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SUBJ/HAZARDS AND GUIDANCE ASSOCIATED WITH CADMIUM BLOOM//

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REF/B/DOC//NAVSEA/01APR2026/NOTAL//
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REF/E/DOC/OPNAV/18JUN2024//
REF/F/DOC/OPNAV/27SEP2021//
NARR/REF A IS NAVSEA SEA05 FLEET ADVISORY 0004-2026, HAZARDS AND GUIDANCE ASSOCIATED WITH CADMIUM BLOOM. REF B IS TECHNICAL PUBLICATION NAVSEA HAZARDOUS MATERIAL AVOIDANCE PROCESS. REF C IS CODE OF FEDERAL REGULATIONS TITLE 29, CHAP XVII OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION PART 1910.1027 CADMIUM. REF D IS OPNAVINST 5100.19F, NAVY SAFETY AND OCCUPATIONAL HEALTH PROGRAM MANUAL FOR FORCES AFLOAT. REF E IS OPNAV M5100.23 CH-3, NAVY SAFETY AND OCCUPATIONAL HEALTH MANUAL. REF F IS OPNAV M5102.1, NAVY AND MARINE CORPS SAFETY INVESTIGATION AND REPORTING MANUAL.//

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GENTEXT/REMARKS/1. This ALSAFE promotes widest dissemination of ref (a), which NAVSEA issued to provide initial guidance on the hazards, identification, and required actions associated with cadmium bloom on navy
vessels. While this message summarizes key provisions, all units should review ref (a) for detailed guidance and technical information. The management of this risk highlights an opportunity to strengthen communication
of risk with potential impact across multiple warfare disciplines.

2. BACKGROUND: Cadmium is extensively used as a corrosion-resistant plating
on metal substrates. Cadmium plating is often utilized on electrical connectors,
electrical connector metal caps, rotary switches, and threaded fasteners due to
its exceptional corrosion protective properties. Cadmium plating in marine
environments reacts with oxygen, moisture, and organic acids to form cadmium

salts and cadmium carbonate commonly referred to as cadmium bloom. Cadmium bloom appears as a white crystalline powder precipitated onto the metal substrate.

3. HAZARD: Cadmium and its compounds are OSHA-regulated carcinogens per ref (c). Long-term exposure can increase the risk of kidney damage as well as lung and prostate cancer while acute contact may result in local skin or eye irritation. The primary exposure routes are inhalation of cadmium dust or fumes and incidental ingestion of dust from contaminated hands. Skin absorption of cadmium has been determined to be negligible.

4. SUMMARY OF ACTIONS: All safety officers, supervisors, and personnel who have the potential to come in contact with electrical connectors, metal rotary switches, metal electrical caps, and threaded fasteners during routine duties should familiarize themselves with ref (a) which provides the following:

A. Required training to be completed within 30 days.
B. Tools to identify potential cadmium blooms.
C. Requirements to involve medical and/or industrial hygienist for exposure assessment prior to abatement.
D. Required hazard mitigations and abatement actions.
E. Required personal protective equipment and disposal methods.
F. Personal hygiene requirements.

5. Email NAVSAFECOM Afloat collective for all safety related questions: navsafecom_afloat30_fs@us.navy.mil. Contact the NAVSEA05 for technical questions and direct requests for copies of ref (a) or questions related to training and non-safety related reporting requirement to your TYCOM.

6. SAFETY REPORTING: Commands are encouraged to submit a Hazard Report (HAZREP) for all discoveries of cadmium blooms, to include IH sampling data if conducted. Per reference (f), all HAZREPS must be submitted via the Hazard Management Module in Risk Management Information (RMI). Hazard reporting provides a means for units to report a real or potentially hazardous condition before it results in a mishap. Hazard reporting is an important part of the DOW mishap prevention program because it alerts NAVSAFECOM, CMC (SD) and safety officers and managers of hazardous conditions where risk is elevated so that

controls can be devised and implemented before a mishap occurs. This approach
to managing safety and risk aligns with an important goal of the Navy Safety
Management System to transition from reactive safety and risk management to
proactive safety and risk management. Hazard reporting also facilitates tracking,
trending and widespread dissemination of hazard data to inform across all
naval communities.

7. Additional guidance for cadmium blooms will be incorporated into future
revisions of references (d) and (e).//
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