

Chain Locker Effluent Discharge Summary

Description of Discharge

How is this discharge generated? This discharge consists of accumulated precipitation and seawater that is occasionally emptied from the compartment used to store the vessel's anchor chain. The chain locker is a compartment used to store anchor chain aboard vessels. Navy policy requires that the anchor chain, appendages, and anchor on Navy surface vessels be washed down with seawater during retrieval to prevent onboard accumulation of sediment. During washdown, some water adheres to the chain and is brought into the chain locker as the chain is stored. The chain locker sump accumulates the residual water and debris that drains from the chain following anchor chain washdown and retrieval, or washes into the chain locker during heavy weather. Water accumulating in the chain locker sump is removed by a drainage eductor powered by the shipboard firemain system.

Which vessels generate this discharge? All Armed Forces vessels housing their anchor chains in lockers, except submarines, can generate this discharge. Since submarine chain lockers are always open to the sea, water is always present in the chain locker and there is no "collected" water to be discharged as effluent.

How often and where is this discharge generated? Navy policy prohibits discharging chain locker effluent within 12 n.m. Other vessels of the Armed Forces are currently authorized to discharge chain locker effluent within 12 n.m.; however, most Armed Forces vessels also observe the 12 n.m. discharge prohibition. A recent review of practices on several Navy ships found no water accumulation in the chain locker sump, and the ships' crew confirmed that discharges of chain locker effluent occur outside 12 n.m.

Analysis

Nature of Discharge: In addition to water, materials collecting in the chain locker sump can include paint chips, rust, grease, and other debris. Chain locker effluent may contain organic and inorganic compounds associated with this debris, as well as metals from the sump and from sacrificial anodes installed in the chain locker to provide cathodic protection. If the anchor chain washdown is not performed and the chain locker effluent is subsequently discharged in a different port, the discharge could potentially transport nonindigenous species. Discharge volume will vary depending upon the frequency of anchoring operations, the number of anchors used, and the depth of water (which determines the amount of chain that will be lowered into the water).

Given the manner in which water collects in the chain locker sump and remains there for extended periods of time, it is possible that the discharge could contain elevated levels of metals at concentrations exceeding State water quality criteria. The following table lists the concentration ranges of the constituents that may exceed acute Federal criteria or State acute water quality criteria.

Constituent	Concentration (µg/L)
<i>Copper</i>	
Dissolved	BDL - 150
Total	34.2 - 143
<i>Iron</i>	
Total	95.4 - 911
<i>Nickel</i>	
Dissolved	BDL - 38.9
Total	BDL - 52.1

BDL = below detection limit

Chain Locker Effluent Discharge Summary (continued)

Discussion and Discharge Determination

Discussion: Given the small volume of the discharge and the infrequency of anchoring operations, it is unlikely that discharges of chain locker effluent would adversely impact the environment. Nevertheless, the Navy and other Armed Forces already have management practices in place for most vessels requiring anchors and anchor chains to be washed down with seawater during retrieval, and prohibiting the discharge of chain locker effluent until beyond 12 n.m. from shore. DoD has chosen as a matter of policy to continue prohibiting the discharge of chain locker effluent within 12 n.m. from shore. This prohibition, while not considered necessary to mitigate an existing or potential adverse impact, will eliminate the possibility of discharging into coastal waters any metals, other contaminants, or nonindigenous aquatic species that may have accumulated in the chain locker sump. EPA and DoD have determined that the existing management practices demonstrate that it is reasonable and practicable to require use of a MPCD for chain locker effluent.

Determination: A marine pollution control device is required.