

§ 227.22

- (d) Recreational fishing in open ocean areas;
- (e) Recreational fishing in coastal areas;
- (f) Recreational fishing in estuarine areas;
- (g) Recreational use of shorelines and beaches;
- (h) Commercial navigation;
- (i) Recreational navigation;
- (j) Actual or anticipated exploitation of living marine resources;
- (k) Actual or anticipated exploitation of non-living resources, including without limitation, sand and gravel places and other mineral deposits, oil and gas exploration and development and offshore marine terminal or other structure development; and
- (l) Scientific research and study.

§ 227.22 Assessment of impact.

The assessment of impact on other uses of the ocean will consider both temporary and long-range effects within the state of the art, but particular emphasis will be placed on any irreversible or irretrievable commitment of resources that would result from the proposed dumping.

Subpart F [Reserved]

Subpart G—Definitions

§ 227.27 Limiting permissible concentration (LPC).

(a) The limiting permissible concentration of the liquid phase of a material is:

(1) That concentration of a constituent which, after allowance for initial mixing as provided in § 227.29, does not exceed applicable marine water quality criteria; or, when there are no applicable marine water quality criteria,

(2) That concentration of waste or dredged material in the receiving water which, after allowance for initial mixing, as specified in § 227.29, will not exceed a toxicity threshold defined as 0.01 of a concentration shown to be acutely toxic to appropriate sensitive marine organisms in a bioassay carried out in accordance with approved EPA procedures.

(3) When there is reasonable scientific evidence on a specific waste ma-

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terial to justify the use of an application factor other than 0.01 as specified in paragraph (a)(2) of this section, such alternative application factor shall be used in calculating the LPC.

(b) The limiting permissible concentration of the suspended particulate and solid phases of a material means that concentration which will not cause unreasonable acute or chronic toxicity or other sublethal adverse effects based on bioassay results using appropriate sensitive marine organisms in the case of the suspended particulate phase, or appropriate sensitive benthic marine organisms in the case of the solid phase; and which will not cause accumulation of toxic materials in the human food chain. Suspended particulate phase bioaccumulation testing is not required. These bioassays are to be conducted in accordance with procedures approved by EPA, or, in the case of dredged material, approved by EPA and the Corps of Engineers.

(c) *Appropriate sensitive marine organisms* means at least one species each representative of phytoplankton or zooplankton, crustacean or mollusk, and fish species chosen from among the most sensitive species documented in the scientific literature or accepted by EPA as being reliable test organisms to determine the anticipated impact of the wastes on the ecosystem at the disposal site. Bioassays, except on phytoplankton or zooplankton, shall be run for a minimum of 96 hours under temperature, salinity, and dissolved oxygen conditions representing the extremes of environmental stress at the disposal site. Bioassays on phytoplankton or zooplankton may be run for shorter periods of time as appropriate for the organisms tested at the discretion of EPA, or EPA and the Corps of Engineers, as the case may be.

(d) *Appropriate sensitive benthic marine organisms* means two or more species that together represent filter-feeding, deposit-feeding, and burrowing characteristics. These organisms shall be chosen from among the species that are most sensitive for each type they represent, and that are documented in the scientific literature and accepted by EPA as being reliable test organisms to