

Glossary:

Airborne particulates: Total suspended particulate matter found in the atmosphere as solid particles or liquid droplets, including windblown dust, emissions from industrial processes, smoke from the burning of wood and coal, and the exhaust of motor vehicles.

Baseline Environmental Assessment (BEA): An evaluation of environmental conditions which exist at a facility at the time of purchase, occupancy, or foreclosure that reasonably defines the existing conditions and circumstance at the facility so that in the event of a subsequent release, there is a means of distinguishing the new release from existing contamination.

Biodegradable: Capable of being decomposed by living organisms.

Bioremediation: The use of living organisms (bacteria) to clean up oil spills or remove other pollutants from soil, water, and wastewater.

Brownfield Plan: A plan approved by the local governing body that includes the specific brownfield properties where:

- The Authority may reimburse the costs of addressing environmental contamination using tax increment financing;
- A developer will be eligible to claim an exemption from their Michigan Single Business Tax of 10% of their investment in new buildings and equipment; and
- The Authority may capture excess tax increment revenues and pay them into a local site remediation revolving fund.

Brownfield Redevelopment Authority (BRA): A local governing body that provides decision making and control of brownfield redevelopment projects. The formation of a BRA is required in order for 1) developers to take up to a \$1 million credit against their Michigan Single Business Tax liability for eligible investments at brownfields, 2) the use of tax increment financing to reimburse eligible environmental costs to redevelop brownfields, 3) the creation of a local site remediation revolving fund for use elsewhere within the Brownfield Zone.

Cap: A fairly impermeable seal, usually composed of clay-type soil or a combination of clay soil and synthetic liner, which is placed over a landfill during closure. The cap serves to minimize leachate volume during biodegradation of the waste by keeping precipitation from percolating through the landfill. The cap also keeps odors down and animal scavengers from gathering.

Carcinogen: A cancer causing agent.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): Federal law passed in 1980 that created a tax to fund Superfund, a trust fund used to investigate and clean up abandoned or uncontrolled hazardous waste sites.

Concentration: The relative amount of a substance mixed with another substance. An example is five parts per million of carbon monoxide in air or 1 milligram/liter of iron in water.

Due care: Obligations imposed on all owners and operators of property to exercise due care to avoid unacceptable exposures, take reasonable precautions and to avoid exacerbating existing contamination at a site.

Environmental Justice: The fair treatment of people of all races, cultures, incomes, and educational levels with respect to the development and enforcement of environmental laws, regulations, and policies. Fair treatment implies that no population should be forced to shoulder a disproportionate share of exposure to the negative effects of pollution due to lack of political or economic strength.

Exacerbation: Refers to activities by the owner or operator that cause existing contamination to migrate beyond the boundaries of the source of contamination or cause an increased response cost.

Exposure: Radiation or pollutants that come into contact with the body and present a potential health threat. The most common routes of exposure are through the skin, mouth, or by inhalation.

Exposure Route: The way in which people come into contact with a substance. The main routes are ingestion, inhalation, and adsorption through the skin.

Facility: As defined in Part 201 of Act 451, a facility is an area, place, or property where a hazardous substance in excess of the cleanup criteria under Part 201 has been released.

Geomembrane: A synthetic membrane, often made of polyvinyl chloride (PVC) or high density polyethylene (HDPE). Often used to line landfills.

Groundwater: Water beneath the surface of the earth which saturates the pores and fractures of sand, gravel, and rock formations.

Hydrophilic: Having a strong attraction to water. Hydrophilic molecules are soluble in water and travel with the groundwater.

Hydrophobic: Having a strong aversion for water. Hydrophobic molecules are relatively insoluble in water and tend to sorb to soil particles.

Leaching: The process by which soluble chemicals are dissolved and carried down through the soil by water or some other fluid such as gasoline.

Memorandum of Agreement (MOA) / Memorandum of Understanding (MOU): An agreement between the Environmental Protection Agency and the Michigan Department

of Environmental Quality in which the EPA promised not to plan or anticipate any federal action against an owner, operator, generator or transporter under Superfund provided that the covered party is in compliance with the Michigan Environmental Response Act.

Milligrams/liter (mg/l): The measure of concentration used in the measurement of chemicals in fluids. This is the most common way to present a concentration in water and is roughly equivalent to parts per million.

Monitoring: Periodic or continuous surveillance or testing to determine the level of compliance with federal, state or local regulations or to assess pollutant levels in various media (such as soil or water) or in humans, animals and other living things.

National Priorities List (NPL): A list of sites, many nominated by the states, for hazardous waste cleanup under Superfund.

Opacity: A measure of the amount of light obscured by very small particles in the air; clear window glass has a zero opacity, a brick wall has 100 percent opacity. Opacity is used when measuring fugitive dust.

Parts per billion (ppb): One ppb is comparable to one kernel of corn in a filled, 45-foot silo, 16 feet in diameter. A part per billion is roughly equivalent to one-thousandth teaspoon of water in a 21-foot diameter, 4-foot deep swimming pool.

Parts per million (ppm): Parts per million may also be expressed as micrograms per gram, milligrams per kilogram or milligrams per liter. A part per million is roughly equivalent to one teaspoon of water in a 21 foot diameter, 4 foot deep swimming pool.

Phase I Environmental Assessment: An initial environmental investigation that is limited to a historical records search to determine ownership of a site and to identify the kinds of chemical processes that were carried out at the site.

Phase II Environmental Assessment: An investigation that includes tests performed at the site to confirm the location and identity of environmental hazards. The audit includes preparation of a report that includes recommendations for cleanup alternatives.

Plume: A concentration of contaminants in air, soil, or water usually extending from a distinct source.

Polychlorinated Biphenyls (PCBs): A group of toxic, persistent chemicals used in electrical transformers and capacitors for insulating purposes, and in gas pipeline systems as a lubricant. The sale and new use of PCBs were banned by law in 1979.

Polynuclear Aromatic Hydrocarbon (PAH): A group of chemical compounds that contain more than one fused benzene ring. Commonly found in petroleum fuels, coal products, and tar.

Potentially Responsible Party (PRP): Any individual or company that is potentially responsible for or has contributed to a spill or other contamination at a Superfund site. Whenever possible, EPA requires PRPs to clean up sites they have contaminated.

Remedial Action Plan (RAP): A plan submitted by a site owner to the MDEQ outlining the planned action to reduce the contamination of a site to acceptable levels.

Remedial Design and Remedial Action (RD/RA): The step in the cleanup process that follows the remedial investigation and feasibility study and selection of a remedy. A RD is the preparation of the engineering plans and specifications to properly and effectively implement the remedy. The RA is the actual construction or implementation of the remedy.

Remedial Investigation and Feasibility Study (RI/FS): The RI/FS is the step in the cleanup process that is conducted to gather sufficient information to support the selection of a site remedy that will reduce or eliminate the risks associated with the contamination at the site. The RI involves site characterization (collection of data) and determines if whether the contamination presents a significant risk to human health or the environment. The FS focuses on the development of specific response alternatives for addressing contamination at a site.

Renaissance Zone: Michigan's tax free zones created as an incentive for redevelopment. These zones waive most state and local taxes on a Michigan business.

Resource Conservation and Recovery Act (RCRA): RCRA is a Federal law enacted in 1976 that established a regulatory system to track hazardous substances from their generation to their disposal. The law requires the use of safe and secure procedures in treating, transporting, storing and disposing of hazardous substances.

Risk: A measure of the chance (probability) that damage to life, health, property, or the environment will occur.

Risk Assessment: A scientific process that estimates the type and magnitude of risk to human health posed by exposure to chemical substances.

Semivolatile: A substance that evaporates slowly at standard temperature (20° C and 1 atm pressure).

Single Business Tax (SBT): The Michigan Single Business Tax has been amended to extend a tax credit for non-liable owners and operators of contaminated facilities within a Brownfield Redevelopment Financing Authority who conduct cleanup or redevelopment. The credit is equal to 10% of the cost of eligible investment accrued up to one million dollars.

Superfund: A trust fund that provides for the cleanup of hazardous substances released into the environment, regardless of fault. Established under CERCLA, Superfund also refers to cleanup programs designed and conducted under CERCLA and amendments.

Surface Water: All water naturally open to the atmosphere (rivers, lakes, reservoirs, ponds, streams, seas, estuaries).

Tax Increment Financing (TIF): Tax Increment Financing is the ability of an eligible agency to capture from all eligible taxing jurisdictions a defined portion of the property tax revenues on real and personal property in a designated area. Eligible agencies who may use tax increment financing include Downtown Development Authorities (DDA), Local Development Financing Authorities (LDFA), Tax Increment Financing Authorities (TIFA), and Brownfield Redevelopment Authorities (BRA). A Brownfield Redevelopment Authority is a special TIF that may capture new property tax value from a redeveloped contaminated site and use those captured funds to reimburse those who incurred eligible environmental expenses on that site. The BRA may create a Local Site Remediation Fund to cover eligible expenses on other contaminated sites within the BRA.

Toxicity Characteristic Leaching Procedure (TCLP): A test designed to determine the potential for toxic chemicals to move through soils and groundwater. Also used for determining the effectiveness of treatment processes designed to contain wastes or toxic chemicals in a solid matrix such as concrete or polyethylene.

Threshold Level: The minimum concentration of a substance at which negative health effects begin to appear.

Toxic: Acting as a poisonous or hazardous substance; having poisonous or harmful qualities.

Toxicity: A measure of the poisonous or harmful nature of a substance.

Toxicology: The study of adverse effects of chemicals on living organisms.

Underground Storage Tank (UST): A tank and any underground piping connected to the tank that has 10% or more of its volume beneath the surface of the ground. USTs are designed to hold gasoline, other petroleum products, and hazardous materials.

Volatile: Any substance which evaporates quickly.

Volatilization: A process by which a chemical evaporates.

Volatile Organic Compound (VOC): Any organic compound which evaporates readily to the atmosphere. VOCs contribute significantly to photochemical smog production and certain health problems.