

## 5.5 Working Glossary of Solid and Hazardous Waste Terminology

This glossary is intended as a quick reference to the basic terminology of solid and hazardous waste issues.

**Acute** - Severe, often dangerous, conditions in which rapid changes occur over a brief period of time as a result of exposure to a toxic material. Acute reactions can be reversed more easily than chronic effects. See also: toxic, chronic.

**Acutely Hazardous Waste** - Waste designated by the U.S. EPA to present such a danger to human health and/or the environment so as to require regulation of small amounts (1 kilogram, or 2.2 pounds). Examples of these wastes include pesticides and dioxin-containing wastes.

**Catalyst** - A substance that increases or decreases the speed of a chemical reaction without undergoing a chemical change itself.

**Caustic** - Something that strongly irritates, burns, corrodes, or destroys living tissues. See also: corrosive.

**Chemical Additive** - Substances used in product formulations to provide certain characteristics to the product. These characteristics might include color, elasticity, durability, viscosity, and others.

**Chemical Substitution** - Replacement of hazardous chemicals with nonhazardous or less hazardous ones in both production and non-production processes.

**Chemical Specific** - Applying to individual chemicals, versus broad classes of chemicals.

**Chronic** - An adverse condition that results from repeated exposure to a substance over a prolonged period of time.

**Code of Federal Regulations (CFR)** - The general and permanent rules promulgated under U.S. law, published in the Federal Register and actually in force at the end of a calendar year. The Code is divided into 50 titles which represent broad areas subject to federal regulation. Each title is divided into chapters according to the issuing agency and subdivided into parts covering specific regulatory areas. See also: Federal Register.

**Compaction** - A reduction in volume. This waste management technique uses mechanical pressure to physically reduce the volume of waste after generation.

**Compatibility** - The ability of two or more materials to exist in close association for long periods with no adverse affect of one on the other.

**Compressed Gas** - Any material or mixture having in the container an absolute pressure exceeding 40 psi at 70EF or, regardless of the pressure at 70EF, having an absolute pressure exceeding 104 psi at 130EF; or any liquid flammable material having a vapor pressure exceeding 40 psi at 100EF.

**Conditionally Exempt Generators** - Generators of less than 100 kilograms (220 pounds) per month of non-acutely hazardous waste or less than 1 kilogram (2.2 pounds) per month of acutely hazardous waste. See also: Very Small Quantity Generator (VSQG).

**Consolidation** (of waste) - Packaging technique used to minimize the volume of waste.

**Contingency Plan** - Management tool that projects potential emergency situations and outlines the appropriate response actions to ensure the health and safety of employees, response personnel, and the environment.

**Cooperative Waste Shipments** - Arrangement between businesses generating similar wastes and a transport firm to provide a coordinated pickup of waste from each participating business. This arrangement can be formal or informal and usually results in a decrease in the transportation costs for each business. (See Milk Runs)

**Corrosivity** - A solid waste characterized as either an aqueous material with a pH less than or equal 2.0, or greater than or equal to 12.5, or a liquid that corrodes steel at a rate greater than 6.35 mm per year at a test temperature of 55E C (130EF).

**Dewatering** - A reduction in waste volume through evaporation or separation processes that remove aqueous components.

**Discharge** - A release or flow of stormwater or other substance from a conveyance or storage container.

**Distillation** - A separation process in which a liquid is converted to vapor and the vapor then condenses back to a liquid.

**Emergency Planning and Community Right-to-Know Act (EPCRA)** - Title III of the Superfund Amendments and reauthorization Act (SARA), passed by Congress in 1986. This major law gave the public significant new rights to find out about the dangerous chemicals stored, used, and released throughout the country. In particular, Section 313 of Title III created the Toxics Release Inventory (TRI) to provide public data on "routine" chemical releases from industries across the nation. See also: Toxic Release Inventory.

**Emission** - Pollution discharges into the atmosphere from smokestacks, other vents, and surface areas of commercial or industrial facilities and from motor vehicle, locomotive, or aircraft exhausts.

**Equipment Changes** - Modifications of and additions to equipment used in any stage of the manufacturing process (e.g., equipment used for storing, moving, mixing, or reacting chemicals) in order to reduce the amount of waste generated.

**EPA Identification Number** - A 12-character, site specific identification number used by the U.S. EPA and states to maintain a national data base on hazardous waste activities. Generators of more than 100 kilograms (2200 pounds) of hazardous waste in any calendar month and transporters and facilities that treat, store or dispose of regulated quantities of hazardous waste are required, by law, to have an EPA Identification Number.

**Explosive** - Any chemical compound, mixture, or device, the primary or common purpose of which is to function by explosion, i.e., with a substantially instantaneous release of gas and heat.

**Federal Register** - Publication of U.S. government documents officially promulgated under the law, documents required to be published by an act of Congress and other federal agency documents of public interest. It is published each day following a government work day. In effect, it is a daily supplement to the Code of Federal Regulations.

**Flammable** - Any solid, liquid or gaseous material that will ignite easily and burn rapidly. Flammable liquids are defined by the National Fire Protection Association and the Department of Transportation of having a flash point of 100EF (37.7EC) and a vapor pressure of not over 40 psi at 100EF. The most common flammable gases are hydrogen, carbon monoxide, acetylene, and other hydrocarbon gases.

**Fugitive Air Emissions** - Air pollution releases through leaky valves, evaporation from tanks, and other *unintentional* release points.

**Full Cost Accounting** - An accounting process that identifies all costs with a process or product.

**Hazardous Waste** - Any solid waste that is characterized as ignitable, corrosive, reactive or toxic and/or has been listed in the RCRA regulations.

**Heavy Metal** - Metallic elements such as mercury, chromium, copper, zinc, lead, and cadmium having high molecular weights. These elements tend to be associated with negative health effects in humans above certain dose levels.

**Housekeeping** - General management and operational practices that can greatly impact worker safety and hazardous waste management. Examples of good housekeeping practices include recycling waste, reducing the amount of waste you generate, and strict use of appropriate personal protection equipment.

**Ignitability** - A solid waste characterized as a non-aqueous liquid having a flash point less than 140°F (60°C), or a non-liquid capable under standard temperature and pressure of causing fire through friction, absorption of moisture, or spontaneous chemical changes and when ignited, burns so vigorously and persistently that it creates a hazard, or an ignitable compressed gas or an oxidizer.

**Incineration** - Thermal destruction of solid or hazardous waste through oxidation.

**Incompatible** - Materials that could cause dangerous reactions from direct contact with one another.

**Inorganic Chemical** - In general, chemicals that do not contain the element carbon. The exceptions include certain simple carbon-containing compounds such as oxides (carbon monoxide, carbon dioxide), carbonated and bicarbonates (such as baking soda, baking powder and chalk), cyanides and cyanates, and carbon disulfide). See also: Organic Chemical.

**Large Quantity Generators** - Facilities that generate 1000 kilograms (2200 pounds) or more of hazardous waste, or more than 1 kilogram (2.2 pounds) of acutely hazardous waste in any month. Generators of hazardous waste are regulated under the Resource Conservation and Recovery Act (RCRA). See also: RCRA.

**Materials Safety Data Sheet (MSDS)** - Part of the Hazard Communication Standards (HCS) set up by the U.S. Occupational Safety and Health Administration (OSHA) to protect workers from chemical hazards. The MSDS provides the chemical composition of the substance being used, its trade name and name of the manufacturer, hazards associated with the substance, and precautions that workers should take to avoid such hazards.

**Materials Balance** - A quantitative assessment of chemical inputs and outputs for individual processes that aims to account for every pound of a chemical that is: shipped to the process; created or destroyed in the process; delivered as a product from the process; or wasted (irrespective of whether it is an air, water, or solid waste). If the amount of wastes identified does not equal the difference between the amount of the chemical entering (or being created in) and leaving (or being consumed in) the process, then other sources of waste must exist and need to be identified.

**Milk Runs** - A term used to refer to cooperative waste shipments. (See Cooperative Waste Shipments)

**Multimedia** - Applying to all environmental media: land, water, and air.

**Operational Changes** - Changes in the way hazardous materials are handled at a plant (e.g., careful observations and control of materials, process conditions, and employee habits in order to minimize spills, process upsets, or the use of excessive amounts of chemicals) that can reduce generation of waste.

**Organic Chemical** - Chemical compounds containing carbon, except for certain simple ones. See also: Inorganic Chemical.

**Oxidizer** - A substance such as chlorate, permanganate, inorganic peroxide, or a nitrate that yields oxygen readily to stimulate the combustion of inorganic matter.

**Personal Protective Equipment (PPE)** - Devices such as respirators, gloves, shoes, and ear protectors that are worn to protect against hazards in the work environment.

**Plasticizer** - A chemical additive used in natural and synthetic polymers that imparts characteristics such as flexibility, elasticity, workability, color, etc.

**Point Source Air Emissions** - Air pollution released through smokestacks, vents, and other intentional release points.

**Polymer** - Compounds of very high molecular weight make up of a large number of simple molecules (monomers) that have been caused to combine with each other through chemical reaction. Polymers can be naturally occurring, such as rubber, cellulose, starch, and proteins, or synthetic, such as polystyrene, nylon, polyethylene, and polypropylene. See also: Resin.

**POTWs (Publicly Owned Treatment Works)** - Public sewage piping and facilities.

**Priority Pollutants** - A list of 126 specific chemicals regulated by the Clean Water Act amendments of 1977 as toxic chemicals. Included are volatile substances, acidic, basic and neutral compounds, pesticides, metals, cyanides, and phenolic compounds.

**Process Changes** - Any change in the production process that reduces the generation of waste, ranging from simple alterations of process conditions, such as temperature and pressure, to discovery of new chemical pathways and production technologies.

**Product Changes** - Changes in the product itself that can be achieved without changing the fundamental manufacturing process and that reduce the generation of waste (e.g., creating a chemical product in the form of pellets rather than as a powder can reduce the generation of waste dusts as the material is transferred during final packaging operations).

**Reactive** - A solid waste characterized as unstable and which readily undergoes violent change without detonating. Forms potentially explosive mixtures with water, generating toxic gases, vapors or fumes so as to present a danger to human health or the environment.

**Recycling** - Reuse of by-products, or components of by-products, that might otherwise be disposed of in the environment.

**Resin** - A special category of polymers characterized by a tendency to harden upon heating (thermosetting), whereas other polymers soften (thermoplastic).

**Resource Conservation and Recovery Act (RCRA)** - Federal "cradle-to-grave" regulations affecting hazardous and nonhazardous (garbage) solid waste.

**Resource Recovery** - The beneficial reuse of a waste products in ways different from their original use.

**Reuse** - In general, reuse refers to a substance that is reintroduced at the front end of a production process from which it was originally generated as a by-product.

**Right-to-Know** - A term usually referring to a series of laws, regulations, or databases that provide industry-related information to the public.

**SARA** - See Superfund Amendments and Reauthorization Act.

**Small Quantity Generator (SQG)** - A facility that generates more than 100 kilograms (220 pounds) and less than 1000 kilograms (2200 pounds) of hazardous waste in any month. Generators of hazardous waste are regulated under the 1986 amendments to the Resource Conservation and Recovery Act (RCRA).

**SIC Codes** - Standard Industrial Classification codes, the system the federal government uses to classify US companies according to the products they produce (e.g., the chemical and allied products industry is assigned SIC code 28, with individual industries in this category having four-digit codes that begin with 28).

**Sludge** - A semi-solid residue from any of a number of air or water treatment processes. Sludge can be a hazardous waste.

**Solvent** - A substance, usually in liquid form, that serves as a medium in which other substances (solids, liquids, or gases) may be undissolved but does not react with those substances. The ability of solvents to dissolve other substances allows them to be used for cleaning purposes, as the major component of products such as paints and adhesives, or as the medium in which the dissolved chemicals may react with each other.

**Source Reduction** - A strategy for reducing pollution that involves preventing the generation of waste in the first place rather than cleaning it up, treating it, or recycling after it has been produced.

**Stormwater** - Runoff from a storm event, snowmelt runoff, surface runoff and drainage.

**Superfund Amendments and Reauthorization Act (SARA)** - A 1986 federal law amending the original "Superfund" law. Title III of this law is called the Emergency Planning and Community Right-to-Know Act (EPCRA). Section 313 of EPCRA contains the Toxics Release Inventory (TRI) requirements. See also: Toxic Release Inventory.

**Surfacewater** - All water naturally open to the atmosphere (rivers, lakes, reservoirs, streams, wetlands impoundments, seas, estuaries, etc.); also refers to springs, wells, or other collectors which are directly influenced by surfacewater.

**Toxicity** - The ability of a substance to cause damage to living tissue, impairment of the central nervous system, severe illness, or in extreme cases, death when ingested, inhaled or absorbed by the skin.

**Toxic Release Inventory (TRI)** - The U.S. EPA's annual inventory of the pounds of about 320 chemicals released to the land, air, or water, or transferred off-site from the 20,000 or so largest manufacturing facilities using or manufacturing these chemicals in the United States. The TRI provisions are found in Section 313 of the Emergency Planning and Community Right-to-Know Act, which is Title III of the 1986 Superfund Amendments and Reauthorization Act (SARA).

**Toxic Pollutants** - Any pollutant listed as toxic under the Clean Water Act, Section 501 (a)(1) or, in the case of "sludge use of disposal practices," any pollutant identified in regulations implementing Section 405 (d). Refer to 40 CFR Part 122 for more details.

**Toxicity Characteristic Leaching Procedure (TCLP)** - A test used to classify materials as hazardous based upon the concentration of heavy metals (such as mercury, cadmium or lead) and pesticides in an extract of that material and the potential for environmental contamination.

**Underground Storage Tanks (USTs)** - Any storage tank with at least 10 percent or more of its storage capacity underground. See 40 CFR Part 280.12 for the complete regulatory definition.

**Very Small Quantity Generator (VSQG)** - A facility that generates no more than 100 kilograms (220 pounds) of hazardous waste and no more than 1 kilogram (2.2 pounds) or acutely hazardous waste in any calendar month. Also called a conditionally exempt small quantity generator under the Resource Conservation and Recovery Act (RCRA).

**Waste Audit** - A formalized inventory of types and quantities of waste generated at a given facility in a given period of time.

**Waste Minimization** - See Waste Reduction.

**Waste Reduction** - Practices or techniques which reduce or eliminated the volume and/or toxicity of wastes generated. This includes in-plant practices that reduce, avoid, or eliminate the generation of hazardous waste so as to reduce risks to health and environment. This includes only actions taken during the waste generating process. Treatment, concentration or recycling of wastes after they are generated is not included.

**Sources:**

*Environmental Dividends: Cutting More Chemical Wastes*, INFORM, Inc., New York, NY.

*The Small Business Guide to Hazardous Materials Management*, Great Lakes Rural Network, 1988.

*Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices*, U.S. EPA, Office of Water, September 1992, EPA 832-R-92-006.