFICIENT INFORMATION on how and where HM are handled to allow LFD to prepare ER to potential releases

Standard Industrial Classification code no. of permittee

Name and twenty-four hour phone number(s) of the person representing the permittee who is able to assist ER personnel in the event of an emergency during non-business hours.
PERMITTEE INSPECTIONS AND RECORDS

Inspections by permittee: Permittee must
- regularly inspect LTSF to assure compliance
- maintain logs or file reports in accordance with its HMMP
- assure inspector conducting such inspections is qualified

Special inspections: If permittee has no qualified inspector, LFD may require permittee to employ a special inspector to periodically make a HM safety evaluation and to determine compliance

Inspector: The special inspector shall be a qualified person

Inspection Report: The special inspection report shall include
- evaluation of the facilities
- recommendations where appropriate.
  A copy of the report must be filed with LFD at the same time it is submitted to permittee.

Permittee Actions: The permittee must, within 30 days of report, file a plan to implement all recommendations, or shall demonstrate to the satisfaction of LFD why such recommendations shall not be implemented.

Substitute Inspections: Inspection by an employee of a state or federal public agency who is trained to inspect HM facilities may be deemed by LFD as a substitute for the “Inspections by Permittee” or “Special Inspections”

Maintenance of Records: Permittee shall
- maintain all inspection records for a period not < 3 years.
- make the inspection records available to LFD
QUESTIONS?