

FY2010 SECRETARY OF THE NAVY ENVIRONMENTAL QUALITY AWARD NOMINATION
NARRATIVE FOR USS MOMSEN (DDG 92)

1. Introduction

a. USS MOMSEN (DDG 92) is the 41st ARLEIGH BURKE-class guided missile destroyer, designed to conduct prompt and sustained combat operations at sea. With its AEGIS Combat System, MOMSEN is equipped to operate offensively and defensively in a high-density, multi-threat environment as an integral member of a Carrier, Amphibious, or Surface Strike Group. Despite this considerable firepower, MOMSEN is capable of "soft" power missions for diplomatic engagement as a representative of the United States, a deterrent against aggression or illegal activity, or in humanitarian assistance and disaster relief response.

b. MOMSEN is part of Destroyer Squadron NINE, based out of the Pacific Northwest homeport of Naval Station Everett, Washington. She boasts an efficient crew size of 290 Sailors and Officers.

2. Background

a. As a resident of the Pacific Northwest, one of the Continental United States' most eco-friendly communities, MOMSEN continuously sets the standard for environmental stewardship. Specific programs and environmental challenges met and overcome by MOMSEN over the past two years include the refurbishment of the Oil/Water Separator, creation of a proactive Environmental Protection plan, implementation of active recycling and refuse sorting techniques, the creation of a hull-specific fuel burn tracking system, and efforts to mitigate the dangers inherent in inport refueling operations.

b. Prior to the Material Inspection conducted by the Board of Inspection and Survey (INSURV) in November 2009, MOMSEN had an inoperable Oil/Water Separator (OWS). OWS is the primary method of ensuring that non-sewage liquid discharges are scrubbed of pollutants, namely lubricating and fuel oils. As any ship at sea will suffer from the occasional intrusion of sea water into the bilge, the collection of condensate on the deck, and the inadvertent seepage of oils, it is imperative that ships maintain the OWS in an operable state - reducing the discharge of these harmful byproducts into the coastal waterways and open ocean, and protecting our maritime environment. Unfortunately, most naval warships and auxiliaries are not always able to maintain this system in good repair, and it is known to be a Fleet-wide "at-risk" system. MOMSEN undertook the daunting task of a complete overhaul of the OWS system, aiming to be the first warship to restore this pivotal environmental protection item to operation in the Pacific Fleet. Over 685 man-hours were expended by ship's force in restoring the OWS to full operability by November 2009, without any additional cost to the Government. The Environmental Protection (EP) program was revitalized, increasing the periodicity of crew training on environmental protection and spill response to quarterly, and the introduction of monthly duty section training on eco-friendly

procedures for work and home. MOMSEN was, in fact, the first destroyer/cruiser to have an operational OWS and a passing Environmental Protection Program, as graded by the INSURV assessors, since 2007 - a key fact that underscores the commitment to environmental stewardship and excellence demonstrated by the "Lucky Swedes" of MOMSEN.

c. Although the INSURV assessment was a major validation for the environmental team in MOMSEN, the innovative approach to EP did not stop there. An aggressive refuse sorting program was implemented, installing over 50 new trash bins across the ship to allow for separation of trash and recycling, both inport and at sea. The EP team continuously evaluates space requirements to ensure adequate stowage is available, and have open communication with the entire crew on how to reduce individual trash output.

d. The largest impact of a modern warship on the environment is, quite simply, the carbon footprint left by the use of fossil fuels. MOMSEN is an energy leader in reducing fuel consumption and operating the plant in the most efficient configurations, as tactical situations allow. Command leadership have pioneered the use of "drift operations" during slow pace underway assignments, securing the main engines and allowing the currents to push MOMSEN as required, thereby reducing fuel consumption by as much as 10 percent per day. An offshoot of this policy was the implementation of standardized single generator operations; as long as the electrical plant can support the required output, MOMSEN steams on one generator, saving 500 gallons of fuel every hour. Furthermore, an on-going evaluation of MOMSEN-specific fuel burn rates, known as the "Lafevor List," has been undertaken by the Oil Lab and Bridge watch teams to closely track and evaluate fuel consumption given specific plant line-ups. With this list, MOMSEN intends to create hull-specific guidance on plant operation given tactical and operational requirements to ensure that the carbon footprint is as small as feasible - protecting both the Republic and our environment.

3. Organization

a. MOMSEN's environmental stewardship is led by the Commanding Officer, who appoints the Hazardous Materials (HM) Coordinator and Afloat Environmental Protection Coordinator (AEPC) to run specific portions of this mission on his behalf. The Captain supervises the implementation of the Protective Measures Assessment Protocol (PMAP) and SONAR Positional Report System (SPORTS) into the decision-making matrix regarding use of active SONAR and live fire exercises, ensuring that marine mammals are well outside of the danger areas associated with such activities.

b. Along with the Captain, the Engineer Officer is a key member of the EP team, and serves as the Command's Environmental Protection Officer (EPO). As such, s/he: (1) directly ensures sewage systems are certified, properly operated, inspected and maintained; (2) that

engines are maintained in accordance with local air pollution emission and HAZMAT regulations; (3) that the Engineering Log reflects any direct discharge of oily waste; (4) prepares Oil and Hazardous Substance (OHS) Spill Contingency Plans, and ensures that all personnel are trained and drilled on OHS SCP; and (5) ensures that medical waste and HAZMAT is disposed of properly.

c. As the primary assistant to the Commanding Officer, the AEPC directly administers the Environmental Program by ensuring all personnel working with pollution control systems, oil pollution systems, HAZMAT, and sewage systems are properly trained, attend appropriate schools, and are fully aware of associated documentation/regulations.

3. Program Summary

a. MOMSEN is fully compliant with Chapter 22 and Appendix K of OPNAVINST 5090.1C (Environmental Program), and abides by the following environmental guidance, directives, and plans:

- (1) Hazardous Material Control & Management (02 Apr 09)
- (2) Oil Pollution Abatement (28 Oct 09)
- (3) OHS Spill Contingency Plans (12 Mar 08)
- (4) Plastic and Solid Waste Control (31 May 08)

b. The "Lucky Swede" EP Program is a model of excellence, founded upon procedural compliance and adherence to governing doctrine. The Program focuses on OHS Pollution Abatement, waste management and maritime life protection.

c. OHS Pollution Abatement is a key component of a vigorous and productive EP Program. MOMSEN has demonstrated exceptional environmental custodianship over the applicable period through the prevention of oil spills/inadvertent discharge. The EP team employs every effort to prevent spills of oil or hazardous substance, and conducts monthly inspections to ensure proper equipment is onboard - and easily accessible - in case of a spill. Due to the relatively remote location of Everett, Washington, and a lack of a duty oiler in the Pacific Northwest, MOMSEN leads the Fleet in inport refueling operations. Such fueling operations, to include refueling, defueling, and internal fuel transfers, always incorporate proper pollution prevention measures. For example, refueling operations are only conducted during working hours, utilizing fully qualified and well-trained fueling details. Advanced coordination between shore facilities and the shipboard organization are seamless, and MOMSEN employs compensating water barges to pump tank ballast water into during fueling operations, minimizing the likelihood of allowing an oil spill. MOMSEN is known to be the regional expert, and the local authorities, from the Regional Support Organization to Port Operations in Everett, refer all visiting ships refueling in the Pacific Northwest to the "Lucky Swede" Oil Lab for advice and assistance in operations.

d. HAZMAT/Hazardous Waste transfers are completed expeditiously and are directed to the proper activity for disposal. Program managers do not allow waste to be left on the pier, introduced into the general solid waste stream, or disposed of over the side. In addition, Medical Waste, except under emergency conditions, is not discharged overboard. The Medical Department segregates infectious waste from non-infectious waste prior to entering disposal containers, and shipboard authorities ensure that infectious waste is turned over to a Hazardous Waste Accumulation Facility. Solid Waste disposal is sorted by type, and maximum use of on-base recycling facilities is employed. Sewage, Non-Oily Wastewater/Graywater Discharge is not pumped over the side, but is retained onboard until properly aligned for disposal ashore. MOMSEN has had no incidents of oil, oily waste, wastewater, or otherwise environmentally unsound discharge over the side during the 2009-2010, period.

e. The protection of Marine Mammals is of paramount importance to the leadership of MOMSEN, and all efforts are made to ensure that ship activities do not deliberately harass, or cause inadvertent interactions with, marine mammals. As such, the mandatory, and aggressive, employment of SPORTS and PMAP prior to active SONAR or gunnery exercises is required.

4. Accomplishments

a. The most outstanding program features of the past two years are the repair of the OWS system, the sustained excellence of the HAZMAT Program, and the creation of the "Lafevor List." As noted above, the fact that MOMSEN has one of the few operational OWS systems in the Fleet is testament to the dedication of the Command and the importance of the EP Program. Furthermore, the HAZMAT Program has been consistently praised by ATG PACNORWEST as the beacon of excellence in the region, and was highly praised by ATG San Diego during the 2010 Supply Management Certification. The fact that MOMSEN never improperly disposes of HAZMAT or hazardous waste, despite the nature of her employment, speaks volumes about the dedication of the crew to the environment. Finally, the "Lafevor List" is an unprecedented step forward in reducing fossil fuel use and emissions, making MOMSEN the most carbon-neutral ship possible.

b. In terms of air pollution abatement, MOMSEN conducts "drift operations" in areas not requiring excessive maneuverability, securing main engines to minimize emissions, as safety of navigation permits. Even when maneuverability is required, Bridge watchstanders favor the use of trail-shaft propulsion plant configuration when transit speeds allow, ensuring the maximum fuel efficient alignment is in place. MOMSEN employs the judicious use of single generator operations when loitering, transiting, and in ports where shore electrical power is not available. This policy has significantly reduced gas turbine generator emissions and fuel burn. Engineers closely monitor air conditioning and sea water service system loads, maintaining only minimum equipment in operation. The reduced combat systems cooling

load results in fewer air conditioning units, even in hot/humid climates. This allows MOMSEN to operate on one unit instead of two, and two seawater service pumps instead of three - a substantial improvement over baseline usage.

c. Water pollution control is maintained through the Engineer's Standing Orders and Commanding Officer's Temporary Standing Orders. By employing periodic sewage storage flushing procedures, MOMSEN reduces the amount of foam produced by the Vacuum Collection/Holding systems, thereby mitigating the risk of accidental overboard discharge of sewage inport. In terms of oily waste, all bilge water is processed through the OWS system to ensure no oil, or oil-like substance, is pumped overboard. The installed OWS (and associated Oil Content Monitor) is fully operable and certified (certified on 14 Jul 10).

d. MOMSEN's solid waste management and resource recovery models are undergoing continuous evaluation to ensure maximum coverage and impact. The crew is conscientious regarding the sorting of refuse and the proper disposal method. HAZMAT/Hazardous Waste Management mandates that all HAZMAT be stored in approved, and periodically inspected, containers, and that all HAZMAT is issued and tracked by the HAZMAT Custodian via receipt. Division Officers are actively engaged in the review and certification of HAZMAT issuance and stowage.

e. In essence, MOMSEN strictly adheres to applicable regulatory requirements by initiating actions to conserve natural resources, protect historical and cultural properties, and prevent, control, and eliminate discharges that would create pollution. MOMSEN is committed to setting the standard for environmental excellence and leadership in all present and future operations. MOMSEN continues to "Rise Above" to set the standard of environmental protection excellence throughout the Pacific Fleet.