



DEPARTMENT OF THE NAVY
UNITED STATES NAVAL ACADEMY
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ANNAPOLIS MARYLAND 21402-1501

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DIRECTOR, NAVAL ACADEMY SAILING INSTRUCTION 9503.1a

From: Director, Navy Sailing

Subj: PROCEDURES FOR CRAFT PUMP OUT IN SANTEE BASIN

Ref: (a) NSTM, Chapter 593, POLLUTION CONTROL
(b) NAVMED P010-7, NAVAL PREVENTIVE MEDICINE

Encl: (1) Pump Out Station Operating Procedures
(2) Pump Out Station Emergency Spill Procedures

1. Purpose. To promulgate procedures for safe sewage pump out from USNA sailing and power craft in Santee Basin.

2. Background

a. The Santee Basin Pump Out Station, on the South Western end of Santee Wharf, is used to transfer marine sewage from USNA Sailing and Power Craft to the USNA public sewer system. The system is composed of a suction hose, a 50 gpm pump, a 200 gallon holding tank, and a transfer pump which transfers waste from the holding tank to the sewer system. Customers of the pump out include Navy 44' MKI and MKII sail training craft; USNA Sailing chartered sail boats, and the USNA Superintendent's yacht.

b. Due to the inherent hazards associated with marine sewage, procedures must be strictly adhered to and enforced. During these procedures, the hazards of a sewage spill into Santee Basin, as well as contamination onto personnel are the greatest risk.

3. Safety

a. Combustible vapors may form from inside the pump out station sewage holding tank due to the decomposition of organic matter. As such, smoking, or the use of any spark producing devices, is not authorized within 50 feet of the Santee Basin Pump Out Station. Propane systems shall be secured by any craft approaching the pump out station.

b. Toxic gases such as hydrogen sulfide may form as a result of the decomposition of sewage within a confined space such as a holding tank. While the Santee Basin pump out station is not a

confined space per definition in ref (a), the pump out station door must be left open when being operated at all times to provide proper air flow when personnel are in close proximity to the holding tank.

c. Proper hygiene and sanitation procedures must be followed when in close proximity to sewage. No eating or drinking is allowed on any craft when the pump out station is in use. Personal Protective Equipment (PPE) encompassing gloves, face shield, and closed toed shoes must be worn when handling the pump out station suction nozzle. Also, personnel in contact with the pump out station hose or nozzle must immediately wash their hands following the evolution.

4. Responsibilities

a. The USNA Sailing Safety Officer shall:

(1) Ensure all personnel involved in the pump out of craft are trained in the proper procedures and safety precautions contained in this instruction.

b. The Craft OIC/Skipper shall:

(1) Maintain familiarity with this instruction.

(2) Be responsible for the safe pump out of their assigned craft and serve as safety officer during pump out evolutions.

c. The Pump Out Station Operator shall:

(1) Be a trained operator from the Vandergrift Cutter Shed or IAP Technician only.

(2) Operate the pump out station machinery IAW enclosures (1) and (2).

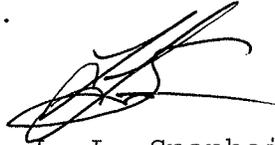
(3) Provide proper PPE to the Suction Nozzle Operator.

d. The Suction Nozzle Operator shall:

(1) Be a trained operator from the Vandergrift Cutter Shed or IAP Technician only.

(2) Wear proper PPE provided by the Pump Out Station Operator and follow all instructions from the Pump Out Station Operator.

5. Review. The Director, Naval Academy Sailing and Sailing Safety Officer are responsible for enforcement, annual review, and update of this instruction.

A handwritten signature in black ink, appearing to be 'L. L. Spanheimer', written in a cursive style.

L. L. Spanheimer

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USNA Sailing

PUMP OUT STATION OPERATING PROCEDURES

NOTE

THESE PROCEDURES ARE TO BE PERFORMED BY QUALIFIED CUTTER SHED MAINTENANCE PERSONNEL OR CERTIFIED IAP MAINTENANCE TECHNICIANS.

Prior to pump out:

1. Unlock the pump out station.
2. Remove hose from the back of the pump out station. Visually inspect for any signs of leakage around the hose and nozzle fittings. If no signs of leakage, continue with the evolution.
3. You will notice a silver control box on your right that has the word "Teel" on it. Open the control box and you will see three switches "Motor 1" "Motor 2" and "Alarm". Ensure all three switches are in the auto position.
4. Underneath the control box is a timer knob, turn the timer knob past 10 to activate the pump.
5. Ensure nozzle operator is wearing gloves, face shield, and closed toed shoes. Dispose of gloves directly after the evolution.
6. Place rags/diapers onto toe rail next to waste deck fitting (Located starboard side amidships on Navy 44' Sail Training Craft). This will absorb any leakage from the nozzle of the pump and prevent any sewage from getting into the basin.

Commencing Pump Out:

1. Proceed below decks, align/ensure the Y-valve is placed in the HOLDING TANK POSITION.
2. Return above decks, starboard side amidships, and use the deck key to unscrew the deck fitting very slowly.

WARNING

IF YOU HEAR AIR; STOP UNSCREWING THE DECK FITTING. THIS INDICATES THAT THE HOLDING TANK IS OVER PRESSURIZED. IN THIS CASE, THE NOZZLE OPERATOR SHALL ALLOW HOLDING TANK PRESSURE TO

EQUALIZE BY VERY SLOWLY UNSCREWING THE DECK FITTING. FAILURE TO ALLOW HOLDING TANK PRESSURE TO EQUALIZE SLOWLY MAY RESULT IN DISCHARGE OF THE HOLDING TANK AND CONTAMINATION OF THE HOSE OPERATOR AND/OR THE SANTEE BASIN.

3. Fill the bucket, designated for holding tank pump out, with 5 gallons of water.
4. Open the valve on the nozzle by making sure the yellow handle is parallel with the hose. Once the hose is open, drop the hose into the bucket filled with 5 gallons of water and let water filter through for 10-30 seconds.

CAUTION

ONLY THE BUCKET THAT IS DESIGNATED FOR HOLDING TANK PUMP OUT PROCEDURES SHALL BE UTILIZED TO FILTER WATER THROUGH THE HOSE. THIS WILL PREVENT CROSS CONTAMINATION AND ENSURE THAT NO SEWAGE; HOWEVER SLIGHT; WILL BE DISCHARGED INTO THE SANTEE BASIN VIA THE NOZZLE AND HOSE ASSEMBLY.

5. Pull the hose out of the bucket and close the hose by placing the yellow handle perpendicular to the hose.
6. Insert hose nozzle into the waste deck fitting and while holding the nozzle down firmly; open the valve.
7. This will begin the process of pumping out the holding tank. Continue to hold the nozzle down into the waste deck fitting.

CAUTION

DO NOT BREAK THE NOZZLE SEAL DURING THE PUMP OUT PROCESS. BREAKING THE SEAL MAY RESULT IN DAMAGED EQUIPMENT OR DISCHARGE OF WASTE FROM FITTING.

8. The clear bulb located under the nozzle will allow you to see the waste coming out of the holding tank. When there is no more waste flowing steadily through the hose, the tank is empty. Secure the hose by closing the valve on the nozzle.
9. Manually pump the head 10 to 20 times to put seawater into the holding tank. This will flush the holding tank to ensure all waste is removed from the tank.

NOTE

IF AVAILABLE, FRESHWATER MAY BE USED TO FILL THE HEAD AND WILL RESULT IN A MORE ADEQUATE FLUSH OF THE HOLDING TANK.

10. Activate the hose by opening the valve on the nozzle. When there is no more seawater (or freshwater if used) and waste flowing steadily through the hose, the tank is empty.

NOTE

ANOTHER INDICATION OF THE HOLDING TANK BEING EMPTY IS PUMP CAVITATION.

11. Secure the hose by closing the valve on the nozzle.

Securing Pump Out Station:

1. Remove the nozzle from the waste deck fitting by slowly rocking it back and forth.
2. Once the nozzle is free of the fitting, open the valve and drop the hose back into the bucket filled with 5 gallons of water. This will allow water to filter through the nozzle and hose assembly.

NOTE

REFILLING THE PUMP OUT BUCKET MAY BE NECESSARY IF SUFFICIENT WATER IN THE BUCKET DOES NOT REMAIN TO ADEQUATELY FLUSH THE NOZZLE AND HOSE ASSEMBLY.

3. Once the water in the bucket has been completely pumped, remove the nozzle from the bucket and secure the valve.
4. Replace the deck fitting and tighten with the deck key.
5. Rewrap the hose around the metal rack located on the back side of the pump out station, inserting the nozzle into the holder.
6. Stow the bucket designated for pump out usage in the pump out station.
7. If the timer is still on; turn the timer to the off position.

8. Lock the pump out station.
9. Properly dispose of gloves used during the pump out evolution and thoroughly wash hands.

PUMP OUT STATION EMERGENCY SPILL PROCEDURES

IN THE EVENT OF A RELEASE OF SANITARY SEWAGE ONTO SANTEE WHARF, PERSONNEL SHOULD:

1. Secure the source of the spill to prevent additional release by turning "Motor 1" and "Motor 2" on the pump motor controller to the off position.
2. Put on protective gloves and use absorbent rags and diapers to absorb sewage. This will help to prevent spillage into the Santee Basin from the Santee Wharf. Absorbent rags and diapers are located in the spill kit located in the back of the pump out station.
3. Double bag rags and diapers and keep bags in pump out station for disposal by IAP.
4. Contact the NSDO at 443-871-2330 as well as Cutter Shed CoC. CoC will contact IAP to complete sanitation and clean up requirements.
5. Keep contaminated area clear and do not allow persons in the immediate vicinity to come into contact with the sewage/wastewater until clean-up is complete.
6. Thoroughly wash skin areas that have been in contact with sewage.

IN THE EVENT OF A RELEASE OF SANITARY SEWAGE INTO SANTEE BASIN, PERSONNEL SHOULD:

1. Secure the source of the spill to prevent additional release by turning "Motor 1" and "Motor 2" on the pump motor controller to the off position.
2. Immediately contact the NSA Annapolis/USNA Environmental Department at 410-293-1025 (Business hours) or 410-279-0693 (after hours). If no one is reached, contact the base fire department at 410-293-3333. Be able to provide an estimate of the quantity of sewage released, and the precise location and time of release.
3. Contact the NSDO at 443-871-2330 as well as Cutter Shed CoC. CoC will contact the Naval Academy Duty Officer (NADO) and IAP to complete sanitation and clean up requirements.