

CY2010 SECRETARY OF THE NAVY ENVIRONMENTAL QUALITY AWARD NOMINATION
NARRATIVE FOR USS STERETT (DDG-104)

USS STERETT (DDG 104) is one of the Navy's newest ARLEIGH BURKE Class Destroyer commissioned in August 2008 and homeported in San Diego, California. STERETT is manned with 300 Officers and crew. The mission of STERETT is to conduct prompt and sustained combat operations at sea independently or in direct support of a Carrier Strike Group or an Expeditionary Strike Group. STERETT is currently part of CSG-9 with the USS ABRAHAM LINCOLN strike group.

1. Background

1.1 Environmental Challenges and Successes. STERETT maintains the highest environmental protection performance in the face of an increasingly complex landscape of environmental protection challenges. Specific examples include:

a. In preparation for her maiden deployment, STERETT invited ATG onboard to conduct a fueling LTT. ATG was thoroughly impressed by STERETT'S performance, stating that she *"was well above the fleet average."* STERETT completed 11 underway replenishments in 2010, refueling over 1.6 million gallons of diesel fuel with zero mishaps or spills.

b. During COMPTUEX, STERETT'S PMAP and SPORTS programs were acknowledged for their suburb level of detail. A Naval Mine and Anti-Submarine Warfare Command (NMAWC) representative said that *"STERETT's marine mammal log was one of the best [he had] ever seen."* The SPORTS program coordinator was recognized by Rear Admiral Guadagnini with a Flag Letter of Commendation for STERETT'S exemplary ASW data collection and Marine Mammal logs. STERETT meticulously documented the frequent sightings of marine mammals and adjusted operations according.

c. In the past two years, STERETT established its first HAZMINCEN, creating instructions and procedures for HAZMAT, then inventorying and onloading over 2,750 items into flammable issue lockers. All 2,750 items, totaling over \$129,000 of HAZMAT, were then offloaded into lockers during a yard period, and finally reloaded after the yard period - with zero discrepancies. STERETT runs a HAZMAT program that follows all NAVOSH requirements and works diligently to reduce waste.

1.2 Organization and Staffing. Environmental Protection is integrated into the shipboard Safety Council. STERETT maintains a designated Afloat Environmental Protection Coordinator, a Hazardous Material/Waste Coordinator and Assistant, a Marine Mammal Awareness Officer, an Ozone Depleting Substance Program Manager, a Plastics Waste Control Coordinator, and a four-member Environmental Compliance Board. In addition, the Main Propulsion Assistant serves as the Fuel

and Lube Oil Quality Manager. All coordinators work in conjunction with Divisional Safety Petty Officers concerning training and implementation of Environmental Protection practices.

1.3 Environmental Guidance

a. Environmental Protection Program (STERETTINST 5090.1A) - Updated 09JUL09, reviewed annually.

b. Plastic and Solid Waste Management Control Program (STERETTINST 5090.4) - Updated 05AUG09, reviewed annually.

c. Oil Spill Contingency Plan (STERETTINST 5090.2A) - Updated 11AUG09, reviewed annually.

d. Hazardous Material Control and Management (HMC&M) Program (STERETTINST 5090.5A) - Updated 02DEC10, reviewed annually.

e. Hazardous Material Minimization Center (HAZMINCEN) Standard Operating Procedure (STERETTINST 5101.1) - Updated 02DEC10, reviewed annually.

f. Hazardous Material (HM) Spill Contingency Plan (STERETTINST 5090.3) - Updated 02DEC10, reviewed annually.

g. Ozone Depleting Substances (STERETTINST 5090.7) - Updated 02DEC10, reviewed annually.

h. OPNAVINST 5100.19E, Navy Occupational Safety and Health Program Manual for Forces Afloat (Vols I, II & III).

i. OPNAVINST 5090.1C CH 19 Environmental and Natural Resource Program Manual.

2. Program Summary. Environmental Protection programs are reviewed and amended as necessary to fulfill requirements stated in OPNAVINST 5090.1B CH 19 and Appendix K. All watchstanders who operate sewage collection and transfer, oily waste, air conditioning and refrigeration, and plastic waste processing systems have completed the required qualifications, schools, and/or Computer Based Training (CBT). Training on Environmental Protection is integrated into the Command Indoctrination Program and all inport Duty Sections receive annual instruction on and conduct an Oil/Hazardous Material Spill response drill. STERETT attended the Afloat Environmental Awareness and Response Training (AEART) course on 28 SEP 10.

3. Accomplishments.

3.1 Air Pollution Control. Major emission control measures have been implemented and maintained to ensure that STERETT minimizes the total amount of airborne pollutants and carefully monitors for

leakages. STERETT has maintained leakage records since prior to her commissioning.

a. Engine emissions. An aggressive operation and maintenance plan for Gas Turbine Main Engines and Gas Turbine Generators ensures the most efficient operation and minimal fuel usage. Fuel conservation curves are posted at each Shaft Control Unit, in Central Control Station, and in the Pilot House. STERETT recently revised the operating curves with assistance of NAVSEA Incentivized Energy Conservation (I-ENCON), adding to the fidelity of the data and providing command leadership the data to make more informed decisions regarding best fuel economy. Energy conservation is routinely stressed, with a specific emphasis on reducing main propulsion engine requirements whenever feasible.

b. Refrigerant Use. All five of STERETT's air conditioning plants and both refrigeration plants utilize R-134A refrigerant—a more environmentally safe and ozone friendly substance than R-12 refrigerant. With R-134A, STERETT neither produced nor released harmful Chlorofluorocarbons (CFCs) into the atmosphere. STERETT has three Air Conditioning and Refrigeration technicians onboard, each certified by the Environmental Protection Agency, ensuring that all proper procedures are followed when handling refrigerant. STERETT maintains state-of-the-art Parasense refrigerant leak detector monitors on the refrigeration units as well as in two of the auxiliary spaces that house the majority of the Air Conditioning plants. STERETT had zero accidental or unintentional ventings of refrigerant in both FY09 and FY10.

c. Firefighting Agents. STERETT maintains a stringent preventative maintenance policy regarding standard firefighting agents carbon dioxide (CO₂) and Halon 1301. Quarterly maintenance is accomplished to ensure CO₂ and Halon canisters are properly maintained and operated and ensure any discrepancies that may cause the equipment to malfunction or leak are identified and corrected, leading to zero leaks in FY10.

3.2 Water Pollution Control. STERETT maintains environmental protection standards that are more strict than those outlined in Navy wide instructions. Oily water run through the oil/water separator must have less than 12 ppm oil prior to discharging, a full 20% less than the Navy-wide standard of 15 ppm.



STERETT is connected to the USS ABRAHAM LINCOLN (CVN 72) during an underway replenishment. STERETT conducted 11 UNREPS to date in 2010 with zero spills. During this time, 1.6 million gallons of fuel were onboard.

a. Special care and consideration is taken in every fueling evolution. All watchstanders are trained prior to conducting each evolution to ensure pre-planned responses are known and rehearsed if a fuel spill does occur. The Engineering Officer briefs the Commanding Officer on system alignment and fuel transfer procedures to facilitate situational awareness throughout the ship. Over the past twelve months, STERETT received over 1.6 million gallons of fuel without incident.

b. The standards for pollution control are dictated by the Commanding Officer's Standing Orders which meet and exceed Navy standards. Minimum discharge ranges are clearly stated and the Commanding Officer's approval is required for any type of overboard discharge. All Officers of the Deck are well versed in proper disposal limits for sewage, trash, garbage, and medical waste.

c. Sewage System Management. The Vacuum, Collecting, Holding and Transfer (VCHT) System is operated in accordance with current class advisory guidelines. The system utilizes potable water as the flushing agent rather than seawater to reduce corrosion and to minimize the possibility of a hydrogen sulfide casualty.

d. Spill Prevention/Response. During the reporting period, STERETT recorded zero fuel spill incidents. Strict EOSS compliance combined with the Five Step ORM Risk Process are standard for every fueling evolution. Over the past twelve months, STERETT safely conducted 11 underway refueling operations receiving over 1.6 million gallons of fuel. STERETT recorded zero fuel spills in 2010. STERETT maintains Oil Spill Containment Kits "at the ready" each time a fueling evolution takes place. Fuel system alignment is independently verified utilizing EOSS procedures and checklists by the Engineer Officer, Main Propulsion Assistant, and Ship's Oil King. Junior officers frequently accompany the Engineer Officer on alignment walkthroughs in order to provide yet another pair of eyes and learn the proper alignment for their EOOW qualifications. STERETT completed a fueling LTT in September of 2010 to give watchstanders refresher training prior to deployment. The program was positively evaluated by ATG, who stated that STERETT's participation was *"very commendable,"* that the Oil King's *"knowledge of the system and administrative process was crucial to the success of the LTT,"* and that STERETT is *"above fleet average."*

e. Oily Waste Management. STERETT is equipped with an oily water separator that removes oil from bilge water and fluid in the oily waste holding tank. All bilge water, regardless of oil or fuel content is pumped to the oily waste holding tanks for processing. In the past year, STERETT transferred 9,863 gallons of oily waste and 5000 gallons of gas turbine waste to shore with zero mishaps or spills.

3.3. Solid Waste Management. STERETT is equipped with two Plastic Waste Processors, a plastic shredder unit, a glass/metal shredder unit and a pulper unit. STERETT separates all trash into paper, plastic, and metals. All biodegradable trash is disposed of through the pulper unit and only when outside 12 nautical miles from land when. STERETT makes every attempt to lower the amount of waste produced, including adjusting the amount of food prepared to better match the crew's appetite and eliminate unnecessary food waste, and re-use food cans for paint buckets.

3.4. Hazardous Material (HAZMAT)/Hazardous Waste Management. STERETT keeps the safety of personnel and the environment at the forefront when dealing with HAZMAT. STERETT minimizes the risk of environmental contamination from HAZMAT by maintaining a rigorous HAZMAT Management Program that involves all hands in detailed tracking and frequent safety walkthroughs. Satellite lockers are inspected and inventoried weekly to ensure HAZMAT is not kept outside of HAZMINCEN's control. STERETT's HAZMAT Coordinator closely controls the receipt of all HAZMAT brought onboard, taking care to ensure that only authorized items in the right quantities are onboard. In addition, the "first in, first out" system is rigorously followed during the issuing process, leading to an astoundingly low number of containers that had to be offloaded due to expired shelf life - only four in all of 2010. Through effective use of rags, STERETT only had to offload 220 bags of oil and grease rags in the past two years. STERETT utilizes every drop of HAZMAT, reusing 11,600 containers of HAZMAT in just one year. STERETT was also able to onload \$2,690.00 worth of reclaimed material from our shore side HAZMINCEN, saving both money and the environment.

3.5. Protective Measures Assessment Protocol (PMAP). Every precaution is taken to protect marine mammals when exercising active sonar by utilizing PMAP to provide marine life awareness to shipboard watch-stations. STERETT has completed over 50 PMAP reports in calendar year 2010 alone, making sure to use them prior to any exercise that may affect marine life. STERETT has conducted over 60 hours of lookout and watchstander training to include correct reporting procedures and protective measures that must be adhered to when marine mammals are sighted. All Sonar Technicians are trained in recognizing both visual and aural cues on passive SONAR that can be classified as marine mammals. As a result of these measures, during COMPTUEX, the Naval Mine and Anti-Submarine Warfare Command (NMAWC)



CSSN Lopezcastillo empties a trash bag full of biogradables into the pulper unit onboard. STERETT makes every effort to minimize waste onboard through recycling and management. Shredded biodegradables are only released when outside 12 nautical miles from land.

representative commented that STERETT had "the best data collection packages and marine mammal logs [they had] ever seen".



A whale tail is spotted from the bridge. Marine mammal sightings are logged and identified, and operations are modified as necessary to avoid hurting the animals. PMAP is run prior to any exercise that could affect marine life.

the environment is our goal as we strive to maintain an impeccable record of environmental protection while developing environmentally conscious 21st Century Sailors.

3.6. SONAR Positional Report System (SPORTS). A firm supporter of monitoring and minimizing any negative effect medium range active sonar has on marine mammals, STERETT utilizes SPORTS as another tool to amplify marine life awareness at all watch-stations during ASW operations. STERETT has created over 30 reports and ensured they were released in message format to the appropriate personnel within the 24 hour time period. Program Coordinator STG1 Borchardt was recognized by Rear Admiral Guadagnini with a Flag Letter of Commendation for STERETT's exemplary ASW data collection and Marine Mammal logs during COMPTUEX 10-3.

3.7. Environmental Awareness. STERETT is committed to Environmental Protection and Safety and continually strives to find new and innovative ways to help reduce the Navy's impact on the environment. Being good stewards of