

ERB Acronym and Glossary – L

Acronym	Glossary	Definition
LADD	Lifetime Average Daily Dose	lifetime average daily dose (LADD) is used for many assessments involving cancer effects. The LADD is calculated as follows: $LADD = (D * EF * ED) / (AT * CF)$; where: D = dose (mg/kg-day), EF = exposure frequency (i.e., frequency of product use) (days/year), ED = exposure duration (years), AT = averaging time (i.e., lifetime) (years), CF = conversion factor (365 days/year)
LBP	Lead Based Paint	Paint containing more than 0.06% of lead by weight.
LC	Liquid Chromatography	is an analytical chromatographic technique that is useful for separating ions or molecules that are dissolved in a solvent. If the sample solution is in contact with a second solid or liquid phase, the different solutes will interact with the other phase to differing degrees due to differences in adsorption, ion-exchange, partitioning, or size. These differences allow the mixture components to be separated from each other by using these differences to determine the transit time of the solutes through a column.
LC50	Lethal Concentration	Median level concentration, a standard measure of toxicity. It tells how much of a substance is needed to kill half of a group of experimental organisms in a given time. See LD50.
LD	Land Disposal	Practice of disposing of liquid and solid hazardous waste in earthen pits, In CA, the State Water Resources Control Board licenses two classes of land disposal facilities which can accept hazardous waste. Class I-Sites which cannot overlie usable ground water, except in "extreme cases," and which may receive all classes of hazardous waste except PCBs and radioactive waste. Class II-1-Sites which may overlie or be adjacent to usable ground water, but must protect ground water by natural site characteristics or site modifications.
LD50	Lethal Dose where 50% of animals die	The dose of a toxicant that will kill 50 percent of the test organisms within a designated period. The lower the LD50, the more toxic the compound.
LDR	Land Disposal Restrictions	A Californian state program administered by the Department of Health Services designed to progressively ban the land disposal of certain hazardous waste.
LEL	Lower Explosive Limit	The concentration of a compound in air below which the mixture will not ignite.
LEPC	Local Emergency Planning Committee	tasked to develop an emergency plan to prepare for and respond to chemical emergencies. The EPA's list of extremely hazardous substances provides a focus for setting priorities in the planning effort. It must include the identity and location of hazardous materials, procedures for immediate response to a chemical accident; ways to notify the public about actions they must take; names of coordinators at plants; and schedules and plans for testing the plan. Once the plan is written, the SERC must review it. The LEPC must publicize the plan

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		through the public meetings or newspaper announcements, get public comments, and periodically test the plan by conducting emergency drills. The LEPC must also update the plan at least annually and let the public know of its activities.
LFG	Landfill Gas	A by-product from the digestion of anaerobic bacteria of decaying matter in waste deposited in landfill sites. The gas is predominantly methane(65%) together with carbon dioxide(35%) and trace concentrations of a range of vapors and gases.
LI	Langelier Index	An index reflecting the equilibrium pH of water with respect to calcium and alkalinity; used in stabilizing water to control both corrosion and scale deposition.
LIF	Laser Induced Fluorescence	The optical emission from molecules that have been excited to higher energy levels by absorption of electromagnetic radiation.
LLRW	Low Level Radioactive Waste	as any radioactive waste that does not belong in one of the other three categories. Those three categories are (1) high-level waste (spent nuclear fuel or the highly radioactive waste produced if spent fuel is reprocessed), (2) uranium milling residues, and (3) waste with greater than specified quantities of elements heavier than uranium. Examples: ion exchange resins and filter materials used to clean water at a nuclear power plant; contaminated hand tools, components, piping, and other equipment from nuclear power plants and other industries; research equipment from laboratories where radioactive materials are used; shoe covers, lab coats, cleaning cloths, paper towels, etc.; containers, cloth, paper, fluids, and equipment which came in contact with radioactive materials used in hospitals to diagnose or treat disease ;filters from sampling devices used to test for airborne radioactive contamination; scintillation fluids in which filters from some sampling devices must be dissolved in order to determine the amount of radioactive material present; and carcasses of animals treated with radioactive materials used in medical or pharmaceutical research.
LNAPL	Light Non-Aqueous Phase Liquid	A liquid that does not dissolve in water, and so forms a separate phase, which is also lighter than water and therefore floats on the surface. Many petroleum products are LNAPLs.
LOAEL	Lowest Observed Adverse Effect Level	In dose-response experiments, the lowest exposure level at which there are statistically or biologically significant increases in frequency or severity of adverse effects between the exposed population and its appropriate control group.
LOD	Limit of Detection	An analytical figure of merit that, owing to the complex statistics involved, deserves a separate treatment.
LOEL	Lowest Observed Effects Level	The lowest dose or concentration in a toxicity test or biological field survey that causes a statistically significant effect in comparison to the controls or reference site.
LTM	Long Term Monitoring	Site sampling and analysis required to confirm that site cleanup requirements continue to be met after the

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		Remedial Action (RA) has been accomplished or that site contaminant levels continue to be below concentrations which require RA. LTM does not overlap (in time) with the RA nor with LTO (monitoring is included in RA or LTO in years where either of those phases is programmed).
LTMgt	Long Term Management	occurs after Response Complete (RC) has been achieved at a site. LTMgt is required at sites that have hazardous substances, pollutants or contaminants remaining at the site after RC, which restricts use of the site. This situation often arises when the DON makes the decision to remediate a site to restricted land use (e.g. recreational) risk-based cleanup levels. LTMgt will require long-term monitoring and usually some type of land use control for the site. The land use control may be engineered control or institutional control. The DON is responsible for maintaining land use controls and the long-term monitoring program.
LTO	Long Term Operation	See Remedial Action Operation.
LTTD	Low Temperature Thermal Desorption	An ex situ process that uses either direct or indirect heat exchange to vaporize and/or volatilize contaminants from soil or sludge. The contaminated material is heated to between 300 - 600 degrees fahrenheit
LUC	Land Use Controls	also known as "institutional controls," are defined broadly as legal measures that limit human exposure by restricting activity, use and access to properties with residual contamination.
LUFT	Leaking Underground Fuel Tank	are underground fuel tanks that discharge or release the liquid contained within them (i.e., gasoline, diesel, waste oil, etc.)
LUST	Leaking Underground Storage Tank	a leaking storage tank

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	laboratory control sample	A control sample of known composition. Aqueous and solid lab control samples are analyzed using the same sample preparation, reagents, and analytical methods employed for samples received.
	lagoon	1) A shallow pond where sunlight, bacterial action, and oxygen work to purify wastewater; also used for storage of wastewater or spent nuclear fuel rods. 2) Shallow body of water, often separated from the sea by coral reefs or sandbars.
	land application	Discharge of wastewater onto the ground for treatment or reuse. See Infiltration.
	land ban	Phasing out of land disposal of most untreated hazardous wastes, as mandated by the 1984 HSWA amendments to RCRA.
	landfarming	1) A disposal process in which hazardous waste deposited on or in the soil is naturally degraded by

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		microbes. 2) A bioremediation technology in which contaminated soil or sediment is excavated and spread on a pan with a built-in system to collect any leachate. The soils are periodically turned over to mix air into the waste. Moisture, nutrients, temperature and pH are also controlled to optimize the biodegradation occurring
	landfill	1) Sanitary landfills are disposal sites for non-hazardous solid wastes spread in layers, compacted to the smallest practical volume, and covered by material applied at the end of each operating day. 2) Secure chemical landfills are disposal sites for hazardous waste, selected and designed to minimize the chance of release of hazardous substances into the environment.
	large quantity generator	Person or facility generating more than 2200 pounds of hazardous waste per month. Such generators produce about 90 percent of the nation's hazardous waste, and are subject to all RCRA requirements.
	Lasagna Process	The Lasagna process uses electrokinetics to move contaminants in soil pore water into treatment zones where the contaminants can be captured or decomposed.
	latency	Time from the first exposure of a chemical until the appearance of a toxic effect.
	LC50/Lethal Concentration	Median level concentration, a standard measure of toxicity. It tells how much of a substance is needed to kill half of a group of experimental organisms in a given time. See LD50.
	LD50/ Lethal Dose	The dose of a toxicant that will kill 50 percent of the test organisms within a designated period. The lower the LD50, the more toxic the compound.
	leachate	Water that collects contaminants as it trickles through wastes, pesticides or fertilizers. Leaching may occur in farming areas, feedlots, and landfills, and may result in hazardous substances entering surface water, groundwater, or soil.
	leachate collection system	A system that gathers leachate and pumps it to the surface for treatment.
	leaching	The process by which soluble constituents are dissolved and filtered through the soil by a percolating fluid. See Leachate.
	lead agency	The location where the master copy of the Administrative Record File/Administrative Record is established and maintained, generally the Engineering Field Division/Engineering Field Activity (EFD/EFA).
	leakance	The ratio of vertical hydraulic conductivity and the thickness of a confining bed; this term is used in the flow equations for leaky aquifers with vertical movement.
	leaky aquifer	An aquifer bounded above and below by a semi-permeable layer so that water from the aquifer flows or leaks from the aquifer.
	legal agreement	A means of setting project milestones; current DON environmental cleanup program funding policy requires incorporating relative risk evaluations and DON

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		environmental restoration funding controls.
	leukogen	A substance that causes leukemia.
	life-cycle design	The designing of a system to maximize operational efficiency throughout the entire operational duration, as opposed to designing for the initial conditions.
	lifetime exposure	Total amount of exposure to a substance that a human would receive in a lifetime (usually assumed to be 70 years).
	lift	In a sanitary landfill, a compacted layer of solid waste and the top layer of cover material.
	ligands	The molecules surrounding a metal ion in a complex ion. See Chelate and Complexation.
	limited degradation	An environmental policy permitting some degradation of natural systems but terminating at a level well beneath an established health standard.
	limiting factor	A condition whose absence or excessive concentration is incompatible with the needs or tolerance of a species or population and which may have a negative influence on their ability to thrive and/or survive.
	limnology	The study of the physical, chemical, hydrological, and biological aspects of fresh water bodies.
	Lindane	A pesticide that causes adverse health effects in domestic water supplies and is toxic to freshwater fish and aquatic life.
	liner	1) A relatively impermeable barrier designed to keep leachate inside a landfill. Liner materials include plastic and dense clay. 2) An insert or sleeve for sewer pipes to prevent leakage or infiltration.
	lipid solubility	The maximum concentration of a chemical that will dissolve in fatty substances. Lipid soluble substances are insoluble in water. They will very selectively disperse through the environment via uptake in living tissue.
	liquefaction	Changing a solid into a liquid.
	listed waste	Wastes listed as hazardous under RCRA but which have not been subjected to the Toxicity Characteristic Listing Procedure because the dangers they present are considered self-evident.
	lithology	The large scale physical characteristics of rocks and sediments.
	lithotroph	An organism that uses inorganic carbon such as carbon dioxide or bicarbonate as a carbon source and an external energy source.
	littoral zone	1) That portion of a body of fresh water extending from the shoreline lakeward to the limit of occupancy of rooted plants. 2) The strip of land along the shoreline between the high and low water levels.
	Lowry Air Force Base	Lowry Air Force Base was located in Denver, Colorado and was closed in 1994.