
Glossary

aquifer

An underground bed or layer of earth, gravel, or porous stone that yields water.

attenuate

To break down or weaken by changing the chemical characteristics.

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

A federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). The acts created a special tax that goes into a trust fund, commonly known as Superfund, to investigate and clean up abandoned or uncontrolled hazardous waste sites. The amended law contains provisions for federal facilities to clean up sites under CERCLA guidelines.

dichloroethylene

An industrial solvent. Dichloroethylene also is formed from the natural breakdown of the solvent trichloroethylene.

enhanced bioremediation

The process of stimulating microorganisms with nutrients and other chemicals to promote faster breakdown of contaminants in soil or groundwater.

groundwater

Water beneath the earth's surface in the spaces between soil particles and between rock surfaces.

hydrogen release compound

A non-hazardous food-grade product in the form of a thick liquid that is used to stimulate rapid breakdown of solvent contamination. The compound works by releasing hydrogen, which causes a series of chemical and biological reactions favorable to microbes that break the chemicals down.

in situ chemical oxidation

A cleanup technology that involves injecting chemical compounds into the ground surface to oxidize contaminants such as solvent, breaking them down into harmless byproducts.

in situ ferox iron slurry injection

A cleanup technology that involves injecting an iron powder slurry into the ground surface to react with contaminants such as solvents, breaking them down into harmless byproducts.

microbes

Microorganisms that live in the soil and groundwater. Bioremediation relies on various types of microbes to break-down contaminants by digesting them and turning them into water and harmless gases.

monitored natural attenuation

The process of relying on natural physical, chemical and biological activities that, without human intervention, can reduce contamination in groundwater or soil. Monitoring of this process often entails testing to measure the progress of cleanup over a long period of time.

New Jersey Department of Environmental Protection (NJDEP)

The state agency overseeing the cleanup at Picatinny.

oxygen release compound

A non-hazardous food-grade product in the form of a thick liquid that is used to stimulate rapid breakdown of solvent contamination. The compound works by increasing the underground oxygen supply for faster growth of microbes that break the chemicals down.

perchloroethylene (PCE)

An industrial solvent used extensively in industrial degreasing (removing grease from metal parts) and in dry cleaning.

pilot study

A test conducted on a small scale to determine if a procedure or technology will work as predicted.

plume

A volume of a substance in air or water that moves from its source to places farther away from the source. For groundwater, plumes are described by the volume of water they occupy and the direction they move through underground soil and rock.

Pneumatic fracturing

The injection of air or another gas into soil, clay or rock to create artificial fractures, or cracks, or to extend natural fractures. The increased spaces provide for more effective cleanup of soil and groundwater by allowing the injected compounds to flow evenly and reach contaminants.

Proposed Plan

A public participation requirement of the Superfund Amendments and Reauthorization Act (SARA). The Army summarizes for the public the preferred cleanup strategy, the rationale for the preference and reviews the alternatives presented in the detailed analysis of the feasibility study. The proposed plan actively solicits public review and comment on all alternatives under consideration.

Pyrotechnic

Describes devices that rely on ignition or explosion, such as certain signals and flares.

solvent

A substance, typically in liquid form, used for cleaning parts or for dissolving other substances. Examples of solvents used in the home include acetone or mineral spirits. Examples of solvents used in industry include trichloroethylene (see definitions).

trichloroethylene (TCE)

An industrial solvent used mainly to remove grease from metal parts, but also used as an ingredient in adhesives, paint removers, typewriter correction fluids, and spot removers.

U.S. Environmental Protection Agency (USEPA)

The federal agency overseeing the cleanup at Picatinny.

vinyl chloride

An industrial chemical used to make poly vinyl chloride (PVC). Vinyl chloride also is formed from the natural breakdown of the solvent trichloroethylene.

volatile organic compound

A chemical compound that evaporates readily at standard temperature and pressure.

xylene

An industrial solvent commonly used in cleaning agents, paint thinner and varnishes.
