

2.2.9 Controllable Pitch Propeller and Thruster Hydraulic Fluid and Other Oil-to-Sea Interfaces Including Lubrication Discharges from Paddle Wheel Propulsion, Stern Tubes, Thruster Bearings, Stabilizers, Rudder Bearings, Azimuth Thrusters, Propulsion Pod Lubrication, and Wire Rope and Mechanical Equipment Subject to Immersion

The protective seals on controllable pitch propellers, azimuth thrusters, propulsion pods, rudder bearings, or any other oil-to-sea interfaces must be maintained in good operating order to minimize the leaking of hydraulic oil or other oils. The vessel owner/operator must not discharge oil in quantities that may be harmful as defined in 40 CFR Part 110 from any oil-to-sea interface. If possible, maintenance activities on controllable pitch propellers, thrusters, and other oil-to-sea interfaces should be conducted when a vessel is in drydock.

Minimize maintenance activities on stern tube seals when a vessel is outside of drydock. If maintenance or emergency repair must occur on stern tubes or other oil-to-sea interfaces which have a potential to release oil in quantities that may be harmful as defined in 40 CFR Part 110, appropriate spill response equipment (e.g., oil booms) must be used to contain any oil leakage. Operators of the vessel must have ready access to spill response resources to clean up any oil spills.

After applying lubrication to wire rope and mechanical equipment subject to immersion, wire ropes, and other equipment must be thoroughly wiped down to remove excess lubricant unless doing so is deemed unsafe by the Master of the vessel.

All vessels must use an EAL in all oil to sea interfaces, unless technically infeasible. "Environmentally acceptable lubricants" means lubricants that are "biodegradable" and "minimally-toxic" and are "not bioaccumulative" 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 come pre-lubricated (e.g., wire ropes) have no available alternatives manufactured with EALs, products meeting a manufacturers specifications are not available within any port in which the vessel calls, or change over and use of an EAL must wait until the vessel's next drydocking.

If a vessel is unable to use an EAL, you must document in your recordkeeping documentation 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 does not authorize the discharge of any lubricant in a quantity that may be 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 eliminate the discharge of oil from these interfaces to the aquatic environment.

Appendix A– Definitions

The following definitions apply to this permit. Terms not defined in this Appendix have the meaning given by 40 CFR §122.2. When a defined term appears in a definition, the defined term is placed in quotation marks as an aid to readers.

“Active Substance” means a substance or organism, including a virus or a fungus, that has a general or specific action on or against harmful aquatic organisms and pathogens. [source: *BW Treaty Reg A-1(7)*]

“Alternative Management System” means the meaning given to ballast water treatment systems given by the U.S. Coast Guard under 33 CFR 151.2026.

“Appropriate Regional Office” means the regional office listed in Appendix B of the Permit responsible for the waters where the vessel spends the most time or is based in a home port.

“Aqueous Film-Forming Foam” means the firefighting foam and seawater mixture discharged during training, testing, or maintenance operations. [source: *40 C.F.R 1700.4*]

“Ballast Tank” means any tank or hold on a vessel used for carrying “ballast water,” whether or not the tank or hold was designed for that purpose [source: *33 CFR §151.2025*]

“Ballast Water Exchange” see “Exchange.”

“Ballast Water” means any water and suspended matter taken on board a vessel to control or maintain, trim, draught, stability, or stresses of the vessel, regardless of how it is carried. [source: *33 C.F.R 151.1504*]

“Ballast Water Capacity” means the total volumetric capacity of any tanks, spaces, or compartments for carrying, loading, or discharging “ballast water,” including any multi-use tanks, space or compartment designed to allow carriage of “ballast water.”

“Bilgewater” means the wastewater from a variety of sources that accumulates in the lowest part of the vessel (the bilge).

“Bioaccumulative” means the opposite of “Not Bioaccumulative”.

“Biocide” means a substance or organism, including a virus or a fungus, which is introduced or produced to kill or eliminate organisms to prevent biofouling, to prevent the transfer of invasive species, or to eliminate organisms as part of the ballast water treatment process.

“Biodegradable” means the following for purposes of the VGP:

- Regarding environmentally acceptable lubricants and greases, biodegradable means lubricant formulations that contain at least 90% (w/w (weight in weight concentration)) or grease formulations that contain at least 75% (w/w) of a constituent substance or constituent substances (only stated substances present above 0.10% shall be assessed) that each demonstrate either the removal of at least 70 percent of dissolved organic

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 301 A-F, 306, and 310, ASTM 5864, ASTM D-7373, OCSPP Harmonized Guideline 835.3110, and International Organization for Standardization 14593:1999. For lubricant formulations, the 10% (w/w) of the formulation that need not meet the above biodegradability requirements, up to 5% (w/w) may be nonbiodegradable (but not bioaccumulative) while the remainder must be inherently biodegradable. For grease formulations, the 25% (w/w) of the formulation that need not meet the above biodegradability requirement, the constituent substances may be either inherently biodegradable or non-biodegradable, but may not be bioaccumulative. Acceptable test methods to demonstrate inherent biodegradability include: OECD Test Guidelines 302C (>70% biodegradation after 28 days) or OECD Test Guidelines 301 A-F (>20% but <60% biodegradation after 28 days).

- Regarding cleaning products, biodegradable means products that demonstrate either the removal of at least 70 percent of dissolved organic 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 301 A-F, 306, and 310, and International Organization for Standardization 14593:1999.
- Regarding biocidal substances, biodegradable means a compound or mixture that yields 60 percent of theoretical maximum carbon dioxide and demonstrate a removal of at least 70 percent of dissolved organic carbon within 28 days as described in EPA 712-C-98-075 (OPPTS 835.3100 Aerobic Aquatic Biodegradation).

“Boat Engine Wet Exhaust” means the seawater that is mixed and discharged with small boat propulsion engine exhaust to cool the exhaust and quiet the engine. *[source: 40 C.F.R 1700.4]*

“Captain of the Port” (COTP) means the Coast Guard officer designated as the COTP, or a person designated by that officer, for the COTP zone covering the U.S. port of destination. These COTP zones are listed in 33 CFR Part 3. *[source: 33 CFR §151.2025]*

“Chain Locker Effluent” means the accumulated precipitation and seawater that is emptied from the compartment used to store the vessel’s anchor chain. *[source: 40 CFR §1700.4]*

“Coastal Exchange Zone” means an area greater than 50 nm from shore and greater than 200 meters in depth.

“Commercial Fishing Vessel” means any vessel which is documented under the laws of the United States or, if under five net tons, registered under the laws of any state, and used for commercial fishing or activities directly related to commercial fishing. *(source: modified from 50 CFR §296.2)*

“Commercial Vessel” means any “vessel” other than a “recreational vessel” or a vessel of the U.S. armed forces.

(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 were excluded from the NPDES permitting program by operation of 40 CFR §122.3(a) as in effect on September 29, 2008.

“Distillation and Reverse Osmosis Brine” means the concentrated seawater (brine) produced as a by-product of the processes used to generate freshwater from seawater. *[source: 40 CFR §1700.4]*

“Drydocking” or “next 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 of a vessel or placing a vessel in a drydock or slipway for an examination of all accessible parts of the vessel's underwater body and all through-hull fittings and does not include emergency drydocking and emergency hull repairs.

“Elevator Pit Effluent” means the liquid that accumulates in, and is discharged from, the sumps of elevator wells on vessels. *[source: 40 CFR §1700.4]*

“Environmentally Acceptable Lubricants” means lubricants that are “biodegradable” and “minimally-toxic,” and are “not bioaccumulative” as defined in this permit. For purposes of the VGP, products meeting the permit’s definitions of being an “Environmentally Acceptable Lubricant” include those labeled by the following labeling programs: Blue Angel, European Ecolabel, Nordic Swan, the Swedish Standards SS 155434 and 155470, Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) requirements, and EPA’s Design for the Environment (DfE).

“ETV Protocol” means EPA’s final protocol for verification of ballast water treatment systems published in September 2010 and subsequent revisions.

“Exchange” means to replace the water in a ballast tank using one of the following methods:

- “Empty/refill exchange” means to pump out the “ballast water” taken on in ports, estuarine, or territorial waters until the tank is empty, then refilling it with water from the “mid-ocean” or “coastal exchange zone” (as applicable); masters/operators should pump out as close to 100 percent of the “ballast water” as is safe to do so. *[modified from: 33 CFR §151.2025]*
- “Flow through exchange” means to flush out “ballast water” by pumping in water from the “mid-ocean” or “coastal exchange zone” (as applicable) into the bottom of the tank and continuously overflowing the tank from the top until three full volumes of water has been changed to minimize the number of original organisms remaining in the tank.

“Exclusive Economic Zone” (EEZ) means the area established by Presidential Proclamation Number 5030, dated March 10, 1983 (48 FR 10605) which extends from the base line of the