

ERB Acronym and Glossary – M

Acronym	Glossary	Definition
M	data qualifiers - metals analysis - M	Duplicate injection precision not met.
MAC	Maximum Allowable Concentrations	Used in industrial toxicology to define permissible levels of exposure to chemicals.
MACT	Maximum Achievable Control Technology	The maximum degree of reduction in air pollution for new and existing sources, taking into consideration cost, non-air quality health and environmental impacts and energy requirements.
MANOVA	Multi Variate Analysis of Variance	An extension of analysis of variance (or ANOVA) used to accommodate more than one dependent variable. MANOVA measures the group differences between two or more metric dependent variables simultaneously, using a set of categorical non-metric independent variables.
MAROS	Monitoring and Remediation Optimization System	Decision support tool for streamlining data management, conducting spatial and temporal analyses, and data visualization functions to aid in optimizing groundwater long term monitoring networks.
MBTA	Migratory Bird Treaty Act	implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Under the Act, taking, killing or possessing migratory birds is unlawful.
MCETP	Marine Corps Environmental Training Program	A program to ensure that training and information are adequately available, highly efficient, and instructionally effective in preparing Marine Corps personnel to perform their environmental and primary job responsibilities competently and/or safely to support Marine Corps environmental objectives.
MCL	Maximum Contaminant Level	The maximum permissible level of a contaminant in water delivered to any user of a public system. MCLs are enforceable standards.
MCLG	Maximum Contaminant Level Goal	Under the Safe Drinking Water Act, a non-enforceable concentration of a contaminant, set at the level at which no known or anticipated adverse effects on human health occur and which allows an adequate safety margin. The MCLG is usually the starting point for determining the regulated Maximum Contaminant Level. See Maximum Contaminant Level.
MCO	Marine Corps Order	to establish and promulgate Marine Corps policy and procedures.
MDL	Method Detection Limit	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.
MEK	Methyl Ethyl Keytone	colorless liquid, acetone-like odor; used as a solvent in nitrocellulose coatings and vinyl films, resins, paint removers, cements, and adhesives. Hazard: toxic by inhalation, flammable, dangerous fire risk.
MESO	Marine Environmental Support Office	established to provide consultation, referrals, information, documentation, and field support concerning marine environmental compliance and

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		assessment to authorized Department of the Navy customers.
MF	Modifying Factor	In toxicity assessments, a number that reflects a professional assessment of additional uncertainties in the critical study and in the entire database for the chemical not explicitly addressed by the uncertainty factors.
Mg	Magnesium	An alkaline earth metal that is very abundant in the environment. Readily forms salts with various metals and halogens. When dissolved in water, it can be used to indicate salinity and alkalinity. Contributes to hard water in high concentrations. It is an essential nutrient for animals and humans. Not generally considered toxic.
mg/kg	milligrams/kilogram - equivalent to ppm	Expressing a concentration in units of milligrams/kilogram is equivalent to expressing the concentration in parts per million by mass or weight.
mg/kg/day	milligram/kilogram/day	Typical daily dose rate is usually expressed as milligram of dose per kilogram of organism body weight per day.
mg/L (mg/l)	milligrams/liter - equivalent to ppm	Expressing a concentration in units of milligrams/liter is equivalent to expressing the concentration in parts per million by volume.
MGD	Million Gallons per Day	a rate of flow of water equal to 133,680.56 cubic feet per day, or 1.5472 cubic feet per second, or 3.0689 acre-feet per day. A flow of one million gallons per day for one year equals 1,120 acre-feet (365 million gallons).
MGP	manufactured gas plant	Common historic facility used for the production of public utility and commercial-grade gas via conversion of coal and/or heavy oil.
MHz	Megahertz	A frequency of one million cycles per second.
mi ²	square mile	Unit of measurement used for area where one square mile is equal to 640 acres.
MILCON	Military Construction	Any construction, alteration, development, conversion, or extension of any kind carried out with respect to a military installation. Also called MILCON.
MIP	membrane interface probe	An instrument that is attached to direct push drilling equipment which allows groundwater to flow across a membrane and be analyzed for volatile organic compounds (VOCs)
mlw	mean low water	Generally there are 2 high tides and 2 low tides each day. These 2 high tides and 2 low tide are different levels and they differ day to day. Low tide averaged over 19 years would be th mean low water.
mm	millimeter	Unit of measurement used for distance where one millimeter would be equal to 0.03937 inch.
mmhos/m	millimhos/meter	Unit of measurement used for conductivity where mhos is the reciprocal of resistivity measured in ohms.
MMPA	Marine Mammal Protection Act	a Federal responsibility to conserve marine mammals with management vested in the Department of Interior for sea otter, walrus, polar bear, dugong, and manatee. The Department of Commerce is responsible for cetaceans and pinnipeds, other than the walrus. With certain specified exceptions, the Act establishes a moratorium on the taking and importation of marine

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		mammals as well as products taken from them, and establishes procedures for waiving the moratorium and transferring management responsibility to the States.
Mn	Manganese	A brittle metal usually occurring in nature with other metals like iron. It is used in steel alloys, dry-cell batteries, electrical coils, other metallic fabrication applications, oxidizing agents, and as a food additive. It is an essential nutrient but can be harmful to the central nervous system in excessive amounts.
MNA	Monitored Natural Attenuation	refers to the treatment approach of allowing natural processes to reduce contaminant concentrations to acceptable levels. Monitored natural attenuation involves physical, chemical and biological processes that act to reduce the mass, toxicity, and mobility of subsurface contamination.
MNO	Monitoring Network Optimization	Employs a 3-tiered approach to designing well networks - qualitative evaluation (hydrostatigraphy, locations of potential receptors, direction and rate of contaminant migration), Mann-Kendall statistical analysis to determine trends in each well (combined with algorithm to determine frequency), and spatial analysis using geostatistical kriging error predictions.
MOA	Memorandum of Agreement	A grant program to support state participation in federal cleanups.
MOD	Modification (Contracts/Plans)	any change within a contract.
mol	mole	A mass of a compound defined as Avogadro's Number (6.022 X 10 ²³) of atoms or molecules.
MOU	Memorandum of Understanding	A document providing a general description of the responsibilities that are to be assumed by two or more parties in their pursuit of some goal(s). More specific information may be provided in an associated SOW.
MP	Melting Point	The temperature at which a solid changes its phase to a liquid. This temperature is also the freezing point depending on the direction of the change. For mixtures, a melting point range may be given.
MPE	Multiphase Extraction	An enhancement to soil vapor extraction where soil vapor groundwater and sometimes free-phase NAPL are simultaneously withdrawn from an extraction well through the application of a vacuum or a combination of a vacuum and a liquid pump in the same extraction well
MPF	Migration Pathway Factor	A measure of the movement or potential movement of contamination away from the original source.
MPN	Most Probable Number	The most probable number of organisms per unit volume of sample water.
MPPEH	Material Potentially Presenting an Explosive Hazard	Material potentially containing explosives or munitions (e.g., munitions containers and packaging material; munitions debris remaining after munitions use, demilitarization, or disposal; and range-related debris); or material potentially containing a high enough concentration of explosives such that the material presents an explosive hazard (e.g., equipment, drainage systems, holding tanks, piping, or ventilation ducts that were associated with munitions production, demilitarization or disposal operations). Excluded from

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		MPPEH are munitions within DoD's established munitions management system and other hazardous items that may present explosion hazards (e.g., gasoline cans, compressed gas cylinders) that are not munitions and are not intended for use as munitions.
MPRSA	Marine Protection, Research and Sanctuaries Act	The basic objective of the permit program is to "prevent or strictly limit the dumping into ocean waters of any material that would adversely affect human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities.
MR	Munitions Response	Munitions Response actions, including investigation, removal and remedial actions to address the explosives safety, human health, or environmental risks presented by unexploded ordnance (UXO), discarded military munitions (DMM) or munitions constituents (MC).
MRL	ATSDR Minimal Risk Level	Agency for Toxic Substances and Disease Registry Minimal Risk Level an estimate of the daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse non cancer health effects over a specified duration of exposure.
MS	Mass Spectrometry	An analytical process to determine the relative atomic masses of atoms. A sample is ionized and passed through an electromagnetic field. Different ions can be identified by characteristic patterns. It is often used in conjunction with gas chromatography.
MS	Matrix Spike	The process of adding a known amount of analyte to a sample and analyzing the sample. The amount of analyte recovered is calculated as a percent recovery. This technique is used to assess accuracy of analysis.
MSD	Matrix Spike Duplicate	A second matrix spike is compared to the results of the first matrix spike to assess precision of the analysis.
MSDS	Material Safety Data Sheet	A compilation of information required under the OSHA Communication Standard on the identity of hazardous chemicals, health, and physical hazards, exposure limits, precautions, and handling information. Section 311 of SARA requires facilities to submit MSDSs under certain circumstances.
MSL or msl	Mean Sea Level	The average height of the sea surface, based upon hourly observation of the tide height on the open coast or in adjacent waters that have free access to the sea. In the United States, it is defined as the average height of the sea surface for all stages of the tide over a nineteen year period. Mean sea level, commonly abbreviated as MSL and referred to simply as "sea level," serves as the reference surface for all altitudes in upper atmospheric studies.
MSW	Municipal Solid Waste	non-hazardous, non-agricultural solid waste generated by residences, businesses, and institutions.
MTBE	Methyl Tertiary Butyl Ether	is a chemical compound which contains oxygen and is often added to gasoline to boost its octane or to meet clean fuel oxygen requirements (i.e., reformulated gasoline and winter oxygenate gasoline).
MW	Molecular Weight	(mass) The sum of atomic masses (in atomic mass units 1 amu = mass of 12C atom as standard) of the atoms

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		present in a molecule.
MW	Monitoring Well	1) A well used to obtain water quality samples or measure groundwater levels. 2) Well drilled at a hazardous waste management facility or Superfund site to collect groundwater samples for the purpose of physical, chemical, or biological analysis to determine the amounts, types, and distribution of contaminants in the groundwater beneath the site.

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	macrofauna	A general term referring to benthic organisms more than 1 mm in size.
	magnetic separation	Use of magnets to separate ferrous materials from mixed municipal waste streams.
	manifest	The form used for identifying the quantity, composition, and the origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of disposal, treatment, or storage.
	manifest system	A procedure in which hazardous materials are identified and tracked as they are produced, treated, transported, and disposed of by a series of permanent, linkable, descriptive documents (e.g., manifests).
	Mare Island	Mare Island Naval Shipyard is located west of the City of Vallejo in Northern California and was closed in 1996 in accordance with the Base Realignment and Closure Commission of 1993.
	margin of safety	Maximum amount of exposure producing no measurable effect in animals (or studied humans) divided by the actual amount of human exposure in a population.
	Mariana Islands	Guam is a island in the Western Pacific, one of the Northern Marianas. It is home to Andersen Air Force Base and U.S. Naval Forces Marianas.
	marsh	A type of wetland that does not accumulate appreciable peat deposits and is dominated by herbaceous vegetation. Marshes may be either fresh or saltwater, tidal or non-tidal. See Wetlands.
	mass removal	Extraction of contamination from the subsurface (usually in the source zone) measured in mass.
	mass removal rate	The amount of material removed per unit time.
	mass transfer	The movement or destruction of contaminant mass from the subsurface via advection, diffusion, stripping, or degradation.
	matrix	The predominant material comprising the sample to be analyzed. The most common matrices are water, soil/sediment, and sludge.
	maximum tolerated dose	The maximum dose that an animal species can tolerate for a major portion of its lifetime without significant

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		impairment or toxic effect other than carcinogenicity.
	Mayport	Naval Station Mayport is located in Jacksonville, Florida
	MCB Camp Lejeune	Marine Corps Base, Camp Lejeune is located in eastern North Carolina on the Atlantic coast.
	MCB Hawaii	Marine Corps Base, Hawaii Kaneohe Bay is located on the eastern side of Oahu, approximately 12 miles northeast of Honolulu..
	measurement endpoint	Quantitative expressions of an observed or measured effect of Environmental Contaminants of Concern. They may be identical to assessment endpoints (e.g., measurement of abundance of fish), or they may be used as surrogates for assessment endpoints (e.g., toxicity test endpoints).
	measurement error	The difference between the true or actual state and that which is reported from measurements; also known as measurement variability.
	mechanical aeration	Use of mechanical energy to inject air into water to cause a waste stream to absorb oxygen.
	mechanical stress	The result of a transfer of energy when one object physically contacts or collides with another. Indications would be punctures, gouges, breaks, or tears in the container.
	media	Specific environments, i.e., air, water, or soil, which are the subject of regulatory concern and activities.
	media-specific half-life	Provides a relative measure of the persistence of a chemical in a given medium, although actual values can vary greatly depending on site-specific conditions. The greater the half-life, the more persistent a chemical is likely to be.
	medical surveillance	A periodic comprehensive review of a worker's health status; acceptable elements of such surveillance program are listed in the Occupational Safety and Health Administration standards for asbestos.
	mesotrophic	Reservoirs and lakes which contain moderate quantities of nutrients and are moderately productive in terms of aquatic animal and plant life.
	metabolic byproduct	A product of the reaction between an electron donor and an electron acceptor. Metabolic byproducts include volatile fatty acids, daughter products of chlorinated aliphatic hydrocarbons, methane, and chloride.
	metabolic intermediate	A chemical produced by one step in a multistep biotransformation.
	metabolism	The chemical reactions in living cells that convert food sources to energy and new cell mass.
	metabolites	Any substances produced by biological processes, such as those from pesticides.
	Metals Analysis, flags differing from organic analysis	placeholder for Metals Analysis entry
	meteorology	The science that deals with the atmosphere and atmospheric phenomena; the study of weather.
	methanogen	A microorganism that exists in anaerobic environments and produces methane as the end product of its

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		metabolism. Methanogens use carbon dioxide or simple carbon compounds such as methanol as an electron acceptor.
	methanol	An alcohol that can be used as an alternative fuel or as a gasoline additive. It is less volatile than gasoline; when blended with gasoline it lowers the carbon monoxide emissions but increases hydrocarbon emissions. Used as pure fuel, its emissions are less ozone-forming than those from gasoline.
	method (analytical) qualifier	Symbols added as a suffix to analytical results to identify the analytical method used to measure the analyte:
	method blank	Contaminant free water, or appropriate matrix, that is taken through the entire analytical process to determine if there is any contamination associated with the analytical procedures.
	Methoxychlor	Pesticide that causes adverse health effects in domestic water supplies and is toxic to freshwater and marine aquatic life.
	microbial growth	The activity and growth of microorganisms such as bacteria, algae, diatoms, plankton, and fungi.
	microclimate	The localized climate conditions within an urban area or neighborhood.
	microcosm	A laboratory vessel set up to resemble as closely as possible the conditions of a natural environment.
	microorganism	Living organisms so small that individually they can usually only be seen through a microscope.
	microsparger	An in-well probe that aerates groundwater and captures the vapor for VOC analysis.
	migration pathway	A pathway by which a hazardous material is transported at, or from, a disposal site.
	mineralization	The complete conversion of an organic compound to inorganic products (principally water and carbon dioxide).
	mining of an aquifer	Withdrawal of groundwater over a period of time that exceeds the rate of recharge to the aquifer.
	miscible	Two or more liquids or gases that can be mixed and will remain mixed under normal conditions, e.g., alcohol and water. Antonym - Immiscible.
	missed detection	The situation that occurs when a test indicates that a tank is "tight" when in fact it is leaking.
	mitigation	Measures taken to reduce adverse impacts on the environment.
	mixed waste	Waste that contains both hazardous waste and source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954.
	mobile incinerator system	Hazardous waste incinerators that can be transported from one site to another.
	mobile source	Any non-stationary source of air pollution such as cars, trucks, motorcycles, buses, airplanes, locomotives, etc.
	modeling	An investigative technique using a mathematical or physical representation of a system or theory that

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		accounts for all or some of its known properties. Models are often used to test the effect of changes of system components on the overall performance of the system.
	Moffett Field NAS	Moffett Field NAS was located north of San Jose adjacent to San Francisco Bay and was closed in 1994
	molecule	The smallest division of a compound that still retains or exhibits all the properties of the substance.
	monitoring	1) Periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, plants, and animals. 2) Used to track the presence, migration, or threat posed by contaminants at a site; may be used at a site between response actions or when no other response action is appropriate until information or site status changes.
	monitoring point	Surveyed location where collection of data on contaminants in different environmental media (i.e., air, surface water, groundwater, sediments, soils) is performed to determine extent and impact of effectiveness of a cleanup action
	monooxygenase	A microbial enzyme that catalyzes reactions in which one atom of the oxygen molecule is incorporated into a product and the other atom appears in water.
	Monte Carlo Simulation	A procedure to estimate the value and uncertainty of the result of a calculation when the result depends on a number of factors, each of which is also uncertain.
	morbidity	Rate of disease incidence.
	mud rotary drilling	Drilling method which uses the viscosity and the uphole velocity of the drilling fluid to remove cuttings from the borehole.
	mudballs	Round material that forms in filters and gradually increases in size when not removed by backwashing.
	mulch	A layer of material (wood chips, straw, leaves, etc.) placed around plants to hold moisture, prevent weed growth, and enrich or sterilize the soil.
	multiple use	Use of land for more than one purpose; i.e., grazing of livestock, watershed and wildlife protection, recreation, and timber production. Also applies to use of bodies of water for recreational purposes, fishing, and water supply.
	mutagen	An agent that causes a permanent genetic change or transformation in a cell other than that which occurs during normal genetic recombination.
	mutagenicity	The capacity of a chemical or physical agent to cause permanent alternation.