

Resource Conservation and Recovery Act

Introduction

The Resource Conservation and Recovery Act (RCRA) establishes one set of regulations for the management of hazardous wastes and other regulations for underground storage tanks. The RCRA contains the following three main regulatory sections:

Hazardous Waste

The RCRA gives the EPA the authority to control hazardous waste from "cradle to grave", including the generation, transportation, treatment, storage, and disposal of hazardous waste.

Solid Waste

The solid and hazardous waste rules of the RCRA require the phasing out of land disposal of hazardous waste. Solid wastes include garbage, trash, and other discarded materials, whether solid, liquid, or gas. This portion of the act covers all types of waste except domestic sewage, industrial wastewater discharges, and certain radioactive materials. Some wastes are classified as "special wastes" meaning they require handling and disposal procedures different from solid waste but not as restrictive as the requirements for hazardous waste. Asbestos, used oil, and oil debris from spill clean ups are examples of special wastes.

Underground Tanks

The third section of the RCRA addresses environmental problems that could result from underground tanks storing petroleum and other hazardous substances. The RCRA focuses only on active and future facilities and does not address abandoned or historical sites. (See Storage Tanks section of this Guide for more information on underground and aboveground storage tanks.)

Regulatory Summary

Under the RCRA, hazardous waste may be identified in one of two possible ways. Initially, the EPA may list it as hazardous waste or acutely hazardous waste, such as "F" (solvent) or "K" (specific chemical process) type wastes. Secondly, if the waste is not listed, it may be considered hazardous due to one of the following four hazardous characteristics:

- Reactivity,
- Corrosivity,
- Ignitability, and
- Toxicity

The EPA created a category of hazardous waste to simplify management for selected high volume, low toxicity wastes. Called "universal wastes", they include fluorescent light bulbs, HID bulbs, pesticide containers, and certain batteries. Some states have adopted modified versions of the federal universal waste rule.

Once a facility determines that it generates a hazardous waste, the manner in which it must be managed will depend on the amount of waste generated at the facility. The amount a facility generates will determine the facility's generator status. The facility will be classified as one of the following three types of generators:

Conditionally Exempt Small Quantity Generators

A facility classified as a Conditionally Exempt Small Quantity Generator (CESQG) generates less than 220 pounds per month of hazardous waste, or less than 2.2 pounds of acutely hazardous waste and stores no more than 2,200 pounds of hazardous waste on site at any one time. CESQG's are exempt from most of the RCRA hazardous waste regulations.

Small Quantity Generators

A facility classified as a Small Quantity Generator (SQG) generates 220 pounds or more but less than 2,200 pounds of hazardous waste per month or accumulates on site 2,200 pounds or more but less than 13,227 pounds of hazardous waste per month. Among other requirements, a small quantity generator must:

- Obtain an EPA identification number,
- Accumulate hazardous waste on site for no longer than 180 days (exception: if the waste is being shipped >200 miles, accumulation time extends to 270 days),
- Use a hazardous waste manifest for a shipping paper,
- Keep all waste records (manifests, lab analyses, etc..) for three years, and
- Notify EPA in writing if a signed copy of the manifest is not received from disposal facility within 60 days of shipment.

Large Quantity Generators

A facility classified as a Large Quantity Generator (LQG) generates 2,200 pounds or more of hazardous waste per month or accumulates 13,227 pounds or more of hazardous waste per month on site. Among other requirements, a large quantity generator must:

- Obtain an EPA identification number,
- Accumulate hazardous waste on site for no longer than 90 days,
- Use a hazardous waste manifest for a shipping paper,
- Keep all waste records (manifests, lab analyses, etc..) for three years,
- File a biennial report for each facility,
- Contact waste transporter and/or disposal facility if a copy of manifest from the disposal facility is not received within 35 days of the shipment, and
- Notify EPA in writing and file an exception report if a signed copy of manifest is not received within 45 days.

When a waste is identified as hazardous, a hazardous waste identification number (waste code) is used to help identify the waste. If any quantity of hazardous waste is mixed with a nonhazardous waste, the entire volume of mixed waste must be managed as hazardous waste. The waste code is used on the manifest, hazardous waste label, biennial report, and any other documentation that will be used to identify the waste.

All hazardous waste generators that wish to ship their waste off-site must comply with the DOT regulations pertaining to packaging, marking, labeling, and placarding.

It is also the responsibility of the hazardous waste generator to ensure that reputable and qualified companies are utilized for transportation and disposal of the hazardous waste. Both the transporter and the disposal site must have an EPA identification number and be fully permitted to conduct their respective activities.

Additionally, RCRA regulations more stringent than those adopted by the EPA may be adopted by individual states.

Natural Gas Industry

Solid waste and potentially hazardous waste could be generated at a variety of areas at a natural gas facility. Common materials that are waste and potentially hazardous waste when generated at natural gas facilities include:

Filters (oil, gas, glycol, amine)	Office trash
Used oil	Paints and solvents
Pipeline condensate	Used/unused chemicals
Acids or caustics	Drums
Oil-soaked paper and rags	Pipe, metals Abrasive blasting media

Due to regulatory requirements and cradle-to-grave responsibilities under the RCRA, natural gas companies should audit disposers and transporters to ensure that long-term liabilities are minimized.

Please note this manual was not designed to provide compliance and/or legal advice on specific situations, and many companies have specific policies and procedures that should be followed. Furthermore, environmental regulations are constantly changing and the information provided in this manual may not be accurate.

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Storage Tanks

Introduction

While the term "aboveground storage tank" (AST) is used generically to describe tanks placed above the surface of the ground and the term "underground storage tank" (UST) applies to those beneath the ground, storage tank structures can fall into three categories:

- Underground storage tanks
- On-ground storage tanks
- Aboveground storage tanks

Underground storage tanks (USTs) have been widely used over the past 40 years to store petroleum products, chemicals, and wastes. Leaks, spills and overfills from UST systems pose risks to human health and the environment. In 1984, a new comprehensive regulatory program for USTs containing regulated substances was established.

While the term "ASTs" generally applies to all systems not clearly identified as USTs, the two types of ASTs in common use are on-ground storage tanks and completely aboveground storage tanks. An on-ground storage tank is one in which some part of the tank comes in contact with the surface of the ground, either on a soil bedding, ringwalls, concrete pad or special foundation supports. The underside of the ground contact area cannot be visually inspected, and it must be protected from corrosion or other forms of bottom plate failure. On-ground tanks comprise most of the larger, high volume, high capacity AST systems frequently found in industrial and refinery systems. A completely aboveground storage tank is supported above the surface of the ground, and all the parts of the tank can be visually inspected. Due to the need to support the heavy weight of stored liquids, this tank cannot be of a large volume and is usually found in volumes of 50,000 gallons or less.

The exact number of ASTs in the United States is unknown. Unlike USTs, ASTs are regulated by more than one EPA program and are not subject to federal reporting requirements. In 1989, the American Petroleum Institute (API) estimated that its members had approximately 700,000 aboveground storage tanks with a total storage capacity of almost 2.3 billion barrels.

AST systems are used in a greater variety of product storage applications than UST systems. In addition to storing petroleum, AST systems throughout the chemical and pharmaceutical industries store various hazardous substances and wastes, chemicals, petroleum products, and other liquids incidental to the plant process. The range of products stored in AST systems is virtually endless.

Regulatory Summary

USTs

The RCRA regulations specify tank notification, interim prohibition, new tank standards, reporting and record keeping requirements for existing tanks, corrective action, financial responsibility, compliance monitoring and enforcement, and approval of state programs. Currently, twenty-eight states operate approved programs in lieu of the federal regulations.

An underground storage tank is defined as follows:

Any one or combination of tanks (including underground pipe connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground.

Several types of tanks that are excluded from the federal UST regulations include the following:

- Any UST system holding hazardous wastes listed or identified under Subtitle C of the Solid Waste Disposal Act or a mixture of such hazardous waste and other regulated substances,
- Any wastewater treatment tank system that is regulated under the Clean Water Act,
- Equipment/machinery that contains regulated substances for operational purposes (such as hydraulic lift tanks and electrical equipment tanks),

- Any UST system with a capacity less than 110 gallons,
- Any UST system that contains a minimal concentration of regulated substances, and
- Any emergency spill or overflow containment UST system that is immediately emptied after use.
- UST owners and operators need to contact their state or local agency that implements the UST program to receive specific information or requirements for their tanks.

All federally regulated USTs must:

- Meet registration requirements,
- Meet leak detection requirements, and
- Meet upgrade requirements of December 22, 1998.

In addition, owners and operators must:

- Meet financial assurance requirements,
- Perform a site check and corrective action in response to leaks, spills, and overfills,
- Replace or close USTs that do not meet the upgrade requirements by December 22, 1998, Follow regulatory rules during installation of new tanks or closure of existing tanks,
- Maintain records as required, and Have periodic checks performed on corrosion protection and leak detection systems.

The deadline for upgrading, replacing or closing existing substandard UST systems was to prevent another generation of leaking UST systems. As of September 1999, the EPA estimated that there were 720,000 regulated USTs and that 85% of them complied with the December 22, 1998 standards. The EPA reports that there have been 400,000 confirmed releases from regulated USTs.

ASTs

Currently, only one comprehensive federal regulatory program (SPCC) governs ASTs, although a variety of existing statutes and regulations apply directly or indirectly to ASTs. These programs require compliance in a piecemeal fashion and focus primarily on containment rather than structural integrity, monitoring, and testing. The emphasis in AST regulation historically has been on fire protection and safety rather than on environmental protection. However, in the years following enactment of federal legislation to regulate USTs, a string of incidents involving ASTs has set the stage to expand the federal regulation of ASTs. A growing number of states have adopted some form of AST regulation as well.

It is important to establish a comprehensive inspection and maintenance routine in the operating program of an AST system. Each tank system should be carefully inspected on a regular schedule, following a carefully prepared check sheet. Any discrepancies should be corrected promptly and the need for modifications or upgrading noted.

Natural Gas Industry

Not all UST systems are regulated by federal UST regulations, although they may be regulated by the state or local agency that implements the UST program. Tank systems in pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, the Hazardous Liquid Pipeline Safety Act of 1979 or in an intrastate pipeline facility regulated under state laws are not included in the definition of a UST under federal UST regulation. A majority of the storage tanks located at natural gas facilities are ASTs used to store product.

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Used Oil and Oil Filters

Introduction

Used oil is defined as an oil refined from crude oil or synthetic oil that has been used and, as a result, is contaminated with physical or chemical impurities. Types of used oils included in this definition are spent automotive lubricating oils, hydraulic fluids, compressor oils from refrigeration units, and metal working oils.

Regulatory Summary

Used oil is classified under the RCRA as a potential hazardous waste. However, used oil generators and transporters are exempt from RCRA generator and transporter regulations normally applicable to hazardous wastes if handled by a used oil recycler. The used oil blender/marketer that receives the oil from the generator and transporter is the first party required to test the oil for specific contaminants. Except for Conditionally Exempt Small Quantity Generators (CESQGs), the hazardous contaminants must enter the used oil as a result of normal operations, and hazardous wastes may not be purposely added to the oil for disposal purposes. If used oil is mixed through normal operations with a listed hazardous waste, then it must be handled/managed as a hazardous waste.

If used oil meets the specifications for maximum contamination levels (specification oil), it may be burned as fuel in boilers and furnaces, subject to the regulatory testing and record keeping requirements. If the contaminant levels exceed the specifications, the "off-specification oil" may be sent to select industrial or utility boilers, industrial furnaces, or RCRA incinerators. Generators may burn their own used oil in small space heaters.

Used oil filters that are not coated with lead for metal stamping purposes (otherwise referred to as "tern plated") are exempt from the regulations for hazardous wastes if the filter is hot-drained or subject to puncturing, crushing, or dismantling or by other methods that would remove the used oil. Used oil filters may be disposed as a non-hazardous solid waste or recycled under the RCRA. However, more stringent state regulations might apply.

Used oil may be stored in aboveground storage tanks or containers. Storage of used oil in underground storage tanks (USTs) is allowed; however, federal and state UST regulations apply. All used oil storage containers must be marked "Used Oil" and no other waste streams may be added to these containers.

A producer could be classified as the generator of used oil if test results indicate the oil is hazardous and/or if the oil was not recycled. Marketers, who collect and sell used oil from generators, are responsible for testing and record keeping. If the generator processing the used oil burns it, then that generator is also considered to be the marketer.

Natural Gas Industry

In the natural gas industry, lubricating oils and filters are used in reciprocating compressors, turbine compressors, and emergency generators. Most of the used oil generated is recycled. The drained filters may be land disposed in some states. Oily rags and absorbent booms are generally used at facilities for oil seepage (drip) control during normal and/or spill situations. The drained rags and absorbents may be land disposed or sent to a laundry service, depending on the absence of other hazardous components that could be involved.

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