Use of Sea Water for Mixing Long-Term Fire Retardant

Use of retardant mixed with seawater is outside of policy

Human Health Impacts

- None likely
- Possibility of sensitivity reactions to contaminants in sea water
- Remove retardant residues by showering as soon as feasible

Other Safety Concerns

- Retardant contains 10-15% fertilizer salts. Sea water contains approximately 4.25% chemical salts that are different from the fertilizer salts.
- The increased salt content may contribute to a slight increase in weight per volume for the mixed retardant. This is not likely to require downloading.
- These salts may have an impact on corrosion.
  - Corrosion to airtankers is likely to be minimal due to the large amount of aluminum used in airtanker construction.
  - Steel corrosion is most likely to be affected by the increased salt content and resulting change in pH. This would affect pumps and storage tanks if components were constructed of steel.
  - Brass corrosion is unlikely to be an issue since brass is the alloy of choice in marine environments.
  - Corrosion affects can be minimized by using fresh water to thoroughly rinse the coated areas. Do not scrub any metallic surfaces.
  - If time allows a preseason coating of wax on exposed surfaces will also minimize retardant clinging to surfaces.

Environmental Concerns

- Little or no impact is expected on either flora or fauna because of existing marine environment.

Effectiveness Concerns

- Probably no impact on effectiveness; possible slight increase if sea water salts have any retarding ability.

Mixing and Handling

- Use the approved mix ratios. These can be found on the Qualified Products List (1/5/2001) and in the Lot Acceptances, Quality Assurance, and Field Quality Control for Fire Retardant Chemicals publication (NWCG, NFES 1245/PMS 444-1. Also available at www.nwcg.gov).
- There should be no differences in mixing, pumping, and loading; use procedures appropriate for the specific retardant.
- The sea salts may have an impact on the thickener effectiveness and/or stability. Manage materials to minimize the amount of mixed retardant in storage. Use retardant as soon as possible after mixing.