

Chapter 9.

Glossary of Oil Spill Terms

acute

Having a sudden onset, lasting a short time. Can be used to define either the exposure or the response to an exposure (effect). The duration of an acute aquatic toxicity test is generally 4 days or less and mortality is the response measured (Rand and Petrocelli 1985).

arcuate

A bowed or curved delta with the convex margin facing the body of water; also known as fan-shaped delta.

aromatic hydrocarbon

Carbon-hydrogen compounds characterized by the presence of at least one six-carbon ring structure.

bbbl

Barrel, a unit of liquid volume for petroleum products. Equivalent to 42 gallons.

bioaccumulation

A general term describing a process by which chemicals are taken up by aquatic organisms from water directly or through consumption of food containing the chemicals (Rand and Petrocelli 1985).

bioassay

A test used to evaluate the relative potency of a chemical by comparing its effect on a living organism with the effect of a standard preparation of the same type of organism (Rand and Petrocelli 1985).

biodegradation

The breakdown of organic compounds by microorganisms.

biomagnification

The result of the process of bioaccumulation by which tissue concentrations of bioaccumulated chemicals increase as the chemical passes up through two or more trophic levels (Rand and Petrocelli 1985).

cetacean

The group of wholly aquatic mammals that includes whales and dolphins.

chronic

Involving a stimulus that is lingering or continues for a long time; often signifies periods from several weeks to years, depending on the reproductive life cycle of the aquatic species. Can be used to define either the exposure or the response to an exposure (effect). The chronic aquatic toxicity test is used to study the effects of continuous, long-term exposure of a chemical or other potentially toxic material on aquatic organisms (Rand and Petrocelli 1985).

cusplate

A crescent-shaped bar joining with the shore at both ends.

depuration

A process that results in the elimination of a material from an aquatic organism.

emphysema

A pulmonary disorder characterized by overdistension and destruction of the air spaces in the lungs.

eucaryotic

Organisms possessing nucleated cells, essentially all organisms except bacteria or viruses.

gneiss

A variety of rocks with a banded or coarsely foliated structure formed by regional metamorphism.

hydrophobic

Lacking an affinity for, repelling, or failing to adsorb or absorb water.

hypoglycemia

Abnormally low levels of glucose in the blood.

LC₅₀

Concentration of any toxic chemical that kills 50 percent of the organisms in a test population per unit time.

lipophilic

Having an affinity for, attracting, or the ability to adsorb or absorb lipids (fats).

metabolite

Any substance involved in or a product of metabolism.

mysid

Planktonic shrimp-like crustaceans that carry their young in a pouch; hence, the common name "opposum shrimp."

mysticete

The baleen whales.

NOAA

National Oceanic and Atmospheric Administration

NOEC

No observed effect concentration, the highest dosage of a compound administered in a toxicity test that does not produce toxic effects. Also called no observed effects level, or NOEL.

nominal concentration

In chemical or toxicological studies with oil, the concentration of a compound expressed as total oil mixed per unit volume water (as opposed to oil concentration in the water phase).

OSC

Federal On-Scene Coordinator

OSHTF

Oil Spill Health Task Force, an interagency group formed to address issues of seafood contamination and human health implications during the *Exxon Valdez* oil spill.

ordered population

A population is ordered if the elements within the population are ordered in magnitude according to some scheme (Scheaffer et al. 1986).

orogeny

The process of mountain formation, especially the intense deformation of rocks by folding and faulting which, in many mountainous regions, has been accompanied by invasion of molten rock and volcanic eruption.

osmoregulatory mechanism

Any physiological mechanism for the maintenance of an optimal and constant level of osmotic activity of the fluid in and around the cells.

PAH

Polycyclic aromatic hydrocarbons

population or universe

Refers to the entire collection of measurements about which one wishes to draw conclusions (Zar 1984).

random population

A population is random if the elements of the population are in random order (Scheaffer et al. 1986).

SSC

NOAA Scientific Support Coordinator, one of the OSC's Special Forces designated in the National Contingency Plan.

surfactant

Surface active agent, a soluble compound that reduces the surface tension of liquids, or reduces interfacial tension between two liquids or a solid.

toxicity

"The inherent potential or capacity of a material to cause adverse effects in a living organism" (Rand and Petrocelli 1985).

trophic level

Any of the feeding levels through which the passage of energy through an ecosystem proceeds; examples are photosynthetic plants herbivorous animals, and microorganisms of decay.

organoleptic

The detection of contamination of food items through smell or taste.

ppm

Parts per million, a measurement of concentration. Can also be expressed in units of weight, for example, as milligrams/kilogram (mg/kg) or micrograms/gram ($\mu\text{g/g}$)

pinniped

the group of marine mammals that includes seals, walruses, and sealions.

tainting

The development of flavors or odors in foods that are not typical of the food itself.

toxicity index

The concept of toxicity evaluation in which toxicant concentration and toxicant exposure time are considered to be equal factors in resultant toxicity. Expressed as a product of the day, as in ppm days or ppm hours.

zoospore

Motile, flagellated asexual reproductive cell in protozoans, algae, and fungi.