1. **SCOPE:**
   1.1 Title: Cleaning and Pumping; accomplish (CMAV)

2. **REFERENCES:**
   2.1 Standard Items
   2.2 S9086-T8-STM-010/CH-593, Pollution Control
   2.3 S9086-SP-STM-010/CH-542, Gasoline and JP-5 Fuel Systems
   2.4 MIL-HDBK-291, Military Handbook Cargo Tank Cleaning
   2.5 S9086-CJ-STM-010/CH-075, Fasteners
   2.6 S9086-CM-STM-020/CH-078, Gaskets and Packing
   2.7 **SOPA(ADMIN)MYPTINST 5090.1 Series, MANAGEMENT AND DISPOSAL OF REGULATED WASTE**
   2.8 **40 Code of Federal Regulations (CFR), Environmental Protection Agency (EPA), Protection of the Environment**
   2.9 **Florida Administrative Code (FAC), 62-730, Regulation of Hazardous Waste**

3. **REQUIREMENTS:**
   3.1 Open, ventilate, empty, clean, render dry, and maintain any tank or space including each adjacent tank, space, or piping system where the scope of repairs will result in a need for certification during the performance of this Job Order in accordance with 2.1 through 2.9.

   3.1.1 Ventilate each harmful vapor, fume, or mist to the exterior of the vessel.

   3.1.2 Submit one legible copy, in approved transferrable media, of a report listing the location, origin, and quantity of each manhole cover removed in 3.1 in respect to its tank, ship's frame, and distance off centerline to the SUPERVISOR.

   3.1.3 Clean and disinfect each CHT/sewage tank and associated piping in accordance with 2.2.
3.1.3.1 Maintain one system for Ship's Force use at all times.

3.1.4 Clean each tank and associated piping in accordance with 2.3 and 2.4.

3.1.5 Clean and inspect each fastener removed for wear and each defect, using 075-8.3 of 2.5 for accept or reject criteria. Visually inspect to ensure material type is the same as required in 3.11. Retain each fastener found acceptable for reuse.

3.1.5.1 Accomplish a visual inspection to verify correct material for application.

3.1.5.2 Submit one legible copy, in approved transferrable media, of a report listing result of each requirement of 3.1.5 and 3.1.5.1 to the SUPERVISOR.

3.2 Steam clean each area where the removal of preservative is required.

3.2.1 Install new rust preventative compound conforming to MIL-PRF-16173, Grade One or 3.

3.2.2 Install new each Monel fill and drain plug conforming to QQ-N-281, Class B, to replace those removed to accomplish steam cleaning.

3.3 Pump each tank containing a petroleum product to the low suction level of the tank.

3.3.1 Off-loading/on-loading of any petroleum product must be accomplished during daylight hours only.

3.3.2 Each hose, pump, and storage container must be clean and dry prior to start of off-loading/on-loading.

3.3.3 Submit one legible copy, in approved transferrable media, of completed Attachment A (inventory schedule-petroleum product) to the SUPERVISOR.

3.3.4 Remove and dispose of each liquid not being stored for reuse, including compensating sea water from each compensating fuel tank, sludge, and debris in accordance with each federal, state, and local law, code, ordinance, and regulation and 2.7. Perform a Waste Determination at the Point of Generation in accordance with (IAW) 40 CFR Part 262.11.

3.3.5 Coordinate and schedule ALL off-base disposal with NAVSTA Mayport N4E in accordance with 2.7, 2.8 and 2.9.

3.3.6 Submit ALL waste profiles received from disposal facilities to NAVSTA Mayport N4E for review and approval in accordance with 2.7.

3.3.7 Provide waste profile documentation, including waste analyses, Safety Data Sheets (SDS), and associated waste approval letter, if applicable, in approved transferable media to NAVSTA Mayport N4E and the SUPERVISOR upon request.
(V)(G) "VERIFY OFF LOAD COORDINATION"

3.4 Coordinate the off-loading or transferring of each fluid through the ship’s Damage Control Assistant (DCA), via the SUPERVISOR, to maintain ship's stability and to prevent flooding.

3.4.1 Obtain a list from the SUPERVISOR of the petroleum sounding for each tank prior to start of each pumping operation.

(V)(G) "VERIFY CLEAN CONTAINER"

3.5 Off-load and store in a clean storage container the lube oil and hydraulic oil removed from each tank. On-load when directed by the SUPERVISOR.

3.5.1 Accomplish the requirements of 009-63 of 2.1.

3.5.1.1 Test and analyze sample from each tank prior to off-loading.
3.5.1.2 Test and analyze sample from each storage container prior to on-loading.

3.6 Clean the bilge of each space noted in the Job Order, free of trash, debris, grease, oily liquid, and other liquid contaminants prior to the initial certification.

3.6.1 Maintain each bilge in a clean, dry condition for the duration of the availability.

3.6.2 Remove liquid from each bilge as noted in the Job Order. Each removal must be measured.

3.6.2.1 Submit one legible copy, in approved transferrable media, of a report listing the amount of gallons removed in 3.6.2, responsible source of liquid, and date liquid was removed after each pumping operation to the SUPERVISOR.

3.6.3 Remove and install pumping equipment 3 evolutions after space turnover to support 3.6.1 and 3.6.2.

(V)(G) "CLEAN AND DRY BILGES"

3.6.4 Prior to space turnover, when directed by the SUPERVISOR, accomplish a final detergent cleaning of each bilge of each space as noted in the Job Order, removing all trash, debris, grease, oily liquid, and other liquid contamination from each bilge.

3.6.5 Clean each chain locker as noted in the Job Order free of silt, mud, and foreign matter.

3.6.6 Dispose of liquid waste off-base in accordance with each federal, state and local law, code, ordinance or regulation and 2.7, 2.8 and 2.9. Disposal quantity must be measured. Total amount of liquid disposed less than the amount noted in the Job Order will be subject to recoupment.
3.6.7 Coordinate and schedule ALL off-base disposal with NAVSTA Mayport N4E in accordance with 2.7.

3.6.8 Submit ALL waste profiles received from disposal facilities to NAVSTA Mayport N4E for review and approval in accordance with 2.7.

3.6.9 Provide waste profile documentation, including waste analyses, Safety Data Sheets (SDSs), and associated waste approval letter, if applicable, in approved transferrable media to NAVSTA Mayport N4E and the SUPERVISOR upon request.

3.7 Tank Closure Repair:
3.7.1 Clean, chase, or tap each threaded area prior to installing each cover.

3.7.2 Weld fill, drill, and tap a total of 15 EA stripped manhole cover bolting ring hole for tanks opened in 3.1.

3.7.3 Remove existing and install new a total of 15 EA missing or broken manhole cover stud for tanks opened in 3.1 conforming to MIL-DTL-1222, Type IV, Grade 304.

3.7.4 Accomplish each requirement of 009-12 of 2.1, including Table 2, Column A, B, C, or D, Line one through 7.

3.7.5 Remove all paint from each seal-mating surface (both cover and tank ring) prior to 3.7.6. Manage and dispose of removed paint as Regulated Waste in accordance with Local Standard Item 099-60SE.

3.7.6 Accomplish each requirement of 009-32 of 2.1 for each new and disturbed surface in the vicinity of tank closure, to include each manhole ring, sealing area, coaming and flanged area.

3.8 Inspect each tank for cleanliness and completion of each repair prior to final closing. Document the personnel who were present during the inspection and confirm that they have exited the space prior to closure of each tank, void, and cofferdam. Designate one person to account for all personnel who may have entered the space.

3.9 Install each manhole cover.
3.9.1 Install each existing fastener found acceptable in 3.1.5.

3.9.2 Install manhole cover for each tank, using new each gasket in accordance with Table 078-8-2 of 2.6, and new each CRES washer conforming to FF-W-92, Type A, Grade One, Class B, and new each brass nut conforming to MIL-DTL-1222, Type I, Grade 464, and/or new each CRES hex head cap screw conforming to ASTM F 593, Group 1, Alloy 304, or Group 2, Alloy 316.

3.9.2.1 Install new 3/16-inch thick gaskets in accordance with Table 078-8-2 of 2.6, and new each hex head brass nut conforming to MIL-DTL-1222, Type I, Grade 464, for each DDG-51 Class ships’ high temperature compartment.

3.9.2.2 Install new each CRES bolt conforming to MIL-DTL-1222, Grade 5,
Class 316, for each flush deck bolted manhole cover.

3.9.3 Install access cover for each potable water, feed water, and sewage tank, using new each gasket in accordance with Table 78-8-2 of 2.6, and new each zinc coated steel nut conforming to MIL-DTL-1222, Type I, Grade 5, and new each CRES washer conforming to FF-W-92, Type A, Grade One, Class B.

3.9.4 Determine the proper tightening sequence from Figure 075-4-1 of 2.5 and 078-8.2.3 of 2.6 (078-8.2.3 refers to Figure 078-8-4 to illustrate several bolt tightening patterns).

(V) (G) "VERIFY TORQUE"

3.9.5 Tighten each fastener uniformly. Apply 10 percent of the specified torque first to make sure that each part is solidly together. Then, apply torque in 25 percent increments (i.e., 25, 50, 75, and 100 percent). Reverse previous sequence (i.e., 6, 5, 4, 3, 2, 1), tightening to 100 percent of required torque.

3.9.6 Verify proper thread protrusion IAW 7.5.1 and 8.2.3 of 2.5.

3.10 Coordinate the filling of each compensating fuel tank with seawater upon completion of work.

3.11 Accomplish each requirement of 009-32 of 2.1 for each new and disturbed surface.

4. NOTES:

4.1 For the purpose of this Work Item, the term "tank" or "space" includes each void, cofferdam, and inaccessible or confined area.

4.2 Consider each bilge to contain salt water contaminated with Petroleum, Oils and Lubricants (POL).

4.3 Booklet of General Plans and Tank Sounding Tables are available for review at the office of the SUPERVISOR.

4.4 Associated piping is defined as, "An assembly of pipe, tubing, each valve, fitting and related component forming a whole or a part of a system which starts or terminates in subject area, thus being common to and associated with same."

4.5 PTFE string gasket material of 100 percent virgin 3500 VALVERLON 3/32 inch diameter (manufactured by A. W. Chesterton Co) may be used as a means of ensuring a watertight seal of each manhole and access cover.

4.6 Torque wrench should be selected in such a manner that the required final torque falls within 20 to 90 percent of the torque wrench range.

4.6.1 A torque wrench with a scale range of 0-100 ft-lbs can be used for a maximum torque of 90 ft-lbs and a minimum torque of 20 ft-lbs.

4.6.2 A torque wrench with a scale range of 0-250 ft-lbs can be used for a maximum torque of 225 ft-lbs and a minimum torque of 50 ft-lbs.