

2.2.9 Controllable Pitch Propellers, Thrusters, and Other Mechanical Equipment Subject to Immersion

Lubrication, and Wire Rope and Mechanical Equipment Subject to Immersion

Protective seals on controllable pitch propellers, azimuth thrusters, propulsion pumps, bearings, or any other oil-to-sea interface must be maintained in good condition.

All vessels must use an EAL in all oil to sea interfaces, unless technically infeasible.

"Environmentally acceptable lubricants" (EAL) are lubricants that are the least harmful as defined in Appendix A of this permit. For purposes of requirements related to EALs, technically infeasible means that no EAL products are approved for use in a given application that meet manufacturer specifications for that equipment. Products which meet some pre-lubricated (e.g., wire ropes) have no available alternatives manufactured with EALs; products meeting a manufacturer's specifications are not available within any port in which the vessel calls, or change over and use of a non-EAL must wait until the vessel's next drydocking.

If a vessel is unable to use an EAL, you must document in your recordkeeping documents consistent with Part 4.2 why you are unable to do so, and must report the use of a non-environmentally acceptable lubricant to EPA in your Annual Report. Use of an environmentally acceptable lubricant is not required if the lubricant is not harmful as defined in 40 CFR Part 110.

EPA recommends that all new build vessel operators endeavor to use seawater-based systems for their stern tube lubrication to minimize the use of lubricant oil in the marine environment.

Appendix A– Definitions

The following definitions apply to this permit. Terms not defined in this Appendix have the meaning given by 40 CFR §112.2.

"**Biodegradable**" means the following for purposes of this permit:

"**Biodegradable Polymer**" means a polymer.

"**Biodegradable Polymer**" means a polymer that is composed of carbon, hydrogen, oxygen, and nitrogen, and is capable of being broken down into carbon dioxide, water, and biomass by microorganisms under aerobic conditions.

"**Biodegradable Polymer**" means the total biodegradability of a polymer, as determined by the following:

"**Biodegradable**" means the following for purposes of this permit:

- a. Regarding environmentally acceptable lubricants and greases, "biodegradable" means "biodegradable" as defined in 40 CFR 112.2, and "biodegradable" means "biodegradable" as defined in 40 CFR 112.2, and "biodegradable" means "biodegradable" as defined in 40 CFR 112.2.

carbon production of at least 60 percent of the theoretical carbon dioxide, or consumption of at least 60 percent of the theoretical oxygen demand within 28 days. Acceptable test methods include Organization for Economic Co-operation and Development Test Guidelines 201, A, F, 296, and 310, ASTM 6966, ASTM D 7737, OCSPP Harmonized Guideline 855.3110, and International Organization for Standardization 14593:1999. For lubricant formulations, the 10% (w/w) organic formulation that need not meet the biodegradability requirements may be non-biodegradable (but not bioaccumulative) while the remainder must be inherently biodegradable. For grease formulations, the 25% (w/w) of the formulation need not meet the biodegradability requirements, but the constituent substances must either be inherently biodegradable or non-biodegradable, but may not be bioaccumulative. Acceptable test methods include those listed in the preceding paragraph.

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COC "Procedures" listed in 33 CFR, Part 3, § 3.300-3

under the 10% (w/w) organic formulation 10%

"10% (w/w) Organic Formulation" means the 10% (w/w) organic formulation that need not meet the biodegradability requirements.

under the 25% (w/w) organic formulation 25%

"25% (w/w) Organic Formulation" means the 25% (w/w) organic formulation that need not meet the biodegradability requirements.

under the 10% (w/w) organic formulation 10%

"10% (w/w) Organic Formulation" means the 10% (w/w) organic formulation that need not meet the biodegradability requirements.

(iii) all "Active Substance" or "Biocide" data (e.g., the full data package as submitted to the International Maritime Organization for approval) have all been made available to the US EPA.

"Discharge Incidental to the Normal Operation of a Vessel" means those discharges that are excluded from the NRD/ES permitting program by operation of 40 CFR 170.4.

brackish seawater (brine) produced as a by-product of the process used to generate freshwater from seawater. [source: 40 CFR §170.4(f)]

"Drydocking" for purposes of the VGP, means the next scheduled drydocking, consistent with the requirements of 46 CFR 31.10-21 (typically, at least every five years or sooner). In the context of ballast water implementation schedule, it means hauling out, or slipway for an examination of all accessible parts of the vessel or placing a vessel in a drydock of the vessel's underwater body and all the hull, fittings and does not include emergency drydocking and emergency hull repairs.

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means lubricants that are "biodegradable" and "non-cumulative" as defined in this permit. For purposes of the definitions of being an "Environmentally Acceptable Lubricant" the following labeling programs: Blue Angel, European Union Ecolabel, Nordic Ecolabel, and the Convention for the Protection of the North-East Atlantic.

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