

abatement - a method of reducing the degree or intensity of pollution, such as the restoration, reclamation or recovery of natural resources.

Action Level - a health-risk based guideline set by California Department of Toxic Substances Control for drinking water quality. It is a point at which DTSC will strongly suggest that action be taken to reduce contaminant levels in water.

activated carbon - a high absorbent form of carbon, used to remove odors and toxic substances from gaseous emissions or liquid effluents.

acute health effects - health effects that occur or develop rapidly after exposure to a substance.

Administrative Record - a file which contains all information used by the lead agency to make its decision on the selection of a response action under CERCLA/SARA. This file, available for public review, is established at or near the site, usually at one of the information repository locations, while a duplicate is held in a central location, such as the lead agency headquarters.

AEC - Atomic Energy Commission.

AF - Air Force.

AFB - Air Force Base.

AFCEE - Air Force Center for Environmental Excellence.

AFIRM - Air Force Installation Restoration Management.

AFS - Air Force Station.

AICUZ - Air Installation Compatible Use Zone.

alluvium - an area of sand, clay or other similar material that has been gradually deposited by moving water such as a shoreline of a river bed or a lake.

ambient - refers to the air, soil, groundwater or other portion of the environment reflects natural conditions in the vicinity of the location of suspected contamination.

AMC - Air Mobility Command.

AMW - Air Mobility Wing.

analyte - any one of a group of chemicals than an analysis is designed to detect.

analytes of interest - those chemicals found most frequently and at the highest concentrations at a specific site, for example, Travis AFB.

annular space - the open space between the wall of a borehole and the well casing.

AOC - Area of concern.

aquifer - a water-bearing layer of rock that will yield water in a usable quantity to a well or spring.

aquitard - a confining bed that retards, but does not prevent, the flow of water to or from an adjacent aquifer.

AR - Administrative Record.

ARARs - Applicable or Relevant and Appropriate Requirements.

Area of Concern (AOC) - an area or facility where preliminary investigations indicate contaminants may have been released to the environment, but where any such contamination has not been confirmed during a remedial investigation.

AST - Aboveground storage tanks.

ATSDR - Agency for Toxic Substance and Disease Registry.

AVGAS - Aviation gasoline.

BAAQMD - Bay Area Air Quality Management District.

background - naturally occurring levels of any substance in nature; the concentration level of substances in a location prior to any release of hazardous material. A background concentration is the average level of a substance found naturally in the environment. Background concentrations are compared with levels found near a hazardous waste site to determine whether contamination is present.

BAF - Bioaccumulation factor.

baseline concentration - a concentration of a pre-existing substance in groundwater. This is referred to in order to determine if the contaminant is increasing toward a maximum contaminant level (MCL). This is an important measurement because some inorganic substances (such as metals) occur naturally in soil and groundwater.

baseline risk assessment - a health risk assessment that evaluates risks to human health or the environment that could result if the current situation is allowed to continue unchecked.

BAT - Best Available Technology.

BCE - Base Civil Engineer.

BEE - Bioenvironmental Engineering.

BES - Bioenvironmental Engineering Services.

bench scale - treatability tests performed on a small scale, usually in a laboratory, to better define parameters of a treatment technology.

bentonite - granules of rock largely comprised of clay minerals that have a great ability to absorb water and swell in volume. The granules are used in well drilling and well construction materials.

benzene - a volatile organic chemical widely used in the chemical and drug industries as a solvent, constituent of motor fuels as an octane booster and in the manufacture of many chemical compounds and rubber. A known cause of cancer, it is toxic by ingestion, inhalation or absorption.

berm - a ledge or shoulder, as along the edge of a paved road.

BGS - Below ground surface.

bioaccumulation - the process that occurs when toxic substances are passed up the food chain from soil to plants to grazing animals to human beings.

bioassay - the use of living organisms to determine the biological effect of some substance, factor, or condition.

biological treatment - a process by which hazardous waste is rendered non-hazardous or is reduced in volume by relying on the action of microorganisms to degrade organic waste.

borehole - an uncased, circular hole bored into the earth, usually to gather data or samples for exploratory or economic purposes. It may be made into a water well or oil well or filled after drilling.

BTEX - a term used to refer collectively to the following common constituents of gasoline—benzene, toluene, ethylbenzene, and xylenes. These chemicals are all aromatic organic chemicals which have distinctive odors and are toxic to humans.

BX - Base Exchange.

C - Degrees Celsius (centigrade).

CAA - Clean Air Act.

Cal/EPA - California Environmental Protection Agency.

Cal/OSHA - California Occupational Safety and Health Administration.

CCR - California Code of Regulation.

carcinogen - a substance that produces cancer after long-term exposure.

casing - (1) metal or plastic pipe or tubing that is welded or screwed together and lowered into a borehole to prevent entry of loose rock, gas, liquid, or to prevent loss of drilling fluid into porous, cavernous, or fractured strata; (2) the pipe between the intake (screen) section and the surface in a well, serving as a housing for pumping equipment and conduit for the pumped water.

CDFG - California Department of Fish and Game.

CDI - Chronic Daily Intake.

CE- Civil Engineering.

CERCLA - Comprehensive Environmental Response, Compensation and Liability Act, also known as Superfund.

CEQ - Council on Environmental Quality.

CEQA - California Environmental Quality Act.

CFR - Code of Federal Regulations.

CFS - Cubic feet per second.

CGI- Combustible Gas Indicator.

chemical treatment - the process by which hazardous waste is rendered non-hazardous or suitable for transport by changing its chemical composition.

chronic health effects - long-term effects or those that are revealed after the elapse of some time, such as cancer, from a one-time or a repeated exposure to a substance.

CIH - Certified Industrial Hygienist.

cleanup - the abatement and minimization, by a selected remedial action, of damage resulting from the presence of pollutants at a site.

closure - actions taken by the owner or operator of a hazardous waste facility to prepare the site for long-term care and to make it suitable for other uses after it has stopped accepting

waste

CLP- Contract Laboratory Program.

CM/SEC - Centimeters per second.

CNPS - California Native Plant Society.

CO - Commanding Officer or Contracting Officer.

COC - Contaminant of concern.

C-O-C - Chain-of-custody.

COE - U.S. Army Corps of Engineers. (See also **USACE**).

compatibility - the ability of materials (usually waste fluid combinations or liners) to coexist without adverse environmental effects or health risks.

compliance monitoring program - a program used to determine whether groundwater performance standards are exceeded.

compliance point - a term used to describe the location where the groundwater protection standard is measured.

concentrations - the amount of a compound present in a sample of water, soil, or air (for example, milligrams of contaminant per liter of water).

cone of depression - the depression in the groundwater surface around a pumping well that is caused by the withdrawal of water.

confined aquifer - an aquifer under greater than atmospheric pressure bounded above and below by impermeable layers (aquitards) with distinctly lower permeabilities than the aquifer itself.

confirmation study - an investigation that verifies the existence or absence of contamination at a hazardous waste site.

constituent - a chemical component of a waste or chemical compound which qualifies a waste as hazardous under state or federal regulation.

contaminant standards - limits on concentrations of contaminants in water, soil, sediments, or air established by federal, state, or local law or regulation.

contamination - the degradation of natural water or soil quality as a result of human activities, to the extent that its usefulness is impaired. The degree of permissible contamination depends upon the intended use of the water or soil.

contingency plan - a document setting forth an organized, planned, and coordinated course of action to be followed to prevent pollution incidents, and limit potential pollution in case of fire, explosion, or discharge of hazardous waste constituents that could threaten human health and environment.

COPC - Chemical of potential concern.

COPEC - Chemical of potential environmental concern.

core - a continuous columnar sample of the lithologic units extracted from a borehole. Such a sample preserves stratigraphic contacts and structural features.

corrective action measures - the removal or treatment in place of any hazardous constituents that exceed concentration limits in groundwater.

cost-effective alternative - the lowest cost alternative that is technologically feasible; is reliable; and effectively mitigates and minimizes damage to, and provides adequate protection of, public health, welfare, and the environment.

CPM - Counts per minute.

CPT - Cone penetrometer, a method of "punching a hole" in the soil to collect a sample without generating drill cuttings that have to be drummed and disposed.

CRP- Community Relations Plan.

CTV - Critical toxicity value.

CV - Coefficient of variation.

CWA - Clean Water Act.

CWM - Chemical Warfare Material.

dbA - Decibels (A-weighted scale).

DCA - Dichloroethane.

DCE - Dichloroethene.

1,2-DCE- 1,2-dichloroethene.

DDD - Dichlorodiphenyldichloroethylene, a pesticide.

DDE - Dichloro-2,2-bis(p-chlorophenyl)ethylene, a pesticide.

DDT - Dichlorodiphenyltrichloroethane, a pesticide.

decomposition - a change in the composition of organic matter due to the actions of microorganisms that break down the matter into simpler forms.

decontamination - the process of making any person, object, or area safe by absorbing, destroying, neutralizing, or making harmless by removing biological or chemical agents.

Defense Environmental Restoration Account (DERA) - DOD monies used to fund remediation of its sites.

DEQPPM - Defense Environmental Quality Program Policy Memorandum.

DERA - Defense Environmental Restoration Account.

DERP - Defense Environmental Restoration Program.

detailed alternatives - potential, comprehensive solutions to site problems, composed of one or more control measures, which are developed and evaluated in detail in a Remedial Action Plan.

detectable - the concentration of a chemical that is equal to or greater than the detection limit (opposite = nondetectable).

detection limit - the lowest amount of chemical measurable by one type of analysis (also called method detection limit).

1,2-Dichloroethane (1,2-DCA) - a volatile organic chemical used as a solvent and fumigant.

diffusion - (1) the mixing of substances, usually gases and liquids, due to molecular motion; (2) spreading out of a substances, usually a gas, to fill a space.

discharge - an intentional or accidental spilling, leaking, pumping, pouring, dumping, emitting, or any other release of hazardous waste, hazardous waste constituents, or hazardous materials.

disposal facility - a facility, as defined in 40 CFR 260.10, where hazardous waste was intentionally placed on land or water, and at which waste will remain after closure of the facility.

distillation - a hazardous waste physical treatment process that involves the evaporation of a liquid or slurry and separation of the components of the resulting vapor.

DL- Detection limit.

DNAPL – Dense Non-Aqueous Phase Liquid. A liquid that is heavier than and has not dissolved in water.

DOD - U.S. Department of Defense

DOE - U.S. Department of Energy.

DOJ - U.S. Department of Justice.

DOT - U.S. Department of Transportation.

downgradient - the direction toward which groundwater is flowing at some specific depth below surface.

DPDO - Defense Property Disposal Office.

DPM - Disintegrations per minute.

DQO - Data Quality Objectives.

drawdown - a decrease of the water level at a measuring point in an aquifer caused by the withdrawal of water.

drinking water supply - any raw or finished water source that is or may be used as a public water system (as defined in the Safe Drinking Water Act) or as a drinking water by one or more individuals.

DRMO - Defense Reutilization and Marketing Office.

DTIC - Defense Technical Information System.

DTSC - Department of Toxic Substances Control.

ECAO - Environmental Criteria and Assessment Office.

ecosystem - the interacting system of a biological community and its nonliving environment.

EE/CA - Engineering Evaluation/Cost Analysis.

effluent - (1) soil, liquid, or gas wastes that enter the environment as a by-product of human processes (2) the discharge or outflow of water from ground or subsurface storage.

EIS - Environmental Impact Statement.

electrolysis - a treatment process by which chemical changes are accomplished at the surface of electrodes that are carrying an electric current and have been immersed in a chemical solution.

electrostatic precipitator - an air pollution control device that imparts an electric charge to particles in a gas stream causing them to collect on an electrode.

EM - Environmental Management.

encapsulation - a physical treatment process for hazardous waste that encases or encloses the waste with either adhesive coating materials or specially lined containers, such as steel-lined drums or concrete blocks, in order to isolate it and keep it from contaminating the environment.

environment - the sum total of all the external conditions that may act upon an organism or community to influence its development or existence.

EODS - Explosive Ordnance Disposal Squadron.

ERA - Ecological Risk Assessment.

estuary - areas where fresh water from rivers and salt water from nearshore ocean waters are mixed. These areas may include bays, mouths of rivers, salt marshes and lagoons. These water ecosystems shelter and feed marine life, birds and wildlife.

ethylbenzene - a chemical commonly found in petroleum products.

extraction system - wells that pump groundwater out of the ground to route it to a treatment plant (see **pumping wells**).

°F - Degrees Fahrenheit.

facility - a building, structure, installation, equipment, pipe or pipeline, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock or aircraft, or any site or area where a hazardous substance has been deposited, stored, disposed of or placed, or otherwise come to be located.

FAFS - Fairfield Air Force Station

FFA - Federal facility agreement. An agreement between the Air Force, EPA and state on the clean-up of contaminated sites.

feasibility study - a U.S. EPA term for the development, evaluation, selection, and description of remedial action alternatives. Based on nine criteria.

FID - Flame Ionization Detector.

field duplicate - a sample taken from the same interval as a normal sample to measure the accuracy of the analytical method.

flocculation - a physical treatment method for hazardous waste by which suspended particles are assembled into larger, more settleable particles; this technique enhances the sedimentation process.

flood plain - the lowland that borders a river, which is usually dry, but is subject to flooding when the stream overflows its bank.

flotation - a physical treatment process for hazardous waste by which fine, light particles are separated from liquid and rise to the surface; the particles are collected by skimming mechanisms.

FMR - Field Metabolic Rate.

food chain - the dependence of one type of life on another, each in turn eating or absorbing the next organism in the chain. (If grass is eaten by a cow, and the cow is eaten by humans, then the food chain involves grass, cow and humans.)

FPM - Feet per minute.

free liquids - liquids that readily separate from the solid portion of a waste under ambient temperature and pressure.

FS - Feasibility Study.

FSP- Field Sampling Plan.

FT - feet.

FVMS - Field Volatile Mass Spectroscopy.

FY - Fiscal year.

GC - Gas chromatography.

GC/MS - Gas Chromatography/Mass Spectroscopy.

GIS - Geographical Information System.

GM - Geiger-Mueller Detector.

GMU - Grazing Management Unit.

GPD - Gallons per day.

GPM - Gallons per minute.

GPR - Ground-Penetrating Radar.

GPS - Global Positioning System.

gradient - the slope of the groundwater surface between two wells that have screens in the same groundwater zone; measured in vertical foot per horizontal foot.

groundwater - water present between particles in subsurface deposits that lie below the water table.

groundwater flow velocity - the rate at which groundwater moves; measured in terms of distance per year or distance per day.

groundwater flow model - a mathematical description of the movement of water in a groundwater system. Models simplify the real system while preserving the important features governing flow. Models are used as tools for assisting in understanding and solving complex field problems.

groundwater plume - see **plume**.

groundwater quality - the specific chemical, physical, and biological properties of groundwater in a specific area. State and local standards determine its suitability as a drinking water supply.

GSAP - Groundwater Sampling and Analysis Plan.

H - Henry's Law Constant.

HARM - Hazardous Assessment Rating Methodology.

Hazard Ranking System (HRS) - a system used by U.S. EPA to decide whether a site should be placed on the National Priorities List (NPL). The score a site receives from the HRS compares the relative hazards for different sites, taking into account the impact the site has on groundwater, surface water and air, as well as the number of people potentially affected by the contamination. Sites receiving a score of 28.5 or greater are proposed for the NPL.

hazardous waste - any waste or combination of wastes that pose a substantial current or potential hazard to human health or living organisms; wastes exhibiting any of the hazardous characteristics in 40 CFR Section 261.2 that have not been specifically excluded as a hazardous waste.

HCl - Hydrochloric acid.

heavy metals - high-density metallic elements (such as mercury, chromium, cadmium, arsenic and lead) which are generally toxic to plant and animal life in low concentrations.

HI- Hazard Index.

HM- Hazardous materials.

HNu - Photoionization detector (trade name), a means of measuring vapors in the soil.

HP - HydroPunch®; a method of collecting a groundwater sample from the bottom of a boring.

HQ - Hazard Quotient.

HQ USAF - Headquarters, U.S. Air Force.I

HRS - Hazard Ranking System.

HSA- Hollow stem auger (drilling method).

HSP- Health and Safety Plan.

HSWA - Hazardous and Solid Waste Act.

hydrocarbons - any of the numerous organic compounds like benzene that contain only hydrogen and carbon which are derived principally from petroleum, coal tar and vegetable sources. Some hydrocarbons are suspected of causing cancer, while benzene is known to cause cancer.

hydrogeologic study - a study which examines the way water behaves in soil and rock formations beneath the ground.

hydrogeology - the geology of groundwater with particular emphasis on the chemistry and movement of groundwater.

IAG - Interagency Agreement.

ICRP - International Commission on Radiological Protection.

IDLH - Immediately dangerous to life and health.

IDW - Investigation- derived waste .

impermeability - as applied to soil or subsoil the degree to which fluids, particularly water, cannot penetrate in measurable quantities.

IN. - inches.

incineration - the process by which waste volume is reduced by combustion in a controlled manner. The primary purpose is to thermally break down hazardous waste.

inorganic compounds - substances that are not derived from plant, animal, or petroleum products (for example, metals).

interim remedial measure - a step taken to protect the public from exposure while continuing investigations required under Superfund laws (CERCLA/SARA); may be called a removal action.

IRA - Interim Remedial Action.

IRG- Interim remediation goal.

IRP - Installation Restoration Program. Established by DOD in 1976 to identify and remediate contamination at DOD facilities caused by past waste disposal practices.

IRPIMS - Installation Restoration Program Information Management System.

isopleth - Lines drawn on a map to connect points of equivalent value. The lines are used to show the extent of groundwater or soil contamination concentrations. Dashed lines indicate that the extent of contamination is estimated.

ITIR - Informal Technical Information Report. **JAG** - Judge Advocate General, the legal office at Travis AFB. **JEG** - Jacobs Engineering Group. **JFSA** - Jet fuel spill area. **JP4** - Jet fuel. **K** - Hydraulic conductivity.

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landfill - a facility for the disposal of solid or hazardous waste involving burial in an excavated area of natural depression; environmental risks are usually lessened by spreading solid wastes in thin layers, compacting them, and applying cover materials at the end of each operating day.

LCS - Laboratory control sample.

leachate - the liquid that trickles through or drains from waste carrying soluble components from the waste. After leachate enters the soil, it can travel downward into groundwater or be carried off-site as runoff.

LEL - Lower explosive limit. The lowest concentration in air at which a chemical will ignite.

liquid phase carbon adsorption - a treatment technology using activated carbon filters to remove contaminants from a liquid waste stream.

LNAPL – Light Non-Aqueous Phase Liquid. A liquid that is lighter than and has not dissolved in water.

Log K_{ow} - Log of octanol/water partition coefficient.

low level (radioactive) waste - radioactive wastes that consist of radionuclides, lab wastes or transuranic nuclides at concentrations of less than 100 nanocuries/gram (nci/g).

LTM- Long-term monitoring.

LUFT - Leaking underground fuel tank.

LUST - Leaking Underground Storage Tank.

MAC - Military Airlift Command.

MAJCOM- Major Command.

MATS - Military Air Transport Services.

MCL - Maximum Contaminant Level, set by U. S. EPA or DTSC.

MCLGs - Maximum Contaminant Level Goals.

MDL - Method detection limit, the smallest quantity detectable by an analytical method.

MEK - Methyl ethyl ketone. Also called 2-butanone.

metals - a group of chemical elements characterized by their luster and ability to conduct electricity and heat. Arsenic, chromium, copper, lead and nickel are examples of metals.

methane - a volatile organic compound (VOC), commonly known as natural gas, resulting from the decay of organic matter, which is used as a fuel, and also in the petrochemical industry. It is a severe fire and explosion hazard.

mg/kg - Milligrams per kilogram.

mg/L - Milligrams per liter.

migration - the movement of oil, gas, contaminants, water or other liquids through the environment especially through porous and permeable rock.

mitigation - actions taken to improve site conditions by limiting, reducing or controlling toxicity and contamination sources.

MS - Mass spectrometry.

MSDS - Material safety data sheet.

MSL - Mean sea level.

MW – Monitoring well. A well that is installed to measure groundwater data such as presence and character of contamination or groundwater levels.

NA - Not analyzed.

NAAQS - National Ambient Air Quality Standards.

NaI - Sodium iodide (probe for detecting gamma radiation).

NAPL - Non-aqueous phase liquid: pure product, such as pure TCE or pure jet fuel.

NAv - Not available.

NCP - National Contingency Plan; the National Oil and Hazardous Substances Contingency Plan.

ND - Not detected.

NEPA - National Environmental Policy Act.

NFA - No further action.

NFI - No further investigation.

NI - None identified.

NIOSH - National Institute for Occupational Safety and Health.

noncancer risk - the potential or probability to incur a noncancer health effect (e.g., lead

poisoning, neurological disorders, liver disease) due to exposure to hazardous substances.

NORM- Naturally occurring radioactive material.

NOU - North Operable Unit.

NOV - Notice of violation.

NOx - Oxides of nitrogen.

NPDES - National Pollutant Discharge Elimination System. The national program established under the Federal Water Pollution Control Act, that requires all point source discharges into any body of water to be permitted by U.S. EPA or the designated state agency. Minimum pretreatment requirements for such discharges are established under the program.

NPL - National Priorities List, the Superfund list.

NRC - Nuclear Regulatory Commission.

NS - Not sampled.

O&M - Operation and maintenance.

OEW - Ordinance and Explosive Waste.

One in one million - An expression of cancer risk. A one in one million excess cancer risk would mean that, out of one million people, one more person might develop cancer in their lifetime due to exposure to the compounds at the site than would be expected to develop cancer from other causes. One in one million (also expressed as 1.0×10^{-6}) risk is generally used as the criterion for requiring cleanup of a contaminant.

Operable Unit - At Travis AFB, a geographic area being investigated as one entity. Operable units may address geographic portions of a site, types of operations, specific site problems, or the initial phase of an action.

operations and maintenance (O&M) - activities conducted at a CERCLA plant or treatment unit to ensure functionality after startup has been completed.

organic compound - any compound that contains carbon. At a hazardous waste site, it is usually a compound generated by human activities.

OSHA - Occupational Safety and Health Administration.

OSWER - Office of Solid Waste and Emergency Response.

OU - Operable Unit.

OVA - Organic vapor analyzer. A trade name for a flame ionization detector.

OVM - Organic vapor monitor. A photoionization detector.

oxidation - in hazardous waste management, the process whereby a waste stream is treated with a strong oxidizing agent, changing the waste chemically to a less hazardous state.

PA - Preliminary Assessment, the stage before a full-scale remedial investigation. A preliminary assessment provides information as to whether a site requires a full-scale study.

PAH - Polynuclear aromatic hydrocarbon.

PAO - Public Affairs Office.

PA/SI - Preliminary assessment/site inspection.

PCB - Polychlorinated biphenyl.

PCE - Tetrachloroethene or perchloroethene. A solvent.

pCi/g - Picocuries per gram.

pCi/l - Picocuries per liter.

PE - Professional engineer.

PEL - Permissible Exposure Limit.

percolation - the movement, flow, or infiltration of water through the pores or spaces of rock or soil.

permeability - the property of soil or rock that allows water to pass through it. Depends not only on the volume of openings and pores, but also on how these openings are connected to each other.

pH - a numerical designation of relative acidity and alkalinity. A pH of 7.0 indicates neutrality, higher values indicate increasing alkalinity and lower values indicate increasing acidity.

physical treatment - the process by which waste is rendered nonhazardous by physically removing the hazardous substance from the waste stream. It may be rendered more readily disposable or transportable by reducing the water content or solidifying the waste.

PID - photoionization detector, a means of measuring organic soil vapors.

piezometric surface - an imaginary surface representing the static head of groundwater and defined by the level to which water will rise in a well (synonymous with potentiometric surface).

pilot scale - treatability tests performed on a large scale to simulate the physical and chemical parameters of a process.

plume - one or more contaminants dissolved in a certain volume of groundwater, which are migrating from a source in the same direction as the flow of the groundwater.

PM₁₀ - particulate matter less than or equal to 10 microns in diameter.

PMCLs - Primary Maximum Contaminant Levels.

PNA - Polynuclear aromatic compound.

POC - Point of contact.

point source - a discernible, confined, and discrete source from which pollutants are or may be discharged.

POL- Petroleum, oil and lubricants.

pollutant - (includes, but is not limited to) any element, substance, compound, or mixture, including disease-causing agents, which, after release into the environment and upon exposure via ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingesting through food chains, will, or may reasonably be anticipated to, cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions or physical deformation in such organisms or their offspring.

potentiometric surface - a surface that represents the water elevations measured at a number of points in an aquifer; that is, the height in feet above a plane, such as mean sea level, at which the water level stands in tightly cased wells that penetrate the same aquifer or zone.

PP- Proposed Plan.

PPB - Parts per billion.

PPBV - Parts per billion by volume.

PPE - Personal protection equipment.

PPM - Parts per million.

PPMV - Parts per million by volume.

PPS - Public participation specialist

PQL - Practical quantitation limit.

precipitation - a hazardous waste chemical treatment method by which dissolved material falls out of the waste solution.

PRG - Preliminary remediation goal.

production well - a well that produces water for domestic, industrial, or agricultural water supplies. City wells (municipal wells) are production wells.

Proposition 65 - California's Safe Drinking Water and Toxics Enforcement Act of 1986; protects drinking water supplies and provides for warning of possible exposure to toxic substances.

PSI - pounds per square inch.

public comment period - a time period during which the public can review and comment on various documents and Federal actions. For example, a minimum 30-day comment period is held to allow citizens to review and comment on the public comment draft studies.

pumping wells - wells that bring groundwater to the surface for water supplies or for removal of contaminants.

PVC - Polyvinyl chloride.

pyrolysis - experimental hazardous waste thermal treatment process by which organic wastes are decomposed in an oxygen deficient atmosphere at high temperatures.

QA - Quality Assurance.

QA/QC - Quality Assurance/Quality Control.

QAPP - Quality Assurance Project Plan.

RA - Remedial Action.

RAB - Restoration Advisory Board.

radionuclides - radioactive-decay particles emitted from natural and manufactured sources, including radon, cosmic rays, X-rays and coal-fired electric utilities.

RAGS - Risk Assessment Guidance for Superfund, developed by the U. S. EPA.

RAP - Remedial Action Plan.

RCRA - Resource Conservation and Recovery Act. Federal law that regulates management and disposal of hazardous materials and wastes that are currently being generated, treated, stored, disposed or distributed; replaced the former Solid Waste Disposal Act (SWDA).

RCRA land bans - prohibitions of specific toxic materials from disposal in landfills under RCRA as amended by HSWA; formally called the Land Disposal Restrictions (LDR).

R&D - Research and Development.

RD - Remedial Design.

RD/RA - Remedial design/remedial action.

recharge zone - area through which water enters an aquifer.

reclamation - restoration to a better or more useful state, such as land reclamation by sanitary landfilling or obtaining useful materials from solid waste.

recommended remedial action - the remedial action alternative found to be most cost effective and appropriate under the feasibility study process. Reference nine criteria.

Record of Decision (ROD) - a document issued after the remedial investigation and feasibility study (RI/FS) that describes U. S. EPA's selected remedy for cleanup of a NPL site.

recoverable - capability and likelihood of being recovered from solid waste for a commercial or industrial use.

recycling - using discarded materials in original or changed form rather than disposing of them.

reinjection - a discharge technology that consists of injecting treated water back into the aquifer through a well.

remedial alternative - a method or combination of methods designed to protect public health, welfare and the environment over the long-term, from releases of hazardous substances at a Superfund site. Remedial alternatives are usually projects or a combination of technologies that contain, remove or destroy most of the contaminants in the air, water, soil and/or groundwater at a Superfund site.

remedial action alternative - a combination of remedial action technologies that will clean up or mitigate site-specific contamination problems.

remedial design (RD) - a phase of the remedial action that follows the remedial investigation and feasibility study, and includes the development of engineering drawings and specifications for a site cleanup.

remedy or remedial action - those actions consistent with a permanent remedy taken instead of, or in addition to, a removal action in the event of a release or a threatened release of a hazardous substance into the environment. The actions are taken to prevent or minimize the release of hazardous substances that could migrate and cause substantial danger to present or future public health or welfare or the environment.

removal - the cleanup or removal of released hazardous substances from the environment; the disposal of removed material; actions taken in response to the threat of a release; and the actions taken to monitor, assess, and evaluate a release or threat of a release.

removal action - a prompt action taken or ordered by U. S. EPA in response to immediate and significant threats to public health or the environment. Also known as removal.

removal action alternative - a group of options brought together for controlling contaminant migration. An alternative is usually made up of an extraction component, a treatment compound, and a discharge component.

residential well - a privately owned well that produces water for domestic or agricultural water supplies.

resource recovery - the extraction of useful materials (paper, solvents, glass, and metals) or energy from solid waste; materials that can be reprocessed and reused.

Responsiveness Summary - a written summary of responses to public inquiries and comments regarding installation activities. Required as part of the Record of Decision for sites listed in the NPL.

RFA - RCRA Facilities Assessment

RFD - Reference dose.

RI - Remedial Investigation.

RI/FS - Remedial Investigation/Feasibility Study.

RI/WP - Remedial Investigation/Workplan.

risk assessment - evaluation of possible adverse effects to human health or the environment that may result from routine exposure to toxic chemicals.

RME - Reasonable maximum exposure.

RMSA - Railroad Munitions Staging Area.

ROD - Record of Decision.

RPD - Relative percent difference.

RPM - Remedial Project Manager.

RQAPP - Radiological Quality Assurance Project Plan.

RWQCB - Regional Water Quality Control Board.

SAC - Strategic Air Command.

SACM - Superfund Accelerated Cleanup Model.

SAF - Office of the Secretary of the Air Force.

SAP - Sampling and Analysis Plan, which includes a Field Sampling Plan (FSP) and a Quality Assurance Project Plan (QAPP).

SARA - Superfund Amendments and Reauthorization Act of 1986.

saturated zone - the depth below ground surface in which virtually all open spaces are filled with water.

SCBA - Self-contained breathing apparatus.

SCDEM - Solano County Department of Environmental Management.

screen - the length of metal casing placed in a well that has openings to allow groundwater to flow into the casing.

scrubber - device that uses a liquid filter to remove gaseous and liquid pollutants from air stream.

SDWA - Safe Drinking Water Act.

sedimentation - Physical treatment method for hazardous waste that separates and removes suspended particles that are heavier than the liquid in which they are present.

semi-volatile organic compounds (SVOCs) - a group of chemical compounds which evaporate in air at a slower rate than volatile organic compounds.

SF- Slope factor.

SFBRWQCB - San Francisco Bay Regional Water Quality Control Board.

SI - Site Inspection.

site - any area or facility at which a hazardous substance is present as a result of a release of hazardous material from the facility as defined under **CERCLA**.

sludge - solid, semisolid, or liquid waste.

slurry - a thin mixture of a liquid (usually water) and fine particles.

solidification - the process of stabilizing waste into a solid with a high structural integrity; solidified wastes are much less likely to leach out of a land disposal site.

solution - a liquid mixture of two or more substances where one is dissolved in the other. (Soluble—capable of being dissolved.)

solvent - liquid that is capable of dissolving another substance; used in a number of manufacturing/industrial processes including the manufacture of paints and coatings for industrial and household purposes, equipment cleanup, and surface degreasing in metal fabricating industries.

SOP - Standard operating procedure.

SOW - Statement of Work/Scope of Work.

SQL - Sample quantitation limit.

SSA - Solvent spill area.

stabilization - hazardous waste chemical treatment method by which a chemical reaction produces an insoluble form of the waste or incorporates the waste into a form that is insoluble.

STEL - Short Term Exposure Limit.

STLC - Soluble Threshold Limit Concentration.

storage tank - any manufactured non-portable covered device used for containing pumpable hazardous wastes.

Superfund - the Comprehensive Environmental Response, Compensation and Liability Act of 1980 provides the federal government with the mechanism to take emergency or remedial action to clean up both abandoned and existing disposal sites whenever there is a

release or potential threat of a release of a hazardous substance which may endanger public health and welfare

SVE - Soil vapor extraction, a technology that vacuums volatile contaminants out of the subsurface.

SVOC - Semivolatile organic compound.

SWMU - Solid Waste Management Unit.

SWPPP - Stormwater Pollution Prevention Plan.

SWTP - Sanitary Waste Treatment Plant.

T&D - Transportation and disposal.

tanks - stationary devices designated to contain a liquid material or waste and constructed primarily or entirely of non-earthen materials such as concrete, steel, plastic.

TARA - Tower Area Removal Action.

TBC - To be considered.

TCA - Trichloroethane.

TCE - Trichloroethene, an industrial solvent.

TD - Total depth.

TDS - Total dissolved solids.

TDY - Temporary duty.

Technical Assistance Grant (TAG) - this term is used in association with grants supported by various environmental laws, most notably U.S. EPA under SARA.

Teflon® - trade name for the fluorinated carbon polymer polyperfluoroethylene.

thermal treatment - process by which hazardous waste is rendered nonhazardous or is reduced in volume by exposing the waste to high temperatures. (See also **incineration**.)

TIC - Tentatively identified compounds.

TLV - Threshold limit value (for occupational exposures).

topography - the configuration of the surface area, including its relative elevations and the position of natural and artificial features.

totally enclosed treatment facility - a hazardous treatment facility that is directly connected to an industrial production process, constructed and operated to prevent waste release into the environment

toxic waste - a waste that poses a substantial present or potential hazard to human health or the environment, when improperly managed.

toxicity - the ability of a material to produce injury or disease upon exposure, ingestion, inhalation, or assimilation by a living organism.

Toxicity Characteristic Leaching Procedure (TCLP) - required test under RCRA to determine toxicity and mobility characteristics of hazardous wastes; replaces the EP-Toxicity procedure. A method of determining whether compounds can leach out of waste toward groundwater.

TPH - Total petroleum hydrocarbons.

TPH-E - TPH-extractable; the heavier fraction of TPH.

TPH-P - TPH-purgable, the lighter fraction of TPH.

TPH-V - TPH-volatile; the lighter fraction of TPH.

TRC - Technical Review Committee.

treatment - any method, technique or process that changes the physical, chemical, or biological composition of any hazardous waste and so renders it nonhazardous (safer for transport, capable of recovery and/or storage, or reduces its volume).

trend - for groundwater, an increase or decrease in concentration over time in one well or a group of wells; the determination of a trend should be based on statistical analysis of concentration data.

1,1,1-Trichloroethane (1,1,1-TCA) - a volatile, organic solvent.

TS - Total solids.

TSCA - Toxic Substance Control Act.

TSDF - Treatment, storage, and disposal facility.

TTLC - Total Threshold Limit Concentration.

TVOC - Total volatile organic compounds.

UCL - Upper confidence limit.

unsaturated zone - interval from the ground surface downward in which open space between soil particles are partly filled with air and partly filled with groundwater.

upgradient - the direction from which groundwater is flowing at some specific depth below surface.

USAF - United States Air Force.

USC - Unified Soil Classification. Also, U. S. Code.

U. S. EPA - U. S. Environmental Protection Agency. Also USEPA.

USFWS - U. S. Fish and Wildlife Service.

UST - Underground storage tank.

UV - ultraviolet.

UV/ozone/peroxide - a treatment system using ultraviolet light, ozone, and peroxide to break Down contaminants dissolved in groundwater.

UXO - Unexploded ordinance.

vernal pool - a seasonal wetland that is characterized by being wet in the springtime, having no outlet through which water can flow, and containing particular varieties of plants and invertebrate animals. Vernal pools are most visible in spring when concentric rings of wildflowers bloom around them. Fairy shrimp, an endangered species, sometimes inhabit vernal pools.

VOA - volatile organic analyses.

VOCs - volatile organic compounds.

volatile - evaporating readily at normal temperature and pressure.

volatile organic compounds (VOCs) - a group of organic compounds that are used in various industrial applications, such as solvents, degreasers, paints, thinners, and fuels, which evaporate very rapidly when exposed to air.

VWTP - Vallejo Water Treatment Plant.

WABOU - West, Annexes, and Basewide Operable Unit.

waste characterization - the identification and quantification of the contents and dimensions of a contaminated source.

wastewater - the used water from private, community or industrial processes that contains dissolved, partially dissolved or solid materials.

water table - the top of the zone of saturation underground.

Weston- Roy F. Weston, Inc.

wetland - an area that is regularly saturated by surface or groundwater and, under normal circumstances, capable of supporting vegetation typically adapted for life in saturated soil conditions. Wetlands are critical to sustaining many species of fish and wildlife. Wetlands generally include swamps, marshes and bogs, and may be either coastal or inland. Coastal wetlands have salt or brackish (a mixture of salt and fresh) water, and most have tides, while inland wetlands are non-tidal and freshwater. Coastal wetlands are integral components of estuaries.

WIOU - West Industrial Operable Unit.

WP - Work Plan.

XRF- X-ray fluorescence, a field screening method.

xylenes - a volatile chemical used as a solvent, a cleaning fluid, as an ingredient in paint, lacquers, enamels, varnishes and adhesives such as rubber cement, as well as in the leather industry.

zone of capture - the area from which a well will draw in groundwater.

µg/L - Micrograms per liter, unit of measuring concentrations in liquid.

µg/kg - Micrograms per kilogram, unit of measuring concentrations in soil.