

Photographic Laboratory Drains Discharge Summary

Description of Discharge

How is this discharge generated? This intermittent discharge is laboratory wastewater resulting from processing photographic film. Typical liquid wastes from these activities include spent film processing chemical developers, fixer-bath solutions and film rinse water.

Which vessels generate this discharge? Navy ship classes such as aircraft carriers, amphibious assault ships, and submarine tenders have photographic laboratory facilities, including color, black-and-white and x-ray photographic processors. The Coast Guard has two icebreakers with photographic and x-ray processing capabilities. The MSC has two vessels that have photographic processing equipment onboard, but the equipment normally is not operated in U.S. waters. Army, Air Force, and Marine Corps vessels do not use photographic equipment aboard their vessels and therefore do not produce this discharge.

How often and where is this discharge generated? Photographic laboratory wastes may be generated within and beyond 12 n.m. from shore, although current practice is to collect and hold the waste onboard within 12 n.m. The volume and frequency of the waste generation varies with a vessel's photographic processing capabilities, equipment, and operational objectives.

Analysis

Nature of Discharge: Expected constituents in photographic laboratory wastes include acetic acid, aluminum sulfate, ammonia, boric acid, ethylene glycol, sulfuric acid, sodium acetate, sodium chloride, ammonium bromide, aluminum sulfate, and silver. Concentrations of silver can exceed acute Federal criteria and State acute water quality criteria; however, the existing data are insufficient to determine whether drainage from shipboard photographic laboratories has the potential to cause adverse environmental effects.

Discussion and Discharge Determination

Discussion: The Navy has adopted guidance to control photographic laboratory drains, including containerizing for onshore disposal all photographic processing wastes generated within 12 n.m., and is transitioning to digital photographic systems. The current handling practices and the availability of digital photographic systems demonstrates that MPCDs are available to mitigate potential adverse effects, if any, from photographic laboratory drains.

Determination: A marine pollution control device is required.