Liquid Terminals Industry Regulations

The U.S. liquid terminals industry complies with a host of regulations by federal, state and even local jurisdictions. Government regulations cover construction of, storage at and transportation to and from facilities, as well as environmental performance, facility safety, worker safety, facility security and emergency preparedness and response.

FEDERAL OVERSIGHT

Many federal agencies regulate the liquid terminal industry. Some regulations center on the type of products stored or handled at a facility, while others relate to the modes of transportation that connect to the facility. Still other regulations apply to air and water quality, safety and security.

Environmental Protection Agency

All terminals are subject to regulation by the EPA including its 10 regional offices. EPA regulates air and water quality around facilities under the Clean Air and Clean Water Acts and the proper handling and disposal of waste. Some of these programs are delegated to and enforced at the state level.

EPA administers other programs that affect terminal operations, including several related to spill prevention, mitigation and risk management if a terminal handles certain chemicals or hazardous substances. Key rules include:

- Spill Prevention, Control, and Countermeasure Rule
- Facility Response Plan Rule
- Risk Management Plan Rule

Department of Labor

Occupational Safety and Health Administration (OSHA)

OSHA requires that tank and terminal operators follow about two dozen general and industry-specific regulations on everything from walking and working surfaces, stairways, personal protective equipment, egress and fire alarms. OSHA also conducts enforcement inspections and has some specific regulatory requirements when companies handle hazardous chemicals. Key rules include:

- 29 CFR 1910 Subpart H. Hazardous materials
- 29 CFR 1910.106 Flammable liquids
- 29 CFR 1910.119 Process Safety Management (PSM)

U.S. Army Corps of Engineers

The United States Army Corps of Engineers is a U.S. federal agency under the Department of Defense. USACE regulates some aspects of terminal construction and maintenance, including dredging permits.

Department of Homeland Security

Cybersecurity and Infrastructure Security Agency

Terminals that handle or store certain “chemicals of interest” (COI)—materials that if released or diverted could be converted into weapon or mixed with readily available materials to cause harm—are subject to the Chemical Facility Anti-Terrorism Standards if COIs at the facility are present above threshold levels. The riskiest facilities must fully implement 18 risk-based performance standards that are addressed in a facility security plan. DHS conducts inspections and audits at each CFATS-covered facility.

U.S. Coast Guard

The Coast Guard regulates the security and safety of ports and harbors as well as maritime facilities, like marine terminals. Coast Guard rules include limiting access to certain terminal facilities, stringent requirements for transferring oil or hazardous materials, and development of emergency response plans.

Department of Transportation

Pipeline and Hazardous Materials Safety Administration

PHMSA regulates the design, construction and inspection of certain aboveground storage tanks, under 49 CFR Part 195. The agency also regulates the pipelines that often connect to facilities. In addition, PHMSA regulates the safe and secure transportation of hazardous materials via other modes of surface transportation, like rail and truck.

Department of Health and Human Services

Food and Drug Administration

Liquid terminals that store food are subject to FDA regulations on food storage and handling. The FDA also has regulations in place to prevent “intentional adulteration,” or food tampering.
American Petroleum Institute (API)
API has over a dozen standards, recommended practices and publications on aboveground storage of oil and oil products. Some of the key ones are:

- API Standard 650: Construction of welded steel tanks for oil storage
- API Standard 653: Tank inspection, repair, alteration and reconstruction
- API Standard 2610: Design construction, operation, maintenance and inspection of terminal and tank facilities
- API Recommended Practice 2350: Overfill protection for storage tanks in petroleum facilities

International Safety Guide for Oil Tankers and Terminals (ISGOTT)
ISGOTT, a guide to the safe carriage and handling of crude oil and petroleum products on tankers and at terminals, was first published in 1978 and is now in its fifth edition. The guide combines the contents of the Tanker Safety Guide (Petroleum), published by the International Chamber of Shipping, and the International Oil Tanker and Terminal Safety Guide, by the Oil Companies International Marine Forum.

National Fire Protection Association (NFPA)
Storage terminals, like virtually every public building, process, service, design and installation in the United States, are affected by NFPA’s 275-plus codes and standards. State and local fire marshals often incorporate standards and recommendations into their fire requirements. Some of the primary ones affecting the tank and terminal industry include:

- NFPA 1: Unified fire code
- NFPA 30: Flammable and combustible liquids code

International Code Council (ICC)
The ICC’s International Fire Code is used worldwide, including in nearly all U.S. states. The code outlines minimum safety guidelines for new and existing buildings, facilities, storage and processes. The code addresses fire prevention, fire protection, life safety and safe storage at these sites.

ASTM International
ASTM International is an international standards organization that has developed and published more than 12,000 technical standards for a wide range of materials, products, systems and services. A few that relate specifically to the tanks and terminal industry include:

- ASTM E2256-19: Standard guide for hydraulic integrity of new, repaired or reconstructed aboveground storage tank bottoms for petroleum service
- ASTM E1930 / E1930M-17: Standard practice for examination of liquid-filled atmospheric and low-pressure metal storage tanks using acoustic emission

American Society of Mechanical Engineers (ASME)
ASME offers more than 600 codes and standards, including for all piping to, from and within the terminal. Specifically, ASME B31.3 contains requirements for piping typically found at terminals and covers materials and components, design, fabrication, assembly, erection, examination, inspection and testing of piping.

Oil Companies International Marine Forum (OCIMF)
OCIMF is a voluntary association of oil companies having an interest in the shipment and terminalling of crude oil and oil products. OCIMF promotes safe and environmentally responsible operation of oil tankers and terminals as well as continuous improvement in standards of design and operation, including its Mooring Equipment Guidelines (MEG).

The Building Officials and Code Administrators International (BOCA)
BOCA is an association of professionals employed in the establishment and enforcement of Building Codes, which are the rules and regulations that govern the design and construction of buildings, including terminals. Many state and local fire officials follow the BOCA Basic Building Code.