

Glossary of Waste Site Cleanup Regulatory Terms

See also 310 CMR 40.0006 (<https://www.mass.gov/lists/waste-site-cleanup-laws-and-regulations>) and “Common Environmental Regulation Acronyms, Abbreviations and Initializations” (<https://www.mass.gov/guides/common-environmental-regulation-acronyms-abbreviations-and-initializations>)

21E - Massachusetts General Law Chapter 21E

Active Operation and Maintenance means activities related to:

- (a) operating and maintaining an Active Remedial System;
- (b) operating and maintaining an Active Exposure Pathway Mitigation Measure; or
- (c) conducting an Active Remedial Monitoring Program.

Activity and Use Limitation means a Grant of Environmental Restriction or Notice of Activity and Use Limitation recorded, registered or filed in accordance with 310 CMR 40.1070 through 310 CMR 40.1099.

Affected Individual means any individual who experiences or may experience significant health, safety, welfare or environmental impacts from a disposal site.

Anthropogenic Background means those levels of oil and hazardous material that would exist in the absence of the disposal site of concern and which are:

- (a) attributable to atmospheric deposition of industrial process or engine emissions and are ubiquitous and consistently present in the environment at and in the vicinity of the disposal site of concern;
- (b) attributable to Historic Fill;
- (c) associated with sources specifically exempt from the definitions of disposal site or release as those terms are defined in MGL c. 21E and 310 CMR 40.0006;
- (d) releases to groundwater from a public water supply system; or
- (e) petroleum residues that are incidental to the normal operation of motor vehicles.

Aquifer means a geologic formation, group of formations or part of a formation that is capable of yielding a significant amount of groundwater to wells or springs.

Assess and Assessment each means investigations, monitoring, surveys, testing, and other information-gathering activities to identify:

- (a) the existence, source, nature and extent of a release or threat of release of oil and/or hazardous material;
- (b) the extent of risk or danger to the public health, safety, welfare and the environment; or
- (c) those persons liable under M.G.L. c. 21E, § 5. Assess and Assessment shall also include, without limitation, studies, services and investigations to plan, manage and direct assessments, containments and removals, to determine and recover the costs thereof and to otherwise accomplish the purposes of M.G.L. c. 21E and/or 310 CMR 40.0000. Assess and Assessment shall not include removals, containments or remedial actions.

Audit means any activity conducted by the Department pursuant to 310 CMR 40.1100 with respect to a site to determine whether response actions which the Department has not directly overseen or performed have been conducted in accordance with M.G.L. c. 21E, 310 CMR

40.000, 310 CMR 40.0000 and any other laws, regulations, orders, permits and approvals applicable to such response actions. An audit may be conducted for all or any portion of a response action or site.

Background means those levels of oil and hazardous material that would exist in the absence of the disposal site of concern, including both Natural Background and Anthropogenic Background.

CAS means Chemical Abstract Service.

Carcinogenic Slope Factor (CSF, also Cancer Slope Factor) means an estimate of the increased cancer risk from exposure to an oil or hazardous material (OHM), expressed as risk per unit dose of (mg OHM/kg-day).

CERCLA means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601 *et seq.*

Class A Surface Water Body means any segment of an inland or coastal surface water body so assigned "Class A" pursuant to 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*.

Compliance Assistance means any service rendered by the Department to assist any person performing a response action to confirm, demonstrate or achieve compliance with M.G.L. c. 21E, 310 CMR 40.0000 and other laws, regulations, orders, permits and approvals applicable to such response actions.

Comprehensive Response Action means any response action performed in accordance with 310 CMR 40.0800.

Conceptual Site Model or CSM means a site-specific description of how contaminants entered the environment, how contaminants have been and may be transported within the environment, and routes of exposure to human and environmental receptors that provides a dynamic framework for assessing site characteristics and risk, identifying and addressing data gaps and managing uncertainty, eliminating or controlling contaminant sources, developing and conducting response action strategies, and evaluating whether those strategies have been effective in achieving desired endpoints. At sites at which NAPL is or may be present, this includes the body of fundamental scientific principles describing the behavior of fluid flow in porous media necessary to assess NAPL in subsurface strata.

Condition of Substantial Release Migration (SRM) means a 72-hour notification condition at a disposal site that is further defined at 310 CMR 40.0313(4) and includes any of the following:

- (a) releases that have resulted in the discharge of separate-phase oil and/or separate-phase hazardous material to surface waters, buildings, or underground utilities or conduits;
- (b) releases to the ground surface or to the vadose zone that, if not promptly removed or contained, are likely to significantly impact the underlying groundwater, or significantly exacerbate an existing condition of groundwater pollution;

- (c) releases to the groundwater that have migrated or are expected to migrate more than 200 feet per year;
- (d) releases to the groundwater that have been or are within one year likely to be detected in a public or private water supply well;
- (e) releases to the groundwater that have been or are within one year likely to be detected in a surface water body, wetland, or public water supply reservoir; or
- (f) releases to the groundwater or to the vadose zone that have resulted or have the potential to result in the discharge of vapors into a School, Daycare or Child Care Center or occupied Residential Dwelling.

Contaminated Debris - means any debris that contains oil and/or hazardous material associated with a release for which notification is required by 310 CMR 40.0300 and 40.1600.

Contaminated Groundwater - means groundwater containing oil and/or hazardous material at concentrations equal to or greater than a release notification threshold established by 310 CMR 40.0300 and 40.1600.

Contaminated Media - means Contaminated Groundwater, Contaminated Sediment, Contaminated Soil, and/or Contaminated Surface Water.

Contaminated Sediments - means sediments containing oil and/or hazardous material associated with a release for which notification is required by 310 CMR 40.0300 and 40.1600.

Contaminated Soil - means soil containing oil and/or hazardous material at concentrations equal to or greater than a release notification threshold established by 310 CMR 40.0300 and 40.1600.

Contaminated Surface Water - means surface water containing oil and/or hazardous material associated with a release for which notification is required under 310 CMR 40.0300 and 40.1600.

Critical Exposure Pathways mean those routes by which oil and/or hazardous material(s) released at a disposal site are transported, or are likely to be transported, to human receptors via:

- (a) vapor-phase emissions of measurable concentrations of oil and/or hazardous materials into the living or working space of a pre-school, daycare, school or occupied residential dwelling; or
- (b) ingestion, dermal absorption or inhalation of measurable concentrations of oil and/or hazardous materials from drinking water supply wells located at and servicing a pre-school, daycare, school or occupied residential dwelling.

Cumulative Receptor Cancer Risk means the sum of the estimated excess lifetime cancer risks associated with exposure to all oil and/or hazardous material at or from a disposal site at all exposure points for a given receptor.

Cumulative Receptor Non-cancer Risk means a calculation of the possibility of non-cancer health effects associated with exposure to all oil and/or hazardous material at or from a disposal

site at all exposure points identified for a given receptor. The Hazard Index is a measure of the Cumulative Receptor Non-cancer Risk.

Current Drinking Water Source Area means groundwater located:

- (a) within the Zone II for a public water supply;
- (b) within the Interim Wellhead Protection Area for a public water supply;
- (c) within the Zone A of a Class A surface water body used as a public water supply; or
- (d) within 500 feet of a private water supply well.

Disposal Site means any structure, well, pit, pond, lagoon, impoundment, ditch, landfill or other place or area, excluding ambient air or surface water, where uncontrolled oil and/or hazardous material has come to be located as a result of any spilling, leaking, pouring, abandoning, emitting, emptying, discharging, injecting, escaping, leaching, dumping, discarding or otherwise disposing of such oil and/or hazardous material. The term shall not include any site containing only oil or hazardous materials which: are lead-based paint residues emanating from a point of original application of such paint; resulted from emissions from the exhaust of an engine; are building materials still serving their original intended use or emanating from such use; or resulted from release of source, byproduct or special nuclear material from a nuclear incident, as those terms are defined in 42 U.S.C. § 2014, if such release was subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under 42 U.S.C. § 2210.

Downgradient means:

- (a) in reference to surface water, the direction perpendicular to lines of equal elevation over a distance in which elevation continuously decreases, measured from the point or area in question; or
- (b) in reference to groundwater, the direction perpendicular to lines of equipotential over a distance in which total head continuously decreases, measured from the point or area in question.

Downgradient Property means a parcel of land which is located downgradient of the parcel of land which is the source of a release which has come to be located thereon.

Eligible Person means an owner or operator of a site or a portion thereof from or at which there is or has been a release of oil or hazardous material who:

- (a) would be liable under M.G.L. c. 21E, § 5(a)(1) solely; and
- (b) did not cause or contribute to the release of oil or hazardous material from or at the site and did not own or operate the site at the time of the release.

Engineered Barrier means a permanent cap with or without a liner that is designed, constructed and maintained in accordance with the requirements of 310 CMR 40.0996 and 310 CMR 40.0000.

Environmental Receptor means any living organism, other than humans, and/or any habitat which supports such organisms, and/or any other natural resource which comes into contact with oil and/or hazardous material as a result of a release to the environment.

Environmental Restriction means a restriction or other covenant concerning the use of property that is held or imposed by the Department pursuant to M.G.L. c. 21E, § 6.

Excess Lifetime Cancer Risk means the estimated probability that an individual's exposure during a lifetime to an oil or hazardous material could result in cancer.

Exposure means any contact with or ingestion, inhalation or assimilation of oil and/or hazardous material, including, without limitation, irradiation.

Exposure Pathway means the mechanism by which human or environmental receptors inhale, consume, absorb, or otherwise take in oil and/or hazardous material at an Exposure Point.

Exposure Pathway Mitigation Measure means a remedial action directed at an Exposure Pathway that eliminates exposure to human or ecological receptors or reduces such exposures to meet applicable performance standards.

Exposure Point means a location of potential contact between a human or environmental receptor and a release of oil and/or hazardous material. An Exposure Point may describe an area or zone of potential exposure, as well as a single discrete point.

Exposure Point Concentration means the concentration of oil or hazardous material in a specific medium which a human or environmental receptor may contact at an Exposure Point.

Groundwater means any water below the earth's surface in the zone of saturation.

Hazard Index means a calculation of the possibility of non-cancer health effects as the result of exposure to one or more oil or hazardous materials with the same or similar modes of toxic action or toxic endpoints. The Hazard Index (HI) is defined as: $HI = D1 / AD1 + D2 / AD2 + \dots + Di / ADi$ where D is the daily dose (or daily concentration) for a particular oil or hazardous material, and AD is the allowable daily dose (or allowable daily concentration) for a particular oil or hazardous material specified by the Department. The allowable daily concentration is the Reference Concentration or other allowable daily concentration specified by the Department.

Hazard Quotient means a calculation of the possibility of non-cancer health effects as the result of exposure to an oil or hazardous material. The Hazard Quotient (HQ) is defined as: $HQ = D / AD$ where D is the daily dose (or daily concentration) for the oil or hazardous material and AD is the allowable daily dose (or allowable daily concentration) for the oil or hazardous material specified by the Department. The allowable daily concentration is the Reference Concentration or other allowable daily concentration specified by the Department.

Hazardous Material means material, including, but not limited to, any material in whatever form which, because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment, when improperly stored, treated, transported, disposed of, used, or otherwise managed. The term shall not include oil, but shall include waste oil and all those substances which are included under 42 U.S.C. § 9601(14), but it is not limited to those substances. The term shall also include, but is not limited to, material regulated as hazardous waste or recyclable material under 310 CMR 30.000: *Hazardous Waste*.

Hazardous Waste means a waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may cause, or significantly contribute to an increase in serious irreversible, or incapacitating reversible illness or pose a substantial present or potential hazard to human health, safety, public welfare or the environment when improperly treated, stored, transported, used or disposed of, or otherwise managed, however, not to include solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act of 1967, or source, special nuclear, or by product material as defined by the Atomic Energy Act of 1954, as further described in 310 CMR 30.000: *Hazardous Waste*.

Historic Fill means Fill Material that based on the weight of evidence and consistent with the Conceptual Site Model:

- (a) was emplaced before January 1, 1983;
- (b) may contain, but is not primarily composed of, construction and demolition debris, reworked soils, dredge spoils, coal ash, wood ash or other solid waste material;
- (c) was contaminated with metals, hydrocarbons, and/or polycyclic aromatic hydrocarbons prior to emplacement, at concentrations consistent with the pervasive use and release of such materials prior to 1983;
- (d) does not contain oil or hazardous materials originating from operations or activities at the location of emplacement;
- (e) is not and does not contain a generated hazardous waste, other than Oil or Waste Oil;
- (f) does not contain chemical production waste, manufacturing waste, or waste from processing of metal or mineral ores, residues, slag or tailings; and
- (g) does not contain waste material disposed in a municipal solid waste dump, burning dump, landfill, waste lagoon or other waste disposal location.

Hot Spot means a discrete area where the concentrations of oil or hazardous material are substantially higher than those present in the surrounding area. A hot spot shall be identified based on consideration of both the concentration of an oil or hazardous material within a contaminated area and the spatial pattern of that contamination. The areal extent and spatial pattern of a hot spot may be determined through the analytical results from multiple samples taken within the area, or the results of limited sampling in combination with other knowledge about the release, such as the presence of discoloration, odors or a defined source area. Discrete areas where the average concentration within the area is greater than ten but less than one hundred times the average concentration in the immediate surrounding area is a Hot Spot unless there is no evidence that the discrete area would be associated with greater exposure potential

than the surrounding area. In all cases, a discrete area where the concentration of an oil or hazardous material is greater than one hundred times the concentration in the surrounding area shall be considered a Hot Spot. In no case shall concentrations of oil or hazardous material equal to or less than an applicable Method 1 standard be considered indicative of a Hot Spot.

Human Receptor means a person who is likely to be affected by a site, as further described in 310 CMR 40.0900.

Immediate Response Action and IRA each means any response action performed in accordance with 310 CMR 40.0410.

Imminent Hazard means a hazard which would pose a significant risk of harm to health, safety, public welfare or the environment if it were present for even a short period of time, as further described in 310 CMR 40.0950.

Interim Deadline means a deadline established by the Department pursuant to M.G.L. c. 21E, § 3A(j), and 310 CMR 40.0167, other than a deadline that is either expressly set forth in 310 CMR 40.0000 or determined by reference to a specific provision in 310 CMR 40.0000.

Interim Wellhead Protection Area ("IWPA") means:

- (a) with respect to public water supply wells and wellfields whose pumping rate is 100,000 gallons per day or greater and for which the Department has not approved a hydrologically delineated Zone II, the ½ mile radius surrounding such well or wellfield; and
- (b) with respect to public water supply wells and wellfields whose pumping rate is less than 100,000 gallons per day and for which the Department has not approved a hydrologically delineated Zone II, the radius calculated by multiplying the maximum pumping rate in gallons per minute for such well or wellfield by 32 and adding 400 feet thereto (*i.e.* IWPA = $32y + 400$; where y = pumping rate in gallons per minute).

Lake means any open body of fresh water with a surface area of ten acres or more, including, without limitation, Great Ponds.

Leaching means the percolation or draining of liquid through oil and/or hazardous material.

Licensed Site Professional and LSP each means a hazardous waste site cleanup professional, as defined in M.G.L. c. 21A, § 19, holding a valid license issued by the Board of Registration of Hazardous Waste Site Cleanup Professionals pursuant to M.G.L. c. 21A, §§ 19 through 19J.

Limited Removal Action and LRA each means a response action performed in accordance with 310 CMR 40.0318.

Living or Working Space means finished and unfinished space within a Daycare or Child Care Center, School or Residential Dwelling, where there is evidence of the potential for more than incidental use (use for more than one hour at a time). Crawl spaces and basements with only incidental use, such as storage or periodic laundry, are not considered Living or Working Space.

LSP Opinion and Opinion each means a "waste site cleanup activity opinion," as that phrase is defined in M.G.L. c. 21A, § 19, that has been submitted to the Department.

Massachusetts Contingency Plan and MCP each means 310 CMR 40.0000.

Migration pathway means a pathway by which oil and/or hazardous material is transported at or from a disposal site.

Modifying Factor (MF) means a factor greater than zero and less than or equal to ten by which a no-observed-adverse-effect level is divided to estimate a Reference Dose. The MF reflects qualitative professional judgments regarding scientific uncertainties not covered under the standard Uncertainty Factors, such as the completeness of the overall data base and the number of animals in the experimental study.

Monitored Natural Attenuation means a systematically designed and monitored Comprehensive Remedial Action that employs physical, chemical, and/or biological processes under favorable conditions to act without human intervention and primarily through degradation mechanisms to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater, as described in publications by EPA, the Department and other sources that are generally accepted by professionals conducting response actions.

Monitoring Well means a well designed to facilitate the down-hole measurement of groundwater and/or gas levels and the collection of groundwater and/or gas samples.

Natural Background means those levels of oil and hazardous material that would exist in the absence of the disposal site of concern, are ubiquitous and consistently present in the environment at and in the vicinity of the disposal site of concern, and are attributable to geologic or ecological conditions.

Non-potential Drinking Water Source Area means:

(a) any Potentially Productive Aquifer or portion thereof which underlies land which has been developed for one or more of the following uses as of January 1, 1996:

1. Industry, including:
 - a. heavy industry with facilities that manufacture, store and assemble raw or partially processed products;
 - b. light industry with facilities that manufacture or assemble smaller, partially processed products); and
 - c. warehouses and transportation facilities for bulk products;
2. Commerce, including stores, hotels, offices, shopping centers, restaurants, theaters, parking garages/lots and buildings used to distribute and sell goods and services;
3. Dense residential development and associated uses, including:
 - a. garden apartments (and attached recreational facilities);
 - b. tenements, town or row houses and apartment buildings with associated retail uses;
 - c. high density urban residential development with one to four families housed on lots less than ¼ acre in size;

- d. mobile home parks.
 - 4. Transportation and associated liquid storage facilities, including:
 - a. airports with paved landing strips, hangars, parking areas and related facilities (excluding small airfields without paved landing strips, hangars or other specialized facilities);
 - b. docks, warehouses and related land-based storage facilities for water transportation and commercial fishing;
 - c. rail yards, terminal freight and storage facilities, and rail stations for passengers;
 - d. terminal freight and storage facilities for truck freight;
 - e. bus terminals; and
 - f. divided highways with a right-of-way wider than 200 feet;
 - 5. Urban open space, including:
 - a. open undeveloped land in the midst of urban areas or adjacent to them, including land that has been cleared for urban development;
 - b. buildings with grounds and green space which are used by Institutions to serve large numbers of people (*e.g.*, schools, hospitals, prisons); and
 - c. cemeteries.
- (b) such developed land described in 310 CMR 40.0006: Non-potential Drinking Water Source Area(a) shall encompass an area at least 100 acres in size, but may include areas that have not been developed for the above -listed uses, provided that the land that has not been developed for the above-listed uses is:
- 1. less than 100 acres in size, and
 - 2. completely surrounded by areas that have been developed for one or more of the above-listed uses.
- (c) those portions of Potentially Productive Aquifers that underlie block groups (defined by the U.S. Census Bureau) identified by the most recent U.S. Census as having a population density equal to or greater than 4,400 persons per square mile; or
- (d) any aquifer or portion of an aquifer categorized as a Non-potential Drinking Water Source Area pursuant to 310 CMR 40.0932(5)(c);

No Significant Risk means a level of control of each identified substance of concern at a site or in the surrounding environment such that no such substance of concern shall present a significant risk of harm to health, safety, public welfare or the environment during any foreseeable period of time.

No Substantial Hazard means a level of control of each identified substance of concern at a site or in the surrounding environment such that no such substance of concern shall present a Substantial Hazard to health, safety, public welfare, or the environment.

Notice of Noncompliance and NON each means a written notice given to a person by the Department that states that said person has failed to comply on any specified occasion with any described requirement, as further described in 310 CMR 5.12: *Notice of Noncompliance*.

Notice of Response Action and NORA each means a notice from the Department to a person informing the person of the Department's intent to undertake one or more response actions.

Notice of Responsibility and NOR each means a notice from the Department to a person informing such person of his or her potential liability pursuant to M.G.L. c. 21E, § 5.

Notification Requirements means the requirements for providing notification to the Department:

- (a) of releases, and threats of release, of oil and/or hazardous material and Imminent Hazards set forth in 310 CMR 40.0300; and/or
- (b) of changes in activities, uses and/or exposures set forth in 310 CMR 40.0020.

NPL Site means a disposal site published on the National Priorities List by EPA.

OHM means oil and/or hazardous material.

Oil means insoluble or partially soluble oils of any kind or origin or in any form, including, without limitation, crude or fuel oils, lube oil or sludge, asphalt, insoluble or partially insoluble derivatives of mineral, animal or vegetable oils and white oil. The term shall not include waste oil, and shall not include those substances which are included in 42 U.S.C. § 9601(14).

Other Person means a person who undertakes a response action who is not a RP or PRP.

Passive Exposure Pathway Mitigation Measure means a type of Exposure Pathway Mitigation Measure that does not rely upon the continual or periodic use of an on-site or *in-situ* mechanical or electro-mechanical device.

Permanent Solution means a measure or combination of measures which will, when implemented, ensure attainment of a level of control of each identified substance of concern at a disposal site or in the surrounding environment such that no substance of concern will present a significant risk of damage to health, safety, public welfare, or the environment during any foreseeable period of time.

Phase Report means a Phase I Report prepared in accordance with 310 CMR 40.0483, Phase II Report prepared in accordance with 310 CMR 40.0835, Phase III Remedial Action Plan prepared in accordance with 310 CMR 40.0861, Phase IV Remedy Implementation Plan prepared in accordance with 310 CMR 40.0874, Phase IV As-Built Construction Report prepared in accordance with 310 CMR 40.0875, Phase IV Operation, Maintenance and Monitoring Plan prepared in accordance with 310 CMR 40.0874(3)(d), Final Inspection Report prepared in accordance with 310 CMR 40.0878, Phase IV Status and Remedial Monitoring Report prepared in accordance with 310 CMR 40.0877, and Phase V Status and Remedial Monitoring Report prepared in accordance with 310 CMR 40.0892.

Pilot Test means a test designed to acquire information on the anticipated performance of a remedial system. A Pilot Test shall be considered assessment if it is conducted and completed within 21 consecutive days, excluding time required for sample analyses, and involves only soil vapor, Nonaqueous Phase Liquid and/or groundwater extraction, otherwise it shall be considered remediation.

Playground (*see Park*)

Point Source means a discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock or vessel from which oil and/or hazardous material is or may be discharged.

Pond means any coastal or inland pond, as defined in 310 CMR 10.04: Pond.

Potential Drinking Water Source Area means groundwater located:

- (a) 500 feet or more from a public water supply distribution pipeline, unless the groundwater is located under a parcel of land or a facility where any portion of that parcel of land or facility is located less than 500 feet from a public water supply distribution pipeline.
- (b) within an area designated by a municipality specifically for the protection of groundwater quality to ensure its availability for use as a source of potable water supply.

Such designation shall be in the form of:

- 1. a local ordinance or bylaw adopted by the municipality (*e.g.*, an Aquifer Protection District or Zone);
 - 2. an intermunicipal agreement approved by the municipal legislative body; or
 - 3. an executed inter-governmental contract for the purchase or sale of drinking water (*e.g.*, a contract between a public authority supplying water and a municipality); or
- (c) within a Potentially Productive Aquifer that has not been excluded as a Non-Potential Drinking Water Source Area.

Potentially Productive Aquifer means:

- (a) all aquifers delineated by the U.S. Geological Survey (USGS) as a high or medium yield aquifer; and
- (b) all aquifers located east of the Cape Cod Canal (Cape Cod), on the Elizabeth Islands, on Martha's Vineyard, or on Nantucket.

Potentially Responsible Party and PRP each means a person who is potentially liable pursuant to M.G.L. c. 21E.

ppm means parts per million.

Private Water Supply Well means a well which is utilized by a private water system. For purposes of 310 CMR 40.0000, the phrase "private water system" is used to refer to a system for the provision of piped water for human consumption which has fewer than 15 service connections or does not regularly serve an average of at least 25 individuals daily at least 60 days of the year.

40.0006: continued

Professional Services means the rendering of LSP Opinions, and services associated with the rendering of LSP Opinions, by a Licensed Site Professional who has either:

- (a) in the case of an LSP Opinion related to an assessment:
 - 1. managed, supervised or actually performed such assessment, or
 - 2. periodically observed the performance by others of such assessment; or
- (b) in the case of an LSP Opinion related to a containment or removal:
 - 1. managed, supervised or actually performed such action, or
 - 2. periodically reviewed and evaluated the performance by others of such action.

Public Involvement Activities means those activities which a person undertaking one or more response actions is required to perform by M.G.L. c. 21E and 310 CMR 40.1400 to inform the public of, and/or involve the public in, decisions regarding response actions at disposal sites, including, without limitation, the designation of a disposal site as a PIP Site, the provision of notice of response actions to local officials, the publication of notices of public meetings and/or of response actions in newspapers of general circulation in a community, the development of a Public Involvement Plan and the provision of relevant information to the public.

Public Involvement Plan Site and PIP Site each means a disposal site for which additional public involvement activities are required beyond those required for every disposal site and which has been designated as a PIP site pursuant to 310 CMR 40.1404.

Public Water Supply means a source of water supply, including, but not limited to, primary, backup and emergency sources, utilized by a public water system. For purposes of 310 CMR 40.0000, the terms "public water system," "primary source," "backup source," and "emergency source" shall have the meaning in 310 CMR 22.02: Public Water System, Primary Source, Backup Source, and Emergency Source.

Public Water Supply Distribution Pipeline means any piping used for the conveyance of potable water in a public water system.

Public Way means land in use as a public street or highway.

Rail Right-of-way means lands or interests in lands which are in use as rights-of-way for rail purposes. Rail Right-of-way includes rights-of-way which are in use for rail transportation as regulated by M.G.L. c. 161C, and rail rights-of-way which are in use by the Massachusetts Bay Transportation Authority. Rail Right-of-way does not include related facilities, such as rail yards and rail maintenance facilities.

Receptor means a Human Receptor or Environmental Receptor.

Reference Concentration (RfC) means the daily concentration in air of an oil or hazardous material which would not be expected to result in any adverse non-cancer health effects.

Reference Dose (RfD) means the daily dose of an oil or hazardous material which would not be expected to result in any adverse non-cancer health effects.

Release means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment, but excludes:

- (a) emissions from the exhaust of an engine;
- (b) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in 42 U.S.C. § 2014, if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under 42 U.S.C. § 2210;
- (c) the normal application of fertilizer;
- (d) the application of pesticides in a manner consistent with their labelling; and
- (e) the application of residuals in accordance with 310 CMR 32.00: *Land Application of Sludge and Septage*.

Release Abatement Measure and RAM each means any response actions undertaken in accordance with 310 CMR 40.0440.

Release Tracking Number means the file number assigned by the Department to a release or threat of release reported in accordance with 310 CMR 40.0300.

Remedial Additives - means any aqueous, gaseous, or solid phase agent that is designed to treat or enhance the treatment of, or assessment of, soil and/or groundwater. The term shall include oxidizing agents, encapsulants, sequestering agents, non-pathogenic microbes, enzymes, nutrients, surfactants, and anti-fouling agents used to inhibit microbial growth in remedial treatment systems and monitoring wells.

Remedial Action means any containment or removal.

Remediation Waste - means any Uncontainerized Waste, Contaminated Media, and/or Contaminated Debris that is managed pursuant to 310 CMR 40.0030. Remediation Waste does not include Containerized Waste.

Reportable Concentration and RC each means the concentration of oil or hazardous material in soil or groundwater which requires notification to the Department under M.G.L. c. 21E, § 7, and/or 310 CMR 40.0360 through 310 CMR 40.0362.

Reportable Quantity and RQ each means the quantity of oil or hazardous material the release of which, or threat of release of which, requires notification to the Department under M.G.L. c. 21E, § 7, and/or 310 CMR 40.0350 through 310 CMR 40.0352.

Request for Information and RFI each means a request issued by the Department to any person for documents or other information relevant or material to a release, threat of release, site, vessel, oil or hazardous material, pursuant to M.G.L. c. 21E, §§ 2, 4 and 8, and 310 CMR 40.0165.

Residual Contamination means the concentrations of oil and/or hazardous material remaining at a site at which further remedial actions are not required by 310 CMR 40.0000.

Response Action Outcome and RAO each means the classification of Permanent and Temporary Solutions as further defined in 310 CMR 40.1000 in effect prior to June 20, 2014.

Response Action Performance Standard and RAPS each means the level of diligence reasonably necessary to obtain the quantity and quality of information adequate to assess a site, to evaluate remedial action alternatives and to design and implement appropriate remedial actions, as further defined by 310 CMR 40.0191.

Responsible Party and RP each means a person who is liable under M.G.L. c. 21E to the Commonwealth, or to any other person, for any costs or damages.

Risk Characterization means the requirements and procedures for characterizing risks of harm to health, safety, public welfare and the environment set forth in 310 CMR 40.0900.

Route of Exposure means a mechanism by which an oil or hazardous material comes into contact with a receptor, including, but not limited to, ingestion, inhalation, dermal absorption and transpiration.

Sediments means all detrital and inorganic or organic matter situated on the bottom of lakes, ponds, streams, rivers, the ocean, or other surface water bodies. Sediments are found:

- (a) in tidal waters below the mean high water line as defined in 310 CMR 10.23: *Additional Definitions for 310 CMR 10.21 through 10.37*; and
- (b) below the upper boundary of a bank, as defined in 310 CMR 10.54(2), which abuts and confines a water body.

Sheen means an iridescent appearance of any oil or waste oil on the surface of any river, stream, lake, pond, spring, impoundment, estuary, coastal water or groundwater. The term "sheen" shall not include detrital, inorganic or organic matter located in a terrestrial environment.

Site means any building, structure, installation, equipment, pipe or pipeline, including any pipe discharging into a sewer or publicly-owned treatment works, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or any other place or area where oil or hazardous material has been deposited, stored, disposed of or placed, or otherwise come to be located. The term shall not include any consumer product in consumer use or any vessel.

Site Activities and Uses means the uses and activities associated with a disposal site and the surrounding environment, as further defined by 310 CMR 40.0923.

Sludge means the accumulated solids and/or semisolids deposited or removed by the processing and/or treatment of gasses, water or other fluids.

Soil means any unconsolidated mineral and organic matter overlying bedrock that has been subjected to and influenced by geologic and other environmental factors, excluding sediment.

Sole Source Aquifer means an aquifer designated by EPA as the sole or principal source of drinking water for an area pursuant to § 1424(e) of the federal Safe Drinking Water Act.

Source of OHM Contamination means:

- (a) a point of discharge of OHM into the environment that may include, without limitation:
 - 1. leaking storage tanks, vessels, drums and other containers;
 - 2. dry wells or wastewater disposal systems that are not in compliance with regulations governing discharges from those systems; or
- (b) waste deposits, sludges, or impacted soil, sediment, or bedrock at or near a point of discharge or deposit of OHM into the environment containing sorbed OHM or NAPL that is contaminating surrounding environmental media via dissolution or volatilization processes; except that the downgradient leading edge of a plume of oil and/or hazardous material dissolved in and migrating with groundwater or as vapor-phase shall not, in and of itself, be considered a Source of OHM Contamination.

Stream means a body of running water, including brooks and creeks, which moves in a definite channel in the ground due to a hydraulic gradient, and which flows within, into or out of an, as defined in 310 CMR 10.04: Area Subject to Protection Under the Act.

Substantial Hazard means a hazard as further defined in 310 CMR 40.0956 that would pose a significant risk of harm to health, safety, public welfare, or the environment if it continued to be present for several years.

Substantial Release Migration and SRM. (*See* Condition of Substantial Release Migration)

Surface Water means all waters other than groundwater within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and vernal pools.

Temporary Solution means any measure or combination of measures which will, when implemented, eliminate any substantial hazard which is presented by a disposal site or by any oil and/or hazardous material at or from such site in the environment until a Permanent Solution is achieved.

Threat of Release means a substantial likelihood of a release of oil and/or hazardous material which requires action to prevent or mitigate damage to health, safety, public welfare or the environment which may result from the release. Circumstances which represent a threat of release include, but are not limited to, sites containing or conducting an amount of oil and/or hazardous material in excess of the Reportable Quantity for that oil and/or hazardous material, or of an unknown quantity, where no reportable release has occurred but where a person required

by 310 CMR 40.0331 to report the threat of release has knowledge of any corrosion, damage, malfunction or other condition that is likely to result in a release.

Treatment means any method, technique or process designed to change the physical, chemical or biological character or composition of any oil or hazardous material so as to neutralize the oil or hazardous material or render it less hazardous, non-hazardous, or reduced in volume, including, without limitation, neutralization, incineration, stabilization or solidification.

Treatment Works - means any and all devices, processes and properties, real or personal, used to manage Remedial Wastewater, Remedial Additives, and/or Remediation Waste at or from a disposal site.

Uncertainty Factor means one or more factors, each generally an order of magnitude, by which a no-observed-adverse-effect level is divided in accordance with EPA-approved methodology to reflect uncertainty in the various types of data used to estimate a Reference Dose.

Unit Risk means the Excess Lifetime Cancer Risk (ELCR) estimated to result from continuous exposure to an oil or hazardous material per concentration unit of $1\mu\text{g}/\text{m}^3$ in air or $1\mu\text{g}/\text{liter}$ in water.

Upgradient means

- (a) in reference to surface water, the direction perpendicular to lines of equal elevation over a distance in which elevation continuously increases, measured from the point or area in question; or
- (b) in reference to groundwater, the direction perpendicular to lines of equipotential over a distance in which total head continuously increases, measured from the point or area in question.

Utility-related Abatement Measure and URAM each means a response action performed in accordance with 310 CMR 40.0460.

Vadose Zone means the unsaturated zone below the ground surface and above the water table.

Vessel means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water.

Volatilization means the conversion of all or part of a liquid or solid into vapor.

Volatile Organic Compounds and VOCs each mean an organic compound with a boiling point equal to or less than 218EC that are targeted analytes in EPA Method 8260B and other purgeable organic methods specified in the Department's Compendium of Analytical Methods.

Water Quality Criteria and Ambient Water Quality Criteria each means the concentrations of oil and/or hazardous material in water developed by EPA pursuant to § 304(a)(1) of the federal Water Pollution Control Act.

Water Quality Standards means 314 CMR 4.00: *Massachusetts Surface Water Quality Standards* and 314 CMR 6.00: *Ground Water Quality Standards*.

Waters of the Commonwealth means all waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters, vernal pools and groundwater. The term shall not include impoundments of chemical wastes.

Watershed means the region or area measured in a horizontal topographic divide which directs surface runoff from precipitation, normally by gravity, into a stream or body of impounded surface water.

Water Table means the upper elevation of the surface of the saturated zone.

Well means a bored, drilled or driven shaft, or a dig hole, whose depth is greater than its largest surface dimension.

Wetland means any area subject to protection under the Wetlands Protection Act, M.G.L. c. 131, § 40, 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* or Section 401 of the federal Water Pollution Control Act, 33 U.S.C. 1341.

Zone A means the area adjacent to the bank of a Class A surface drinking water source and its tributaries, as defined in 310 CMR 22.02: Zone A.

Zone B means an area either ½ mile from the bank of a Class A surface drinking water source, or the watershed boundary, whichever is less.

Zone I means the area within the protective radius surrounding a public water supply well or wellfield required by 310 CMR 22.00: *Drinking Water*.

Zone II means that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated, as approved by the Department's Division of Water Supply pursuant to 310 CMR 22.00: *Drinking Water*.

Zone III means that land area beyond the area of Zone II from which surface water and groundwater drain into Zone II. The surface drainage area, as determined by topography, is commonly coincident with the groundwater drainage area and is used to delineate Zone III. In some locations, where surface and groundwater drainage are not coincident, Zone III shall consist of both the surface drainage and the groundwater drainage areas.

Zone of Saturation means any part of the earth's crust in which all voids are filled with water.