

ERB Acronym and Glossary – E

Acronym	Glossary	Definition
E	data qualifiers - metals analysis - E	The reported value is estimated because of the presence of interference. An explanatory note must be included with the results.
E	data qualifiers - organic analysis - E	Identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and reanalyzed. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported.
E/P	Evaporation/Percolation	The process by which any substance is converted from a liquid state into, and carried off in, vapor; as, the evaporation of water, of ether, of camphor. Percolation; the filtration of a liquid for extraction or purification.
EA	Environmental Assessment	An environmental analysis prepared pursuant to the National Environmental Policy Act to determine whether a federal action would significantly affect the environment and thus require a more detailed environmental impact statement.
EBSL	Environmental Baseline Survey for Lease	An evaluation of the environmental suitability of a parcel for lease or transfer.
EBSL/EBST	Environmental Baseline Survey for Lease/Transfer	An evaluation of the environmental suitability of a parcel for lease or transfer.
EBST	Environmental Baseline Survey for Transfer	An evaluation of the environmental suitability of a parcel for lease or transfer.
EC	Effective Concentration	The concentration of a chemical substance effective in producing a specific result such as increase in oxygen consumption, paralysis, death, etc.
ECE	Environmental Compliance Evaluation	program provides a means to monitor, achieve, and maintain compliance with major federal, state, and local regulations. ECEs are conducted at all shore facilities at least every three years.
EDB	Ethylene Dibromide	A chemical used as an agricultural fumigant and in certain industrial processes. Extremely toxic and found to be a carcinogen in laboratory animals, EDB has been banned for most agricultural uses in the United States.
EDD	Enforcement Decision Document	A document that provides an explanation to the public of EPA's selection of the cleanup alternative at enforcement sites on the National Priorities List. Similar to a Record of Decision.
EDXRF	Energy Dispersive X-Ray Fluorescence	A technique of chemical analysis. The technique involves aiming an X-ray beam at the surface of an object. The interaction of X-rays with an object causes secondary (fluorescent) X-rays to be generated. Each element present in the object produces X-rays with different energies. These X-rays can be detected and displayed as a spectrum of intensity against energy: the positions of the peaks identify which elements are

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		present and the peak heights identify how much of each element is present.
EE	Engineering Evaluation	An official document that evaluates feasible and cost-effective alternatives for proposed removal actions, and recommends a specific removal action.
EE/CA	Engineering Evaluation/Cost Analysis	An official document that evaluates feasible and cost-effective alternatives for proposed removal actions, and recommends a specific removal action.
Eh	Redox Potential	A measure of the relative tendency of groundwater to accept or transfer electrons (volts).
EIS	Environmental Impact Statement	A document required of federal agencies by the National Environmental Policy Act for major projects or legislative proposals significantly affecting the environment. A tool for decision making, it describes the positive and negative effects of the undertaking and cites alternative actions.
EL	Exposure Level	The amount (concentration) of a chemical at the absorptive surfaces of an organism.
ELCR	Excess Lifetime Cancer Risk	The chance of contracting cancer over a human's lifetime due to exposure to site chemicals. U.S. EPA has developed a risk management range of 10 ⁻⁴ (1 in 10,000) to 10 ⁻⁶ (1 in a million) as the target for managing risk.
ELISA	Enzyme-Linked Immunosorbent Assay	A highly sensitive technique for detecting and measuring antigens or antibodies in a solution; the solution is run over a surface to which immobilized antibodies specific to the substance have been attached, and if the substance is present, it will bind to the antibody layer, and its presence is verified and visualized with an application of antibodies that have been tagged in some way.
EM	electromagnetic	The nature of the energy transmitted by radio waves, microwaves, infra-red, visible light, x-rays and gamma rays.
EMAP	Environmental Monitoring and Assessment Program	A research program to develop the tools necessary to monitor and assess the status and trends of national ecological resources.
EMAP	Environmental Monitoring and Assessment Program data	Environmental monitoring data collected under the auspices of the Environmental Monitoring and Assessment Program. All EMAP data share the common attribute of being of known quality, having been collected in the context of explicit data quality objectives (DQOs) and a consistent quality assurance program.
EMSL	Environmental Monitoring System Laboratory	quality control of environmental radiological measurements.

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Endrin	Endrin	A pesticide toxic to freshwater and marine aquatic life that produces adverse health effects in domestic water supplies.
ENRP	Environmental and Natural Resources Program	develops Navy policies and procedures for managing environmental and natural resource programs. This is consistent with all applicable statutes, Executive Orders (EOs), DoD directives and DON instructions.
EO	Executive Order	a rule or regulation having the force of law promulgated directly by the President under his statutory authority.
EO	Explosive Ordnance	All munitions containing explosives, nuclear fission or fusion materials, and biological and chemical agents. This includes bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket, and small arms ammunition; all mines, torpedoes, and depth charges; demolition charges; pyrotechnics; clusters and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature.
EP	Evaporation, Percolation	The process by which any substance is converted from a liquid state into, and carried off in, vapor; as, the evaporation of water, of ether, of camphor. Percolation; the filtration of a liquid for extraction or purification.
EP	Extraction Procedure	Determining toxicity by a procedure which simulates leaching; if a certain concentration of a toxic substance can be leached from a waste, that waste is considered hazardous, i.e., "EP Toxic." Replaced by the TCLP.
EPA	Environmental Protection Agency	Established in 1970 by Presidential Executive Order, bringing together parts of various government agencies involved with control of pollution.
EPA ID	EPA identification number	The unique code assigned to each generator, transporter, and treatment, storage, or disposal facility by the USEPA to facilitate identification and tracking of chemicals or hazardous waste.
EPCRA	Emergency Planning and Community Right-to-Know Act	Commonly known as SARA Title III. Its purpose is to encourage and support emergency planning efforts at the State and local levels and provide the public and local governments with information concerning potential chemical hazards present in their communities.
EPIC	Environmental Photographic Interpretation Center	is a field station of the Landscape Ecology Branch (LEB), Environmental Sciences Division - Las Vegas (ESD-LV), National Exposure Research Laboratory (NERL), Office of Research and Development (ORD).
EPTC	Extraction Procedure Toxicity Characteristic	Refer to 40 CFR 261.24.
EQ	Environmental Quality	development of environmental policies and initiatives.
EQ Strategic Plan	Tri Service Environmental Quality Research and Development Strategic Plan	A tri-service program used to track cleanup RDT&E efforts within the services and to address any new needs for specific RDT&E development.
ER	Environmental Restoration	Cleanup and restoration of sites contaminated with hazardous substances during past production or disposal activities.
ER, N	Environmental Restoration, Navy	The Navy established support funds for oversight of the IR Program. These support funds are intended to assist

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		Installations in meeting oversight requirements. Replaced DERA Funding
ERA	Ecological Risk Assessment	The application of a formal framework, analytical process, or model to estimate the effects of human actions(s) on a natural resource and to interpret the significance of those effects in light of the uncertainties identified in each component of the assessment process. Such analysis includes initial hazard identification, exposure and dose response assessments, and risk characterization.
ER-L	Effects Range-Low	In aquatic systems, concentrations of contaminants that below which adverse biological effects would rarely occur. Concentrations of contaminants between the ER-L and the ER-M represent that adverse effects would occasionally occur.
ER-M	Effects Range-Median	In aquatic systems, concentrations of contaminants that above which adverse biological effects would probably occur.
ERP	Emergency Response Plan	Detailed outline with links of national plan to respond to disasters
ERT	Emergency Response Team	Individuals tasked to take action and ameliorate the consequences of an emergency situation.
ERTAT	Ecological Risk Technical Assistance Team	Provides trouble shooting assistance in the area of ecological risk assessments and monitoring. The team provides guidance on the Navy tiered approach as well as with ecological risk problem formulation and site conceptual model development.
ESA	Endangered Species Act	provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found.
ESC	Endangered Species Council	established to protect wildlife in danger of extinction
ESI	Expanded Site Inspection	The objective of this ESI was to gather the information and data necessary to determine whether there is sufficient evidence of any release of contamination that would require additional investigation.
ESTCP	Environmental Security Technology Certification Program	A corporate Department of Defense (DoD) program that promotes innovative, cost-effective environmental technologies through demonstration and validation at DoD sites.
ETIC	Environmental Technology Implementation Contract	ETIC complements the Remedial Action Contracts (RACs) in place at the NAVFAC Engineering Field Divisions and Activities by providing technical assistance for, and easing the implementation of, innovative technologies. The contract services are available to the Navy and Marine Corps and other government agencies.
eV	electron Volts	Unit of measurement used for very small amounts of energy especially when distributed amongst a great many small particles such as photons, electrons, neutrons, etc.
EW	extraction well	A well specifically designed for removing groundwater and/or soil vapor.
EZ	Exclusion Zone	The area surrounding an operation which may be immediately dangerous to life and health. Requires

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		complete, appropriate protective clothing and equipment. Entry requires approval by the Site Superintendent or a designated sector officer. Complete back-up and rescue teams must be in place at the perimeter before operations begin.
EZVI	emulsified zero-valent iron	Microscale (10-6 m diameter) or nanoscale (10-9 m diameter) zero-valent iron particles in water surrounded by an oil-liquid membrane (food-grade surfactant, biodegradable vegetable oil). EZVI can be used to improve DNAPL degradation by enhancing contact between DNAPL and ZVI particles.

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	ecological assessment	A qualitative and/or quantitative appraisal of the actual or potential effects of chemical(s) of concern on plants and animals other than people and domestic species.
	ecological impact	The effect that a man-made or natural activity has on living organisms and their non-living (abiotic) environment.
	ecological indicator	A characteristic of the environment that, when measured, quantifies magnitude of stress, habitat characteristics, degree of exposure to a stressor, or ecological response to exposure. The term is collective for response, exposure, habitat, and stressor indicators.
	ecology	The relationship of living things to one another and their environment, or the study of such relationships.
	ecosphere	The "bio-bubble" that contains life on earth, in surface waters, and in the air. See Biosphere.
	ecosystem	The interacting system of a biological community and its non-living environmental surroundings.
	ecosystem structure	Attributes related to instantaneous physical state of an ecosystem; examples include species population density, species richness or evenness, and standing crop biomass.
	ecotone	1) A habitat created by the juxtaposition of distinctly different habitats; an edge habitat. 2) An ecological zone or boundary where two or more ecosystems meet.
	ecotoxicity	The study of toxic effects on nonhuman organisms, populations, and communities.
	EET TechXtract _z Technology Evaluation	TechXtract contaminant extraction technology was developed by EET, Inc. TechXtract technology is designed to remove polychlorinated biphenyls (PCBs), heavy metals or radionuclides from the surface and subsurface of porous and nonporous solid materials such as concrete, brick, asphalt, wood, nickel and steel.
	effluent	Wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall. Generally refers to wastes discharged into surface waters.
	electric log	The log of a well or borehole obtained by lowering electrodes in the hole and measuring various electrical

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		properties of the geologic formations traversed.
	electrical resistance heating	A remediation method in which electrodes are placed in the ground and an electric current is applied to the target zone (i.e., contaminated soil mass) in order to remove, vaporize, and/or collect and treat volatile and semi volatile contaminants.
	electron	A negatively charged subatomic particle that may be transferred between chemical species in chemical reactions. Every chemical molecule contains electrons and protons (positively charged particles).
	electron acceptor	Relatively oxidized compounds which gain electrons from electron donors during cellular respiration and oxidation-reduction reactions, resulting in the release of energy to the cell and the reduction of the electron acceptor. Microorganisms obtain energy by transferring electrons from electron donors such as organic compounds (or sometimes reduced inorganic compounds such as sulfide) to an electron acceptor. Electron acceptors are compounds that are relatively oxidized and include oxygen, nitrate, iron (III), manganese (IV), sulfate, carbon dioxide, or in some cases the chlorinated aliphatic hydrocarbons such as tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene (DCE) and vinyl chloride (VC).
	electron capture detector	A common detector found on gas chromatographs that relies upon ⁶³ Ni ionization changes to detect eluting compounds. Most sensitive for chlorine-, bromine-, and nitrogen-containing chemicals.
	electron donor	Organic carbon, or reduced inorganic compounds, which give electrons to electron acceptors during cellular respiration and oxidation-reduction reactions, resulting in the release of energy to the cell, and the oxidation of the electron donor. Electron donors are relatively reduced and include fuel hydrocarbons, less chlorinated solvents like vinyl chloride, and native organic carbon.
	electrophile	A reactive species that accepts an electron pair.
	elimination	Chemical reaction where two groups such as chlorine and hydrogen are lost from adjacent carbon atoms and a double bond is formed in their place.
	emergency (chemical)	A situation created by an accidental release or spill of hazardous chemicals that poses a threat to the safety of workers, residents, the environment, or property.
	emerging technology	A technology in the developmental stage (pilot-scale testing, bench-scale study) of production.
	emission	Pollution discharged into the atmosphere from smokestacks, other vents, and surface areas of commercial or industrial facilities; from residential chimneys; and from motor vehicle, locomotive, or aircraft exhausts.
	endangered species	Animals, birds, fish, plants, or other living organisms threatened with extinction by man-made or natural changes in their environment. Requirements for declaring a species endangered are contained in the

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		Endangered Species Act.
	endangerment assessment	A study to determine the nature and extent of contamination at a site on the National Priorities List and the risks posed to public health or the environment. EPA or the state conduct the study when a legal action is to be taken to direct potentially responsible parties to clean up a site or pay for it. An endangerment assessment supplements a remedial investigation.
	endpoints	Observable or measurable biological or chemical events used as an index of the effect of a chemical on a cell, tissue, organ, organism, etc.
	energy recovery	Obtaining energy from waste through a variety of processes (e.g., combustion.)
	enforceable requirements	Conditions or limitations in permits issued under the Clean Water Act, Section 402 or 404 that, if violated, could result in the issuance of a compliance order or initiation of a civil or criminal action under federal or applicable state laws. If a permit has not been issued, the term includes any requirement which, in the Regional Administrator's judgment, would be included in the permit when issued. Where no permit applies, the term includes any requirement which the Regional Administrator determines is necessary for the best practical waste treatment technology to meet applicable criteria.
	enforcement	EPA, state, or local legal actions to obtain compliance with environmental laws, rules, regulations, or agreements and/or obtain penalties or criminal sanctions for violations. Enforcement procedures may vary, depending on the requirements of different environmental laws and related implementing regulations. Under CERCLA, for example, EPA will seek to require potentially responsible parties to clean up a Superfund site, or pay for the cleanup, whereas under the Clean Air Act the agency may invoke sanctions against cities failing to meet ambient air quality standards that could prevent certain types of construction or federal funding. In other situations, if investigations by EPA and state agencies uncover willful violations, criminal trials and penalties are sought.
	engineering controls	Modifications to a site or facility (for example, slurry walls, capping, and point of use water treatment) to reduce or eliminate the potential for exposure to a chemical(s) of concern.
	enhanced bioremediation	An engineered remediation option that is designed to supply factors that are required for rapid biodegradation of a compound.
	enrichment	The addition of nutrients (e.g., nitrogen, phosphorus, carbon compounds) from sewage effluent or agricultural runoff to surface water, greatly increases the growth potential for algae and other aquatic plants. However, too much can be harmful.
	entrain	To trap chemicals and particles in water either mechanically through turbulence or chemically through a reaction.

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	environment	1) As defined by section 101(8) of CERCLA, includes the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the U.S., and any other surface water, groundwater, drinking water supply, land surface or subsurface strata, ambient air, or fish, wildlife or biota within the U.S. or under jurisdiction of the U.S. 2) The sum of all external conditions affecting the life, development and survival of an organism.
	environmental audit	An independent assessment of the current status of a party's compliance with applicable environmental requirements or of a party's environmental compliance policies, practices, and controls.
	environmental contamination	The release of hazardous substances, or the potential release of a discarded hazardous substance, in a quantity which is, or may become, injurious to the environment, or the public health, safety or welfare.
	environmental equity	Equal protection from environmental hazards of individuals, groups or communities regardless of race, ethnicity, or economic status.
	environmental exposure	Human exposure to pollutants originating from facility emissions. Threshold levels are not necessarily surpassed, but low level chronic pollutant exposure is one of the most common forms of environmental exposure. See Threshold Level.
	Environmental Forensics	A systematic investigation of a contaminated site(s) or event(s) focused on defensibly identifying the source(s) and allocating liability for contamination. Components include chemical fingerprinting, historical research, numerical/statistical analysis, modeling, etc.
	environmental indicator	A measurement, statistic or value that provides a proximate gauge or evidence of the effects of environmental management programs or of the state or condition of the environment.
	environmental justice	The fair treatment of all races, cultures, incomes, and educational levels with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment implies that no population of people should be forced to shoulder a disproportionate share of the negative environmental impacts of pollution or environmental hazards due to a lack of political or economic strength.
	environmental risk	The potential or likelihood of injury, disease, or death resulting from human exposure to a potential environmental threat.
	enzyme	Biologically produced, protein-based catalyst.
	ephemeral	Lasting a short time, transitory.
	epidemiology	Study of the distribution of disease, or other health-related states and events in human populations, as related to age, sex, occupation, ethnic, and economic status in order to identify and alleviate health problems and promote better health.
	epoxidation	A reaction wherein an oxygen molecule is inserted in a

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		carbon-carbon double bond and an epoxide is formed.
	equilibrium	A condition that exists in a system when the phases of the system do not undergo any change of properties with the passage of time; the state in which the action of multiple forces produces a steady balance, resulting in no change overall, over time.
	equilibrium concentration	The concentration of a substance at which its mass per unit volume or per unit mass within and between any adjacent phases is at steady state. A factor used in determining Henry's law constant.
	equilibrium species	1) Species whose population exists in equilibrium with resources and at a stable density. 2) A species that has a life history characterized by long life, long development time to reach maturity, low death rates, and few reproductive cycles per year.
	equipment rinsate	The final analyte-free water rinse from equipment cleaning collected daily during a sampling event.
	equipotential	Equal potential (energy).
	equipotential lines	Lines of equal potential (energy). Water flows from areas of higher potential towards areas of lower potential.
	equivalent method	Any method of sampling and analyzing for chemicals which has been demonstrated to the EPA Administrator's satisfaction to be, under specific conditions, an acceptable alternative to normally used reference methods.
	erosion	The wearing away of land surface by wind or water, intensified by land-clearing practices related to farming, residential or industrial development, road building, or logging.
	estuary	1) A semi-enclosed coastal body of water that has a free connection with the open sea and within which seawater is measurably diluted with fresh water from land drainage. 2) Regions of interaction between rivers and near-shore ocean waters, where tidal action and river flow mix fresh and salt water. Such areas include bays, mouths of rivers, salt marshes, and lagoons. These brackish water ecosystems shelter and feed marine life, birds, and wildlife. See Wetlands.
	ethanol	An alcohol used as an alternative automotive fuel derived from grain and corn; usually blended with gasoline to form gasohol.
	evacuation	A prolonged precautionary stay away from an area affected by a hazardous material.
	evapotranspiration	The process by which surface water, soils, and plants release water vapor to the atmosphere through evaporation and transpiration.
	ex situ	Refers to a technology or process for which contaminated material must be removed from the site of contamination for treatment. For example, soil must be excavated or groundwater must be pumped to an above ground treatment system. Antonym - In Situ.
	exceedence	Violation of the pollutant levels permitted by

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		environmental protection standards.
	exchange capacity	A quantitative measure of the surface charge of a substance, reported in equivalents of exchangeable ions per unit weight of the solid.
	exempt solvent	Specific organic compounds not subject to requirements of regulation because they are deemed by EPA to be of negligible photochemical reactivity.
	exempted aquifer	Underground bodies of water defined in the Underground Injection Control program as aquifers that are potential sources of drinking water though not being used as such, and thus exempted from regulations barring underground injection activities.
	exemption	A state with primacy may relieve a public water system from a requirement respecting an MCL, treatment technique, or both by granting an exemption if the system cannot comply due to compelling economic or other factors, the system was in operation on the effective date of the requirement or MCL, and the exemption will not create an unreasonable public health risk. See Variance.
	exit strategy	An approach developed to facilitate effective operation and optimization of a treatment system, as well as define when the remedial action should be considered complete.
	exogenous	1) Derived or developed from external causes or locations. 2) For bioremediation, microorganisms from other locations, whose effectiveness has been tested and added to a site for remediation.
	exotic species	A species that is not indigenous to a region.
	expanding plume	The situation where a groundwater plume is continuing to move outward or downgradient from the source area.
	explosive limits	The amounts of vapor in the air that form explosive mixtures; limits are expressed as lower and upper limits and give the range of vapor concentrations in air that will explode if an ignition source is present. The limits differ depending on the chemical vapor present.
	exposure	Contact of an organism with a chemical or physical agent. Exposure is quantified as the amount of the agent available at the exchange boundaries of the organism (e.g., skin, lungs or gut) and available for absorption.
	exposure assessment	The determination or estimation (qualitative or quantitative) of the method, magnitude, frequency, duration, and route of exposure.
	exposure event	An incident of contact with a chemical or physical agent. An exposure event can be defined by time (e.g., day, hour) or by the incident (e.g., eating a single meal of contaminated fish).
	exposure incident	A specific eye, mouth, other mucous membrane, non-intact skin, or parental contact with blood or other potentially infectious materials.
	exposure indicator	A characteristic of the environment measured to provide evidence of the occurrence or magnitude of a response

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		indicator's exposure to a chemical or biological stress.
	exposure pathway	The course a chemical or physical agent takes from a source to an exposed organism. An exposure pathway describes a unique mechanism by which an individual or population is exposed to chemicals or physical agents at, or originating from, a site. Each exposure pathway includes a source or release from a source, an exposure point, and an exposure route. If the exposure point differs from the source, a transport/exposure medium (e.g., air) or media (in cases of intermedia transfer) also is included.
	exposure point	A location of potential contact between an organism and a chemical or physical agent.
	exposure route	The manner in which a chemical or physical agent comes in contact with an organism (i.e., by ingestion, inhalation, or dermal contact).
	extractable	A compound that can be partitioned into an organic solvent from the sample matrix and is amenable to gas chromatography. Extractables include semivolatile (BNA) and pesticide/PCB compounds.
	extraction	The act of obtaining from a substance by chemical or mechanical action, as by pressure or distillation.
	extremely hazardous substances	Any of 406 chemicals identified by EPA as toxic, and listed under SARA Title III. The list is subject to periodic revision.