



Environmental Health Science and Remediation Glossary of Terms

The terms in this glossary are commonly used by the U.S. Environmental Protection Agency (EPA) and other government agencies in documents related to Superfund and Brownfield policies and programs. They are also common in related environmental health science and remediation research articles. This glossary is for anyone interested in learning more about these fields of practice and research.

(AA) Ambient Air monitoring - Unlike most soil gas monitoring data and emissions monitoring data, which do not characterize levels of contamination that residents are inhaling, ambient air monitoring data can better characterize gases in the breathing zone. This data is most useful for evaluating the inhalation exposure pathway at landfill sites.

(AAI) All Appropriate Inquiries - Performing All Appropriate Inquiries is the process of evaluating a property's environmental issues and conditions and assessing the potential liability for any contamination.

(ABCA) Analysis of Brownfield Cleanup Alternatives - Based on past environmental assessments, an ABCA report will be prepared that identifies the objectives of a future cleanup and analyzes cleanup alternatives based on effectiveness, efficiency, and cost

(ACL) Alternate Concentration Limit - Alternative Concentration Limits are concentration limits that guide groundwater protection standards. EPA or other federal agencies determine the limits of contaminant concentrations that will not threaten human or environmental health through scientific research, experimentation, and environmental assessment. ACLs are established under the authority of RCRA or CERCLA based on assessments by EPA and/or other federal agencies.

Air Sparging System - Air sparging involves drilling one or more injection wells into the soil soaked with groundwater lower than the water table. An air compressor at the surface can pump air underground through wells. As air bubbles travel through the groundwater, they carry contaminant vapors into the soil above the water table.

(AOC) Administrative Order on Consent - An AOC is an agreement between a regulatory body and an individual, business, or other entity in which the parties agree to pay for damages caused by violations and cease the activities that caused the damages to occur. Governments and businesses voluntarily enter these orders, but they are binding once entered, and nonperformance may result in litigation.



(APCD) Air Pollution Control District - The Air Pollution Control District enforces the Clean Air Act and other laws and regulations that make the air clean and safe in a county. In addition, they work with the community on policies and programs that can lead to a healthier and more sustainable city. There are air pollution control districts in many cities in the US. Some entities are called Air Quality Programs, Air Quality Management Systems, and other similar titles.

(APHA) American Public Health Association - APHA is a Washington, D.C.-based professional membership and advocacy organization that supports public health professionals in the United States. It is the largest public health professional organization in the United States.

(ARAR) Applicable or Relevant and Appropriate Requirements - These are substantive requirements that pertain directly to actions or conditions at a contaminated site. A Requirement is applicable if the specific requirement directly addresses the circumstances at a site. The 1990 National Oil and Hazardous Substances Pollution Contingency Plan (NCP) requires compliance with ARARs during removal and remedial actions to the extent practicable.

(ASAP) Automated Standard Application for Payments - The Automated Standard Application for Payments (ASAP) is a completely electronic system federal agencies use to transfer money to recipient organizations securely.

(ASC) Allowable Soil Concentration - The maximum permissible concentration level of a contaminant in the soil as defined by the EPA.

(ATSDR) Agency for Toxic Substances and Disease Registry - The ATSDR is based in Atlanta, Georgia, and is a federal public health agency of the U.S. Department of Health and Human Services. ATSDR protects communities from harmful health effects related to exposure to natural and artificial hazardous substances by responding to environmental health emergencies, investigating emerging environmental health threats, and researching the health impacts of hazardous waste sites. ATSDR assists in building capabilities and providing actionable guidance to state and local health partners.

(BCA) Benefit-Cost Analysis - Benefit-cost analysis (BCA) is a method for determining a hazard mitigation project's future risk reduction benefit and comparing those benefits to its costs.

(BFPP) Bona Fide Prospective Purchaser - If a BFPP finds contamination while conducting due diligence on a property, they can be protected from liability if they purchase the property. To qualify as a BFPP under CERCLA a landowner must meet specific threshold criteria that include the performance of "all appropriate inquiries" (AAI) before acquiring the property. A person wishing to assert BFPP status must meet continuing obligations, including exercising appropriate care concerning hazardous substances found at the property by taking reasonable steps to stop any continuing release and prevent any threatened future release.

(BGS) Below Ground Surface - In geotechnical engineering, this term refers to being lower than the ground's surface.

Bioaccumulation - This is the general term describing a process by which chemicals are absorbed by a plant or animal either directly from exposure to a contaminated medium (soil, sediment, water) or by eating food containing the chemical. Related terms are bioconcentration, in which chemicals are absorbed by an animal or plant to levels higher than the surrounding environment, and biomagnification, in which chemical levels in plants or animals increase from transfer through the food web.

Bioindicator Species - These are species whose presence and abundance reflect the changing conditions of a given environment.

Biosolids - Biosolids are organic soil amendments that contain essential plant nutrients and organic matter and are recycled as a fertilizer and soil amendment.

(BMP) Best Management Practices - A Best Management Practice (BMP) is a practice or combination of practices that is determined to be a practical and attainable (including technological, economic, environmental, and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals.

(BOL) Bureau of Land - EPA's Bureau of Land protects human health and the environment by regulating the transfer, storage, and disposal of waste and overseeing the cleanup of contaminated properties.

Brownfields Cleanup Grants - These are grants offered by the EPA that provide funding to carry out cleanup activities at brownfield sites. An applicant must own the site for which it is requesting funding.

Brownfields Revolving Loan Fund - This is an EPA grant that provides funding to capitalize loans offered to clean up brownfield sites. When loans are repaid, the loan amount is returned to the fund and is made available to other borrowers, which provides an ongoing source of capital within a community.

(BT) Brownfield Tracker - A Brownfield Tracker identifies the location of brownfield sites in a determined geographical area.

(BUILD) Brownfields Utilization, Investment, and Local Development Act - This was enacted in 2018 to reauthorize EPA's Brownfields Program. In addition, BUILD has made additional amendments to CERCLA that impact EPA's brownfield grant authorities, as well as ownership and liability provisions.

(CAA) Clean Air Act - The CAA was designed to protect air quality by regulating stationary and mobile sources of pollution.



(CAP) Climate Adaptation Plan - Enacted in 2021, EPA's Climate Adaptation Action Plan accelerates and focuses attention on five priority actions the EPA took over the following four years to increase human and ecosystem resilience as climate changes continue and disruptive impacts increase.

(CAR) Cooperative Agreement Recipient - A CAR is an entity receiving funding, property, or services from the EPA. As opposed to Grants, which are used when the EPA expects no specified service or product, a Cooperative Agreement is formed when programmatic involvement is anticipated between the EPA and the recipient during the performance of the activities.

(CBA) Cost Benefit Analysis - An environmental cost-benefit analysis, or CBA, analyzes the time and costs involved in projects that directly or indirectly impact the environment.

(CBO) Community-Based Organization - A non-profit organization that is operated to advance the public interest. Its purpose could be scientific, educational, service, charitable, or other. A CBO also supports and represents a community or certain populations within a community through the processes of engagement, education, and other related services provided to individual community residents and community stakeholders.

(CDC) Centers for Disease Control and Prevention - The Centers for Disease Control and Prevention helps to create expertise, information, and tools that people and communities use to protect their health through health promotion, disease prevention, injury, disability, and preparedness for new health threats.

(CEDS) Community and Environmental Defense Services - The CEDS helps people preserve their neighborhoods' health, safety, and tranquility when threatened by excessive traffic, proposed gas stations, landfills, and other threats.

(CEJST) Climate and Economic Justice Screening Tool - The screening tool utilizes an interactive map and datasets that function as indicators of burdens in the following eight categories: climate change, health, energy, housing, legacy pollution, transportation, water and wastewater, and workforce development. The tool uses this information to identify communities that are experiencing these burdens. These are the disadvantaged communities because they are overburdened and underserved.

(CERC) Crisis and Emergency Risk Communication - The CDC's CERC program provides training, tools, and resources to assist health communicators, emergency responders, and leaders of organizations in communicating effectively during emergencies, including hurricanes, chemical releases, bombs, pandemic illnesses, and earthquakes.

(CERCLA) Comprehensive Environmental Response, Compensations, and Liability Act - CERCLA is also known as Superfund. The Superfund program is responsible for the cleanup, remediation, and ongoing monitoring of contaminated sites that the EPA characterizes as

posing severe human health risks and environmental damage if not contained. CERCLA focuses on managing and reversing environmental damage of non-operating and abandoned sites.

(CEQ) Council on Environmental Quality - CEQ was created in 1969 by the National Environmental Policy Act (NEPA). The Council advises the President in the development of policies on climate change, environmental justice, federal sustainability, public lands, oceans, and wildlife conservation. As the agency responsible for implementing NEPA, CEQ works to ensure that environmental reviews for infrastructure projects and federal actions are thorough and efficient and reflect the input of the public and local communities.

(CFR) Code of Federal Regulations - The Code of Federal Regulations' annual edition codifies the general and permanent rules published in the Federal Register by the departments and agencies of the Federal Government. It is divided into 50 titles representing broad areas subject to Federal regulation.

(CIP) Community Involvement Plan - After a site is added to the NPL, the EPA is required to conduct community interviews and develop a Community Involvement Plan. EPA must also establish and maintain an information repository and administrative record and inform the public of the availability of these document archives.

(CNS) Central Nervous System - The central nervous system (CNS) is a system of the body designed to respond to the environment. It is vulnerable to many of the influences found in the environment.

(CNS) Covenant Not to Sue - A CNS is used to influence the manufacturer of hazardous material to clean up hazardous material and ensure that it is properly disposed of in the future. The environmental regulator can offer a Covenant Not to Sue to the manufacturer of the hazardous material and reserve the right to sue if the manufacturer does not change its waste disposal procedures.

(COC) Contaminants of Concern - COCs are contaminants that have been shown through analysis to be likely to be causing risk to the plants and animals at a site.

Comfort Letter - A Comfort Letter is issued to a party that qualifies for an applicable liability exemption but is not a legal release from liability. It explains the liability exemption or enforcement discretion policy for which the stakeholder has qualified and by which the EPA has determined not to pursue a party for cleanup.



Consent Decree - A consent decree is often used in government regulation in areas such as antitrust, securities, and environmental law. A consent decree (also known as a consent order) is a decree made by a judge with the consent of all parties involved. When the government sues a person or company, and the defendant agrees to stop its illegal conduct, the government may agree not to pursue the case; in this case, the court approves and issues a consent decree.

A judicial consent decree is the only type of settlement the EPA can use for the final cleanup phase or remedial action at a Superfund site. A statement of work (SOW) is a technical attachment to several "Work" administrative settlements, consent decrees, and administrative orders.

Conveyance Zone - These are portions of the floodplain required for the passage or conveyance of the one-hundred-year flood.

(CPO) Contiguous Property Owner - A person or entity who owns property adjacent to property contaminated by a release or a threatened release of a regulated substance that the person or entity does not own. Contiguous property can qualify for the exemption from liability, according to CERCLA.

(CS) Cigarette Smoke - Chemicals, such as volatile organic compounds (VOCs), in cigarette smoke have been linked to an increased risk of cardiovascular disease, cancer, and lung disease in humans.

(CSM) Conceptual Site Model - A conceptual site model is a written or illustrative representation of the physical, chemical, and biological conditions and processes that impact or control the transport, migration, and potential impacts of contamination (in soil, air, groundwater, surface water, and/or sediments) on human and/or ecological receptors.

(CVD) Cardiovascular Disease - CVD is a disease affecting the heart or blood vessels. Smoking, high blood pressure, high cholesterol, unhealthy diet, lack of exercise, obesity, and exposure to harmful chemicals may increase the risk of certain cardiovascular diseases.

(CWA) Clean Water Act - The CWA protects bodies of water by preventing the discharge of pollutants into navigable waters from point sources.

(EA) Environmental Assessment - This is when an environmental regulator, such as the EPA, evaluates the potential impacts of proposed environmental actions and suggests alternatives or mitigations that may reduce or eliminate these impacts.

(ECJ) Environmental and Climate Justice Program - The Environmental and Climate Justice Program (ECJ Program), created by the Inflation Reduction Act (IRA) under the Clean Air Act (CAA) Section 138, provides funding for financial and technical assistance to carry out environmental and climate justice activities to benefit underserved and overburdened communities.



(EDD) Enforcement Decision Document - Decision documents provide the reasoning for choosing or changing a Superfund Site cleanup plan.

(EIS) Environmental Impact Statement - This statement describes the positive and negative environmental effects of a proposed action. It may include one or more alternative actions that can be chosen instead of the action described in the EIS.

(EJG2G) EPA's Environmental Justice Government-to-Government Program - The Environmental Justice Government-to-Government program provides funding at the state, local, territorial, and tribal levels to support government activities that lead to measurable environmental or public health impacts on communities disproportionately burdened by environmental harms.

Eminent Domain - This refers to the government's power to take private property and convert it to public use. The Fifth Amendment provides that the government may only exercise this power if it provides fair compensation to the property owners.

Environmental Covenant - Environmental covenants apply only to properties involved in state or federal environmental remediation programs. These covenants are established through a written agreement, where the parties commit themselves and their future successors to specific conditions, obligations, and/or restrictions on land use, known as activity and use limitations.

Environmental Remediation - Environmental remediation is cleaning up hazardous substances from the environment. It involves removing, treating, and managing pollutants or contaminants in soil, groundwater, and sediment.

Environmental Workforce Development and Job Training Grants - These federal grants provide environmental training for residents impacted by brownfield sites in their communities.

(EPA) Environmental Protection Agency - Formed in 1970, the EPA is the U.S. federal agency responsible for protecting the environment. The EPA conducts environmental assessments, research, and education and is responsible for issuing and enforcing regulations that establish national standards to limit human exposure to various toxins, hazardous materials, and air, water, and soil pollutants.

(EPCRA) Emergency Planning and Community Right-to-Know Act - Passed in 1986, this act required companies to report their use of certain hazardous chemicals to local authorities. As part of the act, emergency planning committees were established in each state to help prepare for potential chemical accidents or spills. This act was designed to give communities more information about potential hazards in their area so they could better protect themselves from environmental threats.



(EQIA) Environmental Quality Improvement Act - Established in 1970, this act ensures that every Federal department and agency involved in public works activities impacting the environment follows the policies set by existing laws and authorizes the Office of Environmental Quality to provide professional and administrative support for the Council on Environmental Quality.

(ESA) Endangered Species Act - The U.S. Endangered Species Act was passed in 1973 to protect plant and animal life threatened with extinction due to economic growth and development untampered by adequate concern and conservation.

(ESA) Environmental Site Assessment Phase 1 and Phase 2 - A Phase I assessment highlights the presence of contamination, and a Phase 2 assessment quantifies and substantiates the source and nature of contamination, often using qualitative and scientific principles.

(ESD) Explanation of Significant Differences - The EPA prepares an Explanation of Significant Differences when it determines that changes to a site's original selected remedy are significant but do not fundamentally alter the remedy outlined in the Record of Decision regarding scope, performance, or cost.

Executive Order - An executive order is a directive issued by the President or Governor that has the force of law and is typically grounded in existing statutory powers.

(FEMA) Federal Emergency Management Agency - This agency was established to assist its partners in understanding and reducing their disaster risks. FEMA leads the coordination of federal response efforts to stabilize communities after a disaster and provides support for individuals and communities to rebuild, making them more resilient than before.

Ferromagnetic Survey - Magnetic surveying is one of several methods used in archaeological geophysics. Magnetic surveys record spatial variation in the Earth's magnetic field.

(FS) Feasibility Study - The Remedial Investigation and Feasibility Study (RI/FS) is a process that focuses on defining the nature and extent of contamination, assessing risk to human health and the environment, and developing a cleanup strategy to eliminate potentially harmful human health and environmental impacts.

(FYR) Five-Year Review - Five-year reviews (FYRs) are mandated by CERCLA when hazardous substances remain on a site above levels that allow for unlimited use and unrestricted exposure. These reviews provide an opportunity to evaluate the implementation and effectiveness of a remedy to ensure it continues to protect human health and the environment. Typically, reviews occur five years after the start of a CERCLA response action and are repeated every five years as long as future uses remain restricted. Five-year reviews can be conducted by the EPA or the lead agency for a site, with the EPA maintaining responsibility for determining the remedy's protectiveness.



(GCCS) Gas Collection and Control System - Gas Collection and Control Systems are a common and major component of most sanitary landfills. They are designed to help control odors, minimize non-methanogenic organic compound releases into the atmosphere, and increase safety by controlling migration.

(GHG) Greenhouse Gas - Greenhouse gases are atmospheric gases that increase the surface temperature of planets like Earth. They differ from other gases because they absorb the radiation wavelengths emitted by the planet, causing the greenhouse effect.

(GMW) Ground Monitoring Well - Groundwater Monitoring Wells are used to observe groundwater levels and flow conditions, obtain samples to determine groundwater quality and evaluate hydraulic properties of water-bearing strata. They are sometimes referred to as "observation wells."

Greenfield Site - A greenfield site is an uncontaminated, undeveloped parcel of land that can be used for commercial or residential development.

Ground Water Protection Standard - These are conditions specified in the facility permit and are designed to protect human health and the environment. The GWPS includes (1) the hazardous constituents that must be monitored, (2) the hazardous constituent concentration limits that must not be exceeded, (3) the point of compliance, and (4) the compliance period. GWPS are established when a release from a unit has been documented.

(HIA) Health Impact Assessment - EPA uses Health Impact Assessments as a decision-support tool to promote sustainable and healthy communities. The HIA is designed to investigate how a proposed program, project, policy, or plan may impact health and well-being and inform decision-makers of these potential outcomes before making a decision.

(HRS) Hazard Ranking System - This is an EPA scoring system that uses information collected during the assessment phase of the Superfund process to score sites according to the danger they may pose to human health and the environment. If a site has a high enough score on the HRS and meets all other criteria, EPA may propose putting it on the National Priorities List.

(HQ) Hazard Quotient - A hazard quotient is a measure comparing the potential exposure to a substance with the level at which no harmful effects are expected. If the Hazard Quotient is calculated to be less than 1, then no adverse health effects are expected due to exposure. If the Hazard Quotient exceeds 1, then adverse health effects are possible.

(HSWA) Federal Hazardous and Solid Waste Amendments - These are the 1984 amendments to the Resource Conservation and Recovery Act (RCRA). They focused on reducing waste, ending the land disposal of hazardous waste, and taking corrective actions for any releases. Some additional mandates of this law include granting the EPA increased



enforcement authority, implementing more stringent hazardous waste management standards, and establishing a comprehensive program for underground storage tanks.

Hyperlocal Data - These are any local data that are not collected regularly on a national level and may only be available at a neighborhood level if gathered by local residents or local institutions. They include measured and other observational data, such as facility locations and land features, that can provide important contextual information to better interpret site information.

(ICs) Institutional Controls - Institutional controls are designed to limit land and/or resource use (e.g., groundwater use) or provide information that may help modify or guide human behavior at a landfill site. Per EPA guidance documents, ICs are non-engineered instruments, such as administrative and/or legal controls, that help minimize the potential for exposure to contamination and protect the integrity of a remedy. ICs can include deed restrictions, restrictive covenants, and easements.

(ICMA) International City/County Management Association - ICMA was founded in 1914 to advance professional local governments through leadership, management, innovation, and ethics.

(ILO) Innocent Landowner - Entities that acquire property without knowledge of contamination at the time of purchase may qualify for the "innocent landowner" (ILO) defense against Superfund liability if they conducted all appropriate inquiries (AAI) before purchase and adhered to other pre- and post-purchase requirements.

In Situ Tests - These are toxicity tests that involve placing plants or animals in locations that might be affected by site contaminants and in reference locations, rather than laboratory tests done using generic materials and organisms. In-situ tests can provide more realistic evidence of adverse effects than laboratory tests; however, there is little control over environmental factors, and experimental organisms can be lost to adverse weather or other events.

Intergovernmental Response Agreement - An intergovernmental agreement is any arrangement between two or more governments to address issues of mutual concern collaboratively. These agreements can be established between or among various governmental or quasi-governmental entities.

Leachate - A solution resulting from leaching, such as soluble constituents from soil, landfill, etc., by downward percolating groundwater.

Legacy Chemicals (Contaminants) - Legacy contaminants are chemicals once used in the U.S. but were then discontinued or banned. However, in many cases, they linger in soil and water, slowly breaking down and impacting humans and wildlife long after they were deposited.



(LEL) Lower Explosive Limit - The lower explosive limit, or lower flammable limit, of a vapor or gas describes the lowest concentration that will produce a flash of fire when an ignition source (heat, arc, or flame) is present. The mixture is too “lean” to burn at concentrations lower than the LEL.

(LFG) Landfill Gas - Landfill gas is a natural byproduct of the decomposition of organic material in landfills. It comprises roughly 50 percent methane (the primary component of natural gas), 50 percent carbon dioxide (CO₂), and a small amount of non-methane organic compounds.

LFG Collection System - Landfill gas is extracted from landfills using a series of wells and a blower/flare (or vacuum) system. Depending on its ultimate use, the system directs the collected gas to a central point where it can be processed and treated.

(MCL) Maximum Contaminant Level - The MCL is the maximum level allowed for a contaminant in water delivered to any user of a public water system.

(MP) Multipurpose Grants - These EPA grants provide funding to conduct eligible assessment and cleanup activities at one or more brownfield sites in a target area.

(MSWLF) Municipal Solid Waste Landfill - A municipal solid waste landfill is a finite area of land or excavation that receives household waste.

(NAAQS) National Ambient Air Quality Standards - The U.S. National Ambient Air Quality Standards limit the atmospheric concentration of six pollutants that cause smog, acid rain, and other health hazards.

(NBS) Nature-Based Solutions - A Nature-based Solution is an action that incorporates natural features and processes to protect, conserve, restore, sustainably use, and manage natural or modified ecosystems to address socio-environmental challenges while providing measurable co-benefits to and benefit both people and nature.

(NCP) National Contingency Plan - The National Oil and Hazardous Substances Pollution Contingency Plan, commonly known as the NCP, is the federal government's blueprint for responding to oil spills and hazardous substance releases.

(NEEA) National Environmental Education Act - The National Environmental Education Act (NEEA) was enacted in 1970. It authorized the United States Commissioner of Education to create programs to promote understanding of policies and supporting activities that enhance environmental quality and maintain ecological balance.



(NEPA) National Environmental Policy Act - Enacted in 1970 NEPA requires federal agencies to assess the environmental effects of their proposed actions before making decisions. Using the NEPA process, agencies evaluate their proposed actions' environmental and related social and economic effects.

(NFA) No Further Action Letter - This is a letter signed by a government agency declaring that you have completed all steps necessary to remedy the environmental problem. A no further action letter is also required if you are running a business and experience some environmental hazard, such as a chemical spill or other contamination.

(NFR) No Further Remediation Action Plan - This plan or letter is given to a landowner of an environmentally contaminated property to state that the property currently meets the environmental standards set by the state. This letter might be called a "No Further Action" (NFA) letter depending on the state. However, this does not mean the property is completely clean; it could still have highly contaminated soil or groundwater. Generally, the contamination is controlled or below certain state-set limits.

(NHPA) National Historic Preservation Act - The National Historic Preservation Act of 1966 was passed to recognize the importance of protecting our nation's heritage from extensive federal development. This legislation resulted from over a century of effort by a grassroots movement of dedicated preservationists.

(NIEHS) National Institute of Environmental Health Sciences Superfund Research Program - NIEHS is one of the 27 institutes and centers of the National Institutes of Health that conducts research into the effects of the environment on human disease.

(NMOC) Non-Methane Organize Compounds - NMVOCs are identical to volatile organic compounds (VOCs), but with methane excluded. They include various chemically different compounds, such as benzene, ethanol, formaldehyde, cyclohexane, 1,1,1-trichloroethane, and acetone.

(NPDES) National Pollutant Discharge Elimination System - NPDES is permitted under the Clean Water Act (CWA). Landfill operators must develop and implement a stormwater pollution prevention plan (SWPPP), which describes best management practices (BMPs) and controls to minimize the discharge of pollutants in stormwater runoff from these facilities.

(NPL) EPA National Priorities List - The National Priorities List (NPL) is the list of national priority sites with known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories.

(NPS) Nonpoint Source Pollution - The introduction of pollution to waterways that does not come from a single definable source. This includes pesticides, fertilizers, road salt, and contaminated sediments moving through runoff into surface waters.

(NRC) National Resource Center - The NRC is the national point of contact for reporting all oil, chemical, radiological, and biological releases into the environment anywhere in the United States and its territories.

(NRCS) Natural Resources Conservation Services - Natural Resources Conservation Service, formerly known as the Soil Conservation Service, is an agency of the United States Department of Agriculture that provides technical assistance to farmers and other private landowners and managers.

(NREL) National Renewable Energy Library - The National Renewable Energy Laboratory (NREL) transforms energy through research, development, commercialization, and deployment of renewable energy and energy efficiency technologies.

(NWF) National Wildlife Federation - The National Wildlife Federation is the United States' largest private, nonprofit conservation education and advocacy organization, with over six million members and supporters and 51 state and territorial affiliated organizations.

(O&M) Operation and Maintenance - An O&M Plan specifies key system operating parameters and limits, maintenance procedures and schedules, and documentation methods necessary to demonstrate proper operation and maintenance of an approved emission control device or system.

(OLEM) Office of Land and Emergency Management – EPA's Office of Land and Emergency Management provides policy, guidance, and direction for the EPA's emergency response and waste programs.

(OSHA) The Occupational Safety and Health Administration - (OSHA) is a government agency within the United States Department of Labor that protects employees in both the public and private sectors. OSHA laws require employers to maintain a safe working environment for their employees.

(OSRTI) The Office of Superfund Remediation and Technology Innovation - OSRTI administers Superfund, which oversees the cleanup process at contaminated sites across the country. OSRTI works with state and local governments, tribes, environmental groups, industry representatives, and other stakeholders to ensure safe and effective cleanups. OSRTI also enforces compliance with CERCLA regulations through inspections, investigations, enforcement actions such as fines or orders requiring corrective action. Additionally, OSRTI provides technical assistance to help communities understand their rights under CERCLA and develop plans for cleaning up contaminated sites.

(OU) Operable Unit - During cleanup, a site can be divided into several distinct areas depending on the complexity of its associated problems. These areas, called operable units, may address geographic areas of a site, specific site problems, or areas where a specific



action is required. An example of a typical operable unit is a specific area that may require the removal of drums and tanks from the surface of a site.

(PA/SI) Preliminary Assessment/Site Inspection - Once a superfund site is identified, EPA looks at existing information, inspects the site, and may interview nearby residents to find out the site's history and its effects on the population and the environment. EPA also normally tests the soil, water, and air to determine what hazardous substances were left at the site and how serious the risks may be to human health and the environment.

(PAH) Polycyclic Aromatic Hydrocarbon - Polycyclic Aromatic Hydrocarbons are a class of chemicals that occur naturally in coal, crude oil, and gasoline. They result from burning coal, oil, gas, wood, garbage, and tobacco.

(PCBs) Polychlorinated Biphenyls - PCBs are industrial products or chemicals. According to the EPA, PCBs belong to a broad family of human-created organic chemicals known as chlorinated hydrocarbons. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. The use of PCB chemicals was banned in the U.S. in 1979 because they harm human and environmental health.

(PFAS) Polyfluoroalkyl Substances - PFAS are manufactured chemicals in industry and consumer products since the 1940s. Because of their widespread use and persistence in the environment, many PFAS are found in the blood of people and animals worldwide. Remediation of groundwater impacted by per- and polyfluoroalkyl substances (PFAS) is challenging due to the strength of the carbon-fluorine bond perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) in conventional water treatment systems.

(POC) Point of Compliance - The Point of Compliance is a spot at the downstream edge of the waste management area that extends into the uppermost aquifer below. This is where groundwater monitoring happens and where the Groundwater Protection Standard (GWPS) is set. If Alternate Concentration Limits (ACLs) are needed, they are also set here.

Point of Exposure - The point at which a potential receptor can come into contact, either now or in the future, with the contaminated groundwater.

Post-Closure Care - Municipal Solid Waste landfill regulations require that owners/operators monitor and maintain a landfill for 30 years after the landfill is closed, to include:

- Maintaining the integrity and effectiveness of any final cover, including monitoring settlement and inspecting the cover for failures and erosion.
- Maintaining and operating the leachate collection system.
- Monitoring groundwater for contamination.
- Maintaining and operating the gas monitoring system.



(PPA) Power Purchase Agreement - A Power Purchase Agreement is an arrangement in which a third-party developer installs, owns, and operates an energy system on a customer's property. The customer then purchases the system's electric output for a predetermined period.

(ppmV) Parts per Million by Volume - This is a concentration measurement on a weight or volume basis. Parts per million by mass are equivalent to milligrams per liter (mg/L). Parts per million by volume is a common way to measure concentrations of gases.

(PRP) Potentially Responsible Party - A PRP is an individual or company (including generators, transporters, operators and owners) that may be responsible for causing or contributing to contamination at a Superfund site. Whenever possible, PRPs must clean or pay for the cleanup of the hazardous sites they contaminate.

(QAPP) Quality Project Plan - QAPP is a written document outlining the procedures a monitoring project will use to ensure the data it collects and analyzes meets project requirements.

(QEP) Qualified Environmental Professional - A Qualified Environmental Professional may be required to provide a report and/or recommendations to enhance or protect a stream or other part of the natural environment.

(RAO) Remedial Action Objective - RAOs can address chemical concentrations and potential exposure pathways. Protection can be achieved by reducing the mass, volume, toxicity, or mobility of chemicals of interest, by reducing potential exposures, or by combining these approaches.

(RAP) Remedial Action Plan - A Remedial Action Plan is a cleanup plan for restoring the environmental quality of an Area of Concern (AOC), such as a Superfund site.

(RBCA) Risk-Based Corrective Action - RBCA projects allow some contaminants to remain on a site depending on its intended use. To protect people from exposure to toxins, physical or engineering controls (such as caps over contaminated soil) are placed on the site and legal or institutional controls (ICs) are created that impose restrictions on land use (e.g. prohibiting building houses on previous industrial sites).

(RCRA) Resource Conservation and Recovery Act - Established in 1976, the Resource Conservation and Recovery Act gives EPA the authority to control hazardous waste from cradle to grave, including the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA is related to the management of hazardous waste at facilities that are currently in use. The 1986 amendments to RCRA enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.



Regulated Unit - Surface impoundment, waste pile, land treatment unit, or landfill that received waste after July 26, 1982.

Remediation - Procedures and methods for restoring or redressing the environment following public health and environmental incidents and disasters, such as hazardous substance contamination following chemical, radiological, and biological incidents.

Remedial Actions - Remedial actions are used by the EPA to handle complex sites needing a long-term response. Remedial actions manage releases that do not pose an urgent threat to public health or the environment and do not require immediate action. Remedial actions involve complex and highly contaminated sites that often require several years to study the problem, develop a permanent solution, and clean up the hazardous waste.

Removal Actions - The EPA uses Removal Actions to handle emergency oil spills, chemical releases, and short-term responses. Emergency actions are taken to eliminate immediate risks and ensure public safety. Such emergencies include chemical releases at a fixed location or during transportation. The EPA may respond to help state and local authorities deal with these emergencies quickly.

(RI) Remedial Investigation - RI focuses on defining the nature and extent of contamination, assessing risk to human health and the environment, and developing a cleanup strategy to eliminate potentially harmful human health and environmental impacts.

Riprap Area - Riprap is a layer of large stones that protects soil from erosion in areas of high or concentrated flows. It is especially useful for armoring channels and ditch banks, among other features.

(ROD) Record of Decision - An ROD records the EPA's decision on an action and serves to provide the reasoning for the choice of or changes to a Superfund Site cleanup plan. A ROD must include (1) A brief description of the proposed action and alternatives considered in the EIS (Environmental Impact Statement), environmental factors considered, and project impacts; (2) Any mitigation commitments.

(RPM) Remedial Project Manager - A remedial project manager refers to the Environmental Protection Agency (EPA) or state official responsible for overseeing on-site remedial action.

(RSL) Regional Screening Level - The RSL table compares residential and commercial/industrial exposures to soil, air, and tap water (drinking water). The unified use of the RSLs to screen chemicals at Superfund sites promotes national consistency.

(SAA) Superfund Alternative Approach Agreement - The Superfund alternative approach uses the same investigation and cleanup process and standards that are used for sites listed

on the NPL. The SA approach is an alternative to listing a site on the NPL; it is not an alternative to Superfund or the Superfund process.

(SARA) Superfund Amendments and Reauthorization Act 1986 - This act provided additional funding for hazardous waste cleanups nationwide. It includes several site-specific amendments, definition clarifications, and technical requirements to ensure that cleanups were conducted properly.

Scrubber - Scrubbers are one of the primary devices that control gaseous emissions, especially acid gases. They can also be used for heat recovery from hot gases by flue-gas condensation. They are also used for high flows in solar, photovoltaic, or LED (light-emitting diode) processes.

(SG) Soil Gas - Soil gases (soil atmosphere) are the gases found in the air space between soil components. If they do not contain water, the spaces between the solid soil particles are filled with air. The primary soil gases are nitrogen, carbon dioxide and oxygen

(SGW) Soil Gas Well - Soil vapor sampling works by extracting and sampling the off-gases of contaminants in the soil. This is done through the construction of a soil vapor well. A soil vapor well will typically be installed using quarter-inch Teflon tubing with a vapor probe attached to the end.

Small Business Liability Relief and Brownfields Revitalization Act - This 2002 act amends the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, by adding Section 104(k) which authorizes the EPA to provide funding to eligible entities to inventory, characterize, assess, conduct planning related to, remediate, or capitalize revolving loan funds for, eligible brownfield sites.

Solar PV - Photo Voltaic Panels - These generate power using devices that absorb energy from sunlight and convert it into electrical energy through semiconducting materials.

(SOW) Statement of Work - SOW is a document that describes a given project's requirements. It defines the scope of work being provided, project deliverables, timelines, work location, and payment terms and conditions.

(SSG) Soil Screening Guidance Tool - The Soil Screening Guidance presents a framework for developing risk-based, soil screening levels (SSLs) to protect human health. The framework provides a flexible, tiered approach to site evaluation and screening level development.

(SSL) Soil Screening Level - SSLs are concentrations of contaminants in soil designed to protect residents from exposures in a residential setting. A site-specific risk assessment evaluates the risk posed by exposure to site contaminants in various media.

State and Tribal Response Program Grants - These grants provide non-competitive funding to establish or enhance state and tribal brownfield response programs.

Summa Canister - This canister is constructed of specially treated stainless steel and is designed to collect a whole air sample.

Superfund - EPA's Superfund program is responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills, and natural disasters. To protect public health and the environment, the Superfund program focuses on making a visible and lasting difference in communities, ensuring people can live and work in healthy, vibrant places.

Superfund Climate Resilience Website - This website provides an overview of climate-related initiatives within the Superfund program, including information about strategies that can be used to evaluate and strengthen climate resilience at Superfund sites. While this website offers guidance on Superfund sites, it can also help inform decisions at RCRA facilities.
<https://www.epa.gov/superfund/superfund-climate-resilience>.

(SVE) Soil Vapor Extraction - Soil vapor extraction remediates unsaturated (vadose) zone soil. A vacuum is applied to the soil to induce a controlled flow of air and remove volatile and semi-volatile organic contaminants.

(SVOCs) Semi-Volatile Organic Compounds - SVOCs are more likely to be liquids or solids at lower temperatures. Some examples of products that include SVOCs are pesticides, oil-based products, and fire retardants.

(SWDA) Solid Waste Disposal Act - Passed in 1965, the SWDA set minimum safety requirements for local landfills and formed the framework for states to better control waste disposal.

(SWPPP) Stormwater Pollution Prevention Plan - This plan describes best management practices (BMPs) and controls to minimize the discharge of pollutants in stormwater runoff from facilities.

(TAG) Technical Assistance Grants - These grants provide money for activities that help community groups participate in decision-making at eligible Superfund sites. TAGs are available for Superfund sites on the NPL or proposed for the NPL, and for which a response action has begun. EPA must notify the public when a site in their community qualifies for a TAG.



(TASC) Technical Assistance Services for Communities - This EPA program helps communities understand the technical issues related to site activities, hazardous substances, and sampling results. Technical assistance is available to help the community understand and review the information gathered at the site throughout the Superfund process, beginning with PA/SI.

(TPY) Tons Per Year of CO₂ - TPY is used in carbon accounting and emissions monitoring.

(TSDF) Treatment, Storage and Disposal Facilities - These facilities use various processes (such as incineration or oxidation) to alter the character or composition of hazardous wastes.

(USACE) US Army Corps of Engineers - The USACE oversees civil engineering projects, including designing and developing major highways, airfields, hospitals, laboratories, dams, levees, powerhouses, embankments, and various military installation facilities.

(UST) Underground Storage Tanks - An underground storage tank system is a tank and any underground piping connected to it with at least 10 percent of its combined volume underground. The federal UST regulations apply only to UST systems storing petroleum or certain hazardous substances.

(UU/UE) Unlimited Use and Unrestricted Exposure - CERCLA or program policy generally requires five-year reviews (FYRs) when hazardous substances remain on site above levels that permit unlimited use and unrestricted exposure.

Vapor Intrusion Pathways - Vapor intrusion occurs when vapor-forming chemicals migrate from any subsurface source into an overlying building.

(VI) Vapor Intrusion Study - A complete vapor intrusion (VI) model, describing the vapor entry of volatile organic chemicals (VOCs) into buildings located on contaminated sites, generally consists of two main parts: one describing vapor transport in the soil and the other its entry into the building.

(VISL) Vapor Intrusion Screening Level - This screening level was developed by the EPA that lists chemicals considered to be volatile and sufficiently toxic through the soil gas intrusion pathway; and, provides generally recommended, media-specific, risk-based screening-level concentrations for groundwater, near-source soil gas, sub-slab soil gas, and indoor air (i.e., the VISLs).

(VOCs) Volatile Organic Compounds - VOCs are organic chemical compounds that can volatilize under normal atmospheric temperature and pressure conditions. There is some level of natural VOC exposure from environmental sources, but VOCs are also emitted from anthropogenic sources such as paints, cleaners, cigarette smoke, car exhaust, and industrial

releases. Several VOCs, including 1,3-butadiene, benzene, and chloroform, have been linked to adverse health outcomes, while others have no known health effects.

(VRP) Volunteer Remediation Program - VRP encourages environmental cleanups; facilitates the redevelopment, sale, and reuse of commercial and industrial properties; and reduces the risks that contaminants pose to human health and the environment. The VRP provides a process for property owners, operators, potential purchasers, and third parties to voluntarily address (by investigating and, if necessary, remediating) property that is or may be contaminated. Participants are typically current or past property owners, current or past lessees, and prospective purchasers.

Windfall Liens - A windfall lien is a CERCLA statutory lien on a property for the increase in the fair market value of that property attributable to EPA's cleanup efforts.

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