

2013 VGP Requirements for EALs

According to the 2013 Vessel General Permit (VGP), effective 19 December 2013, all vessels (not only new vessels) must use environmentally acceptable lubricants (EALs) in all oil-to-sea interfaces, unless technically not feasible. All vessels were required to be in compliance by the effective date. The VGP does not contain provisions for exemptions for this requirement. Shipowners must document in their Annual Reports the specific EALs used for each oil-to-sea interface or reasons why an EAL was not used. Valid reasons for stating that the use of an EAL is technically infeasible include waiting for the next drydock and EAL products are not available for a given application.

It should be noted that use of an EAL does not prevent a violation of the VGP. The vessel owner and/or operator must not discharge oil (including EALs) in quantities that may be harmful to the environment as defined in 40 CFR Part 110.

Oil-to-Sea Interfaces

When determining if a piece of equipment is required to use an EAL, it is important to determine if an oil-to-sea interface exists. Section 2.2.9 of the 2013 VGP identifies oil-to-sea interfaces as:

- Controllable pitch propeller
- Thrusters
- Paddle wheel propulsion
- Stern tubes
- Thruster bearings
- Stabilizers
- Rudder bearings (excluding head bearing)
- Azimuth thrusters
- Propulsion pod lubrication
- Submersible recovery crane wire rope and others that may be normally submerged
- Mechanical equipment subject to immersion (including dredges and grabs)

Stern Tube Seals

A significant source of lubricants dispersed into the sea occurs from stern tube seals. Air seal bladders and air gap seals have become attractive to shipowners for protection. However, the use of a double barrier does not preclude the US Environmental Protection Agency's (EPA's) requirement

to use an EAL. The EPA states, if any chance of oil leakage exists, an EAL must be used because the oil-to-sea interface is still present and any leakage would be a VGP violation for failing to use an EAL, where technically feasible.

ABS asked manufacturers of air seals and double barriers to confirm that leakages would not occur, and to present failure modes for their equipment to determine if EALs are required. As of the date of this publication, Wärtsilä is the only manufacturer of air seals that clearly states that EALs are not required.

The 5 March 2014 Wärtsilä Service Letter clearly states that an EAL is not required for the Wärtsilä Airguard and Oceanguard seals because the "air chamber/void space within the seal captures any water or oil leakage, which is transferred to inboard tanks for monitoring and further treatment." The Wärtsilä statement is sufficient evidence that a vessel is not to be required to use an EAL. Ships should maintain a copy of the Wärtsilä statement on board. At this time, other vendor statements lack details to determine if EALs are required.

The EPA also recommends that all newbuild vessels be designed with seawater-based systems for stern tube lubrication to eliminate the discharge of oil from these interfaces to the aquatic environment.



Above Deck Equipment

EALs are only mandated for use in the previously identified oil-to-sea interfaces. Vessels are not required to change to an EAL for above deck equipment, but EPA strongly encourages the use.

What is an EAL?

The 2013 VGP defines EALS as lubricants that are “biodegradable” and “minimally-toxic” and are “not bioaccumulative.” The EPA identifies EALS as products 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 the EPA’s Design for the Environment (DfE).

If the reported EAL is not labeled by one of the identified programs, the shipowner or manager should request verification from the lubricant vendor that the product meets the criteria in the VGP definitions for biodegradable, minimally-toxic, and non-bioaccumulative.

Please note that the EPA does not have a Type Approval program for equipment or EALs. However, the EPA’s Design for the Environment program intends to provide labeling certification of environmentally acceptable lubricants to assist vessel operators in selecting identified EALs. At this time, the EPA DfE program has not listed any EALs.

Technically Infeasible

EPA defines “technically infeasible” for EALs as:

- No EAL product is 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 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 an EAL must wait until the vessel’s next drydocking.



Necessary Documentation

The vessel’s Annual Report must identify the complete brand names of EALs used in the various oil-to-sea interfaces. The vessel should also maintain a copy of labeling program certificates and technical data sheets (i.e., material safety data sheets (MSDS)) for each EAL. The vessel’s log should record dates and locations of any maintenance of controllable pitch propellers that occurs while the vessel is in waters subject to the VGP.

If an EAL was not used in a particular oil-to-sea interface, the vessel’s Annual Report must:

- Report the use of a non-EAL;
- List the specific reason for not using an EAL; and
- Provide any documentation supporting the reason for not using an EAL.

EPA has identified the following reasons for change to an EAL being technically infeasible:

- No EALs are approved for use that meet manufacturer’s specifications for a specific piece of equipment;
- Change to an EAL requires a drydocking; or
- No EAL is available within the port of call for a vessel.

ABS highly recommends that statements are obtained from equipment vendors supporting the reported reason. Many vendors have supplied information sheets stating EALs are incompatible with specific components or change to an EAL requires a drydocking. If a drydocking is required, the vessel’s Annual Report should state that drydocking is required and identify the next drydocking date.

EPA has stated that a classification society may deem an EAL inappropriate for a particular use. At present, there are no ABS Rules prohibiting the use of EALs.

Vessel owners and operators need to be cognizant that the VGP also requires recording in the vessel’s official logbook of any emergencies requiring discharges and reporting in the Annual Report of any noncompliance with the VGP requirements.

Additional Best Management Practices

EPA has also identified the following best practices management practices for oil-to-sea interfaces:

- Maintenance activities should be conducted when a vessel is in drydock
- Any maintenance or emergency repairs must use appropriate spill response equipment (e.g., oil booms)
- Vessel operators must have ready access to spill response resources to clean up any spills
- Any excess lubricant must be thoroughly wiped down

ABS Assistance

ABS is able to support vessel owners and operators by documenting and verifying EALs used in oil-to-sea interfaces. Please contact your local ABS office for scheduling the assistance.