

GLOSSARY OF COMMON ENVIRONMENTAL REMEDIATION TERMS

Aboveground Storage Tank (AST): Tanks or other containers that are aboveground, partially buried, bunkered, or in a subterranean vault.

Administrative Record: A file which is maintained and contains all information used by the lead agency to make its decision on the selection of a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This file is to be available for public review and a copy is to be established at or near the site, usually at one of the information repositories.

Administrative Order on Consent (AOC): An agreement between regulatory agencies and the owner and/or operator of a facility for achieving compliance.

Applicable or Relevant and Appropriate Requirement (ARAR): CERCLA §121 requires cleanups to meet any legally ARAR, standard, criterion, or limitation that has been promulgated under federal or state environmental laws. The United States Environmental Protection Agency (EPA) can waive the ARARs for a site in some limited situations.

Aqueous Film-Forming Foam (AFFF): A type of foam commonly used to fight fires.

Area of Interest (AOI): A term referring to an area that is of interest to an investigation for further evaluation.

Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX): Term used for BTEX-volatile aromatic compounds typically found in petroleum products, such as gasoline and diesel fuel.

Chemical of Concern (COC): A site-related contaminant that EPA has determined, at the conclusion of a baseline risk assessment, to pose an unacceptable risk to human health and/or the environment. In the Superfund program, COCs are the drivers of (i.e., determine) cleanup actions on the site evaluated in a feasibility study.

Chemical of Potential Concern (COPC): Also called “contaminants of potential concern” in EPA guidance, are defined as “chemicals that are potentially site-related and where data are sufficient quality for use in the quantitative risk assessment” (EPA 1989).

Community Involvement Plan (CIP): A formal plan for community involvement activities at a Superfund site.

Community Relations Program (CRP): A proactive program to inform and involve the public in the Installation Restoration planning process and to respond to the surrounding community’s concerns.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): A federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). The act created a special tax that goes into a trust (Superfund) to investigate and remediate inactive, abandoned, or uncontrolled hazardous waste sites. Under the act, the EPA can either (1) pay for site remediation when parties responsible for the impacts cannot be located or are unwilling or unable to perform the work or (2) take enforcement action against the parties responsible for site impacts and oversee its remediation.

Containment: A remediation method that seals off all possible exposure pathways between a hazardous disposal site and the environment, which generally includes capping and institutional controls.

Decision Document (DD): Serve to provide the reasoning for the choice of or changes to a Superfund Site cleanup plan. Decision documents include records of decision (RODs), ROD amendments, Explanations of Significant Differences (ESDs), and other associated memoranda and files.

Engineering Evaluation/Cost Analysis (EE/CA): An analysis of removal alternatives for a site, similar to a remedial program feasibility study (FS). Upon completion, the EE/CA must be made available for a 30-calendar-day public comment period. This comment period must be extended by at least 15 days open timely request.

Environment, as defined by CERCLA §101(8): “(A) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Fishery Conservation and Management Act of 1976, and (B) any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.”

Environmental Hazard Evaluation (EHE): The link between site investigation activities and response actions carried out to address hazards posed by the presence of contaminated soil and groundwater. An EHE should be performed for all sites where contaminated soil and groundwater have been identified.

Environmental Hazard Management Plan (EHMP): If contaminated media is left on-site after the response action is completed, an EHMP must be prepared to manage environmental hazards identified in the EHE over the long term. An EHMP presents all necessary information in a single, stand-alone document that identifies the nature and extent of residual contamination, potential environmental concerns posed by the contamination, and appropriate measures to ensure that these concerns are adequately addressed.

Environmental Restoration (ER) Program: A United States Department of the Navy (Navy) initiative to identify, investigate, and clean up former waste disposal sites on military property. The program’s objectives are to reduce the risk to human health and the environment from past waste disposal operations and hazardous material spills in a cost-effective manner.

Facility, as defined by CERCLA §101(9): “(A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of; or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.”

Feasibility Study (FS): See remedial investigation (RI) and FS.

Ground Water: Water found beneath the surface of land (or other water resources) that is sometimes used for drinking or irrigation purposes.

Hazard Ranking System (HRS): A scoring system used to evaluate potential risks to public health and the environment from releases or threatened releases of hazardous substances. EPA and the states use the HRS to calculate a site score (0 to 100) based on the actual or potential release of hazardous substances from a site through air, surface water, or groundwater. This score is the primary factor used to decide if a hazardous waste site should be placed on the National Priorities List (NPL).

Hazardous Substance, as defined by CERCLA §101(14): any substance designated or listed under the Federal Water Pollution Control Act, CERCLA, the Resource Conservation and Recovery Act (RCRA), the Clean Air Act, and the Toxic Substances Control Act. The term excludes petroleum, or any fraction thereof, unless it is specifically listed under one of the mentioned laws; it also excludes natural gas, natural

gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

Information Repository: A file stored in a public location (e.g., a public library) that contains current information, technical reports, and documents regarding Navy installation restoration sites.

In-Situ Chemical Oxidation (ISCO): Chemical oxidation uses chemicals called “oxidants” to help change harmful contaminants into less toxic ones. It is described as “in situ” because it is conducted in place without having to excavate soil or pump out groundwater for aboveground cleanup. ISCO can be used to treat many types of contaminants like fuels, solvents, and pesticides. ISCO is usually used to treat soil and groundwater contamination in the source area where contaminants were originally released.

Installation Restoration Program (IRP): A subsection of the ER Program focusing on releases of hazardous substances, pollutants, and impacts that pose environmental health and safety risks.

Institutional Controls (ICs): Measures, such as access restrictions and deed restrictions, that separate people from the source of impacts. More than one institutional control may be used at a site.

Land Use Control (LUC): Controls that may consist of non-engineered instruments, such as administrative and legal controls or engineered and physical barriers, such as fences and security guards. LUCs help to minimize the potential for exposure to contamination and/or protect the integrity of a response action and are typically designed to work by limiting land and/or resource use or by providing information that helps modify or guide human behavior at a site.

Light Non-Aqueous Phase Liquid (LNAPL): Non-aqueous phase liquids (NAPLs) are hydrocarbons that exist as a separate, immiscible phase when in contact with water and/or air. Differences in the physical and chemical properties of water and NAPL result in the formation of a physical interface between the liquids that prevents the two fluids from mixing. LNAPL is a type of NAPL that is lighter than water, generally petroleum hydrocarbon liquids such as gasoline.

Long-Term Monitoring (LTM): Following achievement of the response complete milestone, monitoring long-term protectiveness of the remedy may be required during the LTM phase. The LTM phase is required when the remedial action objectives do not allow unrestricted use of the property. Actions during this phase may involve monitoring site conditions, implementing and managing land use controls, and performing five-year reviews.

Munitions Response Program (MRP): A subsection of the ER Program addressing munitions and explosives used or released on military sites from past operations and activities. Because the MRP is implemented under the ER Program, the response actions follow the CERCLA response process as described in this plan.

National Oil and Hazardous Substances Pollution Contingency Plan or National Contingency Plan (NCP): The EPA policy and regulatory directive for federal response actions under CERCLA. It sets out the organizational structure and procedures for responding to releases of hazardous substances, pollutants, and impacts. Published in 40 Code of Federal Regulations, Part 300.

National Priorities List (NPL): The EPA’s list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under Superfund. The list is based primarily on the score a site receives from the HRS. EPA is required to update the NPL at least once a year.

Natural Resources, as defined by CERCLA §101(16): “land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States...any state or local government, any foreign government, any Indian tribe...”

No Further Action (NFA): Designation for a site where there is no unacceptable risk to human health or the environment and it has been determined that no additional site investigation and/or cleanup are warranted.

Non-Time-Critical Removal Action (NTCRA): A removal action conducted at a Superfund site when the lead agency determines, based on the site evaluation, that a removal action is appropriate, and a planning period of at least 6 months is available before on-site activities must begin.

Per- and Polyfluoroalkyl Substances (PFAS): Group of human-made chemicals that includes perfluorooctanoic acid, perfluorooctanesulfonic acid, GenX, and many other chemicals. PFAS have been manufactured and used in a variety of industries in the United States and around the globe since the 1940s. Perfluorooctanoic acid and perfluorooctanesulfonic acid have been the most extensively produced and studied of these chemicals. Both chemicals are very persistent in the environment and in the human body, meaning they do not break down and they can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects.

Petroleum, Oil, and Lubricants (POL): A broad term that includes all petroleum and associated products used by the Department of the Navy.

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

Polynuclear Aromatic Hydrocarbon (PAH): Synonymous with polyaromatic hydrocarbon. Aromatic hydrocarbons containing more than one fused benzene ring.

Preliminary Assessment (PA): The process of collecting and reviewing available information about a known or suspected hazardous waste site or release. This information is used to determine whether the site requires further study. If further investigation is required, a site inspection (SI) is performed. Typically, site media (e.g., soil, groundwater) is not sampled and analyzed for impacts during the PA.

Project Action Level (PAL): A numerical value that helps the decision-makers target a course of action from the project’s data. They may be regulatory standards, risk-based concentration levels, or technology limitations.

Proposed Plan (PP): A fact sheet or report document that summarizes for the public the preferred cleanup strategy for an environmental site, rationale for the preference, alternative cleanup methods considered, and waivers to cleanup standards of 121(d)(4) that may be proposed. The PP is a public participation requirement of CERCLA and NCP.

Public Comment Period: A period of time during which the public can review and comment on a particular cleanup action being proposed for the site under the IRP, including various documents and actions taken by the Navy, the State of Hawaii Department of Health, or the EPA.

Record of Decision (ROD): The primary legal decision document that explains the cleanup alternative(s) to be used at a NPL site as well as the factors that led to its selection.

Remedial Action: Typically, a long-term action that stops or substantially reduces a release or threat of a release of hazardous substances that is serious but not an immediate threat to public health. Remedial actions are most often conducted when the circumstances of the impact are complex in nature, for example where: multiple types of chemicals have been released and are commingled at a site; there is widespread impact; both soil and groundwater media have been impacted, and/or the impact presents a potential risk to both humans and animals.

Remedial Action Area (RAA): The area for which a remedial action is performed.

Remedial Action Completion Report (RACR): Documents the completion of a remedial action. The RACR must be approved in writing by the designated regional official (as determined by the EPA Region) to achieve completion of the remedial action project.

Remedial Action Work Plan (RAWP): Describes those actions that are needed to ensure viability of both long-term engineered and institutional control remedies.

Remedial Design (RD): An engineering phase that follows the publication of the decision document for a site during which technical specifications are developed for the selected remedial action.

Remedial Investigation (RI) and Feasibility Study (FS): Two distinct but related studies that are often performed concurrently. The RI is intended to gather necessary data to determine the type and extent of impact at a site and establish criteria for site remediation. The FS is intended to identify options for remedial actions, analyze and compare the technological and cost benefits of these remedial options, and propose a preferred cleanup option (to be summarized in a PP).

Remedial Project Manager (RPM): The federal (e.g., Navy) official responsible for overseeing on-site investigation and response action.

Remediation: Actions taken to clean up existing hazardous substances at site caused by past or present human activities. The term remediation, or cleanup, is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, or corrective action.

Removal Action: Actions conducted over a relatively short-term period to address a release or threatened release of hazardous substances. Removal action is most appropriate when site conditions are simple and straight forward or there is a need to expedite cleanup.

Response Action: A general term that collectively refers to remedial, removal, and enforcement action(s).

Response Complete: The stage in cleanup when physical construction of all cleanup remedies is complete, all immediate threats have been addressed, and all long-term threats are under control. Though long-term cleanup actions (e.g., monitored natural attenuation) may still be occurring, the site is often ready for economic, social, or environmental reuse.

Responsiveness Summary: A summary of oral and/or written public comments received during the comment period on key draft documents and the responses to those comments. The responsiveness summary is especially valuable during the PP or remedial action planning phase where it highlights community concerns and cleanup preferences for the decision makers.

Restoration Advisory Board (RAB): A board comprised of community members representing a diverse cross section of the community, and representatives from the Navy, the State of Hawaii Department of Health,

and the EPA. The RAB's principal objective is to provide opportunity for community stakeholders to participate in the review and formulation of site cleanup plans and related documents.

Release, as defined by CERCLA §101(22): "...any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant)."

Remedial/Removal Site Evaluation (RSE): An initial site evaluation phase consisting of the PA and SI. The site information gathered may be used to calculate a HRS score for the site to determine whether response action is needed.

Removal Verification Report (RVR): A report documenting a removal action, such as a TCRA or an NTCRA.

Resource Conservation and Recovery Act of 1976 (RCRA), as amended: The principal federal law that regulates the definition, transportation, and disposal of hazardous wastes (as well as solid wastes in general). A key difference from the CERCLA is that RCRA addresses current and future waste disposal practices and the clean up of recent hazardous waste spills, while CERCLA was established to clean up releases of hazardous substances that typically occurred in the distant past.

Risk Assessment: A qualitative and quantitative evaluation performed as part of the site investigation phase to assess conditions at a site and determine the health risks posed to the public and environment.

Soil Vapor Extraction (SVE): An in situ remedial technology that reduces concentrations of volatile constituents in petroleum products adsorbed to soils in the unsaturated (vadose) zone. In this technology, a vacuum is applied to the soil matrix to create a negative pressure gradient that causes movement of vapors toward extraction wells. Volatile constituents are readily removed from the subsurface through the extraction wells. The extracted vapors are then treated, as necessary, and discharged to the atmosphere or reinjected to the subsurface (where permissible) (EPA 2017).

Site Inspection (SI): A technical phase that follows a PA, the SI is designed to collect more extensive information on a hazardous waste site. Limited site media (e.g., soil, groundwater) may be sampled and analyzed for impacts during the SI phase.

Superfund: The common name used for the trust fund established by CERCLA; also referred to as the Trust Fund.

Superfund Amendments and Reauthorization Act (SARA): Amendments to CERCLA expanding its scope, enacted on October 17, 1986. SARA stressed the importance of permanent remedies and innovative treatment technologies; required Superfund actions to consider the standards and requirements found in other State and Federal environmental laws and regulations; provided new enforcement authorities and settlement tools; increased State involvement; increased the focus on human health problems; encouraged greater citizen participation; and increased the size of the Trust Fund.

Technical Assistance Grant (TAG) Program: A grant program that provides funds for qualified citizens groups to hire independent technical advisors to help them understand and comment on technical decisions relating to CERCLA cleanup actions.

Technical Assistance for Public Participation (TAPP): A Department of Defense program to assist the community members of RABs and Technical Review Committees in understanding the technical and

scientific aspects of ER at Department of Defense installations near their communities. The TAPP provides RAB/Technical Review Committee members this objective scientific and engineering support through independent contractors procured via government purchase orders.

Tetrachloroethene (PCE): A nonflammable, colorless liquid. Other names for PCE include perchloroethylene, perc, tetrachloroethene, and perchlor. PCE is used as a dry cleaning agent and metal degreasing solvent. It is also used as a starting material (building block) for making other chemicals and is used in some consumer products.

Time-Critical Removal Action: A type of action that includes emergency removal actions lasting more than 30 calendar days and releases requiring initiation of on-site activities within 6 months of the lead agency's determination, based on the site evaluation that a remedial action is appropriate.

Total Petroleum Hydrocarbons (TPH): A measure of the concentration or mass of petroleum hydrocarbon constituents present in a given amount of air, soil, or water.

Trichloroethylene (TCE): A stable, low boiling-point colorless liquid that is toxic if inhaled. Used as a solvent or metal degreasing agent, and in other industrial applications.

Underground Storage Tank (UST): A tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground.

Volatile Organic Compound (VOC): A compound that has a high vapor pressure and low water solubility. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, pharmaceuticals, and refrigerants. VOCs typically are industrial solvents, such as trichloroethylene; fuel oxygenates, such as methyl tert-butyl ether; or by-products produced by chlorination in water treatment, such as chloroform. VOCs are often components of petroleum fuels, hydraulic fluids, paint thinners, and dry cleaning agents. VOCs are common groundwater contaminants.