

LABORATORY HAZARDOUS WASTE TREATMENT GUIDELINES

For use by Unidocs Member Agencies or where approved by your Local Jurisdiction

Authority Cited: California Health and Safety Code (HSC); Title 22 California Code of Regulations (22CCR)

A. Scope

These guidelines address Laboratory Treatment (also known as Benchtop Treatment) of hazardous waste. Treatment of laboratory hazardous wastes generated onsite may be performed without a hazardous waste treatment/storage/disposal facility (TSDF) Facility Permit from the Department of Toxic Substances Control (DTSC) or Tiered Permit issued by the local Certified Unified Program Agency (CUPA) provided that all requirements specified in this document are met.

The California Code of Regulations (CCR) is available on the Internet at www.calregs.com and Health and Safety Code at leginfo.legislature.ca.gov/faces/codes.xhtml.

B. Definitions [HSC §25200.3.1(a) and 22CCR §66260.10]

For the purposes of this document, the following definitions apply:

- **Acutely Hazardous Waste (AHW)** – Means any hazardous waste identified as an Acute Hazardous Waste in Article 4 of Chapter 11 of Division 4.5, Title 22, California Code of Regulations.
- **Laboratory** – Means a workplace where relatively small quantities of hazardous chemicals are handled or used in a manner that meets all of the following criteria:
 - Chemical reactions, transfers, and handling are carried out using containers that are designed to be easily and safely manipulated by one person.
 - Protective laboratory practices and equipment are available and in common use to minimize the potential for laboratory worker exposure to hazardous chemicals.
 - The chemical procedures conducted in the laboratory meet all of the following criteria:
 - The chemical procedures are conducted for purposes of education; research; chemical analysis; clinical testing; or product development, testing, or quality control.
 - The chemical procedures are not part of the actual commercial production of chemicals or other products, and are not part of production development activities, unless the activities are conducted on the scale of a research laboratory.
 - The chemical procedures are not part of the treatment of hazardous waste, other than the treatment of laboratory hazardous waste as described in Section E of this document, below.
- **Laboratory Accumulation Area (LAA)** – Means the area where laboratory hazardous wastes are accumulated pursuant to HSC §25200.3.1(b). It may be located in the room in which the accumulated laboratory hazardous wastes are generated or at another onsite location as close as practical to the actual point of generation.
- **Laboratory Hazardous Waste (LHW)** – Means hazardous waste generated in a laboratory by chemical procedures meeting the criteria specified above.

- **Large Quantity Generator (LQG)** – Means a hazardous waste generator who generates in a calendar month: 1,000 kilograms (2,205 pounds) or more of hazardous waste, including non-RCRA (i.e., California regulated only) wastes such as used oil; or 1 kilogram of AHW or 100 kilograms of debris resulting from the spill of an AHW. LQG requirements also apply to any generator who accumulates on-site more than 6,000 kilograms (13,228 pounds) of hazardous waste at any one time.
- **RCRA Hazardous Waste** – Means a waste identified as hazardous pursuant to the Resource Conservation and Recovery Act in Title 40, Code of Federal Regulations (CFR), Chapter 1, Subchapter I, Part 261, and applicable appendices.
- **Small Quantity Generator (SQG)** – Means a generator of hazardous waste who generates less than 1,000 kilograms of hazardous waste, including non-RCRA wastes such as used oil, per month.

C. LHW Accumulation Quantity Limits

Up to 55 gallons of LHW, or one quart of laboratory hazardous waste that is acutely hazardous waste, may be accumulated onsite in a LAA that is located as close as is practical to the location where the LHW is generated, if all of the following conditions are met: [HSC §25200.3.1(b)]

- The LAA must be managed under the control of one or more designated personnel who have received training commensurate with their responsibilities and authority for managing LHW.
- Unsupervised access to the LAA must be limited to personnel who have received training commensurate with their responsibilities and authority for managing LHW.
- The LHWs must be managed so as to ensure that incompatible wastes are not mixed and are otherwise prevented from coming in contact with each other.

[Exception: Incompatible wastes may be mixed together during treatment meeting the requirements of Section E, below, if one LHW is used to treat another LHW in containers using recommended procedures and quantities for treatment of laboratory wastes published by the National Research Council (NRC)¹ or procedures for treatment of laboratory wastes published in peer-reviewed scientific journals.]

- The amount of LHW accumulated in the LAA must be appropriate for the space limitations and the need to safely manage the containers and separate incompatible wastes.

D. Accumulation Requirements:

All of the following requirements must be met: [HSC §25123.3(d)]

- The generator must accumulate the waste in containers other than tanks. [HSC §25123.3(d)(2)]
- The generator must not hold the hazardous waste onsite without a hazardous waste facilities permit or other grant of authorization for a period of time longer than the shorter of the following time periods: [HSC §25123.3(d)(3)]
 - One year from the initial date of accumulation.
 - 90 days from the date that the 55 gallon (or 1 quart AHW) quantity limit is reached if the generator is a Large Quantity Generator (LQG).

¹ The complete text of Prudent Practices in the Laboratory: Handling and Disposal of Chemicals, published by the NRC's Committee on Prudent Practices for Handling, Storage, and Disposal of Chemicals in Laboratories, is available free online at: www.nap.edu.

- 180 days from the date that the 55 gallon (or 1 quart AHW) quantity limit is reached if the generator is a Small Quantity Generator (SQG). *[Exception: 270 days if the SQG's waste is transported a distance of 200 miles or more for offsite treatment, storage, or disposal.]*
- The generator must label any container used for the accumulation of hazardous waste with the initial date of accumulation, the words "HAZARDOUS WASTE", the composition and physical state of the waste, the hazardous properties of the waste (i.e., flammable, corrosive, toxic, reactive), and the generator's name and address. [HSC §25123.3(d)(4) and 22 CCR §66262.34(f)]
- Within three days of reaching the 55 gallon (or 1 quart AHW) quantity limit, the generator must label the container holding the accumulated hazardous waste with the date the quantity limitation was reached and either transport the waste offsite or hold the waste onsite and comply with applicable hazardous waste accumulation regulations. [HSC §25123.3(d)(5)]
- The generator must comply with regulations pertaining to the use and management of hazardous waste containers and any other applicable hazardous waste management regulations. [HSC §25123.3(d)(6)]

E. Treatment Requirements:

All of the following requirements must be met: [HSC §25200.3.1(c)]

- The LHW must be treated in containers using recommended procedures and quantities for treatment of laboratory wastes published by the NRC or procedures for treatment of laboratory wastes published in peer-reviewed scientific journals. [HSC §25200.3.1(c)(1)]
- The LHW must be treated at a location that is as close as is practical to the location where it is generated, and the treatment must be conducted within ten calendar days after the date the waste is generated. [HSC §25200.3.1(c)(2)]
- The amount of LHW treated in a single batch must not exceed the smaller of:
 - Five gallons or 18 kilograms, whichever is greater; [HSC §25200.3.1(c)(3)(A)] OR
 - The quantity limit recommended in the procedures published by the National Research Council (NRC) or in other peer-reviewed scientific journals for the treatment procedure being used. [HSC §25200.3.1(c)(3)(B)(i)]

[Exception: Per HSC §25200.3.1(c)(3)(B)(ii,) the amount of LHW treated in a single batch may exceed the NRC quantity limit if a qualified chemist has demonstrated that the larger quantity can be safely treated, and documentation of the demonstration is maintained onsite. The documentation must be made available for inspection upon request by the local CUPA.]
- The LHW treated must be from a single procedure, or set of procedures that are part of the same laboratory process. [HSC §25200.3.1(c)(4)]
- The person performing the treatment must have knowledge of the LHW being treated, including knowledge of the procedure that generated the LHW, and must have received hazardous waste training, including information on how to properly conduct treatment, manage treatment residuals, and respond effectively to emergency situations. [HSC §25200.3.1(c)(5)]
- Training records for all persons performing treatment of LHW must be maintained for a minimum of three years. [HSC §25200.3.1(c)(6)]

- ❑ The LHW must be managed in accordance with applicable requirements for generators accumulating LHW as described in Sections C and D, above. All treatment residuals and effluents must be managed in accordance with applicable federal, state and local requirements. [HSC §25200.3.1(c)(7)]
- ❑ All records maintained by the laboratory pertaining to LHW treatment must be made available for inspection upon request by the local CUPA. [HSC §25200.3.1(c)(8)]

F. Mixed Wastes:

For LHW that contain radioactive materials, the above requirements apply in addition to, but do not supersede, applicable federal and state requirements governing the management of radioactive materials. [HSC §25200.3.1(d)]