

APPENDIX B: GLOSSARY

Absorption

How a chemical enters a person's blood after the chemical has been swallowed, has come into contact with the skin, or has been breathed in.

Acute Exposure

Contact with a chemical that happens once or only for a limited period of time. ATSDR defines acute exposures as those that might last up to 14 days.

Adverse Health Effect

A change in body function or the structures of cells that can lead to disease or health problems.

ATSDR

The Agency for Toxic Substances and Disease Registry. ATSDR is a federal health agency in Atlanta, Georgia that deals with hazardous substance and waste site issues. ATSDR gives people information about harmful chemicals in their environment and tells people how to protect themselves from coming into contact with chemicals.

Background Level

An average or expected amount of a chemical in a specific environment. Or, amounts of chemicals that occur naturally in a specific-environment.

Cancer

A group of diseases which occur when cells in the body become abnormal and grow, or multiply, out of control.

Carcinogen

Any substance shown to cause tumors or cancer in experimental studies.

CERCLA

See Comprehensive Environmental Response, Compensation, and Liability Act.

Chronic Exposure

Contact with a substance or chemical that happens over a long period of time. ATSDR considers exposures of more than one year to be *chronic*.

Completed Exposure Pathway

See Exposure Pathway.

Comparison Values (CVs)

Concentrations or the amount of substances in air, water, food, and soil that are unlikely, upon exposure, to cause adverse health effects. Comparison values are used by health assessors to select which substances and environmental media (air, water, food and soil) need additional evaluation while health concerns or effects are investigated.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

CERCLA was put into place in 1980. It is also known as Superfund. This act concerns releases of hazardous substances into the environment, and the cleanup of these substances and hazardous waste sites. ATSDR was created by this act and is responsible for looking into the health issues related to hazardous waste sites.

Concern

A belief or worry that chemicals in the environment might cause harm to people.

Concentration

How much or the amount of a substance present in a certain amount of soil, water, air, or food.

Contaminant

See Environmental Contaminant.

Dermal Contact

A chemical getting onto your skin. (see Route of Exposure).

Dose

The amount of a substance to which a person may be exposed, usually on a daily basis. Dose is often explained as “amount of substance(s) per body weight per day”.

Duration

The amount of time (days, months, years) that a person is exposed to a chemical.

Environmental Contaminant

A substance (chemical) that gets into a system (person, animal, or the environment) in amounts higher than that found in Background Level, or what would be expected.

Environmental Media

Usually refers to the air, water, and soil in which chemicals of interest are found. Sometimes refers to the plants and animals that are eaten by humans. Environmental Media is the second part of an Exposure Pathway.

Environmental Protection Agency (EPA)

The federal agency that develops and enforces environmental laws to protect the environment and the public's health.

EPA's cancer slope factors

The additional risk of cancer posed by the ingestion of 1 milligram of a substance, per kilogram of body weight, per day, over a lifetime.

EPA's chronic oral reference dose (RfD)

An estimate (uncertainty spanning perhaps an order of magnitude) of a daily exposure (milligram per kilogram per day [mg/kg/day]) to the general public (including sensitive subgroups) that is likely to be without an appreciable risk of harmful effects during a lifetime exposure or exposure during a limited time interval.

Exposure

Coming into contact with a chemical substance. (For the three ways people can come in contact with substances, see Route of Exposure.)

Exposure Pathway

A description of the way that a chemical moves from its source (where it began) to where and how people can come into contact with (or get exposed to) the chemical. ATSDR defines an exposure pathway as having 5 parts:

1. Source of Contamination,
2. Environmental Media and Transport Mechanism,
3. Point of Exposure,
4. Route of Exposure, and
5. Receptor Population.

When all 5 parts of an exposure pathway are present, it is called a Completed Exposure Pathway. Each of these 5 terms is defined in this Glossary.

Frequency:

How often a person is exposed to a chemical over time; for example, every day, once a week, twice a month.

Hazardous Waste

Substances that have been released or thrown away into the environment and, under certain conditions, could be harmful to people who come into contact with them.

Health Effect

ATSDR deals only with Adverse Health Effects (see definition in this Glossary).

Ingestion

Swallowing something, as in eating or drinking. It is a way a chemical can enter your body (See Route of Exposure).

Inhalation

Breathing. It is a way a chemical can enter your body (See Route of Exposure).

MRL

Minimal Risk Level. An estimate of daily human exposure—by a specified route and length of time—to a dose of chemical that is likely to be without a measurable risk of adverse, noncancerous effects. An MRL should not be used as a predictor of adverse health effects.

National Priorities List

The National Priorities List. A list kept by the U.S. Environmental Protection Agency (EPA) of the most serious, uncontrolled or abandoned hazardous waste sites in the country. An NPL site needs to be cleaned up or is being looked at to see if people can be exposed to chemicals from the site.

Pesticides

Any organic or inorganic substance used to destroy or inhibit the action of plant or animal pests, including insecticides, herbicides, fungicides, rodenticides, miticides, fumigants, and repellants. All pesticides are toxic to humans to some degree. Pesticides vary in biodegradability.

PHA

Public Health Assessment. A report that evaluates chemicals at a hazardous waste site and indicates whether people could be harmed from coming into contact with those chemicals. The PHA also indicates whether further public health actions are needed.

Polychlorinated biphenyls (PCBs)

A group of synthetic organic chemicals that contain 209 individual chlorinated biphenyl compounds (known as congeners). There are no known natural sources of PCB in the environment. PCBs are either oily liquids or solids. Because they do not burn easily and are good insulating materials, PCBs have been used widely as coolants and lubricants in transformers, capacitors, and other electrical equipment. The manufacture of PCBs stopped in the United States in October 1977 as a result of evidence that they build up in the environment and cause harmful effects.

Plume

A line or column of air or water containing chemicals moving from the source to areas further away. A plume can be a column or clouds of smoke from a chimney or

contaminated underground water sources or contaminated surface water (such as lakes, ponds and streams).

Point of Exposure

The place where someone can come into contact with a contaminated environmental medium (air, water, food or soil). Examples include: (1) an area in a playground that has contaminated dirt, (2) a contaminated spring used for drinking water, (3) a location where fruits or vegetables are grown in contaminated soil, or (4) a backyard area where someone might breathe contaminated air.

Population

- A group of people living in a certain area; or the number of people in a certain area.

Public Health Assessment(s):

See PHA.

Public Health Hazard

The category is used in PHAs for sites that have certain physical features or evidence of chronic, site-related chemical exposure that could result in adverse health effects.

Receptor Population

People who live or work in the path of one or more chemicals, and who could come into contact with them (See Exposure Pathway)

Reference Dose (RfD)

An estimate, with safety factors (see safety factor) built in, of the daily, life-time exposure of human populations to a possible hazard that is not likely to cause harm to the person.

Route of Exposure

The way a chemical can get into a person's body. There are three exposure routes:

- breathing (also called inhalation),
- eating or drinking (also called ingestion), or
- getting something on the skin (also called dermal contact).

Safety Factor

Also called Uncertainty Factor. When scientists don't have enough information to decide if an exposure will cause harm to people, they use "safety factors" and formulas in place of the information that is not known. These factors and formulas can help determine the amount of a chemical that is not likely to cause harm to people.

Semivolatile Organic Compounds (SVOCs)

A class of organic (containing carbon) chemicals similar to VOCs, but that evaporate or volatilize less rapidly.

Source of Contamination

The place where a chemical comes from, such as a landfill, pond, creek, incinerator, tank, or drum. (See Exposure Pathway.)

Toxic

Harmful. Any substance or chemical can be toxic at a certain dose (amount). The dose is what determines the potential harm of a chemical and whether it would cause someone to get sick.

Toxicology

The study of the harmful effects of chemicals on humans or animals.

Tumor

Abnormal growth of tissue or cells that have formed a lump or mass.

Volatile organic compounds (VOCs)

Substances containing carbon and different proportions of other elements such as hydrogen, oxygen, fluorine, chlorine, bromine, sulfur, or nitrogen; these substances easily become vapors or gases. A significant number of the VOCs are commonly used as solvents (paint thinners, lacquer thinner, degreasers, and dry cleaning fluids).