

PWSRCAC Glossary

activated carbon: highly absorbent form of carbon used to remove odors and toxic substances from liquid or gaseous emissions. In waste treatment it is used to remove dissolved organic matter from waste water.

aeration: a process which promotes biological degradation of organic water. The process may be passive (as when waste is exposed to air) or active (as when a mixing or bubbling device introduces the air).

air pollution: presence of contaminant or pollutant substances in the air that do not disperse properly and interfere with human health or welfare, or produce other harmful environmental effects.

ballast water: water carried in vessel tanks for stability.

- **dirty ballast:** ballast water that contains residual oil. When seawater is introduced into empty cargo tanks, residual oil mixes with the water and requires special handling at sea or treatment at a specialized facility before being discharged into the sea. Dirty ballast consists of seawater contaminated with approximately 1% crude oil.
- **clean ballast:** ballast water that is essentially free from oil. Does not exceed 15 ppm total recoverable oil and grease (TROG) and does not exceed 15 ppb benzene, toluene, ethylbenzene, and xylene (BTEX).
- **segregated ballast:** ballast water that is in tanks designed and used exclusively for that purpose.

benthic region: bottom layer of a body of water

bioaccumulate: to gradually accumulate organic compounds in living tissue, typically from ingestion and/or absorption of food or water

bioaccumulative: substances that increase in concentration in living organisms (that are very slowly metabolized or excreted) as they breathe contaminated air, drink contaminated water, or eat contaminated food.

biological treatment: treatment technology that uses bacteria to consume waste. This treatment breaks down organic materials.

boom: a floating barrier that extends above and below the water's surface and is designed to prevent the passage of or contain oil floating on water (also called containment boom)

command post: facility located at a safe distance upwind from an accident site, where the on-scene coordinator, responders, and technical representatives can make response decisions, deploy manpower and equipment, maintain liaison with news media, and handle communications.

C-plan: Contingency plan—an action plan with guidelines for what to do in case of an oil spill

crude oil: petroleum in its natural state prior to any refining process. Main elements are hydrogen and carbon.

current buster: oil spill containment device capable of collecting, containing, and separating oil at tow speeds and currents up to five knots

degradation: process by which a chemical is reduced to a less complex form

dispersant: substance applied to spilled oil that disperses oil into the water column, rather than leaving it floating on the surface in a slick

emulsification: process by which one liquid is dispersed into another in the form of small droplets

enhanced tractor tug (ETT): a very powerful tug boat with cycloidal drive (Voith-Schneider) systems, fire fighting system, and towing winches. The cycloidal drive system consists of revolving vertical blades having a variable pitch that can produce a propelling force in any horizontal direction. An ETT is capable of applying a greater than its maximum propulsion force when it uses its keel to skeg. The Nanuq and Tan'erliq are the two ETT's used in Prince William Sound.

entrapment booming: setting boom to guide oil into a confined area to prevent it from reaching another area

environmental assessment: written environmental analysis that is prepared pursuant to the National Environmental Policy Act to determine whether a federal action would significantly affect the environment and thus require preparation of a more detailed environmental impact statement

environmental impact statement: document required of federal agencies by the National Environmental Policy Act for major projects or legislative proposals significantly affecting the environment. A tool for decision making, it describes the positive and negative effects of the undertaking and lists alternative actions.

exclusion booming: placing boom to prevent oil from entering a specific area, such as a small bay

Geographic Response Strategies (GRS): oil spill response plans tailored to protect a specific environmentally sensitive area from impacts following an oil spill

hydrocarbon: organic chemical compound composed mainly of carbon and hydrogen. Hydrocarbons are the main constituents of crude oils.

in-situ burning: an oil spill clean up technique in which oil is burned directly where it spilled

j configuration: formation for holding boom in the shape of a "J"

nm: nautical mile—a unit of length used in sea and air navigation, based on the length of one minute of arc of a great circle on the earth's surface, especially an international and U.S. unit equal to 1,852 meters (about 6,076 feet)

non-indigenous species: a species that is non-native (or alien) to the ecosystem under consideration

phototoxic: a state of becoming more poisonous when exposed to ultraviolet light

place of refuge: a safe refuge (such as a protected bay) for leaking or disabled vessels

polynuclear aromatic hydrocarbon (PAH): PAHs are the most common smaller and more volatile compounds found in oil.

prevention response tug (PRT): a very powerful tug boat with z-drive systems, fire fighting system, and towing winches. The z-drive system consists of ducted-propellers that can be oriented in any horizontal direction. A PRT is not capable of applying more than its maximum propulsion force. The Attentive, Aware, and Alert are the three PRT's used in Prince William Sound.

resurfacing: when oil that's been broken apart by a dispersant re-coagulates and pops back to the water surface

risk assessment: qualitative and quantitative evaluation performed in an effort to define the risk posed to human health and/or the environment by the presence or potential presence and/or use of specific pollutants

skimmer: a piece of equipment that removes floating oil from water

tanker of opportunity: a tanker that is in transit and is the closest and most available for storage use in the event of a spill.

tanker vapor recovery system: a system installed on the berths at the Alyeska terminal that captures hazardous air pollutants from tanker loading operations. Vapors are incinerated or are burned in a power generation boiler.

technological disaster: catastrophic event caused by humans that results in the toxic contamination of the environment

theriot class tug: (theriot is pronounced tare-ee-o) tug boat that includes towing winches, shock line/surge gear, crane, and ground tackle

u configuration: formation for holding boom in the shape of a "U"

volatile organic compound (VOC): organic compound, typically a liquid, that forms a vapor. Many VOCs are harmful. Specific VOCs, also classified as hazardous air pollutants by the U.S. EPA, of concern when released into the atmosphere from operations at the Valdez Marine Terminal include benzene, toluene, ethylbenzene, and xylene (BTEX).

wave tank: a specialized tank that simulates wave action, used for testing oil spill clean-up methods