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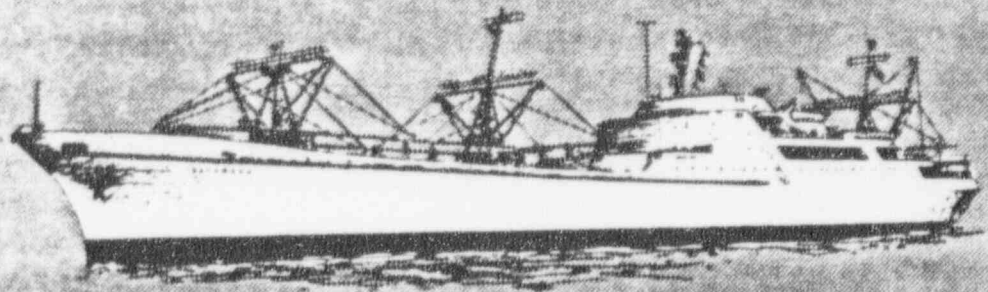


MASTS-103

N. S. Savannah

Port Operating Plan for Port of Baltimore, Maryland

JULY 1975



U.S.
DEPARTMENT
OF
COMMERCE
Maritime
Administration

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N.S. SAVANNAH
PORT OPERATING PLAN
FOR
PORT OF BALTIMORE, MARYLAND

REVISED MAY, 1994

BY

*U.S. DEPARTMENT OF TRANSPORTATION
MARITIME ADMINISTRATION*

MARITIME ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE
July 1975

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1. INTRODUCTION

The N.S. SAVANNAH, in a defueled condition, will be towed to the Port of Baltimore, Maryland where the ship will be drydocked in the BethShip Sparrows Point Shipyard for maintenance preparatory to final layup in the National Defense Reserve Fleet in James River (Fort Eustis), Virginia. This report summarizes pertinent information regarding approach and navigation, port administration site evaluation, and emergency plans.

2. GENERAL CONSIDERATIONS

The following information describes the berth characteristics and the administrative, operational, and emergency port information considered necessary to provide systematic safekeeping from industrial hazards and protection of the public from radioactive materials aboard the ship while on drydock.

Site descriptions are given later in this report.

2.1 LOCATION AND GENERAL DESCRIPTION OF PORT

The Port of Baltimore is located in the upper western reaches of the Chesapeake Bay. This port, on the banks of the Patapsco River, is 150 nautical miles from Cape Henry via the Chesapeake Bay. Baltimore is about 40 miles northeast of Washington and 85 miles southwest of Philadelphia. The 1973 population of Baltimore was 862,620, and that of the Baltimore metropolitan five county area was 2,114,230.

The terrain in the Baltimore vicinity is relatively low and flat, with no wind channeling effects. There are no natural hazards in the Chesapeake Bay enroute to Baltimore, and the route is void of man-made obstructions such as lift bridges, locks and traffic control points. The current in Baltimore Harbor is approximately

0.8 knots during flood and ebb tides. The changes in water level in the upper Chesapeake Bay are primarily due to prolonged wind rather than tides, which have a range of approximately one foot.

It is concluded that there are no unusual characteristics of the Port of Baltimore which would make it unsuitable for N.S. SAVANNAH entrance.

2.2 PORT ADMINISTRATION AND SERVICES

The Port of Baltimore is operated by the Maryland Port Administration, which is governed by five Commissioners appointed by the Governor of Maryland. An Executive Director, and administrative staff, and several department heads are responsible to the Commissioner for the port operation. The Baltimore City Police Department, Marine Division, polices the docks and the waterside of the harbor. The Baltimore Fire Department provides fire protection, using fireboats on the waterside of the ship.

Maryland Port Administration
The World Trade Center Baltimore
Baltimore, Maryland 21202

Executive Director: (410) 385-4400
Director of Operations: (410) 385-4415
Office of Communications: (410) 385-4480
Port Police: (410) 633-1066

2.2.1 U.S. Coast Guard

The Coast Guard maintains several patrol boats and two small harbor tugs, which are deemed unsuitable for towing the SAVANNAH, in the Baltimore area. Except when on patrol, these boats are berthed at the USCG Base in Curtis Bay above Pennington Bridge. These boats range from 110-foot cutters to 20-foot patrol boats. Additional

tugs are available through the U.S. Army, see paragraph 2.2.2 below.

USCG Shipyard, Curtis Bay, Maryland

Operations: (410) 576-2516

Shipyard: (410) 636-3202

The USCG Marine Safety Office, Baltimore, continuously monitors VHF radiotelephone Channels 13, 16, 22 & 81 and HF radiotelephones 2182 and 2670 KHz. VHF is the primary communications method used, with HF voice utilized at greater distances (> 25 NM).

USCG District 5

Marine Safety Office - Baltimore, Maryland

Customs House

40 S. Gay Street

Baltimore, MD 21202-4022

Captain of the Port: Captain Gregory S. Kope, USCG

(410) 962-5121

MSO 24 hour phone: (410) 962-5100 / 5105

Port Services: (410) 962-2651

Group Ops Center (Curtis Bay): (410) 576-2520 (24hr)

2.2.2 Tug Service

The contracted towing company will be responsible for providing sufficient assisting tugs during transits, maneuvering, docking and undocking.

The U.S. Army 949th Transportation Company (Reserve Unit) maintains harbor tugs of significantly larger horsepower than the Coast Guard. These tugs (2 - 107', 1600 HP, and 2 smaller 65' tugs) would be available in the event of an emergency. This unit is also due to receive four brand new 128', 5600 HP tugs which may be available at the conclusion of the SAVANNAH yard period.

U.S. Army 949th Transportation Company

Phone: (410) 354-6570 / (410) 789-7738

2.2.3 Pilot Service

Pilot service for the ship's navigation of the Chesapeake Bay will be provided by state licensed pilots. These pilots will be assigned in rotation. Normally, a pilot is allowed 2 hours to respond to a call, however, he can respond in 1 hour during an emergency. When on standby, a pilot will respond to a call in 15 minutes.

The pilot boat off Cape Henry monitors VHF radio channels 16, 11 and 13 (156.8, 156.550 and 156.650 MHz respectively).

Association of Maryland Pilots

24-hour Dispatch Phone: (410) 342-6013 / (410) 276-1337

Chesapeake & Interstate Pilots Association

24-hour Dispatch Phone: (804) 855-2733

2.2.4 Police Services

Local police services at Sparrows Point are provided by the Baltimore County Police Department, Dundalk Precinct. The department also maintains a small marine unit with four small boats. All of the marine unit personnel are trained in shipboard firefighting. Two-way radiotelephone communication is maintained between all units on two channels. The marine unit also monitors VHF Channels 16 and 22A.

Baltimore County Police Department

Dundalk Precinct, Captain Thomas Canning (410) 887-7320

1747 Merritt Blvd / Baltimore, MD 21222

Marine Division, Sgt. Shanks (410) 887-0279

2.2.5 Fire Department Service

Local fire services to Sparrows Point are provided by both the Baltimore City and Baltimore County Fire Departments. Response time from the local stations is under five minutes (see 2.2.7 below). Firefighters assigned to these stations have received training in shipboard firefighting.

The county fire department has two small fireboats, with a pumping capacity of 750 gpm. These boats will respond to shipboard fires, but are too small to handle such fires alone. The Baltimore City Fire Department has one active (4 monitors at 12,000 gpm each) and one reserve (3 monitors at 7,000 gpm each) fireboats stationed at Locust Point (Fort McHenry, directly across the Patapsco River from BethShip, Sparrows Point) which are available to respond to emergencies at Sparrows Point.

All fire department units, including the fireboats, have two-way radiotelephones on the fire department frequency. The fireboats also monitor VHF Channel 16 and HF 2182 KHz in the event of an emergency.

U.S. Coast Guard vessels are also equipped to fight shipboard fires, and could respond in the event of an emergency.

Baltimore City Fire Dept., Marine Division

(410) 396-

Baltimore County Fire Dept., Marine Division

(410) 887-5974

2.2.6 Telephone Service

BethShip will provide an office trailer equipped with telephones and fax machine to the General Agent during the shipyard period.

telephone will be installed onboard the ship during the drydocking period.

2.2.7 Security

The shipyard security is under the ultimate control of Steven Sullivan, Human Resources Manager, and Richard Hibler is Safety Manager. The entire shipyard can be cleared of personnel within 30 minutes. All gates are guarded 24-hours a day. Emergency security measures can be effected by telephone; a complete list of telephone numbers will be given to the Government Representative (General Agent and MARAD Marine Surveyor) when the ship docks.

The shipyard maintains a private, state authorized, police force of approximately 50 persons. This force is supplemented by contract security personnel. Backup is provided by the local Baltimore County Police Department (see below).

Local police and fire precinct stations are each located less than 5 minutes away. The Shipyard is responsible for requesting outside assistance if necessary.

3. TRANSIT OPERATIONS

N.S. SAVANNAH will enter the Port of Baltimore via transit of Chesapeake Bay from the southern entrance off Cape Henry (See Figure 1). The approach to Baltimore is deep and unobstructed. The controlling channel depth throughout the passage (Cape Henry to Fort McHenry, Baltimore) is 50 feet. The width of the Chesapeake Bay at the entrance is approximately 10 miles. The width and depth of the channel above the tunnel portion of the Chesapeake Bay Bridge-Tunnel (U.S. Route 13) at the entrance of Chesapeake Bay is approximately 4800 feet and 49 feet respectively. The width from the sea to the Wm. Preston Lane Jr. Mem. Bridge (i.e. the "Bay Bridge", U.S. Routes 50/301) generally exceeds 5 miles. The dredges

channel from a point about 2 miles below Sandy Point to Baltimore varies from 600 to 1750 feet in width, and has a 50 foot controlling depth.

There are three dredged channels in the lower Chesapeake Bay; the first off Cape Henry just above the Virginia Capes (at the Bridge-Tunnel), the second from 11 to 22 miles above the Capes, and the third off the Rappahanock River 40 to 46 miles above the Capes. All are well marked and maintained.

There are no general hazards to navigation into or out of the Port of Baltimore.

3.1 TRANSIT SITE EVALUATION

During transit from the Atlantic Ocean to the southern tip of Kent Island the closest approach to land is about 13,000 feet. This closest approach occurs at Cove Point, about 22 miles below Kent Island on the western side of the Bay. In the 9 miles transit from Kent Island to the Wm. Preston Lane Mem. Bridge (minimum width 1500', height 187' clearance), the closest approach to land is about 6000 feet, and this occurs only at Sandy Point just north of the bridge. The distance to the nearest land at the entrance to the dredged channel exceeds 6500 feet.

From Sandy Point to Sparrows Point the closest approach to land is about 3200 feet at Sparrows Point. In all other areas the distance to land generally exceeds 6500 feet.

In transit from Sparrows Point (see Figure 2) to BethShip Sparrows Point Shipyard, the ship will be about 2800 feet from land until it is turned into the channel leading to the berth (see Figure 3).

3.2 TRANSIT SUMMARY

During the transit from Cape Henry to BethShip Sparrows Point, there are no restrictions since in the absence of nuclear fuel in the reactor, there is no fission product inventory.

The pilot will board at Cape Henry, tugs will normally be in attendance from below the Wm. Preston Lane Jr. Memorial Bridge to the berth.

The arrival sequence of events for the arrival of the N.S. SAVANNAH at the Port of Baltimore is as follows:

- a. Contact pilot boat and tugs before arriving at Cape Henry and give estimated time of arrival.
- b. Board pilot and meet tugs if needed, off Cape Henry. Establish radio contact with USCG. After initial contact on VHF Channel 16 or 2182 KHz, VHF Channel 22A or 2670 KHz will be used for further communication .
- c. Contact and meet assisting tugs below Sandy Point.
- d. Proceed to berth at BethShip, Sparrows Point.
- e. Secure ship alongside berth.

The departure sequence is to order tugs and board pilot, clear the berth, discharge assisting tugs below Sandy Point, proceed to Cape Henry, disembark pilot and proceed on voyage under tow.

4. BERTH

4.1 BETHSHIP SPARROWS POINT SHIPYARD.

The N.S. SAVANNAH will be drydocked at BethShip Sparrows Point Shipyard for examination, cleaning, painting, and repair work in preparation for layup in the Reserve Fleet in James River (Fort Eustis), Virginia. The shipyard is located to the southeast and

across the Patapsco River from the center of Baltimore. Figure 4 is a plant layout of the facility showing drydock and associated hoist capacities. The entire yard, except the water front is enclosed by a chain link fence. The floating drydock will be used for the SAVANNAH. If the ship is to be tied up, an appropriate berth will be used. All land adjacent the shipyard is either used by the Bethlehem Steel Corp. Sparrows Point complex or is vacant. Shipyard piers and drydock face west on the Patapsco River.

Since there is no nuclear fuel in the reactor, there are no population control zones required, however, a health physicist furnished by the shipyard is to survey the outside hull surfaces and drydock area immediately following the lift of the vessel before any work is performed in the dock areas. Health physicist and the Government representative (General Agent and/or MARAD Marine Surveyor) will also control access to areas aboard ship containing contaminated or radioactive materials to prevent casual entry by shipyard or any other personnel.

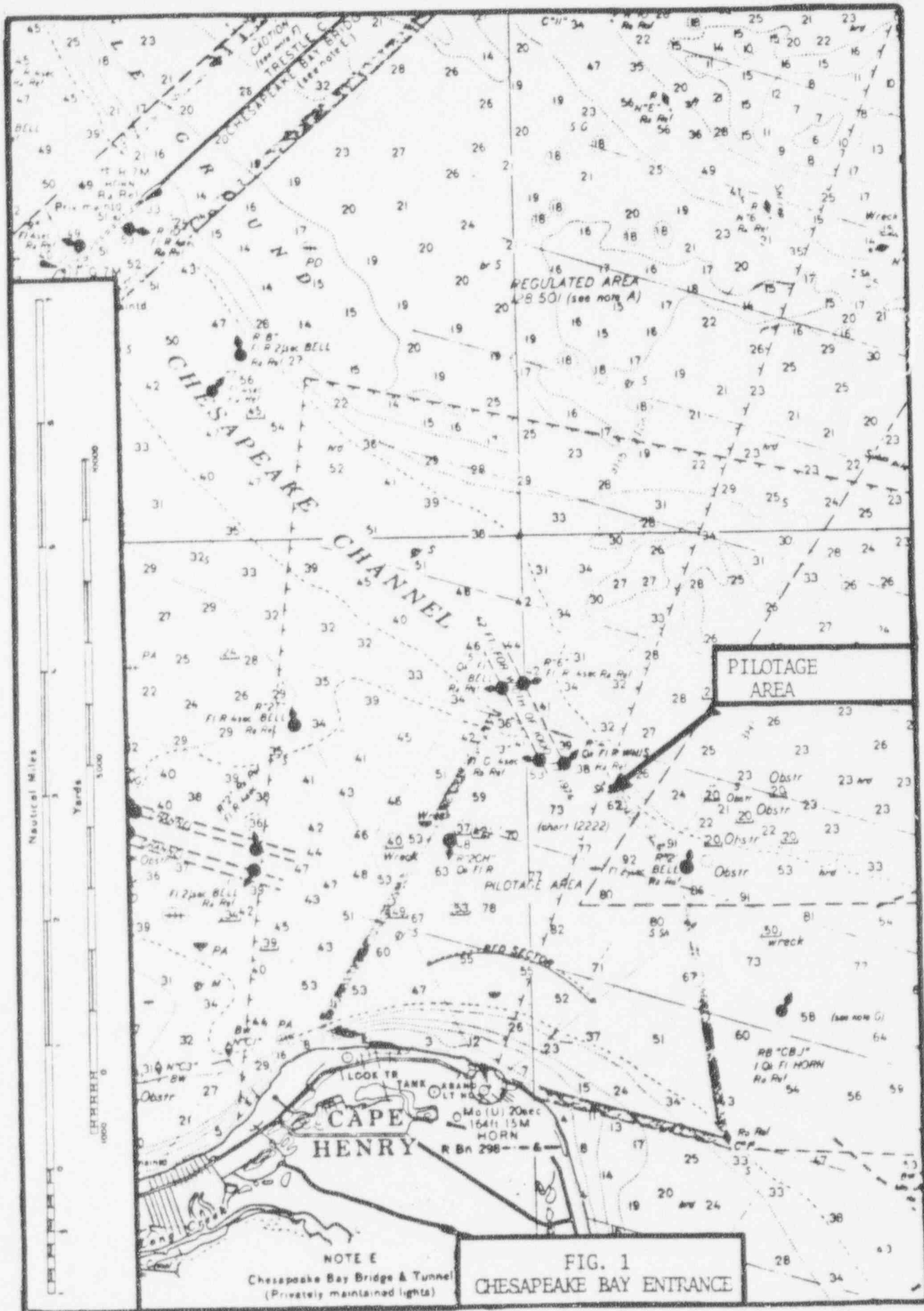
Note: Entry into controlled areas is not anticipated during this shipyard period.

5. EMERGENCY ACTIONS

5.1 EMERGENCY PLAN

The shipyard is responsible for providing adequate intrusion, fire and flooding protection while the ship is in its care. This period is defined from pickup of the ship from its layberth in Portsmouth, Virginia, through deliver to MARAD at the James River Reserve Fleet. This will be accomplished through periodic (every 2 hours) security rounds, and controlled access to the interior of the ship, continuous firewatches at all work sites and installation of a temporary firefighting system, and daily pumping of bilges.

In the event of fire the shipyard will initiate action using on-dock resources, and request immediate assistance from local fire stations (see 2.2.5).



NOTE E
Chesapeake Bay Bridge & Tunnel
(Privately maintained lights)

FIG. 1
CHESAPEAKE BAY ENTRANCE

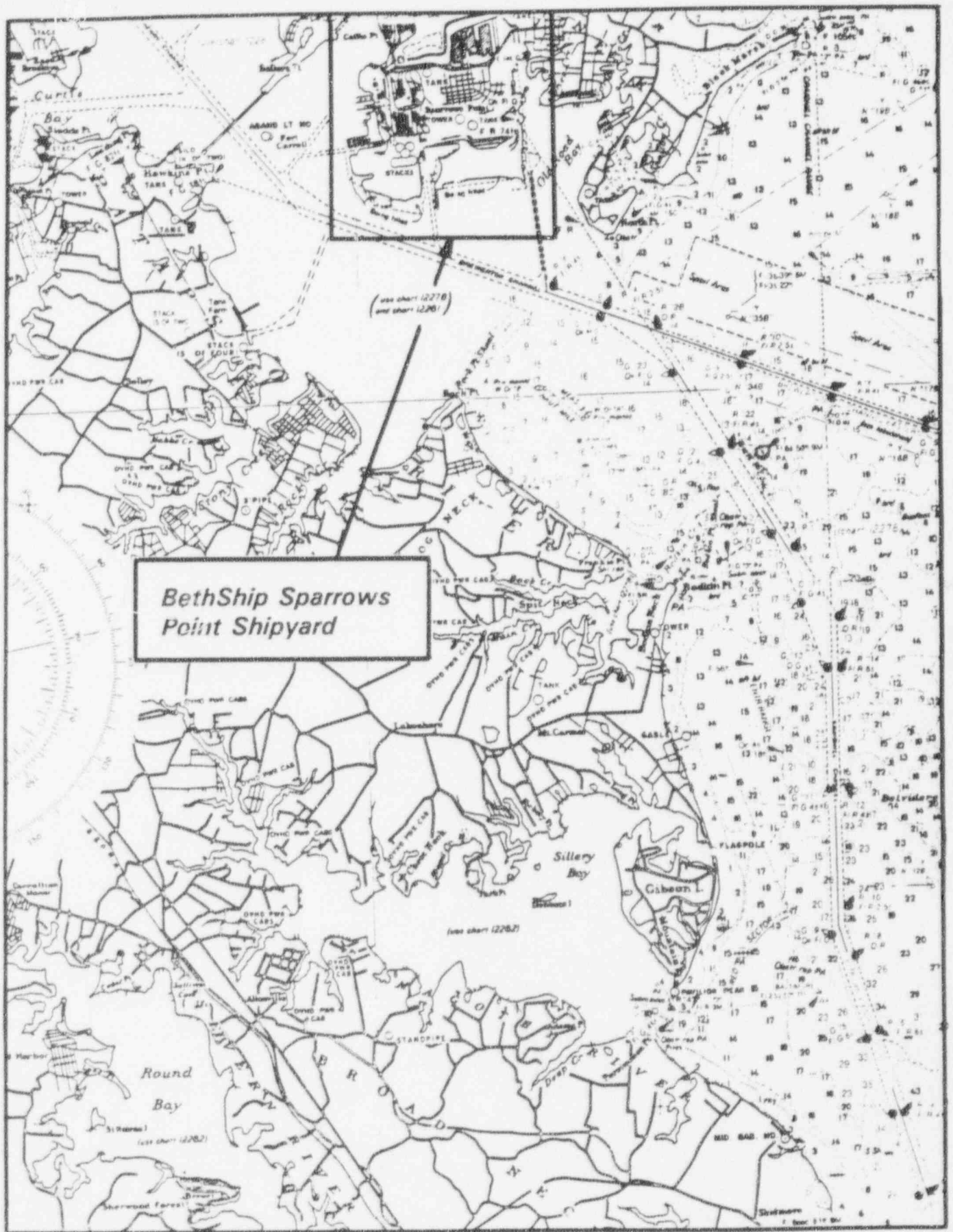


Fig. 2

Approach to BethShip Sparrows Point Shipyard

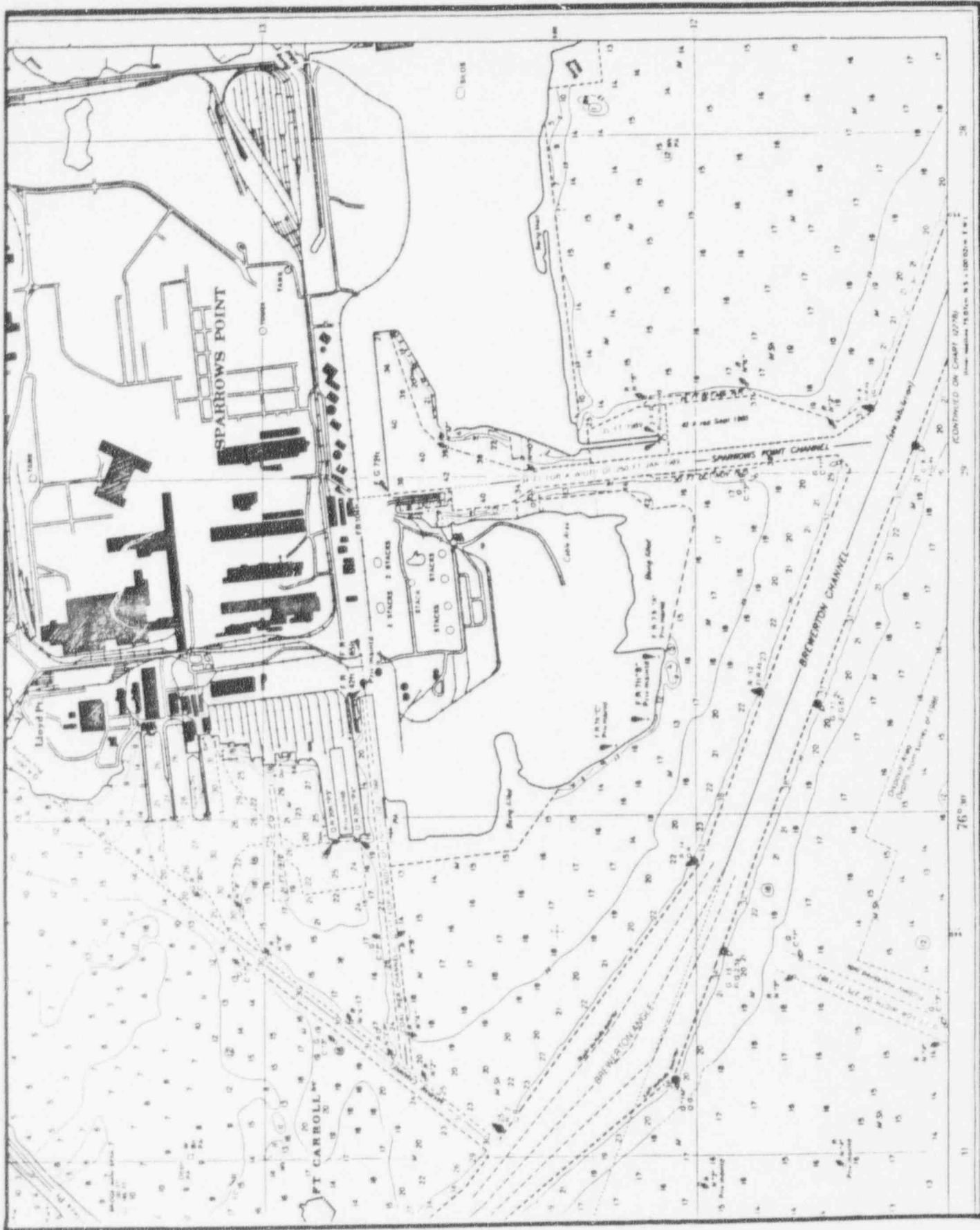


Fig. 3

BethShip Sparrows Point Shipyard

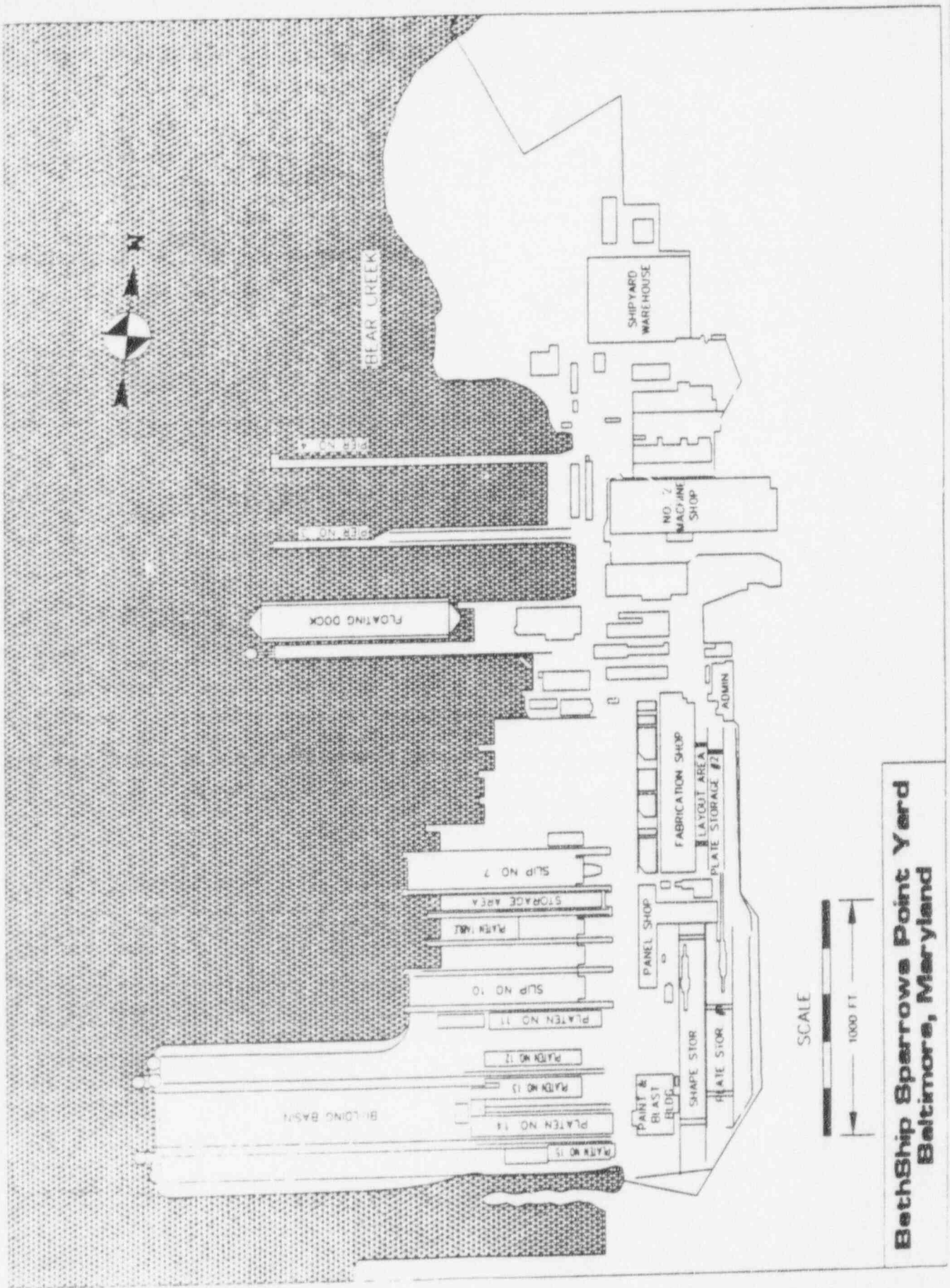


Fig. 4

Plant Layout BethShip Sparrows Point Shipyard

BethShip Sparrows Point Yerd
Baltimore, Maryland