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

3. **REQUIREMENTS:**

   3.1 Open, ventilate, empty, clean, render dry, and maintain any tank or space including adjacent tanks, spaces, or piping systems where the scope of repairs will result in a need for certification during the performance of this Job Order.

      3.1.1 Ensure that harmful vapors, fumes, or mists are ventilated 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 any associated piping in accordance with 2.3 and 2.4.

   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 Monel fill and drain plugs conforming to QQ-N-281, Class B, to replace those removed to accomplish steam cleaning.

3.3 Pump tanks containing petroleum products to the low suction level of each tank.

3.3.1 Off-loading/on-loading of petroleum products shall be accomplished during daylight hours only.

3.3.2 Hoses, pumps, and storage containers shall 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 (products inventory) to the SUPERVISOR.

3.3.4 Remove and dispose of liquids not being stored for reuse, including compensating sea water from the compensating fuel tanks, sludge, and debris in accordance with federal, state, and local laws, codes, ordinances, and regulations.

3.3.4.1 Fill the compensating fuel tanks with sea water upon completion of work.

(V)(G) "VERIFY OFF LOAD COORDINATION"

3.4 Coordinate the off-loading or transferring of fluids 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 petroleum soundings for tanks prior to start of pumping operations.

(V)(G) "VERIFY CLEAN CONTAINER"

3.5 Off-load and store in clean storage containers the lube oil and hydraulic oil from the tanks. 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 samples from each tank prior to off-loading.

3.5.1.2 Test and analyze samples from each storage container prior to on-loading.

3.6 Clean each bilge of spaces noted in the Job Order, free of trash, debris, grease, oily liquids, and other liquid contaminants prior to the initial certification.
3.6.1 Maintain each bilge to a clean, dry condition for the duration of the availability.

3.6.2 Remove liquids from bilges as noted in the Job Order. Removals shall be measured. Total amount of liquids removed greater or less than the amount noted in the Job Order will be the subject of an equitable adjustment.

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 liquids, and date liquids were 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 spaces as noted in the Job Order, removing all trash, debris, grease, oily liquids, and other liquid contaminants from the bilges.

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

3.8 Dispose of liquid waste off-base in accordance with federal, state and local laws, codes, ordinances or regulations. Disposal quantity shall be measured. Total amount of liquids disposed greater or less than the amount noted in the Job Order will be the subject of an equitable adjustment.

3.9 Tank Closure Repairs:

3.9.1 Clean, chase, or tap threaded areas prior to installing covers.

3.9.2 Weld up, drill, and tap a total of 15 stripped manhole cover bolting ring holes for tanks opened in 3.1.

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

3.9.4 Accomplish the requirements of 009-12 of 2.1, including Table 2, Columns A, B, C or D, Lines One through 7.

3.9.5 Accomplish the requirements of 009-32 of 2.1 for new and disturbed surfaces.
3.10 Inspect each tank for cleanliness prior to final closing.

3.10.1 Confirm that all personnel have exited the space prior to closure of tanks, voids, and cofferdams. Designate one person to account for all personnel who may have entered the space.

3.10.2 Install manhole cover for each tank, using new gaskets conforming to SAE-AMS-C-6183, Type II, Class 2, Grade B, new CRES washers conforming to FF-W-92, Type A, Grade One, Class B, and new brass nuts conforming to MIL-DTL-1222, Type I, Grade 464, and/or new CRES hex head cap screws conforming to ASTM F 593, Group 1, Alloy 304, or Group 2, Alloy 316.

3.10.2.1 Install new 3/16-inch thick gaskets conforming to A-A-55759, Class 3A, Grade 30, and new hex head brass nuts conforming to MIL-DTL-1222, Type I, Grade 464, for DDG-51 Class ships' high temperature compartments.

3.10.2.2 Install new nickel-copper hex head, self-locking nuts conforming to NASM-25027 for LSD-41 and LSD-49 Class ships.

3.10.2.3 Install new gaskets conforming to SAE-AMS-C-6183, Class One, using gasket sealant conforming to MIL-S-45180, Type II, new CRES 303 nuts conforming to MIL-DTL-1222, Grade 304, and new galvanized steel washers conforming to SAE-1040, for compensating tanks on LHD and LHA Class ships.

3.10.2.4 Install new CRES bolts conforming to MIL-DTL-1222, Grade 5, Class 316, for flush deck bolted manhole covers.

3.10.3 Install access cover for each potable water, feedwater, and sewage tank, using new gaskets conforming to MIL-PRF-1149, Type I, Class 1, new zinc coated steel nuts conforming to MIL-DTL-1222, Type I, Grade 5, and new CRES washers conforming to FF-W-92, Type A, Grade One, Class B.

3.10.4 Submit one legible copy, in approved transferrable media, of a report listing the names of personnel who were present during inspection to the SUPERVISOR within 72 hours after completion of final closing.

3.11 Accomplish the requirements of 009-32 of 2.1 for new and disturbed surfaces.

4. NOTES:

4.1 For the purpose of this Work Item, the terms "tank" or "space" include voids, cofferdams, and inaccessible or confined areas.

4.2 Consider each bilge to contain contaminated oily salt water.
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, valves, fittings and related components 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 Cotton wax wicking (6 plies per strand) conforming to MIL-T-713 may be used as a means of ensuring a watertight seal of manhole and access covers.
INVENTORY SCHEDULE - PETROLEUM PRODUCTS

SHIP:  
CONTRACTOR:  
SUBCONTRACTOR:  

CONTRACT NO.  
LOT NO.  

<table>
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<th>TANK NO.</th>
<th>TYPE OF PETROLEUM PRODUCT</th>
<th>ITEM NO</th>
<th>PUMPED TO TANK/TRUCK/BARGE NO.</th>
<th>DATE REMOVED FROM SHIP</th>
<th>TAPE READING</th>
<th>NUMBER GALLONS REMOVED</th>
<th>REMARKS</th>
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SIGNATURES

CONTRACTOR/SUBCONTRACTOR AUTHORIZED REPRESENTATIVE

SHIP'S COMMANDING OFFICER'S AUTHORIZED REPRESENTATIVE