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FINAL PRELIMINARY ASSESSMENT REPORT FOR UNEXPLODED ORDNANCE SITE 3 (UXO 3) MUNITIONS LOADING PIERS NWS YORKTOWN VA

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Final

Preliminary Assessment Report UXO 0003 Munitions Loading Piers

Naval Weapons Station Yorktown
Yorktown, Virginia
May 2013

Contract No. N62470-11-D-8012 | CTO-WE03

prepared by CH2MHILL.

Final

Preliminary Assessment Report
UXO 0003 Munitions Loading Piers

Naval Weapons Station Yorktown
Yorktown, Virginia

Contract Task Order WE03

May 2013

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Virginia Beach, Virginia

Executive Summary

This Preliminary Assessment (PA) was conducted to evaluate the potential for munitions and explosives of concern (MEC), including unexploded ordnance (UXO), discarded military munitions, and munitions constituents (MC), to be present at Unexploded Ordnance Site 0003 (UXO 3), the Naval Weapons Station (WPNSTA) Yorktown Munitions Loading Piers, located in Yorktown, Virginia. UXO 3 is a Munitions Response Site that includes areas along and beneath the current and former piers at WPNSTA Yorktown, where historical munitions loading and unloading activities may have resulted in the presence of MEC in the York River.

UXO 3 consists of the current and former piers and pier area along the shoreline of the York River, comprising approximately 289 acres of water. The current operational pier (Pier R-3) includes approximately 6,400 linear feet of standing concrete pier. Remnants of a former wooden pier (Pier R-1) remain beneath the water surface adjacent to Pier R-3. The Department of Defense has established the Military Munitions Response Program under the Defense Environmental Restoration Program to address MEC. The Department of the Navy and United States Environmental Protection Agency guidance for conducting and documenting this PA was followed and tailored, where appropriate, to address the aspects of MEC and munitions constituents potentially present at UXO 3.

Onsite and offsite sources were researched to evaluate the potential for munitions to have been dropped or mishandled during munitions loading operations. The two areas of UXO 3 include Pier R-1 (operated from 1920 to the 1970s) and Pier R-3 (operated from 1941 to the present), the pier-associated trestles, and sediment associated with these areas. The desktop review included both record searches and interviews. Although documentation of a release was not identified during the PA, the potential exists for MEC to be present at UXO 3 as a result of undocumented releases during historical loading operations. It is recommended that a Site Inspection (SI) be performed for the inactive portions of UXO 3, former Pier R-1, to further evaluate the potential presence or absence of MEC. However, because active pier sites used for munitions-related activities are typically not investigated until munitions activities have ceased or unless the site is causing contamination at other areas, it is recommended that SI activities for Pier R-3, which is currently active, not be performed until all munitions loading operations in this area have ceased.

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Acronyms and Abbreviations

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CSM	conceptual site model
EOD	Explosive Ordnance Disposal
FY	fiscal year
MC	munitions constituents
MEC	munitions and explosives of concern
MLW	mean low water
MLLW	mean lower low water
MRS	Munitions Response Site
MRSPP	Munitions Response Site Prioritization Protocol
NARA	National Archives and Records Administration
NAVFAC	Naval Facilities Engineering Command
Navy	Department of the Navy
NOAA	National Oceanic and Atmospheric Administration
PA	Preliminary Assessment
PCB	polychlorinated biphenyl
SI	Site Inspection
TNT	trinitrotoluene
USEPA	U.S. Environmental Protection Agency
UXO	unexploded ordnance
UXO 3	Unexploded Ordnance Site 0003
WWI	World War I
WW II	World War II
WPNSTA	Naval Weapons Station

SECTION 1

Introduction

This Preliminary Assessment (PA) was conducted to evaluate the potential for munitions and explosives of concern (MEC), including unexploded ordnance (UXO), discarded military munitions, and munitions constituents (MC), to be present at Unexploded Ordnance Site 0003 (UXO 3), the Munitions Loading Piers located at Naval Weapons Station (WPNSTA) Yorktown, Yorktown, Virginia (**Figure 1-1**), as a result of munitions loading operations conducted at the piers.

UXO 3 consists of the current and former piers and pier area along the shoreline of the York River, comprising approximately 289 acres, approximately 6,400 linear feet of standing concrete pier (current operational pier area known as Pier R-3), and remnants of a former wooden pier area where only pilings remain (former Pier R-1) (**Figure 1-2**). The Department of Defense has established the Military Munitions Response Program under the Defense Environmental Restoration Program to address MEC. This PA Report has been prepared under Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic Division, Comprehensive Long-term Environmental Action–Navy, Contract N62470-11-D-8012, Contract Task Order WE03. The Department of the Navy (Navy) and the United States Environmental Protection Agency (USEPA) guidance for conducting and documenting this PA was followed and tailored, where appropriate, to address the aspects of MEC and MC potentially present at UXO 3.

This PA is organized into the following sections:

Section 1—Introduction
Section 2—Summary of Data Collected and Review of Information
Section 3—Site Description, Operational History, and Waste Characteristics
Section 4—Pathway and Hazard Assessment
Section 5—Conclusions and Recommendations
Section 6—References

A summary of documents reviewed, source information, Munitions Response Site Prioritization Protocol (MRSPP) scoring worksheets, and a Tier I Sediment Transport Evaluation are provided as supplemental information in **Appendixes A**, **B**, **C**, and **D**, respectively.

1.1 Purpose

The purpose of the PA was to collect information related to the UXO 3 WPNSTA Yorktown Munitions Loading Piers in the York River (**Figures 1-1** and **1-2**) and to ascertain whether there is potential for MEC or MC to be present at the site as a result of past munitions loading operations conducted at the site. This report summarizes the findings of the desktop review (consisting of archives searches and interviews) performed to collect data for the PA. It also presents an updated conceptual site model (CSM), which was previously submitted in the PA Work Plan (CH2M HILL, 2011). The CSM has been updated based upon the findings of the desktop review. It will assist the project team in planning, interpreting data, and communicating throughout additional investigations, and will help to draw logical conclusions about UXO 3. The CSM is considered a “living” document and will be refined during any future investigations or as new information becomes available.

The general objectives of the PA were to:

- Eliminate from further consideration those areas that pose no threat to public health or the environment
- Identify areas requiring further investigation before arriving at decisions on the need (or lack of need) for munitions response actions
- Assess whether there is a need for an accelerated remedial action or removal action due to an imminent threat to human health or the environment
- Evaluate available site data to prioritize or sequence with other sites for further action

1.2 Preliminary Assessment Approach

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) guidance, which was prepared for sites potentially contaminated with hazardous substances, describes the PA as a limited-scope investigation, based on existing and available data, that is performed to evaluate whether there is a potential for a release of hazardous substances (USEPA, 1991). Although this PA generally follows CERCLA guidance, certain elements, such as development of the MRSPP worksheets, assessment of exposure pathways, and development of the CSM, have been tailored to address the unique explosives-safety aspects of MEC.

Data collection activities, including onsite research (WPNSTA Yorktown information repositories) and offsite research (Internet sources, the National Archives and Records Administration [NARA], public libraries, and local libraries) were conducted as part of the PA. Current WPNSTA Yorktown and Naval Munitions Command Detachment Yorktown personnel were interviewed to obtain descriptions of operations and any details regarding activities performed at UXO 3. The findings are compiled in this PA report and were used for evaluating and identifying the appropriate path forward to address safety, human health, and the environment.

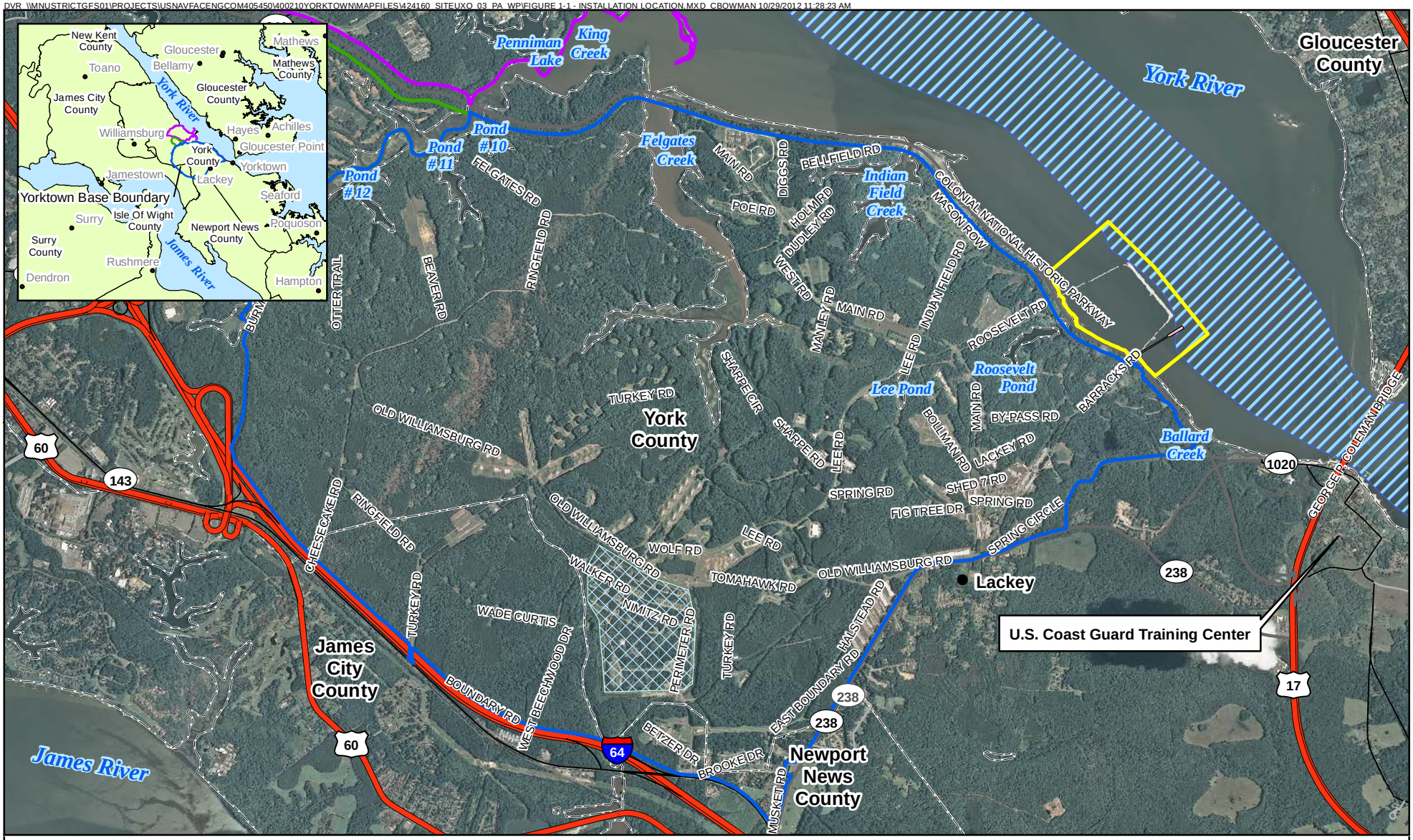
The PA was conducted in accordance with USEPA and Navy guidance, including the following documents:

- *Guidance for Performing Preliminary Assessments Under CERCLA* (USEPA, 1991)
- *Handbook on the Management of Munitions Response Actions* (USEPA, 2005)
- *Department of the Navy Environmental Restoration Program Manual* (Navy, 2006)

In addition, the CSM was developed using the *Final United States Army Corps of Engineers Conceptual Site Model Guidance, Development of Integrated Conceptual Site Models for Environmental Ordnance and Explosives Sites* (USACE, 2003).

The approach for conducting the PA and the development of this PA report is documented in the *Final Preliminary Assessment Work Plan, Munitions Response Program Site UXO 3, Naval Weapons Station Yorktown, Yorktown, Virginia* (CH2M HILL, 2011), which was reviewed and approved by the WPNSTA Yorktown Tier I Partnering Team.

DVR \\NNUSTRICTGFS01\PROJECTS\USNAVFACENGCOM405450\400210YORKTOWN\MAPFILES\424160_SITEUXO_03_PA_WP\FIGURE 1-1 - INSTALLATION LOCATION.MXD CBOWMAN 10/29/2012 11:28:23 AM



Legend

- UXO 3 Boundary
- York River Main Channel
- Location of former pier known as Pier R-1 (submerged pilings may remain)
- County Boundary
- Kings Creek Commerce Park
- Cheatham Annex
- Former Skiffes Creek Annex
- Yorktown Base Boundary

N
W E
S

0 2,250 4,500 Feet

Imagery: 2011

Figure 1-1
Installation Location Map
UXO 3 Preliminary Assessment
WPNSTA Yorktown
Yorktown, Virginia

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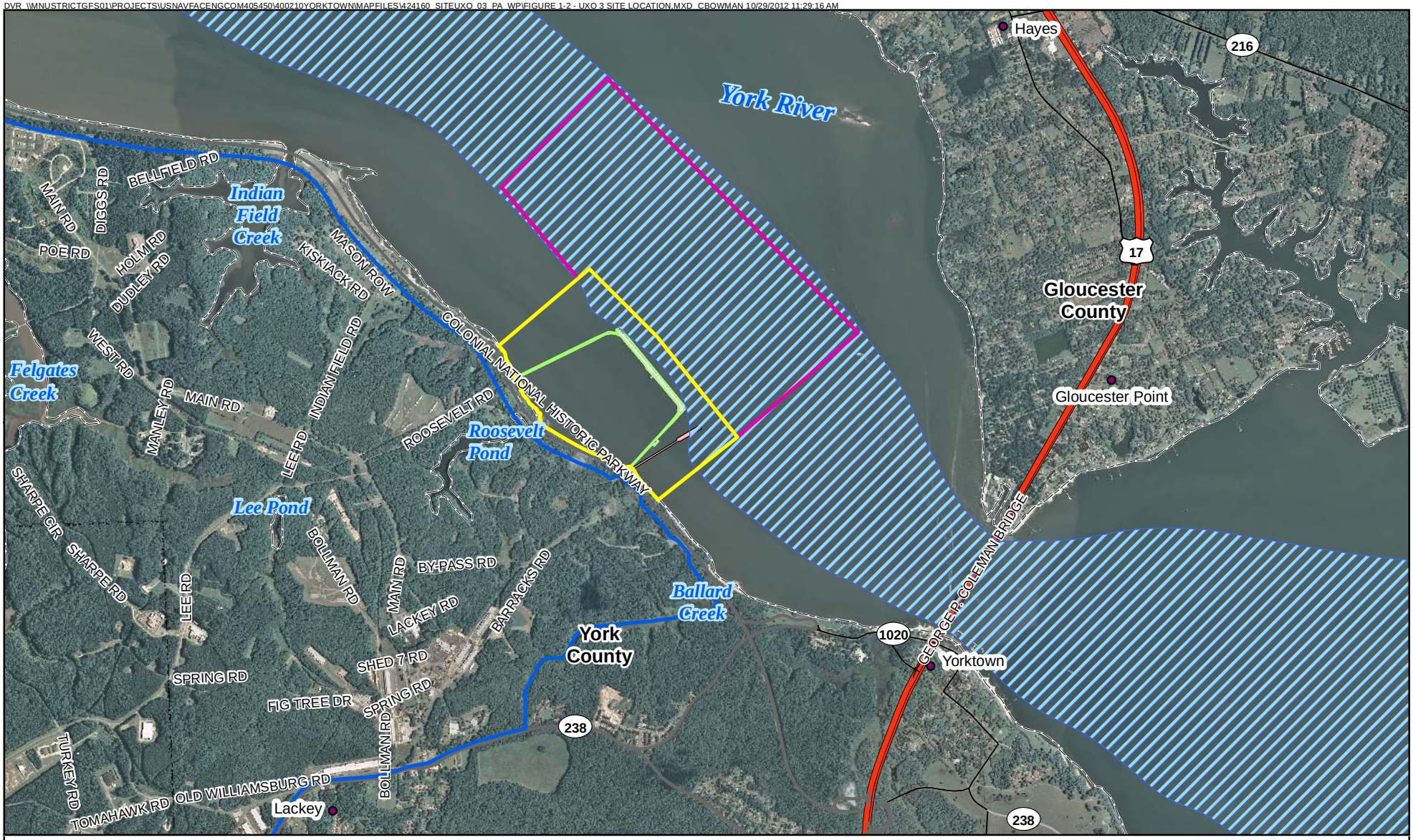
DVR \\NNUSTRICTGFS01\PROJECTS\USNAVFACENGCOM405450\400210YORKTOWN\MAPFILES\424160_SITEUXO_03_PA_WP\FIGURE 1-2 - UXO 3 SITE LOCATION.MXD CBOWMAN 10/29/2012 11:29:16 AM



Legend

- Yorktown Base Boundary
- Location of former pier known as Pier R-1 (submerged pilings remain)
- York River Main Channel
- Restricted Area (no unauthorized access during munitions loading/unloading activities)
- Site UXO 3 Boundary (Prohibited Area [no unauthorized access at all times])
- Pier R-3
- County Boundary

N
W E
S

0 1,500 3,000 Feet

Imagery: 2011

Figure 1-2
UXO 3 Location and Vicinity
UXO 3 Preliminary Assessment
WPNSTA Yorktown
Yorktown, Virginia

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SECTION 2

Summary of Data Collected and Review of Information

2.1 Summary of Data Collected

Data were collected from file sources, historical records reviews, and site-specific, in-house (WPNSTA Yorktown and NAVFAC) files. During the desktop review, local and federal guidelines pertaining to document duplication and removal were followed. Local archive and desktop data sources included the Internet, previous investigation reports, local libraries, newspapers, and WPNSTA Yorktown Facilities Operations records. National Archive desktop data sources included the National Archives Center in College Park, Maryland. A summary of information reviewed and information sources is provided as **Appendix A**.

As detailed in the PA Work Plan (CH2M HILL, 2011), the following data sources were gathered and reviewed during the desktop review:

- Maps and aerial photographs
- Descriptions of environmental, cultural, and historical conditions
- Environmental surveys, studies, and assessments, including:
  - Physical investigations
  - Chemical sample results
  - Results from maintenance, geophysical surveys, and sampling programs
  - Identification of potential pathways and receptors
- Munitions-related operations records detailing:
  - Munitions handling and storage procedures
  - Types of munitions handled
  - Dates and durations of munitions-related operations
- Real estate records
- Environmental cleanup records
- Newspaper articles
- Ordnance inventory records
- Geographic information system data
- Base Master Plan

Copies of all pertinent data were kept and filed as allowed. A summary of all documents reviewed (**Appendix A**) was generated and included the following information:

- Employee name
- Facility and activity
- Date and time collected
- Data source
- Document title
- Nature of document or file
- Notes
- Summary of data

All documentation was scanned (if hard copy) and uploaded to the local secure server and to the specified file folder. Electronic copies of all files not readily available to the public are provided on compact disc as **Appendix B**. If copies of data were not permitted or could not be obtained, a transcribed summary of the data was generated.

2.2 Review of Information

The PA process involved reviewing information associated with munitions-related activities at UXO 3. A summary of the information obtained from each source reviewed is provided as follows. This information was used to develop a more-detailed site description and CSM, as presented in Sections 3 and 4, respectively. A summary of items reviewed and consulted during the PA is included as **Appendix A**.

2.2.1 Interviews

Interviews were conducted with four current WPNSTA Yorktown and Navy Munitions Command Detachment Yorktown personnel capable of providing pertinent information about the Munitions Loading Piers. The information was also used to validate and verify data collected during the desktop review. Personnel interviewed were referred by Base personnel and solicited through approved Base resources. Names of potential interviewees were provided to the Navy Technical Representative for approval before any interviews were conducted. No contact was made with potential interviewees until the proper approval was received. Interview records are provided in **Appendix B**.

Information obtained during these interviews described pier usage, types of munitions loaded at the piers, maintenance activities for the piers, loading operations and types of ships loaded, and munitions handling protocols. This information was used to develop the CSM and an understanding of the site description presented in Section 3. Information obtained from the interviews indicates that MEC has not been released during recent loading activities (1977 to present) at Pier R-3. Limited information was able to be compiled on Pier R-1 operations because of the pier's age and historical use as a munitions loading pier.

2.2.1.1. Mr. Richard Eanes

Mr. Richard Eanes' tenure at WPNSTA Yorktown began approximately 30 years ago. Currently, Mr. Eanes serves as the Naval Ordnance Detachment Officer in charge of overseeing munitions loading and unloading operations at the Base (including the pier area). Information collected during this interview consisted of details regarding the historical use and maintenance of the piers (including dredging operations and demolition and construction of the piers), employee experiences during loading operations in the 1970s, and potential contacts for gathering information about munitions handling and dredging operations at the piers. Mr. Eanes said that no munitions had been dropped or pushed over the side of the Pier R-3 during his tenure. The areas surrounding Pier R-3 have been dredged historically and are subject to periodic maintenance dredging. Based upon Mr. Eanes' knowledge of current munitions handling procedures and personal experience, if any munitions items are present in the sediments and are located near the piers, they are likely not from recent activities, because current loading operations are much stricter than historical operations.

Mr. Eanes had limited knowledge of munitions loading activities at Pier R-1. When he began his tenure at WPNSTA Yorktown in the 1970s, Pier R-1 was used strictly as a recreational pier.

2.2.1.2. Dr. Francis Holt and Mr. Mike Foley

Dr. Holt and Mr. Foley were interviewed together. Dr. Holt and Mr. Foley's tenures began at WPNSTA Yorktown approximately 25 years ago. Currently, Dr. Holt serves as the Assistant to the Naval Ordnance Detachment Commanding Officer. Mr. Foley is a Facilities Engineer for the Naval Ordnance Detachment. Information collected during this interview consisted of details regarding the historical use and maintenance of the piers (including dredging operations and demolition and construction of the piers) and potential contacts for gathering information about munitions handling and dredging operations at the piers. Dr. Holt and Mr. Foley did not know whether munitions had been dropped or pushed over the side of the piers during loading and/or unloading operations. The areas surrounding Pier R-3 have been dredged and are currently dredged periodically for

maintenance; no ordnance items have been recovered during maintenance dredging operations to their knowledge.

Dr. Holt and Mr. Foley had limited knowledge of Pier R-1; they believe it was used as a recreational pier beginning in the 1970s until the early 1990s, when the pier was condemned. In 2003, Hurricane Isabel destroyed the remaining pieces of the pier.

2.2.1.3. Mr. Mark Piggott

Mr. Piggott's tenure began at WPNSTA Yorktown in 2003 as the Public Affairs Officer for WPNSTA Yorktown. Minimal information relating to the Munitions Loading Piers operation was collected during this interview because of Mr. Piggott's limited experience with pier operations. He was able to provide general information on Base security procedures while ships are docked at Pier R-3 and typical periods when ships are docked at Pier R-3. Security procedures are more stringent while a ship is docked at Pier R-3 compared to when no ships are moored along this pier. At a minimum, one harbor patrol unit operates 24 hours a day to survey the York River from Gloucester Bridge to Camp Peary.

2.2.2 Internet Search

Throughout the records review, CH2M HILL personnel conducted Internet searches. York County census data (for 2010), historical and current National Oceanic and Atmospheric Administration (NOAA) navigational maps, climate information, online newspaper articles, and Naval Installation Restoration Information Solution data were reviewed during these Internet searches. Information obtained during the Internet searches were used to learn about or identify:

- Population density surrounding UXO 3
- Information required to complete MRSPP worksheets (presented as **Appendix C**)
- Prohibited and restricted access areas, as well as identify current and historical water depths in the vicinity of Piers R-1 and R-3
- Hydrologic conditions of the site
- A visual timeline of the construction for the piers
- Munitions incidents at WPNSTA Yorktown

Links to information consulted during the PA are provided in **Appendix A**. Information obtained from the Internet searches did not locate any records documenting that MEC may have been released at the piers during loading activities.

2.2.3 Data Repositories

Throughout the records review, CH2M HILL personnel travelled and conducted record searches at multiple locations identified in the PA Work Plan (CH2M HILL, 2011). Record searches were completed at NARA (College Park, Maryland), WPNSTA Yorktown facilities, local libraries and museums, and military archives, as described below. Information obtained during these searches described pier usage, types of munitions loaded at the piers, maintenance activities for the piers, loading operations and types of ships loaded, base history, relevant studies and/or studies of the York River, and munitions handling protocols. Information obtained from the records search at various data repositories did not identify any records documenting that that MEC may have been released at the piers during loading activities.

2.2.3.1. Historical Archives

CH2M HILL personnel reviewed archival records at the NARA center in College Park, Maryland. Records relevant to the Bureau of Ordnance, naval property files, pier inspection prints, World War II (WW II) war diaries and deck logs of ships known to frequent the York River, historical maps, and historical real estate information were obtained and reviewed. Most of the post-WW II records are not currently organized or available for public

research at NARA. Therefore, only a limited number of available records identified were relevant to the Munitions Loading Piers historical activities after WW II.

2.2.3.2. Installation Data Repositories

Historical environmental reports and pamphlets, real estate records, construction drawings, cultural resources documents, dredging records, contract records, and former Base master plans were obtained from WPNSTA Yorktown data repositories, including the Public Works, Public Affairs, Hydrographics, and Environmental offices. Historical and current photographs were also obtained and reviewed in conjunction with construction drawings to determine the timeline of usage, historical activities performed, and existing conditions for the various pier areas. Dredging permits and records, related sediment analytical data, and contract records provided information relating to the maintenance and condition of sediment surrounding the piers and previous dredge spoil disposal locations[1].

2.2.3.3. Non-installation Data Repositories

During the records review, documents were also obtained from non-installation data repositories. Newspaper articles and books containing photographs relevant to the Munitions Loading Piers were obtained from the Hampton Roads Planning District Commission, the Army Transportation Museum, and the Hampton Roads Naval History Museum. Newspaper articles contained information on historical weapons research at WPNSTA Yorktown and the York River. Reports regarding ecology of the York River were retrieved from the Virginia Institute of Marine Science. A report obtained from the National Park Service contained information regarding stabilization of the York River shoreline and preservation of the Colonial National Historic Parkway, as well as results of a remote-sensing metallic survey conducted along the outside edges of the UXO 3 boundary. An essay on historical structures and literature on Hampton Roads naval bases was obtained from the York County Library.

No new information was provided from the Naval Ordnance Safety and Security Activity library or the Newport News Library.

2.2.4 Geographic Information System and Spatial Data

The Commander Navy Region Mid-Atlantic GeoReadiness Center provided historical imagery in August 2012. Online imagery resources and various maps, photographs, and drawings identified during other areas of the desktop review were also used in the development of figures for this report and for the CSM. The information derived from these data sets was used to establish the periods of munitions loading operations, locations of utilities, and the construction history of the piers.

The collected images and drawings were uploaded and verified by geographic information system professionals for spatial correctness. No corrections or adjustments to spatial data were necessary during the PA. Information obtained during the Internet searches were incorporated into the MRSPP worksheets (provided as **Appendix C**), hydrologic conditions of the site, and visual timeline of the piers.

Spatial data and geographic information data provided timelines and imagery of the pier development but did not provide any documentation that MEC has been released at the piers during loading activities.

[1] Dredge spoils were disposed at multiple locations throughout the decades; previous dredge spoil locations used by WPNSTA Yorktown include upland disposal located northwest of the northern trestle of Pier R-3, the Craney Island dredge disposal site in Portsmouth, Virginia, managed by the USACE, and offshore disposal.

SECTION 3

Site Description, Operational History, and Waste Characteristics

3.1 Facility and Site Description

WPNSTA Yorktown is a 10,624-acre installation located on the Virginia Peninsula in York and James City counties, Virginia (**Figure 1-1**). WPNSTA Yorktown is bounded on the northwest by Cheatham Annex and the King's Creek Commerce Center; on the northeast by the York River and the Colonial National Historic Parkway; on the southwest by Route 143 and Interstate 64; and on the southeast by Route 238 and the town of Lackey. The Colonial National Historic Parkway runs between the inland portion of WPNSTA Yorktown and the Munitions Loading Piers.

Before it was acquired by the Navy, the land that is now WPNSTA Yorktown was used as a coal and oil depot. On August 7, 1918, this land was acquired by President Woodrow Wilson by proclamation and was identified as the Navy Mine Depot Yorktown. Construction was initiated at the Navy Mine Depot Yorktown in September 1918. The primary mission of the facility was to support the production of mines for the mine-laying effort in the North Sea during World War I (WWI) (Bureau of Yards and Docks, 1942-1945). The Base location was selected primarily for the following reasons (WPNSTA Yorktown, 1978):

- Proximity with respect to the Naval Operating Base (Naval Station Norfolk) of the Norfolk area and fuel bases of the Fifth Naval District
- Sparsely populated area large enough to provide quantity-distance separation of explosive material and processing facilities
- Availability of transportation facilities, including the proximity to the Ohio and Chesapeake railroad lines and waterfront access to the York River
- Natural characteristics of the York River (allowing navigation of oceangoing vessels of the largest size)

The total acreage of the Mine Depot was reported to be 12,562 acres, subdivided into 11,288 acres of hard, marsh, and water land, and 1,274 acres of underwater land, which made it the largest single reservation in the United States under Navy control. To afford adequate protection of the waterfront, the Commonwealth of Virginia conveyed to the Navy all underwater land to the pier-head line, which later the War Department (Engineer Corps) calculated as the 30-foot depth curve (Miles, 1928).

For 20 years after WWI, the depot continued to receive, reclaim, store, and issue mines, depth charges, and related materials. On July 1, 1932, the first name change for the facility took affect when the facility was officially renamed the Naval Mine Depot. In 1938, it was reported that trinitrotoluene (TNT), bombs, fuzes, hardware, drill mines, aerial depth bombs, mousetraps, demolition charges, and rockets made up a large portion of the shipments from Yorktown and were destined to reach almost every naval facility in the continental United States and bases overseas (Bureau of Yards and Docks, 1942-1945). Additionally, the Naval Mine School[2] was created to support the Base mission of mine production through experiments and employee education. During WW II, the facility was expanded to include three TNT loading plants and new torpedo overhaul facilities. A research and development laboratory for experimentation with high explosives was also established in 1944. During the 1940s, two major munitions-related explosions occurred; on November 16, 1943, the Plant 2 warehouse exploded,

[2] The Naval Mine School was relocated to Naval Amphibious Base Little Creek (currently the Joint Expeditionary Base Little Creek/Fort Story) in July 1959. The Coast Guard established a Reserve Training Center at the school's former site, which occupies approximately 154 acres on the south bank of the York River. The Navy retained the use of a fuel storage area and fuel pier on the property (Foss, 1984).

followed by a fire at Storehouse 2 on April 1, 1947. Although these incidents are significant to the Base history and progression of munitions storage and handling activities at the Base, they are unrelated to the pier activities.

In 1947, a quality evaluation laboratory was developed to monitor special tasks assigned to the facility, which included the design and development of depth charges and advanced underwater weapons. In 1953, the transition from conventional to modern weapons began at WPNSTA Yorktown with the commissioning of Skiffes Creek Annex[3] (Foss, 1984).

On August 7, 1958, the depot was renamed the WPNSTA Yorktown, and by 1977 was consolidated with the Naval Ammunition Depot at St. Juliens Creek. Today, the primary mission of WPNSTA Yorktown is to provide ordnance, technical support, and related services to sustain the war-fighting capability of the armed forces in support of national military strategy (CH2M HILL, 2011).

UXO 3 consists of the current and former piers and pier area along the shoreline of the York River, comprising approximately 289 acres of water, approximately 6,400 linear feet of standing concrete pier (the current operational pier area known as Pier R-3), and remnants of a former wooden pier area where only pilings may remain below the water surface (former Pier R-1) (**Figure 3-1**). Former Pier R-1 consisted of a 1,100-foot-long trestle and 600-foot-long berthing area; whereas the current configuration of Pier R-3 consists of two trestles (each approximately 2,000 feet long) and a 2,300-foot-long berthing area. No reports were located indicating munitions loading operations occurred along the trestles of Piers R-1 and R-3. For the purposes of this PA, delineation of the UXO 3 boundary is defined as the prohibited area identified in the Title 33 of the Code of Federal Regulations, Paragraph 334.260.a.1 (33 CFR 334.260.a.1)[4]:

> *Naval Mine Service Testing Area (Prohibited) - [a rectangular area surrounding the piers] and extending upstream therefrom, beginning at a point on the shore line at latitude 37°15'25" N., longitude 76°32'32" W.; thence to latitude 37°15'42" N., longitude 76°32'06" W.; thence to latitude 37°15'27" N., longitude 76°31'48" W.; thence to latitude 37°15'05" N., longitude 76°31'27" W.; thence to a point on the shore line at latitude 37°14'51"N., longitude 76°31'50" W.; and thence along the shore line to the point of beginning.*

Additional areas associated with water-related munitions loading operations at WPNSTA Yorktown are discussed in 33 CFR 334.260. These areas consist of the restricted area (33 CFR 334.260.a.2) and the explosives handling berth (33 CFR 334.260.a.3), which are beyond the scope of this investigation. The restricted area is enforced during munitions loading activities for safety reasons, and few references to the use of the explosives handling berth were found during the desktop study. It was reported that the explosives handling berth (identified as the York River Explosives Anchorage) was used for the first time for a weapon exchange with United States Ship *Randolph* (CVS-15) in 1960 (WPNSTA Yorktown, 1976). Use of this anchorage and berthing area was reportedly limited to approximately 15 years (1960 to 1975), based on employee interviews and reports reviewed during the desktop study.

Historically, deployment of underwater mines (type and quantity unspecified) was tested in the York River (assumed within the location of the restricted and prohibited area as defined by 33 CFR 334.260) in the vicinity of WPNSTA Yorktown; the mines were dropped into the York River from aircraft and recovered for analysis (WPNSTA Yorktown, 1976). These tests were conducted to increase the reliability of mines from 1920 to 1950. The mines, after being evaluated, were located by underwater sound signals emanating from the mine and recovered for post test analysis (WPNSTA Yorktown, 1976).

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[3] Skiffes Creek Annex was established during the transition of WW II-type munitions to modern munitions as a separate facility within the WPNSTA boundary. This facility was specifically built to handle and store nuclear weapons at WPNSTA Yorktown. The first nuclear weapons arrived at the Annex in 1954. Throughout the 1950s and 1960s, the quantity and types of naval nuclear weapons grew to supply the Atlantic Fleet. The Annex was disestablished and designated as a Special Weapons Department at WPNSTA Yorktown in April 1970. In 1998, it was reported the only nuclear weapons stored at WPNSTA Yorktown were submarine-type nuclear weapons (320 W80 Tomahawk submarine-launched cruise missile). Currently, WPNSTA does not handle, store, or ship nuclear weapons.

[4] 26 FR 11198, Nov. 28, 1961, as amended at 27 FR 2465, Mar. 14, 1962; 30 FR 220, Jan. 8, 1965; 35 FR 4552, Mar. 14, 1970. Redesignated at 50 FR 42696, Oct. 22, 1985, as amended at 58 FR 37608, July 12, 1993

The Colonial National Historic Parkway, which borders the southwestern edge of the site, passes between UXO 3 and the inland portion of WPNSTA Yorktown. Access to UXO 3 is limited to Navy personnel and vessels, in accordance with 33 CFR 334.260, and is monitored by water patrols and security at the entrances of Pier R-3. This site has recently been opened under the Navy's Military Munitions Response Program and is designated as UXO 3.

3.1.1 Facility Physiography and Climate

WPNSTA Yorktown is situated within the Virginia Coastal Plain Physiographic Province, which is characterized by unconsolidated sediments several thousand feet in thickness (Meng and Harsh, 1988). Deposition and erosion associated with fluctuating sea levels have resulted in terraces that decrease in topographic elevation in a stair-step pattern with scarps, oriented north to south, that delineate the eroded shoreline along the toe of each terrace. Two terraces (Lackey Plain and Croaker Flat) are divided by one scarp (the Camp Peary Scarp) within the boundaries of WPNSTA Yorktown.

The York River is a tidally influenced sub-estuary of the Chesapeake Bay. The WPNSTA Yorktown Munitions Loading Piers are approximately 8 miles upstream of the mouth of the river, and approximately 1.5 miles upstream of Gloucester Point, where the river channel constricts and changes direction. At this location, the river is characterized by a deeper main channel bordered on either side by well-developed shoals. The outer edge of the Munitions Loading Piers borders the main channel, which has a depth of 40 to 45 feet (**Figure 1-2**). The trestles for each pier traverse the shoals from the shoreline to the berthing and cargo loading areas to facilitate transport of munitions from WPNSTA Yorktown to the transport vessel. The inboard side of the Pier R-3, known as the barge basin, has a water depth ranging from 15 to 20 feet. Remnants of Pier R-1 remain submerged in the water south of the WPNSTA Yorktown Munitions Loading Piers; the current water depth near the former berthing area of Pier R-1 ranges from 18 to 29 feet.

Maintenance dredging information for WPNSTA Yorktown indicates that the berthing area adjacent to the main channel is maintained at a depth of -42 feet mean lower low water (MLLW). The barge basin and the area just north of Pier R-3 are maintained at a depth of -18 feet MLLW. The Navy has reported an average requirement for dredging of approximately 300,000 cubic meters every 8 years.

WPNSTA Yorktown is located in a maritime climate that is influenced by the moderating effects of the Atlantic Ocean. Yorktown experiences mild winters and long, warm summers and is subject to easterly storms in the late summer and early fall, resulting in high tides and coastal flooding. Winter storms and tropical hurricanes may also move through the area. Winds are variable in WPNSTA Yorktown, but prevailing winds are usually from the south-southwest (Baker, 1995).

The area generally experiences warm summers, with temperatures averaging 87 degrees Fahrenheit in July, and moderate winters, with an average temperature of 30 degrees Fahrenheit in January. The area receives approximately 50 inches of rainfall annually (http://www.weather.com/weather/wxclimatology/monthly/USVA0856).

3.1.2 Surface Water Hydrology

The York River is a partially mixed estuarine system (Friedrichs, 2009). The mean tidal range near WPNSTA Yorktown is approximately 2 feet. The lower York River exhibits salinity stratification, with bottom salinities of 20 to 22 practical salinity units and surface salinities of 16 to 17 practical salinity units. Circulation is driven by tides, wind, and freshwater inflow. Tidal currents are stronger in the main channel than in the adjacent shoals. Spring tidal velocities near WPNSTA Yorktown are on the order of 2 feet per second. The flood tides tend to be stronger and more turbulent than the ebb tides because sediment is suspended and moved landward (upriver) on the flood tide compared to ebb tides in the York River. In the absence of wind or major freshwater discharge events, the mean estuarine circulation is weak, at approximately 2 to 3 inches per second in a landward (upriver) direction in the channel. Because the York River has a relatively small watershed, freshwater inflow is minor.

Waves are generally small in the York River, except when strong winds line up with the axis of the estuary (Friedrichs, 2009). Conditions for wind-wave growth are present only 3 to 4 percent of the time. However, large

waves can occur during extreme events, such as Hurricane Isabel in September 2003, when significant wave heights of 5 feet were measured at Gloucester Point.

Sources of sediment to the York River include influx from the tributaries at the head of the river (the Mattaponi and Pamunkey rivers), influx from the Chesapeake Bay, and shoreline erosion. The net movement of sediment is from the Chesapeake Bay into the York River, although sediment is transported out of the river into the bay during storms and hurricanes (Friedrichs, 2009; U.S. Geological Survey, 2003).

3.1.3 Ecological Settings and Natural Resources

The ecological setting of the site influences the type of ecological receptors that may be expected to inhabit or use the site. This section briefly describes the environmental setting of the York River adjacent to the site.

The shoreline bordering UXO 3 consists primarily of beach and lightly wooded areas and is characterized primarily by a shallow water habitat with small pockets of tidal marsh. The York River provides a variety of aquatic habitats for a number of ecological receptors. Various species of submerged aquatic vegetation and bordering emergent wetland plant species are present in the oligohaline and mesohaline aquatic habitats present. The river also supports a diverse array of estuarine benthic-dwelling organisms, including insects, annelids, mollusks, and crustaceans (Virginia Institute of Marine Science, 2009). Other aquatic organisms, particularly estuarine and marine fish, inhabit the river and surrounding areas. Avian and mammalian wildlife are also potential ecological receptors, as are reptiles. Upland areas that surround the pier are mostly developed (National Park Service, 2012).

3.1.4 Cultural Resources

WPNSTA Yorktown is located within the "historical triangle" of Yorktown, Williamsburg, and Jamestown. There are 366 historical sites and 3 historic districts currently known to exist on WPNSTA Yorktown, including the Lee House, a historic property listed in the National Register of Historic Places, and the Kiskiack Village site, perhaps the best-preserved Contact Period Native American village settlement on the Chesapeake Bay. WPNSTA Yorktown contains a wide variety of historical resources, including archaeological remnants of Native American populations, the settlement of the Chesapeake Bay, the Revolutionary War, the development of plantation agriculture, the Civil War, and post-war reconstruction.

Areas outside WPNSTA Yorktown contain similar and significant historical resources. The Yorktown Battlefield and the Colonial Parkway are both part of the Colonial National Historical Park, a historic property owned and managed by the National Park Service. The Colonial Parkway is listed in the National Register of Historic Places, and the Yorktown Battlefield has recently been nominated for listing. Site UXO 3 lies along an eastern segment of the Colonial Parkway.

The general project area is also known to contain underwater archaeological sites. The Yorktown Shipwrecks Archaeological District is southeast of the project area, in the York River. This district is composed of the remains of several British navy vessels scuttled by Lord Cornwallis during the siege of Yorktown.

3.2 Munitions Loading Piers Background and Description

3.2.1 Pier R-1

The initial pier located at WPNSTA Yorktown was Pier R-1. Currently, no remnants from Pier R-1 are visible; however, pilings may remain below the water level. Construction of Pier R-1 was completed in 1920 to facilitate munitions loading to ships (WPNSTA Yorktown, 2008). Before the wooden Pier R-1 was constructed, munitions loading and handling reportedly occurred in the York River from barge to ship, possibly outside the boundaries of UXO 3. Reports reviewed during the desktop study indicated munitions loading operations occurred along the berthing area of Pier R-1; no munitions loading operations were reported along the trestle of Pier R-1. Currently, no maintenance (pier or dredging) activities occur in the vicinity of the former footprint of Pier R-1.

A list of significant events for Pier R-1 is compiled as follows:

- 1920 – Initial construction of timber pier to facilitate munitions loading to ships (WPNSTA Yorktown, 2008)
- 1933 – Severe damage caused by a hurricane. Pier rebuilt during subsequent years.
- 1940 – Pier expansion (approximately 250 feet added to pier) to accommodate additional berthing areas for ships
- 1954 – Severe damage caused by fire[5]. Creosote-treated timbers were removed from the damaged portion of the pier and placed at WPNSTA Installation Restoration Site 23. A significant portion of the berthing area was destroyed by the fire.
- 1965 – Concrete cover installed over pier.
- 1970s - Recreational use of pier begins.
- 1985 – Pier reported to be in extremely poor condition.
- 2003 – Hurricane Isabel destroyed remaining portions of pier.
- 2009 – NOAA Navigational Chart 12243 (November 2009) identifies former pier footprint as submerged piles.

A detailed narrative timeline of Pier R-1 is provided on **Figure 3-2** and a summary of historical navigational charts for UXO 3 is provided as **Figure 3-3**.

3.2.2 Pier R-3

In 1941, construction began on what is now the current concrete pier, Pier R-3, immediately adjacent to Pier R-1 to accommodate the additional munitions supply demands for WW II and to alleviate some of the workload from Pier R-1. Pier R-3 was originally L-shaped (**Figure 3-3**) and consisted of only the eastern arm of the current pier (the southern trestle) and a portion of the cross-member (Pier R-3 South). In the 1960s, Pier R-3 was completed to the current U-shape, and a drawbridge was later constructed on the northern trestle that allowed loading activities inside of the pier in the barge basin. The current Pier R-3 consists of two trestles leading to the main portion of Pier R-3, which are perpendicular to the shoreline and extend approximately 2,000 feet into the York River. Connecting the two trestles is the 2,300-linear-foot main pier (combined Pier R-3 North and South) that is parallel to the shoreline (**Figure 3-1**). Reports reviewed during the desktop study indicated munitions loading operations occurred along the berthing area of Pier R-3; no munitions loading operations were reported along the trestles of Pier R-3. A list of significant events in the history of Pier R-3 is provided as follows:

- 1941 – Construction begins on Pier R-3 (current Pier R-3 South).
- 1951 – Dredging around Pier R-3.
- 1962 – Construction on Pier R-3 (current Pier R-3 North) was initiated to complete the current U-shape formation; construction included a draw bridge for entrance and exit of the barge basin.
- 1963 – Construction ongoing and fenders repaired.
- 1964 – Pier R-3 construction complete and area surrounding the new construction dredged for the first time.
- 1965 – Inboard area was dredged to approximately -18 feet mean low water (MLW) (this depth was maintained in subsequent dredging activities); outboard area was dredged to approximately -36 feet MLW (**Figure 3-4**).
- 1977 – Granted authorization to construct an open-pile timber boathouse along the southern trestle (to be completed in 1980).
- 1979 – Outboard area was dredged to approximately -42 feet MLW (**Figure 3-4**).

[5] No reports on the cause of the 1954 fire at Pier R-1 were located during the PA records search.

- 1987 – Inboard area was dredged to approximately -18 feet MLW (**Figure 3-4**).
- 1990 – Pier R-3 South was expanded to the width of Pier R-3 North. Limited dredging within the existing Pier R-3 North footprint took place to facilitate construction (**Figure 3-4**).
- 1999 – Replacement of Pier R-3 South (portion unmodified by the pier expansion in 1990) and southern trestle, including a new boathouse (modifications completed by 2002).
- 2005 - Outboard area was dredged to approximately -42 feet MLLW (**Figure 3-4**).
- 2012 – Pier R-3 in use for munitions loading. Maintenance dredging activities (inboard and outboard portions of Pier R-3) are planned for fiscal year (FY) 2013.

A condition survey of the pier was completed in 2008, when the Pier R-3 substructure and superstructure was described to be in "fair" condition (NAVFAC, 2011c). The north trestle is in poor condition, with a large amount of concrete spalling and pile damage. The south trestle and Pier R-3 South are in good condition as a result of their relatively recent modifications (1990 to 1999). Overall, approximately 53 percent of the pile and pile cap structures have deteriorated throughout Pier R-3. The primary fender system servicing Pier R-3 is in "satisfactory" condition and the secondary fender system is in "fair" condition. The mooring dolphins along Pier R-3 are in "poor" condition requiring repairs to its piles. A maintenance dredging operation along Pier R-3 is expected to occur in the near future.

Pier R-3 has been used for munitions loading operations from the 1940s until the present on both the inboard and outboard portions (berthing area) of the pier. Employee interviews and site photographs indicate that barges were loaded side by side (maximum number of barges loaded side by side was estimated to be five) along the inboard portion (barge basin) of the pier. These barges were loaded via forklift ramps run between the barges and the pier. Typically, ships or motorized amphibious craft were loaded on the outboard portions of the pier. It was reported in 1984 that:

> *…[with the] exception of aircraft carriers, all classes of modern fleet vessels enter the deep-channeled York River and berth at the pier to receive munitions (missiles, mines, torpedoes, and ordnance equipment). Aircraft carriers, anchored in Hampton Roads Explosive Anchorage, are serviced by transfer barge or helicopters*. (Foss, 1984)

The barge basin is still used for loading today and the area is routinely dredged to approximately -18 feet MLLW. Pier R-3 is currently active and used for munitions loading activities. The use of Pier R-3 is not expected to change in the foreseeable future.

A detailed narrative timeline of Pier R-3 is provided as **Figure 3-2**. A summary of historical navigational charts of UXO 3 is provided as **Figure 3-3.**

3.2.3 Loading Operation Description

It was reported that WPNSTA Yorktown increased its production of munitions by 800 percent during WW II, when the Base operated 24 hours a day, 7 days a week, for the duration of the conflict (Bureau of Yards and Docks, 1942-1945). A two-shift operation at Pier R-3 was also required to receive, segregate, and store gun ammunition received from the depot at St. Juliens Creek between 1974 and 1977 (WPNSTA Yorktown, 1976). Only a few references to incidents along the piers were located during the desktop study; the incidents reported include the following:

- In 1944, a fire was reported onboard Landing Ship, Tank 540 while loading ammunition at Pier R-3 (south); the cause of the fire was an ignited MK-2 (smoke float). A considerable amount of cargo had to be removed and replaced on the vessel; however, no additional damage was reported (Bureau of Yards and Docks, 1942-1945).
- In 1954, a fire destroyed the berthing area of Pier R-1 (the trestle for the pier was not damaged during the fire). No details on the cause of the fire were located during this desktop study.

No documentation of incidents involving munitions, dropping of munitions, or explosions at the piers was identified during the PA.

As shown in **Photographs 3-1**, **3-2**, and **3-3**, protocols for loading and unloading munitions on ships have changed dramatically throughout the last century. **Photograph 3-1** (circa 1920) shows mines being loaded onto a ship using a mechanical pulley system. **Photograph 3-2** (circa 1945) shows cargo being loaded using planks between Pier R-3 and the ship for men to manually load and unload cargo, whereas **Photograph 3-3** (circa 1980) shows that more-recent cargo and munitions loading is palletized and loaded onto ships by heavy machinery.

PHOTOGRAPH 3-1

Munitions loading operations along Pier R-1 circa 1920.
Source: Hampton Roads Naval Museum

PHOTOGRAPH 3-2

Munitions loading operations along Pier R-3 circa 1945.
Source: Hampton Roads Naval Museum

PHOTOGRAPH 3-3
Munitions loading operations along Pier R-3 circa 1980.
Source: Mark Piggott, WPNSTA Yorktown Public Affairs Officer

3.2.3.1. Relevant Reports

Appendix A contains a list of all documents reviewed during the desktop study, and **Table 3-1** identifies and summarizes those documents that contain information relevant to the findings of this PA.

TABLE 3-1
Munitions Loading Piers, Relevant Reports

Title	Date	Description
Pier R-1 Construction Drawings (Bureau of Yards and Docks, 1918)	1918-1920	Wooden pier construction includes railroad tracks and a small office. Trestle is narrow and includes only one set of railroad tracks; berthing area includes two sets of railroad tracks to expedite loading and unloading operations (berthing area is approximately 56 feet in width).
The Naval Mine Depot Yorktown (Miles, 1928)	1928	Brief history of WPNSTA Yorktown published by Commander A. H. Miles; provides details on plant and animal life, property history, and brief description of Base activities.
Pier R-1 Dredging Plan (WPNSTA Yorktown, 1931)	1931	The plan indicates the southern side of the berthing area will be dredged to a depth of -28 feet MLW; however, no after-dredging documents were identified to confirm if dredging occurred.
WW II War Diaries, Naval Mine Depot Yorktown (Bureau of Yards and Docks, 1942-1945)	1942-1945	Collection of records documenting daily or monthly activities at WPNSTA Yorktown during the war.
The History of Naval Weapons Station Yorktown, Yorktown, Virginia (Clingan, 1961)	1961	Brief history of WPNSTA Yorktown; provides details on the property history and brief description of ongoing Base activities.

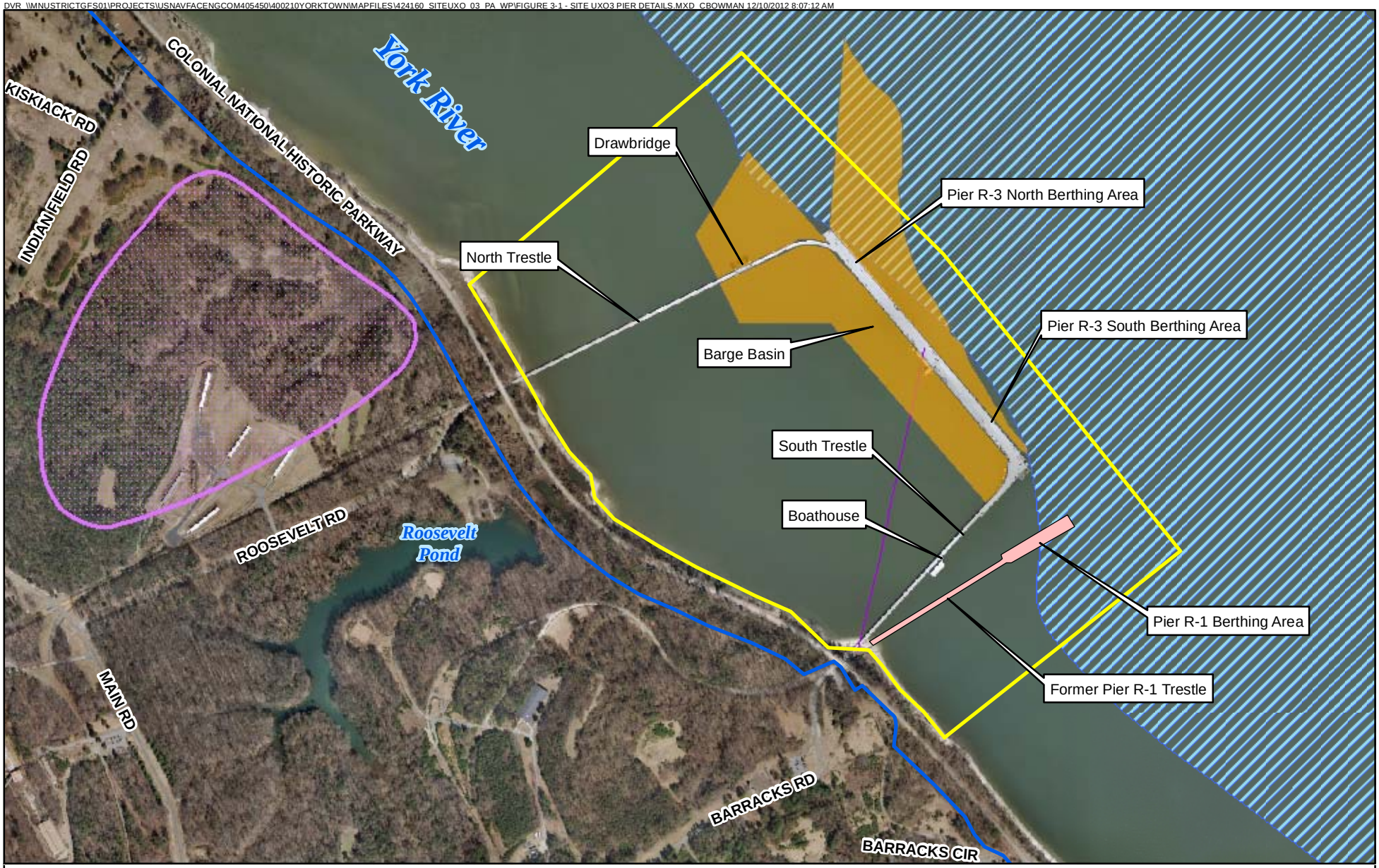
TABLE 3-1
Munitions Loading Piers, Relevant Reports

Title	Date	Description
Former Dredge Permits, Dredging Documents, and Condition Surveys of Pier R-3 (WPNSTA Yorktown, 1964-2008)	1965 - 2008	Provides water depth and pier configuration information. Documented historical dredging operations conducted at Pier R-3 consists of the following (**Figure 3-4**): 1965 - 1966: 169,535 cubic yards removed from the barge basin (inboard portion of Pier R-3) via hydraulic pipeline to achieve a depth of -18 feet MLW; dredge spoils placed on inland WPNSTA property (**Figure 3-1**). 74,860 cubic yards removed from outboard portion of Pier R-3 to achieve a depth of -36 feet MLW; dredge spoils placed in disposal area in York River. 1979: 545,500 cubic yards removed from outboard portion of Pier R-3 via hopper to achieve a depth of -42 feet MLW; dredge spoils placed at Craney Island. 1980: 155,040 cubic yards removed from outboard portion of Pier R-3 via clamshell to achieve a depth of -42 feet MLW; dredge spoils placed at Craney Island. 1987: 168,387 cubic yards removed from barge basin (inboard portion of Pier R-3) via clamshell to achieve a depth of -18 feet MLW; dredge spoils placed at Craney Island. 1990: Sediments were removed from the existing footprint of Pier R-3 South to facilitate construction (widening of Pier R-3); information the disposal area and approximate amount of dredge spoils was not located. 1993 - 1994: Sediments were removed from barge basin (inboard portion of Pier R-3) and outboard portion of Pier R-3 to achieve a depth of -18 and -42 ft MLW, respectively; information on the disposal area and approximate amount of dredge spoils was not located. 2004: 120,687 cubic yards removed from outboard portion of Pier R-3 via clamshell to achieve a depth of -42 feet MLLW; dredge spoils placed at Norfolk Ocean Disposal Site. 2008: 120,670 cubic yards removed from outboard portion of Pier R-3 to achieve a depth of -42 feet MLLW; dredge spoils placed at Norfolk Ocean Disposal Site.
WPNSTA Yorktown 50th Anniversary Pamphlet (WPNSTA Yorktown, 1968)	1968	Brief history and still photographs of initial Base construction and ongoing activities. Includes photos and descriptions of munitions produced by WPNSTA Yorktown and explosions at the Base (all terrestrial incidents).
An Introduction to WPNSTA Yorktown (WPNSTA Yorktown, 1975)	1975	Brief history and still photographs of initial base construction and ongoing activities. Includes photos and descriptions of munitions produced by WPNSTA Yorktown and statistical data from FY 1975.
Disestablishment of Ammunition Functions for St. Juliens Creek Annex (WPNSTA Yorktown, 1976)	1976	Detailed plan of the disestablishment of St. Juliens Creek Annex munitions activities and transition to WPNSTA Yorktown.
GSA Real Property Utilization Survey (WPNSTA Yorktown, 1978)	1978	Survey of WPNSTA Yorktown property. Includes still photographs of the Base.
Initial Assessment Study, Naval Weapons Station Yorktown, Yorktown, Virginia (Naval Energy and Environmental Support Activity, 1984)	1984	Initial assessment of hazardous waste disposal areas at WPNSTA Yorktown. The purpose of pier operations was described as loading and unloading supplies from ships. The ammunition pier is described as 4,100 feet of berthing on both the inboard and outboard sides operated by the Dockmaster Division of the Ordnance Department. The U-shaped pier could accommodate 2 vessels along the 2,250-foot outboard side with a maximum Class I, Division I loading of 700,000 pounds net explosive weight. A lift span bridge enabled barges, lighters, and service craft to dock on the inboard side of the pier to be loaded. Ordnance loading and/or unloading operations were accomplished by a 25-ton-capacity, track-mounted, mobile crane or truck-mounted, 19-ton- capacity cranes. All types of ordnance (missiles, torpedoes, bullets, and so forth) were handled at the pier. Dunnage from ships is hauled to a burning site located behind the Barrack Road Landfill (Site 12). Unloaded wood was reclaimed and metal banding was taken to the scrap metal yard adjacent to Building 402. Retrieval of overboard material was the responsibility of the Explosive Ordnance Disposal (EOD). No major accidents were reported to have occurred within the last 10 years at the time of the report (1973 to 1983). The pier was not identified as a site warranting investigation.
The United States Navy in Hampton Roads (Foss, 1984)	1984	Brief history and still photographs of initial Base construction and ongoing activities. Includes photos and descriptions of munitions produced by WPNSTA Yorktown.
Chemical Weapons Movement. History Compilation (Brankowitz, 1987)	1950-1987	Description of chemical warfare weapons transport and incidents associated with transport of weapons. WPNSTA Yorktown is not listed as a facility that received, shipped, or stored chemical weapons.

TABLE 3-1
Munitions Loading Piers, Relevant Reports

Title	Date	Description
Long-Term Management Strategy for Dredged Material Disposal for the WPNSTA Yorktown, Yorktown, Virginia; Naval Supply Center, Cheatham Annex; and Naval Amphibious Base Little Creek, Norfolk, Virginia. Phase I: Evaluation of Existing Management Options and Data (Army, 1990)	1990	Summarized previous dredging and sample activities for the existing maintenance dredging permit for WPNSTA Yorktown. Purpose of report was to evaluate potential dredge spoil sites for maintenance dredging activities for WPNSTA Yorktown. In 1975, 10 sediment samples were collected and analyzed for inorganics, kepone, TNT (not detected), 1,3,5-trinitroperhydro-1,3,5-triazine (not detected), toxaphene, methoxyclor, endrine, lindane, polychlorinated biphenyls (PCBs), nitrogen, phosphorus, total suspended solids, oil and grease, and physical characteristics.
WPNSTA Yorktown 75th Anniversary Pamphlet (WPNSTA, 1994)	1994	Brief history and still photographs of initial Base construction and ongoing activities. Includes photos and descriptions of munitions produced by WPNSTA Yorktown and explosions at the Base (all terrestrial incidents).
WPNSTA Dredging Permit 99-0371 (Virginia Water Protection, 2001)	2001-2016	Permit to allow the maintenance dredging of outboard and inboard slips and the approaches to Pier R-3 to maintain continued navigational ingress and egress; dredged material (approximately 300,000 cubic yards of material for each cycle) will be disposed of at the Norfolk Ocean Disposal Site. The permit is effective from October 10, 2001, to October 10, 2016.
Tier III Sediment Evaluation Report, Naval Weapons Station Yorktown and Cheatham Annex (GMI, 2004)	2004	Fifteen sediment samples were collected and analyzed for total organic carbon, nitrogen, phosphorus, nitrate and nitrite, inorganics, polyaromatic hydrocarbons, PCBs, dioxins, pesticides, and semivolatile organic compounds. The sampling was conducted for the maintenance dredging permit for WPNSTA Yorktown.
Sediment Sampling Results for WPNSTA Yorktown Maintenance Dredging Permit (NAVFAC, 2011a)	2011	Two composite sediment samples were collected and analyzed for physical characteristics, total organic carbon, nitrogen, phosphorus, nitrate and nitrite, inorganics, polyaromatic hydrocarbons, PCBs, dioxins, pesticides, organopesticides, semivolatile organic compounds, and explosives. The sampling was conducted for the maintenance dredging permit for WPNSTA Yorktown.
Preliminary Draft WPNSTA Yorktown Maintenance Dredging Plans (NAVFAC, 2011b)	2011	Plans indicated extensive dredging of the outboard and inboard portions of Pier R-3 will occur in 2012. Plans show the limit of dredging is offset approximately 12.5 feet to prevent structural damage of the pier. Additionally, the maintained dredge depth is approximately -42 feet MLLW on the east side of the pier and -18 feet MLLW on the west and northern portions of Pier R-3 (**Figure 3-1** and **3-4**). The dredge disposal area is identified as the Norfolk Ocean Disposal Site.
Colonial National Historic Parkway, Repair and Stabilize the York River Shoreline to Protect the Colonial National Historic Parkway (National Park Service, 2012)	2012	Provides alternatives to prevent erosion along the Colonial National Historic Parkway. Investigation included a near-shore metallic investigation to the north and south of the current Pier R-3. The results of the metallic investigation are included as **Figure 3-5**.

DVR \\MNUSTRICTGFS01\PROJECTS\USNAVFACENGCOM405450\400210YORKTOWN\MAPFILES\424160_SITEUXO_03_PA_WP\FIGURE 3-1 - SITE UXO3 PIER DETAILS.MXD CBOWMAN 12/10/2012 8:07:12 AM



Legend

- Location of former pier known as Pier R-1 (submerged pilings remain)
- Yorktown Base Boundary
- UXO 3 Boundary
- Maintenance Dredge Area
- Approximate location of Upland Dredge Disposal Area used in 1965
- York River Main Channel
- Sewer Utility (Submerged)

N W E S

0 500 1,000 Feet

Imagery: 2010

Figure 3-1
Munitions Loading Piers Details
UXO 3 Preliminary Assessment
WPNSTA Yorktown
Yorktown, Virginia

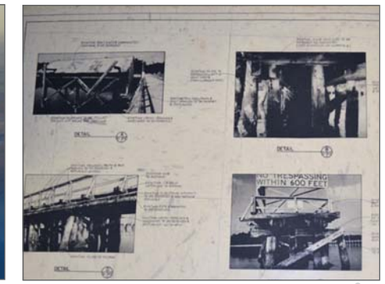
CH2MHILL

Pier R-1

2.

1.

3.



4.

5.

1920 – Initial construction of timber pier to facilitate munitions loading to ships.

1933 – Severe damage caused by a hurricane. Pier rebuilt during subsequent years.

1940 – Pier expansion (approximately 250 ft added to pier) to accomodate additional berthing areas for ships.

1954 – Severe damage caused by fire. Creosote timbers removed from damaged portion of pier and placed at Installation Restoration Site 23. A significant portion of the berthing area was destroyed by the fire.

1965 – Concrete cover installed over pier.

1970s – Recreational use of pier begins.

1985 – Pier reported to be in extremely poor condition.

2003 – Hurricane Isabel destroyed remaining portions of pier.

2009 – NOAA Navigational Chart 12243 (November 2009) marks former pier footprint as submerged piles.

1920 | 1925 | 1930 | 1935 | 1940 | 1945 | 1950 | 1955 | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015

Pier R-3

6.

7.

8.

9.

10.

1941 – Construction begins on Pier R-3 (Current Pier R-3 South).

1951 – Dredging around Pier R-3.

1962 – Construction on Pier R-3 (Current Pier R-3 North) was initiated to complete the current U-shape formation; construction included a draw bridge for entrance and exit of the barge basin.

1963 – Construction ongoing and fenders repaired along the barge basin.

1964 – Pier R-3 construction complete and area surrounding the new construction dredged for the first time.

1965 – Inboard area was dredged to approximately -18 ft MLW (this depth was maintained in subsequent dredging activities).

1966 – Outboard area was dredged to approximately -36 ft MLW.

1977 – Granted authorization to construct an open-pile timber boathouse along the southern trestle (to be completed in 1980).

1979 – Outboard area was dredged to approximately -42 ft MLW.

1987 – Inboard area was dredged to approximately -18 ft MLW.

1990 – Pier R-3 South was expanded to the width of Pier R-3 North.

1999 – Replacement of Pier R-3 South (portion unmodified by the pier expansion in 1990) and Southern trestle including a new boathouse (modifications completed by 2002).

2005 – Outboard area was dredged to approximately -42 ft MLLW.

2012 – Pier R-3 in use for munitions loading. Maintenance dredge activities (inboard and outboard portions of Pier R-3) expected to be conducted in the near future.

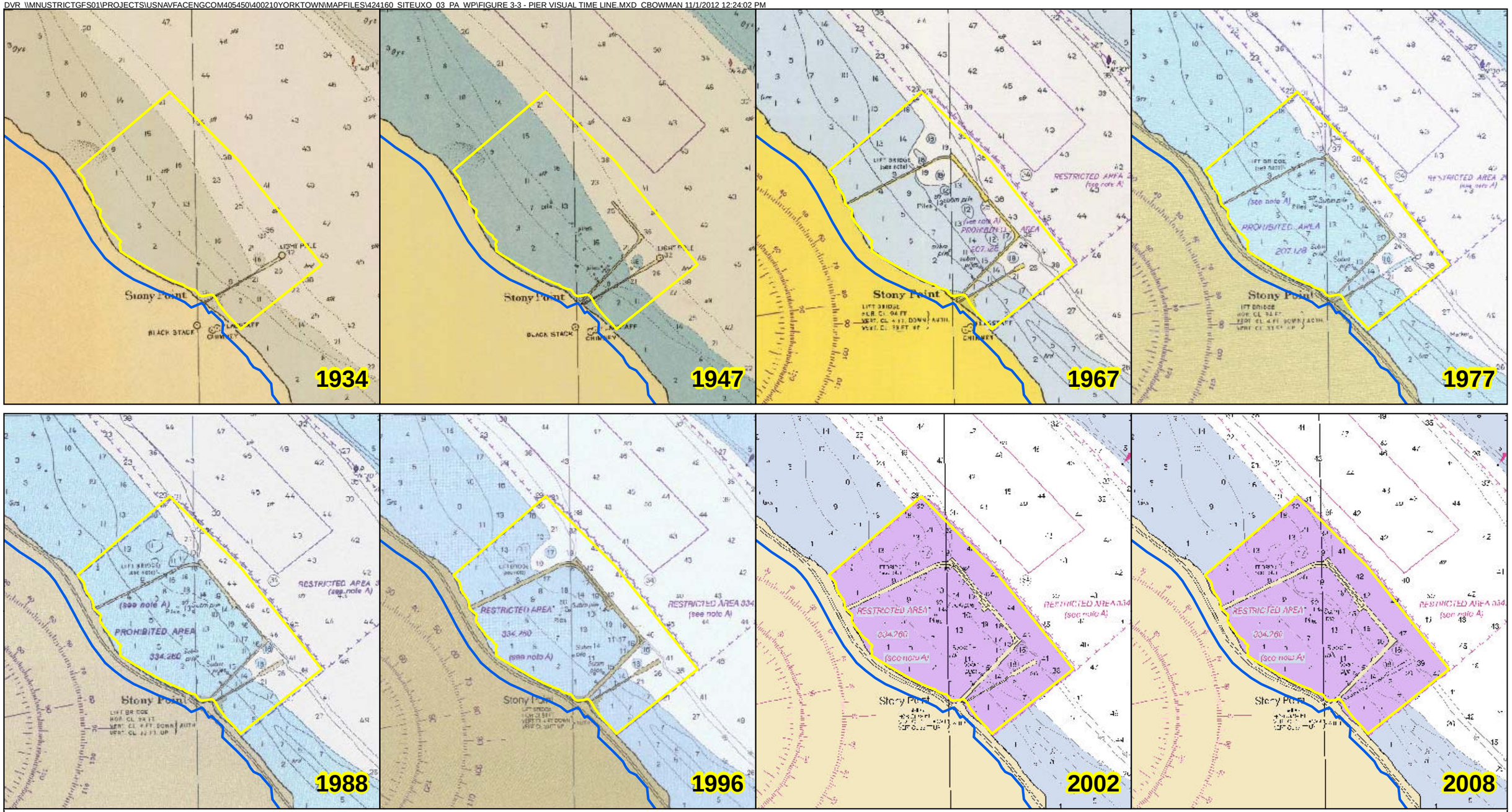
Photography Sources

1. NARA
2. NARA
3. NAVFAC Hydrographics
4. WPNSTA Yorktown PWD
5. WPNSTA Yorktown PAO
6. Hampton Roads Naval Museum
7. WPNSTA Yorktown PAO
8. WPNSTA Yorktown PAO
9. CH2M HILL
10. www.cnic.navy.mil

Acronyms List

ft – feet/foot
FY – Fiscal Year
MLW – mean low water
MLLW – mean lower low water
NARA – National Archives and Records Administration
NOAA – National Oceanic and Atmospheric Administration
PAO – Public Affairs Officer
WPNSTA – Naval Weapons Station

FIGURE 3-2
Munitions Loading Piers Timeline
UXO 3 Preliminary Assessment
WPNSTA Yorktown
Yorktown, Virginia



Legend
- UXO 3 Boundary
- Yorktown Base Boundary

N

0 1,000 2,000 4,000 Feet

1 inch = 2,000 feet

Source: NOAA Navigational Chart 12242

Footnote: Restriction around piers began in 1961.

Figure 3-3
Munitions Loading Piers Visual Timeline
UXO 3 Preliminary Assessment
WPNSTA Yorktown
Yorktown, Virginia

CH2MHILL.

Legend
- Future Dredge Area
- Former Dredged Area
- UXO 3 Boundary
- Yorktown Base Boundary

Note: Additional maintenance dredging events occurred at the pier however official dredging records have not been located. Data compiled from WPNSTA drawings provided by the NAVFAC Hydrographics Department.

N

0 1,000 2,000 4,000 Feet

1 inch = 2,000 feet

Imagery: 2010

Figure 3-4
Dredge Areas Visual Time Line
UXO 3 Preliminary Assessment
WPNSTA Yorktown
Yorktown, Virginia

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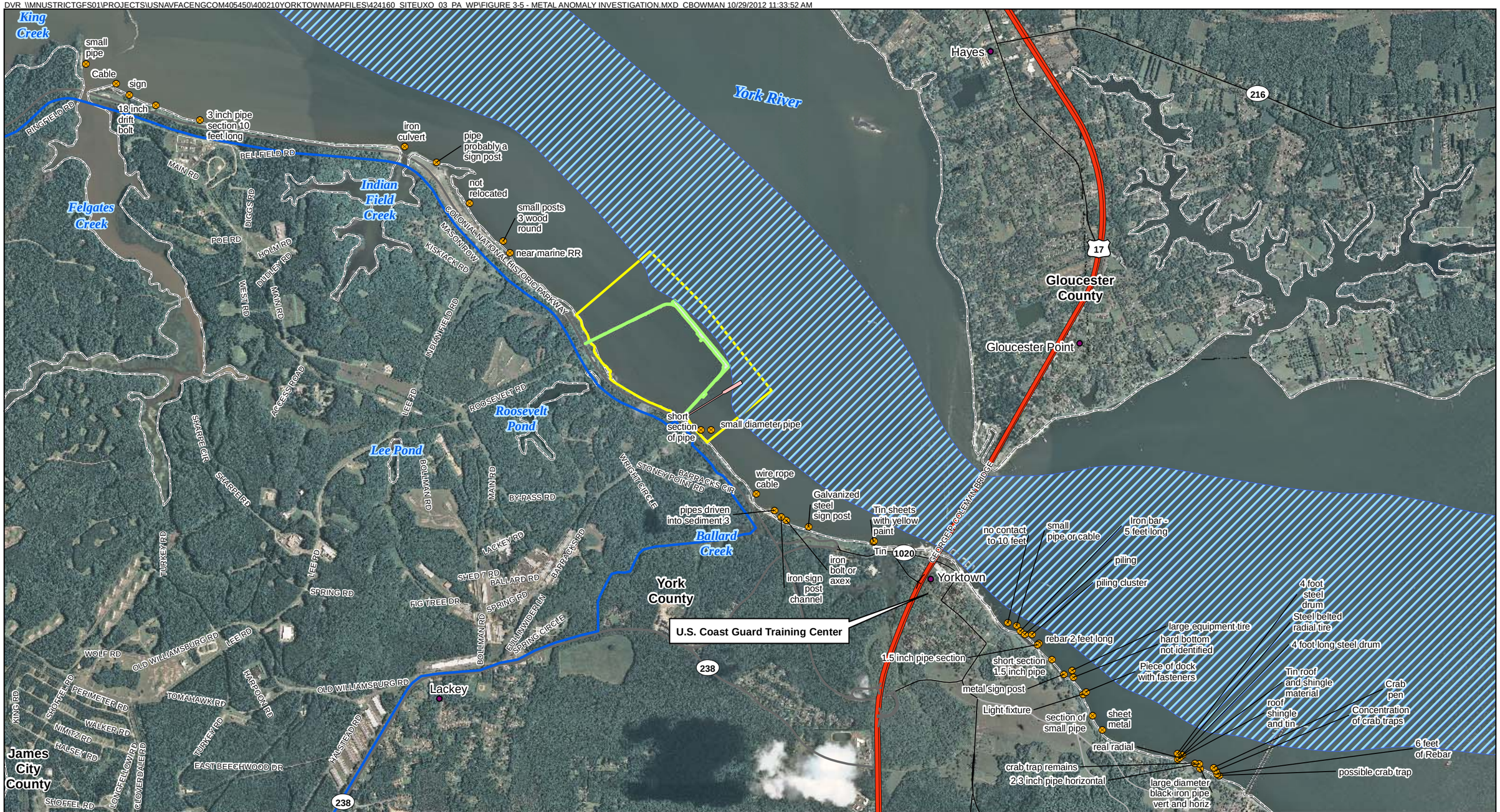
DVR \\MNUSTRICTGFS01\PROJECTS\USNAVFACENGCOM405450\400210YORKTOWN\MAPFILES\424160_SITEUXO_03_PA_WP\FIGURE 3-5 - METAL ANOMALY INVESTIGATION.MXD CBOWMAN 10/29/2012 11:33:52 AM



Legend

- Metal Anomaly Investigation Location
- UXO 3 Boundary
- Yorktown Base Boundary
- York River Main Channel
- Location of former pier known as Pier R-1 (submerged pilings remain)
- Pier R-3
- County Boundary

N

0 1,250 2,500 5,000 Feet

1 inch = 2,500 feet

Imagery: 2011

Figure 3-5
Metal Anomaly Investigation Results
UXO 3 Preliminary Assessment
WPNSTA Yorktown
Yorktown, Virginia

CH2MHILL.

SECTION 4

Pathway and Hazard Assessment

This section presents the CSM, discusses potential MEC and explosive hazards, identifies potential MC, presents the population summary, and summarizes the development of MRSPP worksheets (**Appendix C**).

4.1 Conceptual Site Model

The profile development and pathway analysis was conducted as part of the PA Work Plan (CH2M HILL, 2011). Changes have occurred to the profiles for UXO 3 presented in the Work Plan, based on information obtained during the PA. Physical characteristics of the site have been revised in the CSM, as shown on **Figure 4-1**.

4.1.1 Facility Profile

Detailed descriptions of WPNSTA Yorktown and UXO 3 are provided in **Section 3**.

4.1.2 Physical Profile

UXO 3 is located along the York River in Yorktown, Virginia. Since at least 1920, the depth within the channel of the York River at WPNSTA Yorktown has been maintained at -40 to -45 feet MLLW. Currently, the maintained dredged depth is approximately -42 feet MLLW along the outboard side of Pier R-3 and -18 feet MLLW along the inboard barge basin (NAVFAC, 2011b).

Pier R-1 construction was completed in 1920. WPNSTA Yorktown maintains a prohibited area surrounding UXO 3, as defined by 33 CFR 334.260.a.1. The prohibited area initially appeared on navigational charts in the 1960s. This area, which was used as the basis for the initial study area, is a large rectangular area that encompasses the current and former pier areas within the York River. The zone is marked on nautical charts (**Figure 3-3**). According to 33 CFR 334.260:

> *(1) All persons and all vessels other than naval craft are forbidden to enter the prohibited area described in paragraph (a)(1) of this section {the area surrounding UXO 3}.*

4.1.3 Release Profile

UXO 3 includes areas along and beneath piers R-1 and R-3, where historical munitions loading and unloading activities may have resulted in the presence of MEC (primarily discarded military munitions) in the York River.

Documentation of a release was not identified during the PA. However, it is possible that undocumented releases occurred. The exact number and type of MEC items that may have been released, if any, was unable to be obtained during the PA; however, an incomplete list of items identified in historical loading reports is provided in **Section 4.1.3.1**. Based on a Tier 1 sediment evaluation of the York River (**Appendix D**), current velocities are not sufficient to transport intact munitions significantly. Therefore, the probable location for items that may have been dropped at UXO 3 is believed to remain localized to the pier areas as long as they remain undisturbed. However, the hydrodynamic environment in the York River is complex and variable, and the Tier 1 evaluation should be considered an initial, simplified assessment of the site conditions. It is also possible that physical processes such as dredging, construction activities, and other investigations caused the movement or relocation of MEC; no reports or documentation were located during the desktop study that reported munitions were encountered during dredging or fishing operations in the vicinity of former Pier R-1 or Pier R-3. Although recreational uses (fishing, boating, and diving) are not permitted in the prohibited zone, it is possible that future trespassers (fishermen or divers) could be exposed to MEC (entangled in fishing nets and gear or interaction while diving) if site use changes and the prohibited area is no longer enforced. Although future use is not anticipated to change, this potential exposure pathway cannot be eliminated at this point.

4.1.3.1. Potential Munitions Presence

Most documentation, records, and other material reviewed during the desktop review indicate that a wide variety of munitions and munitions-related material was shipped to and from and/or handled at WPNSTA Yorktown. Based on records identified in the desktop review, the following list of munitions items potentially shipped to and from WPNSTA Yorktown during and after the WWI era was compiled:

Bombs

- Amatol loaded bombs
- Earthquake bomb (or the Tall Boy-M containing 5,600 pounds of Torpex D-1)
- Aircraft depth bombs
- MK 4-4, MK 12, MK 12-2, MK 13-2, MK 13, MK 15-2, MK 17-1,MK 17-2, MK-29, Mark 34-B, MK 37, MK-44 (inert and loaded, with bursting tubes, anti-aircraft)
- TPX-2, amatol, 80-20, comp B bombs
- Anti-aircraft type B bombs
- Air demolition bombs
- Demolition bombs and charges
- AN-M58a1 bomb

Projectiles

- Mark 4a hedgehog projectiles
- 5-inch
- 15-inch
- Anti-submarinea, Hydrostatic Impact Rocket, and British

Mines

- MK 6 mine material
- MK 7, MK 23, MK 25, MK 36-1
- Mine conversion kits
- Mine cases MK 16 and MK 31 central sections for Mine MK 27
- Oscillating mines MK 19-1

Charges

- Depth charges (including MK 6, MK 9-2, and British)
- Depth charge test sets (MK 2)
- Pistol depth charges
- Demolition charges (MK 14)
- Mousetrap (electrically fired contact charges)

Fuzes

- Nose fuzes
- Detonating fuzes
- MK-13, MK 21, MK-29
- Aircraft bomb fuzes
- Hydrostatic bomb fuzes

Miscellaneous

- ”Type D” explosive
- Blasting caps
- Boosters (loaded)
- M-4 mechanisms
- Detonators (including dummy electric, MK 6)
- TNT (-A granular, flake, blocks, and HI-X)

- CS MK 1-2 mechanisms
- British cartridges
- Primers (including: nitromon, electric)
- Exploder mechanisms
- Small arms (loaded)
- Igniters and accessories
- X-3 test stand (MK 1-1)
- Tetryl
- Composition B LT6
- Rockets (beach)
- Military fireworks
- High explosive compo. "C"
- AS-P20s mark 4-3
- Torpex, minol
- 7-40 m's
- AN MK 44
- MK 37 ADB caps
- Smoke pots
- Depth Bomb Explosive
- MK 18 afterbodies
- Warheads (and warhead rings; MK 1, MK 8-3, MK 10, MK 13, MK 13-1, MK 15, MK 16, MK 17, MK18, loaded)
- Torpedoes and parts (Including: MK-3D, MK 8 Mod 8, MK 15, MK 19, and self-propelling dummy torpedoes)

As noted previously, the Base has been in use as a munitions facility since 1918; however, pier operations did not begin until 1920. Any type of conventional ordnance that was in the United States inventory during and after WWI may have been shipped to and from WPNSTA Yorktown. However, no documentation was found indicating that WPNSTA Yorktown transported chemical warfare material (Brankowitz, 1987) via the pier throughout its history. Additionally, no documentation related to any incidents involving nuclear weapons was located.

4.1.3.2. Munitions Constituents

According to the USEPA handbook (USEPA, 2005), the progression of explosives in the United States advanced quickly following the first commercial production of nitroglycerine and smokeless powders. The significant time periods in the development of explosives by the United States, as defined by USEPA (2005) and relevant to WPNSTA Yorktown, are as follows:

- **Early Development:** Black powder was the earliest known explosive mixture developed, consisting of potassium nitrate, sulfur, and powdered charcoal or coal. Black powder was the universal explosive and was used as a propellant for guns.
- **Developments in the Nineteenth Century:** Nitrocellulose was developed in 1838 and used as a propellant and as an explosive, leading to the creation of dynamite. By 1909, a new stabilizer, explosive powder, TNT 11, and "Explosive D," were standardized in the United States as the preferred explosive materials for projectile manufacturing.
- **WWI:** Lead azide was introduced as an initiator, and TNT substitutes (amatol), containing mixtures of TNT, ammonium nitrate, and in some cases aluminum, were utilized by all the warring nations. Tetryl was introduced as a booster explosive for projectile charges.
- **The Decades between the Two World Wars:** Additional TNT substitutes and mixtures, such as the use of lead azide, were developed as military explosives. More powerful and castable explosives were developed, as well as flashless propellant.

- **WW II:** TNT was produced and used on an enormous scale during WW II. Rocket propellants, special-purpose binary explosives, plastic explosives, and shaped charges were developed during this time.
- **Modern Era:** Research has been directed into the optimization of explosive mixtures for special applications and for identifying and solving safety problems. Developments in explosives have increased the efficiency of demolition practices and heat-resistant compositions for conventional missile warheads and for the conventional implosion devices used in nuclear weapons.

The possible types of MC that may be present at UXO 3 are currently unknown. Site-specific MC should be evaluated based on the location and type of MEC that may be confirmed to be present at UXO 3.

4.1.4 Land Use and Exposure Profile

Pier R-3 is currently an active munitions loading pier. Pier R-1 is no longer active or physically present at the site (except for the pilings that remain beneath the water surface); however, munitions were historically handled at this pier. Access to the pier area at WPNSTA Yorktown is controlled by WPNSTA Yorktown security forces from the waterfront area. Although there is no physical barrier to prevent access to the pier area by boat, the prohibited zone is enforced by the Navy and limits accessibility to the site (**Figure 3-1**). The Navy has a patrol boat in the water to enforce the restricted area 24 hours a day. The potential future land use for the pier area is assumed to remain unchanged. The active Pier R-3 will continue to be used for loading operations, and the inactive Pier R-1 will remain inactive.

Potential future human receptors may include Navy personnel (such as EOD divers) and construction workers (possibly involved in piling maintenance, dredging, or upgrading or demolishing portions of the piers). Future trespassers (such as fishermen and recreational divers) within the restricted area will also be considered potential human receptors. Although ecological receptors do not typically engage in activities that result in direct exposure to MEC, the release of MC through degradation and corrosion of underwater munitions or accidental detonations or munitions response actions, such as blow-in-place operations, may affect ecological receptors.

4.1.5 Ecological Profile

A detailed description of ecological setting at UXO 3 is provided in **Section 3.1.3**.

4.2 Pathway Analysis

Potential source-receptor interactions are defined in this section to identify the potential for exposure to possible MEC at UXO 3. The following key components to be considered during pathway analysis are discussed as follows.

4.2.1 Source

The source of potential MEC was previously defined as munitions items that may have been dropped into the York River through mishandling during loading activities associated with UXO 3. As previously discussed, the exact location, quantity, and depth of items potentially released, if any, are currently unknown. The Tier 1 sediment transport evaluation for the WPNSTA Yorktown Munitions Loading Piers (**Appendix D**) indicates that migration of intact munitions as a result of underwater currents, tide, and flooding is unlikely. Therefore, the probable location for items that may have been dropped at UXO 3 is believed to be localized to the immediately around the Pier R-1 and Pier R-3 loading/unloading areas.

4.2.2 Receptors

Potential receptors are identified in the previous sections. Reasonably anticipated human receptors include current and/or future construction workers, Navy EOD divers, and trespassers (such as fishermen and divers). Current and future ecological receptors near the WPNSTA Yorktown pier area include aquatic vegetation (wetlands), benthic organisms, estuarine and marine fish, and wildlife.

4.2.3 Interaction

Source-receptor interaction at UXO 3 could occur through the following activities:

- Current/future Navy divers, construction and/or utility workers encountering MEC during pier maintenance, piling repairs, demolition, or during future construction activities in or around the piers (such as digging or dredging)
- Future fishermen contacting MEC while fishing, trolling, or conducting similar activities, or by munitions items becoming entangled in fishing nets or gear
- Future recreational swimmers or divers encountering MEC during swimming and diving
- Current/future trespassers encountering MEC while wading in shallow water
- Current/future site workers encountering MEC during investigations, sampling activities, ecological studies, or emergency responses
- Current/future ecological receptors exposed to MC released or other dangers from deteriorated MEC items

Access by human receptors to the locations of potential MEC is limited both by the depth of the water near the pier areas and the enforcement of the restricted zone surrounding the WPNSTA Yorktown Munitions Loading Piers area. Ecological receptors such as fish and other aquatic species have unrestricted access to potential MC through direct contact (sediment and water) of lower-trophic-level species (such as benthic and aquatic organisms). Wildlife may be exposed to these constituents through ingestion of chemicals that have accumulated in prey, ingestion of surface water, and incidental ingestion of sediment while foraging or grooming.

4.3 Population Summary

The piers at WPNSTA Yorktown were constructed to minimize potential explosive hazards to surrounding communities. The areas immediately surrounding the WPNSTA Yorktown Munitions Loading Piers area include Gloucester, Yorktown, and Lackey townships (**Figure 1-2**). According to the 2010 Census, York County had a population of 65,464 and a population density of 533 persons per square mile. The nearby Gloucester County had a population of 36,858 and population density of 161 persons per square mile.

Administrative buildings, logistics and recreation buildings, commercial properties, schools, residences, and other buildings are within a 2-mile radius of the pier area.

4.4 Munitions Response Site Prioritization Protocol

The MRSPP was established by the Department of Defense in 2005 to assign priority for response actions at Munitions Response Sites (MRS) known or suspected to contain MEC. The protocol takes into account site conditions (including the physical conditions of the site and the types of MEC that may be present) to calculate a munitions hazard ranking score in which “1” represents the highest hazard and “8” represents the lowest hazard. MRSPP tables and associated scores for UXO 3 are found in **Appendix C**[6] of this report. Tables 1 through 29 were completed to the maximum extent possible with the information compiled during the PA. The tables take into consideration site conditions such as the population density, location, type of MEC and/or MC present (or potential for presence), and several other factors are ranked to prioritize the site.

Based on the MRSPP scoring system and the site conditions at UXO 3, the overall MRS priority rating calculated for UXO 3 is a hazard ranking score of 6. The explosive hazard evaluation module scored a total of 55 points,

[6] MRSPP worksheets are included as Appendix C of this PA; however, the worksheets are considered a living document that is continually updated based upon current site understanding. The score that is included in this PA is based on the findings of the desktop study and input from the regulators, but does not incorporate the quality assurance panel review. Subsequent to the submittal of the Final PA report, a notification will be issued and a public meeting will be held to discuss the MSRPP scoring. If comments are received from the public, the comments will be provided to the quality assurance panel for review. Quality assurance panel and public comments will be incorporated in the MSRPP scoring in the SI

which is equivalent to an overall module rating of E. The chemical hazard evaluation module was not scored because no chemical warfare material is suspected to be present at the site. The human and ecological health risks associated with MC could not be assessed as part of the human health evaluation module because of the minimal sediment sampling conducted for maintenance dredge activities. Only two composite samples were collected from the Pier R-3 area in 2011 and analyzed for physical characteristics, total organic carbon, nitrogen, phosphorus, nitrate and nitrite, inorganics, polyaromatic hydrocarbons, PCBs, dioxins, pesticides, organopesticides, semivolatile organic compounds, and explosives. The analytical results of the sediment samples for inorganics[7] were incorporated into the MSRPP sheets for future use; however, the overall module rating was determined to be "evaluation pending" once additional analytical data (if warranted) are collected at the site. This section of the MRSPP may be further refined based on any additional SI and sampling activities.

[7] The results of the sediment sampling in 2011 did not detect any explosive constituents; therefore the MSRPP Health Hazard Evaluation module could not be completed and is marked as "Evaluation Pending."

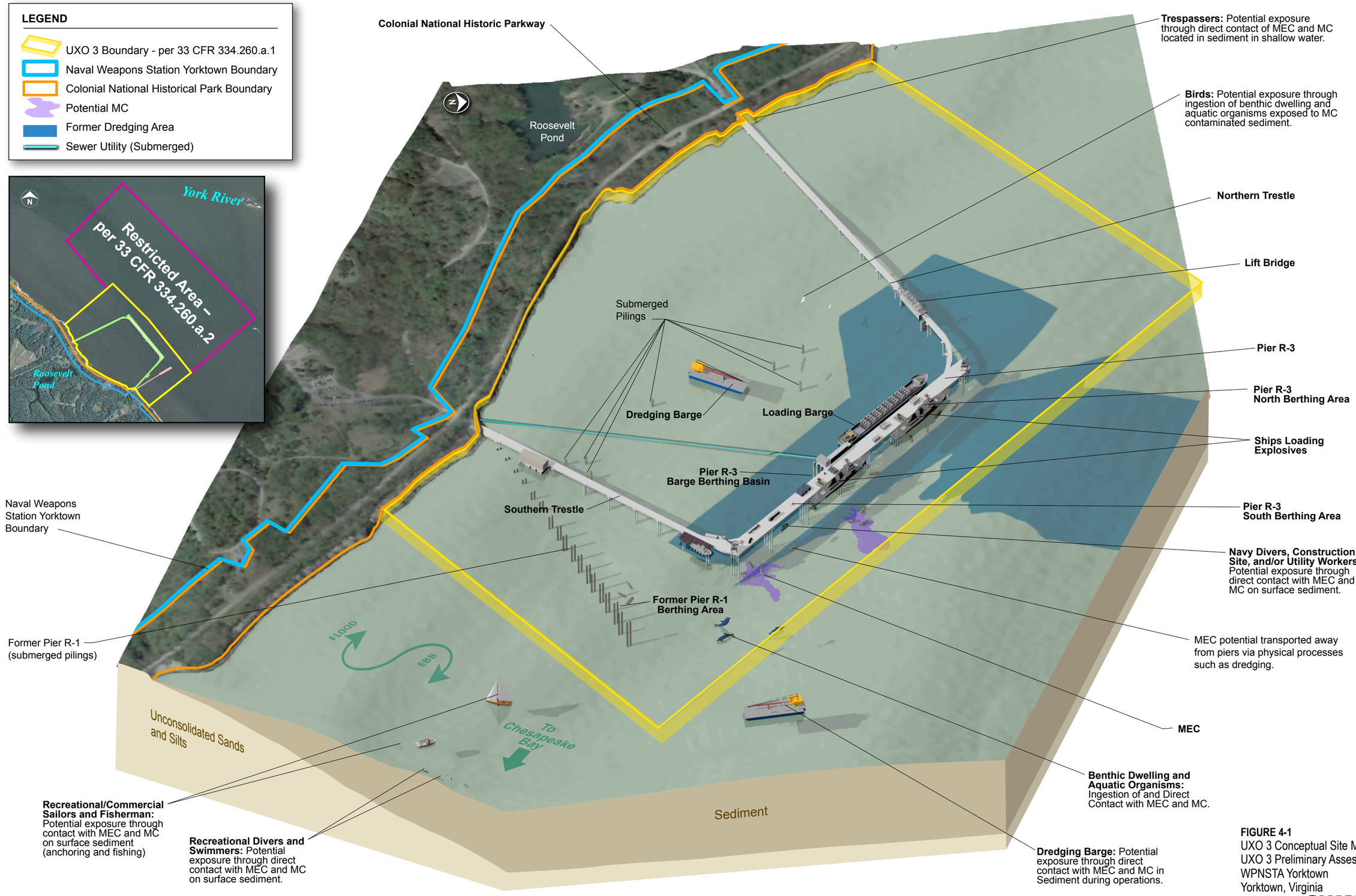


FIGURE 4-1
UXO 3 Conceptual Site Model
UXO 3 Preliminary Assessment
WPNSTA Yorktown
Yorktown, Virginia

CH2MHILL

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SECTION 5

Conclusions and Recommendations

UXO 3 has been utilized since WWI; UXO 3 consists of Pier R-1 (operated from 1920 to the 1970s) and Pier R-3 (operated from 1941 to the present), the associated trestles for each pier, and sediment associated with these areas. Pier R-1 is no longer actively used for loading and unloading activities, although munitions were historically handled at this pier. Pier R-3 is the active munitions loading area.

Pier R-1 was the first active pier constructed at WPNSTA in 1920 and was used for munitions loading activities for approximately 50 years. The berthing area (northern and southern sides) of Pier R-1 were used for munitions loading (see Section 4.1.3 for a listing of potential munitions loaded at Pier R-1); no records indicated munitions loading operations occurred along the trestle for Pier R-1. Based on a comparison of historical design documents, dredging reports, and current NOAA navigational maps, the river bottom adjacent to Pier R-1 has accumulated as much as 1 to 7 feet of sediment from the original operational depth (approximately -28 feet MLW). Although no documentation of a release of MEC was identified during the PA, Pier R-1 was used during times of increased productivity when fleet demands required loading operations be performed 24 hours a day. These increased demands may have resulted in unreported mishandling and dropping of munitions into the York River at UXO 3. Pier R-1 is no longer active, and only wooden remnants of the pilings remain below the water surface. Therefore, the Pier R-1 portion of UXO 3 (**Figure 5-1**) is recommended for an SI to further evaluate the potential presence or absence of MEC. The proposed investigation area is approximately 250 feet on all sides of the former berthing area (this distance was selected as a conservative estimate based on the beam of the largest warship in the Navy fleet, a Nimitz class aircraft carrier. However, it should be noted that the draft of this ship makes it infeasible to have been berthed at Pier R-1). It is anticipated that if munitions were dropped from the pier, they are most likely to be found in the immediate vicinity of the pier.

Pier R-3 was constructed in 1941. It is estimated that the berthing areas along the inboard (barge basin) and outboard sides of Pier R-3 have been used for munitions loading operations (see Section 4.1.3 for a list of potential munitions loaded at Pier R-3) for more than 70 years, and it is still in use today. No records were found that indicated munitions loading operations occurred along the trestles for Pier R-3. The maintained dredged depth is approximately -42 feet MLLW along the outboard portion of the pier and -18 feet MLLW along the inboard portion of the pier. Pier R-3 was used at some capacity throughout multiple wars (WW II, Korean and Vietnam conflicts, Cold War, and recent conflicts) to supply the fleet with ammunition. Similar to Pier R-1, although no documentation of a release of MEC was identified during the PA, Pier R-3 was used during times of increased productivity when fleet demands required loading operations be performed 24 hours a day. These increased demands may have resulted in unreported mishandling and dropping of munitions into the York River at UXO 3. Modern loading activities at the pier include strict enforcement of munitions loading operating procedures, reporting, tracking, and use of safety features during loading; therefore, it is less likely that modern weapons (post-WW II) have been released during recent loading operations. The Pier R-3 portion of UXO 3 (**Figure 5-1**) is recommended for an SI to further evaluate the potential presence or absence of MEC once munitions loading operations are discontinued and the pier is no longer operational. The investigation area[8] is approximately 250 feet along the outboard berthing area (this distance was selected as a conservative estimate based on the beam of the largest warship in the Navy fleet, a Nimitz class aircraft carrier) and approximately 250 feet along the inboard portion of the pier (the approximate width of five barges loaded at one time, based on interview information for loading activities at this location). It is anticipated that, if munitions were dropped from the pier, they are most likely to be found in the immediate vicinity of the pier. Because active pier sites used for munitions-related activities are typically not investigated until munitions activities have ceased or unless the site

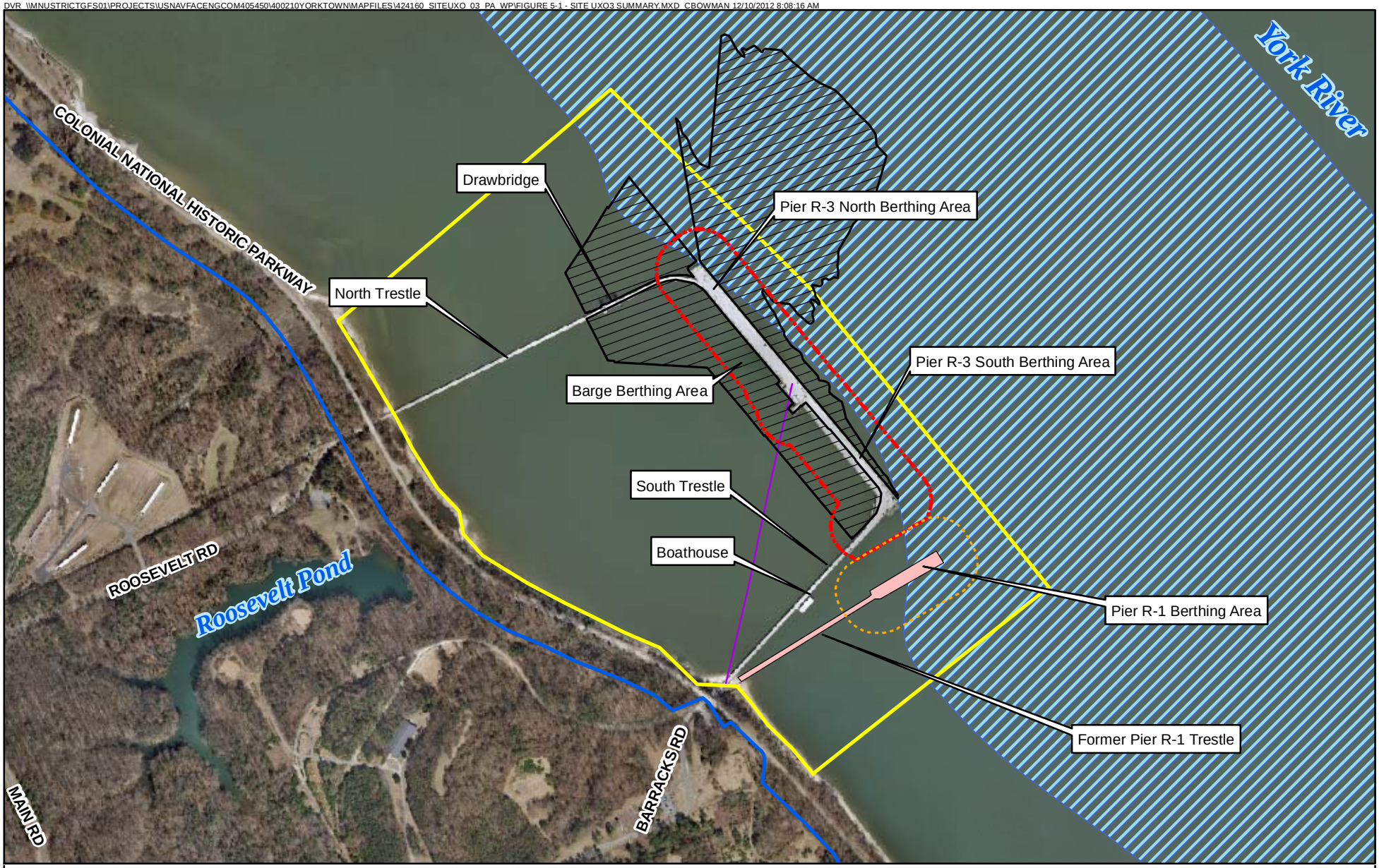
[8] The recommended investigation area is subject to change based on future munitions loading operations at the pier. This investigation area should be re-evaluated once all munitions loading operations at Pier R-3 (inboard and outboard sections) have ceased.

is causing contamination at other areas, it is recommended that Pier R-3, which is currently active, not be included in future investigations until all munitions loading operations in these areas have ceased.

Based on the limited inventory list compiled, MEC potentially located underwater at the piers may pose an explosive safety risk to human and ecological receptors. Although documentation of a release was not identified during the PA, the potential exists for MEC to be present at UXO 3 as a result of undocumented releases during historical loading operations. Potential MC associated with the degradation of the MEC items is currently unknown and should be evaluated based on type and location of confirmed MEC present at UXO 3. Changes in the exposure scenario (**Figure 4-1**) based on current and planned site use is unlikely. UXO 3 is located underwater and potential uses are limited; therefore, the need for an accelerated remedial action has not been identified. The Tier 1 sediment transport evaluation for the pier complex suggests that sediment transport may occur in the vicinity of the Munitions Loading Piers, but that current velocities are unlikely to mobilize intact munitions. However, the hydrodynamic environment in York River is complex and variable, and the Tier 1 evaluation should be considered as an initial, simplified assessment of site conditions. A Tier 2 evaluation, which considers site-specific data and consists of a more-detailed analysis, may be recommended if the presence of MEC is confirmed at UXO 3.

In summary, although documentation of a release was not identified during the PA, the potential exists for MEC to be present at UXO 3 as a result of undocumented releases during historical loading operations. Based on information obtained during the PA and the hazards associated with MEC that may be present, it is recommended that an SI be performed along the berthing areas where munitions loading operations occurred (**Figure 5-1**) to further evaluate the potential presence or absence of MEC at UXO 3. If MEC is found to be present at the site during the SI, MC sampling will be performed to evaluate any possible release that may have occurred as a result of the presence of MEC. If MEC is not present, MC sampling will not be necessary. In accordance with CERCLA guidance, if MEC is identified at the site during the investigations conducted during the SI, a Remedial Investigation may be required to characterize the nature and extent of contamination associated with the identified MEC. Additionally, the Remedial Investigation may result in a reevaluation of the UXO 3 boundary. Because active pier sites used for munitions-related activities are typically not investigated until munitions activities have ceased or unless the site is causing contamination at other areas, it is recommended that SI activities for Pier R-3, which is currently active, not be performed until all munitions loading operations in this area have ceased. A summary of the UXO 3 site boundary and the areas recommended for an SI are shown on **Figure 5-1**.

DVR \\MNUSTRICTGFS01\PROJECTS\USNAVFACENGCOM405450\400210YORKTOWN\MAPFILES\424160_SITEUXO_03_PA_WP\FIGURE 5-1 - SITE UXO3 SUMMARY.MXD CBOWMAN 12/10/2012 8:08:16 AM



Legend

- Area Recommended for SI
- Area Recommended for SI once munitions loading operations have ceased
- Former Dredged Area
- Yorktown Base Boundary
- UXO 3 Boundary
- Location of former pier known as Pier R-1 (submerged pilings remain)
- York River Main Channel
- Sewer Utility (Submerged)

N
W E
S

0 500 1,000 Feet

Imagery: 2010

Figure 5-1
UXO 3 Summary
UXO 3 Preliminary Assessment
WPNSTA Yorktown
Yorktown, Virginia

CH2MHILL

SECTION 6

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United States Geological Survey (USGS). 2003. *A Summary Report of Sediment Processes in Chesapeake Bay and Watershed*. Water-Resources Investigations Report 03-4123.

Virginia Institute of Marine Science (VIMS). 2009. *York River Water Budget Report.* January.

Virginia Water Protection. 2001. WPNSTA Dredging Permit 99-0371.

Appendix A
Summary of Documents Reviewed

Preliminary Assessment Document Log

Employee Name: Angela Petree Jones and Genevieve Moore
Facility/Activity: WPNSTA Yorktown

Date/Time	Document Location	Data Source	Document Title	Nature of Document/File	Notes	Brief Summary
11/12/2012 - 11/13/2012	Appendix B	National Archives - College Park, MD	Pier R-1 Construction Drawings (Bureau of Yards and Docks, 1918)	Construction Drawings	Photocopy	Wooden pier construction includes railroad tracks and a small office. Trestle is slightly narrow and includes only one1 set of railroad tracks; berthing area includes 2 sets of railroad tracks to expedite loading/unloading operations (berthing area is approximately 56 feet in width).
11/12/2012 - 11/13/2012	Appendix B	National Archives - College Park, MD	WPNSTA Yorktown WWII War Diaries	WWII War Diaries	Photocopy	Collection of records documenting daily or monthly activities at WPNSTA Yorktown during the war.
11/12/2012 - 11/13/2012	Appendix B	National Archives - College Park, MD	Pier R-1 Construction Drawings (Bureau of Yards and Docks, 1931)	Construction Drawings	Photocopy	The plan indicates the southern side of the berthing area will be dredged to a depth of -28 feet mean low water (MLW); however, no after-dredging documents were identified to confirm if dredging occurred
11/12/2012 - 11/13/2012	Appendix B	National Archives - College Park, MD	United States Navy and Marine Corps Bases, Domestic Paolo E. Coletta, Editor K. Jack Bauer, Assistant Editor Greenwood Press, 1985 West Port, Connecticut	Brief history of WPNSTA Yorktown	Photocopy	Brief description of WPNSTA Yorktown's mission and infrastructure.
11/12/2012 - 11/13/2012	NARA	National Archives - College Park, MD	Rudtorpe Digest, Bureau of Ordnance Publication. January 1955 - October 1956	Information Pamphlet	Photocopy	Report of Lost Torpedoes and Self-Propelled Mines (record of accidental and planed loses of munitions), desicriptions on torpedo salvaging, photograph loading submarine with a torpedo
11/12/2012 - 11/13/2012	NARA	National Archives - College Park, MD	Reports Showing Expenditures of Ammunition and Deficiencies 1942-1945 (Bureau of Ordnance)	WWII Ammunition Deficiency Reports	1942-1945	Reports on ammunition deficiency. No usuable information located.
11/12/2012 - 11/13/2012	NARA	National Archives - College Park, MD	USS Antietam Deck Logs 1946	Deck log for USS Antietam	Photocopy	USS Antitam was reported to be loaded/unloaded with munitions at the Yorktown piers. Dock logs contain information on when the ship was moored, ship conditions, energy usage, conditions of engines, etc
11/12/2012 - 11/13/2012	Appendix B	National Archives - College Park, MD	OPNAV Instruction 8020.4 "Naval Responsibilities for Explosive Ordnance Disposal'	Instruction for handling munitions	Issue date 1/8/1954	Naval insturction/standard operating procedure for handling munitions.
11/12/2012 - 11/13/2012	NARA	National Archives - College Park, MD	Naval Property Case Files - WPNSTA Yorktown (Bureau of Yards and Docks)	Property and construction contacts	1941-1958	Contracts for new construction, maintenance activities, utility installation/repair, etc.
11/12/2012 - 11/13/2012	Appendix B	National Archives - College Park, MD	Office of Industrial Survey, Report No 81, NMD Yorktown	Report on Industrial activities.	Photocopy	Approved 7/7/1948. Provided general information on NMD Yorktown.
11/12/2012 - 11/13/2012	NARA	National Archives - College Park, MD	Harbor Defense Files, Chesapeake Bay	Files on the defense of Chesapeake Bay	1918-1945	Correspondence and maps detailing the Chesapeake Bay defenses (mine locations, Army bases, emergency plans, etc)
11/12/2012 - 11/13/2012	NARA	National Archives - College Park, MD	Unprocessed Naval Property Case Files (Bureau of Yards and Docks)	Property and construction contacts	1941-1958	Contracts for new construction, maintenance activities, utility installation/repair, etc.
11/12/2012 - 11/13/2012	Appendix B	National Archives - College Park, MD	NAVFAC Engineering Command Waterfront Structures, Primary Program of Engineering and Design Division with Emphasis on Hydraulic Facilities and Navy Hydromechanics	Special Reports on various topics	1946-1966	Special studies on various topics for NAVFAC.
11/12/2012 - 11/13/2012	Appendix B	National Archives - College Park, MD	Still Photographs of Yorktown Mine Depot, August 1920	Photographs on Pier R-1 Construction	Photocopy	Four photographs total.
11/12/2012 - 11/13/2012	Appendix B	National Archives - College Park, MD	Fifth Naval District Correspondence, 1955-1956	US NMD Yorktown, Government Ownership and jurisdiction over lands in York River	Photocopy	Correspondence of government ownership and jurisdiction over lands in York River
11/12/2012 - 11/13/2012	Appendix B	National Archives - College Park, MD	Fifth Naval District Commander Correspondence Files, 1953	List construction projects within the Fifth Naval District	Photocopy	List construction projects within the Fifth Naval District
11/12/2012 - 11/13/2012	Appendix B	National Archives - College Park, MD	Naval District and Shore Establishments, Fifth Naval District, Correspondence of the Commandant 1945-1952; Inshore Survey Projects - Division of Oceanography	Special reports on mines conducted by the Mine School at NMD Yorktown	1945-1952	Operation MUD specifically evaluated the penetration and general behavior of mines on the bottom, scouring, and the relations of bottom currents to burying of mines on sand bottoms (investgation conducted from 12/1/1951 - 1/20/1952.

Preliminary Assessment Document Log
Employee Name: Angela Petree Jones and Genevieve Moore
Facility/Activity: WPNSTA Yorktown

Date/Time	Document Location	Data Source	Document Title	Nature of Document/File	Notes	Brief Summary
3/7/2012	Appendix B	NAVFAC Hydrographics	VWP Category 1 Permit 99-0371/ACOE Permit 99-V0371-14	Dredging Permit(s)	Issue date 10/10/2001	Dredging permit specifications include the following: -No double handling of spoils is allowed -No dredging may occur between 3/1 to 6/30 (to prevent adverse affects to andronomous fish) -dredging may occur by the clam shell method into bottom dump scows -Limit of 300,000 CY may be dredged per dredging cycle; no more than 2,000,000 CY may be dredged under this permit -Authorized maximum depth under permit is -44' (outboard) and -20' (inboard) -Permit expires 15 years following issue date
3/7/2012	Appendix B	NAVFAC Hydrographics	Contact N62470-85-C-5144, Pier Modernization, NWS, Yorktown, VA	Navy Correspondence to USACE	Issue Date 3/5/1990	25,500 CY dredged from the inboard side of Pier R-3; location of dredge spoils is Craney Island Disposal Area
3/7/2012	Appendix B	NAVFAC Hydrographics	Joint Permit No 99-0371, Ocean Disposal of Dredged Material from NWS Yorktown Pier R-3	Navy Correspondence to USACE	Issue Date 9/15/2000	Bioassy results verify dredge material is suitable for disposal at the Norfolk Oceana Disposal Site. Enclosure include the following: -Whole Sediment Bioassay and Bioaccumulation Analysis Yorktown Ammunition Pier, NWS Yorktown, July 30, 2000 -Condition surveys indicating proposed dredging areas
3/7/2012	Appendix B	NAVFAC Hydrographics	ASBCA No 37368, Appeal of J.M. Suchman, Inc., Under Contract No N62470-84-C-4426; Forward Decision In	Navy Correspondence	Issue Date 6/18/1991	Dredging contractor encountered the following items while dredging along NWS Yorktown Pier R-3: -12''X12''x10' timbers -10'' diameter pipes (various lengths) -various diameter stell cable -unspecified metal debris -metal scraps/banding -concrete reinforcing bars (with matting and wire rope) -steel pallets -metal ladder -pilings -stell plates -electrical cable -miscellaneous debris
3/7/2012	Appendix B	NAVFAC Hydrographics	VWP Permit No 92-0085	Dredging Permit	Issue date: 9/8/1993	Dredging permit specifications include the following: -No double handling of spoils is allowed -dredging may occur by the clam shell method -Limit of 325,000 CY may be dredged from NWS Yorktown and disposed at the Ocean Open Disposal Site -Authorized depth through this permit is -18' MLW and -42' MLW -Permit expires 5 years following issue date
3/7/2012	Appendix B	NAVFAC Hydrographics	USACE Permit No 92-0085-25	Dredging Permit	Issue date: 9/24/1993	Dredging permit specifications include the following: -No dredging may occur between 3/1 to 6/30 (to prevent adverse affects to andronomous fish) -dredging may occur by the clam shell method -Limit of 475,500 CY may be dredged from NWS Yorktown and disposed at the Ocean Open Disposal Site -Authorized depth through this permit is -18' MLW and -42' MLW -Time limit for completing work end on 12/31/1996
3/7/2012	Appendix B	NAVFAC Hydrographics	Pier R-1 and R-3	Photograph		Shows ships tied to outboard side of Pier R-3 and barges tied to inboard side of Pier R-3; section of Pier R-1 are in disrepair and access is limited.
3/7/2012	Appendix B	NAVFAC Hydrographics	Proposed Dredging in York River at US NWS	Plan and Section	Issue date: 8/15/1984	Indicates a 12.5' offset from face of pier

Preliminary Assessment Document Log

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Facility/Activity: WPNSTA Yorktown

Date/Time	Document Location	Data Source	Document Title	Nature of Document/File	Notes	Brief Summary
3/7/2012	Appendix B	NAVFAC Hydrographics	Proposed Dredging in York River at US NWS	Plan and Section	Issue date: 11/15/1991	Indicates approximately 400,000 CY is removed every 8 years by the bucket method.
3/7/2012	Appendix B	NAVFAC Hydrographics	VMRC Permit No 99-0370	Construction Permit	Issue date: 4/27/1999	Permit to replace the south berth of Pier R-3 with a structure of the same footpring, the south access trestle of Peri R-3 with a 27' wide trestle (approximately 4'4'' wider than the existing trestle) and three existing boathouses with 1 105' long by 6.5' wide covered boathouse with 8 precast concrete finger piers adjacent to NWS Yorktown
3/7/2012	Appendix B	NAVFAC Hydrographics	Ner Pier Extension Dredging Plan	Plan	Issue date: 2/23/1966	Northern berth and trestle plan to create current configuration of pier
3/7/2012	Appendix B	NAVFAC Hydrographics	1966 Pre & Post Dredging Sounding	Construction Drawings	electronic copy	Inboard and North portions of new pier dredged; outboard of new pier was not included in this specific contract
3/7/2012	Appendix B	NAVFAC Hydrographics	1979 Pre & Post Dredging Sounding	Construction Drawings	electronic copy	Outboard of Pier R-3 Dredged Feb 1979
3/7/2012	Appendix B	NAVFAC Hydrographics	1980 Pre & Post Dredging Sounding	Construction Drawings	electronic copy	Outboard of Pier R-3 Dredged Oct 1980
3/7/2012	Appendix B	NAVFAC Hydrographics	1981 Condition Survey	Construction Drawings	electronic copy	Inboard soundings of Pier R-3
3/7/2012	Appendix B	NAVFAC Hydrographics	1985 Condition Survey	Construction Drawings	electronic copy	Inboard soundings of Pier R-3
3/7/2012	Appendix B	NAVFAC Hydrographics	1987 Pre & Post Dredging Sounding	Construction Drawings	electronic copy	Inboard of Pier R-3 Dredged March 1987
3/7/2012	Appendix B	NAVFAC Hydrographics	Pier R-3 Modernization Pre & Post Dredging Soundings	Construction Drawings	electronic copy	Inboard soundings of Southern berth Pier R-3; indicates construction is ongoing
3/7/2012	Appendix B	NAVFAC Hydrographics	1991 Condition Survey	Construction Drawings	electronic copy	Outboard Sounding of Northern berth and trestle (to drawbridge)
3/7/2012	Appendix B	NAVFAC Hydrographics	1994 Pre & Post Dredging Sounding	Construction Drawings	electronic copy	Inboard and Outboard Soundings of Pier R-3; drawings indicate the Southern berth is wider than previous drawings
3/7/2012	Appendix B	NAVFAC Hydrographics	2007 Condition Survey	Construction Drawings	electronic copy	Inboard and Outboard Soundings of Pier R-3
3/7/2012	Appendix B	NAVFAC Hydrographics	2009 Post Dredge Sounding	Construction Drawings	electronic copy	Outboard Soundings of Pier R-3; approximately 120,000 CY dredged and disposed at Craney Island
3/7/2012	Appendix B	NAVFAC Hydrographics	2005 Pre and Post Dredge Soundings	Construction Drawings	electronic copy	Outboard Soundings of Pier R-3; approximately 120,000 CY dredged and disposed at Craney Island
3/7/2012	Appendix B	NAVFAC Hydrographics	NWS Major Maintenance Energy RM11-5461 Repair/Replace Gravity Sewer	Construction Drawings	electronic copy	Replacement of gravity sewer lines along pier
12/23/2012	http://www.ussantietam.com/diary.html	Internet	Diary of USS Antietam	http://www.ussantietam.com/diary.html	Journal entries	Brief log of activites performed by USS Antietam
12/23/2012	http://www.navy.mil/search/display.asp?story_id=38849	Internet	WPNSTA Yorktown General Information	http://www.navy.mil/search/display.asp?story_id=38849	Informational	General information on WPNSTA Yorktown
12/23/2012	http://en.wikipedia.org/wiki/USS_Weehawken_(CM-12)	Internet	General information on USS Weehawk	http://en.wikipedia.org/wiki/USS_Weehawken_(CM-12)	Informational	General information on activities performed by USS Weehawk
12/23/2012	http://www.cnic.navy.mil/Yorktown/About/History/MineDepot/index.htm	Internet	WPNSTA Yorktown General Information	http://www.cnic.navy.mil/Yorktown/About/History/MineDepot/index.htm	Informational	General information on WPNSTA Yorktown
12/23/2012	http://www.airfields-freeman.com/VA/Airfields_VA_Hampton.htm	Internet	WPNSTA Yorktown Air Field	http://www.airfields-freeman.com/VA/Airfields_VA_Hampton.htm	Informational	Brief history on WPNSTA Yorktown's air field

Preliminary Assessment Document Log

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Date/Time	Document Location	Data Source	Document Title	Nature of Document/File	Notes	Brief Summary
3/7/2012	el.erdc.usace.army.mil/elpubs/pdf/mpel90-8.pdf	Internet	Long-Term Management Strategy for Dredged Material Disposal for the Naval Weapons Station, Yorktown, Yorktown, Virginia; Naval Supply Center, Cheatham Annex, Williamsburg, Virginia; and Naval Amphibious Base, Little Creek, Norfolk, Virginia; Phase I: Evaluation of Existing Management Options and Data	el.erdc.usace.army.mil/elpubs/pdf/mpel90-8.pdf	News article	Dredging depths, disposal sites, and length of piers from 1979-1990. Background information about WPNSTA Yorktown.
3/7/2012	http://www.navy.mil/search/display.asp?story_id=38849		Naval Weapons Station Yorktown Celebrates 90 Years of Ordnance Support	http://www.navy.mil/search/display.asp?story_id=38849	News article	Pier was high priority because of complaints from the captain's that were bringing in material. Ships anchored in York River, materials were moved onto barges that were brought up to an old dock and off loaded by hand. Original wooden pier damaged in 1933 by hurricane and by a fire in 1954. Concrete Pier built in 1962.
3/7/2012	www.Cnic.navy.mil		Photograph of pier	www.Cnic.navy.mil	photograph of pier	
3/7/2012	www.gloucesterva.info		The Point Walk	www.gloucesterva.info	News article	Information about the York River and brief background of WPNSTA Yorktown.
3/7/2012	http://www.nao.usace.army.mil/Regulatory_Branch/ExpiredNotices2009.asp		Regulatory Branch - 2009 Public Notices	http://www.nao.usace.army.mil/Regulatory_Branch/ExpiredNotices2009.asp	News article	Proposed maintenance dredging around pier.
3/7/2012	http://www.history.navy.mil/museums/hrnm/resources.html		Hampton Roads Naval History Museum	http://www.history.navy.mil/museums/hrnm/resources.html	Informational	Contains articles and photos of historical operations and activities of WPNSTA Yorktown and other Hampto Roads areas bases.
3/7/2012	http://www.hrpdc.org/		Hampton Roads Planning District Commision	http://www.hrpdc.org/	Informational	Historical areal photographs, permits, land use, census information, etc
3/7/2012	http://www.mrc.state.va.us/		Virginia Marine Resources Commision	http://www.mrc.state.va.us/	Informational	Review of permits applied for by WPNSTA Yorktown for waterfront structures/activities since 1977.
5/29/2012	**Appendix B**		Navy Periodical - The Flagship	Flagship aritcle - 7/13/2011	News article	Brief history of WPNSTA Yorktown
5/29/2012	**Appendix B**		Navy Periodical - The Flagship	Flagship aritcle - 8/17/2011	News article	WPNSTA Celebrates is 93rd birthday
5/29/2012	**Appendix B**		The Virginia Gazette	The Virginia Gazette - 4/11/2011	News article	"Danger Lurks" - brief article on history and current munitions storage and transport at WPNSTA Yorktown
5/29/2012	el.erdc.usace.army.mil/elpubs/pdf/mpel90-8.pdf		Candidate Environmental Impact Statement, Norfolk Naval Base Complex Long-Range Maintenance Dredging Program	Report	Arthur D Little, Inc, July 1975	Dredging environmental impact statement for several Tidewater area bases including WPNSTA Yorktown.
5/29/2012	ccrm.vims.edu/publications/.../Havens%20et%20al%20NAJFM08.pdf		Marine Debris Survey in Virginia, Derelict Blue Crab Trap impacts on marine fisheries in the lower York River, Virginia	Report	Center for Coastal Resources Management, VIMS, and College of William & Mary, December 2006	Side-scan sonal used to identify dere;ict blue crab traps in the York River.
5/29/2012	ccrm.vims.edu/publications/projreps/**yorkriver** final.pdf		Development of Tidal Wetland Inventory and Assessment for York River, Virginia Watershed	Report	VIMS and College of William & Mary, December 2006	Information on the York River (cultural resources, surrounding land use, etc).
5/29/2012	http://www.yorkcounty.gov/Default.aspx?tabid=6871		Population of the City of Yorktown, Virginia	http://www.yorkcounty.gov/Default.aspx?tabid=6871	Informational	Census data
5/29/2012	http://www.yorkcounty.gov/Default.aspx?tabid=6871		York County Virginia Economic Development, Workforce Overview	http://www.yorkcounty.gov/Default.aspx?tabid=6871	Informational	Contains census data
5/29/2012	http://www2.timesdispatch.com/news/2008/aug/12/-rtd_2008_08_12_0069-ar-113915/	Internet	90 Years of Yorktown Naval Weapons Station	http://www2.timesdispatch.com/news/2008/aug/12/-rtd_2008_08_12_0069-ar-113915/	Informational	history
	http://www.bestplaces.net/climate/city/virginia/yorktown		Climate in Yorktown Virginia	http://www.bestplaces.net/climate/city/virginia/yorktown	Informational	
	http://www.idcide.com/weather/va/yorktown.htm		Yorktown, VA Weather	http://www.idcide.com/weather/va/yorktown.htm	Informational	Used this for annual average rainfall in text
	http://www.weather.com/weather/wxclimatology/monthly/graph/USVA0856		Monthly Averages for Yorktown, VA	http://www.weather.com/weather/wxclimatology/monthly/graph/USVA0856	Informational	Used this for annual average temperature in text

Preliminary Assessment Document Log

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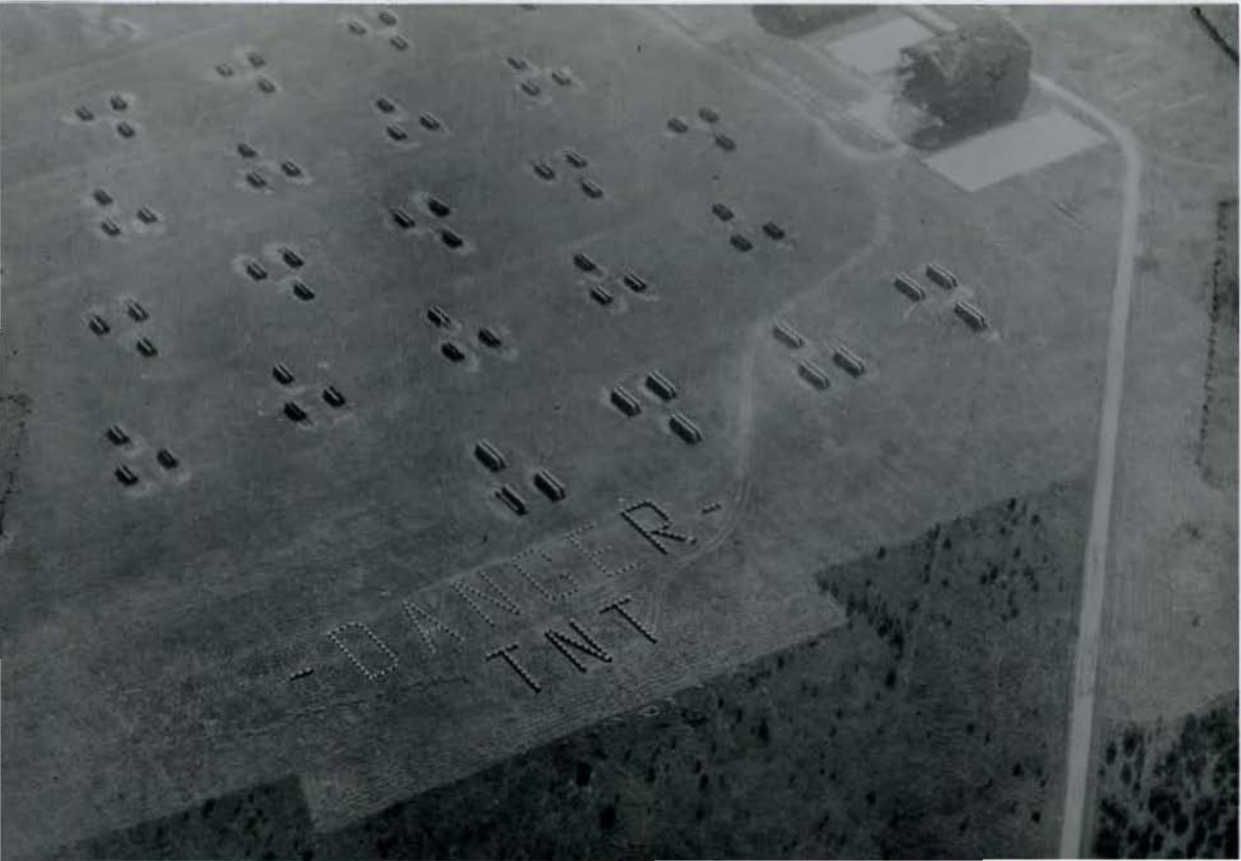
Date/Time	Document Location	Data Source	Document Title	Nature of Document/File	Notes	Brief Summary
6/7/2012	https://niris.navfac.navy.mil/Document_Management%2FMID_ATLANTIC%2FWILLIAMSBURG_FISC%2FBASEWIDE%2FADMIN%20RECORD%2F/N60138_000636.pdf	Internet	Summary Of Background Constituent Concentrations And Characterization Of Biotic Community From the York River Drainage Basin	https://niris.navfac.navy.mil/Document_Management%2FMID_ATLANTIC%2FWILLIAMSBURG_FISC%2FBASEWIDE%2FADMIN%20RECORD%2F/N60138_000636.pdf	Baker, July 1995	Sediment information in the York River
	http://ccrm.vims.edu/research/climate_change/yrkph.html	Internet	Climate Change - Lower York River - Polyhaline	http://ccrm.vims.edu/research/climate_change/yrkph.html	Informational	Map of current costal habitat
	http://nrhp.focus.nps.gov/natregsearchresult.do?fullresult=true&recordid=5	Internet	National Register of Historic Places	http://nrhp.focus.nps.gov/natregsearchresult.do?fullresult=true&recordid=5	Informational	Kiskiak
	http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=3&ved=0CFsQFjAC&url=http%3A%2F%2Fwww.dhr.virginia.gov%2Fregisters%2FCounties%2FYork%2F099-0012_Kiskiack_(Lee_House)_1969_Final_Nomination.pdf&ei=9STOT6H6M6Xa2QW5ptjEDA&usg=AFQjCNHYXWz2qsNLzQG0PrBzPOCMJg-xjg&sig2=4MLDkzBOGIMlM1Gctm0kQw	Internet	Kiskiak Nomination Form	http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=3&ved=0CFsQFjAC&url=http%3A%2F%2Fwww.dhr.virginia.gov%2Fregisters%2FCounties%2FYork%2F099-0012_Kiskiack_(Lee_House)_1969_Final_Nomination.pdf&ei=9STOT6H6M6Xa2QW5ptjEDA&usg=AFQjCNHYXWz2qsNLzQG0PrBzPOCMJg-xjg&sig2=4MLDkzBOGIMlM1Gctm0kQw	Informational	Original Kiskiak nomination form
	http://en.wikipedia.org/wiki/Naval_Weapons_Station_Yorktown	Internet	NWS Yorktown	http://en.wikipedia.org/wiki/Naval_Weapons_Station_Yorktown	Informational	ATSDR Report - 2006
	http://www.pursuetheoutdoors.com/boating/nautical-charts/charts.php?id=12238	Internet	Chesapeake Bay, Mobjack Bay, and York River Navigational Map	http://www.pursuetheoutdoors.com/boating/nautical-charts/charts.php?id=12238	Navigational Charts	
	http://www.nauticalcharts.noaa.gov/nsd/hcp_notesoncoast.html	Internet	Memoir of the York River - 1816	http://www.nauticalcharts.noaa.gov/nsd/hcp_notesoncoast.html	Informational	
	http://www.navy.mil/local/localPhotos.asp?id=255&page=3	Internet	Naval Weapons Station Yorktown Gallery	http://www.navy.mil/local/localPhotos.asp?id=255&page=3	Informational	Photograph of pier
6/8/2012	WPNSTA Public Affairs Officer Files	WPNSTA Public Affairs Officer	Historical Photographs of WPNSTA Yorktown	WPNSTA Yorktown	Photographs	Photographs of WPNSTA Operations and Structures
6/8/2012	WPNSTA Historical Files	WPNSTA Public Affairs Officer	WPNSTA Yorktown 50th Anniversary Pamphlet	WPNSTA Yorktown	Not allowed to duplicate	Brief history of WPNSTA Yorktown
6/8/2012	WPNSTA Historical Files	WPNSTA Public Affairs Officer	An Introduction to WPNSTA Yorktown	WPNSTA Yorktown	Not allowed to duplicate	Brief history of WPNSTA Yorktown
6/8/2012	WPNSTA Historical Files	WPNSTA Public Affairs Officer	Disestablishment of Ammunitions Functions for *St. Juliens Creek Annex*	WPNSTA Yorktown	Not allowed to duplicate	Brief history of WPNSTA Yorktown
6/8/2012	WPNSTA Historical Files	WPNSTA Public Affairs Officer	GSA Real Property Utilization Survey	WPNSTA Yorktown	Not allowed to duplicate	Brief history of WPNSTA Yorktown
6/8/2012	WPNSTA Historical Files	WPNSTA Public Affairs Officer	WPNSTA Yorktown 75th Anniversary Pamphlet	WPNSTA Yorktown	Not allowed to duplicate	Brief history of WPNSTA Yorktown
6/8/2012	WPNSTA Historical Files	WPNSTA Public Affairs Officer	WPNSTA Yorktown Celebrates 90 Years of Ordnance Support	WPNSTA Yorktown	Not allowed to duplicate	Brief history of WPNSTA Yorktown
6/8/2012	NAVFAC Contract Department	NAVFAC Mid-Atlantic	Preliminary Draft WPNSTA Yorktown Maintenance Dredging *Plans*	Dredging Plans	Informational	Future dredging plans for Pier R-3
6/8/2012	**Appendix B**	NAVFAC Contract Department	FY2012 Special Project Report, Project number 11-9982	Pier R-3	Informational	Maintenance Work on Pier
7/8/2012	Adminstrative Record	Internet	Colonial National Historic Parkway, Repair and Stabilize the York River Environmental Assesssment	National Park Service	Report	Information on shoreline of York River near UXO 3 boundary.

Appendix B
Source Information

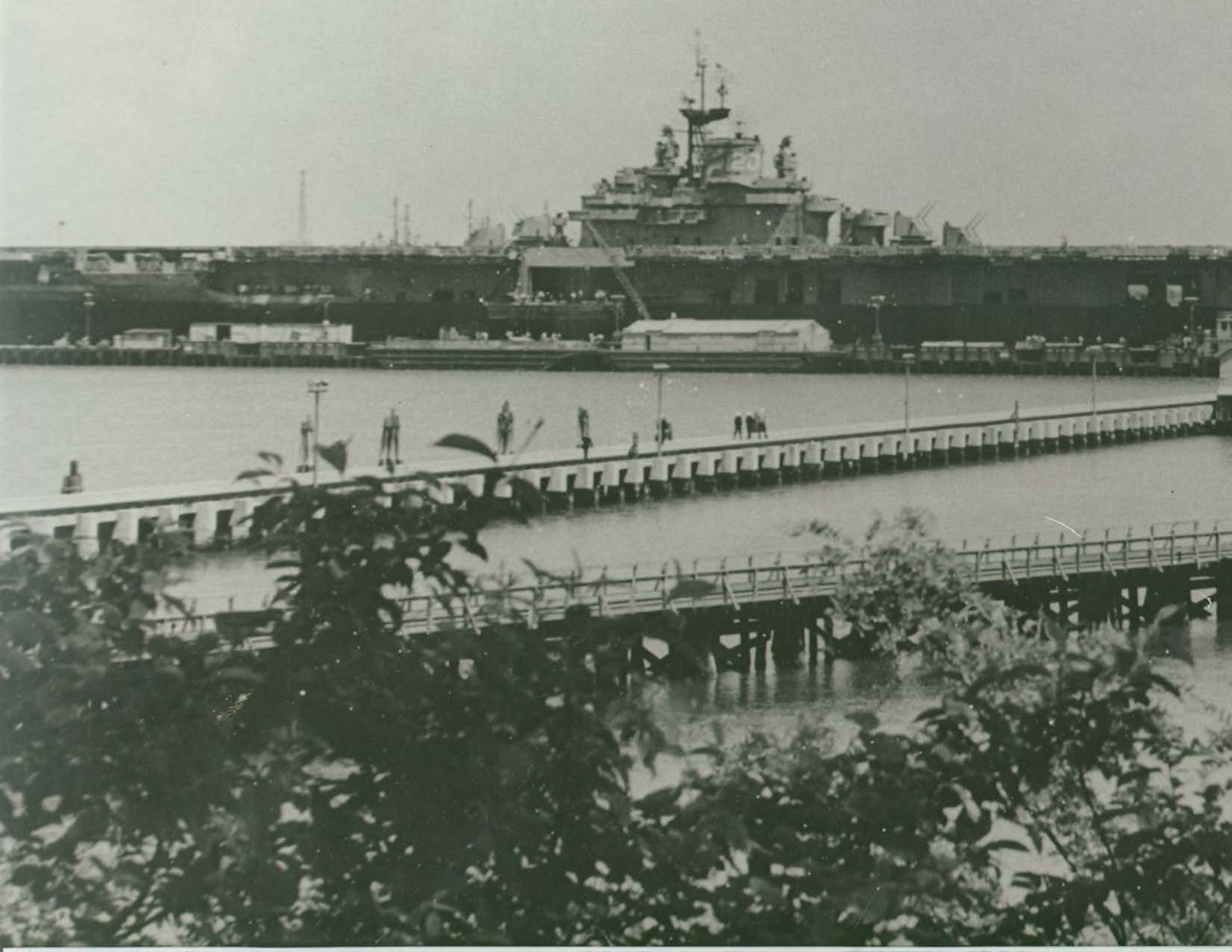
Data Repositories

Installation Repositories


-DYNAMITE-
TNT

Lighting of "Star Line" with Flares

LIMITS IN THIS
EXPLOSIVES
VACUATING



N

1082

Mine Depot Dock Yorktown Va
Dock Mine Depot Yorktown Va

U S NAVY
96-22243

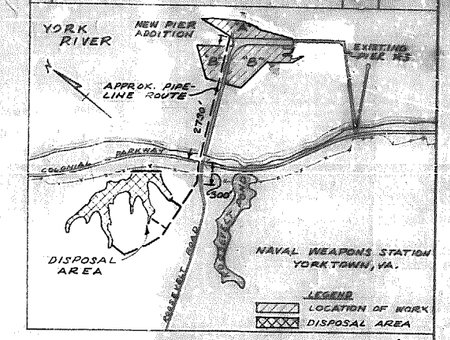
CHANNEL AT LIFT BRIDGE
SCALE: 1" = 30'

ESTIMATE OF QUANTITIES				
AREA	PROJECT DEPTH-FEET	QUANTITY CU. YDS.	1' OVERDEPTH CU. YDS.	TOTAL
"A"	-36	68,580	15,065	83,645
"B"	-18	130,340	28,595	163,535
TOTAL		199,520	43,660	233,180

QUANTITIES ARE BASED ON PLACE MEASUREMENT AND INCLUDE MATERIAL IN PRISM TO FORM SLOPES.

REVISIONS

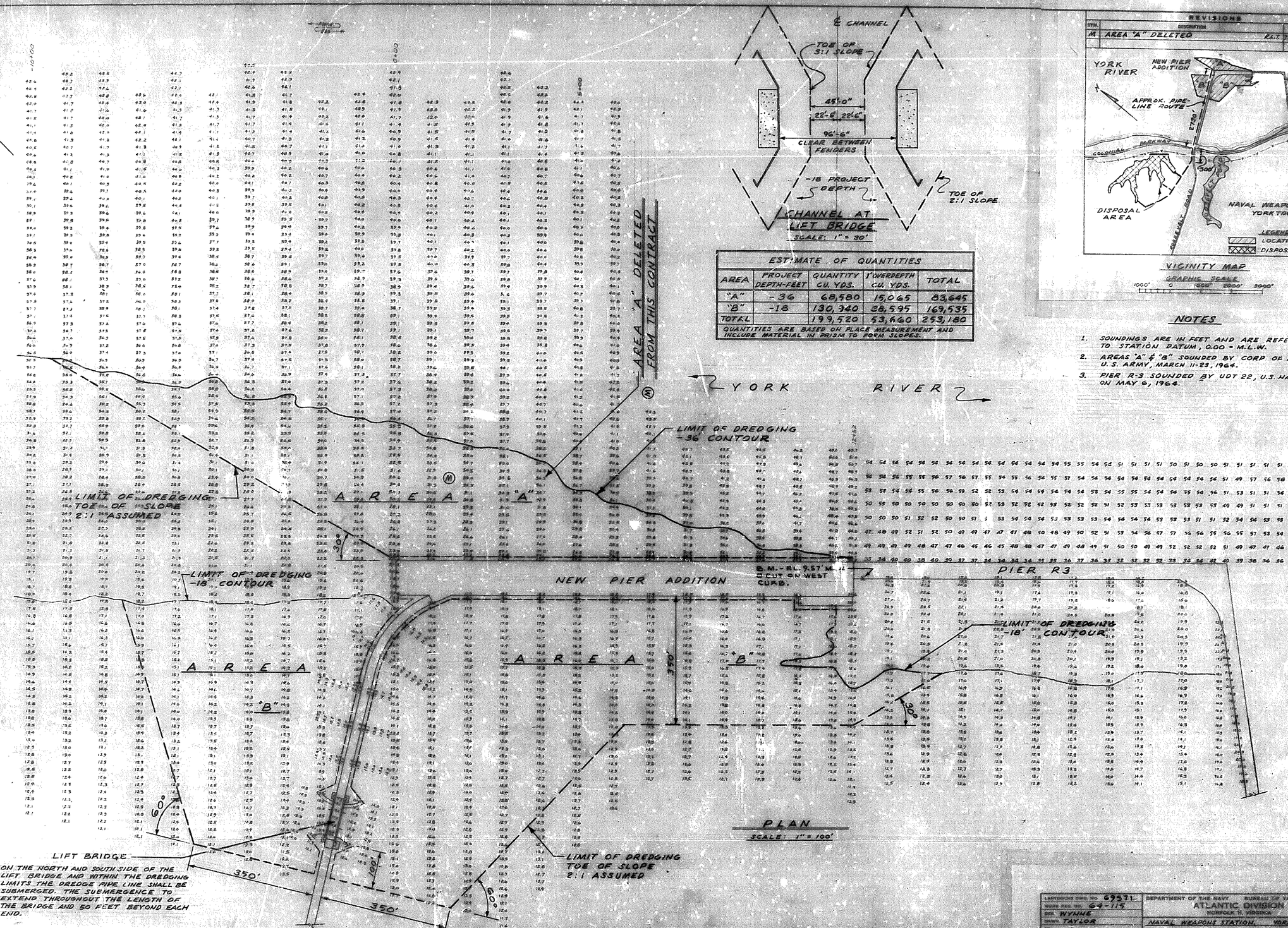
SYM.	DESCRIPTION	DATE	APPROVED
M	AREA "A" DELETED R.L.T.		



VICINITY MAP
GRAPHIC SCALE
1000' 0 1000' 2000' 3000'

NOTES

1. SOUNDINGS ARE IN FEET AND ARE REFERRED TO STATION DATUM, 0.00 = M.L.W.
2. AREAS "A" & "B" SOUNDED BY CORP OF ENGINEERS, U.S. ARMY, MARCH 11-23, 1964.
3. PIER R-3 SOUNDED BY UDT 22, U.S. NAVY, ON MAY 6, 1964.



PLAN
SCALE: 1" = 100'

GRAPHIC SCALES
0 50' 100' 200' 300' 400' 500' 600'
1" = 100'
0 15' 30' 60' 90' 120' 150' 180'
1" = 30'

LANTDIVCOM SPEC. NO.	69571
WORK REQ. NO.	64-115
SPEC.	WYNNE
DRAWN	TAYLOR
CK.	
DES.	WYNNE
BY WORK	E.R. Mitchell
SPEC. CHIEF	

DEPARTMENT OF THE NAVY BUREAU OF YARDS & DOCKS
ATLANTIC DIVISION
NORFOLK 11, VIRGINIA

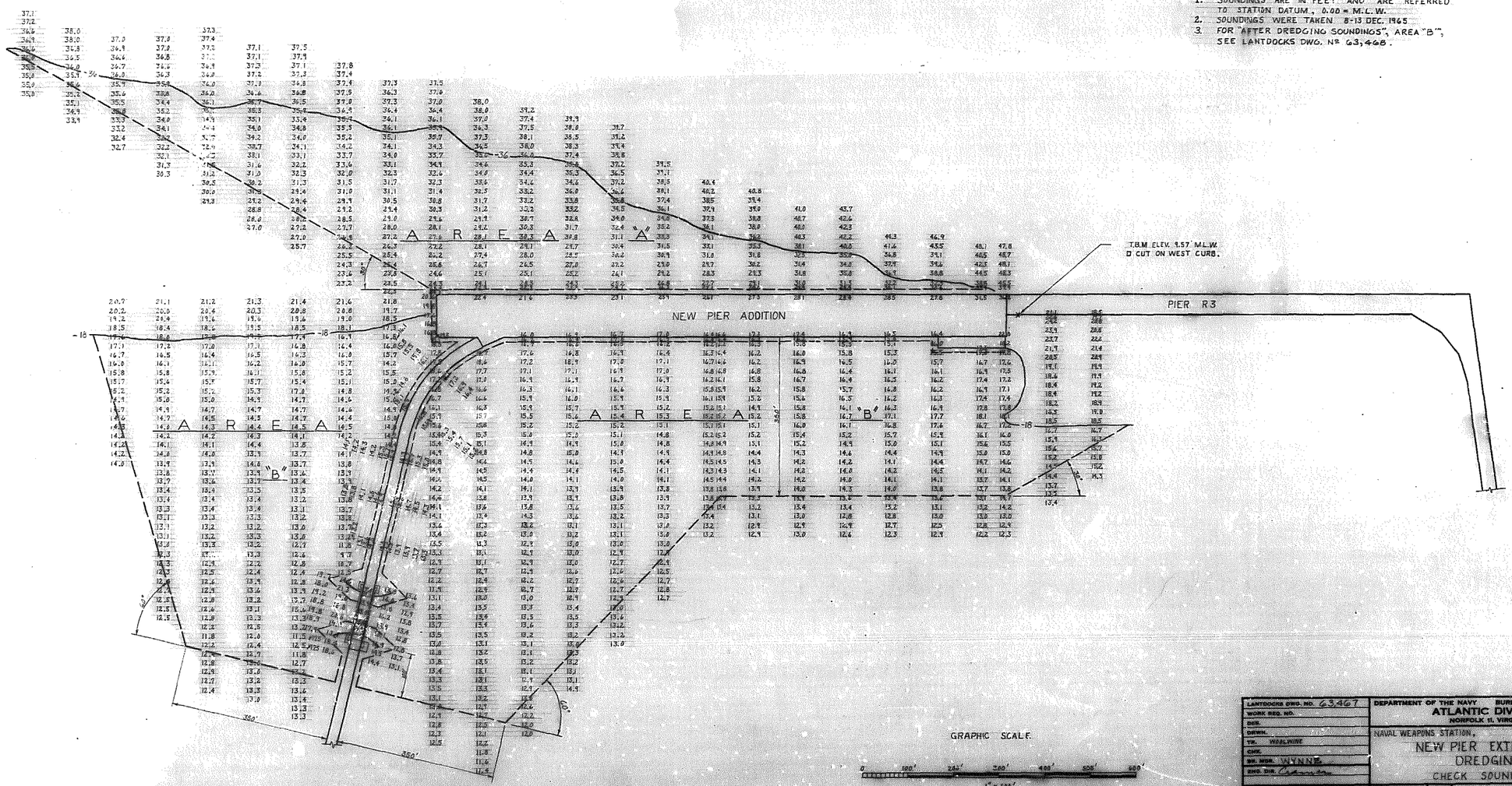
NAVAL WEAPONS STATION, YORKTOWN, VA.

NEW PIER EXTENSION
DREDGING
DREDGING LOCATION PLAN

CODE IDENT. NO.	SIZE	Y & D DRAWING NO.
80091	F	1060071

SCALE AS NOTED DATE 23 FEB 1965 DRAWN BY LANTDIVCOM BUCEPS SHEET 1 OF 2

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED

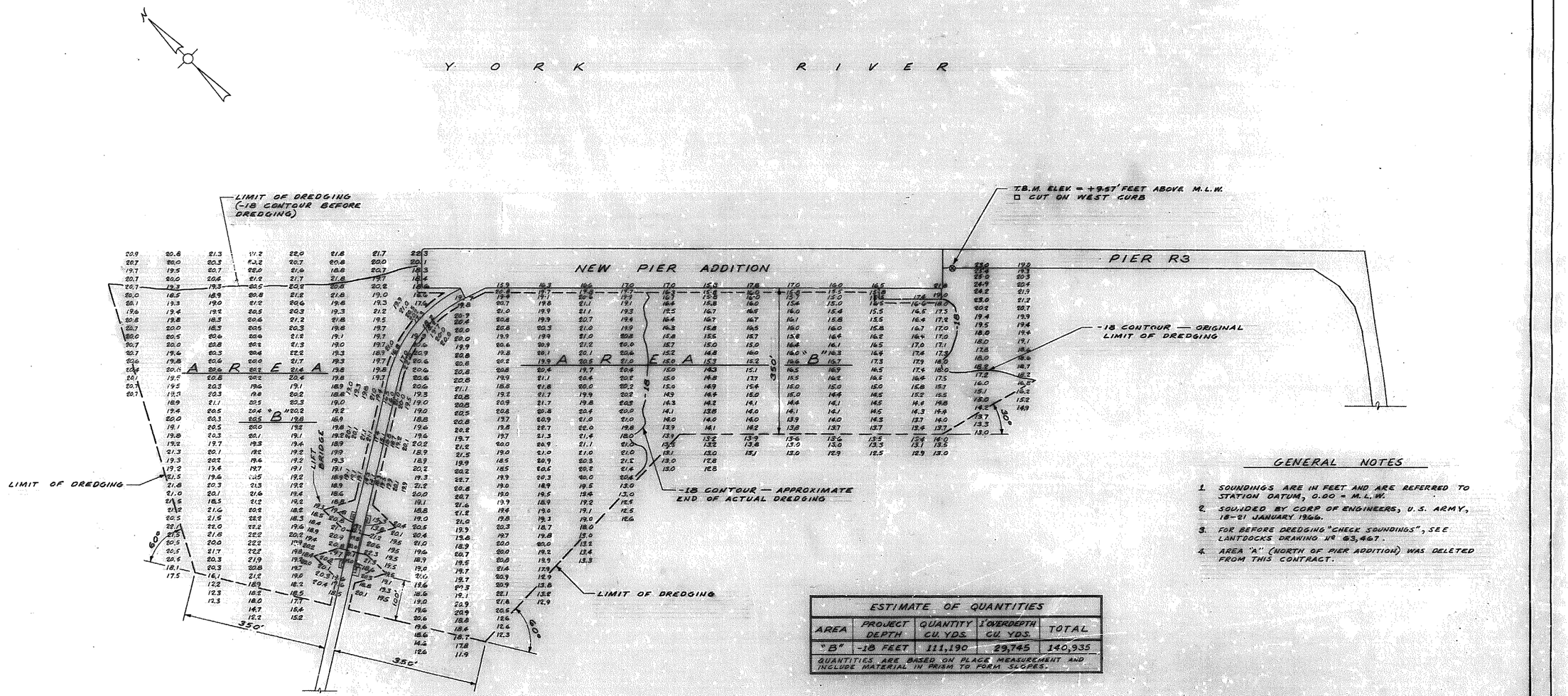


GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND ARE REFERRED TO STATION DATUM, 0.00 = M.L.W.
2. SOUNDINGS WERE TAKEN 8-13 DEC. 1965
3. FOR "AFTER DREDGING SOUNDINGS", AREA "B", SEE LANTDOCKS DWG. № 63,468.

LANTDOCKS DWG. NO. 63467	DEPARTMENT OF THE NAVY — BUREAU OF YARDS & DOCKS ATLANTIC DIVISION NORFOLK 11, VIRGINIA
WORK REQ. NO.	
DES.	
DRWN.	
TR. WOALMINE	NAVAL WEAPONS STATION, YORKTOWN, VA.
CHK.	NEW PIER EXTENSION
SR. MGR. WYNNE	DREDGING
ENG. DIV.	CHECK SOUNDINGS
SATISFACTORY TO DATE "RECORD DRAWING"	CODE IDENT. NO. 80091 · SIZE F · Y & D DRAWING NO.
APPROVED DATE 7 FEB 1966 — CH. CIVIL DIVISION, LANTDOCKS	SCALE 1" = 100' · SPEC. No. · SHEET 1 OF 1

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



PLAN

SCALE: 1" = 100'

GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND ARE REFERRED TO STATION DATUM, 0.00 = M.L.W.
2. SOUNDED BY CORP OF ENGINEERS, U.S. ARMY, 18-21 JANUARY 1966.
3. FOR BEFORE DREDGING "CHECK SOUNDINGS", SEE LANTDOCKS DRAWING Nº 63,467.
4. AREA "A" (NORTH OF PIER ADDITION) WAS DELETED FROM THIS CONTRACT.

ESTIMATE OF QUANTITIES				
AREA	PROJECT DEPTH	QUANTITY CU. YDS.	1' OVERDEPTH CU. YDS.	TOTAL
"B"	-18 FEET	111,190	29,745	140,935
QUANTITIES ARE BASED ON PLACE MEASUREMENT AND INCLUDE MATERIAL IN PRISM TO FORM SLOPES.				

GRAPHIC SCALE

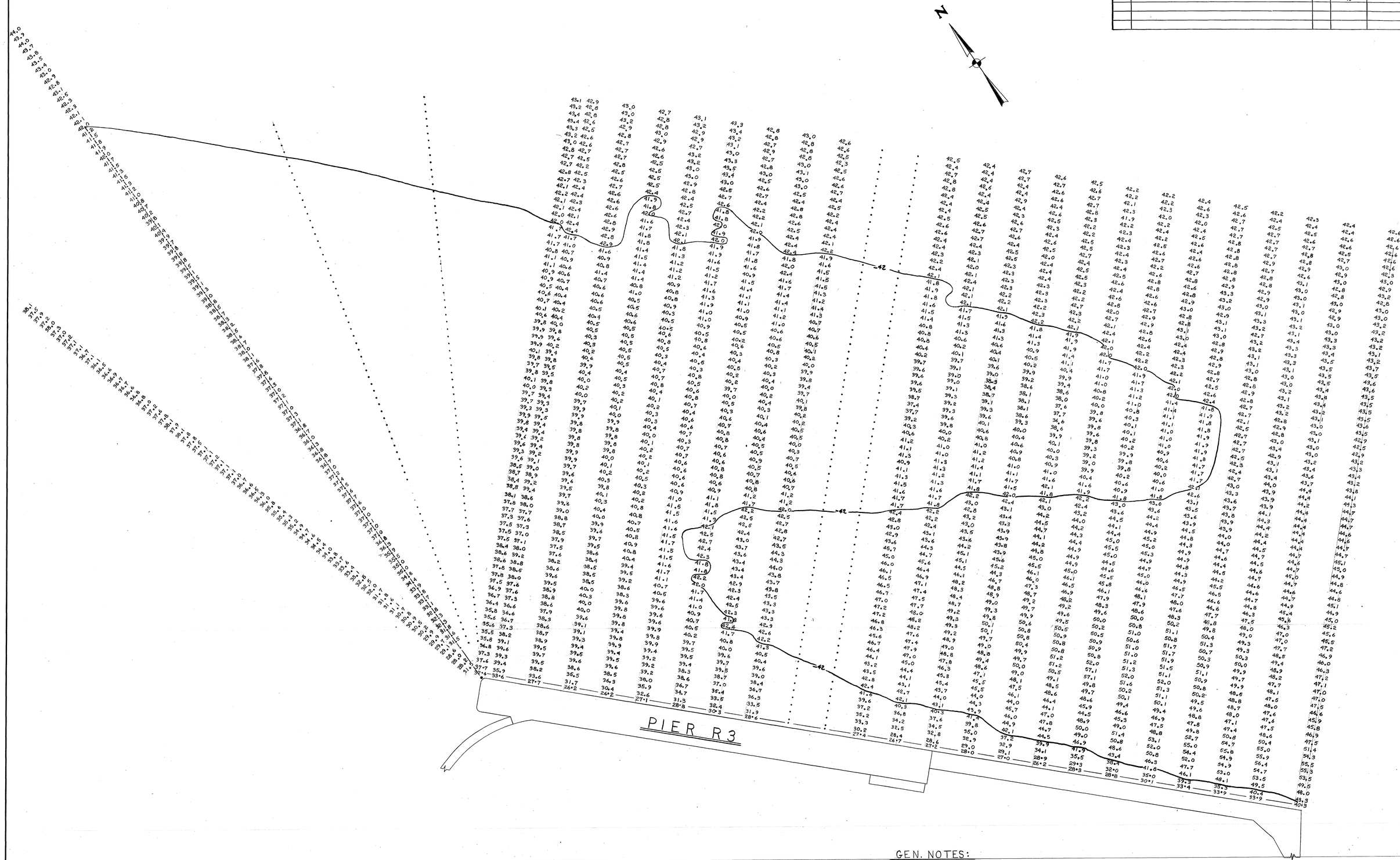
0 50' 100' 200' 300' 400' 500' 600'

1" = 100'

LANTDOCKS DWG. NO. 63,468	DEPARTMENT OF THE NAVY BUREAU OF YARDS & DOCKS
WORK ORD. NO.	ATLANTIC DIVISION NORFOLK, VIRGINIA 23511
DRN. TAYLOR	NAVAL WEAPONS STATION, YORKTOWN, VA.
TR.	NEW PIER EXTENSION
CHK.	DREDGING
SUB. MGR. WYNNE	AFTER DREDGING SOUNDINGS
SUB. MGR.	
SUBMITTED TO "RECORD DRAWING"	SIZE F — SHEET NO. 80091 — T & I DRAWING NO.
DATE 2 FEB 1966	SCALE AS NOTED — WS. NO. — LANTDOCKS NO. 60465 — SHEET 1 OF 1
CAPT. CEC, U.S. NAVY, OFFICER IN CHARGE	

K&E 19 1193 5-75 MC 3777

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY TO	APPROVED



GEN. NOTES:

1. SOUNDINGS ARE RECORDED IN FEET REFERRED TO THE STATION LOW WATER DATUM.
2. DATES OF SURVEY: 5-5-76 TO 5-11-76.

DWG. 425-76

PWC DRAWING NO. 9074	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVY PUBLIC WORKS CENTER NORFOLK, VIRGINIA		
DRAWN J.L. BOND JR. 5-17-76	NAVWEP STA. YORKTOWN, VA.		
DES.	PIER R3		
DIV. DIR. WGT	PRELIMINARY DREDGING PPOJECT		
HD. ENG. DEPT.			
WORK REQUEST NO.			
SATISFACTORY TO DATE	SIZE F	CODE IDENT. NO. 80091	NAVFAC DRAWING NO.
APPROVED DATE 5/18/76 FOR COMMANDER, NAVFAC	SCALE 1" = 100'	CONST. CONTR. NO.	
		SPEC.	SHEET 1 OF 1

GENERAL NOTES:

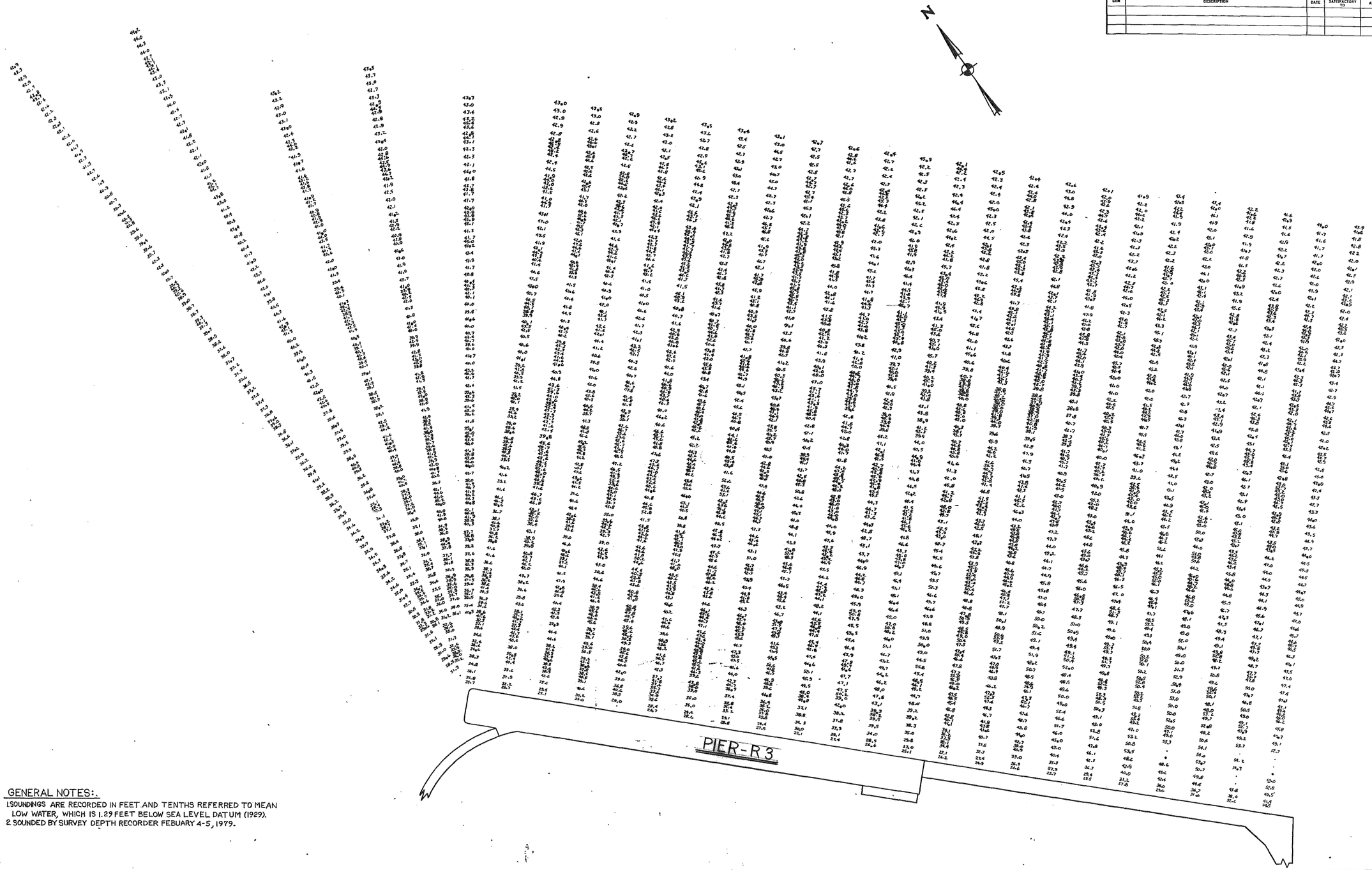
1. SOUNDINGS ARE RECORDED IN FEET AND TENTHS REFERRED TO MEAN LOW WATER, WHICH IS 1.29 FEET BELOW SEA LEVEL DATUM (1929).
2. SOUNDED BY SURVEY DEPTH RECORDER DECEMBER 16, 1978 TO JANUARY 16, 1979.

GRAPHIC SCALE: 100 200 300 400 500

PWC DRAWING NO. 9890	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVY PUBLIC WORKS CENTER NORFOLK, VIRGINIA
DRAWN T.L.B. & RMS. 12-78	NAVAL WEAPONS STATION YORKTOWN, VA.
DES.	PIER - R3
INV. DR. MU 1257	BEFORE DREDGING
HD. ENG. DEPT.	
WORK REQUEST NO. 478543	
SATISFACTORY TO DATE	SIZE F · CODE IDENT. NO. 80091 · NAVFAC DRAWING NO.
APPROVED DATE	SCALE 1" = 100' · CONST. CONTR. NO. · SPEC. · SHEET 1 OF 2
CO. FOR ENGINEERING SERVICE	

DWG. 498-78

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY TO	APPROVED



GENERAL NOTES:

1. SOUNDINGS ARE RECORDED IN FEET AND TENTHS REFERRED TO MEAN LOW WATER, WHICH IS 1.29 FEET BELOW SEA LEVEL DATUM (1929).
2. SOUNDED BY SURVEY DEPTH RECORDER FEBUARY 4-5, 1979.

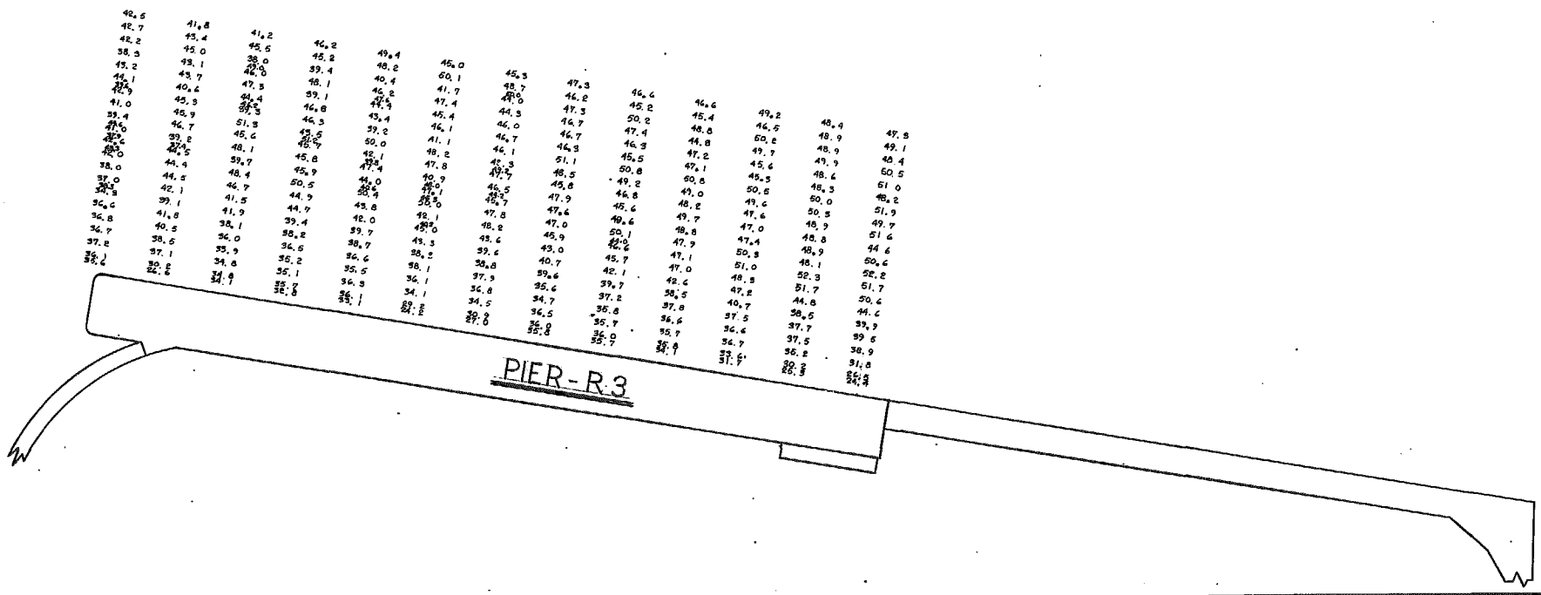
GRAPHIC SCALE:

0 100 200 300 400 500

PWC DRAWING NO. 9890A	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVY PUBLIC WORKS CENTER NORFOLK, VIRGINIA
DRAWN WGT	NAVAL WEAPONS STATION YORKTOWN, VA.
DES.	
DIV. DIR. MW WGT	PIER - R3 AFTER DREDGING
HD. ENG. DEPT.	
WORK REQUEST NO. 1678545	
SATISFACTORY TO DATE	SIZE F · CODE IDENT. NO. 80091 · NAVFAC DRAWING NO.
APPROVED DATE	CONST. CONTR. NO.
C.O. FOR COMMANDER, NAVFAC	SCALE 1" = 100' · SPEC. · SHEET 2 OF 2

DWO. 498-78

REVISIONS				
STM	DESCRIPTION	DATE	SATISFACTORY TO	APPROVED



GENERAL NOTES:

1. SOUNDINGS ARE RECORDED IN FEET AND TENTHS REFERRED TO MEAN LOW WATER, WHICH IS 1.29 FEET BELOW SEA LEVEL DATUM (1929).
2. SOUNDED BY SURVEY DEPTH RECORDER JULY 9, 1979 AFTER REDREDGING.

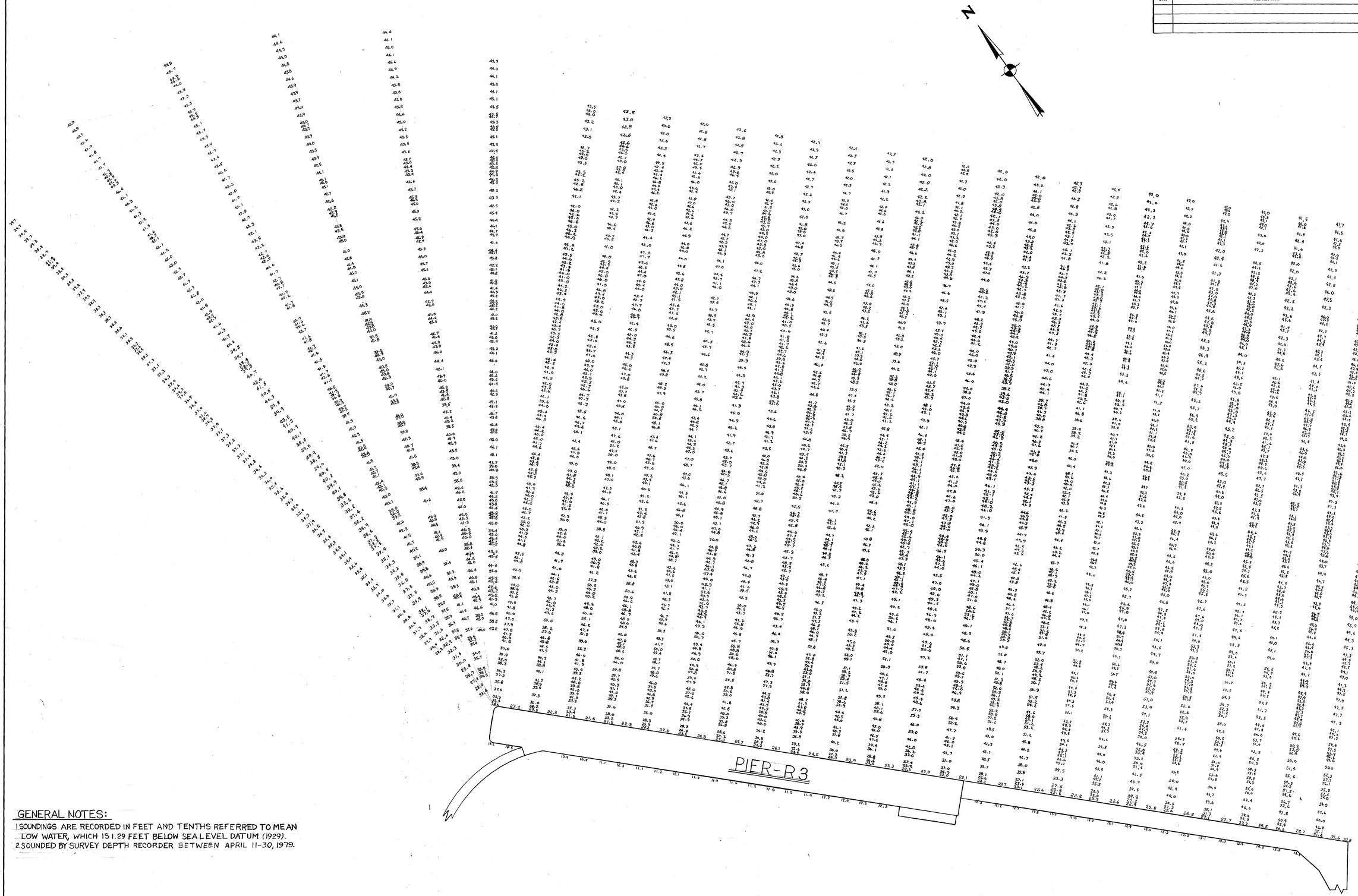
GRAPHIC SCALE:

0 100' 200' 300' 400' 500'

DWG. 498-78

PWC DRAWING NO. 10412	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVY PUBLIC WORKS CENTER NORFOLK, VIRGINIA		
DRAWN J.L. BOND 8-27-79	NAVAL WEAPONS STATION YORKTOWN, VA.		
DES.	PIER - R.3 AFTER REDREDGING		
DIV. DIR. M(L) WEST			
HD. ENG. DEPT.			
WORK REQUEST NO. 1478549			
SATISFACTORY TO DATE	SIZE F	CODE IDENT. NO. 80091	NAVFAC DRAWING NO.
APPROVED DATE			CONST. CONTR. NO.
CEL PW ENGINEER, NAVFAC	SCALE 1"=100'	SPEC.	SHEET 1 OF 1

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY TO	APPROVED



GENERAL NOTES:

1. SOUNDINGS ARE RECORDED IN FEET AND TENTHS REFERRED TO MEAN LOW WATER, WHICH IS 1.29 FEET BELOW SEA LEVEL DATUM (1929).
2. SOUNDED BY SURVEY DEPTH RECORDER BETWEEN APRIL 11-30, 1979.

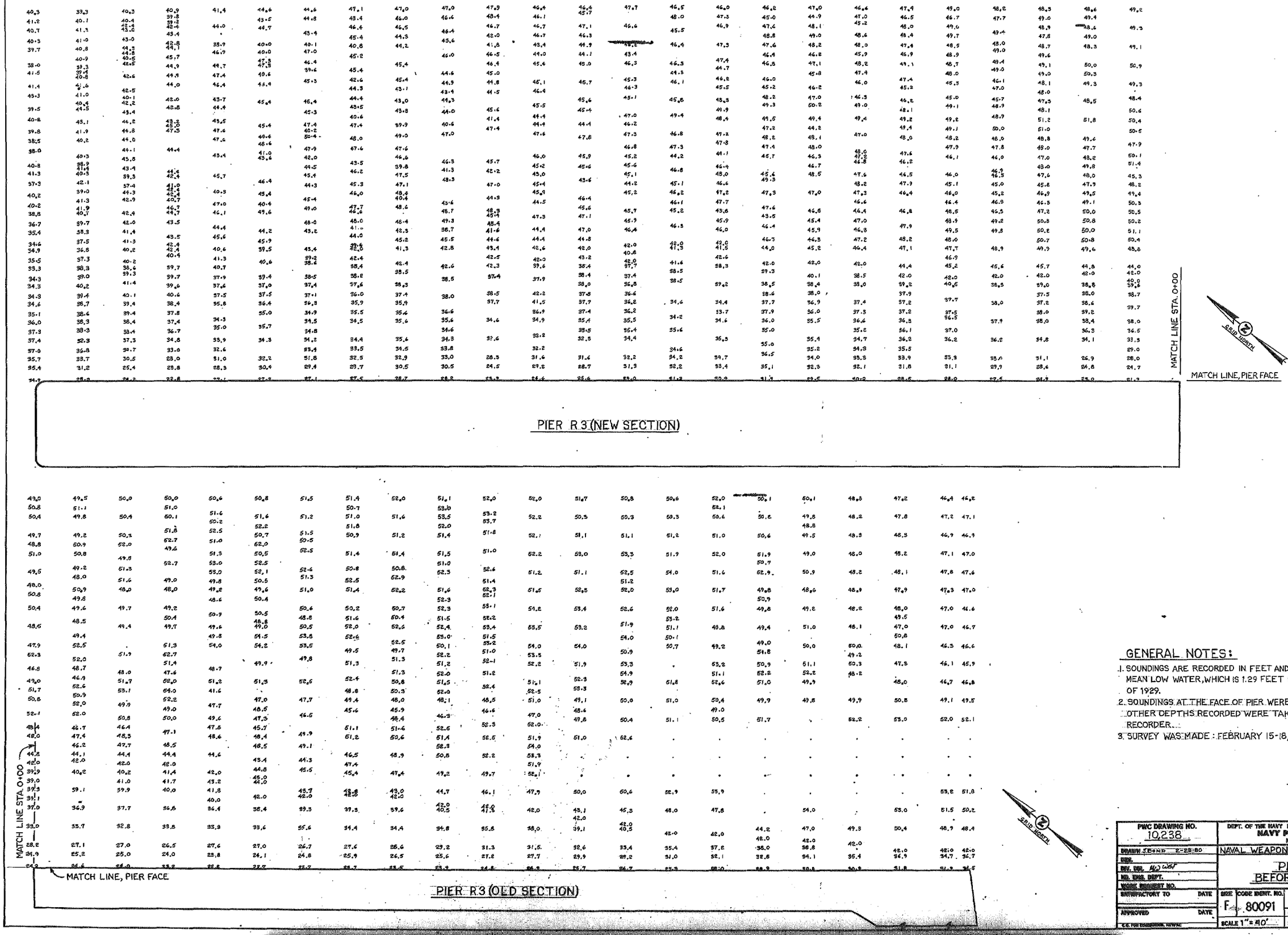
GRAPHIC SCALE:

0 100 200 300 400 500

DWG. 498-78

PWC DRAWING NO. 9994	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND **NAVY PUBLIC WORKS CENTER** NORFOLK, VIRGINIA
DRAWN JRA	NAVAL WEAPONS STATION YORKTOWN, VA.
DES.	
DIV. DIR. MJJ WGT	PIER - R3 AFTER DREDGING
HD. ENG. DEPT.	
WORK REQUEST NO. 1678545	
SATISFACTORY TO DATE	SIZE F / CODE IDENT. NO. 80091 / NAVFAC DRAWING NO.
APPROVED DATE	CONST. CONTR. NO.
C.O. FOR COMMANDER, NAVFAC	SCALE 1" = 100' / SPEC. / SHEET 1 OF 1

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY TO	APPROVED



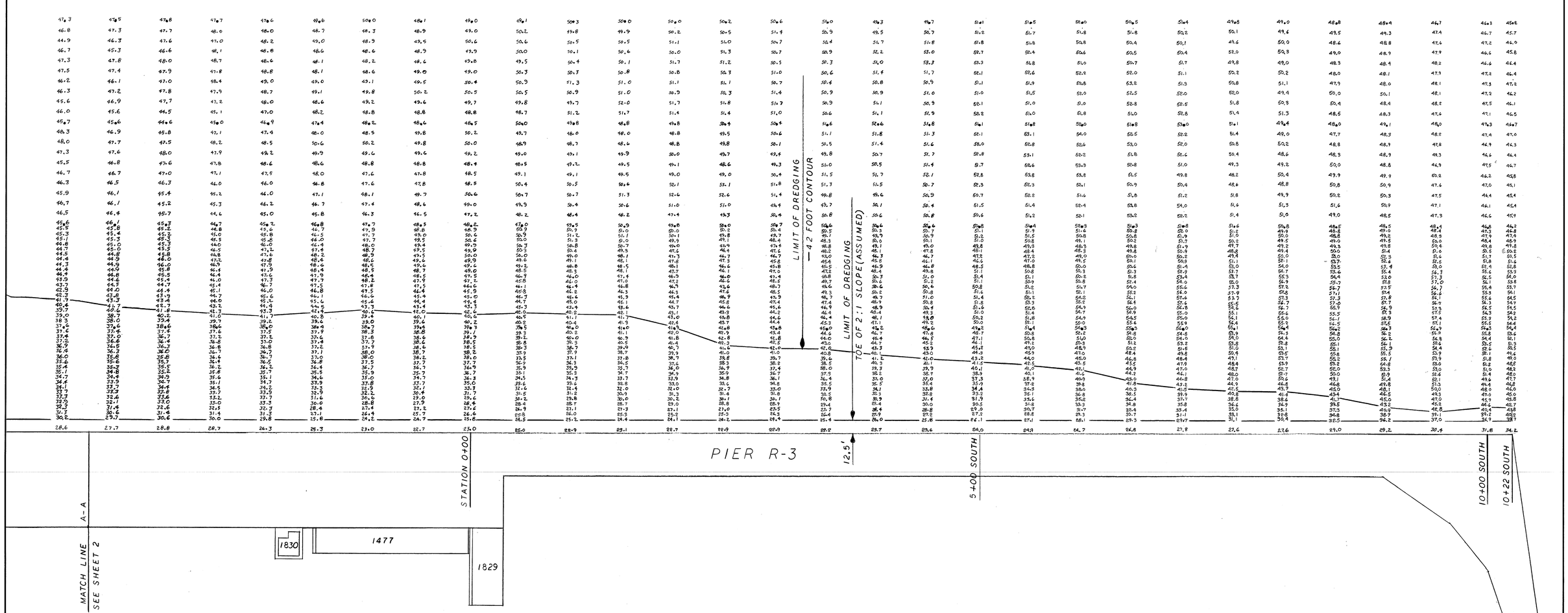
GENERAL NOTES:

1. SOUNDINGS ARE RECORDED IN FEET AND TENTHS REFERRED TO MEAN LOW WATER, WHICH IS 1.29 FEET BELOW SEA LEVEL DATUM OF 1929.
2. SOUNDINGS AT THE FACE OF PIER WERE TAKEN BY HANDLINE. ALL OTHER DEPTHS RECORDED WERE TAKEN BY SURVEY DEPTH RECORDER.
3. SURVEY WAS MADE : FEBRUARY 15-18, 1980.

PWC DRAWING NO. 10,238	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVY PUBLIC WORKS CENTER NORFOLK, VIRGINIA		
DRAWN J.BOND 2-28-80	NAVAL WEAPONS STATION YORKTOWN, VA.		
DIR.	PIER - R3 BEFORE DREDGING		
DIV. DIR.			
NO. ENG. DEPT.			
WORK REQUEST NO.			
SATISFACTORY TO / DATE	SIZE F	CODE IDENT. NO. 80091	NAVFAC DRAWING NO.
APPROVED / DATE	SCALE 1" = 40'	CONST. CONTR. NO.	
C.E. FOR ENGINEERING, NAVFAC		SPEC.	SHEET 1 OF 1

K-62x MC 392

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY TO	APPROVED



SITE PLAN
SCALE: 1" = 40'

GENERAL NOTES

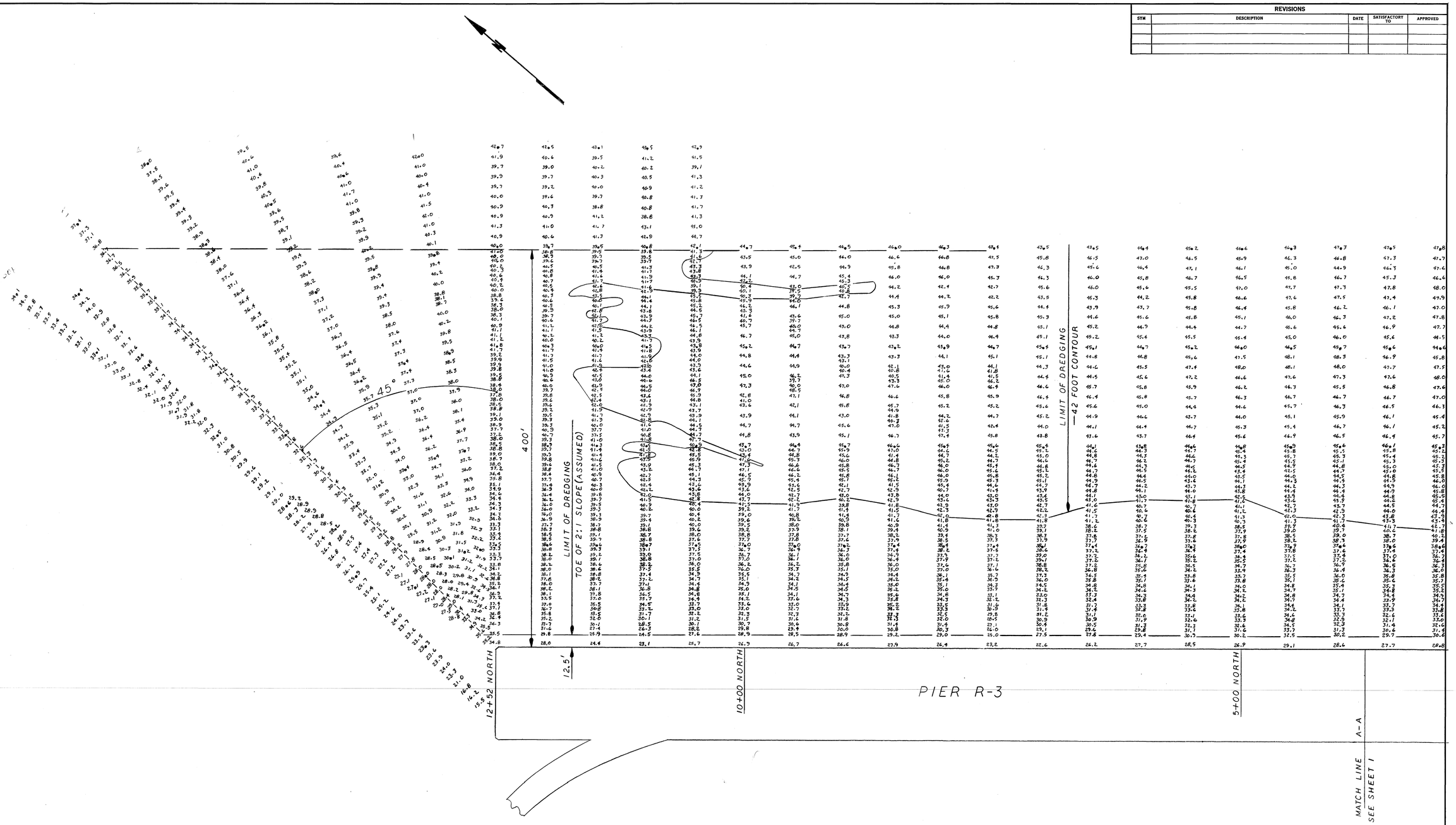
1. DEPTHS ARE RECORDED IN FEET AND TENTHS REFERRED TO THE STATION LOW WATER DATUM, WHICH IS 1.29 FEET BELOW SEA LEVEL DATUM OF 1929, ADJUSTMENT OF 1953.
2. SOUNDINGS AT THE FACE OF PIER WERE TAKEN BY HANDLINE. REMAINDER OF SURVEY WAS MADE BY SURVEY DEPTH RECORDER.
3. SURVEY WAS TAKEN AUGUST 9–19, 1980.

DWO. 218-80

PWC DRAWING NO. 10371	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND **NAVY PUBLIC WORKS CENTER** NORFOLK, VIRGINIA
DRAWN WGT	NAVAL WEAPONS STATION YORKTOWN, VA. PIER R-3 BEFORE DREDGING CHECK SOUNDINGS
DES.	
DIV. DIR.	
HD. ENG. DEPT. M. CANNON	
WORK REQUEST NO. 1283500	
SATISFACTORY TO DATE	SIZE F · CODE IDENT. NO. 80091 · NAVFAC DRAWING NO.
APPROVED DATE C.O. FOR COMMANDER, NAVFAC	CONST. CONTR. NO. N62470-80-B-0125
	SCALE 1" = 40' · SPEC. 05-80-0125 · SHEET 1 OF 2

K&E® MC 392

REVISIONS				
STM	DESCRIPTION	DATE	SATISFACTORY TO	APPROVED



SITE PLAN
SCALE : 1" = 40'

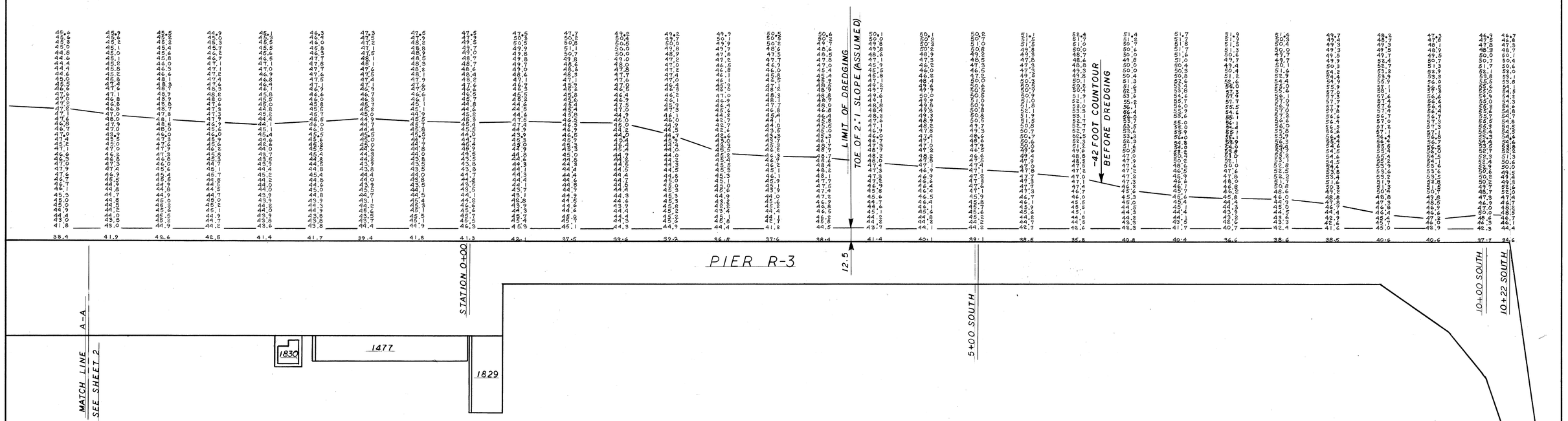
FOR GENERAL NOTES, SEE SHEET ONE

DWO 218-80

PWC DRAWING NO. 10371 A	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND **NAVY PUBLIC WORKS CENTER** NORFOLK, VIRGINIA	
DRAWN WGT	NAVAL WEAPONS STATION YORKTOWN, VA. PIER R-3 BEFORE DREDGING CHECK SOUNDINGS	
DES.		
DIV. DIR. R I		
HD. ENG. DEPT. M. CANNON		
WORK REQUEST NO. 1283500		
SATISFACTORY TO / DATE	SIZE F / CODE IDENT. NO. 80091	NAVFAC DRAWING NO.
APPROVED / DATE		CONST. CONTR. NO. N62470-80-B-0125
C.O. FOR COMMANDER, NAVFAC	SCALE 1" = 40'	SPEC. 05-80-0125 SHEET 2 OF 2

K&E• MC 199

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY TO	APPROVED



SITE PLAN
SCALE : 1" = 40'

GENERAL NOTES

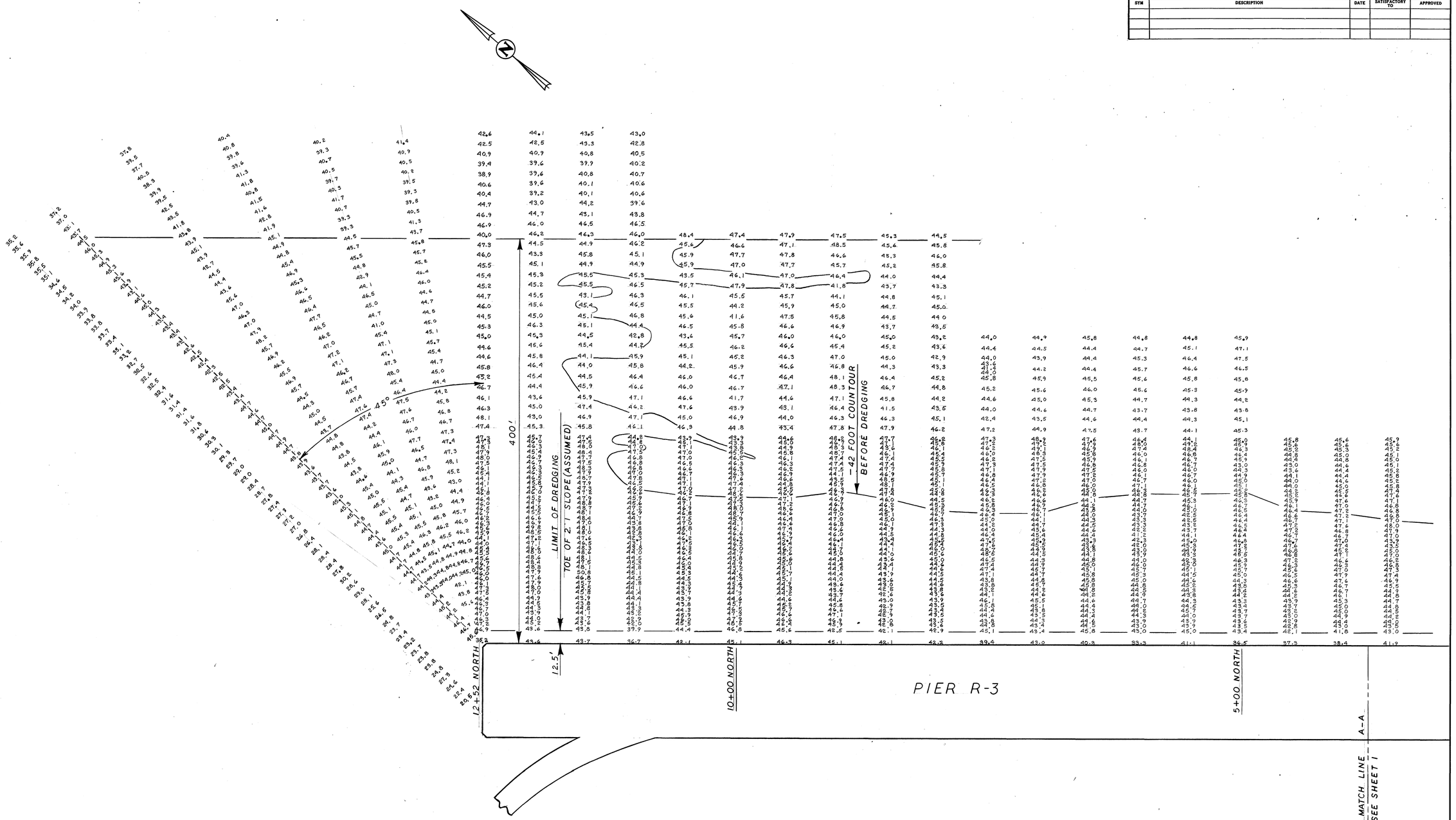
1. DEPTHS ARE RECORDED IN FEET AND TENTHS REFERRED TO THE STATION LOW WATER DATUM, WHICH IS 1.29 FEET BELOW SEA LEVEL DATUM OF 1929, ADJUSTMENT OF 1953.
2. SOUNDINGS AT THE FACE OF PIER WERE TAKEN BY HANDLINE, REMAINDER OF SURVEY WAS MADE BY SURVEY DEPTH RECORDER.
3. SURVEY WAS TAKEN SEPT. 24-OCT. 8, 1980.

DWO. 218-80

PWC DRAWING NO. 10,407	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVY PUBLIC WORKS CENTER NORFOLK, VIRGINIA
DRAWN J.L. BOND 10-22-80	NAVAL WEAPONS STATION YORKTOWN, VA.
DES.	PIER R-3
DIV. DIR.	AFTER DREDGING SOUNDINGS
HD. ENG. DEPT.	
WORK REQUEST NO. 1283500	
SATISFACTORY TO DATE	SIZE F · CODE IDENT. NO. 80091 · NAVFAC DRAWING NO.
APPROVED DATE	CONST. CONTR. NO. N62470-80B-0125
C.O. FOR COMMANDER, NAVFAC	SCALE 1" = 40' · SPEC. 05-80-0125 · SHEET 1 OF 2

K&E× MC 199

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY TO	APPROVED



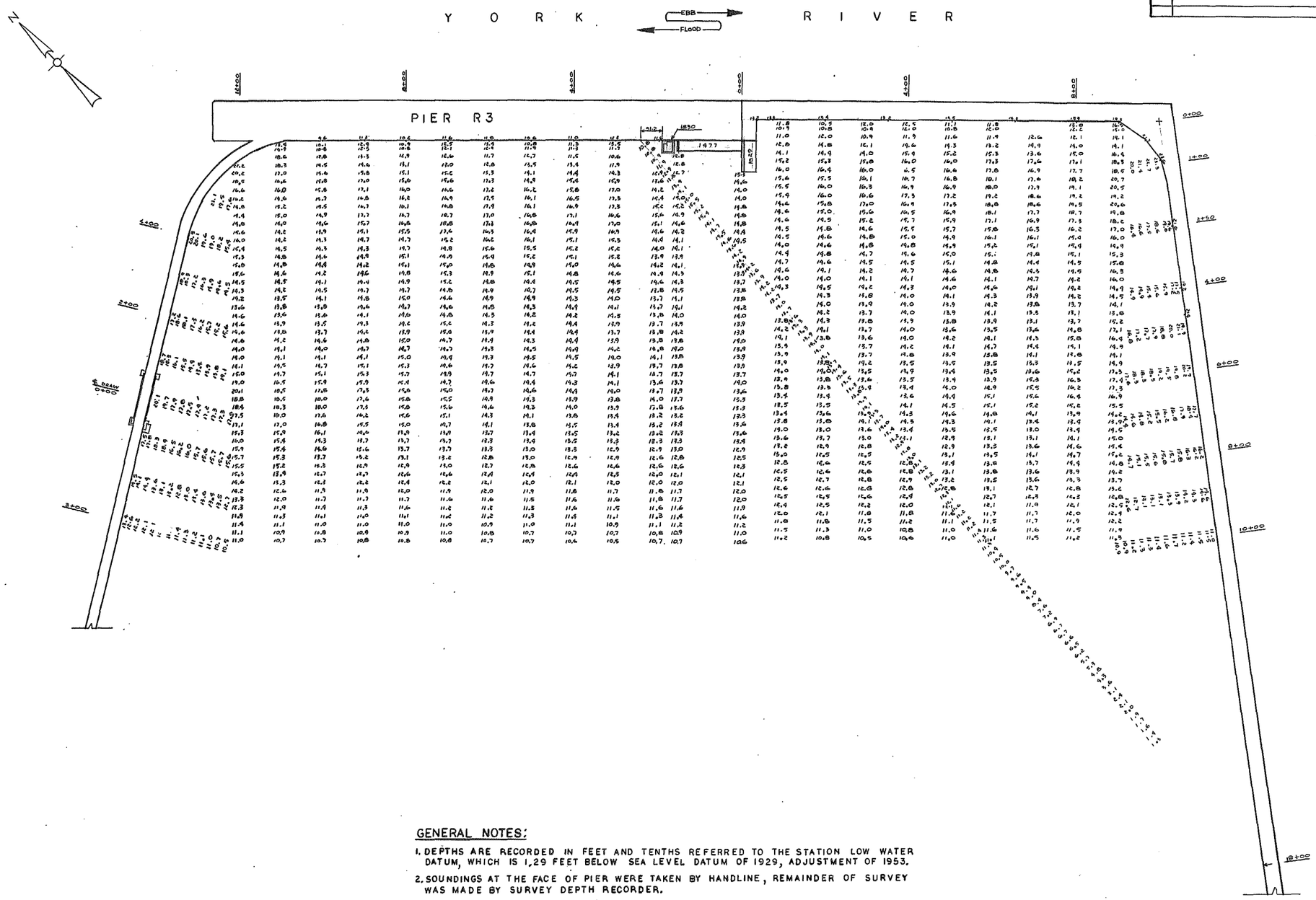
SITE PLAN
SCALE : 1" = 40'

FOR GENERAL NOTES SEE SHEET ONE

DWO. 218-80

PWC DRAWING NO. 10.407-A	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND **NAVY PUBLIC WORKS CENTER** NORFOLK, VIRGINIA
DRAWN J.L. BOND 10-22-80	NAVAL WEAPONS STATION YORKTOWN, VA.
DES.	PIER R-3
DIV. DIR.	AFTER DREDGING SOUNDINGS
HD. ENG. DEPT.	
WORK REQUEST NO. 1283500	
SATISFACTORY TO DATE	SIZE F · CODE IDENT. NO. 80091 · NAVFAC DRAWING NO.
APPROVED DATE	CONST. CONTR. NO. N62470-80 B-0125
C.O. FOR COMMANDER, NAVFAC	SCALE 1" 40' · SPEC. 05-80-0125 · SHEET 2 OF 2

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY TO	APPROVED



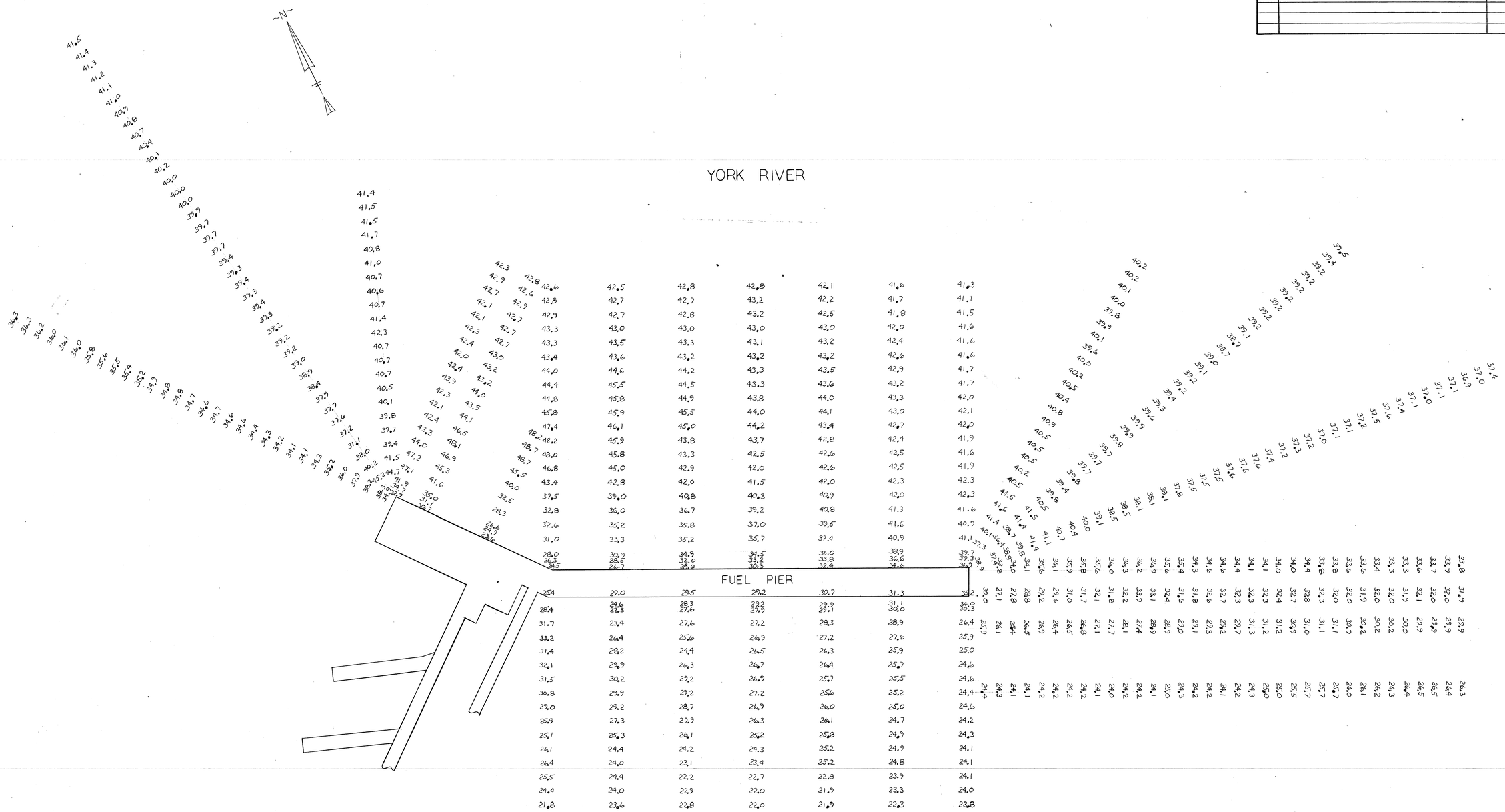
GENERAL NOTES:

1. DEPTHS ARE RECORDED IN FEET AND TENTHS REFERRED TO THE STATION LOW WATER DATUM, WHICH IS 1.29 FEET BELOW SEA LEVEL DATUM OF 1929, ADJUSTMENT OF 1953.
2. SOUNDINGS AT THE FACE OF PIER WERE TAKEN BY HANDLINE, REMAINDER OF SURVEY WAS MADE BY SURVEY DEPTH RECORDER.
3. SURVEY WAS TAKEN APRIL 1981.

FWC DRAWING NO. 10521	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVY PUBLIC WORKS CENTER NORFOLK, VIRGINIA
DRAWN RMS 4-21-81	NAVAL WEAPONS STATION, YORKTOWN, VA.
DES.	PIER R3
DIV. DIR.	CONDITION SURVEY
HD. ENG. DEPT.	1981
WORK REQUEST NO. 1911545	
SATISFACTORY TO DATE	SIZE F · CODE IDENT. NO. 80091 · NAVFAC DRAWING NO.
APPROVED DATE 11-13-81	COMPT. CONTR. NO.
	SCALE 1"=100' · SPEC. · SHEET 1 OF 1

K&E MC392

REVISIONS				
STM	DESCRIPTION	DATE	SATISFACTORY TO	APPROVED



GENERAL NOTES:

1. SOUNDINGS ARE IN FEET AND TENTHS AND REFER TO MEAN LOW WATER AT GLOUCESTER POINT, YORK RIVER, 1967 DATUM, U.S. COAST AND GEODETIC SURVEY.

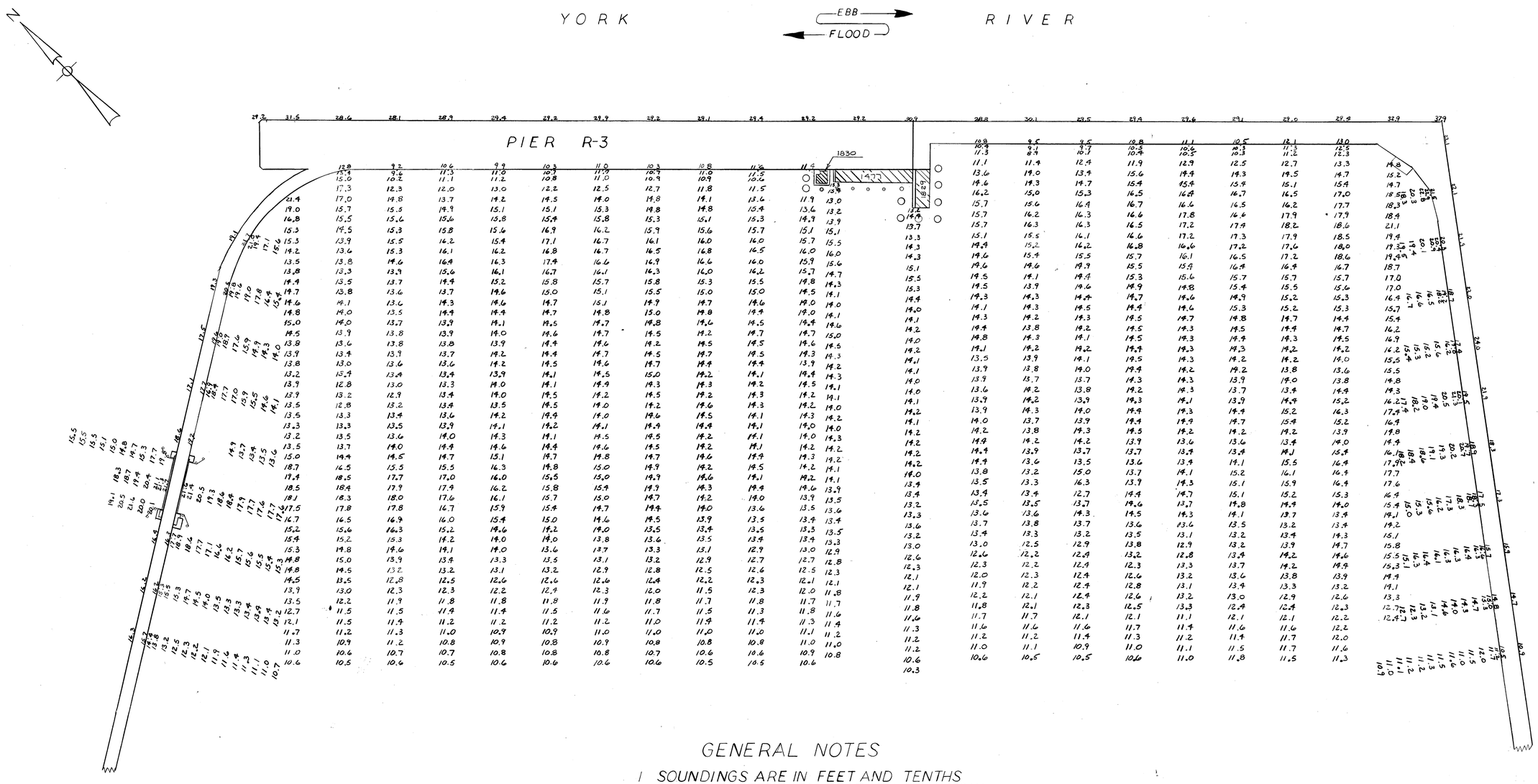
2. SOUNDINGS AT FACE OF PIER WERE TAKEN BY HANDLINE. ALL OTHER DEPTHS RECORDED WERE TAKEN BY SURVEY DEPTH RECORDER.

3. SURVEY WAS MADE: 4-22-81 TO 6-15-81.

DWO 1-81

PWC DRAWING NO. 10604	DEPT. OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND **NAVY PUBLIC WORKS CENTER** NORFOLK, VIRGINIA
DRAWN DEC 6-23-81	NAVAL SUPPLY CENTER YORKTOWN VA.
DES.	
DIV. DIR.	YORKTOWN FUEL PIER
HD. ENG. DEPT.	CONDITION SURVEY
WORK REQUEST NO. 1200518	
SATISFACTORY TO DATE	SIZE F · CODE IDENT. NO. 80091 · NAVFAC DRAWING NO.
APPROVED DATE C.O. FOR COMMANDER, NAVFAC 6-24-81	CONST. CONTR. NO.
	SCALE 1" = 60' · SPEC. · SHEET 1 OF 1

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE MEAN LOW WATER DATUM OF 1929 WHICH IS 1.66' BELOW NATIONAL VERTICAL DATUM, 1972 ADJUSTMENT.
2. SOUNDINGS AT FACE OF PIER WERE TAKEN BY HANDLINE. ALL OTHERS WERE TAKEN BY SURVEY DEPTH RECORDER.
3. SURVEY WAS MADE: 2-25-85 TO 3-4-85

GRAPHIC SCALE

1" = 100' 0' 100' 200' 300' 400' 500'

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

NAVY PUBLIC WORKS CENTER

NAVAL STATION — NORFOLK, VIRGINIA

NAVAL WEAPONS STATION, YORKTOWN VIRGINIA

PIER R-3 CONDITION SURVEY 1985

JOB ORDER NO.	1915109
DES.	EMS
DR.	DEBENNETT
CHK.	RDC
BR. MGR.	R. M. Stephen
SUBMITTED BY:	DATE:
FIRM MEMBER / PRINCIPAL	
EIC	F.P.
DIV. DIR.	M.L. CANNON
APPROVED:	DATE:
SATISFACTORY TO ACTIVITY	
APPROVED: M.L. Cannon	DATE: 3-22-85
FOR C.O. FOR COMMANDER, NAVFAC	

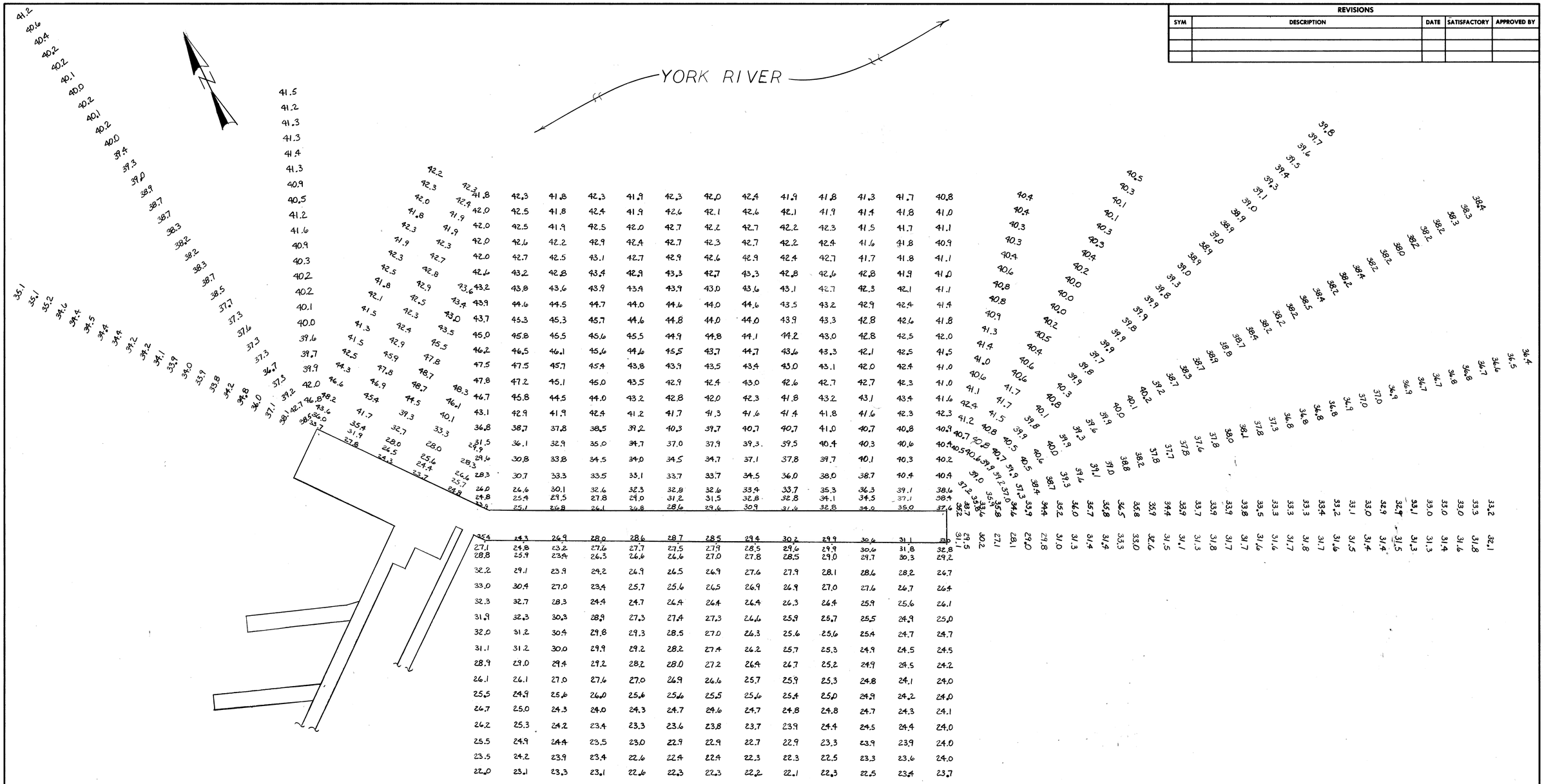
SIZE	CODE IDENT NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		11,931
		CONSTR. CONTR. NO.	
SCALE: GRAPHIC/1"=100'		SPEC.	SHEET 1 OF 1

62850

KAE

4.55

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND REFER TO MEAN LOW WATER AT GLOUCESTER POINT, YORK RIVER, 1967 DATUM, U.S. COAST & GEODETIC SURVEY.
2. SOUNDINGS AT FACE OF PIER WERE TAKEN BY HANDLINE. ALL OTHER DEPTHS RECORED WERE TAKEN BY SURVEY DEPTH RECORDER.
3. SURVEY WAS MADE: 17 JUNE TO 2 JULY, 1985.

1" = 60' -60' 0' 60' 120' 180' 240' 300'

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

NAVY PUBLIC WORKS CENTER

NAVAL STATION — NORFOLK, VIRGINIA

JOB ORDER NO. 1204632 — NAVAL SUPPLY CENTER, YORKTOWN VA.

DES. RMS | DR. D.L. Bennett | CHK. [illegible]

BR. MGR. R. M. Stache

SUBMITTED BY: DATE:

FIRM MEMBER / PRINCIPAL

EIC | F.P.

DIV. DIR.

APPROVED: DATE:

SATISFACTORY TO ACTIVITY

APPROVED: DATE: 7-23-85

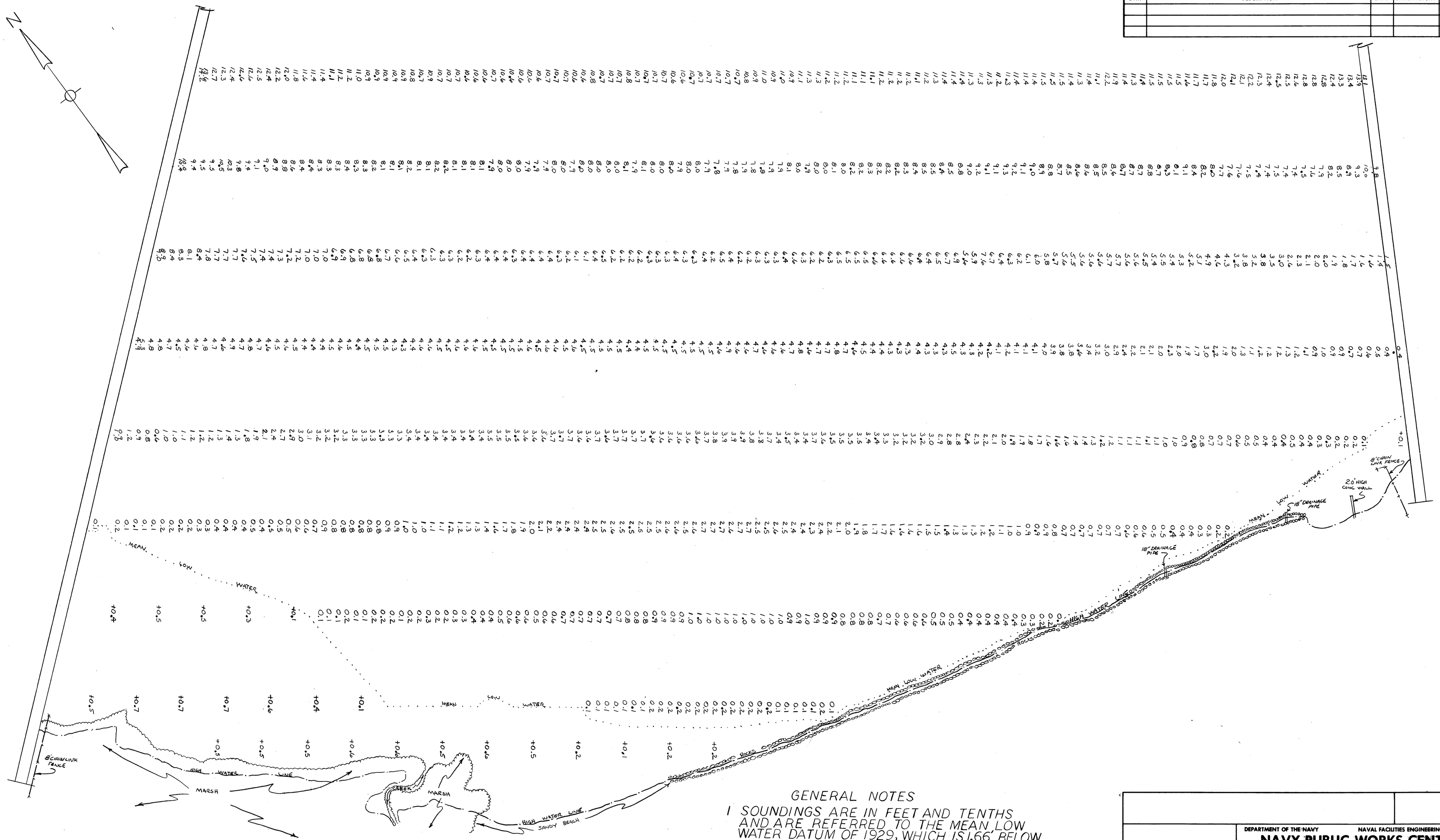
FOR C.O. FOR COMMANDER, NAVFAC

YORKTOWN FUEL PIER CONDITION SURVEY

SIZE	CODE IDENT NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		11,959
		CONSTR. CONTR. NO.	
SCALE: GRAPHIC 1" = 60'		SPEC.	SHEET 1 OF 1

K&E 52950

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY



GENERAL NOTES

1 SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE MEAN LOW WATER DATUM OF 1929, WHICH IS 1.66' BELOW NATIONAL VERTICAL DATUM, 1972 ADJUSTMENT.
2 SOUNDINGS TAKEN BY HANDLINE AND SURVEY DEPTH RECORDER.
3 SURVEY WAS MADE: 8-5-85 TO 8-23-85

GRAPHIC SCALE

1" = 100' 0 100 200 300 400 500

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

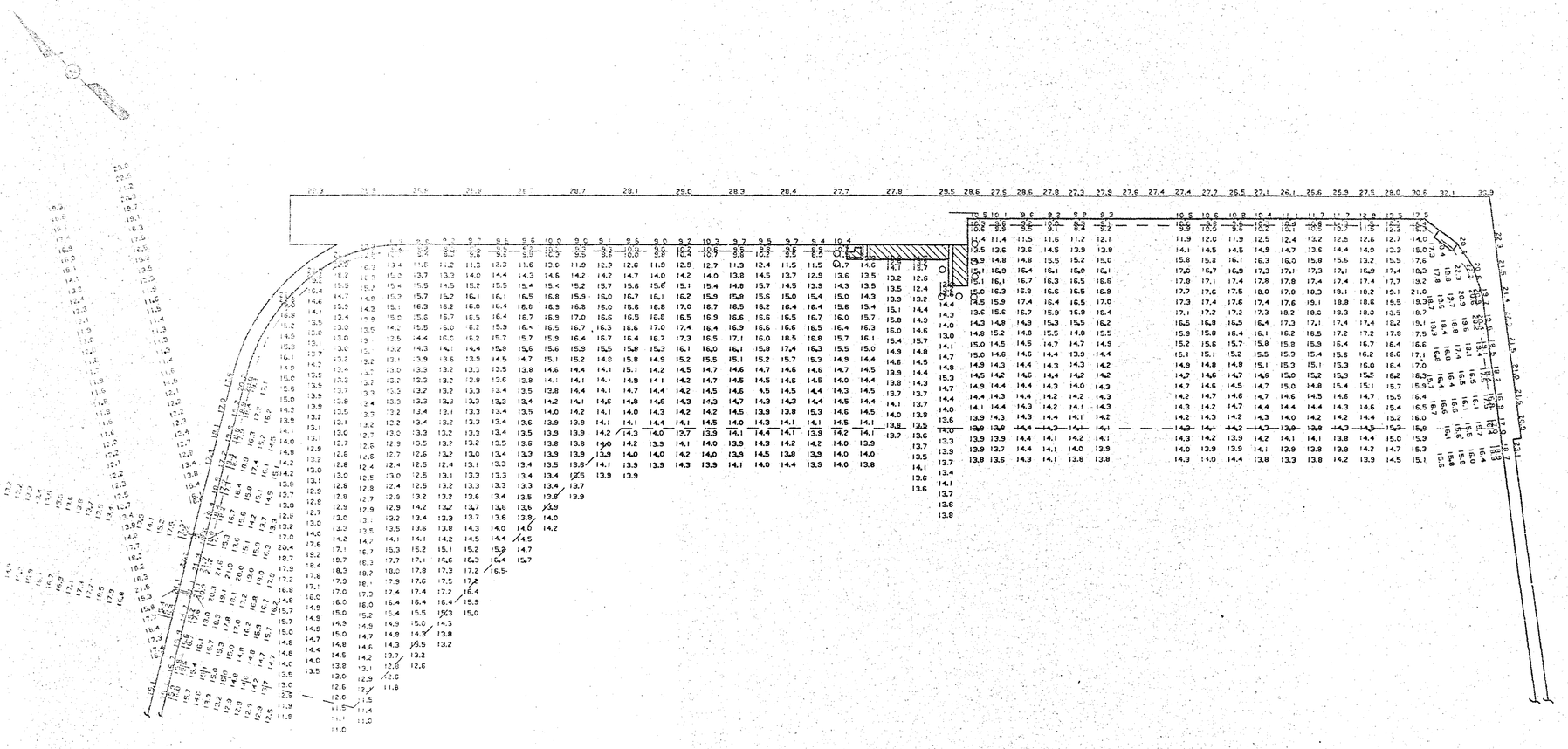
NAVY PUBLIC WORKS CENTER

NAVAL STATION — NORFOLK, VIRGINIA

JOB ORDER NO. 1915109	NAVAL WEAPONS STATION, YORKTOWN VIRGINIA
DES. D.I.B. / DR. D.I. BANNETT / CHK.	PIER R-3
BR. MGR.	PROPOSED SPOIL AREA
SUBMITTED BY: DATE:	
FIRM MEMBER / PRINCIPAL	
EIC / F.P.	
DIV. DIR. M.L. CANNON	
APPROVED: DATE: SATISFACTORY TO ACTIVITY	SIZE D / CODE IDENT NO. 80091 / NAVFAC DRAWING NO. / PWC DRAWING NO. 12,148
APPROVED: DATE: 8-27-85 FOR C.O. FOR COMMANDER, NAVFAC	CONSTR. CONTR. NO.
	SCALE: GRAPHIC 1" = 100' / SPEC. / SHEET 1 OF 1

SB 218 pg 17-21

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED (S)



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE MEAN LOW WATER DATUM OF 1929,WHICH IS 1.66 FEET BELOW NATIONAL VERTICAL DATUM,1972 ADJUSTMENT.
2. SOUNDINGS AT THE FACE OF PIER WERE TAKEN BY HANDLINE,ALL OTHERS WERE TAKEN BY SURVEY DEPTH RECORDER.
3. SURVEY WAS MADE:14 JULY THRU 29 JULY,1987.

GRAPHIC SCALE

1"=100'-0" 100' 0" 100' 200' 300' 400' 500'

GRAPHICS DESIGN SYSTEM NPWC NORFOLK VA

NPWC:MYD,YKT,PR3,BFD,12954,PIER-3INBOARD

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION NORFOLK,VIRGINIA

JOB ORDER NO. 1917540 — NAVAL WEAPONS STATION YORKTOWN,VIRGINIA

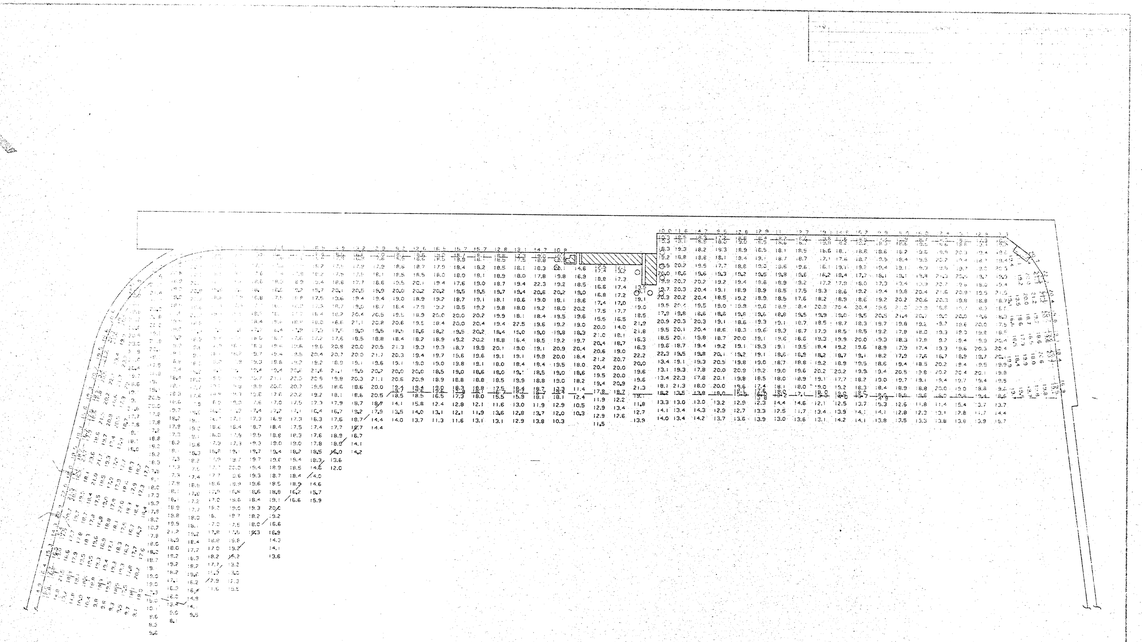
DES. DIB. JDR,RDC/DIB CHK. CLL
BR. MGR. E.M. Kazmierczak 8-14-87
SUBMITTED BY:
FIRM MEMBER / PRINCIPAL
EIC F.P.
DIV. DIR. M.L.CANNON
APPROVED: DATE:
SATISFACTORY TO ACTIVITY
APPROVED: DATE:
FOR C.O. COMMANDER NAVFAC

PIER R-3
BEFORE DREDGING

SIZE	CODE ID NO	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		12924

CONSTR. CONTR. NO. N62470-84-B-4426
SCALE:GRAPHIC SPEC. 08-84-4426 SHEET 1 OF 2

PW 12924 SH 1



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE MEAN LOW WATER DATUM OF 1983 WHICH IS 1.68 FEET BELOW NATIONAL VERTICAL DATUM 1972 ADJUSTMENT.
2. SOUNDINGS AT THE FACE OF PIER WERE TAKEN BY HYDROTECHNICAL STAFF WERE TAKEN BY SURVEY DEPTH RECORDER.
3. SURVEY WAS MADE 5 OCT. 1987 THRU 28 JAN. 1988.

GRAPHIC SCALE

1"=100'-0" 10' 0" 100' 200' 300' 400' 500'

NAVFAC-NYD YX-R-3-AFD, 1994 PIER R-3

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION, NORFOLK, VIRGINIA

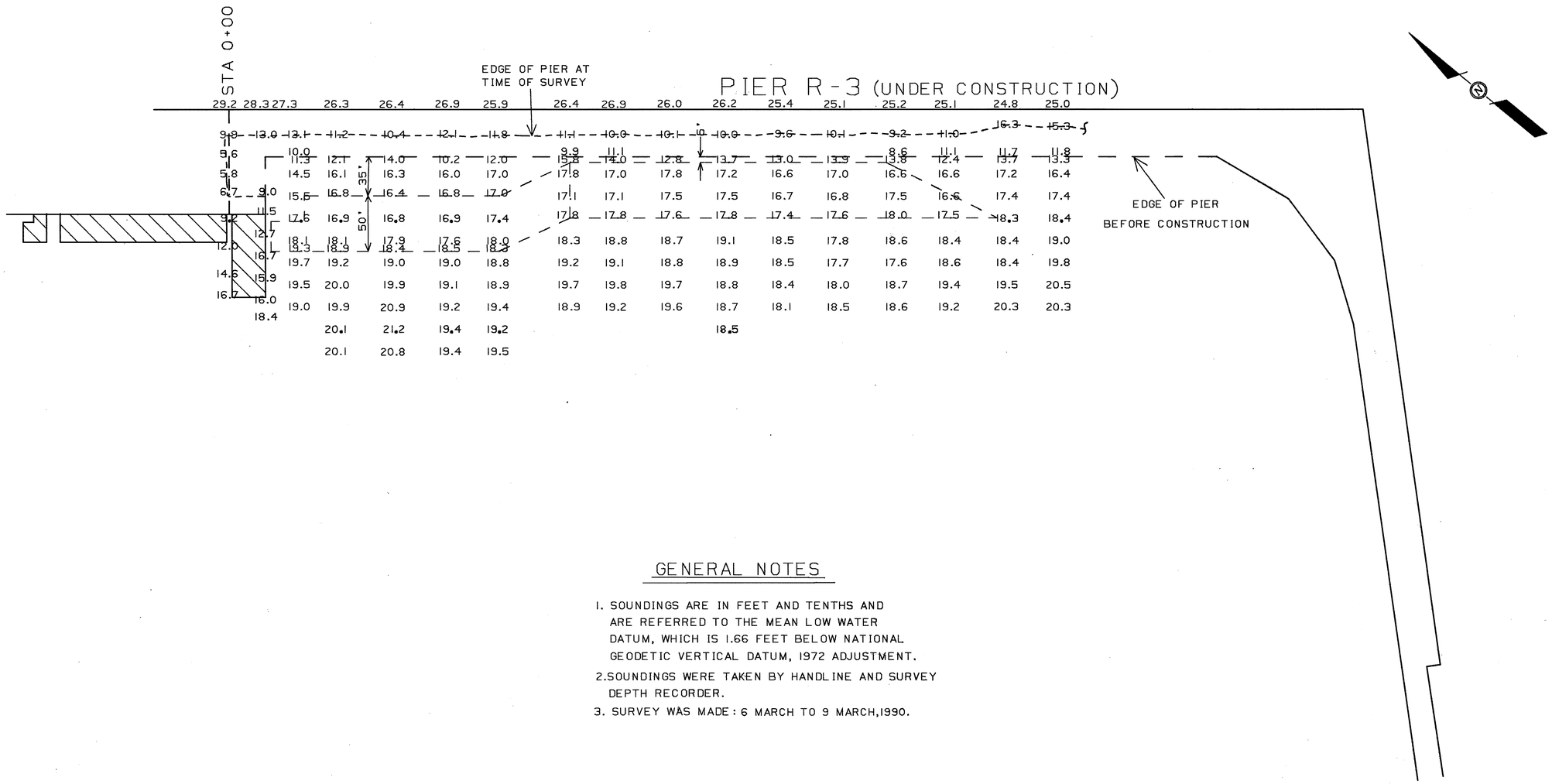
JOB ORDER NO. N61340
DESIGN SYSTEM NAVFAC
DR. MCS. J. J. ZIMMER 2-8-88
SUBMITTED BY:
FROM MCWOW / J. PATRICKAS
SUBMITTED:
DIV. DIR. M. J. LANDER
APPROVED: DATE:

PIER R-3
AFTER DREDGING

D 80091

PW 12924 A SH 2

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE MEAN LOW WATER DATUM, WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT.
2. SOUNDINGS WERE TAKEN BY HANDLINE AND SURVEY DEPTH RECORDER.
3. SURVEY WAS MADE: 6 MARCH TO 9 MARCH, 1990.

GRAPHIC SCALE

1 = 50 -0

50 0 50 100 150

GRAPHICS DESIGN SYSTEM NPWC NORFOLK VA NPWC.HYD.YKT.R-3.BFD.13774.PIERALINGMENTSURVEY

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION NORFOLK, VIRGINIA

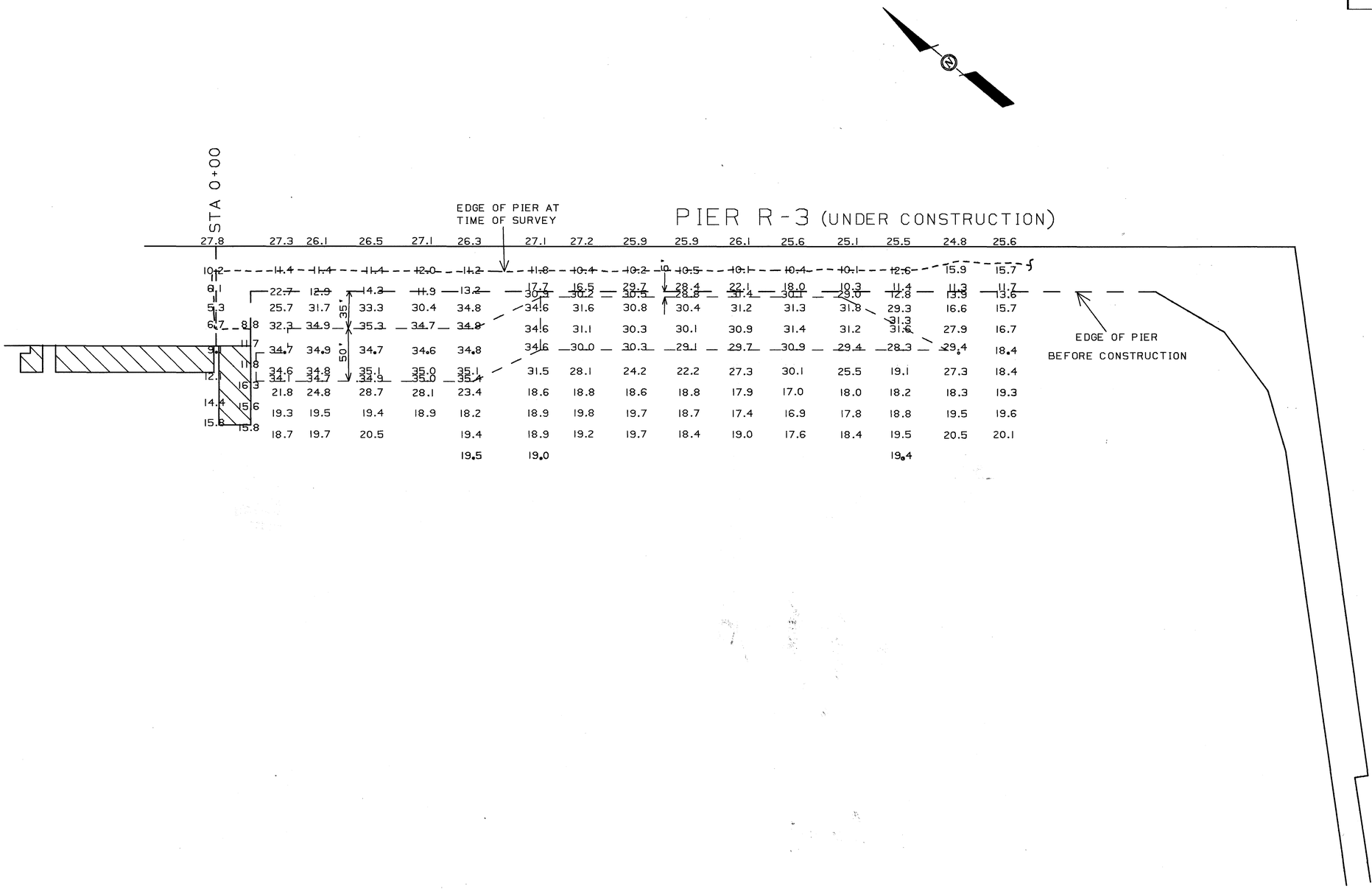
JOB ORDER NO. 1919236 — NAVAL WEAPONS STATION YORKTOWN, VA.

DES. DIB | DR. DIB | CHK. NYW
BR. MGR. R. M. Starke 4-2-90
SUBMITTED BY:
FIRM MEMBER / PRINCIPAL
EIC F.P.
DIV. DIR. M.L. CANNON
APPROVED: DATE:
SATISFACTORY TO ACTIVITY
APPROVED: DATE:
FOR C.O. COMMANDER, NAVFAC

PIER R-3
PIER MODERNIZATION
BEFORE DREDGE SURVEY

SIZE	CODE ID NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		13774
		CONSTR. CONTR. NO. N62470-85-B-5144	
SCALE: GRAPHIC		SPEC. 05-85-5144	SHEET 1 OF 2

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE MEAN LOW WATER DATUM, WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT.
2. SOUNDINGS TAKEN BY SURVEY DEPTH RECORDER ON 4-10-90 IN THE 40 FT. PROJECT DEPTH AREA WERE APPROXIMATELY 0.5 FT.DEEPER THAN THE SOUNDINGS TAKEN IN THE SAME AREA BY THE SAME METHOD ON 3-27-90 .
3. HANDLINE SOUNDINGS TAKEN IN THE 40 FT. PROJECT DEPTH AREA ON 4-10-90 WERE APPROXIMATELY 2.3 FEET DEEPER THAN THE SOUNDINGS RECORDED BY THE SURVEY DEPTH RECORDED AT THE SAME LOCATIONS AND AT THE SAME TIME.
4. HANDLINE SOUNDING TAKEN IN THE 30 FOOT PROJECT DEPTH AREA ON 3-28-90 WERE APPROXIMATELY 0.9 FEET DEEPER THAN THE SOUNDINGS RECORED BY THE SURVEY DEPTH RECORDER AT THE SAME LOCATIONS AND AT THE SAME TIME.
5. DATA COLLECTED TO 4-10-90 INDICATE THAT A LARGE VOLUME OF VERY FINE SUSPENDED MATERIAL HAS COLLECTED OR BECOME ENTRAPED WITHIN THE DREDGE AREA MOSTLY IN THE DEEPER (40 FT. PROJECT DEPTH) PORTION. RESETTLEMENT OF THIS MATERIAL IS OCCURING AT A VERY SLOW RATE.
6. SURVEY WAS MADE: 27 MARCH TO 10 APRIL,1990.

GRAPHIC SCALE

1 = 50 -0   50 0 50 100 150

GRAPHICS DESIGN SYSTEM NPWC NORFOLK VA NPWC.HYD.YKT.R-3.AFD.13774.PIERALINGMENTSURVEY

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION NORFOLK, VIRGINIA

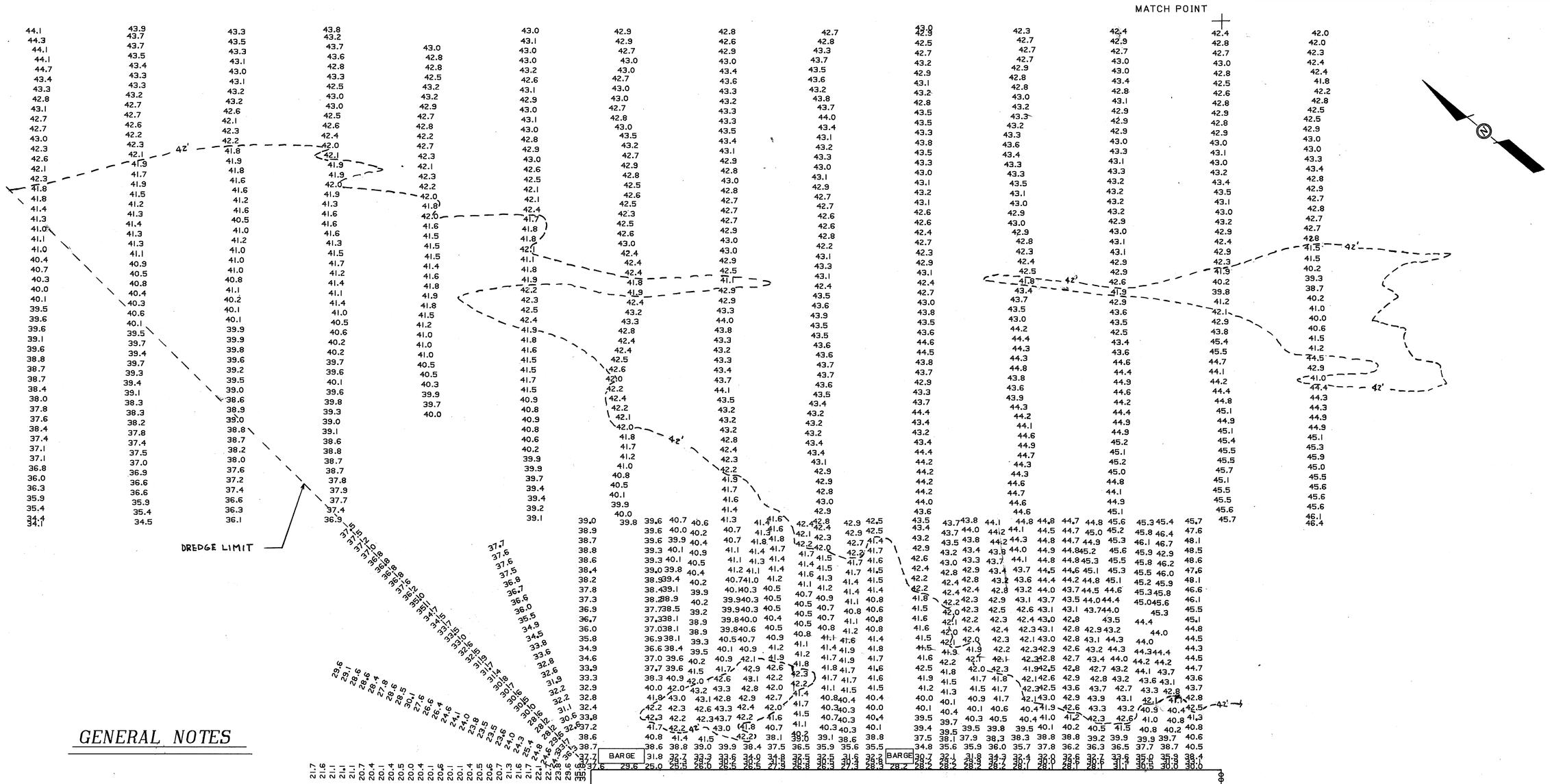
JOB ORDER NO. 1919236 | NAVAL WEAPONS STATION YORKTOWN,VA.

DES. DIB | DR. DDH | CHK. DIB
BR. MGR. [illegible] 4-26-90
SUBMITTED BY:
FIRM MEMBER / PRINCIPAL
EIC F.P.
DIV. DIR. M.L.CANNON
APPROVED: DATE:
SATISFACTORY TO ACTIVITY
APPROVED: DATE:
FOR C.O. COMMANDER, NAVFAC

PIER R-3
PIER MODERNIZATION
AFTER DREDGE SURVEY

SIZE	CODE ID NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		13774A
		CONSTR. CONTR. NO. N62470-85-B-5144	
SCALE: GRAPHIC		SPEC. 05-85-5144	SHEET 2 OF 2

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE MEAN LOW WATER DATUM, WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM,1972 ADJUSTMENT.
2. SOUNDINGS AT THE EDGE OF THE PIER WERE TAKEN BY HANDLINE. ALL OTHERS WERE TAKEN BY SURVEY DEPTH RECORDER USING TAGWIRE METHOD OF POSITIONING AND LASER BASED RANGE/AZIMUTH AUTOMATED POSITIONING SYSTEM.
3. SURVEY WAS MADE 1 NOV 1989 TO 17 JAN 1990.

GRAPHICS DESIGN SYSTEM NPWC NORFOLK VA NPWC.HYD.YKT.CON.R-3.13721.SHEET1

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION NORFOLK, VIRGINIA
NAVAL WEAPONS STATION YORKTOWN, VA.

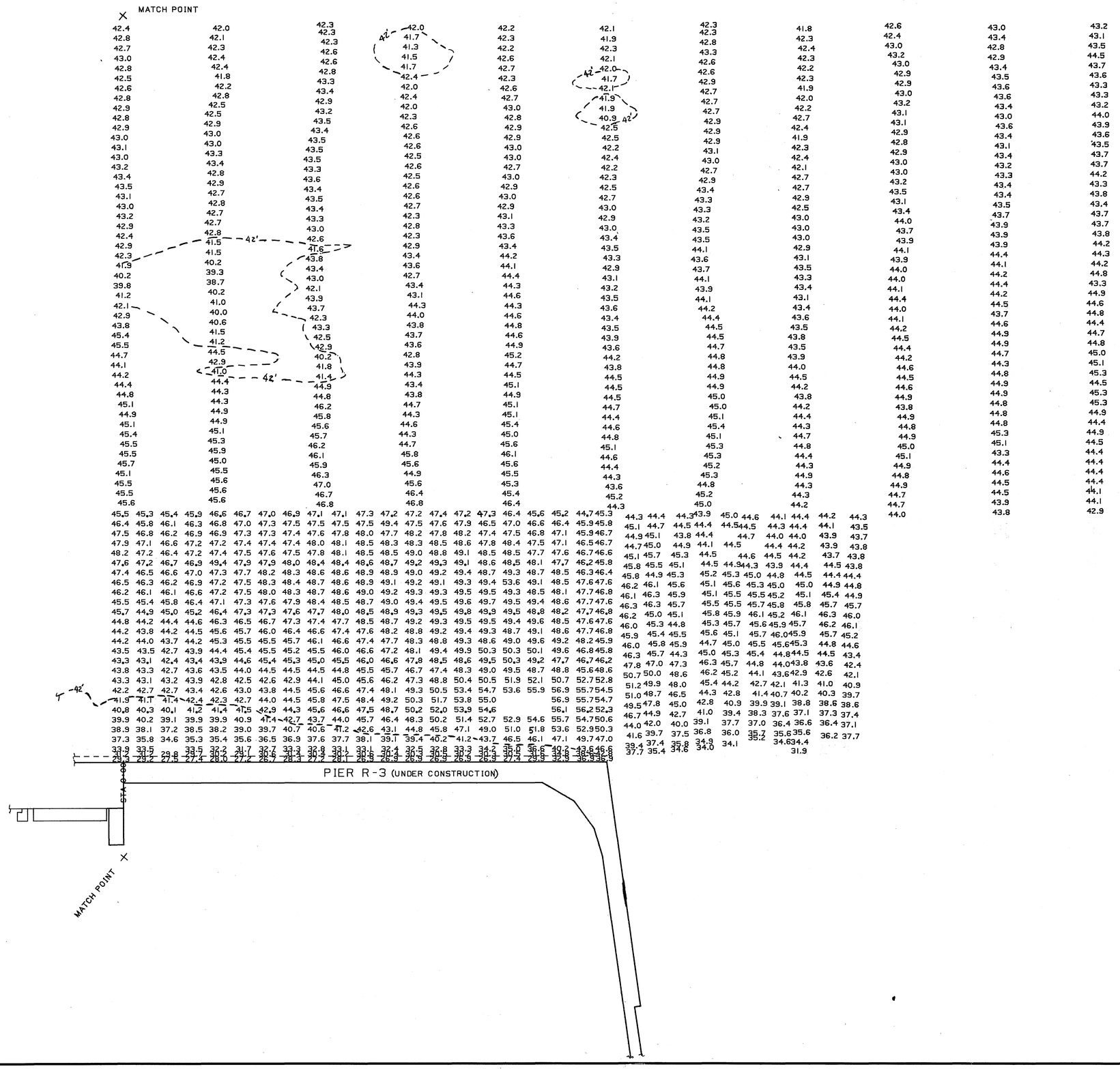
JOB ORDER NO. 1919236
DES. DIB | DR. DIB | CHK. RJ
BR. MGR. R.M. Clarke 2-7-90
SUBMITTED BY:
FIRM MEMBER / PRINCIPAL
EIC | F.P.
DIV. DIR. M.L.CANNON
APPROVED: DATE:
SATISFACTORY TO ACTIVITY
APPROVED: DATE:
FOR C.O. COMMANDER, NAVFAC

PIER R-3

CONDITION SURVEY

SIZE	CODE ID NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		13721
		CONSTR. CONTR. NO.	
SCALE: GRAPHIC		SPEC.	SHEET 1 OF 2

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE MEAN LOW WATER DATUM, WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT.
2. SOUNDINGS AT THE EDGE OF THE PIER WERE TAKEN BY HANDLINE. ALL OTHERS WERE TAKEN BY SURVEY DEPTH RECORDER USING TAGWIRE METHOD OF POSITIONING AND LASER BASED RANGE/AZIMUTH AUTOMATED POSITIONING SYSTEM.
3. SURVEY WAS MADE : 1 NOV 1989 TO 17 JAN 1990.

CADD GRAPHICS DESIGN SYSTEM NPWC NORFOLK VA

NPWC.HYD.YKT.CON.R-3.13721.SHEET2

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION NORFOLK, VIRGINIA

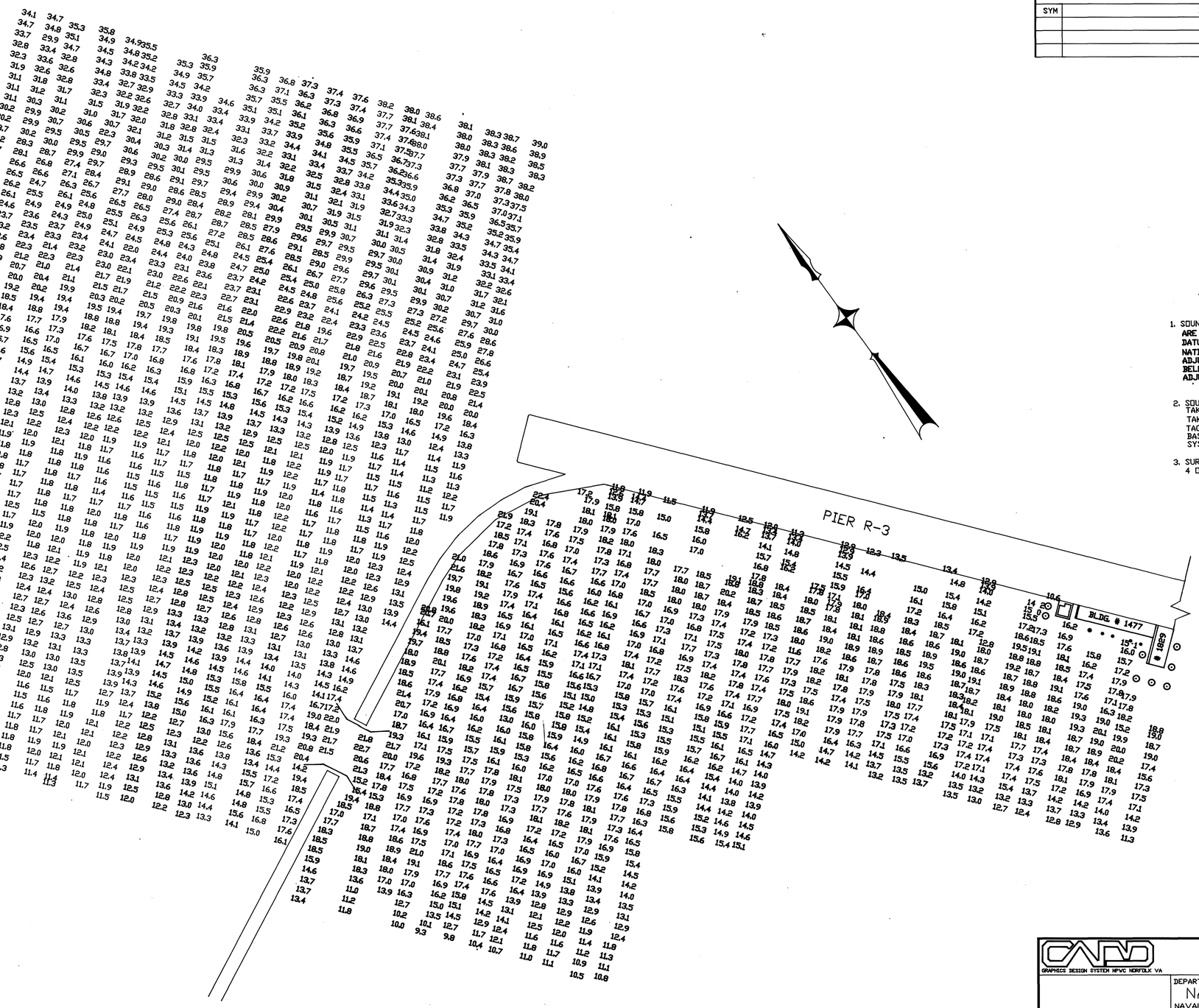
NAVAL WEAPONS STATION YORKTOWN, VA.

JOB ORDER NO. 1919236
DES. DIB | DR. DIB | CHK. CLL.
BR. MGR. R.M. Starke 2-7-90
SUBMITTED BY:
FIRM MEMBER / PRINCIPAL
EIC | F.P.
DIV. DIR. M.L.CANNON
APPROVED: DATE:
SATISFACTORY TO ACTIVITY
APPROVED: DATE:
FOR C.O. COMMANDER, NAVFAC

PIER R-3
CONDITION SURVEY

SIZE	CODE ID NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		13721A
		CONSTR. CONTR. NO.	
SCALE: GRAPHIC		SPEC.	SHEET 2 OF 2

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO STATION LOW WATER DATUM WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT. MEAN LOW WATER IS 1.25 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT.

2. SOUNDINGS AT THE EDGE OF THE PIER WERE TAKEN BY HANDLINE. ALL OTHERS WERE TAKEN BY SURVEY DEPTH RECORDER USING TAGWIRE METHOD OF POSITIONING AND LASER BASED RANGE/AZIMUTH AUTOMATED POSITIONING SYSTEM.

3. SURVEY WAS MADE 17 JULY 1991 THROUGH 4 OCTOBER 1991.

GRAPHICS DESIGN SYSTEM NPWC NORFOLK VA

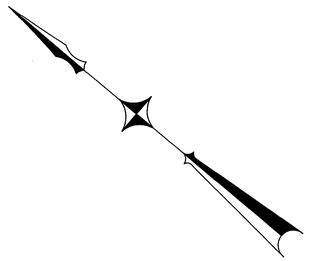
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION NORFOLK, VIRGINIA
NAVAL WEAPONS STATION YORKTOWN, VIRGINIA

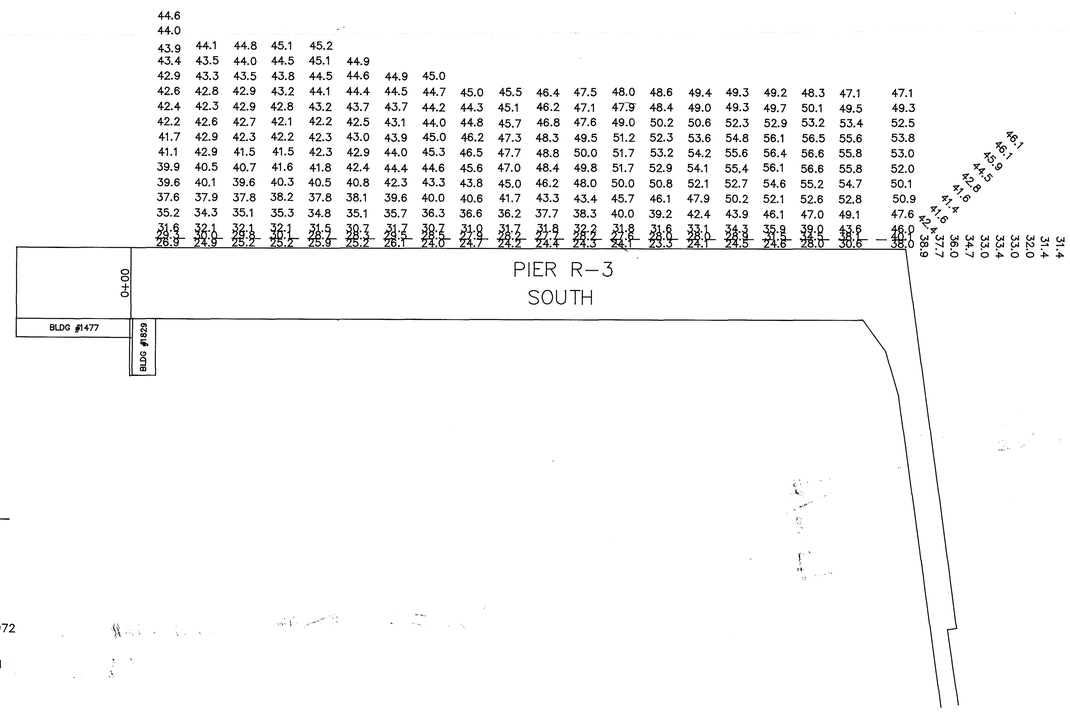
JOB ORDER NO. 1919236
DES. RAJ | DR. RAJ | CHK. RMS
BR. MGR. R.M. Nauke 10-17-91
SUBMITTED BY:
FIRM MEMBER / PRINCIPAL
EIC F.P.
DIV. DIR. R.H. IVES, ACTING
APPROVED: DATE:
SATISFACTORY TO ACTIVITY
APPROVED: DATE:
FOR C.O. COMMANDER, NAVFAC

PIER R-3
CONDITION SURVEY

SIZE	CODE ID NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		14122
		CONSTR. CONTR. NO.	
SCALE: GRAPHIC		SPEC.	SHEET 1 OF 1

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY





GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE STATION LOW WATER DATUM WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT. MEAN LOW WATER IS 1.25 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT.
2. SOUNDINGS AT THE FACE OF PIERS WERE TAKEN BY HANDLINE. ALL OTHERS WERE TAKEN BY SURVEY DEPTH RECORDER USING CONVENTIONAL TAGWIRE POSITIONING METHOD.
3. SURVEY WAS MADE 13 OCT – 26 OCT 1993.

GRAPHIC SCALE

SCALE : 1" = 100'

0' 100' 200' 300' 400' 500'

GRAPHICS DESIGN SYSTEM NPWC NORFOLK VA

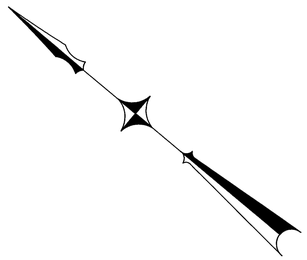
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION NORFOLK, VIRGINIA
NAVAL WEAPON STATION YORKTOWN, VIRGINIA

JOB ORDER NO. 1919236
DES. RAJ | DR. RDC | CHK. RMS
BR. MGR. R.M. Fiske 1-5-94
SUBMITTED BY:
FIRM MEMBER / PRINCIPAL
EIC F.P.
DIV. DIR. R.H. IVES, JR. PE
APPROVED: DATE:
SATISFACTORY TO ACTIVITY
APPROVED: DATE:
FOR C.O. COMMANDER, NAVFAC

NWS PIER R3 SOUTH BEFORE DREDGE SURVEY

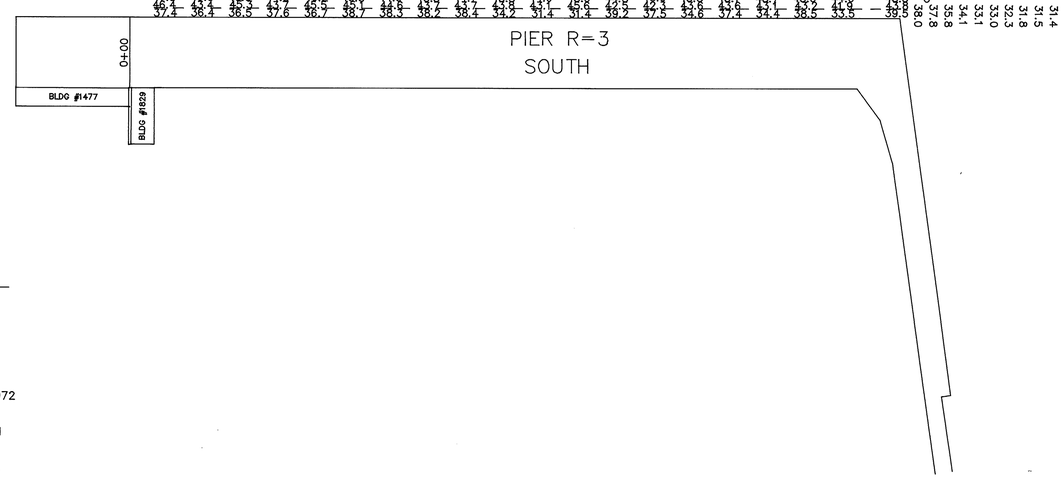
SIZE	CODE ID NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		14930
		CONSTR. CONTR. NO.	N62470-90-B-0132
SCALE: GRAPHIC		SPEC. 05-90-0132	SHEET 1 OF 6

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY



45.5	45.9	46.2	46.5	47.0	47.5															
45.7	45.4	46.0	46.1	46.7	46.8															
45.0	45.0	45.0	45.4	46.4	46.4															
47.8	44.3	44.9	45.3	45.8	45.8	46.8														
48.0	44.2	44.8	45.0	45.3	45.4	45.7														
44.0	43.7	43.8	44.4	44.7	45.0	45.1														
43.7	44.0	43.3	43.7	44.4	44.1	44.6														
43.6	43.3	42.8	42.9	43.7	44.3	44.8	44.5	44.9	45.7	46.6	47.1	48.3	48.6	49.4	49.7	49.4	48.2	47.5	46.2	
43.4	43.3	42.9	42.6	42.9	43.4	43.3	44.0	44.8	44.9	45.9	47.3	48.0	48.4	49.1	49.8	49.1	49.9	49.5	48.6	
43.8	43.9	43.3	42.8	42.8	42.7	42.9	44.6	44.9	45.4	47.2	47.6	49.1	50.1	51.1	51.6	52.6	53.1	52.3	51.5	
44.0	43.7	43.5	43.6	43.8	43.5	44.7	45.6	45.8	46.9	48.3	49.2	50.9	52.0	53.8	54.6	55.5	56.2	55.2	53.0	
44.4	44.3	43.8	44.1	44.6	45.6	45.8	45.9	45.7	46.6	47.7	49.2	51.0	52.6	54.1	55.0	56.5	56.6	55.4	52.8	
44.0	43.7	45.7	43.8	45.6	46.0	46.0	45.1	45.9	45.9	47.4	49.1	51.0	52.4	54.1	54.7	55.2	55.8	55.9	51.7	
44.2	43.5	44.5	43.4	44.7	44.1	44.6	43.7	44.7	46.3	46.1	47.3	49.1	50.9	51.6	52.6	54.4	54.7	54.3	50.3	
43.9	44.0	43.5	43.3	44.7	44.7	43.3	43.2	45.5	45.2	45.5	45.1	45.6	45.2	47.6	50.1	49.7	51.2	51.5	50.4	
46.9	46.1	45.9	45.3	45.7	46.3	45.7	45.0	44.3	44.3	45.3	44.0	43.8	45.6	46.1	45.2	44.7	46.8	48.6	46.3	
47.3	46.3	46.5	44.8	46.2	45.8	44.8	45.3	44.7	45.8	44.9	45.6	44.8	45.6	45.8	45.1	45.7	45.6	44.6	45.3	
46.4	43.4	45.3	43.7	46.5	45.1	44.8	43.7	43.7	43.8	43.1	45.6	42.8	42.3	43.6	43.6	43.1	43.2	41.9	42.8	
37.4	36.4	36.5	37.6	36.7	38.7	38.3	38.2	38.4	34.2	31.4	31.4	39.2	37.5	34.6	37.4	34.4	38.5	33.5	39.5	

46.7 45.8 45.7 43.1 43.1 41.9 41.2 41.6 42.5 38.0 37.8 35.8 34.1 33.1 33.0 32.3 31.8 31.5 31.4



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE STATION LOW WATER DATUM WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT. MEAN LOW WATER IS 1.25 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT.
2. SOUNDINGS AT THE FACE OF PIERS WERE TAKEN BY HANDLINE. ALL OTHERS WERE TAKEN BY SURVEY DEPTH RECORDER USING CONVENTIONAL TAGWIRE POSITIONING METHOD.
3. SURVEY WAS MADE: DEC. 2 thru 8,1993.

GRAPHIC SCALE

SCALE : 1" = 100'

0' 100' 200' 300' 400' 500'

GRAPHICS DESIGN SYSTEM NPWC NORFOLK VA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION NORFOLK, VIRGINIA

JOB ORDER NO. 1919236
DES. RAJ | DR. RDC | CHK. RMS
BR. MGR. Kim Stacks 1-5-94
SUBMITTED BY:
FIRM MEMBER / PRINCIPAL
EIC | F.P.
DIV. DIR. R.H. IVES, JR. PE
APPROVED: DATE:
SATISFACTORY TO ACTIVITY
APPROVED: DATE:
FOR C.O. COMMANDER, NAVFAC

NAVAL WEAPON STATION YORKTOWN, VIRGINIA

NWS PIER R3 SOUTH AFTER DREDGE SURVEY

SIZE	CODE ID NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		14930A
		CONSTR. CONTR. NO. N62470-90-B-0132	
SCALE: GRAPHIC		SPEC. 05-90-0132	SHEET 2 OF 6

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY

GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE STATION LOW WATER DATUM WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT. MEAN LOW WATER IS 1.25 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT.
2. SOUNDINGS AT THE FACE OF PIERS WERE TAKEN BY HANDLINE. ALL OTHERS WERE TAKEN BY SURVEY DEPTH RECORDER USING CONVENTIONAL TAGWIRE POSITIONING METHOD.
3. SURVEY WAS MADE DEC 2 THRU 17, 1993.

GRAPHIC SCALE

SCALE : 1" = 100'

0' 100' 200' 300' 400' 500'

GRAPHICS DESIGN SYSTEM NPWC NORFOLK VA

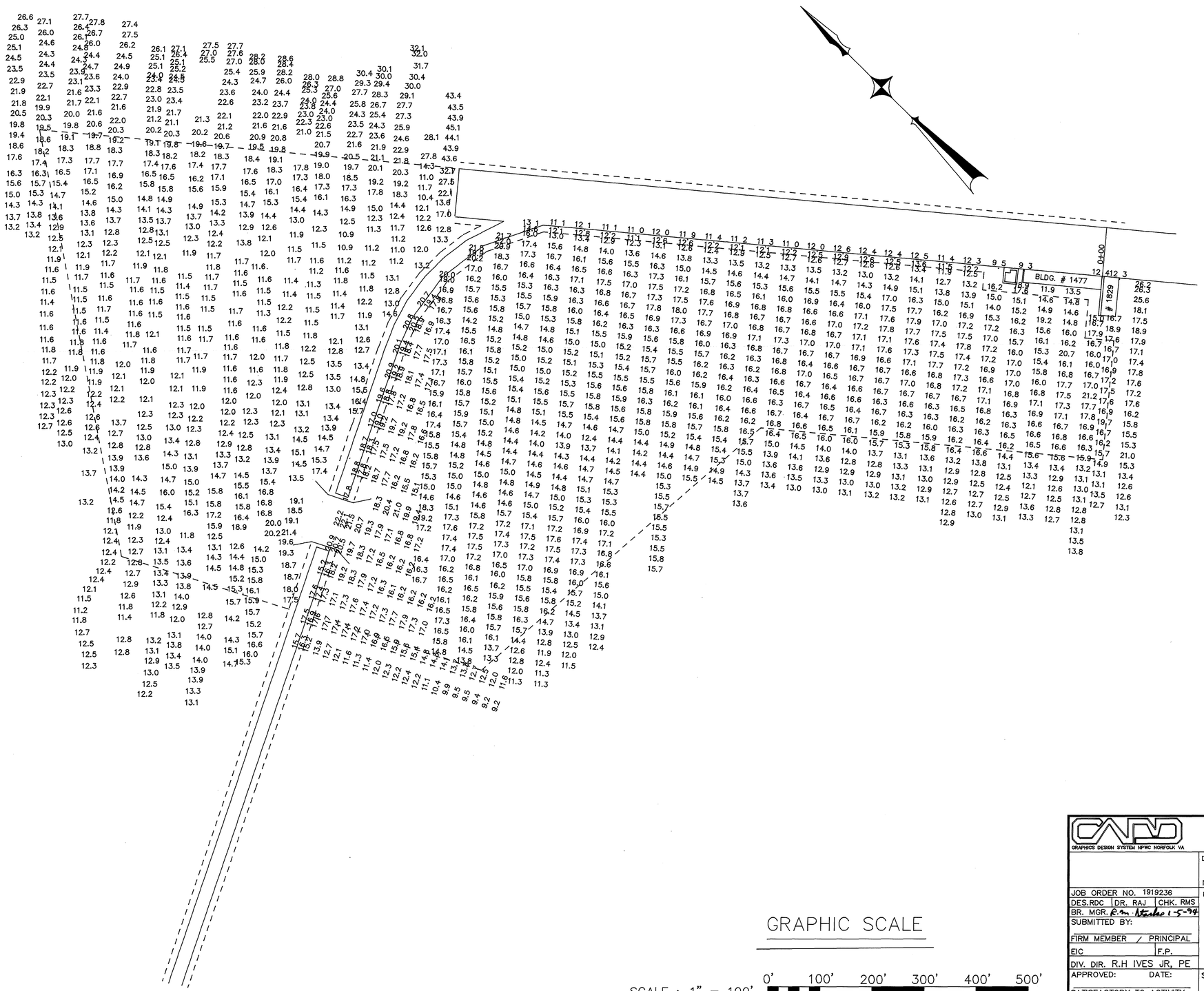
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION NORFOLK, VIRGINIA
NAVAL WEAPON STATION YORKTOWN, VIRGINIA

NWS PIER R3 NORTH AFTER DREDGE SURVEY

JOB ORDER NO. 1919236
DES. RAJ | DR. RDC | CHK. RMS
BR. MGR. R.M. Stake 1-5-94
SUBMITTED BY:
FIRM MEMBER / PRINCIPAL
EIC | F.P.
DIV. DIR. R.H. IVES, JR. PE
APPROVED: DATE:
SATISFACTORY TO ACTIVITY
APPROVED: DATE:
FOR C.O. COMMANDER, NAVFAC

SIZE	CODE ID NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		14930C
		CONSTR. CONTR. NO. N62470-90-B-0132	
SCALE: GRAPHIC		SPEC. 05-90-0132	SHEET 4 OF 6

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO STATION LOW WATER DATUM WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT. MEAN LOW WATER IS 1.25 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT.
2. SOUNDINGS AT THE FACE OF PIERS WERE TAKEN BY HANDLINE. ALL OTHERS WERE TAKEN BY SURVEY DEPTH RECORDER USING CONVENTIONAL TAGWIRE POSITIONING METHOD.
3. SURVEY WAS MADE NOV 11–30 1993.

GRAPHIC SCALE

SCALE : 1" = 100'

0' 100' 200' 300' 400' 500'

GRAPHICS DESIGN SYSTEM NPWC NORFOLK VA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION NORFOLK, VIRGINIA
NAVAL WEAPON STATION YORKTOWN, VIRGINA

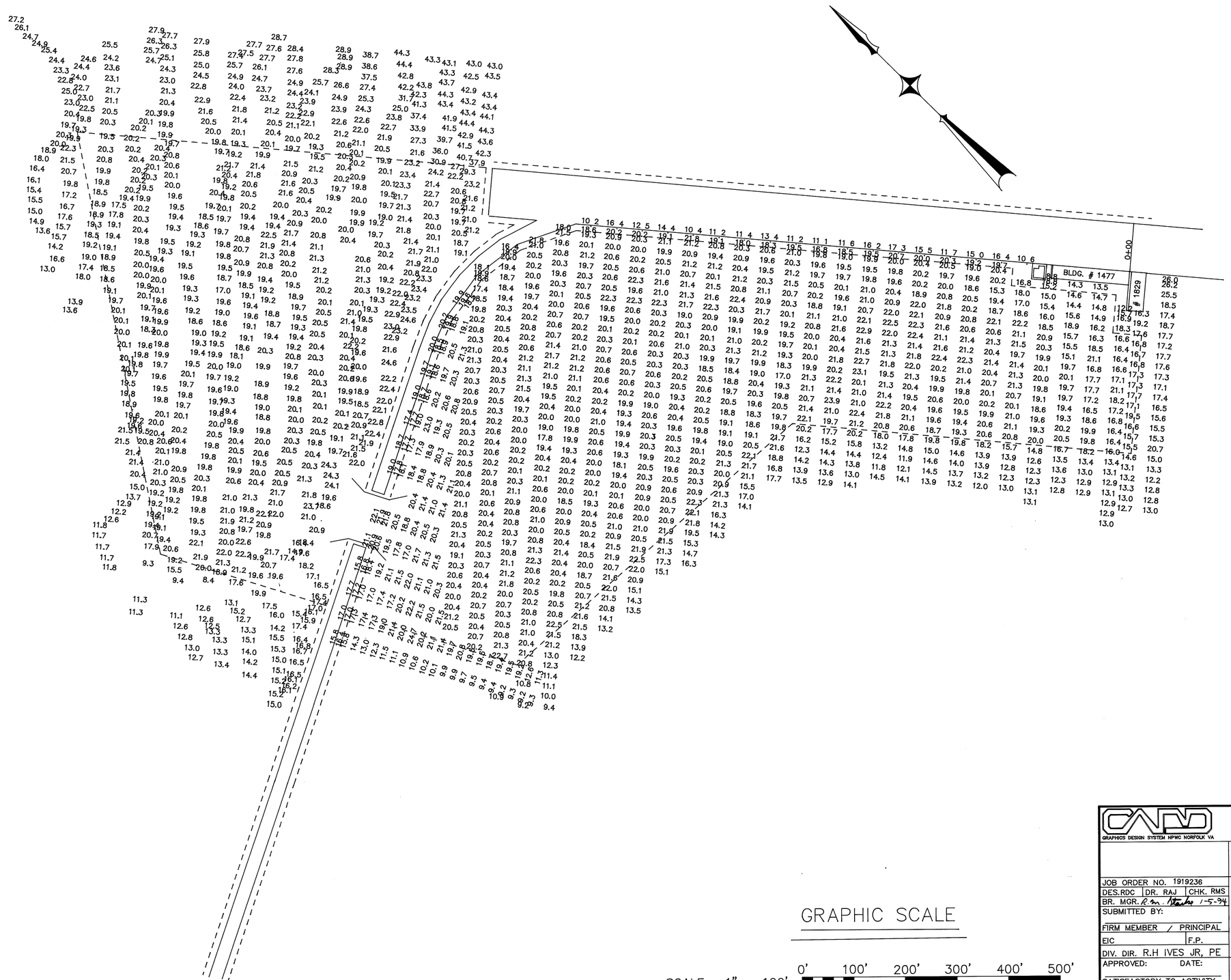
JOB ORDER NO. 1919236
DES.RDC | DR. RAJ | CHK. RMS
BR. MGR. R.M. Atzeho 1-5-94
SUBMITTED BY:
FIRM MEMBER / PRINCIPAL
EIC | F.P.
DIV. DIR. R.H IVES JR, PE
APPROVED: DATE:
SATISFACTORY TO ACTIVITY
APPROVED: DATE:
FOR C.O. COMMANDER, NAVFAC

NWS PIER R3 AREA C&D
BEFORE DREDGE SURVEY

SIZE	CODE ID NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		14930D

CONSTR. CONTR. NO. N62470–90–B–0132
SCALE: GRAPHIC | SPEC. 05–90–0132 | SHEET 5 OF 6

REVISIONS				
SYM	DESCRIPTION	DATE	SATISFACTORY	APPROVED BY



GENERAL NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO STATION LOW WATER DATUM WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT. MEAN LOW WATER IS 1.25 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM, 1972 ADJUSTMENT.
2. SOUNDINGS AT THE FACE OF PIERS WERE TAKEN BY HANDLINE. ALL OTHERS WERE TAKEN BY SURVEY DEPTH RECORDER USING CONVENTIONAL TAGWIRE POSITIONING METHOD.
3. SURVEY WAS MADE 23 NOV 1993 THRU 3 JAN 1994.

GRAPHIC SCALE

SCALE : 1" = 100'

0' 100' 200' 300' 400' 500'

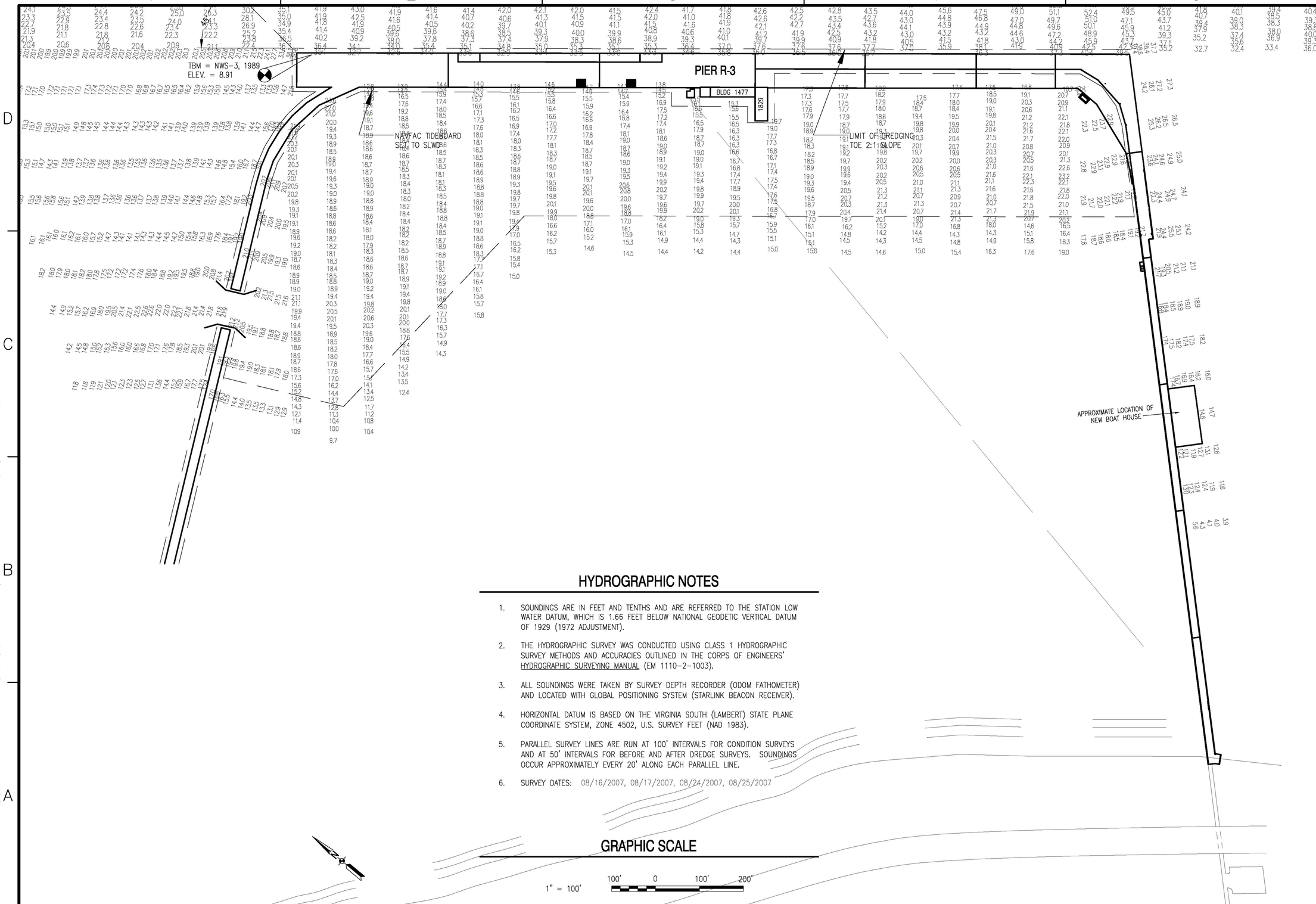
GRAPHICS DESIGN SYSTEM NPWC NORFOLK VA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
NAVY PUBLIC WORKS CENTER
NAVAL STATION NORFOLK, VIRGINIA
NAVAL WEAPON STATION YORKTOWN, VIRGINA

JOB ORDER NO. 1919236
DES.RDC | DR. RAJ | CHK. RMS
BR. MGR. R.m. Stahe 1-5-94
SUBMITTED BY:
FIRM MEMBER / PRINCIPAL
EIC | F.P.
DIV. DIR. R.H IVES JR, PE
APPROVED: DATE:
SATISFACTORY TO ACTIVITY
APPROVED: DATE:
FOR C.O. COMMANDER, NAVFAC

NWS PIER R3 AREA C&D AFTER DREDGE SURVEY

SIZE	CODE ID NO.	NAVFAC DRAWING NO.	PWC DRAWING NO.
D	80091		14930E
		CONSTR. CONTR. NO. N62470-90-B-0132	
SCALE: GRAPHIC		SPEC. 05-90-0132	SHEET 6 OF 6



HYDROGRAPHIC NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE STATION LOW WATER DATUM, WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM OF 1929 (1972 ADJUSTMENT).
2. THE HYDROGRAPHIC SURVEY WAS CONDUCTED USING CLASS 1 HYDROGRAPHIC SURVEY METHODS AND ACCURACIES OUTLINED IN THE CORPS OF ENGINEERS' HYDROGRAPHIC SURVEYING MANUAL (EM 1110-2-1003).
3. ALL SOUNDINGS WERE TAKEN BY SURVEY DEPTH RECORDER (ODOM FATHOMETER) AND LOCATED WITH GLOBAL POSITIONING SYSTEM (STARLINK BEACON RECEIVER).
4. HORIZONTAL DATUM IS BASED ON THE VIRGINIA SOUTH (LAMBERT) STATE PLANE COORDINATE SYSTEM, ZONE 4502, U.S. SURVEY FEET (NAD 1983).
5. PARALLEL SURVEY LINES ARE RUN AT 100' INTERVALS FOR CONDITION SURVEYS AND AT 50' INTERVALS FOR BEFORE AND AFTER DREDGE SURVEYS. SOUNDINGS OCCUR APPROXIMATELY EVERY 20' ALONG EACH PARALLEL LINE.
6. SURVEY DATES: 08/16/2007, 08/17/2007, 08/24/2007, 08/25/2007

GRAPHIC SCALE

1" = 100'

100' 0 100' 200'

REVDATE	DESCRIPTION	APPR

NAVFAC

SEAL

SUBMITTED BY
FIRM MEMBER DATE
APPROVED
ACTMTY - SATISFACTORY TO DATE
APPROVED
FOR COMMANDER NAVFAC DATE

DES	TLB	DR	TLB
CHK	JRA	QC	

DESIGNER
REVIEWED BY
QC
AIC/EIC
FIRE PROTECTION
BRANCH MANAGER R. DALEY, P.E.
DESIGN DIRECTOR R. DALEY, P.E.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
CI CORE (HYDRO) / PWD NORFOLK

NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL WEAPONS STATION
YORKTOWN, VA
FY2007 CONDITION SURVEY
AT PIER R-3

CONDITION HYDROGRAPHIC SURVEY

CODE ID. NO. 80091 SIZE D
SCALE: AS NOTED
MAXIMO NO. 3LVDQO
JOB ORDER NO.
SPEC. NO.
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12,000,032
SHEET 2 OF 2
V-102

DRAWFORM REVISION: 01 AUGUST 2004

FILE NAME: P:\Yorktown\Dredging\3LVDQO_FY-07_NWS_Cond\Phase B - Design\Drawings\3LVDQO_Cond_NWS#3.dwg LAYOUT NAME: INNER PLOTTED: Thursday, August 30, 2007 - 12:43pm

GRAPHIC SCALE

1" = 120' 120' 0 120' 240'

CONDITION SURVEY

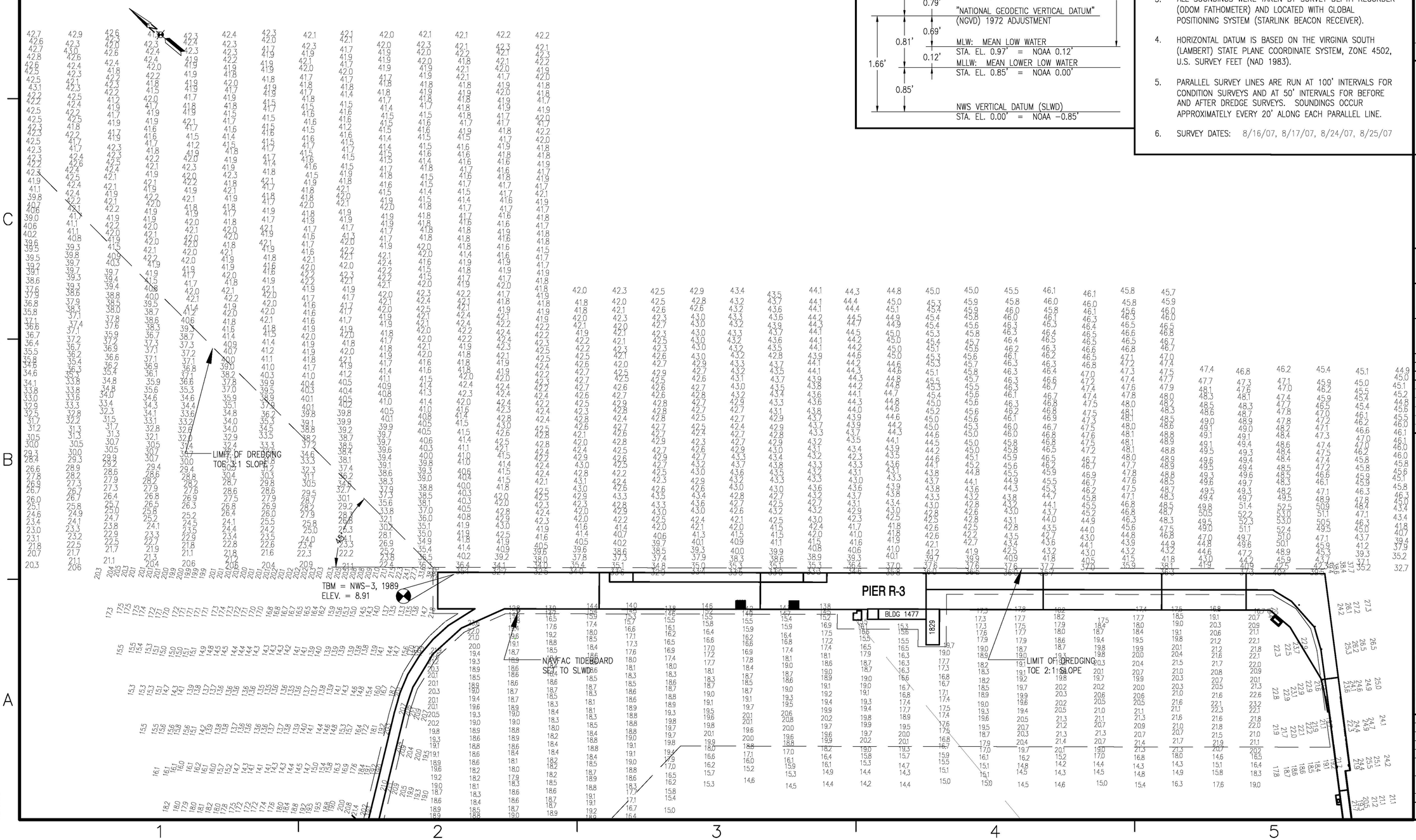


DIAGRAM OF DATUM PLANE *

NAVAL WEAPONS STATION
YORKTOWN, VIRGINIA

VERTICAL CONTROL
[* 2001 EPOCH]

MHHW: MEAN HIGHER HIGH WATER	STA. EL. 3.54' = NOAA 2.69'
0.20'	
MHW: MEAN HIGH WATER	STA. EL. 3.34' = NOAA 2.49'
0.89'	
1.68'	"NORTH AMERICAN VERTICAL DATUM" (NAVD 88)
2.37'	
0.79'	
"NATIONAL GEODETIC VERTICAL DATUM" (NGVD) 1972 ADJUSTMENT	
0.69'	
0.81'	MLW: MEAN LOW WATER
	STA. EL. 0.97' = NOAA 0.12'
0.12'	
1.66'	MLLW: MEAN LOWER LOW WATER
	STA. EL. 0.85' = NOAA 0.00'
0.85'	
NWS VERTICAL DATUM (SLWD)	STA. EL. 0.00' = NOAA −0.85'

HYDROGRAPHIC NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE STATION LOW WATER DATUM, WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM OF 1929 (1972 ADJUSTMENT).
2. THE HYDROGRAPHIC SURVEY WAS CONDUCTED USING CLASS 1 HYDROGRAPHIC SURVEY METHODS AND ACCURACIES OUTLINED IN THE CORPS OF ENGINEERS' HYDROGRAPHIC SURVEYING MANUAL (EM 1110–2–1003).
3. ALL SOUNDINGS WERE TAKEN BY SURVEY DEPTH RECORDER (ODOM FATHOMETER) AND LOCATED WITH GLOBAL POSITIONING SYSTEM (STARLINK BEACON RECEIVER).
4. HORIZONTAL DATUM IS BASED ON THE VIRGINIA SOUTH (LAMBERT) STATE PLANE COORDINATE SYSTEM, ZONE 4502, U.S. SURVEY FEET (NAD 1983).
5. PARALLEL SURVEY LINES ARE RUN AT 100' INTERVALS FOR CONDITION SURVEYS AND AT 50' INTERVALS FOR BEFORE AND AFTER DREDGE SURVEYS. SOUNDINGS OCCUR APPROXIMATELY EVERY 20' ALONG EACH PARALLEL LINE.
6. SURVEY DATES: 8/16/07, 8/17/07, 8/24/07, 8/25/07

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

SUBMITTED BY
FIRM MEMBER DATE
APPROVED
ACTIVITY – SATISFACTORY TO DATE
APPROVED
FOR COMMANDER NAVFAC DATE

DES	JRA	DR	TLB
CHK	TLB	QC	

DESIGNER
REVIEWED BY
QC
AIC/EIC
FIRE PROTECTION
BRANCH MANAGER: R. DALEY, P.E.
DESIGN DIRECTOR: R. DALEY, P.E.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
CI CODE: (HYDRO) / PWD NORFOLK

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL STATION – NORFOLK, VIRGINIA

NAVAL WEAPONS STATION
YORKTOWN, VA
FY2007 CONDITION SURVEY
AT PIER R-3

CONDITION HYDROGRAPHIC SURVEY

CODE ID. NO. 80091 SIZE D
SCALE: AS NOTED
MAXIMO NO. 3LVDQ0
JOB ORDER NO.
SPEC. NO.
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12,000,031
SHEET 1 OF 2
V-101

DRAWFORM REVISION: 01 AUGUST 2004

REV/DATE FILE NAME: P:\Yorktown\Dredging\3LVDQ0_FY-07_NWS_Cond\Phase B – Design\Drawings\3LVDQ0_Cond_NWSP3.dwg LAYOUT NAME: OUTER PLOTTED: Thursday, August 30, 2007 – 12:43pm

GRAPHIC SCALE

1" = 120' 120' 0 120' 240'

CONDITION SURVEY

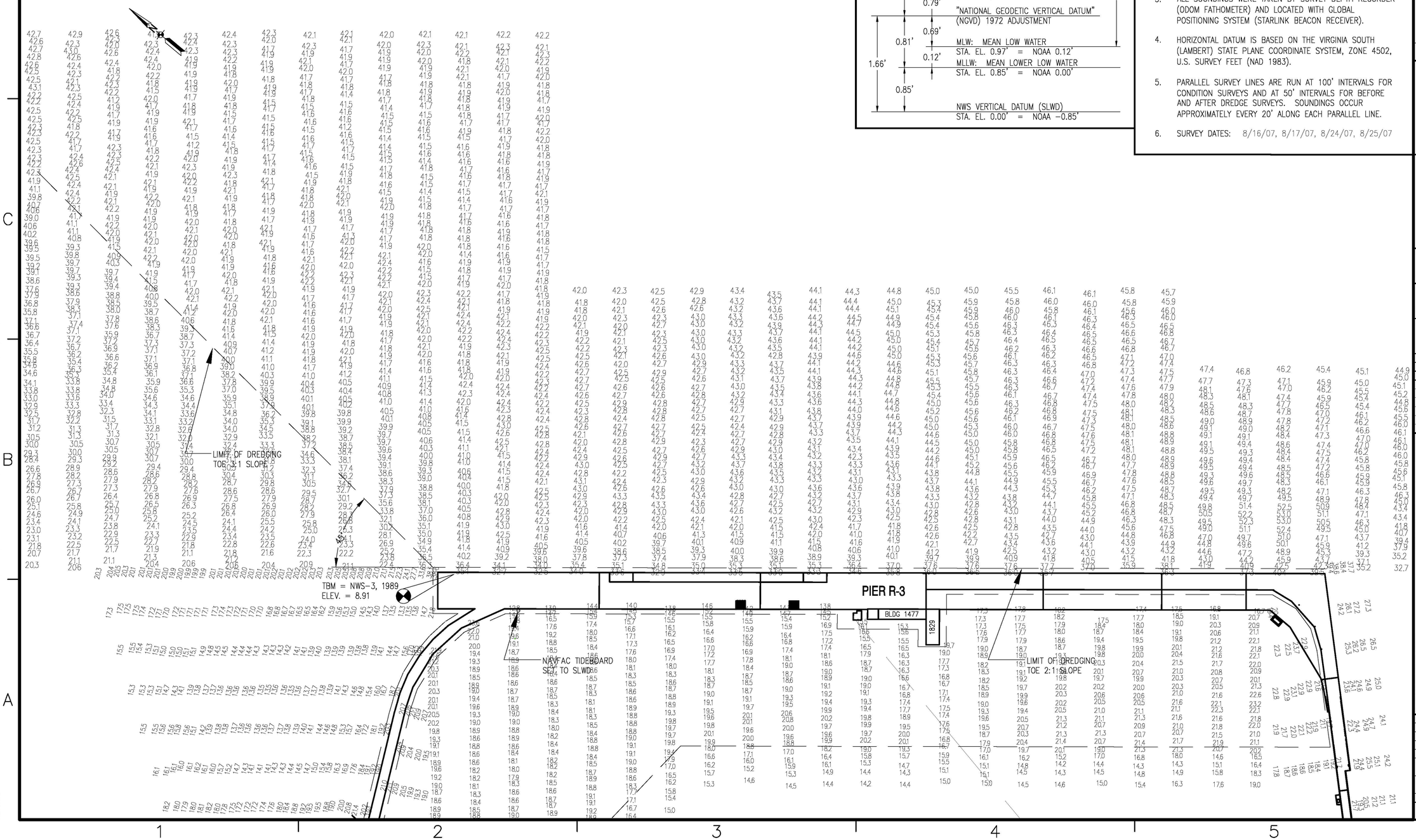


DIAGRAM OF DATUM PLANE *

NAVAL WEAPONS STATION
YORKTOWN, VIRGINIA

VERTICAL CONTROL
[* 2001 EPOCH]

MHHW: MEAN HIGHER HIGH WATER	STA. EL. 3.54' = NOAA 2.69'
0.20'	
MHW: MEAN HIGH WATER	STA. EL. 3.34' = NOAA 2.49'
0.89'	
1.68'	"NORTH AMERICAN VERTICAL DATUM" (NAVD 88)
2.37'	
0.79'	
"NATIONAL GEODETIC VERTICAL DATUM" (NGVD) 1972 ADJUSTMENT	
0.69'	
0.81'	MLW: MEAN LOW WATER
	STA. EL. 0.97' = NOAA 0.12'
0.12'	
1.66'	MLLW: MEAN LOWER LOW WATER
	STA. EL. 0.85' = NOAA 0.00'
0.85'	
NWS VERTICAL DATUM (SLWD)	STA. EL. 0.00' = NOAA −0.85'

HYDROGRAPHIC NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE STATION LOW WATER DATUM, WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM OF 1929 (1972 ADJUSTMENT).
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6. SURVEY DATES: 8/16/07, 8/17/07, 8/24/07, 8/25/07

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

SUBMITTED BY
FIRM MEMBER DATE
APPROVED
ACTIVITY – SATISFACTORY TO DATE
APPROVED
FOR COMMANDER NAVFAC DATE

DES	JRA	DR	TLB
CHK	TLB	QC	

DESIGNER
REVIEWED BY
QC
AIC/EIC
FIRE PROTECTION
BRANCH MANAGER: R. DALEY, P.E.
DESIGN DIRECTOR: R. DALEY, P.E.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
CI CODE: (HYDRO) / PWD NORFOLK

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL STATION – NORFOLK, VIRGINIA

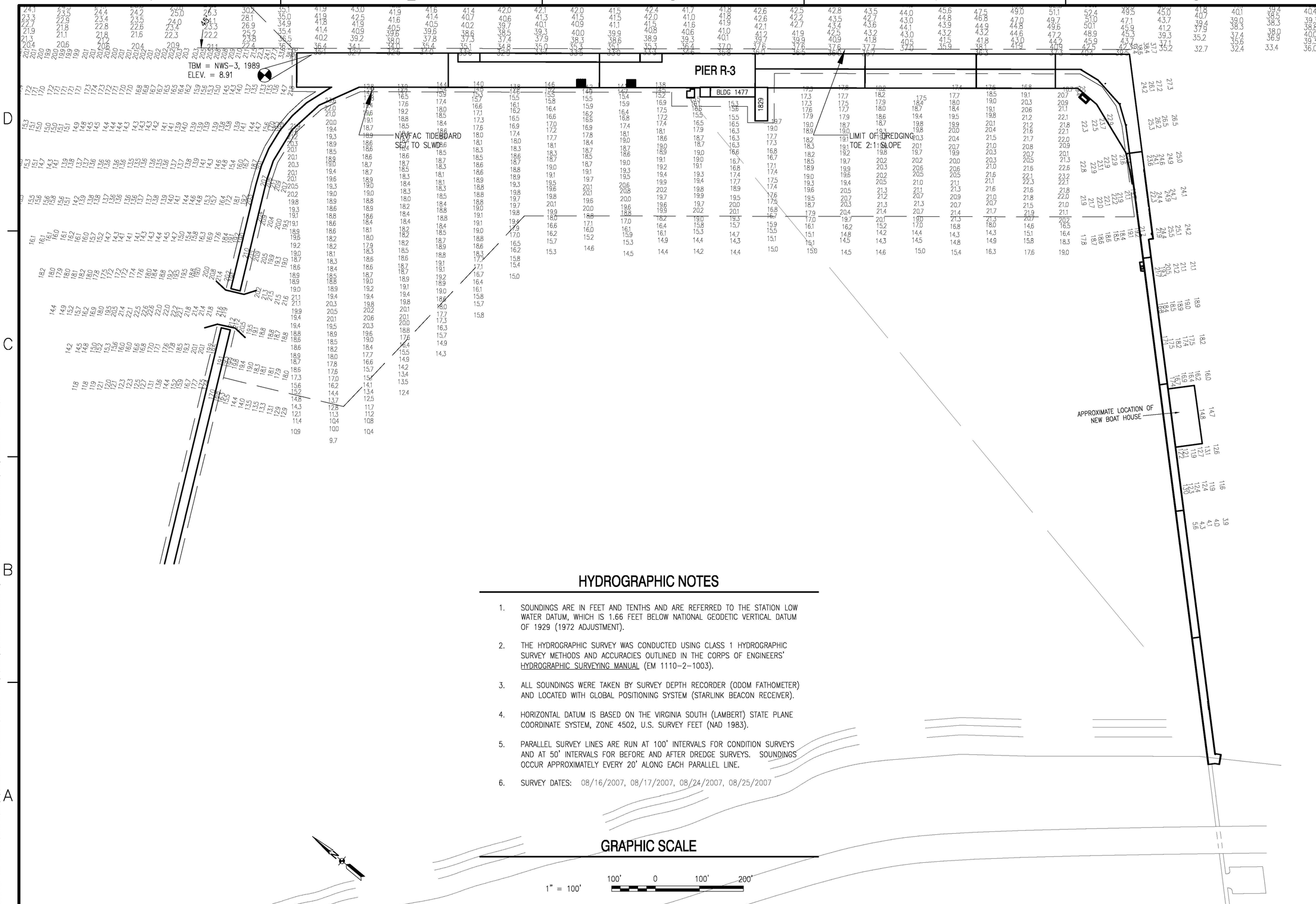
NAVAL WEAPONS STATION
YORKTOWN, VA
FY2007 CONDITION SURVEY
AT PIER R-3

CONDITION HYDROGRAPHIC SURVEY

CODE ID. NO. 80091 SIZE D
SCALE: AS NOTED
MAXIMO NO. 3LVDQ0
JOB ORDER NO.
SPEC. NO.
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 12,000,031
SHEET 1 OF 2
V-101

DRAWFORM REVISION: 01 AUGUST 2004

REV/DATE FILE NAME: P:\Yorktown\Dredging\3LVDQ0_FY-07_NWS_Cond\Phase B – Design\Drawings\3LVDQ0_Cond_NWSP3.dwg LAYOUT NAME: OUTER PLOTTED: Thursday, August 30, 2007 – 12:43pm



HYDROGRAPHIC NOTES

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3. ALL SOUNDINGS WERE TAKEN BY SURVEY DEPTH RECORDER (ODOM FATHOMETER) AND LOCATED WITH GLOBAL POSITIONING SYSTEM (STARLINK BEACON RECEIVER).
4. HORIZONTAL DATUM IS BASED ON THE VIRGINIA SOUTH (LAMBERT) STATE PLANE COORDINATE SYSTEM, ZONE 4502, U.S. SURVEY FEET (NAD 1983).
5. PARALLEL SURVEY LINES ARE RUN AT 100' INTERVALS FOR CONDITION SURVEYS AND AT 50' INTERVALS FOR BEFORE AND AFTER DREDGE SURVEYS. SOUNDINGS OCCUR APPROXIMATELY EVERY 20' ALONG EACH PARALLEL LINE.
6. SURVEY DATES: 08/16/2007, 08/17/2007, 08/24/2007, 08/25/2007

GRAPHIC SCALE

1" = 100'

100' 0 100' 200'

REVDATE	DESCRIPTION	APPR

NAVFAC

SEAL

SUBMITTED BY
FIRM MEMBER DATE
APPROVED
ACTMTY - SATISFACTORY TO DATE
APPROVED
FOR COMMANDER NAVFAC DATE

DES	TLB	DR	TLB
CHK	JRA	QC	

DESIGNER
REVIEWED BY
QC
AIC/EIC
FIRE PROTECTION
BRANCH MANAGER R. DALEY, P.E.
DESIGN DIRECTOR R. DALEY, P.E.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
CI CORE (HYDRO) / PWD NORFOLK

NAVAL FACILITIES ENGINEERING COMMAND - MID-ATLANTIC
NAVAL STATION - NORFOLK, VIRGINIA

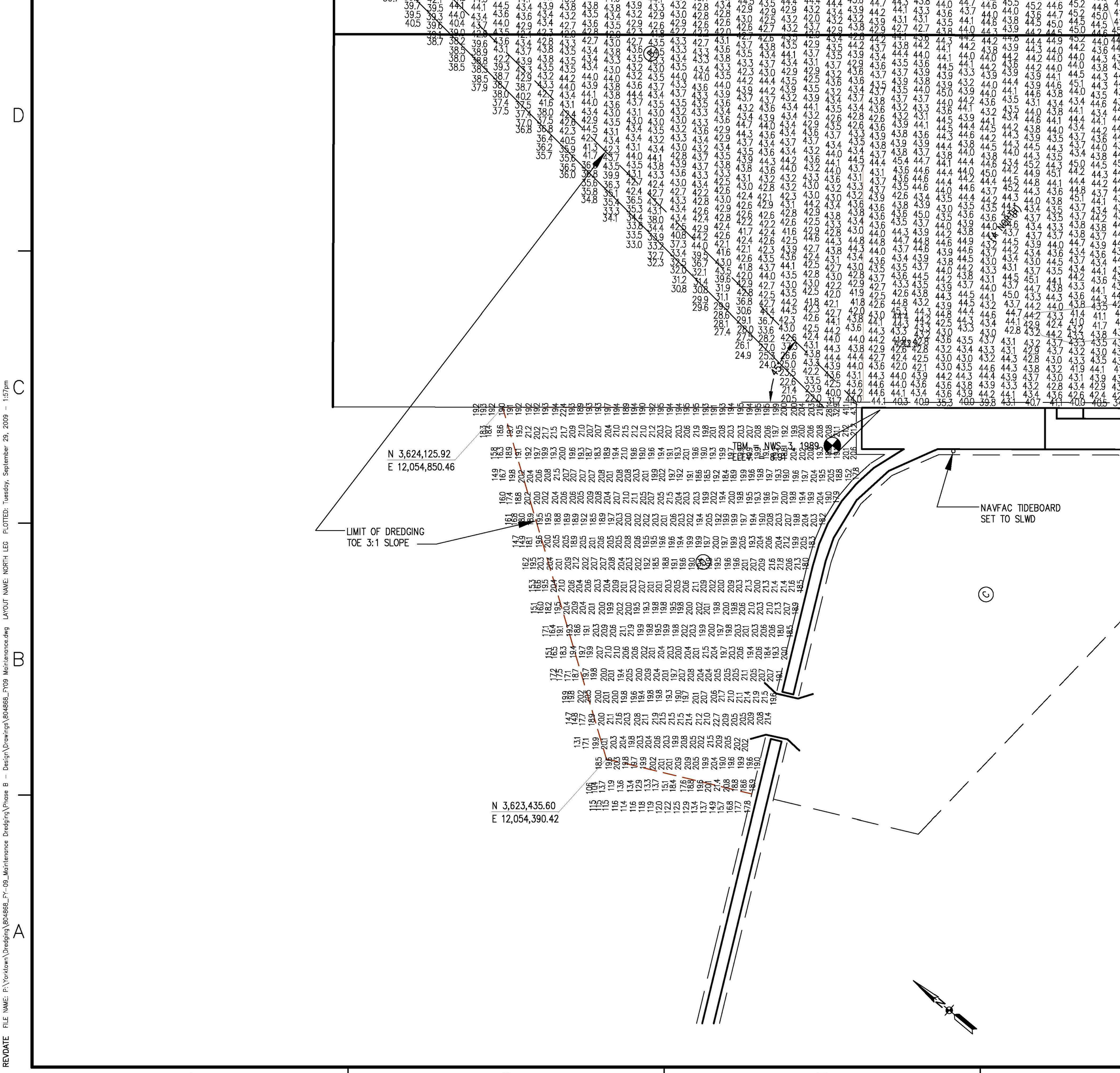
NAVAL WEAPONS STATION
YORKTOWN, VA
FY2007 CONDITION SURVEY
AT PIER R-3

CONDITION HYDROGRAPHIC SURVEY

CODE ID. NO. 80091 SIZE D
SCALE: AS NOTED
MAXIMO NO. 3LVDQO
JOB ORDER NO.
SPEC. NO.
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
12,000,032
SHEET 2 OF 2
V-102

DRAWFORM REVISION: 01 AUGUST 2004

FILE NAME: P:\Yorktown\Dredging\3LVDQO_FY-07_NWS_Cond\Phase B - Design\Drawings\3LVDQO_Cond_NWS#3.dwg LAYOUT NAME: INNER PLOTTED: Thursday, August 30, 2007 - 12:43pm



REVDATE FILE NAME: P:\Yorktown\Dredging\804868_FY-09_Maintenance Dredging\Phase B - Design\Drawings\804868_FY09 Maintenance.dwg LAYOUT NAME: NORTH LEG PLOTTED: Tuesday, September 29, 2009 - 1:57pm

AFTER DREDGE SURVEY

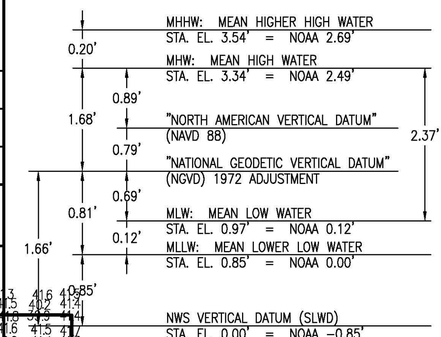
ESTIMATE OF QUANTITIES IN CUBIC YARDS

SHEET	PIER OR SLIP	PROJECT DEPTH	REQUIRED DEPTH	IN CONTRACT: QUANTITY TO CONTRACT DEPTH	IN CONTRACT: OVERDEPTH (2' FOOT)	IN CONTRACT: TOTAL AMOUNT PAYABLE	NOT IN CONTRACT (NIC)	TOTAL AMOUNT PLACED IN NORFOLK OCEAN DISPOSAL AREA
V-101-AD	PIER R-3	-42'	-42'	65,495	48,321	113,816	6,854	120,670
TOTAL YORKTOWN NAVAL WEAPONS STATION				65,495	48,321	113,816	6,854	120,670

NOTES FOR THIS TABLE:
1. QUANTITIES INCLUDE MATERIAL IN PRISMS TO FORM SLOPES
2. NIC, MATERIAL BELOW OVERDEPTH AND OUTSIDE DREDGE PRISM TEMPLATE.

DIAGRAM OF DATUM PLANE *

NAVAL WEAPONS STATION YORKTOWN, VIRGINIA — VERTICAL CONTROL [* 2001 EPOCH]

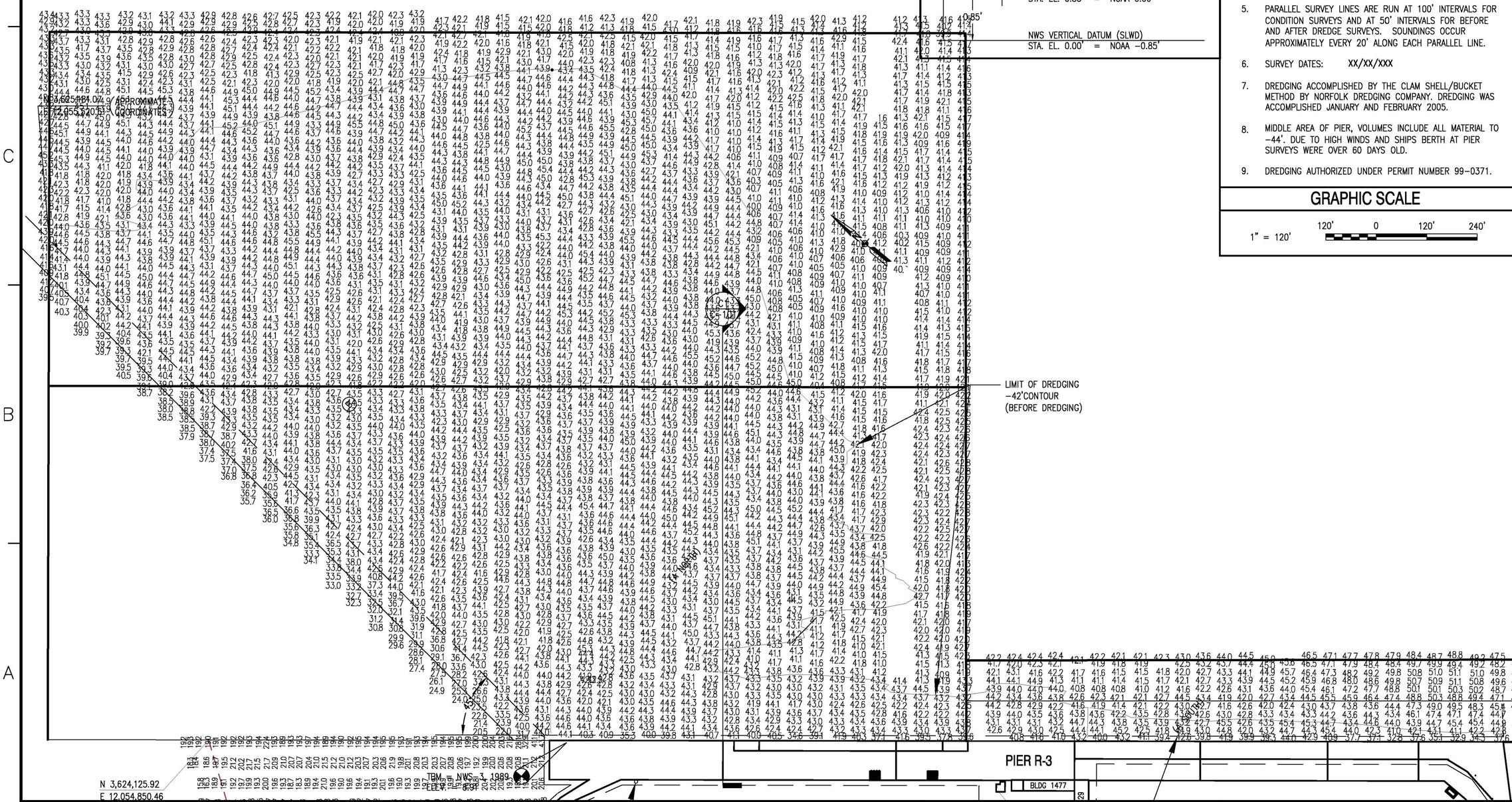


HYDROGRAPHIC NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE STATION LOW WATER DATUM, WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM OF 1929 (1972 ADJUSTMENT).
2. THE HYDROGRAPHIC SURVEY WAS CONDUCTED USING CLASS 1 HYDROGRAPHIC SURVEY METHODS AND ACCURACIES OUTLINED IN THE CORPS OF ENGINEERS' HYDROGRAPHIC SURVEYING MANUAL (EM 1110-2-1003).
3. ALL SOUNDINGS WERE TAKEN BY SURVEY DEPTH RECORDER (ODOM FATHOMETER) AND LOCATED WITH GLOBAL POSITIONING SYSTEM (STARLINK BEACON RECEIVER).
4. HORIZONTAL DATUM IS BASED ON THE VIRGINIA SOUTH (LAMBERT) STATE PLANE COORDINATE SYSTEM, ZONE 4502, U.S. SURVEY FEET (NAD 1983).
5. PARALLEL SURVEY LINES ARE RUN AT 100' INTERVALS FOR CONDITION SURVEYS AND AT 50' INTERVALS FOR BEFORE AND AFTER DREDGE SURVEYS. SOUNDINGS OCCUR APPROXIMATELY EVERY 20' ALONG EACH PARALLEL LINE.
6. SURVEY DATES: XX/XX/XXX
7. DREDGING ACCOMPLISHED BY THE CLAM SHELL/BUCKET METHOD BY NORFOLK DREDGING COMPANY. DREDGING WAS ACCOMPLISHED JANUARY AND FEBRUARY 2005.
8. MIDDLE AREA OF PIER, VOLUMES INCLUDE ALL MATERIAL TO -44'. DUE TO HIGH WINDS AND SHIPS BERTH AT PIER SURVEYS WERE OVER 60 DAYS OLD.
9. DREDGING AUTHORIZED UNDER PERMIT NUMBER 99-0371.

GRAPHIC SCALE

1" = 120' 120' 0 120' 240'



REVDATE	DESCRIPTION	DATE	APPR.	SYM

PRELIMINARY NOT FOR CONSTRUCTION

SEAL

SUBMITTED BY
FIRM MEMBER — DATE
APPROVED J. R. W[illegible]ER, P.E. (PER [illegible]) — ACTIVITY — SATISFACTORY TO — 2/2/09
APPROVED LEONAR[illegible] MULE, P.E. — FOR COMMANDER NAVFAC — 2/2/09
DES[illegible] TLB
CHK[illegible] QC
DE[illegible]
R[illegible] NA
S[illegible] NA
[illegible] MULE, P.E.
[illegible] NA
BRANCH M[illegible] FITCH, P.E.
DESIGN DIRECTOR R. FITCH, P.E.

NAVFAC

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
CI CORE (HYDRO) ~ PWD NORFOLK, VIRGINIA

NAVAL WEAPONS STATION
YORKTOWN, VIRGINIA
FY2009 MAINTENANCE DREDGING
AT PIER R-3
AFTER DREDGE HYDROGRAPHIC SURVEY

CODE ID. NO. 80091	SIZE D
SCALE:	AS NOTED
MAXIMO NO.	NA
JOB ORDER NO.	804868
SPEC. NO.	NA
CONSTR. CONTR. NO.	NA
NAVFAC DRAWING NO.	X,XXX,XXX
SHEET	2 OF 4
	V-XXX

DRAWFORM REVISION: 01 AUGUST 2004

FILE NAME: P:\Yorktown\Dredging\804868_FY-09_Maintenance Dredging\Phase B - Design\Drawings\804868_FY09 Maintenance.dwg LAYOUT NAME: OUTER PLOTTED: Tuesday, September 29, 2009 - 1:34pm

GRAPHIC SCALE

1" = 120'

120' 0 120' 240'

BEFORE DREDGE SURVEY

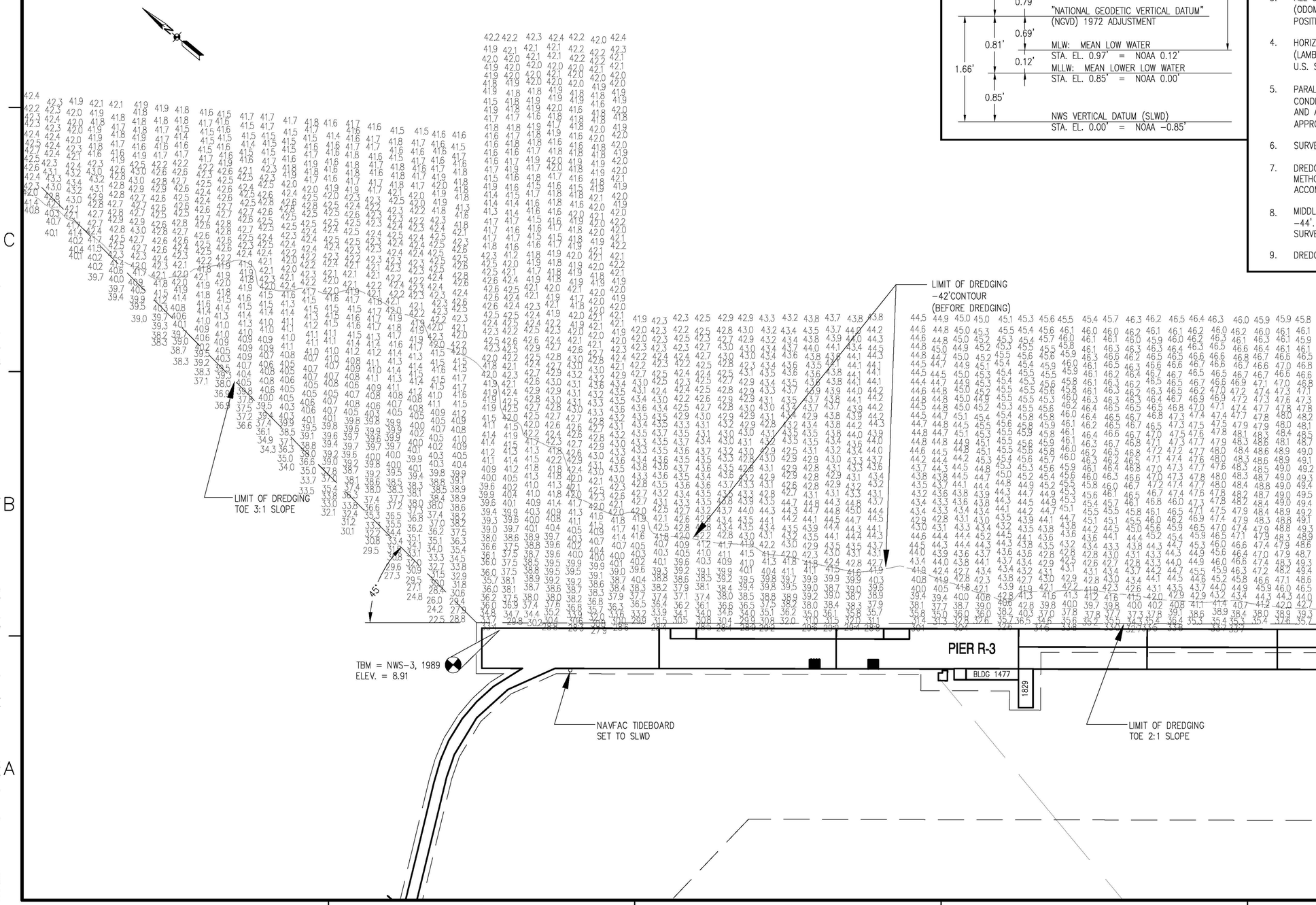


DIAGRAM OF DATUM PLANE *

NAVAL WEAPONS STATION
YORKTOWN, VIRGINIA

VERTICAL CONTROL
[* 2001 EPOCH]

	MHHW: MEAN HIGHER HIGH WATER	STA. EL. 3.54' = NOAA 2.69'
0.20'		
	MHW: MEAN HIGH WATER	STA. EL. 3.34' = NOAA 2.49'
0.89'		
1.68'	"NORTH AMERICAN VERTICAL DATUM" (NAVD 88)	2.37'
0.79'		
	"NATIONAL GEODETIC VERTICAL DATUM" (NGVD) 1972 ADJUSTMENT	
0.69'		
0.81'	MLW: MEAN LOW WATER	STA. EL. 0.97' = NOAA 0.12'
0.12'		
1.66'	MLLW: MEAN LOWER LOW WATER	STA. EL. 0.85' = NOAA 0.00'
0.85'		
	NWS VERTICAL DATUM (SLWD)	STA. EL. 0.00' = NOAA -0.85'

HYDROGRAPHIC NOTES

1. SOUNDINGS ARE IN FEET AND TENTHS AND ARE REFERRED TO THE STATION LOW WATER DATUM, WHICH IS 1.66 FEET BELOW NATIONAL GEODETIC VERTICAL DATUM OF 1929 (1972 ADJUSTMENT).
2. THE HYDROGRAPHIC SURVEY WAS CONDUCTED USING CLASS 1 HYDROGRAPHIC SURVEY METHODS AND ACCURACIES OUTLINED IN THE CORPS OF ENGINEERS' HYDROGRAPHIC SURVEYING MANUAL (EM 1110-2-1003).
3. ALL SOUNDINGS WERE TAKEN BY SURVEY DEPTH RECORDER (ODOM FATHOMETER) AND LOCATED WITH GLOBAL POSITIONING SYSTEM (STARLINK BEACON RECEIVER).
4. HORIZONTAL DATUM IS BASED ON THE VIRGINIA SOUTH (LAMBERT) STATE PLANE COORDINATE SYSTEM, ZONE 4502, U.S. SURVEY FEET (NAD 1983).
5. PARALLEL SURVEY LINES ARE RUN AT 100' INTERVALS FOR CONDITION SURVEYS AND AT 50' INTERVALS FOR BEFORE AND AFTER DREDGE SURVEYS. SOUNDINGS OCCUR APPROXIMATELY EVERY 20' ALONG EACH PARALLEL LINE.
6. SURVEY DATES: **01/29/2005, 02/06/2005**
7. DREDGING ACCOMPLISHED BY THE CLAM SHELL/BUCKET METHOD BY NORFOLK DREDGING COMPANY. DREDGING WAS ACCOMPLISHED JANUARY AND FEBRUARY 2005.
8. MIDDLE AREA OF PIER, VOLUMES INCLUDE ALL MATERIAL TO -44'. DUE TO HIGH WINDS AND SHIPS BERTH AT PIER SURVEYS WERE OVER 60 DAYS OLD.
9. DREDGING AUTHORIZED UNDER PERMIT NUMBER 99-0371.

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

SUBMITTED BY
FIRM MEMBER DATE
APPROVED
ACTIVITY - SATISFACTORY TO DATE
APPROVED
FOR COMMANDER NAVFAC DATE

DES	RDC	DR	TLB
CHK	PES	QC	
DESIGNER	STEELE		
REVIEWED BY			
QC			
AIC/EIC	FITCH, P.E.		
FIRE PROTECTION	N/A		
BRANCH MANAGER			
ENGINEERING DIR	FORMATO, P.E.		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
CAPITAL IMPROVEMENTS BUSINESS LINE ~ CORE

NAVAL FACILITIES ENGINEERING COMMAND
NAVAL STATION - NORFOLK, VIRGINIA

NAVAL WEAPONS STATION
FY2004 MAINTENANCE DREDGING
YORKTOWN, VA
AT PIER R-3

BEFORE DREDGE HYDROGRAPHIC SURVEY

CODE ID. NO. 80091 | SIZE D

SCALE:	AS NOTED
MAXIMO NO.	ADGRCG
PROJECT #	M108-03
SPEC. NO.	05-04-4043
CONSTR. CONTR. NO.	N62470-04-B-4043
NAVFAC DRAWING NO.	4,530,347
SHEET	1 OF 2

V-101-BD

DRAWFORM REVISION: 01 AUGUST 2004

REVDATE FILE NAME: P:\Yorktown\Dredging\ADGRCG NWS Dredging FY04\Phase B - Design\Drawings\NWSR3-ADGRCG-C-101-02.dwg LAYOUT NAME: OUTER PLOTTED: Wednesday, May 25, 2005 - 12:55pm

GRAPHIC SCALE

1" = 120'

120' 0 120' 240'

AFTER DREDGE SURVEY

ESTIMATE OF QUANTITIES IN CUBIC YARDS

SHEET	PIER OR SLIP	PROJECT DEPTH	REQUIRED DEPTH	IN CONTRACT			NOT IN CONTRACT (NIC)	TOTAL AMOUNT PLACED IN NORFOLK OCEAN DISPOSAL AREA
				QUANTITY TO CONTRACT DEPTH	OVERDEPTH (2' FOOT)	TOTAL AMOUNT PAYABLE		
V-101-AD	PIER R-3	-42'	-42'	65,495	48,321	113,816	6,854	120,670
TOTAL YORKTOWN NAVAL WEAPONS STATION				65,495	48,321	113,816	6,854	120,670

NOTES FOR THIS TABLE:
1. QUANTITIES INCLUDE MATERIAL IN PRISMS TO FORM SLOPES
2. NIC, MATERIAL BELOW OVERDEPTH AND OUTSIDE DREDGE PRISM TEMPLATE.

DIAGRAM OF DATUM PLANE *

NAVAL WEAPONS STATION
YORKTOWN, VIRGINIA

VERTICAL CONTROL
[* 2001 EPOCH]

MHHW: MEAN HIGHER HIGH WATER
STA. EL. 3.54' = NOAA 2.69'

0.20'

MHW: MEAN HIGH WATER
STA. EL. 3.34' = NOAA 2.49'

0.89'

1.68'

"NORTH AMERICAN VERTICAL DATUM" (NAVD 88)

2.37'

0.79'

"NATIONAL GEODETIC VERTICAL DATUM" (NGVD) 1972 ADJUSTMENT

0.69'

0.81'

MLW: MEAN LOW WATER
STA. EL. 0.97' = NOAA 0.12'

0.12'

1.66'

MLLW: MEAN LOWER LOW WATER
STA. EL. 0.85' = NOAA 0.00'

0.85'

NWS VERTICAL DATUM (SLWD)
STA. EL. 0.00' = NOAA -0.85'

HYDROGRAPHIC NOTES

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3. ALL SOUNDINGS WERE TAKEN BY SURVEY DEPTH RECORDER (ODOM FATHOMETER) AND LOCATED WITH GLOBAL POSITIONING SYSTEM (STARLINK BEACON RECEIVER).
4. HORIZONTAL DATUM IS BASED ON THE VIRGINIA SOUTH (LAMBERT) STATE PLANE COORDINATE SYSTEM, ZONE 4502, U.S. SURVEY FEET (NAD 1983).
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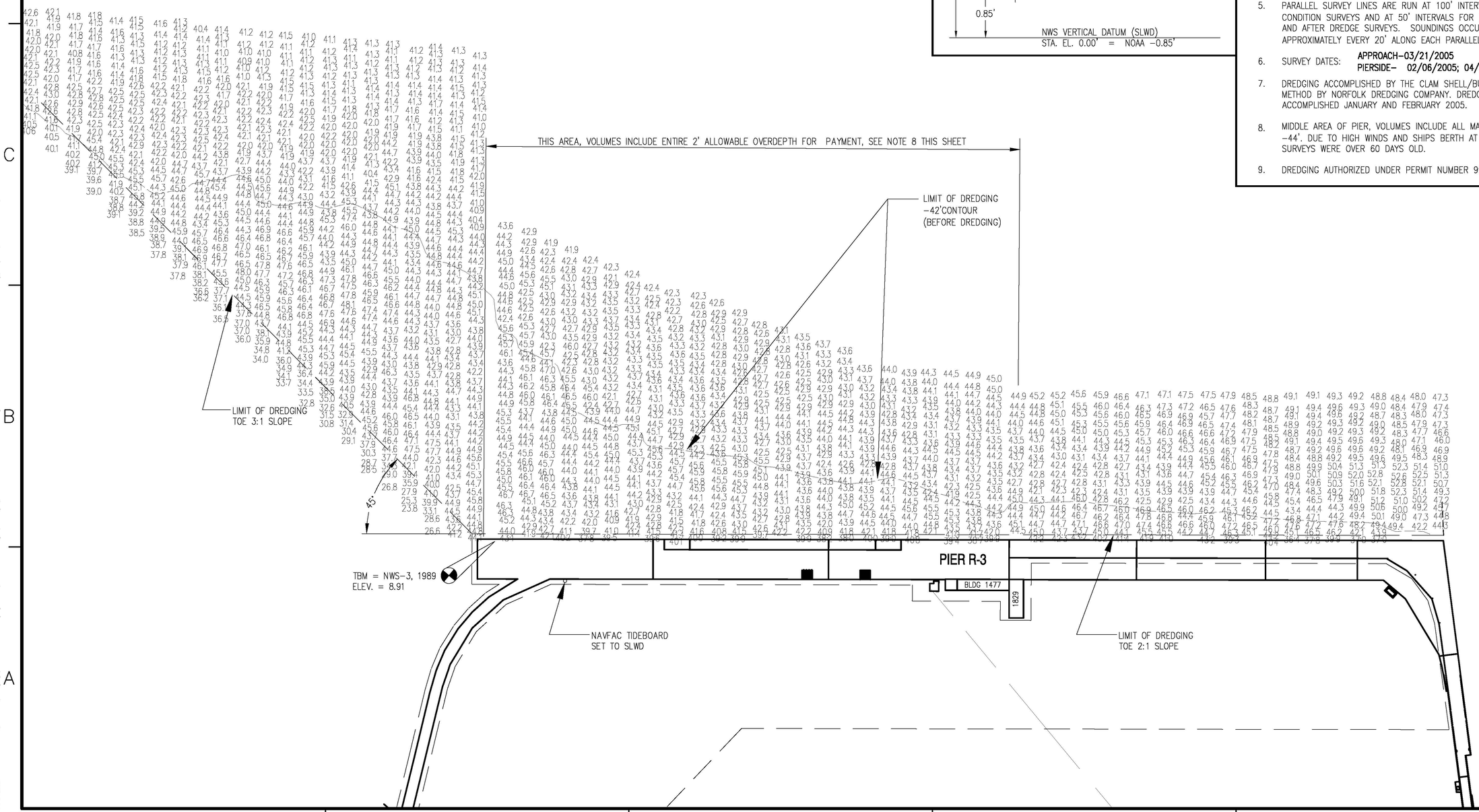
6. SURVEY DATES: APPROACH-03/21/2005
   PIERSIDE- 02/06/2005; 04/28/2005
7. DREDGING ACCOMPLISHED BY THE CLAM SHELL/BUCKET METHOD BY NORFOLK DREDGING COMPANY. DREDGING WAS ACCOMPLISHED JANUARY AND FEBRUARY 2005.
8. MIDDLE AREA OF PIER, VOLUMES INCLUDE ALL MATERIAL TO -44'. DUE TO HIGH WINDS AND SHIPS BERTH AT PIER SURVEYS WERE OVER 60 DAYS OLD.
9. DREDGING AUTHORIZED UNDER PERMIT NUMBER 99-0371.



REVDATE	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

SUBMITTED BY
FIRM MEMBER DATE
APPROVED
ACTIVITY - SATISFACTORY TO DATE
APPROVED
FOR COMMANDER NAVFAC DATE

DES	RDC	DR	TLB
CHK	PES	QC	
DESIGNER	STEELE		
REVIEWED BY			
QC			
AIC/EIC	FITCH, P.E.		
FIRE PROTECTION	N/A		
BRANCH MANAGER			
ENGINEERING DIR.	FORMATO, P.E.		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
CAPITAL IMPROVEMENTS BUSINESS LINE - CORE

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL STATION ~ NORFOLK, VIRGINIA

NAVAL WEAPONS STATION
YORKTOWN, VA
FY2004 MAINTENANCE DREDGING
AT PIER R-3

AFTER DREDGE HYDROGRAPHIC SURVEY

CODE ID. NO. 80091		SIZE	D
SCALE:	AS NOTED		
MAXIMO NO.	ADGRCG		
PROJECT #	M108-03		
SPEC. NO.	05-04-4043		
CONSTR. CONTR. NO.	N62470-04-B-4043		
NAVFAC DRAWING NO.	4,530,348		
SHEET	2 OF 2		

V-101-AD

DRAWFORM REVISION: 01 AUGUST 2004

REVDATE FILE NAME: P:\Yorktown\Dredging\ADGRCG NWS Dredging FY04\Phase B - Design\Drawings\NWSR3-ADGRCG-C-101-02.dwg LAYOUT NAME: OUTER PLOTTED: Wednesday, May 25, 2005 - 12:55pm

DIAGRAM OF DATUM PLANE *

NAVAL WEAPONS STATION
YORKTOWN, VIRGINIA

VERTICAL CONTROL
[* 2001 EPOCH]

	MHHW: MEAN HIGHER HIGH WATER STA. EL. 3.54' = NOAA 2.69'	
0.20'		
	MHW: MEAN HIGH WATER STA. EL. 3.34' = NOAA 2.49'	
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0.81'	MLW: MEAN LOW WATER STA. EL. 0.97' = NOAA 0.12'	
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1.66'	MLLW: MEAN LOWER LOW WATER STA. EL. 0.85' = NOAA 0.00'	
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	NWS VERTICAL DATUM (SLWD) STA. EL. 0.00' = NOAA −0.85'	

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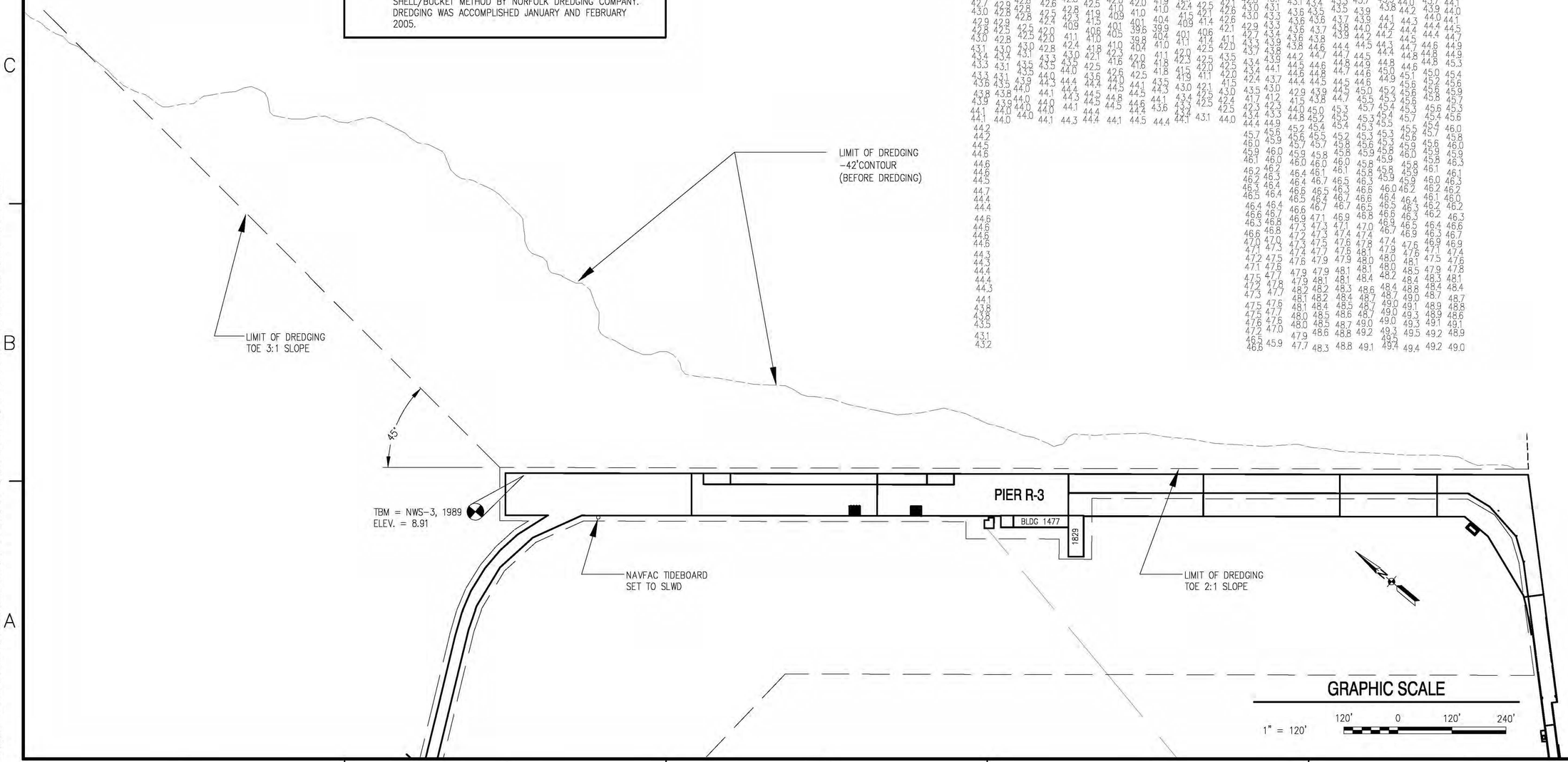
6. SURVEY DATES: **09/07/06**
7. PREVIOUS DREDGING ACCOMPLISHED BY THE CLAM SHELL/BUCKET METHOD BY NORFOLK DREDGING COMPANY. DREDGING WAS ACCOMPLISHED JANUARY AND FEBRUARY 2005.



REVDATE	DESCRIPTION	APPR

NAVFAC

SEAL

SUBMITTED BY:
FIRM MEMBER DATE
APPROVED
ACTIVITY − SATISFACTORY TO DATE
APPROVED
FOR COMMANDER NAVFAC DATE

DES	RDC	QR	TLB
CHK	PES	QC	

DESIGNER
REVIEWED BY
QC
A/C/EIC: STEELE
FIRE PROTECTION
BRANCH MANAGER: GALLAHER, P.E.
DESIGN DIRECTOR: GALLAHER, P.E.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
HAMPTON ROADS IPT
NAVAL STATION ~ NORFOLK, VIRGINIA
NAVAL WEAPONS STATION YORKTOWN, VA
FY2006 SHOAL SURVEY
AT PIER R-3
HYDROGRAPHIC SURVEY

CODE ID. NO. 80091 SIZE D
SCALE: AS NOTED
MAXIMO NO. AS62B7
JOB ORDER NO.
SPEC. NO.
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. 4,532,890
SHEET 1 OF 1
V-101

DRAWFORM REVISION: 01 AUGUST 2004

FILE NAME: P:\yorktown\Dredging\NWS_34' Shoal\Phase B – Design\Drawings\NWSR3_Template.dwg LAYOUT NAME: OUTER PLOTTED: Monday, September 18, 2006 – 8:03am

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

5636 Southern Boulevard
Virginia Beach, VA 23462
Tel# (757) 518-2000
http://www.deq.state.va.us

Dennis H. Treacy
Director

Francis L. Daniel
Tidewater Regional Director

October 10, 2001

Atlantic Division, Naval Facilities Engineering Command
Attn: Mr. Joseph W. Zorica, Captain USN
c/o Attn: Mr. Paul T. Kidd
1510 Gilbert Street
Norfolk, Virginia 23511-2699

RE: VWP Permit No. 99-0371
Yorktown Naval Weapons Station Maintenance Dredging

Dear Mr. Zorica:

In accordance with the application, we have enclosed the VWP Permit for the maintenance dredging of the facility inboard and outboard slips and aproaches at Pier R-3 in Yorktown, Virginia, pursuant to the Virginia Water Protection Permit Regulation (9 VAC 25-210, formerly VR 680-15-02) and Section 401 of the Clean Water Act Amendments of 1977, Public Law 95-217.

The provisions and conditions contained therein according to Section 401(a)(1) of the Clean Water Act require that:

> "any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge in the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters at the point where the discharge originates or will originate, that any such discharge will comply with the applicable provisions of sections 301, 302, 303, 306, and 307 of this Act."

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of

appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period. Refer to Part 2A of the Rules of the Supreme Court of Virginia for additional requirements governing appeals from administrative agencies.

Alternatively, any owner under §§ 62.1-4.16, 62.1-44.17 and 62.1-44.19 of the State Water Control Law aggrieved by any action of the Board taken without a formal hearing, or by inaction of the Board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in § 1.23(b) of the Board's Procedural Rule No. 1. In cases involving actions of the Board, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

If you have any questions, please contact Sheri Kattan at (757) 518-2156.

Sincerely,

William M. Cash-Robertson
Regional Permit Manager

Enclosures: Virginia Water Protection Permit

cc: Peter Kube, U.S. Army Corps of Engineers
Traycie West, Virginia Marine Resources Commission
File

COMMONWEALTH of VIRGINIA

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Virginia Beach, VA 23462
Tel# (757) 518-2000
http://www.deq.state.va.us

Dennis H. Treacy
Director

Francis L. Daniel
Tidewater Regional Director

VWP Permit No. 99-0371
Effective Date: October 10, 2001
Expiration Date: October 10, 2016

VIRGINIA WATER PROTECTION PERMIT
ISSUED PURSUANT TO THE STATE WATER CONTROL LAW
AND SECTION 401 OF THE CLEAN WATER ACT

Based upon an examination of the information submitted by the owner and in compliance with Section 401 of the Clean Water Act as amended (33 USC 1251 et seq.) and the State Water Control Law and regulations adopted pursuant thereto, the Department has determined that there is reasonable assurance that the activity authorized by this permit, if conducted in accordance with the conditions set forth herein, will protect instream beneficial uses and will not violate applicable water quality standards. The Department finds that the effect of the impact, together with other existing or proposed impacts to wetlands, will not cause or contribute to a significant impairment of state waters or fish and wildlife resources.

Permittee: Atlantic Division, Naval Facilities Engineering Command
Attn: Joseph W. Zorica, Captain USN

Address: Code 09A
1510 Gilbert Street
Norfolk, Virginia 23511-2699

Activity Location: Yorktown Naval Weapons Station Maintenance Dredging

Activity Description: The applicant proposes maintenance dredging of outboard and inboard slips and the approaches to Pier R-3 to maintain continued navigational ingress and egress. Dredged material will be disposed of at the Norfolk Ocean Disposal Site.

The permitted activity shall be in accordance with this cover page, Part I - Special Conditions, and Part II - General Conditions.

for William H. Clark-Roberts
Director, Department of Environmental Quality

October 12, 2001
Date

PART I - SPECIAL CONDITIONS

A. Adherence to Application

The conditions and limitations specified in the application dated March 2, 1999 and associated drawings dated March 1, 1999, and revised application Appendix J submitted by Paul Kidd on July 19, 2001 shall be adhered to.

B. Spill Control

The permittee shall employ measures to prevent spills of fuels or lubricants into State waters. If spills do occur, notification shall be provided to the Department of Environmental Quality (DEQ) Tidewater Regional Office (TRO) at 757-518-2077 or Department of Emergency Services at 1-800-468-8892.

C. Construction Activity

All construction and installation associated with the activity shall be accomplished in such a manner that construction materials or waste materials are not discharged into State waters.

D. DEQ Notification

The permittee shall advise the DEQ TRO in writing when unusual or potentially complex conditions are encountered which require debris removal or involve potentially toxic pollutants, and shall not take measures to remove the obstruction, material, or toxic pollutant, or change the location of any structure until approval by the Department is received.

E. Permit Expiration

This permit is valid for a maximum of **fifteen years** from the date of issuance. In accordance with the VWPP Regulation (9 VAC 25-210-80, formerly VR 680-15-02), reapplication must be made no less than 180 days prior to the expiration date of this permit.

F. Dredging and Disposal

1. The DEQ TRO shall be notified in writing not less than **ten days** prior to commencement and not more than **ten days** following completion of each dredging cycle.

2. All dredging shall be accomplished via clamshell method into bottom dump scows.

3. Dredging shall be accomplished in such a manner as to minimize disturbance of the bottom and minimize turbidity levels in the water column. Sediment resuspension recommendations outlined in the Corps research documents "Sediment Resuspension Characteristics of Selected Dredges - 1984" and "Literature Review and Technical Evaluation of Sediment Resuspension During Dredging - 1991" shall be followed when applicable. Documentation of recommendations that were or were not followed and supporting explanations shall be reported in writing to DEQ TRO within **30 days** following completion of each dredging cycle.

4. Dredging of approximately 300,000 cubic yards of material is authorized per dredging cycle with a total of approximately 2,000,000 cubic yards dredged over the term of this permit.

5. Dredging is authorized to a maximum depth of -44 feet mean low water in Area A and -20 feet mean low water in Areas B & C as depicted on Sheet 2 of 3 of project drawings dated March 1, 1999. This maximum depth includes any overdredge, advanced maintenance and margin of error.

6. All dredged material will be deposited into the Norfolk Ocean Disposal Site.

7. The double handling of dredged material in State waters is prohibited.

8. State Water Quality Criteria (9 VAC 25-260-50) shall not be violated during dredging operations, unless otherwise caused by ambient conditions.

9. If evidence of impaired water quality, such as fish kills, is observed during dredging, dredging operations shall cease and the DEQ shall be notified immediately at (757) 518-2077.

10. No wetland fill or excavation is authorized by this permit.

11. A before-dredge bathymetric survey and after-dredge bathymetric survey of the dredged area, using mean low water datum, shall be submitted to the DEQ TRO within **30 days** following completion of each dredging cycle.

12. To avoid and minimize impacts to anadromous fish, no dredging shall occur between March 1 and June 30.

13. As additional data concerning the impacts of dredging on aquatic resources becomes available, DEQ TRO may require additional and/or alternative water quality/biological monitoring, time of year restrictions, and/or other procedures to avoid and minimize impacts to these resources.

14. All correspondence regarding this permit shall be directed to:

Department of Environmental Quality
Tidewater Regional Office
Virginia Water Protection Permit Program Office
5636 Southern Boulevard
Virginia Beach, Virginia 23462

Include your Permit Number 99-0371 on all correspondence.

PART II - GENERAL CONDITIONS

A. Duty to Comply

The permittee shall comply with all conditions of the permit. Nothing in the regulations shall be construed to relieve the permittee of the duty to comply with all applicable Federal and State statutes, regulations and toxic standards and prohibitions. Any permit non-compliance is a violation of the Clean Water Act and State Water Control Law, and is grounds for enforcement action, permit termination, revocation, modification, or denial of a permit renewal application.

B. Mitigation Requirements

1. The permittee shall take all reasonable steps to

   a) avoid all adverse environmental impact which could result from the activity,

   b) where avoidance is impractical, minimize the adverse environmental impact, and

   c) where impacts cannot be avoided, provide mitigation of the adverse impact on an in kind basis.

C. Reopener

This permit may be reopened to modify the conditions of the permit to meet new regulatory standards duly adopted by the Board. Causes for reopening permits include, but are not limited to:

1. When State law prohibits conditions in a permit which are more stringent than an applicable effluent limitation guideline;

2. When subsequently promulgated effluent guidelines are modified, and are based on best conventional pollutant control technology; or

3. When the circumstances on which the previous permit was based have materially and substantially changed or special studies conducted by the Department or permittee show material and substantial change since the time the permit was issued and thereby constitute cause for permit modification or revocation and reissuance.

D. Change in Management of Pollutants

All discharges and other activities authorized by this permit shall be made in accordance with the terms and conditions of this permit. The permittee shall submit a new application 180 days prior to any modification to their activity which will:

1. Result in a significantly new or substantially increased discharge of dredged or fill material, or a significant change in the nature of the pollutants; or

2. Violate or lead to the violation of the terms and conditions of the permit or the Water Quality Standards of the Commonwealth.

E. Duty to Halt or to Reduce Activity

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

F. Compliance with State and Federal Law

Compliance with this permit constitutes compliance with Virginia Water Protection Permit requirements of the State Water Control Law. Nothing in this permit shall be construed to preclude the institution of any legal action under or relieve the permittee from any responsibilities, liabilities, or other penalties established pursuant to any other State law or regulation or under the authority preserved by Section 510 of the Clean Water Act.

G. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal property rights, nor any infringement of federal, state or local laws or regulations.

H. Severability

The provisions of this permit are severable.

I. Right of Entry

The permittee shall allow authorized State and Federal representatives, upon the presentation of credentials at reasonable times and under reasonable circumstances:

1. To enter the permittee's property, public or private, and have access to, inspect and copy any records that must be kept as part of the permit conditions;

2. To inspect any facilities, operations, or practices (including monitoring equipment) regulated or required under the permit;

3. To sample or monitor any substance, parameter or activity for the purpose of assuring compliance with the conditions of the permit or as otherwise authorized by law.

For the purpose of this section, the time for inspection shall be deemed reasonable during regular business hours. Nothing contained herein shall make an inspection time unreasonable during an emergency.

J. Transferability of Permits

This permit may be transferred to another person by a permittee if:

1. The current permittee notifies the Department of Environmental Quality 30 days prior to the proposed transfer of the title to the facility or property;

2. The notice of the proposed transfer includes a written agreement between the existing and proposed new owner containing a specific date of transfer of the permit responsibility, coverage and liability between them; and

3. The Department of Environmental Quality does not within the 30 day time period notify the existing owner of its intent to modify or revoke and reissue the permit.

Such a transferred permit shall, as of the date of the transfer, be as fully effective as if it had been issued directly to the new permittee.

K. Permit Modification

The applicant shall notify the Department of Environmental Quality of any modification of this project and shall demonstrate in a written statement to the Department that said modification will not violate any conditions of this permit. If such demonstration cannot be made, the permittee shall apply for a modification of this permit. This permit may be modified when any of the following developments occur:

1. When additions or alterations have been made to the affected facility or activity which require the application of permit conditions that differ from those of the existing permit or are absent from it;

2. When new information becomes available about the operation or discharge covered by the permit which was not available at permit issuance and would have justified the application of different permit conditions at the time of permit issuance;

3. When a change is made in the promulgated standards or regulations on which the permit was based;

4. When it becomes necessary to change final dates in schedules due to circumstances over which the permittee has little or no control such as acts of God, materials shortages, etc. However, in no case may a compliance schedule be modified to extend beyond any applicable statutory deadline of the Clean Water Act;

5. When an effluent standard or prohibition for toxic pollutant must be incorporated in the permit in accordance with provisions of Section 307(a) of the Clean Water Act;

6. When changes occur which are subject to "reopener clauses" in the permit;

7. When the Department of Environmental Quality determines that minimum instream flow levels resulting from the permittee's withdrawal of water are detrimental to the instream beneficial use, the withdrawal of water should be subject to further net limitations or when an area is declared a Surface Water Management Area pursuant to State water Control Law Sections 62.1-242 through 253, during the term of the permit;

8. When the level of discharge of a pollutant not limited in the permit exceeds the level which can be achieved by available methodology for controlling such discharges;

9. When the permittee begins or expects to begin to cause the discharge of any toxic pollutant not reported in the application; or

10. When other states were not notified of the change in the permit and their waters may be affected by the discharge.

L. Permit Termination

This permit, after public notice and opportunity for a hearing, is subject to termination. Causes for termination are as follows:

1. Noncompliance by the permittee with any condition of the permit;

2. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts or the permittee's misrepresentation of any relevant facts at any time;

3. The permittee's violation of a special or judicial order;

4. A determination that the permitted activity endangers human health or the environment and can be regulated to acceptable levels by permit modification or termination; or

5. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge of dredged and fill material controlled by the permit.

M. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

N. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act or Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

O. Unauthorized Discharge of Pollutants

Except in compliance with this permit, it shall be unlawful for the permittee to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances, or

2. Otherwise alter the physical, chemical, or biological properties of such state surface waters and make them detrimental to the public health, or to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, or for recreation, or for other uses.

VWP Permit No. 99-0371

VWP PERMIT PROGRAM
FACT SHEET

1. Project Description:

This project involves maintenance dredging of the inboard and outboard slips and approaches to Pier R-3 to provide continued navigational ingress and egress.

NAME AND ADDRESS: Atlantic Division, Naval Facilities Engineering Command
Attn: Joseph W. Zorica, Captain USN
Code 09A
1510 Gilbert Street
Norfolk, Virginia 23511-2699

STREAM: York River
BASIN: Chesapeake Bay, Atlantic Ocean, and Small Coastal
SUBBASIN: n/a
SECTION: 1
CLASS: II
SPECIAL STANDARDS: a, NEW-17
CATEGORY: VWP Category I Permit

2. Project Impacts:

Project impacts are expected to be temporary and minimal provided the applicant abides by the conditions of the permit. Benthic communities are expected to recover following dredging activities. Sediment in the proposed dredge area was analyzed for contaminants as required by the EPA/Corps of Engineers "Green Book" for ocean disposal. According to EPA, the sediment testing indicated that the material was suitable for disposal; therefore, contaminants are not expected to be present in concentrations that would adversely impacts water quality or aquatic life.

3. Mitigation of Impacts:

No mitigation is required due to the temporary and minimal nature of impacts anticipated for this project. Procedures to minimize sediment resuspension during dredging, found in the Corps research documents "Sediment Resuspension Characteristics of Selected Dredges - 1984" and "Literature Review and Technical Evaluation of Sediment Resuspension During Dredging - 1991" will be followed when applicable and reported to DEQ.

4. Site Inspection:

No site inspection was conducted due to the open water nature of this project.

5. Relevant Regulatory Comments:

A VWP Permit was previously issued for this project in 1992; however, the file can not be located. Based on Corps of Engineers file information and past permit issuance, the proposed project is identical in scope to the project previously permitted.

The Virginia Institute of Marine Science commented that project impacts are expected to be minimal in nature. The Virginia Marine Resources Commission has no jurisdiction as the proposed dredging is a federal project exempt from their regulatory purview, and the disposal site is outside of State waters.

According to the Corps of Engineers, EPA and U.S. Fish & Wildlife Service have no objections to the project. The Department of Game and Inland Fisheries gave a time of year restriction recommendation from March 1 to June 30 to protect anadromous fish species during their spawning and nursery periods.

The Department of Conservation and Recreation commented that the project was not anticipated to adversely affect state or federally listed plant, insect or animal species or any streams on the National Park Service Inventory, Final List of Rivers, potential Scenic Rivers or existing or potential State Scenic Byways. The State Department of Health Office of Water Programs, Division of Shellfish Sanitation, and the local health department had no objections to the project.

6. Antidegradation:

There is reasonable assurance that the existing instream water uses and the level of water quality necessary to protect the existing uses should be maintained and protected, provided the permittee abides by the conditions of the permits.

7. General Standard:

The proposed project should have negligible impacts to the beneficial uses related to recreation and the production of edible and marketable natural resources as defined under the General Standard.

8. Permit Conditions:

Part 1 - Special Conditions:

A. Thru E. Standard conditions used for all projects with project specific description and permit expiration.

F. Dredging and disposal addresses operations to ensure these activities are conducted as proposed to minimize impacts from sedimentation to State Waters and comply with Water Quality Standards.

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT, CORPS OF ENGINEERS
FORT NORFOLK, 803 FRONT STREET
NORFOLK, VIRGINIA 23510-1096

REPLY TO
ATTENTION OF:

September 19, 2001

Western Virginia Regulatory Section
99-V0371-14 (Atlantic Ocean)

Jim P. Dell, Capt. USN Code ML
Atlantic Division, Naval Facilities Engineering Command
1510 Gilbert Street
Norfolk, Virginia 23511-2699

Dear Capt. Dell:

Enclosed is a Department of the Army permit authorizing you to perform certain work in waters of the United States. Please sign both copies in the space provided for the permittee's signature and return them to this office, US Army Corps of Engineers, Regulatory Branch 803 Front Street, Norfolk, VA 23510 Attn: Peter Kube. Upon receipt, the district engineer or his authorized representative will sign both copies and return an original to you. The permit is not valid until signed by both parties.

Please take note of project specific, special and general conditions incorporated in this permit. Enclosed is a "compliance certification" form, which must be signed and returned within 30 days of completion of the project, including any required mitigation. Your signature on this form certifies that you have completed the work in accordance with the permit terms and conditions.

Please note that you can not begin work until you have obtained a Section 401 Water Quality Certificate/Virginia Water Protection Permit or a waiver. All the conditions in the 401 certificate/Water Protection Permit automatically are conditions of your Department of the Army Permit. In addition, you should obtain a permit from the Virginia Marine Resources Commission and/or the local wetlands board.

If any material change in the plan of the work is found necessary, revised plans must be submitted for our approval before any work is begun.

If you have any questions, you may call Peter Kube at (757) 441-7504.

Sincerely,

Michael A. Schwinn

Michael A. Schwinn
Chief, Western Virginia
Regulatory Section

Enclosures

Copies Furnished:

Virginia Marine Resources Commission, Newport News, (w/cy of permit)

Environmental Protection Agency, Philadelphia, (w/cy of permit)
National Marine Fisheries Service, Oxford, (w/cy of permit)
U. S. Fish and Wildlife Service, Gloucester, (w/cy of permit)
Virginia Department of Environmental Quality, Richmond, (w/cy of permit)
Local Wetlands Board (w/cy of permit)

U.S. Army Corps Of Engineers
Norfolk District

Fort Norfolk, 803 Front Street
Norfolk, Virginia 23510-1096

DEPARTMENT OF THE ARMY PERMIT

Permittee: United States Navy
Permit No.: 99-V0371-14
Issuing Office: Norfolk District, Corps of Engineers

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below pursuant to:

(x) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
(x) Section 404 of the Clean Water Act (33 U.S.C. 1344).
(x) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

Project Description: The applicant is authorized to maintenance dredge approximately 400,000 cy of predominantly silty material per dredging cycle from the inboard and outboard slips and approaches at Pier R-3. A total of 2,000,000 cy of material is authorized to be dredged over the 15 year life of this permit. The material will be dredged with clamshell equipment, placed in dump scows, and disposed of at the offshore Norfolk Ocean Disposal Site in the northwest quadrant at coordinates 37°00′ North Latitude and 75°40″ West Longitude. The stated purpose of the project is to remove accumulated siltation to return pier berths and approaches to previously permitted operating depths, maximum depths of -44′ mlw and -20′ mlw.

Project Location: The project is located in the waters of the York River, a tributary to the Chesapeake Bay, at the Yorktown Naval Weapons Station in Yorktown, Virginia.

Project Specific Conditions:

1. Prior to the commencement of any work authorized by this permit, you shall advise Peter Kube in writing at: Norfolk District, Corps of Engineers, Regulatory Branch, 803 Front Street, Norfolk, Virginia 23510 of the time the authorized activity will commence and the name and telephone number of all contractors or other persons performing the work. A copy of this permit and drawings must be provided to the contractor and made available to any regulatory representative during an inspection of the project site.

2. This permit allows subsequent maintenance dredging of the site at necessary intervals for a period of 15 years from the date of issuance of this permit. Approval of a sediment testing plan, and the determination of suitability for

ocean disposal is required from this office and the Environmental Protection Agency, Region III prior to any further maintenance dredging according to the Mid-Atlantic Regional Implementation Manual: Dredged Material Evaluation for Norfolk and Dam Neck Ocean Disposal Sites. You must advise this office in writing, at least two weeks before you start maintenance dredging activities under the authority of this permit.

3. You will submit to this office a printed report of the dump scow's voyage during each haul. A global positioning system will be used to determine the vessels position at no greater than 30 minute intervals during the haul and at the point the dredged material was released.

4. No dreging shall be performed between March 1 and June 30 of any year to minimize impacts on migrating anadromous fish.

5. Enclosed is a "compliance certification" form, which must be signed and returned within 30 days of completion of the project, including any required mitigation. Your signature on this form certifies that you have completed the work in accordance with the permit terms and conditions.

6. This permit does not authorize any double handling of dredged material in waters and/or wetlands.

7. You are authorized to dredge to permitted depths of -44 and -20 feet at mlw, per the enclosed drawings. This permitted depth includes any advance maintenance, allowable overdepth, and/or margin of error. Exceeding this depth will be considered a violation of the terms and conditions of the permit. If you contract for this work, a contract that allows any payment for dredging deeper than the permitted depth will be considered as evidence of an intent to violate the permit condition. The only way to legally dredge deeper is to apply for, and be granted, a permit modification <u>before</u> the dredging occurs. Both you and your contractor may be subject to substantial fines and penalties for a permit violation.

8. Barges and scows used to transport dredged material may be filled only to a point where no overflow occurs. No overflow pipes are allowed.

General Conditions:

1. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Conditions 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
2. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
3. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

4. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.
5. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.
6. The work authorized by this permit will be conducted in a manner so as to minimize any degradation of water quality and/or damage to aquatic life. Also, you will employ measures to prevent or control spills of fuels or lubricants from entering the waterway.
7. Failure to comply with the terms and conditions of this permit can result in enforcement actions against the permittee and/or contractor.
8. In granting an authorization pursuant to this permit, the Norfolk District has relied on the information and data provided by the permittee. If, subsequent to notification by the Corps that a project qualifies for this permit, such information and data prove to be materially false or materially incomplete, the authorization may be suspended or revoked, in whole or in part, and/or the Government may institute appropriate legal proceedings.
9. Your use of the permitted activity must not interfere with the public's right to reasonable navigation on all navigable waters of the United States.

Further Information:

1. Limits of this authorization:
   a. This permit does not obviate the need to obtain other Federal, state or local authorizations required by law.
   b. This permit does not grant any property rights or exclusive privileges.
   c. This permit does not authorize any injury to the property or rights of others.
   d. This permit does not authorize interference with any existing or proposed Federal projects.

2. Limits of Federal Liability: In issuing this permit, the Federal Government does not assume any liability for the following:
   a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
   b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
   c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
   d. Design or construction deficiencies associated with the permitted work.
   e. Damage claims associated with any future modification, suspension, or revocation of this permit.

3. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

4. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
   a. You fail to comply with the terms and conditions of this permit.
   b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 3 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

5. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as a permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

(Permittee)

27 SEP 01

(Date)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Michael A. Schwinn
Chief, Western Virginia
Regulatory Section

10/01/01

(Date)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(Transferee) (Date)

U.S. Army Corps
Of Engineers
Norfolk District

CERTIFICATE OF COMPLIANCE WITH ARMY CORPS OF ENGINEERS PERMIT

Permit Number:

Name of Permittee:
Date of Issuance:
Permit Type:

Within 30 days of completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

c/o Regulatory Branch
Norfolk District Corps of Engineers
803 Front Street
Norfolk, Va. 23510-1096

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation has been completed in accordance with the permit conditions.

_____ _____

Signature of Permittee Date

COMMONWEALTH of VIRGINIA

E. ANNE PETERSON, M.D., M.P.H.
STATE HEALTH COMMISSIONER

Department of Health
Division of Wastewater Engineering
Southeast Area

5700 THURSTON AVE., SUITE 203
VIRGINIA BEACH, VIRGINIA 23455
Phone (757) 363-3881
Fax (757) 363-3931
email mgarnett@vdh.state.va.us

August 3, 2001

SUBJECT: YORK COUNTY
Sewerage - VPDES Permits
Yorktown NWS Maintenance Dredging

Mr. Francis L. Daniel, Director
Tidewater Regional Office
Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, Virginia 23462

Dear Mr. Daniel:

This office has received a copy of the VWPP No. 99-0371 for the subject facility.

The Division of Shellfish Sanitation and the local health department have reviewed this application. Their responses were previously sent to your office. The Office of Water Programs has reviewed the permit. Enclosed is a copy of their response. They have not objections.

This discharge does not affect sewage collection or treatment.

Sincerely,

Marcy Garnett

Marcy Garnett, P.E.
Environmental Engineer Senior
Division of Wastewater Engineering

MG/
Enclosures
pc: Joseph W. Zorica, Captain USN
York County Health Department
V.D.H. - Division of Water Supply Engineering
V.D.H. - Division of Shellfish Sanitation
pc/enc: V.D.H. - Division of Wastewater Engineering

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Atlantic Division, Naval Facilities Engineering Command

Code CI45, 1510 Gilbert Street, Norfolk, Va. 23511-2699

May 9, 2001

Memorandum

From: Paul Kidd, Code CI45

To: Sheri Kattan, DEQ

Subject: Joint Permit No. 99-0371, Ocean Disposal of Dredged Material from Naval Weapons Station Pier R-3, Yorktown, VA.

Sheri,

Attached are the documents submitted to Michelle Fults last September for this project. The last three drawing sheets where not part of that submittal, but I have included them for you because they also show the sampling point locations with respect to the proposed dredging limits. Advise if you have any questions.

Paul Kidd

Paul Kidd, P.E.
Capital Improvements, Civil Design Branch
Atlantic Division
Naval Facilities Engineering Command

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

5636 Southern Boulevard
Virginia Beach, VA 23462
Tel# (757) 518-2000
http://www.deq.state.va.us

Dennis H. Treacy
Director

Francis L. Daniel
Tidewater Regional Director

July 30, 2001

Atlantic Division, Naval Facilities Engineering Command
Attn: Mr. Joseph W. Zorica, Captain USN
c/o Attn: Mr. Paul T. Kidd
1510 Gilbert Street
Norfolk, Virginia 23511-2699

RE: **Public Notice of Draft VWP Permit No. 99-0371**
Yorktown Naval Weapons Station Maintanence Dredging

Dear Mr. Zorica:

Enclosed is a copy of the **draft permit** special conditions of the Virginia Water Protection Permit for the above referenced project. Acceptance of these conditions is evidenced by the publishing of the following public notice, which must appear in a newspaper(s) of general circulation in the area of the project. The notice need only be published once and such publication will be at the applicant's expense. Due to the wide area served by this project, we request publication of this notice in both the Virginian Pilot and the Daily Press.

Please review the enclosed public notice and draft permit special conditions carefully. If you have any questions, comments, or objections concerning the draft permit special conditions or public notice, please contact me within the next 14 days. I am available to meet with you to resolve any concerns you may have.

As part of the application processing, we require proof of publication of the public notice. Please have the publisher provide us with the actual copies of pages from the newspaper(s) showing the notice and the date of the newspaper(s), or have them complete the attached sworn verification statement and forward it to this office. If we do not receive evidence of publication within 45 days of the date of this letter, then we may deny the application for the project. **Additionally, the 30-day public notice period must be complete within the 45 day period.**

Should you have any questions, please contact me at (757) 518-2156, or at the above address. Thank you for your cooperation in this matter.

Sincerely,

Sheri Kattan
Environmental Engineer, Senior

Enclosures: Public Notice
Public Notice Verification Form
Permit Parts I and II
Fact Sheet

cc: File

VWP PERMIT PROGRAM
FACT SHEET

1. Project Description:

This project involves maintenance dredging of the inboard and outboard slips and approaches to Pier R-3 to provide continued navigational ingress and egress.

NAME AND ADDRESS: Atlantic Division, Naval Facilities Engineering Command
Attn: Joseph W. Zorica, Captain USN
Code 09A
1510 Gilbert Street
Norfolk, Virginia 23511-2699

STREAM: York River
BASIN: Chesapeake Bay, Atlantic Ocean, and Small Coastal
SUBBASIN: n/a
SECTION: 1
CLASS: II
SPECIAL STANDARDS: a, NEW-17
CATEGORY: VWP Category I Permit

2. Project Impacts:

Project impacts are expected to be temporary and minimal provided the applicant abides by the conditions of the permit. Benthic communities are expected to recover following dredging activities. Sediment in the proposed dredge area was analyzed for contaminants as required by the EPA/Corps of Engineers "Green Book" for ocean disposal. According to EPA, the sediment testing indicated that the material was suitable for disposal; therefore, contaminants are not expected to be present in concentrations that would adversely impacts water quality or aquatic life.

3. Mitigation of Impacts:

No mitigation is required due to the temporary and minimal nature of impacts anticipated for this project. Procedures to minimize sediment resuspension during dredging, found in the Corps research documents "Sediment Resuspension Characteristics of Selected Dredges - 1984" and "Literature Review and Technical Evaluation of Sediment Resuspension During Dredging - 1991" will be followed when applicable and reported to DEQ.

4. Site Inspection:

No site inspection was conducted due to the open water nature of this project.

5. Relevant Regulatory Comments:

A VWP Permit was previously issued for this project in 1992; however, the file can not be located. Based on Corps of Engineers file information and past permit issuance, the proposed project is identical in scope to the project previously permitted.

The Virginia Institute of Marine Science has provided no comments on the project. The Virginia Marine Resources Commission has no jurisdiction as the proposed dredging is a federal project exempt from their regulatory purview, and the disposal site is outside of State waters.

According to the Corps of Engineers, EPA and U.S. Fish & Wildlife Service have no objections to the project. The Department of Game and Inland Fisheries gave a preliminary time of year restriction recommendation from March 1 to June 30 to protect anadromous fish species during their spawning and nursery periods. The Corps of Engineers is coordinating with National Marine Fisheries Service to determine if they will recommend a similar time of year restriction. The past Corps of Engineers permit for Cheatham Annex, located just upstream from the subject facility, did require a time of year restriction for anadromous fish.

6. Antidegradation:

There is reasonable assurance that the existing instream water uses and the level of water quality necessary to protect the existing uses should be maintained and protected, provided the permittee abides by the conditions of the permits.

7. General Standard:

The proposed project should have negligible impacts to the beneficial uses related to recreation and the production of edible and marketable natural resources as defined under the General Standard.

8. Permit Conditions:

Part 1 - Special Conditions:

A. Thru E. Standard conditions used for all projects with project specific description and permit expiration.

F. Dredging and disposal addresses operations to ensure these activities are conducted as proposed to minimize impacts from sedimentation to State Waters and comply with Water Quality Standards.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

5636 Southern Boulevard
Virginia Beach, VA 23462
Tel# (757) 518-2000
http://www.deq.state.va.us

Dennis H. Treacy
Director

Francis L. Daniel
Tidewater Regional Director

VWP Permit No. 99-0371
Effective Date: DRAFT
Expiration Date: DRAFT

VIRGINIA WATER PROTECTION PERMIT
ISSUED PURSUANT TO THE STATE WATER CONTROL LAW
AND SECTION 401 OF THE CLEAN WATER ACT

Based upon an examination of the information submitted by the owner and in compliance with Section 401 of the Clean Water Act as amended (33 USC 1251 et seq.) and the State Water Control Law and regulations adopted pursuant thereto, the Department has determined that there is reasonable assurance that the activity authorized by this permit, if conducted in accordance with the conditions set forth herein, will protect instream beneficial uses and will not violate applicable water quality standards. The Department finds that the effect of the impact, together with other existing or proposed impacts to wetlands, will not cause or contribute to a significant impairment of state waters or fish and wildlife resources.

Permittee: Atlantic Division, Naval Facilities Engineering Command
Attn: Joseph W. Zorica, Captain USN

Address: Code 09A
1510 Gilbert Street
Norfolk, Virginia 23511-2699

Activity Location: Yorktown Naval Weapons Station Maintenance Dredging

Activity Description: The applicant proposes maintenance dredging of outboard and inboard slips and the approaches to Pier R-3 to maintain continued navigational ingress and egress. Dredged material will be disposed of at the Norfolk Ocean Disposal Site.

The permitted activity shall be in accordance with this cover page, Part I - Special Conditions, and Part II - General Conditions.

_____
Director, Department of Environmental Quality

_____
Date

PUBLIC NOTICE
ISSUANCE
OF A VIRGINIA WATER PROTECTION PERMIT AND
STATE CERTIFICATION UNDER THE STATE WATER CONTROL LAW

The Department of Environmental Quality (DEQ) has under consideration issuance of the following Virginia Water Protection (VWP) Permit:

VWP Permit Number:	99-0371
Name of Permittee:	Atlantic Division, Naval Facilities Engineering Command Attn: Joseph W. Zorica, Captain USN
Permittee Address:	1510 Gilbert Street Norfolk, Virginia 23511-2699
Project Name:	Yorktown Naval Weapons Station Maintenance Dredging
Project Location:	Stream: York River Basin: Chesapeake Bay, Atlantic Ocean, and Small Coastal Subbasin: n/a Section: 1 Class: II Special Standards: a, NEW-17

Description of VWP Permit Activities: The applicant proposes maintenance dredging of the inboard and outboard facility slips as well as the approaches to Pier R-3 to maintain continued safe navigational ingress and egress. Dredged material will be disposed of at the Norfolk Ocean Disposal Site.

On the basis of staff review and application of lawful standards and regulations, the DEQ tentatively proposes issuance of the VWP Permit subject to certain conditions.

Persons may comment in writing to the DEQ on the proposed issuance of the VWP Permit within 30 days from the date of the notice. Address comments to the contact person listed below. Comments shall include the name, address, and telephone number of the writer and shall contain a complete, concise statement of the factual basis for the comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if it determines that public response is significant.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Sheri Kattan at:

Department of Environmental Quality
5636 Southern Blvd.
Virginia Beach, VA 23462
(757) 518-2156

Following the comment period, the Department will make a determination regarding the proposed issuance. This determination will become effective, unless the Director grants a public hearing. Due notice of any public hearing will be given.

Public Notice Verification

PASTE PRINTED COPY OF PUBLIC NOTICE IN
THIS SPACE

I HEREBY CERTIFY THAT THE NOTICE ATTACHED IN THE SPACE ABOVE

APPEARED IN THE _____
(Name of Paper)

ON THE FOLLOWING DATE: _____

_____
(Signature)

_____
(Title)

THIS IS FOR THE VIRGINIA WATER PROTECTION PERMIT APPLICATION #99-0371

PART I - SPECIAL CONDITIONS

A. Adherence to Application

The conditions and limitations specified in the application dated March 2, 1999 and associated drawings dated March 1, 1999, and revised application Appendix J submitted by Paul Kidd on July 19, 2001 shall be adhered to.

B. Spill Control

The permittee shall employ measures to prevent spills of fuels or lubricants into State waters. If spills do occur, notification shall be provided to the Department of Environmental Quality (DEQ) Tidewater Regional Office (TRO) at 757-518-2077 or Department of Emergency Services at 1-800-468-8892.

C. Construction Activity

All construction and installation associated with the activity shall be accomplished in such a manner that construction materials or waste materials are not discharged into State waters.

D. DEQ Notification

The permittee shall advise the DEQ TRO in writing when unusual or potentially complex conditions are encountered which require debris removal or involve potentially toxic pollutants, and shall not take measures to remove the obstruction, material, or toxic pollutant, or change the location of any structure until approval by the Department is received.

E. Permit Expiration

This permit is valid for a maximum of **fifteen years** from the date of issuance. In accordance with the VWPP Regulation (9 VAC 25-210-80, formerly VR 680-15-02), reapplication must be made no less than 180 days prior to the expiration date of this permit.

F. Dredging and Disposal

1. The DEQ TRO shall be notified in writing not less than **ten days** prior to commencement and not more than **ten days** following completion of each dredging cycle.

2. All dredging shall be accomplished via clamshell method into bottom dump scows.

3. Dredging shall be accomplished in such a manner as to minimize disturbance of the bottom and minimize turbidity levels in the water column. Sediment resuspension recommendations outlined in the Corps research documents "Sediment Resuspension Characteristics of Selected Dredges - 1984" and "Literature Review and Technical Evaluation of Sediment Resuspension During Dredging - 1991" shall be followed when applicable. Documentation of recommendations that were or were not followed and supporting explanations shall be reported in writing to DEQ TRO within **30 days** following completion of each dredging cycle.

4. Dredging of approximately 300,000 cubic yards of material is authorized per dredging cycle with a total of approximately 2,000,000 cubic yards dredged over the term of this permit.

5. Dredging is authorized to a maximum depth of -44 feet mean low water in Area A and -20 feet mean low water in Areas B & C as depicted on Sheet 2 of 3 of project drawings dated March 1, 1999. This maximum depth includes any overdredge, advanced maintenance and margin of error.

6. All dredged material will be deposited into the Norfolk Ocean Disposal Site.

7. The double handling of dredged material in State waters is prohibited.

8. State Water Quality Criteria (9 VAC 25-260-50) shall not be violated during dredging operations, unless otherwise caused by ambient conditions.

9. If evidence of impaired water quality, such as fish kills, is observed during dredging, dredging operations shall cease and the DEQ shall be notified immediately at (757) 518-2077.

10. No wetland fill or excavation is authorized by this permit.

11. A before-dredge bathymetric survey and after-dredge bathymetric survey of the dredged area, using mean low water datum, shall be submitted to the DEQ TRO within **30 days** following completion of each dredging cycle.

12. To avoid and minimize impacts to anadromous fish, no dredging shall occur between March 1 and June 30.

13. As additional data concerning the impacts of dredging on aquatic resources becomes available, DEQ TRO may require additional and/or alternative water quality/biological monitoring, time of year restrictions, and/or other procedures to avoid and minimize impacts to these resources.

14. All correspondence regarding this permit shall be directed to:

Department of Environmental Quality
Tidewater Regional Office
Virginia Water Protection Permit Program Office
5636 Southern Boulevard
Virginia Beach, Virginia 23462

Include your Permit Number 99-0371 on all correspondence.

PART II - GENERAL CONDITIONS

A. Duty to Comply

The permittee shall comply with all conditions of the permit. Nothing in the regulations shall be construed to relieve the permittee of the duty to comply with all applicable Federal and State statutes, regulations and toxic standards and prohibitions. Any permit non-compliance is a violation of the Clean Water Act and State Water Control Law, and is grounds for enforcement action, permit termination, revocation, modification, or denial of a permit renewal application.

B. Mitigation Requirements

1. The permittee shall take all reasonable steps to

   a) avoid all adverse environmental impact which could result from the activity,

   b) where avoidance is impractical, minimize the adverse environmental impact, and

   c) where impacts cannot be avoided, provide mitigation of the adverse impact on an in kind basis.

C. Reopener

This permit may be reopened to modify the conditions of the permit to meet new regulatory standards duly adopted by the Board. Causes for reopening permits include, but are not limited to:

1. When State law prohibits conditions in a permit which are more stringent than an applicable effluent limitation guideline;

2. When subsequently promulgated effluent guidelines are modified, and are based on best conventional pollutant control technology; or

3. When the circumstances on which the previous permit was based have materially and substantially changed or special studies conducted by the Department or permittee show material and substantial change since the time the permit was issued and thereby constitute cause for permit modification or revocation and reissuance.

D. Change in Management of Pollutants

All discharges and other activities authorized by this permit shall be made in accordance with the terms and conditions of this permit. The permittee shall submit a new application 180 days prior to any modification to their activity which will:

1. Result in a significantly new or substantially increased discharge of dredged or fill material, or a significant change in the nature of the pollutants; or

2. Violate or lead to the violation of the terms and conditions of the permit or the Water Quality Standards of the Commonwealth.

E. Duty to Halt or to Reduce Activity

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

F. Compliance with State and Federal Law

Compliance with this permit constitutes compliance with Virginia Water Protection Permit requirements of the State Water Control Law. Nothing in this permit shall be construed to preclude the institution of any legal action under or relieve the permittee from any responsibilities, liabilities, or other penalties established pursuant to any other State law or regulation or under the authority preserved by Section 510 of the Clean Water Act.

G. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal property rights, nor any infringement of federal, state or local laws or regulations.

H. Severability

The provisions of this permit are severable.

I. Right of Entry

The permittee shall allow authorized State and Federal representatives, upon the presentation of credentials at reasonable times and under reasonable circumstances:

1. To enter the permittee's property, public or private, and have access to, inspect and copy any records that must be kept as part of the permit conditions;

2. To inspect any facilities, operations, or practices (including monitoring equipment) regulated or required under the permit;

3. To sample or monitor any substance, parameter or activity for the purpose of assuring compliance with the conditions of the permit or as otherwise authorized by law.

For the purpose of this section, the time for inspection shall be deemed reasonable during regular business hours. Nothing contained herein shall make an inspection time unreasonable during an emergency.

J. Transferability of Permits

This permit may be transferred to another person by a permittee if:

1. The current permittee notifies the Department of Environmental Quality 30 days prior to the proposed transfer of the title to the facility or property;

2. The notice of the proposed transfer includes a written agreement between the existing and proposed new owner containing a specific date of transfer of the permit responsibility, coverage and liability between them; and

3. The Department of Environmental Quality does not within the 30 day time period notify the existing owner of its intent to modify or revoke and reissue the permit.

Such a transferred permit shall, as of the date of the transfer, be as fully effective as if it had been issued directly to the new permittee.

K. Permit Modification

The applicant shall notify the Department of Environmental Quality of any modification of this project and shall demonstrate in a written statement to the Department that said modification will not violate any conditions of this permit. If such demonstration cannot be made, the permittee shall apply for a modification of this permit. This permit may be modified when any of the following developments occur:

1. When additions or alterations have been made to the affected facility or activity which require the application of permit conditions that differ from those of the existing permit or are absent from it;

2. When new information becomes available about the operation or discharge covered by the permit which was not available at permit issuance and would have justified the application of different permit conditions at the time of permit issuance;

3. When a change is made in the promulgated standards or regulations on which the permit was based;

4. When it becomes necessary to change final dates in schedules due to circumstances over which the permittee has little or no control such as acts of God, materials shortages, etc. However, in no case may a compliance schedule be modified to extend beyond any applicable statutory deadline of the Clean Water Act;

5. When an effluent standard or prohibition for toxic pollutant must be incorporated in the permit in accordance with provisions of Section 307(a) of the Clean Water Act;

6. When changes occur which are subject to "reopener clauses" in the permit;

7. When the Department of Environmental Quality determines that minimum instream flow levels resulting from the permittee's withdrawal of water are detrimental to the instream beneficial use, the withdrawal of water should be subject to further net limitations or when an area is declared a Surface Water Management Area pursuant to State water Control Law Sections 62.1-242 through 253, during the term of the permit;

8. When the level of discharge of a pollutant not limited in the permit exceeds the level which can be achieved by available methodology for controlling such discharges;

9. When the permittee begins or expects to begin to cause the discharge of any toxic pollutant not reported in the application; or

10. When other states were not notified of the change in the permit and their waters may be affected by the discharge.

L. Permit Termination

This permit, after public notice and opportunity for a hearing, is subject to termination. Causes for termination are as follows:

1. Noncompliance by the permittee with any condition of the permit;

2. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts or the permittee's misrepresentation of any relevant facts at any time;

3. The permittee's violation of a special or judicial order;

4. A determination that the permitted activity endangers human health or the environment and can be regulated to acceptable levels by permit modification or termination; or

5. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge of dredged and fill material controlled by the permit.

M. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

N. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act or Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

O. Unauthorized Discharge of Pollutants

Except in compliance with this permit, it shall be unlawful for the permittee to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances, or

2. Otherwise alter the physical, chemical, or biological properties of such state surface waters and make them detrimental to the public health, or to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, or for recreation, or for other uses.

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1510 GILBERT ST
NORFOLK, VA 23511-2699

TELEPHONE NO
(757) 322-4405

IN REPLY REFER TO
11000
405:PTK:lfm
15 September 2000

From: Commander, Atlantic Division, Naval Facilities Engineering Command
To: District Engineer, Norfolk District Corps of Engineers

Subj: JOINT PERMIT NO. 99-0371, OCEAN DISPOSAL OF DREDGED MATERIAL FROM NAVAL WEAPONS STATION YORKTOWN PIER R-3

Ref : (a) Project Report for Whole Sediment Bioassay Testing at the Yorktown Ammunition and Cheatham Annex Cargo Piers, 14 April 1993.
(b) Project Report for Round Two Whole Sediment Bioassay Testing at the Yorktown Ammunition and Cheatham Annex Cargo Piers, 25 May 1993.
(c) Project Report for Whole Sediment Bioassay Testing at the Yorktown Ammunition Pier, September 1993.
(d) Project Report, Whole Sediment Bioassay Testing at the Yorktown Ammunition and Yorktown Fuel Piers, October 1993.

Encl: (1) A copy of the letter report "Whole Sediment Bioassay and Bioaccumulation Analysis, Yorktown Ammunition Pier, Naval Weapons Station Yorktown, Virginia, July 30, 2000"
(2) One set condition surveys showing proposed dredging areas.

1. Enclosure (1) is forwarded in support of the U.S. Navy application for the use of the Norfolk Ocean Disposal Site for the disposal of dredged material from the maintenance dredging at Pier R-3 at the Naval Weapons Station Yorktown, Yorktown, Virginia. This area has been tested in the past (references (a) through (d)). Enclosure (1) confirms the results in the references and verifys that the material scheduled for dredging is suitable for disposal at the Norfolk Ocean Disposal Site.

2. Enclosure (1) also includes the results of sediment analysis at the piers including dioxin analysis. These are also forwarded to support the conclusion that the material is suitable for disposal in the Norfolk Ocean Disposal Site.

3. Enclosure (2) is also forwarded to assist in the permit process.

4. If you require additional information regarding our application to complete the permit process, please contact me at (757) 322-4405 or Mr. Paul Steele at (757) 322-4288. If you require

Subj: JOINT PERMIT NO. 99-0371, OCEAN DISPOSAL OF DREDGED MATERIAL FROM NAVAL WEAPONS STATION YORKTOWN PIER R-3

additional clarification of the sediment testing and results, please contact Mr. James Haluska, Code BD33JH, at (757) 322-4889 or DSN 262-4889, FAX (757) 322-4984. Mr. Haluska's e-mail address is haluskajd@efdlant.navfac.navy.mil.

Paul Kidd

PAUL T. KIDD
By direction

Copy to:
EPA Region III (Mr. Bill Muir)
US EPA Region III
~~6th and Walnut Streets~~
Philadelphia, PA

Wrong Address

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1510 GILBERT ST
NORFOLK, VA 23511-2699

TELEPHONE NO
(757) 322-4405

IN REPLY REFER TO
11000
405:PTK:lfm
September 15, 2000

Ms. Michelle Fults
Commonwealth of Virginia,
Department of Environmental Quality
5636 Southern Boulevard
Virginia Beach, VA. 23462

Subject: JOINT PERMIT NO. 99-0371, OCEAN DISPOSAL OF DREDGED MATERIAL FROM NAVAL WEAPONS STATION YORKTOWN PIER R-3

Dear Ms. Fults:

Your letter of November 8, 1999, advised that you were withdrawing the subject application from consideration until sediment testing requested by the Corps of Engineers and the Environmental Protection Agency was available. We have completed that testing and a copy of the report is attached for your records. Please reactivate our application at this time and finalize your consideration of our project at your earliest convenience.

If you require additional clarification of our proposal, please contact me immediately at (757) 322-4405, or Paul Steele at (757) 322-4288, to discuss your requirements.

Sincerely,

Paul Kidd

PAUL KIDD, P.E.
Head, Civil Engineering Branch
Atlantic Division
Naval Facilities Engineering Command

Encl: (1) Copy of the letter report "Whole Sediment Bioassay and Bioaccumulation Analysis, Yorktown Ammunition Pier, Naval Weapons Station Yorktown, Virginia, 30 July 2000"
(2) One set condition surveys showing proposed dredging areas

GEO-MARINE

GEO-MARINE, INC.
ENGINEERING AND ENVIRONMENTAL SERVICES

Since 1972

30 July, 2000

Commander
LANTNAVFACENGCOM
1510 Gilbert Street
Norfolk, Virginia 23511-2699
Attn: Mr. James Haluska (Code 2032JH)
Planner-in-Charge

RE: Contract Number N62470-95-D-1160, Contract Task Order 023
Whole Sediment Bioassay and Bioaccumulation Analysis
Yorktown Ammunition Pier, Naval Weapons Station Yorktown, Virginia

Dear Jim,

Enclosed please find a copy of the results of the sediment toxicity and bioaccumulation analyses performed by Coastal Bioanalysts, Incorporated (CBI) for the Yorktown Ammunition Pier. Also enclosed for your review are supporting sections of the Corps of Engineers/EPA Sediment Testing Manual (Green Book) and the EPA Inland Testing Manual (Gold Book). These documents support that the fairly high mortality rates observed in the Composite 1 and Composite 2 samples were the probable result of biological interference from polychaetes that managed to pass through the sieve used to prepare the sediment for testing. All EPA specified methodologies and QA/QC practices were followed. The enclosed data states that the statistical analysis of the data showed that the composite sample test results were not statistically significantly different from the Bay reference site and the Ocean reference site. The Corps of Engineers/EPA Sediment Testing Manual (Green Book) and the EPA Inland Testing Manual (Gold Book) acknowledge that biological interference from indigenous organisms in the test sediments can be problematic, but are not grounds for invalidating the test results. Since only the test replicates that had polychaete remains in them at the end of the test exhibited high mortalities, and all other replicates exhibited low mortalities, it is evident that biological interference occurred. The fact that the results were not statistically different between the composite samples and the reference samples further supports the technical validity of the data. There was a statistically significant difference between all of the test samples and the laboratory control, however, which indicates that the observed mortality was not due to lab induced problems.

Also enclosed please find a copy of the revised draft report detailing the information presented above. I look forward to receiving your comments on this information. If I can be of assistance, please call me at (757) 873-3702.

Sincerely,

Beth Stephenson

Beth Stephenson
Field Environmental Scientist

Ref: File 1760-p23
cc: Bob Kull

11846 Rock Landing Drive, Suite C • Newport News, VA 23606 • Tel: (757) 873-3703 • E-Mail: gmi-va@ix.netcom

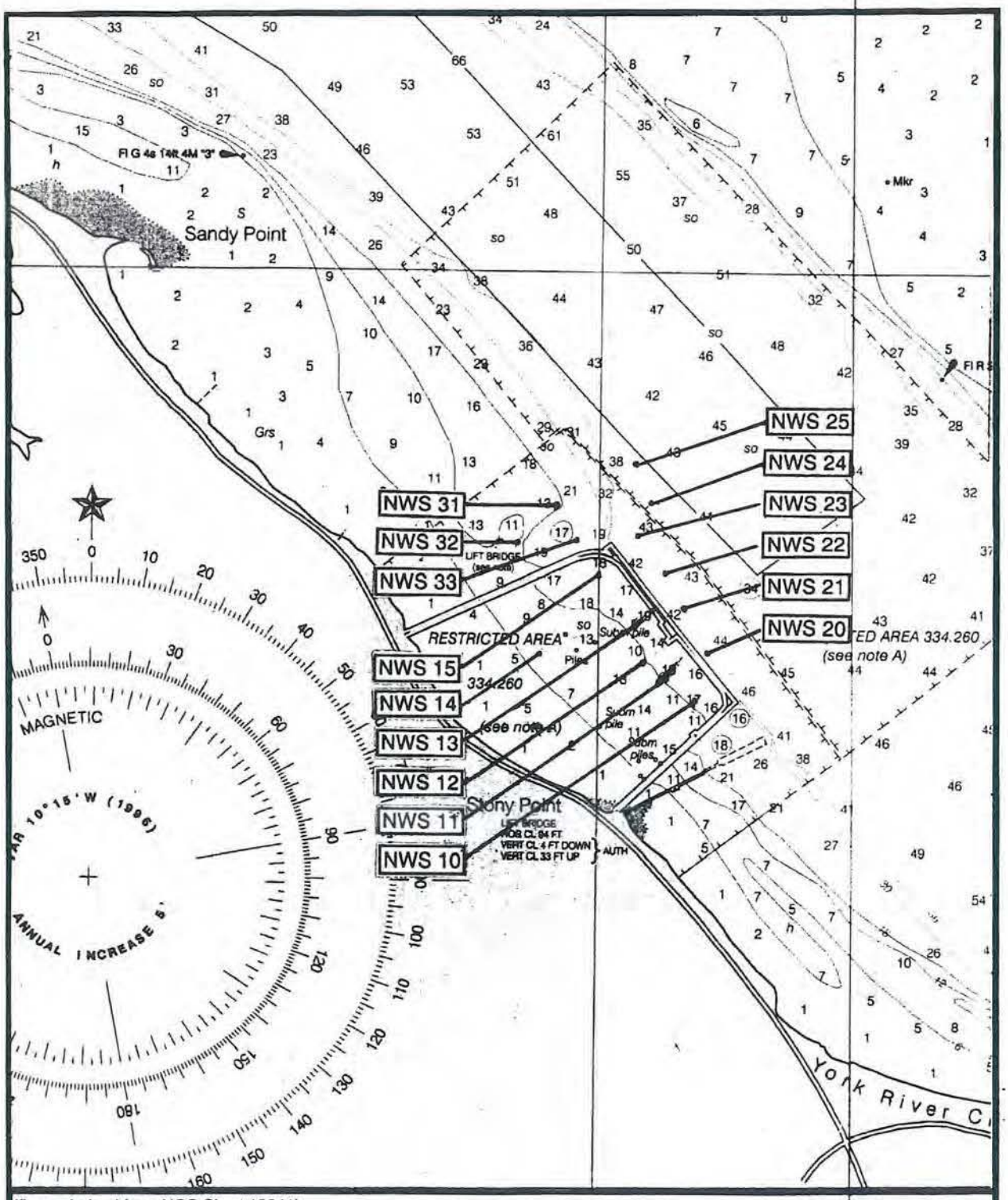
El Paso • San Antonio • Dallas-Ft. Worth • Oak Ridge • Panama City • Newport News

WHOLE SEDIMENT BIOASSAY AND BIOACCUMULATION ANALYSIS
YORKTOWN AMMUNITION PIER
NAVAL WEAPONS STATION YORKTOWN, VIRGINIA

The Navy has investigated several options for the disposal of dredged material from the maintenance dredging of the Ammunition Pier at the Naval Weapons Station (NWS), Yorktown, Virginia. Ocean disposal is the best alternative for material disposal when legal and environmental considerations are addressed. In order to use the Norfolk Ocean Disposal Site (NODS) as a designated disposal site for dredging projects at the Yorktown Ammunition Pier, sediment samples from this location must be obtained and tested. The NWS pier site has previously been tested as part of the Navy sponsored Long-Term Management Strategy (LTMS) dredged material disposal study (Palermo et al., 1992) and bioassay testing in 1993 (Atlantic Division, Naval Facilities Engineering Command, 1993). The testing conducted by the LTMS study provided sufficient information to allow the evaluation of these sites using the U.S. Environmental Protection Agency/U.S. Army Corps of Engineers Evaluation of Dredged Material Proposed for Ocean Disposal; hereafter noted as the USEPA/USACOE "Green Book" to Tier III (EPA/Corps, 1993). The "Green Book" test procedure requires the determination of reference sediment and control mortalities from the dredging locations.

Due to the length of time that has passed since the above referenced analyses were conducted, it was necessary to reanalyze samples in order to provide current test data to the Norfolk District, Army Corps of Engineers and the US EPA, Region III. Solid phase bioassay using two organisms: the amphipod *Leptocheirus plumulosus* and the polychaete *Nereis succinea* and a bioaccumulation analysis using the clam *Macoma nasuta* were conducted. In addition, sediment samples were analyzed for grain size, total organic carbon (TOC), oil and grease, Aroclor 1254, Aroclor 1260, dioxin, and the metals Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), and Antimony (Sb).

To facilitate the requirements for testing, sediment samples were collected from fifteen sites around the Yorktown Ammunition Pier (NWS-10 to NWS-15, NWS-20 to NWS-25, and NWS-31 to NWS-33), the Chesapeake Bay Reference (BR-1) site, and the Ocean Reference (OR-1) site (Figures 1, 2 and 3) in early February, 2000. The Ocean Reference site used was the same location that was used in the LTMS study. The boat used for sample collection was equipped with Differential Global Positioning System (DGPS) to provide accurate position fixing of sample locations. The latitude/longitude coordinates for all the sampling stations are listed in Table 1. Sediment samples were obtained using a stainless steel ponar grab sampler. Sediment samples from sites NWS-10 to NWS-15 were composited to form Sample 1; sites NWS-20 to NWS-25 were composited to form Sample 2; and sites NWS-31 to NWS-33 were composited to form Sample 3. The three resulting composite pier samples and the two reference site samples were evaluated for whole sediment bioassay, bioaccumulation, and chemical and physical parameters as shown in Table 2.

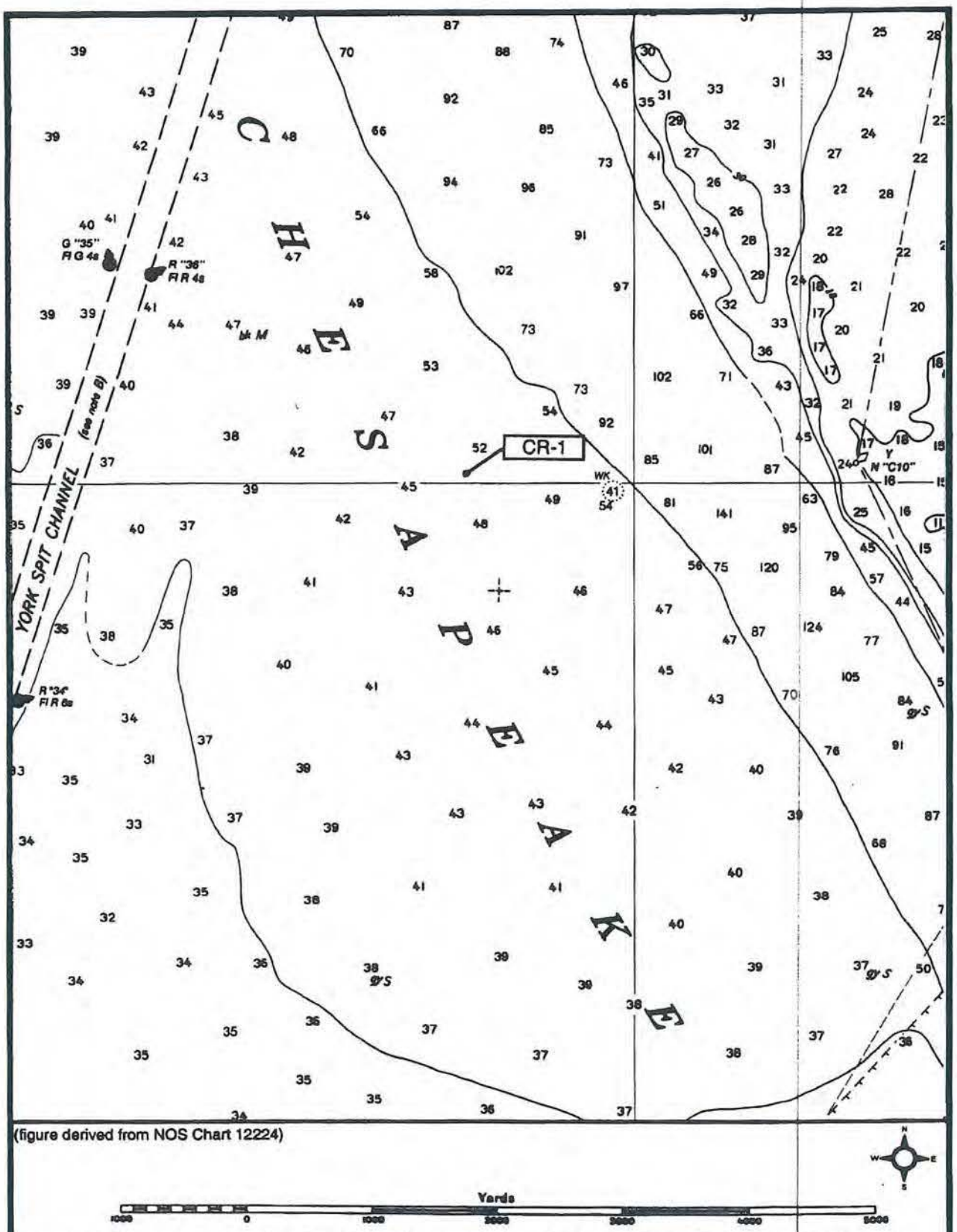


(figure derived from NOS Chart 12241)

Yards

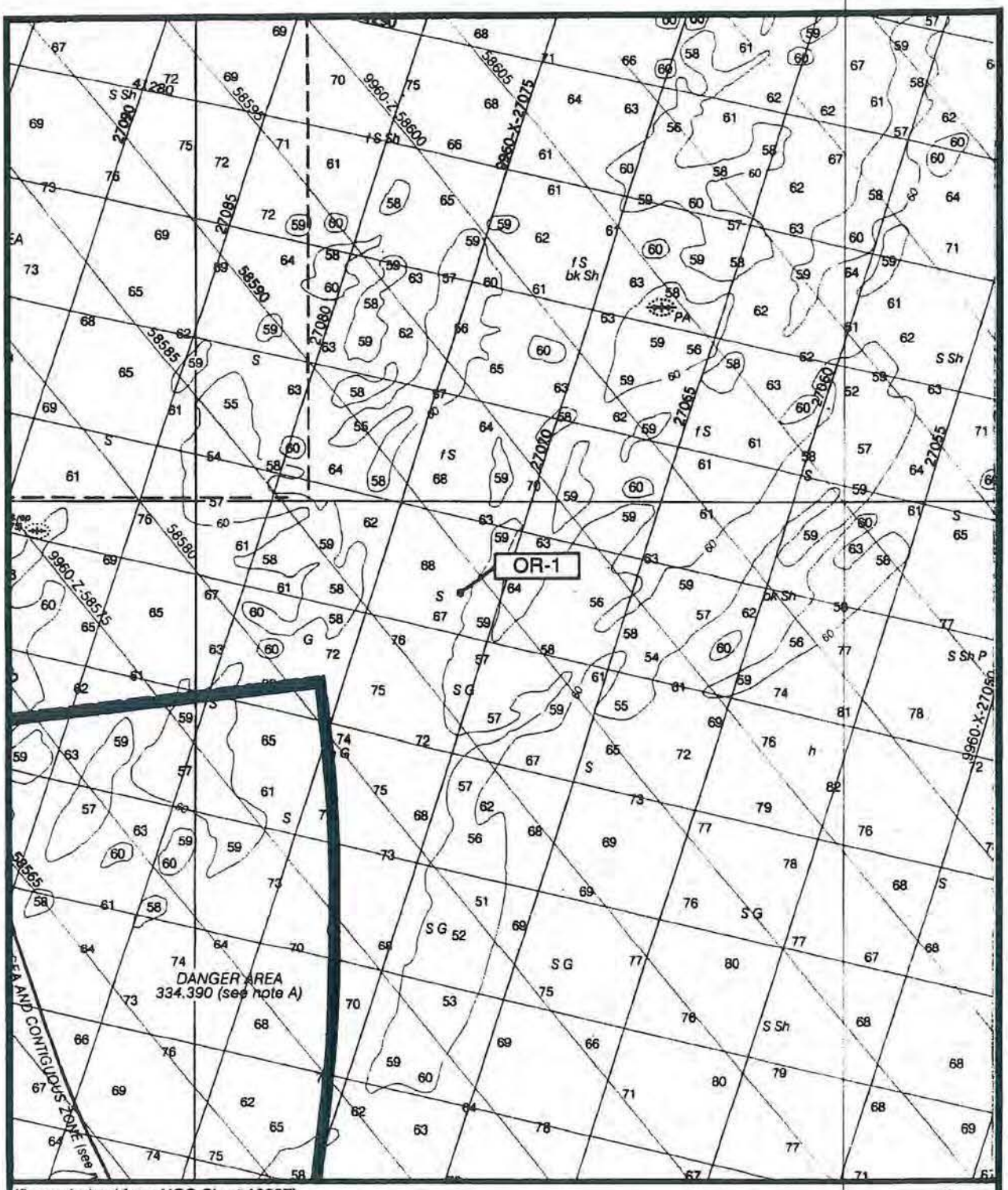
500 0 500 1000 1500 2000 2500

Figure 1. Site map showing location of sample sites at Yorktown Ammunition Pier, Naval Weapons Station Yorktown, Virginia.



(figure derived from NOS Chart 12224)

Figure 2. Site map showing location of the Chesapeake Bay Reference Site (CR-1) in the Chesapeake Bay, Virginia.



(figure derived from NOS Chart 12207)

Yards

1000 0 5000 10000

Figure 3. Site map showing location of the Ocean Reference Site (OR-1) in the Atlantic Ocean.

TABLE 1. SAMPLING STATION LATITUDE AND LONGITUDE	
Station	**Location**
10	37°15.193′N; 076°31.770′W
11	37°15.255′N; 076°31.821′W
12	37°15.321′N; 076°31.883′W
13	37°15.376′N; 076°31.939′W
14	37°15.386′N; 076°32.030′W
15	37°15.440′N; 076°32.000′W
20	37°15.344′N; 076°31.728′W
21	37°15.386′N; 076°31.782′W
22	37°15.431′N; 076°31.829′W
23	37°15.514′N; 076°31.911′W
24	37°15.677′N; 076°31.959′W
25	37°15.722′N; 076°32.014′W
31	37°15.580′N; 076°32.116′W
32	37°15.520′N; 076°32.163′W
33	37°15.512′N; 076°32.059′W
Bay Reference Site	37°15.005′N; 076°05.707′W
Ocean Reference Site	36°49.446′N; 075°37.749′W

TABLE 2. CHEMICAL AND PHYSICAL ANALYSIS REQUIREMENTS	
Physical Characteristics	Grain Size Analysis
Metals in Sediment	As, Cd, Cr, Cu, Pb, and Sb
Organics in Sediment	Aroclor 1254, Aroclor 1260, Dioxin, Oil and Grease, and Total Organic Carbon
Metals in Clam Tissue	As, Cd, Cr, Cu, Hg, Ni, Pb, and Zn

To obtain the composite samples for analysis, the fifteen pier sites were composited in the field as noted previously to produce three samples for whole sediment bioassay. Equal volumes of sediment from each site within each composite group were placed in a 25-gallon stainless steel container. Each composite sediment sample was homogenized and placed into clean airtight sample containers, which were then stored

on ice for shipment to the analytical laboratories. All quality control procedures for sample collection and handling were in accordance with the "Green Book" and Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA SW-846, 3rd edition (1996).

Whole sediment bioassays were conducted using the marine benthic amphipod species *Leptocheirus plumulosus* and the marine polychaete *Nereis virens*. Assessment of toxicity was accomplished by conducting 10-day sediment bioassays to compare the survival of the test organisms placed in the NWS Yorktown sediment to the survival of the organisms placed in the reference sediments. Five replicates were established for each sample for both the *Leptocheirus* tests and the *Nereis* tests. Dunnett's test, as described in the Green Book, and an Analysis of Variance (ANOVA) were performed to determine whether exposure of the amphipod and polychaete to the sediments resulted in significant differences in survival. All methodologies and QA/QC practices were followed as specified in the "Green Book" and the EPA Inland Testing Manual ("Gold Book"). The results are presented in Table 3, and are represented as average values for the five replicates.

TABLE 3.
SEDIMENT BIOASSAY TEST RESULTS

Sample Identification	*Leptocheirus plumulosus* (% Survival)	*Nereis virens* (% Survival)
Lab Control	99	100
Sample 1 (Stations 10-15)	97	100
Sample 2 (Stations 20-25)	64[2]	100
Sample 3 (Stations 31-33)	38[3]	87
Bay Reference Site	75	100
Ocean Reference Site	97	100

[2] Pieces of dead, unidentified polychaetes observed to be present in the two replicates with lowest survival (20% and 30%). Survival in replicates without polychaetes was 70-100%.
[3] Pieces of dead, unidentified polychaetes observed to be present in 4 of the 5 replicates. The replicate without polychaetes had the highest survival at 70%.

Good survivorship was observed in four of the six *Leptocheirus* tests, and in all six of the *Nereis* tests, indicating no significant toxicological effect on the survival of either species exposed to these sediment samples. Two of the *Leptocheirus* tests, for sediment samples 2 and 3, had lower than expected survival (64% and 38% respectively). The fairly high mortality rates observed in the Composite 1 and Composite 2 samples were the probable result of biological interference from polychaetes that managed to pass through the sieve used to prepare the sediment for testing. The Green Book and the Gold Book acknowledge that biological interference from indigenous organisms in the test sediments can be problematic. At the end of the test, each replicate of each test was sieved to capture and count the surviving animals. In the Sample 2 test replicates, sieving turned up pieces of dead polychaetes in two of the replicate chambers. These two chambers had very low survival of *Leptocheirus* (20% and 30%). The three replicates without polychaete remains had good survival (70%, 100%, and 100%). Similar results were observed in the Sample 3 test replicates, where polychaete remains were observed in four of the five replicate chambers. These chambers exhibited very low survival, while the single chamber without polychaetes had a survival of 70%. Since only the test replicates that had polychaete remains in them at the end of the test exhibited high mortalities, and all other replicates exhibited low mortalities, it is evident that biological interference occurred. Furthermore, the statistical analysis of the data showed that the composite sample test results were not statistically significantly different from the Bay reference site and the Ocean reference site ($p= 0.05$). There was a statistically significant difference between all of the test samples and the laboratory control however, which indicates that the observed mortality was not due to lab induced problems. The results and observations for these tests point toward biological interference as the probable cause of the observed mortalities rather than sediment toxicity.

Bioaccumulation analysis was performed on the sediment samples using the clam *Macoma nasuta*, testing for potential accumulation of the metals Arsenic, Cadmium, Chromium, Copper, Mercury, Nickel, Lead, and Zinc (Table 4). Lab results for each of these metals were typically below or near the specified detection limits. Statistical analysis of the data indicates that only the values for lead detected in the pier samples were significantly greater ($p=0.05$) than those of the Ocean Reference site. Additionally, final body burden values for all analytes except for lead were not significantly different from initial body burden values. Actual concentrations of lead in the pier samples were low, however, and therefore should not be cause for concern.

TABLE 4. SEDIMENT BIOACCUMULATION TEST RESULTS (in parts per million)								
Metal Analyte (Detection Limit)	As (0.5)	Cd (0.05)	Cr (1.0)	Cu (1.0)	Hg (0.05)	Ni (2.0)	Pb (0.2)	Zn (1.0)
Initial	1.88	0.046	0.876	22.6	0.093	1.80	0.10	41.0
Lab Control	1.58	0.043	0.894	26.3	0.131	1.84	0.20	53.2
Sample 1 (Composite 3)	1.64	0.039	0.658	22.8	0.108	1.58	0.42	42.4
Sample 2 (Composite 2)	1.74	0.037	0.946	35.8	0.140	2.20	0.30	38.6
Sample 3 (Composite 1)	1.78	0.055	0.739	31.4	0.110	2.24	0.40	89.4
Bay Reference Site	1.74	0.041	0.656	20.2	0.124	1.56	0.28	48.8
Ocean Reference Site	1.72	0.040	0.459	17.0	0.117	1.05	0.10	62.0

* Detection limit for each analyte in parts per million

Chemical analysis was performed on sub-samples of the three pier sites and the two reference sites. These samples were analyzed for seven metals (As, Cd, Cr, Cu, Pb, and Sb), two specific PCB congeners (Aroclor 1254 and Aroclor 1260), Oil and Grease, and Total Organic Carbon (TOC). The methods used for these analyses are described in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA SW-846, 3rd edition, December 1996. Method 8082 was used to analyze for Aroclor 1254 and 1260, while oil and grease samples were analyzed using Method 413.1. Method 9060 was used to analyze for TOC. The results of these analyses are provided in Table 5, and are reported in μg/g (ppm) on a wet weight basis. The pesticides Aroclor 1254 and Aroclor 1260 were not detected (ND) in any of the samples. Additionally, arsenic and antimony concentrations were below method detection limits on all samples. The remainder of the analytes was detected, but not in concentrations that are high enough to be of concern.

TABLE 5.
SEDIMENT CHEMISTRY ANALYSIS RESULTS
(in $\mu g/g$)

	Sample 1 (Sta.10-15)	Sample 2 (Sta.20-25)	Sample 3 (Sta.31-33)	Field Duplicate	Bay Reference	Ocean Reference	Detection Limit
Arsenic (As)	<40[1]	<33[1]	<35[1]	<42[1]	<43[1]	<42[1]	50
Cadmium (Cd)	1.3	1.8	1.0	1.2	1.2	<0.84[1]	1.0
Chromium (Cr)	19	19	15	19	12	3.3	1.0
Copper (Cu)	7.9	7.3	6.5	7.5	3.7	<0.84[1]	1.0
Lead (Pb)	12	17	9.5	16	<8.6[1]	<8.4[1]	10
Antimony (Sb)	<7.7[1]	<6.7[1]	<7.0[1]	<8.5[1]	<8.6[1]	<8.4[1]	10
Aroclor 1254	ND	ND	ND	ND	ND	ND	1.0
Aroclor 1260	ND	ND	ND	ND	ND	ND	1.0
Oil and Grease	85	88	21	21	73	24	2.0
TOC	3000	3200	2900	2200	2200	430	50

[1] Value below actual detection limit

Physical analysis of the sediment samples was conducted, and the results are presented in Table 6. Samples were analyzed for particle size to determine the percentage of gravel, sand, silt, and clay that each was comprised of. Particle size analysis of the samples indicates that the NWS Yorktown Ammunition Pier Sites contained high percentages of clay and silt, and low percentages of sand. Both the Bay Reference and the Ocean Reference sites possessed high percentages of sand, and low percentages of silt and clay. These results are typical of pier sites located within a river, where the deposition of river borne fine sediments is a continuous occurrence.

TABLE 6. SEDIMENT PHYSICAL ANALYSIS RESULTS						
	Sample 1 (Sta.10-15)	Sample 2 (Sta.20-25)	Sample 3 (Sta.31-33)	Control	Bay Reference	Ocean Reference
% Gravel	0	0	0	0	0	0.3
% Sand	1.2	6.1	3.8	12.7	46.9	98.1
% Silt	34.2	31.2	36.9	49.0	38.6	0.5
% Clay	64.6	62.7	59.2	38.3	14.6	1.1

Dioxin analysis was performed using EPA Method 1613: Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGC/ HRMS, updated October 1994. Dioxin concentrations were analyzed for Samples 1, 2, and 3, as well as the two reference sites (Table 7). Dioxin was detected at all sites including the reference sites at the extremely low method detection limits used in this analysis. The dioxin concentration in each sample ranged from 2.05-2.83 parts per trillion, while the reference site concentrations were somewhat lower at 0.70 and 0.03 parts per trillion. All sample concentrations were well below the required detection limit of 50 parts per trillion.

TABLE 7. DIOXIN ANALYSIS RESULTS (in parts per trillion)		
Sample Identification	**Dioxin Concentration**	**Detection Limits**
Sample 1 (Sta. 10-15)	2.26	0.02
Sample 2 (Sta. 20-25)	2.05	0.02
Sample 3 (Sta. 31-33)	2.83	0.04
Bay Reference Site	0.70	0.03
Ocean Reference Site	0.03	0.02

Overall, the results of these analyses indicate that the sediments in the area of the NWS Ammunition Pier are suitable for disposal at the Norfolk Ocean Disposal Site. In general, there were higher concentrations of metals observed in the pier samples than in the reference samples. This is expected due to the proximity of the sites to an active cargo handling pier, and due to the tendency for metals to bind readily to silty sediment particles. None of the concentrations found were at levels of concern. This was supported by the bioaccumulation tests, which demonstrated no significant difference in bioaccumulation rates of the metals between the pier and reference sites, with the

exception of lead. Lead concentrations in the pier samples were significantly different (p=0.05) than the concentrations found at the Ocean reference site; however, the actual concentration values were very low at 0.3 to 0.42 ppm. The sediment bioassay tests were slightly less conclusive. The *Nereis virens* tests showed no significant difference in survivorship between the pier and reference sites, but the *Leptocheirus plumulosus* tests experienced unexpected mortalities in some of the Sample 2 and Sample 3 test replicates. It is believed that the observed mortality in these replicates was due to biological interference rather than sediment toxicity. This conclusion is supported by the fact that polychaete body parts were found in all of the sieved samples that had very low survival at the end of the test, and none were found in the remainder of the replicates, which exhibited high survival. Furthermore, although survivorship was lower than expected in two of the *Leptocheirus plumulosus* tests, the statistical analysis of the data showed that the composite sample test results were not statistically significantly different from the Bay reference site and the Ocean reference site.

REFERENCES

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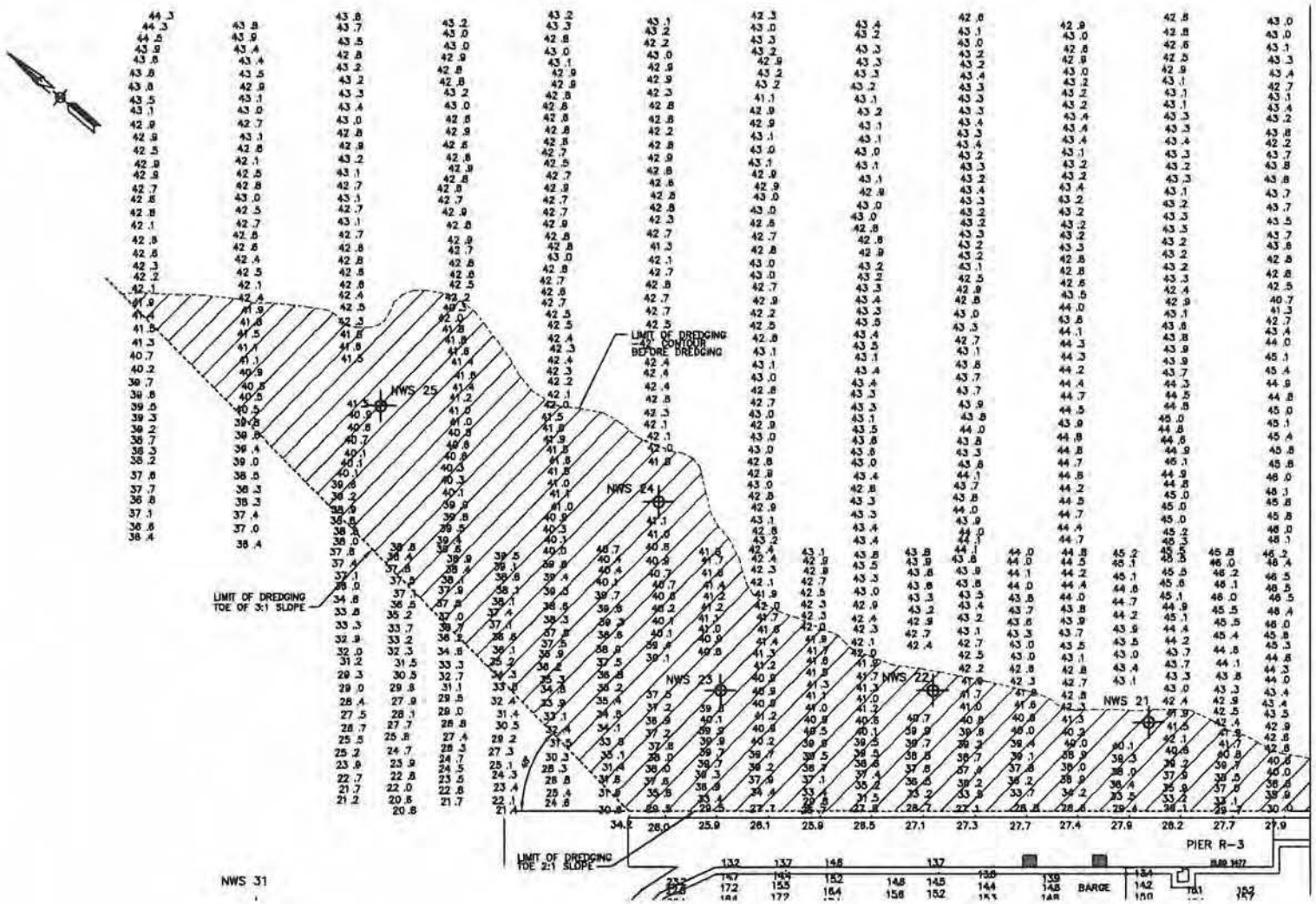
US Environmental Protection Agency/ US Army Corps of Engineers. Technical Report EPA/ 823/B-98/004, Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S.- Inland Testing Manual, 1998.



REVISIONS

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ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA

NAVAL WEAPONS STATION
YORKTOWN, VA.

MAINTENANCE DREDGING

PIER R-3, OUTBOARD

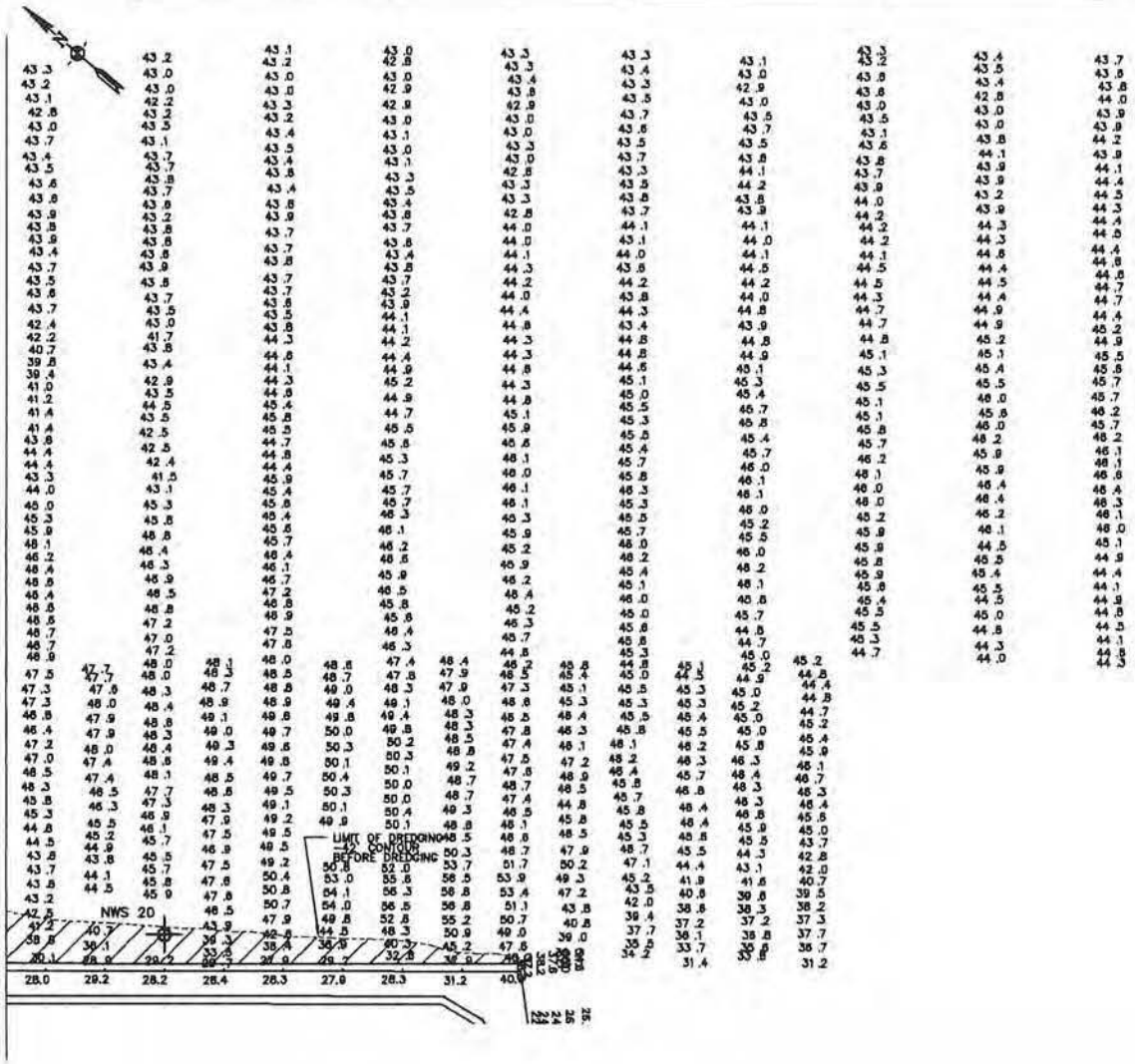
DEPARTMENT OF THE NAVY
NAVAL STATION

SCALE 1" = 100'
SPEC. NO. 00-00-8078
N62470-00-B-8078

SHEET 2 OF 4

C-1

FILENAME: 8078C001.DWG PLOT SCALE: 1=1, SAVED ON 09/15/00 AT 09:57, XREFS: 8078C001.DWG



1"=100' 0' 100' 200' 300' 400' 500'

REVISIONS

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DEPARTMENT OF THE NAVY
NAVAL STATION
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA
NAVAL WEAPONS STATION
YORKTOWN, VA.

MAINTENANCE DREDGING

PIER R-3, OUTBOARD

SCALE: 1" = 100'

CONTR NO. N62470-98-B-6078

SHEET 3 OF 4

C-2

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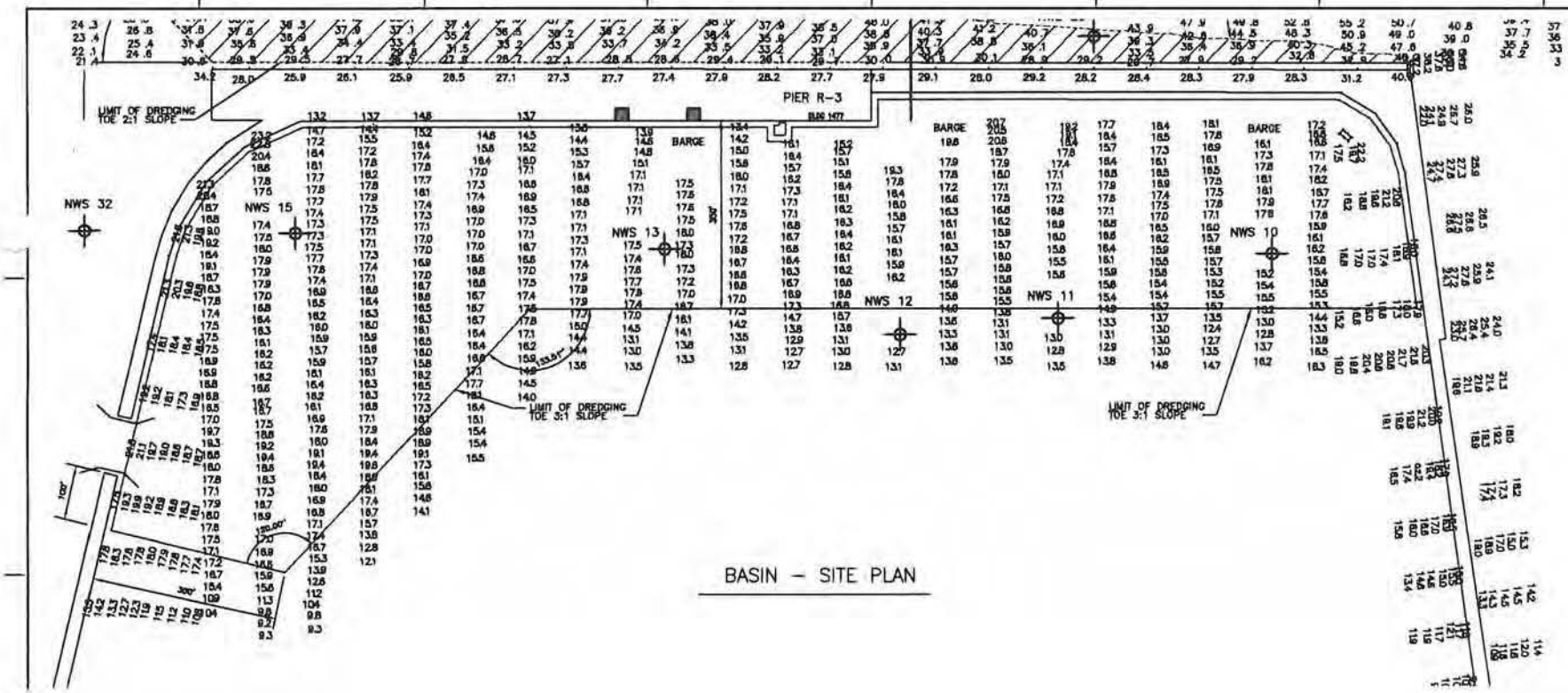

BASIN – SITE PLAN

1"=100' 0' 100' 200' 300' 400' 500'

REVISIONS

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ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL WEAPONS STATION
YORKTOWN, VA.

MAINTENANCE DREDGING
PIER R-3, INBOARD

SCALE: 1" = 100'
N62470-90-B-6067

C-3

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DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
200 STOVALL STREET
ALEXANDRIA, VA 22332-2300

Pass to Appropriate Code Office

IN REPLY REFER TO
Serial No. H170
18 June 1991

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0520
0523

MEMORANDUM

From: NAVFACENGCOM (Code 09CTA1)
To: Distribution List

Subj: ASBCA NO. 37368, APPEAL OF J.M. CASHMAN, INC., UNDER CONTRACT NO. N62470-84-C-4426; FORWARD DECISION IN

Encl: (1) ASBCA decision; cvr ltr dtd 11 Jun 91

1. Enclosure (1) is forwarded for your information.

2. Please do not immediately close the files on these claims. The appellant has thirty days to ask for ASBCA reconsideration and four months to file an appeal with the Court of Appeals for the Federal Circuit. I will let you know if, and when, such filings occur. If they do, the files must be kept active until such time as the Board or appeals court renders a decision on the filing.

3. There is a lesson to be learned from the fact that claims were made under this contract. That is, a more broadly worded yet suscinct disclaimer would more than likely have precluded this litigation. Specifically, the contract should accurately state whatever is actually and factually known about the existing conditions and then say something like, "The contractor is responsible for dealing, at no additional cost to the Government, with any condition encountered that is not unusual when compared to the conditions recognized in the dredging business as usual in dredging activities such as those required under this contract." Such a disclaimer shifts to the contractor all risk associated with the possibility of encountering the sorts of things that could be deposited in the site by the river's current, or by the activities normally associated with an active pier.

4. Please convey my thanks to all participants for their assistance in reaching this successful outcome. Please contact me at your convenience if you have questions or comments.

David G. Ranowsky
Trial Counsel
(703) 325-0462

Distribution:
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LANTNAVFACENGCOM (Code 09C)
ROICC NWS YORKTOWN, VA (Attn: Ms. J. Smith)

JUN 1991
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ARMED SERVICES BOARD OF CONTRACT APPEALS
SKYLINE SIX
5109 LEESBURG PIKE
FALLS CHURCH, VIRGINIA 22041-3208
Telephone: (703) 756-8502

11 June 1991

CERTIFIED MAIL
RECEIPT REQUESTED

Paul W. Losordo, Esq.
21 McGrath Highway
Suite 302
Quincy, MA 02169

Counsel
Naval Facilities Engineering Command
Hoffman Building II, Room 11N69 (09CT3)
200 Stovall Street
Alexandria, VA 22332-2300
Attention: David G. Ranowsky, Esq.

Re: ASBCA No. 37368
Appeal of J. M. Cashman, Inc.
Under Contract No. N62470-84-C-4426

Dear Sirs:

Enclosed is one authenticated copy of the Board's decision.

Very truly yours,

EDWARD S. ADAMKEWICZ
Recorder

Enclosure
as stated

ENCLOSURE(1)

ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeal of --	)	
	)	
J. M. Cashman, Inc.	)	ASBCA No. 37368
	)	
Under Contract No. N62470-84-C-4426	)	

APPEARANCE(S) FOR THE APPELLANT: Paul W. Losordo, Esq.
Quincy, MA

APPEARANCE(S) FOR THE GOVERNMENT: C. John Turnquist, Esq.
Navy Chief Trial Attorney
David G. Ranowsky, Esq.
Trial Attorney
Naval Facilities Engineering Command
Alexandria, VA

OPINION BY ADMINISTRATIVE JUDGE HARPER

Appellant, J. M. Cashman, Inc., a Massachusetts corporation located at North Weymouth, Massachusetts (hereinafter "Contractor"), appeals from a decision of a contracting officer of the United States Department of the Navy (hereinafter "Government") which denied a claim for a price increase under a contract for dredging a portion of the York River bottom in Virginia. Contractor claimed that it was entitled to an equitable adjustment in the contract price because it encountered latent changed conditions of the river bottom which caused Contractor increased costs above those it had contemplated when it prepared its bid.

FINDINGS OF FACT

1. On 29 September 1986 Government issued a solicitation N62470-84-B-4426 which sought bids for maintenance dredging of a portion of the York River bottom where the river abuts the Naval Weapons Station at Yorktown, Virginia. In addition, the dredging was to cover a portion of the river bottom where it adjoins the Naval Supply Center, Cheatham Annex, Williamsburg, Virginia. This appeal is largely concerned with the dredging performed at the Naval Weapons Station. (R4, tab 1)

2. The dredging to be performed at the Naval Weapons Station was shown by the solicitation to involve an estimated amount of approximately 198,300 cubic yards of river bottom. Such river bottom was surrounded by a large "C" shaped pier on three sides and the shoreline on the fourth side. The outermost side of the pier, which was parallel to the shoreline, was approximately 2,300 feet long. Large ships tie up to load and unload alongside the outer face of such pier. A large crane which runs on railroad

rails along the top of the pier assists in the loading and unloading of ships. The two sides of the pier, which extend outwardly at approximately 90 degree angles from the shoreline, were each approximately 1,000 feet long. Access to the water surrounded by the pier and the shoreline within the confines of the pier is through a lift bridge which comprises a part of the pier. (R4, tab 1; exh. G-1, -5)

3. The solicitation Instructions to Bidders permitted bidders to bid upon either of two methods of performing the proposed contract. The river bottom was to be dredged with a clam shell bucket raised and lowered by a powered crane mounted on a barge. However the disposal of the dredged material could be handled by dumping it into a scow with subsequent removal from such scow by the bidder utilizing its own hydraulic pumping equipment to pump such material directly upon a land disposal area located upon Craney Island in the James River at Norfolk, Virginia, or the bidder could dump the dredged material into a scow or barge of the bidder containing bottom opening hopper doors which would permit the material to be dumped so as to fall into a rehandling basin in the water adjoining Craney Island for subsequent hydraulic pumping of such dredged material by Government with Government's own pumping equipment onto the disposal area on Craney Island. (R4, tab 1)

4. The solicitation contained a Log of Soil Borings taken on 23 October 1984 in behalf of Government at the dredging site. The borings covered the river bottom at a depth of approximately 17 feet below the surface of the water to a depth of 25 feet below the river bottom. The boring logs disclosed that the material to be dredged was olive green and black silty clay - saturated - very soft, and that the borings were representative of material existing within the entire area to be dredged. The solicitation stated that the test boring logs were furnished to bidders "to make available to the [bidders] the information obtained by Government investigation." The solicitation further stated that "[t]he Government does not guarantee that these borings indicate actual conditions other than at the exact locations and at the time they were made." (R4, tab 1)

5. The solicitation contained written specifications for the work to be performed under the proposed contract. Such specifications contained the following language pertinent to this appeal:

Section 02881

Dredging

Part 1 - General

1.1 EXTENT OF DREDGING WORK: Dredging includes the removal and disposal of all materials encountered, as specified and indicated.

1.1.1 Material to be Removed: The material to be removed . . . for Yorktown is shown on the boring logs.

1.1.1.1 Hard Material: The removal of hard material is not included. Hard material is defined as material requiring blasting or the use of special equipment for its economical removal, and includes boulders or fragments too large to be removed in one piece by the dredge.

1.1.2 Artificial Obstructions: Except as indicated, the Government has no knowledge of the existence of wrecks, wreckage, and other material of a size or character that will necessitate the use of explosives or the employment of special or additional equipment for their economical removal or knowledge of the presence of cables, pipes, or other artificial obstructions except that for Yorktown metal pallets and miscellaneous metal items may be encountered adjacent to the pier. In case the actual conditions differ from those stated or shown, or both, an adjustment in contract price or time for completion, or both, will be made in the same manner as provided by the contract.

1.1.3 Quantity of Material (Yorktown): The total estimated amount of material to be removed from within the specified limits, including side slopes and exclusive of overdepths, is 118,800 cubic yards. The maximum amount of allowable overdepth dredging is estimated to be 79,500 cubic yards. The estimated quantity for bidding purposes and for application of the clause entitled "Variations in Estimated Quantities" of the General Provisions shall be the total quantity, including overdepth, 198,300 cubic yards. The quantities listed are estimates only. Within the limits of available funds, complete the work specified whether the quantities involved are greater or less than those estimated.

1.1.4 Quantity of Material (Cheatham Annex): The total estimated amount of material to be removed from within the specified limits, including side slopes and exclusive of overdepths, is 11,250 cubic yards. The maximum amount of allowable overdepth dredging is estimated to be 5,060 cubic yards. The estimated quantity for bidding purposes and for application of the clause entitled "Variations in Estimated Quantities" of the General Provisions shall be the total quantity, including overdepth, 16,310 cubic yards. The quantities listed are estimates only. Within the limits of available funds, complete the work specified whether the quantities involved are greater or less than those estimated.

1.1.5 Overdepth Dredging: To cover unavoidable inaccuracies of dredging processes, material actually removed to a depth of 2 feet below the depth specified and within the dredging limits will be measured and paid for at full contract price.

* * *

2.3 MEASUREMENT: The Government will take before and after dredging soundings.

2.3.1 Method of Measurement: The material removed will be measured by cubic yard in place by means of soundings taken before and after dredging. The drawings are believed to represent accurately the average existing conditions, but they will be verified and corrected, if necessary, by soundings taken shortly before dredging is begun in any locality. Soundings will be taken by lead line or sonic methods, or both, as determined by the Government; results of soundings by either or both of these methods will be the basis for payments. Any area sounded more than 30 days prior to beginning dredging in the respective area will be re-sounded when requested by the Contractor. The Contractor has the option of being present when such soundings are being made.

2.3.2 Surveys During Progress of Work: Whether or not the contract depth is being made will be determined by soundings or sweepings taken behind the dredge as the work progresses. The Government will take progress soundings or progress sweepings.

2.3.3 Monthly Estimates: Monthly estimates of work completed will be based on the result of soundings taken during the progress of work or, at the option of the Contracting Officer, on 85 percent of the scow or barge measurement. Deductions will be made for dredging and disposal not in accordance with the specifications.

2.4 FINAL EXAMINATION AND ACCEPTANCE: As soon as practicable after the completion of such sections as in the opinion of the Contracting Officer will not be subject to injury by further operations under the contract, each section will be thoroughly examined by the Government by sounding or sweeping, or by both sounding and sweeping. Remove all shoals and lumps disclosed by this examination by dragging the

> bottom or by dredging at no additional cost to the Government. However, if the bottom is soft and the shoal areas so small as to form no material obstruction to navigation, their removal may be waived at the discretion of the Contracting Officer. The Contractor or his authorized representative will be notified when soundings or sweepings are to be made and will be permitted to accompany the sounding or sweeping party and to inspect the data and methods used in preparing the final estimate. When sections are found to be in a satisfactory condition, the work therein will be accepted as complete. Final estimates will be subject to proper deductions or to corrections of deductions already made on account of excessive overdepth, dredging outside of authorized areas, or material disposed of in an unauthorized manner.

(R4, tab 1)

6. The drawings which comprised a part of the solicitation and which were to be part of the proposed contract showed the pier location in the York River at the Naval Weapons Station and depth soundings in feet and tenths of a foot covering the entire river bottom area to be dredged. Such depth soundings were taken by handline at the face of the pier and elsewhere by survey depth recorder. The soundings were taken during the period of 25 February to 4 March 1985. The drawings indicated the approximate location of an existing sanitary sewer line, sometimes referred to as a "Sanitary Force Main"; running from approximately the center of the outermost part of the pier on a diagonal line to the shore across the area to be dredged at a depth of approximately 23 feet below the river bottom. (R4, tab 2; exh. G-5, -6)

7. There was nothing to impede the normal one- to two-knot flow of the York River and the ebb and flood tidal effects of the water across the river bottom area that was to be dredged (R4, tab 2; exh. G-5, -6; tr. 2/71, 169).

8. The Instructions to Bidders which comprised a part of the solicitation contained the following caveat:

> 4. CONDITIONS AFFECTING THE WORK. Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Failure to do so will not relieve bidders from responsibility for estimating properly the difficulty or cost of successfully performing the work.

In addition to the foregoing instructions the solicitation showed that the proposed contract would contain, among others, the following two standard clauses established by the Federal Acquisition Regulations:

36. FAR 52.236-2 DIFFERING SITE CONDITIONS (APR 1984)

(a) The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Contracting Officer of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those originally encountered and generally recognized as inhering in work of the character provided for in the contract.

(b) The Contracting Officer shall investigate the site conditions promptly after receiving the notice. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the contract modified in writing accordingly.

(c) No request by the Contractor for an equitable adjustment to the contract under this clause shall be allowed, unless the Contractor has given the written notice required; provided, that the time prescribed in (a) above for giving written notice may be extended by the Contracting Officer.

(d) No request by the Contractor for an equitable adjustment to the contract for differing site conditions shall be allowed if made after final payment under this contract.

37. FAR 52.236-3 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK (APR 1984)

(a) The Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and roads; (3) uncertainties of weather, river stages, tides, or

similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during work performance. The Contractor also acknowledges that it has satisfied itself as to the obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Government, as well as from the drawings and specifications made a part of this contract. Any failure of the Contractor to take the actions described and acknowledged in this paragraph will not relieve the Contractor from responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to the Government.

(b) The Government assumes no responsibility for any conclusions or interpretations made by the Contractor based on the information made available by the Government. Nor does the Government assume responsibility for any understanding reached or representation made concerning conditions which can affect the work by any of its officers or agents before the execution of this contract, unless that understanding or representation is expressly stated in this contract.

(R4, tab 1)

9. Contractor's employee, James Skaves (hereinafter "Skaves"), prepared Contractor's bid for the job (tr. 1/32, 33). Contractor had had extensive experience in dredging river bottoms prior to preparation of the bid (tr. 1/34-35, 40). Contractor knew that dredging of river bottoms with a mechanical crane and clam shell bucket with the dredged material being dumped into a bottom emptying hopper scow is an equipment oriented operation and that a bidder must anticipate many equipment breakdowns (tr. 1/34-35, 47-48). In preparing Contractor's bid, Skaves planned upon Contractor's mechanical equipment being broken down at least 15 percent of Contractor's working time (tr. 1/47-48, 83-84). Contractor's bid price was based upon an expected daily average dredging production of 2,100 cubic yards of dredged material (tr. 2/42). Skaves also knew that the most recent dredging at the Naval Weapons Station work site had been done over 20 years ago in 1965 (tr. 2/40). Skaves further knew that under the terms of the proposed dredging contract, Contractor would be solely responsible for maintaining its own equipment in good working order (tr. 1/114-15). Skaves was aware that the dredging contract would contain the following clauses pertaining to execution of the work:

> 2.2.6 Plant: The plant, scows, coamings, barges . . . and associated equipment [of contractor] shall be of a size sufficient to meet the requirements of the work and shall be kept at all times in condition for efficient work.
>
> 2.2.7 Disposal of Excavated Material: The Contractor shall be responsible for the proper and safe transportation and disposal of dredged materials. All dredged material shall be transported to, and disposed of in, the Craney Island Disposal Area. The depositing of dredged materials in unauthorized places is strictly forbidden. . . . The Contractor shall comply with the "Regulations Governing Use of Craney Island Disposal Area and Facilities, Norfolk Harbor, Virginia" revised 23 July 1975. This document is available from the Corps of Engineers, Norfolk, Virginia.

(R4, tab 1)

10. The aforesaid regulations governing the use of Craney Island provided that only dredged materials which could later be rehandled by hydraulic pipeline dredge such as mud, silt, clay, sand, shell and marl, and composites thereof, should be dumped into the Craney Island Rehandling Basin (R4, tab 7).

11. Contractor chose not to make a prebid site visit and made no inquiries prior to bidding as to the conditions it might encounter in doing the dredging (tr. 2/49, 51). If Contractor had made a prebid site inspection or if it had made prebid inquiries of Government it could have learned that repairs were then being performed to Government's pier which surrounded the area to be dredged and would also be on-going during the time required for the dredging work. It could have learned that the Contractor performing such repairs was working from a barge alongside such pier chipping and removing spalled and loose concrete from the pier and replacing the same with wire mesh reinforced gunnite concrete, that some of the chipped concrete fell into the waters adjoining the pier together with some wire mesh, and that such ongoing work might have some impact upon the dredging work to be performed. (Tr. 2/141-42, 167)

12. When Contractor's bid was prepared Contractor knew that owners of piers would likely have little knowledge of what a dredging Contractor might encounter in dredging alongside such pier (tr. 1/41).

13. Based upon the information contained in the solicitation and its prior dredging experiences Contractor contemplated that if it was awarded the dredging contract it would dredge up some metal pallets, metal banding, and metallic materials commonly associated with the loading and unloading of ships (tr. 1/35, 36).

14. Contractor's bid allowed for performing the dredging job using its own powered mechanical crane mounted upon its own barge. Such crane would lower and raise its own clam shell bucket to dredge the muck and mud from the river bottom. The clam shell bucket had a 10 cubic yard capacity. It was approximately 15' long by 8' wide by 15' high (tr. 1/38-39). Contractor expected that the muck and mud to be dredged from the river bottom would consist of a very fine silty material such as was described in the Borings Report in the solicitation (tr. 1/80).

15. Contractor's bid was based upon the use of its aforesaid equipment in conjunction with its 13-year old steel bottom opening hopper scow. Such scow was approximately 250' long by 50' wide and contained seven hoppers (sometimes called pockets) for holding and transporting dredged materials. The maximum capacity of the scow was approximately 3,000 cubic yards of dredged material. Contractor's bid estimated that the scow would hold 2,100 cubic yards of material when in full operating condition. Each hopper had a set of heavy steel doors at the bottom which comprised a part of the bottom of the hull of the scow. The doors could be opened downwardly permitting the contents of the hopper to fall into the water beneath the scow. Each hopper was approximately 16 feet deep. When all hoppers were full the steel hopper bottoms or doors were at a depth of approximately 12 feet beneath the surface of the water. The hopper doors were not designed to be watertight. The hopper doors were attached to the hull of the scow by hinges located on the outermost edges of the doors; thus when the doors were closed the innermost edges of such doors (running longitudinally with the longitudinal axis of the scow) formed a very loose joint. Such joint left an open space between the edges of the doors of approximately one foot. To prevent the loss of the contents of the hopper through such space a heavy reinforced rubber strip or seal was attached to the edge of one of the two doors so that when the doors were closed the rubber impinged upon the edge of the opposing door thus closing off the open space. Steel aprons were constructed above the other joints formed by the remaining three edges of each door. To each such apron was attached a rubber seal or strip similar to the one used to close the space between the opposing edges of the two doors so as to minimize the loss through the joints of dredged material dumped into the hopper. (R4, tab 13; tr. 1/34-35, 38, 59, 82, 88-89, 99-100, 162-63; exh. G-1)

16. The steel hopper doors were opened and closed mechanically by a system comprised of large heavy chains each attached to one of the two innermost corners of each door, a heavy steel cable attached to each such chain (which cable passes up through a turning block mounted on the bulkheads, which separate the hoppers from each other), and a hydraulic mechanism for tightening the cables and chains. When the cables and chains were tightened the steel doors were pulled up to their fully closed position. When the tension on the cables and chains was released the weight of the steel doors together with the weight of the dredged material resting in the hopper would cause the doors to swing downwards and outwards so that the contents of the hopper would fall into the water beneath the scow.

Contractor intended to dredge the river bottom at the places designated in the solicitation, to place such dredged material into its scow, to transport the scow to the rehandling basin located adjacent to Craney Island, and to dump such dredged material into the rehandling basin. Accordingly, Contractor submitted a bid of $3.35 per cubic yard of dredged material to Government. (R4, tab 1, 13; tr. 1/34-35, 42-43, 59, 108-09, 162-63; exh. G-1)

17. Government awarded contract N62470-84-C-4426 to Contractor on 27 April 1987 to perform the dredging (R4, tab 1). Contractor arrived with its equipment at the work site on 15 August 1987. When Contractor's scow arrived at the job site it was in good working condition. The seals on the hopper doors were expected to seal off the fine silt to be dredged so that it would not escape from the scow. Contractor spent the first several days thereafter making repairs to its equipment and getting set up to do the actual dredging. On 20 August 1987 Contractor commenced dredging. On that day it reported that it had dredged 533 cubic yards of river bottom during a period of two hours of dredging which it took to the Craney Island rehandling basin where it was dumped. On 21 August 1987 it reported that it had dredged 1,244 cubic yards during five and one-half hours of dredging. On 22 August 1987 it reported that it had dredged 1,996 cubic yards during four and three-quarter hours. On 24 August 1987 Contractor reported that it was having trouble sealing the doors of three of the seven hoppers since it had had a collision at the rehandling basin and had grounded the scow causing damage to the hopper doors.

18. Despite the collision and grounding damages to its scow and mechanical maintenance problems with its crane, Contractor continued to work at the job site. On 24 August 1987 it reported it had dredged 1,392 cubic yards of river bottom during three hours of dredging; on 25 August 1987 it reported it had dredged 2,333 cubic yards in five hours. On 26 August 1987 it spent the entire day making repairs to its crane and did no dredging. On 27 August 1987 it continued to repair and replace parts on its crane while it also repaired leaks in the hydraulic door closing system of the scow and did no dredging. On 28 August 1987 it continued repairs on its crane and the hydraulic system of the scow and again did no dredging. Contractor's repairs continued until 3 September 1987 when it decided the damages to the scow from the collision and grounding were so severe that it should be drydocked for repairs (R4, tabs 4-6; tr. 1/90).

19. On 4 September 1987 the scow was drydocked at Norfolk, Virginia. Examination showed three holes in the lower hull plating, collision damage to the hopper doors with the leading edges of the doors severely crimped and buckled, the door seals torn off in the areas of the collision, and the scow completely disabled. Extensive repairs involving the hopper doors, steel aprons, rubber seals, interhopper bulkheads and other parts of the scow were made. The rubber seals (which were sometimes referred to at the shipyard as "Gaskets") and parts of the metal aprons were replaced. The repairs were completed and the scow returned to duty on 15 September 1987. (R4, tabs 4-6, 8; tr. 1/44)

20. On 16 September 1987 Contractor reported that its clam shell bucket picked up some 12" by 12" by 10' long timbers believed by Contractor to be from the guard rail of the bridge of the pier (while dredging alongside the pier) together with some wire rope and other debris (R4, tabs 4-6). Contractor had previously instructed its employees that when the clam shell bucket picked up any debris other than the river bottom muck and mud such debris was not to be placed in the hoppers of the scow but was to be placed on the deck of the scow for later unloading at the proper place for such items at Craney Island (tr. 1/105-06, 2/54). The regulations governing the use of Craney Island Disposal Area and Facilities, Norfolk Harbor, Virginia, clearly prohibited the disposal of debris other than mud, silt, clay, sand, shell and marl in the Craney Island Rehandling Basin (finding 10). Contractor was, nevertheless, aware that its employees often disregarded its instructions concerning not dumping debris into the scow's hoppers (R4, tab 4; tr. 1/107-08). When it bid the job, Contractor had anticipated that debris (which was not supposed to be dumped into the scow's hoppers and thence into the rehandling basin) would on occasion be dumped in the rehandling basin (tr. 1/108-09). There were occasions when Contractor knew of debris being dumped into its hoppers yet did not object. Contractor felt such action would be okay if it would not affect the operation of its scow (tr. 104-05, 2/58, 146, 147, 157, 164). Contractor reported that it had dredged 1,866 cubic yards of river bottom during seven hours of dredging on 16 September 1987 (R4, tabs 4, 5).

21. Contractor provided to Government reports of its daily activities. For the days listed it reported as follows:

Date	Time Spent Dredging	Cubic Yards Dredged	Contractor's Comments
17 Sept	10 hrs. 15 mins.	2933	
18 Sept	7 hrs. 0 mins.	2133	Improper operation of hydraulic system of scow caused hopper doors to stay open
19 Sept	0 hrs. 0 mins.	0	Repairs needed to scow & crane
21 Sept	7 hrs. 30 mins.	2111	Picked up 60' length of 1½" cable
22 Sept	6 hrs. 0 mins.	2815	Picked up two 10" pipes 30' long
23 Sept	6 hrs. 50 mins.	2800	
24 Sept	7 hrs. 0 mins.	2888	Picked up metal debris

25 Sept	7 hrs. 30 mins.	2592	Pocket No. 5 leaking
26 Sept	7 hrs. 0 mins.	2629	
28 Sept	9 hrs. 0 mins.	2888	
29 Sept	7 hrs. 0 mins.	2222	Material dredged silty with very little clay, picked up rocks and timber scraps
30 Sept	6 hrs. 15 mins.	2444	
1 Oct	6 hrs. 0 mins.	2548	
2 Oct	6 hrs. 0 mins.	2666	
3 Oct	7 hrs. 30 mins.	2488	
5 Oct	7 hrs. 0 mins.	2533	Picked up metal banding, concrete reinforcing bars and matting and wire rope
6 Oct	7 hrs. 10 mins.	2696	Picked up metal banding, metal ladder, concrete reinforcing bars and wire rope
7 Oct	6 hrs. 0 mins.	2222	Picked up 30' long piling, metal strapping, steel pallets, and concrete reinforcing bars
8 Oct	4 hrs. 15 mins.	1866	Picked up metal strapping, concrete reinforcing bars, small diameter pipe; could not load Pocket Nos. 1 & 2 because of broken cable on hopper door closing mechanism

(R4, tabs 4-6)

22. The broken cable of the hopper door closing mechanism of Contractor's scow, mentioned in the immediately preceding finding, had been broken as a result of one of Contractor's employees attempting to force the hopper doors to close when foreign material had jammed the closing mechanism (tr. 1/51, 53).

23. On 8 October 1987 Contractor wrote to Government complaining that "a great deal of foreign matter is present at the face of the pier. The list of foreign matter includes metal pallets, banding, mesh from the gunite operation and chunks of concrete with reinforcing steel. The volume of this material is greater than one would normally expect in an operation of this type." Contractor argued that such debris had "a great potential for damaging the seals and moving parts of the doors of the scow." Contractor further advised that it was dumping the debris at Craney Island "as provided for in the contract and as such [Contractor] has no further responsibility for the material." (R4, tab 10)

24. Contractor's reports to Government further showed as follows:

Date	Time Spent Dredging	Cubic Yards Dredged	Contractor's Comments
9 Oct	5 hrs.	1777	Picked up 30' & 40' long pilings, dropped pilings into Pocket No. 6 jamming doors, broke door closing mechanism cable in Pocket No. 1
10 Oct	0 hrs. 0 mins.	0	Repairs made to scow door closing mechanism
11 Oct	0 hrs. 0 mins.	0	Replaced cables and chain for door closing mechanism Pocket No. 1; removed 30' piling jammed in doors of Pocket No. 5
12 Oct	8 hrs. 30 mins.	2440	Loaded four 20' pilings, two 30' pilings, 100' of electrical cable, one 20' 4" X 4" timber, one 15' long 10" pipe, and one steel plate 2' x 30' into scow
13 Oct	7 hrs. 30 mins.	2633	Picked up old piling, electrical cable, rebar and banding
14 Oct	6 hrs. 45 mins.	2474	Picked up debris
15 Oct	6 hrs. 15 mins.	2414	Picked up "much debris"
16 Oct	5 hrs. 53 mins.	2377	Picked up "much debris"

17 Oct	0 hrs. 0 mins.	0	Repairs to crane
19 Oct	2 hrs. 0 mins.	711	Repairs to crane, debris has not delayed progress
20 Oct	6 hrs. 30 mins.	2518	Contractor claims debris causing problem with doors sealing properly
21 Oct	5 hrs. 15 mins.	1244	Contractor claims scow "leaking down"

(R4, tabs 4-6)

25. When Contractor's scow returned to the work site on 21 October 1987 after dumping the dredged material of 20 October 1987 at the Craney Island rehandling basin Contractor discovered that the hopper doors had not opened all the way, or the scow might have been run aground, since all pockets of the scow still contained 4' to 5' of dredged material in them (R4, tab 6). Contractor was only able to add 1,244 cubic yards of new dredged river bottom to the scow on 21 October 1987 (tr. 1/111-12, 121-23). Contractor's reports that the scow's hoppers were "leaking down" and that the hopper doors were not properly sealing were not based upon actual knowledge of leakage and improper sealing. Contractor based its reports of improper sealing and "leakage" upon seeing what appeared to be a downward settlement of the mud into the hoppers when observed from the deck of the scow. Contractor had no actual knowledge of leaks or of the scow's doors failing to shut. (Tr. 1/134-35, 136, 137, 147-48, 162-64, 2/53, 61, 67, 159, 160-61, 164)

26. Contractor's daily reports to Government of 22 October 1987 showed the following:

Date	Time Spent Dredging	Cubic Yards Dredged	Contractor's Comments
22 Oct	7 hrs. 15 mins.	2844	Scow "leaking" because of debris "hung up on closing chains and seals"

(R4, tabs 4-6)

27. On Friday, 23 October 1987 Contractor had a diver examine the hopper doors and door closing mechanisms of its scow. No dredging was accomplished. Contractor reported that the diver found a 150' long two-inch electrical cable and a 150' long three-inch wire cable wrapped around the chains of the opening and closing mechanism for hoppers 1 and 2 of the scow. At Contractor's request Government took photographs of the debris entangled in the hopper door opening and closing mechanism chains. Further

inspection of the scow disclosed 100' of one-inch cable entangled in the chains of the closing mechanism for hopper 4. The balance of the working day was spent removing said debris together with additional debris entangled in the chains of hoppers 3, 5 and 7 (R4, tabs 4, 5; tr. 1/42-44, 59, 2/55-56, 57, 148-49; exh. G-2).

28. Contractor's daily reports to Government for 26 and 27 October 1987 showed as follows:

Date	Time Spent Dredging	Cubic Yards Dredged	Contractor's Comments
26 Oct	7 hrs. 30 mins.	2577	Debris problem with seals and closing chains
27 Oct	6 hrs. 30 mins.	2666	

(R4, tabs 4-6)

29. On 27 October 1987 Contractor wrote to Government complaining that it had "encountered a great deal of foreign matter while conducting the dredging at Pier R-3." Contractor advised that it had experienced several days of "lost or reduced production due to the debris and their [sic] interference with the ability of the scow to effectively hold the dredge spoil." Contractor indicated that it expected to lose more production time because of "damage to the scow, caused by the debris." Contractor further advised that it expected to be compensated for its lost time and damages to its scow. (R4, tab 13)

30. On 28 October through 30 November 1987 Contractor reported to Government as follows:

Date	Time Spent Dredging	Cubic Yards Dredged	Contractor's Comments
28 Oct	6 hrs. 40 mins.	2400	None
29 Oct	6 hrs. 15 mins.	2666	None
30 Oct	6 hrs. 30 mins.	2074	None
31 Oct	7 hrs. 0 mins.	2666	None
2 Nov	9 hrs. 30 mins.	2844	Picked up wire cages, 150' of three-inch electrical cable, 10' of reinforcing bar, and a 30' long piling - all loaded into hopper

3 Nov	6 hrs. 15 mins.	2666	None
4 Nov	7 hrs. 45 mins.	3037	Sealing problem on Pocket No. 3
5 Nov	8 hrs. 30 mins.	2666	None
6 Nov	2 hrs. 40 mins.	888	Grabbed sanitary sewer pipeline, work stopped while pipeline examined by divers for damage, no damage discovered
7 Nov	7 hrs. 30 mins.	2800	Much debris (metal banding, assorted metal)
8 Nov	7 hrs. 15 mins.	2799	Picked up metal banding, wire rope
9 Nov	8 hrs. 30 mins.	2940	Pocket No. 3 leaking, picked up metal banding, wire rope
10 Nov	5 hrs. 30 mins.	2800	Picked up reinforcing bars, wire ropes
11 Nov	2 hrs. 45 mins.	1200	Picked up metal banding, rebar and wire rope
12 Nov	5 hrs. 10 mins.	1733	Picked up rolls of metal banding, rebar, wire rope
14 Nov	6 hrs. 45 mins.	2800	Picked up metal banding, rebar, wire rope, 25' long piling
15 Nov	7 hrs. 0 mins.	2801	Picked up debris
16 Nov	7 hrs. 15 mins.	1955	Pockets leaking
17 Nov	6 hrs. 20 mins.	2133	
18 Nov	8 hrs. 55 mins.	2133	Pockets and seals leaking
19 Nov	6 hrs. 40 mins.	2133	Pockets leaking down
20 Nov	0 hrs. 0 mins.	0	Cable to hopper door mechanism for Hopper No. 2 broke

21 Nov	0 hrs. 0 mins.	0	Repairing broken cable also broken chain in Hopper No. 1
22 Nov	8 hrs. 0 mins.	1955	Pockets leaking because of seals
23 Nov	7 hrs. 30 mins.	1955	Pockets leaking because of leaking seals
24 Nov	6 hrs. 30 mins.	1866	Scow would hold no more - seals not holding
25 Nov	6 hrs. 30 mins.	2133	Scow would hold no more because of leaking seals
30 Nov	6 hrs. 20 mins.	1866	Pockets leaking down

(R4, tabs 4-6)

31. On 1 December 1987 Contractor wrote to Government reserving a right to file a claim for additional costs due to an alleged latent condition of the river bottom existing at the face of the pier. In pertinent part Contractor stated as follows:

> J.M. Cashman, Inc. has encountered a variety of debris while digging along the face of the pier R-3. I have also explained the detrimental impact the debris have [sic] on the capacity of the scow to hold material. Upon completion of the Northerly face of the pier on 11/15/87, the scow ZB1005 has been experiencing a problem holding material. Since 11/16/87 this problem has persisted and appears to be getting worse. Production has dropped from 2500c.y. per day to somewhere around 1900c.y. per day. I feel the scow has demonstrated its capability to hold material throughout the bulk of the project and this lost production is directly attributable to damage caused by the debris. As I stated, this problem has continued from 11/16/87 to the present and it appears that it will continue throughout the remainder of the project. The magnitude of this loss in conjunction with time already listed in my letter of 10/27/87 is considerable. In addition to this expense the likelihood of a drydocking at the completion of the project is almost a certainty.

(R4, tab 17)

32. On 1 December through 20 December 1987 Contractor submitted reports to Government which disclosed the following:

Date	Time Spent Dredging	Cubic Yards Dredged	Contractor's Comments
1 Dec	5 hrs. 0 mins.	1866	All pockets leaking down
2 Dec	7 hrs. 0 mins.	2281	Scow has diminished capacity
3 Dec	8 hrs. 35 mins.	2370	Scow has diminished capacity
4 Dec	8 hrs. 55 mins.	2370	Scow has diminished capacity
5 Dec	6 hrs. 5 mins.	2666	
6 Dec	6 hrs. 50 mins.	2488	
7 Dec	6 hrs. 15 mins.	2400	
8 Dec	8 hrs. 30 mins.	2370	
9 Dec	6 hrs. 40 mins.	2133	
10 Dec	5 hrs. 25 mins.	2148	
11 Dec	6 hrs. 40 mins.	2370	All pockets leaking down
12 Dec	4 hrs. 40 mins.	1407	
14 Dec	6 hrs. 15 mins.	1795	Pocket Nos. 1, 2 and 3 leaking down - scow would not hold more
15 Dec	7 hrs. 30 mins.	2333	
16 Dec	6 hrs. 25 mins.	1866	
17 Dec	6 hrs. 0 mins.	2333	
18 Dec	8 hrs. 0 mins.	2255	
19 Dec	5 hrs. 30 mins.	2354	
20 Dec	4 hrs. 20 mins.	2074	

(R4, tabs 4-6)

33. On 20 December 1987 Contractor completed its dredging at the Naval Weapons Center at Yorktown and prepared its equipment for moving to the Cheatham Annex at Williamsburg. On 4 January 1988 Contractor commenced dredging at Cheatham Annex. Contractor's reports to Government during its dredging at Cheatham Annex disclosed the following:

Date	Time Spent Dredging	Cubic Yards Dredged	Contractor's Comments
4 Jan	7 hrs. 30 mins.	1778	Picked up rope, cable, piling and 2" X 12" timbers
5 Jan	4 hrs. 0 mins.	1111	Picked up rope, cable, piling and 2" X 12" timbers
6 Jan	0 hrs. 0 mins.	0	Crane repairs took 8 hrs. 30 mins.
7 Jan	6 hrs. 35 mins.	3200	
8 Jan	3 hrs. 10 mins.	1067	
9 Jan	6 hrs. 0 mins.	2833	
11 Jan	7 hrs. 30 mins.	2833	
12 Jan	8 hrs. 50 mins.	2833	
13 Jan	4 hrs. 55 mins.	1600	
14 Jan	6 hrs. 5 mins.	907	Dredging completed

(R4, tabs 4-6)

34. Contractor's reports disclosed that a large amount of time was spent by Contractor (beyond the amounts of time shown spent in dredging), making repairs to Contractor's crane. This occurred on a daily basis and some days were spent completely for repairs to the crane. (R4, tabs 4-6)

35. In accordance with the provisions of the contract, Government performed "Before Dredging" and "After Dredging" hydrographic surveys to determine the amount of dredging performed by Contractor. Government utilized trained and skilled personnel and modern, advanced equipment to achieve accurate surveys. The surveys showed that Contractor had overdepth dredged in some places and had dredged outside of the design limits in other locations. Government determined that Contractor was entitled to be paid at the contract rate per cubic yard for 163,103 cubic yards dredged at the Naval Weapons Stations and for 23,170 cubic yards at Cheatham Annex. (R4, tabs 1, 2, 24, 25, 27, 31, 34; tr. 2/78-95, 111, 125-35; exh. G-5, -6)

36. On 21 January 1988 Contractor wrote to Government in pertinent part as follows:

J.M. Cashman, Inc. has encountered latent and changed conditions while dredging the basin at pier R-3. I have also stated that J.M. Cashman, Inc. will be, as provided for within the contract, filing a claim for compensation due to these changed conditions.

* * *

My claim is based on the fact that the nature and volume of debris have had a detrimental impact on the prosecution of the work, in that they seriously inhibited the effective operation of the doors sealing components. The debris encountered was of a wide range of materials, ie, banding, wire rope, chain, concrete, gunite reinforcing mash [sic], reinforcing bars, wood pilings and electric cable and conduit. The nature of the various materials effected [sic] the seals in different ways but combined caused an ongoing leakage problem. In the short term this affected isolated days production by interfering with the tight sealing of the doors and therefore reduced the effective capacity of the scow. The scenario is this: the scow would experience minor leaking up to a point. As loading continued the load on the seals would increase until in their damaged or interfered with state they would fail causing large scale leaking until the load was reduced and equilibrium restored. At this point loading would stop and the scow would be sent to sea regardless of the quantity of material it contained. This posed two problems:

1) The scow could not be filled to capacity and therefore represented reduced revenue for J.M. Cashman, Inc. although daily operating costs remained very close to the same. I feel J.M. Cashman, Inc. is entitled to the revenue lost on these days of reduced production. I arrived at definitive quantities for specific days by first determining an average daily production on days when the debris did not effect the sealing of the doors. The days are 9/16 - 10/7, 10/12 - 10/16, and 10/26-11/15 with a combined total quantity of 104,391 cy or 56% of the total project. This took place in 40 separate tows which reduces to an average of 2610 cy/scow load. From this I subtract actual quantities removed on days that the seals were affected by the debris. This figure represents the loss in production for any given day. Also on several days dredging was entirely shut down to conduct repairs to damage caused by,

or to remove, the debris ie: replacing cable broken by debris (see 10/10 - 10/11, and 11/20 - 11/21) or spending a day removing debris from cables and hinges as in 10/23. On these days the lost production was the total average amount or 2610 cy. I then totalled up all lost production and divided by the average daily production, established previously, to determine how many additional days were required to complete the project and then using the daily cost figure as detailed in my letter of 11/10/87 I arrived at a final dollar value for this aspect of the claim.

2) The material that leaked throughout theloading [sic] operation is the second short term impact of the debris. Although every attempt was made to re-dig thismaterial [sic], only the larger shoals got removed. The remainder of this material is reflected in the reduced pay quantities your office has calculated in relation to the quantity calculated using our quality control sheets. This explains the discrepency [sic] between the Navy pay quantity and the number submitted by me. At this time I have not yet received the calculations done by your office so I am not sure what your final figure is. To arrive at the quantity I submitted to you, I took the soundings taken off the bow of the dredge by J.M. Cashman, Inc. personnel (these soundings were taken at 25' intervals perpendicular to the direction of movement and at 20' intervals along the line of movement as explained in our quality control program submitted to your office) and compared them to the pre-dredge soundings to determine the quantity removed. The difference in my number and the number generated by your office reflects the amount of material that leaked from the scow after being dug. As this situation would not have occurred had the debris not been present I feel J.M. Cashman, Inc. is entitled to the full amount dug as submitted to you in extimate [sic] 005.

The last part of the claim deals with the damage to the seals caused by the debris. This item is much more difficult to assign a dollar value to, but is no less important, in that repairs to the ZB1005 require drydocking. As I noted in my correspondence of 10/27 and the pictures I supplied to you indicate, J.M. Cashman, Inc. performed extensive repairs to the seals, hinges, and doors of the scow ZB1005 at NorshipCo, and was in

addition to work performed at our own shipyard in Boston. Under normal conditions no more than routine maintenance would be expected within the next 2 years, in this case after 2½ months it appears repairs are again necessary. The prices for this work vary from shipyard to shipyard but to drydock and survey would probably cost $10,000.00 with any necessary work at $38.00/man hour. The work done at NorshipCo was valued at approximately $100,000. The damage done now is proabably not as severe and in our opinion can probably be repaired for $50,000.

FOLLOWING IS A BREAKDOWN AND SUMMARY OF COSTS

1) Average daily production of in place yards removed per scow after return from drydock and not impeded by debris. Quantity calculated from periods 9/16 - 10/7, 10/12 - 10/16, and 10/26 - 11/15

Total volume removed 104,391 cy at 40 tows

Daily Average=2610 cy

NOTE: This Quantity reflects, as in daily reports, in place yards removed as calculated from the difference of pre-dredge soundings and quality control soundings (not scow yards)

DAYS OF LOST PRODUCTION DUE TO DEBRIS

Date	Explanation	Quantity Dug	Quantity Lost
10/8	Cable broken due to con. wedging door (2) pkts inop.	1866	744
10/9	" " "	1777	833
10/10	Lose whole day conducting repairs to above break	0	2610
10/11	" " "	0	2610
10/21	Cables, Ropes, banding, re-bar etc. fouling doors causing leaking	1244	1366
10/23	Lose whole day removing above debris from hinges & chains	0	2610
10/6	Pick up SFM's stop digging at request of Navy	888	1722

11/16	Damage caused by debris allowing leaking of material from pkts.	1955	655
11/17	" " "	2133	477
11/18	" " "	2133	477
11/19	" " "	2133	477
11/20	Lose whole day conducting repairs to cable as in 10/20 - 10/11	0	2610
11/21	" " "	0	2610
11/22	Damage caused by debris allows leaking of material from pkts.	1955	655
11/23	" " "	1955	655
11/24	" " "	1866	744
11/25	" " "	2133	477
11/30	" " "	1866	744
12/1	" " "	1866	744
12/2	" " "	2281	329
12/3	" " "	2370	240
12/4	" " "	2370	240
12/5	" " "	2488	122
12/7	" " "	2400	213
12/8	" " "	2370	240
12/9	" " "	2133	477
12/10	" " "	2148	462
12/11	" " "	2370	240
12/12	" " "	1407	1203
12/14	" " "	1795	815
12/15	" " "	2333	277

12/16	"	"	"	1866	744
12/17	"	"	"	2337	273
12/18	"	"	"	2255	355
12/19	"	"	"	2354	256
12/20	"	"	"	2074	536

This represents 63,121 cy removed on 36 days of operation or an average production of 1753 cy
The loss represented here is 30,842 cy

Represented as additional time to complete the project is 30.842cy ÷ 2610 cy/day = 11.82 days

11.82 days X $8,376.41 cost/day = $99,176.69

This is the claim for reduced production

2) J.M. Cashman, Inc. estimate of removed material from quality control sheets =186,825 cy
Navy preliminary estimate Pier R-3+ =161,173 cy

Material leaked out of scow due to debris 25,652 cy

25,652 cy @ $3.35/cy = 85,934.20

* Please note calculations done by J.M. Cashman, Inc. from available data ie., pre-dredge and after dredge determine quantity to be 177,435 cy so this value may change

3) Drydocking costs

Initial blocking and survey (estimated)* = $ 10,000.00
Additional labor to repair damage (estimated)* = $ 50,000.00
Total cost drydock (estimated)* = $ 60,000.00

Total cost of claim

1) Lost production = $ 99,176.69
2) Leaked Material = $ 85,934.20
3) Drydock & repairs (estimated)* = $ 60,000.00

Total value of claim * $245,110.89

* cost of repair dependant [sic] upon results of survey, value could slide up or down

In closing, when J. M. Cashman, Inc. arrived on site, we found that due to a grounding incident and the fineness of the material our scow ZB1005 had a problem holding the material at pier R-3. To ensure a successful project we sent our scow to drydock to bring its sealing components up to 100% efficiency. I feel that this is demonstrated by the fact that for 56% of the project no leaking problems occurred, but after continued exposure to debris the seals effectiveness has dropped. That is to say that it could no longer hold the fine material present at R-3 to the capacity that it could upon return from the drydocking. This does not mean that the scow cannot effectively hold other types of material but that [it] is no longer in the excellent condition it was, and would still be if it had not been exposed to debris I have mentioned. I look forward to working with you on this matter and will make myself available to meet with you at your earliest convenience.

(R4, tab 22)

37. On 3 February 1988 Contractor duly certified its claim as required by the Contract Disputes Act of 1978 (R4, tab 23). At Contractor's request some of the dredged areas at the Naval Weapons Center were resurveyed by Government, but the final results were not changed from the prior after dredging survey. Contractor did not agree with the quantities of dredged material determined by Government, but provided no additional surveys or information to prove that Government's surveys were incorrect. (R4, tabs 24-29, 31)

38. On 9 May 1988 Government's contracting officer issued a final decision denying Contractor's claim of 21 January 1988 for equitable adjustment in the amount of $245,110.89 (R4, tab 30). Contractor duly appealed from such decision on 2 August 1988 (R4, tab 32).

39. At the hearing of this appeal Skaves testified on behalf of Contractor that in preparing Contractor's claim for an equitable adjustment he eliminated all downtime caused by mechanical problems of its crane or other equipment; that he counted only those working days where serious debris problems occurred; and that during such times, Contractor experienced production of only 1,900 cubic yards on the average for such days. (Tr. 1/48) Contractor has no actual knowledge of damage to its scow from performing the job other than that metallic debris had from time to time become entangled in the chains and cables of the scow's hopper door opening and closing mechanisms. The damages assumed in the claim were merely guesses made by Contractor. The ability of Contractor's scow to perform its next dredging job was not impaired after its job for

Government. (Tr. 1/98-99) The damages assumed by Contractor in its claim were greater than were subsequently determined by Contractor to have occurred. The only damage to the scow that occurred was the entanglement of metallic debris with the hopper door opening and closing chains and cables (tr. 2/67-68). When such chains and cables became fouled with metallic debris they could have been cleaned of such debris (tr. 2/64). Contractor's troubles, if any, arose out of the entanglement of metallic debris in such chains and cables (tr. 2/57). Contractor did not regularly remove all the debris it saw entangled in the said chains and cables (tr. 2/58, 62-63). Despite such failure to regularly remove metallic debris Contractor was able to close the hopper doors everytime it attempted to do so (tr. 2/61).

40. In its claim Contractor alleged that it lost 25,652 cubic yards of dredged material. At the hearing Skaves on behalf of Contractor revised such estimate of loss to 19,000 cubic yards. (Tr. 2/47) Contractor claims no damages arising out of picking up and handling pilings (tr. 2/54).

41. The concrete referred to in Contractor's claim letter as comprising part of the debris that was alleged to have damaged its scow existed by surmise only, since it was, in fact, not observed (tr. 2/55). None of Contractor's employees who actually operated the equipment that performed the dredging appeared at the hearing to testify as to what they observed. Government's Assistant Resident Officer in Charge of Construction (AROICC) who administered the contract and who was regularly at the job site testified. Contractor's personnel regularly complained to him that the debris dredged up prevented the scow from holding the proper amount of material; and that the dredged material was leaking down (tr. 2/146). When the AROICC viewed the scow he saw Contractor dump wire cable, metal banding and wood pilings into the scow. He never saw any concrete, gunnite or wire mesh being loaded therein (tr. 2/146-47, 148-49, 157, 162, 163). There was no evidence that the scow's hoppers leaked. The river bottom mud was properly held by the hoppers. (Tr. 2/160-61, 164) Contractor's employees complained to the AROICC about metal debris fouling the hopper opening and closing mechanisms, but when asked by the AROICC as to why Contractor did not remove the debris so as to eliminate such fouling Contractor's employees advised the AROICC there was no need to remove the debris as it could be dumped (tr. 2/164).

42. After Contractor completed the job for Government, Contractor returned its dredging equipment to Boston, Massachusetts, where, on 1 July 1988, prior to any new work assignments being undertaken, Contractor hired a diver to make an inspection of its scow that had been used on the job for Government. The diver examined the scow both externally and internally. The external inspection disclosed that the scow's hopper doors closed tightly. The internal inspection revealed that the hopper door seals were intact and sealing well except for only one particular place two-feet long where the diver could insert his hand between the seal and the opposing door. The diver also found debris hanging from the hopper door closing mechanism chains. He recommended that such debris be removed. (Exh. A-8)

43. During August 1988 Contractor undertook another dredging job. Such job was located in Boston Harbor and lasted approximately one year and four months. No drydocking or major repairs were done on Contractor's scow prior to doing such job. Some minor repairs, however, were made to the scow. It was in good working order when it started such job. The scow performed satisfactorily so as to complete such new job. (Tr. 1/69-72, 90-91, 94, 96-97, 2/65-66; exh. A-1)

DECISION

We are not persuaded by the evidence that Contractor is entitled to an equitable adjustment.

The Differing Site Conditions clause of the contract called for Contractor to prove by a preponderance of the evidence that the subsurface or latent physical conditions at the work site differed materially from those indicated in the contract or, in the alternative, that the conditions at the work site differed materially from the conditions ordinarily encountered and were of an unusual nature when compared to the conditions recognized as inhering in the type of dredging required under the contract. If Contractor met its burden of proof as to the foregoing it still had to prove that its cost of, or the time required for, performing any part of the work of the contract was increased as a direct and proximate result of such difference. Charles T. Parka Construction Co. v. United States, 433 F.2d 771 (Ct. Cl. 1970)

From the evidence we conclude that the subsurface or physical conditions indicated in the contract did not differ materially from those encountered by Contractor. The contract described the river bottom at the places where borings were made to be comprised of olive green and black, very soft and saturated silty clay. The contract also indicated that Government knew of no artificial obstructions to the dredging that would require the use of explosives or special equipment for their removal. The contract specified that metal pallets and miscellaneous metal items might be encountered adjacent to the pier at the Naval Weapons Center. The contract drawings showed the location of Goverment's Sanitary Force Main at the dredging site.

The evidence showed that Contractor dredged very soft saturated silty clay the same as described in the contract. Likewise, Contractor did not have to use any explosives or any special equipment to be able to perform its work. The evidence disclosed that Contractor did encounter metal pallets and miscellaneous metal items adjacent to the pier as described in the contract. No evidence was provided to show whether or not such metal pallets and miscellaneous metal items or the amounts thereof were of an unusual nature or that such differed materially from the conditions ordinarily encountered under similar circumstances. The evidence further showed that pilings and wood, which were not described in the contract, were picked up by Contractor during its dredging operations. Contractor admitted that such caused it no damages. The evidence showed that Contractor

encountered a Sanitary Force Main. Nevertheless, such Sanitary Force Main was where it was shown on the contract drawings and, although Contractor argued that such Sanitary Force Main was at a different elevation than shown on the contract drawings, there was insufficient evidence to back up such argument. All of the foregoing makes us conclude that the work site was not materially different from that indicated in the contract.

Even if we were to assume (which we do not) that there were subsurface or latent physical conditions at the work site that differed materially from those indicated in the contract or that the conditions differed materially from those ordinarily encountered and were of an unusual nature when compared to conditions recognized as inhering in the dredging required by the contract we would still find no entitlement to an equitable adjustment, since Contractor failed to prove by a preponderance of the evidence that its cost of or the time required for performing the contract was increased and that any such increase was the direct and proximate result of such differing site condition.

In its claim Contractor alleged that it lost production in that its scow could not be filled to capacity because of leakage. The evidence does not support this contention.

Contractor anticipated producing an average daily dredging of 2,100 cubic yards of material with the site conditions as described in the contract. Contractor's daily reports (findings 17, 18, 19, 20, 21, 24, 26, 28, 30, 32, 33) show that during 58 hours of dredging it dredged 204,087 cubic yards of river bottom, thus, it dredged approximately 350 cubic yards per hour of dredging. Since Contractor's daily reports covered 90 days of dredging it had an average daily dredging production of 2,267 cubic yards or 167 cubic yards in excess of the daily production anticipated. Such is not a loss of production. It is a gain in daily production. No evidence was shown as to any cost savings achieved by Contractor as a result of such production gain. Likewise, no evidence was presented as to any losses that might have occurred as a result of such gain in production. Nor has Contractor proved that it would have had even better production but for differing site conditions.

Contractor also argued that the debris encountered "seriously inhibited the effective operation of the doors [of its hoppers] sealing components." Such inhibition of sealing capacity is argued to have permitted the dredged material to leak out so as to require redredging. Contractor failed to prove such leakage. However, even if leakage occurred, as argued, such was the fault of Contractor and not that of Government.

Per the terms of the contract, Contractor was responsible for keeping its scow in a condition at all times for efficient work. If the hopper doors were not closing properly because of the door's closing mechanism being fouled by dredged debris, as is argued by Contractor, such was the responsibility of Contractor. Improperly closed doors are a maintenance problem. Improperly closed doors also make a hopper scow inefficient since

it will not effectively hold a complete load. The contract clearly placed the burden of maintaining the operation of Contractor's hopper doors in proper condition upon Contractor. Debris, according to Contractor, was continually fouling its scow's hopper door closing mechanisms. Such a problem, if it existed, was a maintenance problem that Contractor could solve simply by removing the entangling debris. Contractor admits that it did not always remove such entanglements even when the entanglements were open and obvious to the Contractor. Contractor's diver reported that debris still was entangled in the door closing mechanisms even after the job was completed.

Contractor should not complain that its scow did not function properly when Contractor's failure to remove entanglements was the sole cause of such improper functioning.

We are not persuaded that the seals of Contractor's scow were damaged by debris as claimed by Contractor. The diver's report covering his examination of the scow after completion of the job shows that the doors closed tightly and that the seals, except for one very small area, were working properly. Even if damage had occurred to the seals, such damage and its repair were the responsibility of Contractor and its employees and not that of Government. Contractor's employees dumped huge pilings directly into the hoppers along with large timbers and sizable quantities of metal cables contrary to Contractor's instructions. Such actions were under Contractor's control and not that of Government. If damage resulted therefrom Contractor must assume the cost therof.

The appeal is denied.

Dated: 7 June 1991

HERBERT C. HARPER
Administrative Judge
Member of the Armed Services
Board of Contract Appeals

I concur

WILLIAM J. RUBERRY
Administrative Judge
Acting Chairman, Armed Services
Board of Contract Appeals

I concur

V. JOHN RIISMANDEL
Administrative Judge
Vice Chairman, Armed Services
Board of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA No. 37368, Appeal of J. M. Cashman, Inc., rendered in conformance with the Board's Charter.

Dated: 11 JUN 1991

EDWARD S. ADAMKEWICZ
Recorder, Armed Services
Board of Contract Appeals

DEPARTMENT OF THE NAVY
OFFICER IN CHARGE OF CONSTRUCTION
RESIDENT OFFICER IN CHARGE OF CONSTRUCTION
NAVAL FACILITIES ENGINEERING COMMAND CONTRACTS
P O BOX 103
NAVAL WEAPONS STATION
YORKTOWN, VIRGINIA 23691-0103

IN REPLY REFER TO

ROICC
85-C-5144
Ser 0009
5 MAR 90

Norfolk District, Corps of Engineers
803 Front Street
Norfolk, Virginia 23510-1096

Attn: Mr. Meade Stith, Chief, O & M Branch CENAO-OP-R

Re: CONTRACT N62470-85-C-5144, PIER MODERNIZATION, NAVAL WEAPONS STATION, YORKTOWN, VIRGINIA

Gentlemen:

Approximately 25,550 Cubic Yards of material will be dredged on the inboard side of Pier R-3 at the Naval Weapons Station, Yorktown. The work will be performed under the referenced contract with Tidewater Construction Corporation. The subcontractor performing the dredging is Norfolk Dredging Company. This work is being performed under the Deparment of the Army, COE Permit No. 87-0215-01.

The dredging is anticipated to begin on 9 March 1990. In order to comply with your requirements to have a signed authorization for depositing materials into the Craney Island Disposal Area on board the tug, the enclosed authorization form is forwarded to you for approval. You are requested to return a signed copy of the authorization to this office by 8 March 1990. To assist in meeting this date, please forward this document by fascimilie transmission at (804) 887-4200 and follow up with the hard copy by mail.

Should you have any questions, point of contact at this office is Mrs. Brenda Norton at (804) 887-4161.

Sincerely,

J. M. Bellamy

J. M. BELLAMY, P. E.
Duputy Resident Officer
in Charge of Construction

Copy to:
Commander, Atlantic Division
Naval Facilities Engineering Command
Attn: Codes 052 and 405
Norfolk, Virginia 23511-6287

This form is to be filled out and returned to the Corps of Engineers prior to the depositing of material into the Craney Island Disposal Area or Craney Island Rehandling Basin.

NO deposits will be made with out a signed authorization.

A copy of the signed authorization will be on board the tug.

Return this form to:

Norfolk District, Corps of Engineers
803 Front Street
Norfolk, Virginia 23510-1096
ATTN: Chief, O&M Branch CENAO-OP-R

PERMITTEE AND ADDRESS Commander, Atlantic Division Naval Facilities Engineering Command Code 405 Norfolk, Virginia 23511	**PERMIT NO.** 87-0215-01
CONTRACTOR AND ADDRESS Norfolk Dredging Company P. O. Box 1706 Chesapeake, Virginia 23320	**CONTRACT NO.** N62470-85-C-5144
DESCRIPTION OF WORK Dredging on inboard side of Pier R-3 at the Naval Weapons Station, Yortown, Virginia	**ESTIMATED QUANTITY** 25,550 CY
SURVEY PERFORMED BY Bob Stark Public Works Center Hydrographics Department Norfolk, Virginia 23511	**ESTIMATED DREDGING PERIOD** **FROM** 9 MAR 90 **TO** 24 MAR 90
DISPOSAL OPERATIONS APPROVED **TYPED NAME AND TITLE** **CHIEF, OPERATIONS SECTION**	**SIGNATURE AND DATE**

(804)444-9905

11000
405
21 SEP 93

Mr. Craig Jones
Regulatory Branch
Norfolk District, Corps of Engineers
803 Front Street
Norfolk, VA 23510-1096

Re: Permit No. 92-0085, Dredging Pier R-3, NWS Yorktown

Dear Mr. Jones:

As requested by the Department of Environmental Quality, the original 401 permit for the referenced project is forwarded for your use.

If you have any questions, please contact me at 444-9905.

Sincerely,

JAMES E. BUTLER, P.E.
Head, Civil Engineering Branch
Engineering and Design Division
By direction of the Commander

Enclosure

Blind copy to:
405

COMMONWEALTH of VIRGINIA

RICHARD N. BURTON
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL QUALITY

(804) 527-5000
TDD (804) 527-4261

VWP Permit No. 92-0085
Effective Date: September 8, 1993
Expiration Date: September 8, 1998

AUTHORIZATION TO DISCHARGE UNDER THE

VIRGINIA WATER PROTECTION PERMIT

PURSUANT TO SECTION 401 OF THE CLEAN WATER ACT

AND STATE WATER CONTROL LAW

In compliance with Section 401 the Clean Water Act as amended (33 USC 1351 et seq) and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the conditions set forth in this permit.

Owner: Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511

County: York

Project: Maintenance dredging of 325,000 cubic yards of material from around Pier R-3 at the Yorktown Naval Weapons Station.

Location: York River

The authorized discharge shall be in accordance with this cover page, Part I - Special Conditions, Part II - Monitoring and Reporting Requirements, and Part III - Management Requirements, as set forth herein.

for Director

9/8/93
Date

CONDITIONS

A. Special Conditions

1. That all dredging shall be accomplished by clamshell method.

2. That approximately 325,000 cubic yards of material is to be dredged from the ~~Cheatham Annex~~ NWS Yorktown and transported via hopper dredge for overboard, unconfined disposal at Ocean Open Disposal Site.

3. That the area adjacent to Pier R-3, through this dredging project, shall be returned to its original dimensions of:

   a. 700 feet in length, 350 to 750 feet bottom width, 400 to 800 top width and -18 feet MLW (Area A);

   b. 2000 feet in length, 350 to 400 feet bottom width, 400 to 500 feet top width and -18 feet MLW (Area B);

   c. 2000 feet in length, 25 to 600 feet bottom width, 25 to 600 feet top width, and -42 feet MLW.

4. That barges which are to be used to transport dredged material to the Ocean Disposal Site can only be filled to a point that no overflow occurs. No overflow pipes can be used on the barges.

5. That there will be no double-handling of dredged materials in State Waters.

6. That any time of year restrictions requested by the VA Department of Game and Inland Fisheries and the U. S. Fish and Wildlife Service be strictly adhered to.

7. That each dredging cycle performed within the 10-year period must receive authorization by the SWCB before dredging or disposal operations may commence. This Permit constitutes approval of the initial dredging cycle within the 10-year period.

B. General Conditions

1. That all work shall be done in such a manner as to minimize sedimentation/siltation of State waters in accordance with Virginia Erosion and Sedimentation Regulations (VR 625-02-00).

2. That the applicant shall employ measures to prevent spills of fuels or lubricants into State waters. The Water Division of the Department of Environmental Quality (DEQ\WD) must be notified if spills do occur (804/527-5200).

3. That appropriate erosion and sedimentation controls and practices shall be utilized during construction and until all disturbed areas have been stabilized.

4. That the conditions and limitations as specified in the application shall be adhered to during the life of this project.

5. That all construction and installation associated with the project shall be accomplished in such a manner that construction material or waste material is not to be discharged into State waters.

6. That the Department of Environmental Quality's VWPP Program staff shall be notified <u>in writing</u> 10 days prior to operations authorized under this Permit are to begin so that staff inspections of the project can be planned if deemed necessary.

7. The permittee shall advise the Director in writing when unusual or potentially complex conditions are encountered which require debris removal or involve potentially toxic substances, and shall not take measures to remove the obstruction, material, or toxic substance, or change the location of the structure until written approval by the Director or his authorized representative is received.

MITIGATION, MONITORING AND REPORTING

A. Mitigation Requirement

1. The permittee shall take all reasonable steps to

   a) avoid all adverse environmental impact which could result from the activity,

   b) where avoidance is impractical, minimize the adverse environmental impact, and

   c) where impacts cannot be avoided, provide mitigation of the adverse impact on an in kind basis.

B. Monitoring Method

1. Monitoring shall consist of monitoring for dissolved oxygen (DO), one meter above the bottom, 100 feet downcurrent of the project area. DO readings should be taken once daily, one hour prior to sunrise each day throughout active dredging. In addition the dates of dredging activity and the approximate cubic yardage of material dredged during each cycle should be recorded.

C. Reporting of Results

1. The results of the DO monitoring shall be sent to the Water Division of the Department of Environmental Quality weekly during active dredging in each year in which dredging occurs (each cycle year). The dates and final total for the dredged material must be submitted by December 31 of each calendar year in which dredging has occurred. The mailing address is Department of Environmental Quality-Water Division, OWRM/VWPP, P.O. Box 11143, Richmond, Virginia 23230.

MANAGEMENT REQUIREMENTS

A. Duty to Comply

The permittee shall comply with all conditions of the permit. Nothing in these regulations shall be construed to relieve the VWPP holder of the duty of comply with all applicable Federal and State statutes, regulations and toxic standards and prohibitions. Any permit non-compliance is a violation of the Act and law, and is grounds for enforcement action, permit termination, revocation, modification, or denial of a permit renewal application.

B. Change in Management of Pollutants

All discharges and other activities authorized by this permit shall be made in accordance with the terms and conditions of this permit. The permittee shall submit to the Board a new application 180 days prior to all expansions or process modifications that would result the discharge of any pollutant at a level greater than that authorized by this permit.

C. Duty to Halt or to Reduce Activity

1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2. The permittee shall take all reasonable steps to minimize, correct or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

D. Compliance with State and Federal Law

Nothing in this permit shall be construed to preclude the institution of any legal action under or relieve the permittee from any responsibilities, liabilities, or other penalties established pursuant to any other State law or regulation or under the authority preserved by Section 510 of the Clean Water Act.

E. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive

privileges, nor does it authorize any injury to private property or any invasion of personal property rights, nor any infringement of Federal, State or Local Laws or regulations.

F. Severability

The provisions of this permit are severable.

G. Right of Entry

The permittee shall allow authorized State and Federal representatives, upon the presentation of credentials:

1. To enter the permittee's premises on which the establishment, outfalls and impacts are to be located or in which any records are required to be kept under the terms and conditions of this permit;

2. To have access to and to inspect at reasonable times any records required to be kept under the terms and conditions of this permit;

3. To inspect at reasonable times any monitoring equipment or monitoring method required in this permit.

For the purpose of this section, the time for inspection shall be deemed reasonable during regular business hours. Nothing contained herein shall make an inspection time unreasonable during an emergency.

H. Transferability of Permits

This permit may be transferred to another person by a permittee if:

1. The current owner notifies the Board 30 days prior to the proposed transfer of the title to the facility or property;

2. The notice to the Board of the proposed transfer includes a written agreement between the existing and proposed new owner containing a specific date of transfer of the permit responsibility, coverage and liability between them; and

3. The Board does not within the 30 day time period notify the existing owner of its intent to modify or revoke and reissue the permit.

Such a transferred permit shall, as of the date of the transfer, be as fully effective as if it had been issued directly to the new permittee.

H. Permit Modification

The applicant shall notify the Board of any modification of this project and shall demonstrate in a written statement to the Board that said modification will not violate any conditions of this permit. If such demonstration cannot be made, the applicant shall apply to the Board for a modification of this permit. This permit may be modified when any of the following developments occur:

1. When additions or alterations have been made to the affected facility or activity which require the application of permit conditions that differ from those of the existing permit or are absent from it.

2. When new information becomes available about the operation or discharge covered by the permit which was not available at permit issuance and would have justified the application of different permit conditions at the time of permit issuance.

3. When a change is made in the promulgated standards or regulations on which the permit was based.

4. When changes occur which are subject to "reopener clauses" in the permit.

5. When the permittee begins or expects to begin to cause the discharge of any toxic pollutant not reported in the application.

I. Permit Termination

This permit, after proper hearing, is subject to revocation for failure to comply with the conditions herein. It is issued in accordance with the plans for the project and certifies that the applicant and project contractor shall not violate Water Quality Standards to accomplish the project. Any violation of Water Quality Standards will be subject to abatement and control under State Water Control Law. A permit can be terminated on any of the following grounds:

1. Noncompliance by the permittee with any condition of the permit;

2. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts or the permittee's misrepresentation of any relevant facts at any time;

3. The permittee's violation of a special or judicial order;

4. A determination that the permitted activity endangers human health or the environment and can be regulated to acceptable levels by permit modification or termination;

5. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge of dredged and fill material controlled by the permit.

J. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

K. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act or Sections 62.1-44.34(1) through 62.1-44.34(7) of the law.

L. Unauthorized Discharge of Pollutants

Except in compliance with this permit, it shall be unlawful for the permittee to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances, or

2. Otherwise alter the physical, chemical or biological properties of such state surface waters and make them detrimental to the public health, or to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, or for recreation, or for other uses.

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT, CORPS OF ENGINEERS
FORT NORFOLK, 803 FRONT STREET
NORFOLK, VIRGINIA 23510-1096

REPLY TO
ATTENTION OF

CENAO-CO-R (1145b)
92-0085-25 (York River)

24 September 1993

MEMORANDUM FOR Commander, LANTFACENFCOM

SUBJECT: Department of the Army Permit for Dredging at NWS, Yorktown.

1. Enclosed is a Department of the Army permit authorizing you to perform certain work in waters of the United States. Please sign both copies in the space provided for the permittee's signature and return them to this office. Upon receipt, the District Engineer or his authorized representative will sign both copies and return the original to you. The permit is not valid until signed by both parties.

2. Please note that Special Condition 14 of the permit requires you to notify this office of certain dates concerning the progress of the work. It is requested that you also take note of any other Special Conditions incorporated in this permit.

3. This permit does not authorize continued maintenance dredging of the project sites. When additional dredging is required, reauthorization must be obtained from this office.

3. If any material change in the plan of the work is found necessary, revised plans must be submitted for our approval before any work is begun.

FOR THE COMMANDER:

Bruce F. Williams

Encls

BRUCE F. WILLIAMS
Chief, Northern Virginia
Regulatory Section

Copies Furnished (w/permit & dwgs):

Virginia Council on the Environment, Richmond, (w/dwg)
Virginia Marine Resources Commission, Newport News
Environmental Protection Agency, Philadelphia
National Marine Fisheries Service, Oxford
U. S. Fish and Wildlife Service, White Marsh,
Virginia Department of Environmental Quality, Richmond

DEPARTMENT OF THE ARMY PERMIT

Permittee: Commander, LANTNAVFACENGCOM
Permit No.: 92-0085-25
Issuing Office: Norfolk District, Corps of Engineers,
803 Front Street, Norfolk, Virginia 23510

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the Commanding Officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

Dredge, by clamshell method, approximately 475,500 cubic yards of material to allow berthing of munitions carrying vessels at Pier R-3. The dredging will be done in three areas. Area A will be 700 feet long with a variable base width of 350 to 700 feet to a depth of 18 feet at mean low water. Area B will be 2000 feet long with a variable base width of 350 to 450 feet to a depth of 18 feet at mean low water. Area C will be 2000 feet long with a variable base width of 25 to 600 feet to a depth of 42 feet at mean low water.

All dredged material will be placed, by dump scow, in the northeast quadrant of the Norfolk Ocean Dredged Material Disposal Site at 37°00' North Latitude and 75°38' West Longitude. A global positioning system will be used to locate the dump site.

Project Location:

The projects are located in the York River, a tributary to the Chesapeake Bay, at Pier CAD-A at the Yorktown Naval Weapons Station (92-0085-25) in York County, Virginia.

Permit Conditions:

Special Conditions:

1. You will submit to this office a printed report of the dump scows voyage during each haul. A global positioning system will be used to determine the vessels position at no greater than 30 minute intervals during the haul and at the point the dredged material was released.

2. You shall advise this office verbally or in writing when unusual or complicated foundation conditions are encountered requiring debris removal (e.g. stumps, broken concrete, etc.) and shall not take measures to remove the obstruction or change the location of the structure until written or verbal approval by the District Engineer or his authorized representative is received.

3. There will be no dredging or filling in marsh.

4. All dredging and/or filling will be done so as to minimize disturbance of the bottom or turbidity increases in the water which tend to degrade water quality and damage aquatic life.

5. You will employ measures to prevent or control spills of fuels or lubricants from entering the York River.

6. No dredging shall be performed between March 1 and June 30.

7. Any marsh disturbed during construction will be revegetated with species from the adjacent marsh by the applicant and/or contractor.

8. Construction methods will be designed to minimize marsh disturbance.

9. Double-handling of dredged material in state waters shall not be permitted. Bottom dump scows can only be filled to a point where no overflow occurs. No overflow pipes can be used by the scows.

11. The discharge will consist of suitable material free from toxic pollutants in toxic amounts.

12. Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.

13. You must have a copy of this permit available on the vessel used for the authorized dredging and transportation and disposal of dredged material.

14. PRIOR TO THE COMMENCEMENT OF ANY WORK AUTHORIZED BY THIS PERMIT, YOU SHALL ADVISE THE DISTRICT ENGINEER AND THE CHIEF OF OPERATIONS AND MAINTENANCE BRANCH, IN WRITING TO: NORFOLK DISTRICT CORPS OF ENGINEERS, 803 FRONT STREET NORFOLK, VIRGINIA 23410-1096, OF THE TIME THE AUTHORIZED ACTIVITY WILL BE COMMENCED AND OF THE NAME, ADDRESS, AND TELEPHONE NUMBER OF ALL CONTRACTORS OR OTHER PERSONS UNDERTAKING THE WORK, AND SHALL FURNISH TO THEM, BEFORE THE COMMENCEMENT OF THE WORK, A COMPLETE COPY OF THIS PERMIT ALONG WITH ALL DRAWINGS AND SPECIAL CONDITIONS.

15. You must install and maintain, at your expense, any safety lights and signals prescribed by the United States Coast Guard (USCG), through regulations or otherwise, on your authorized facilities. The USCG may be reached at the following address and telephone number: Commander (oan), Fifth Coast Guard District, Federal Building, 431 Crawford Street, Portsmouth, Virginia 23704, ATTN: Mr. John Walters, telephone number (804) 398-6230.

16. You must take the actions required to record this permit with the Registrar of Deeds or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property.

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 1996. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as Special Conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(x) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
( ) Section 404 of the Clean Water Act (33 U.S.C. 1344).
(x) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization:

a. This permit does not obviate the need to obtain other Federal, state or local authorizations required by law.
b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.
d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability: In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities from natural causes.
b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
d. Design or construction deficiencies associated with the permitted work.
e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.
b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions: General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as a permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

James F. Butt
(Permittee)

24 SEP 1993
(Date)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

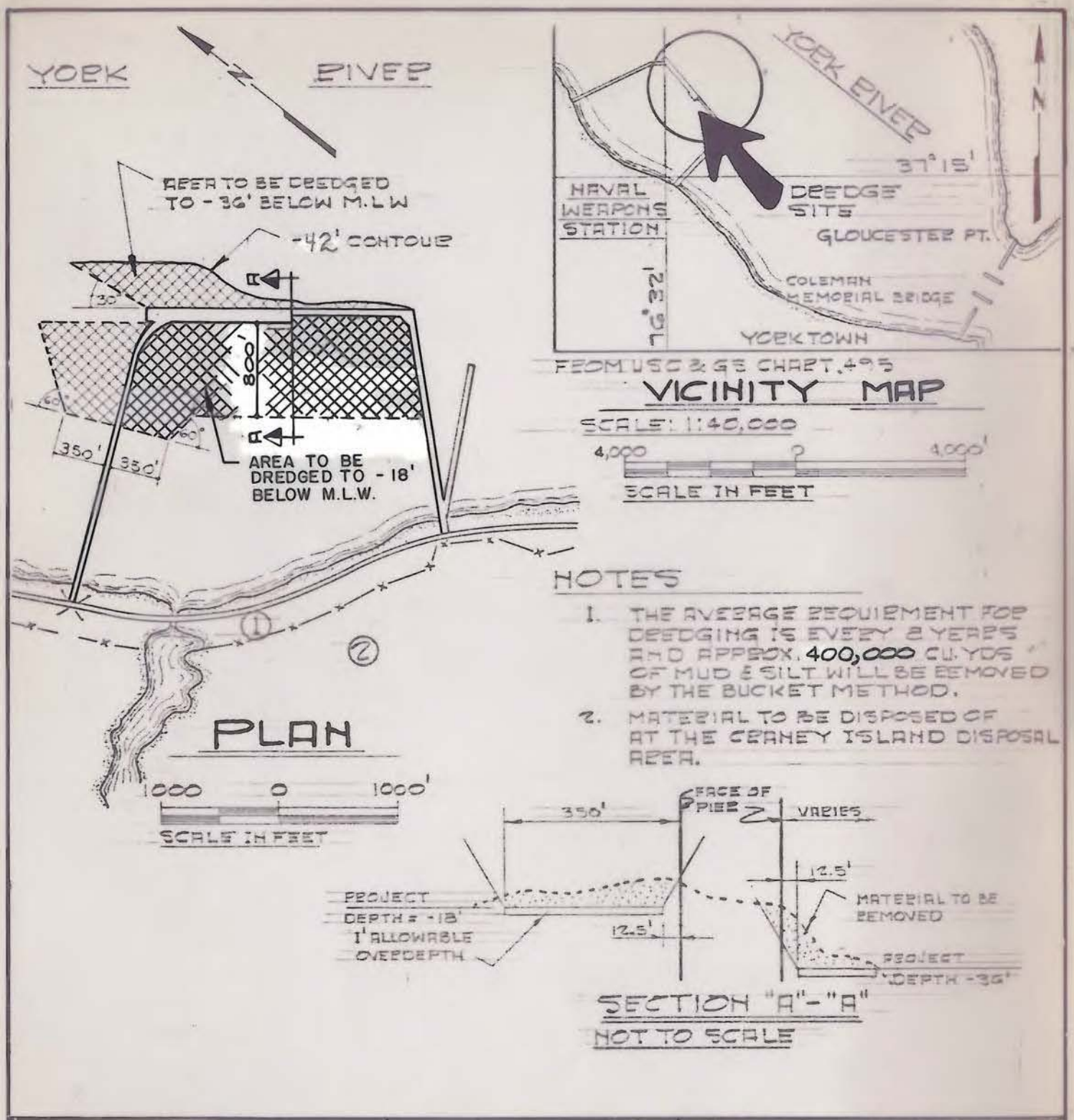
Bruce F. Williams
Bruce F. Williams
Chief, Northern Virginia
Regulatory Section

24 September 1993
(Date)

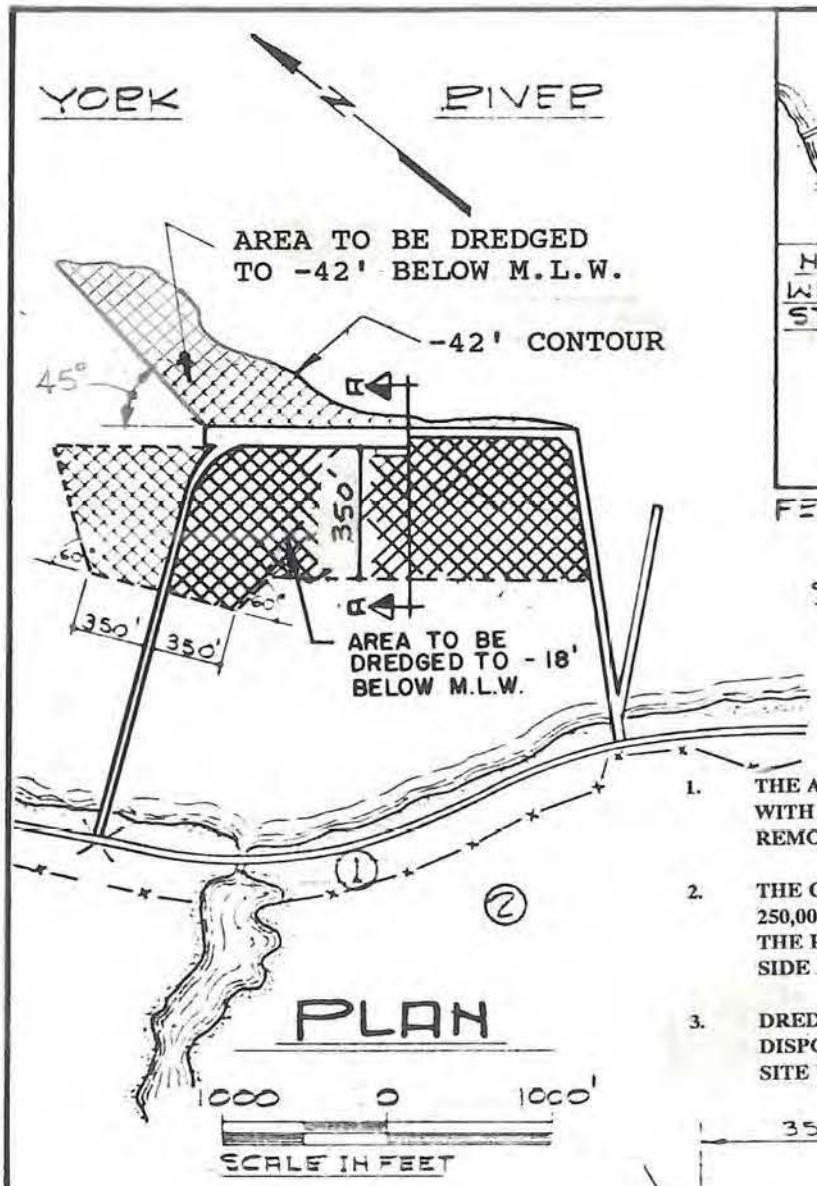
When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____
(Transferee)

_____
(Date)



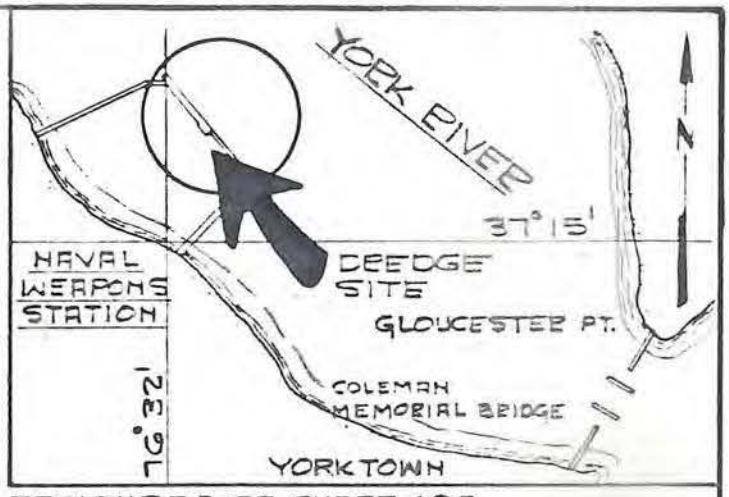
PURPOSE: MAINTENANCE DREDGING **DATUM**: MEAN LOW WATER = 0.00 ADJACENT PROPERTY OWNERS 1. NATIONAL PARK SERVICE 2. U.S. NAVY	PLAN AND SECTION	PROPOSED DREDGING IN YORK RIVER AT U.S. NAVAL WEAPONS STATION CITY OF YORKTOWN STATE VA. APPLICATION BY ATLANTIC DIV. NAVAL FACILITIES ENGR. COMM. SHEET 1 OF 1 DATE 8-15-84



PLAN

1000 0 1000'

SCALE IN FEET



FROM USC & GS CHART 495

VICINITY MAP

SCALE: 1:40,000

4,000 0 4,000'

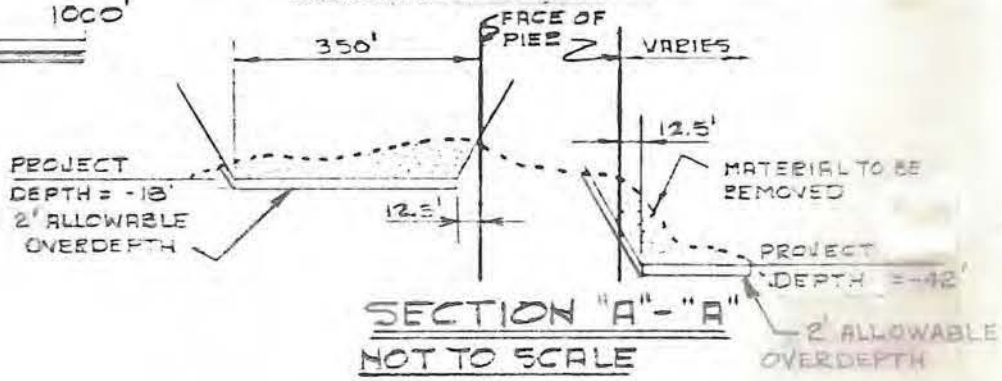
SCALE IN FEET

NOTES:

1. THE AVERAGE REQUIREMENT FOR DREDGING IS EVERY 8 YEARS, WITH APPROX. 400,000 CU. YDS OF MUD AND SILT TO BE REMOVED BY THE BUCKET METHOD.

2. THE CURRENT PROJECT INVOLVES THE REMOVAL OF APPROX. 250,000 CU. YDS. OF SILT FROM THE OUTBOARD SIDE OF THE PIER (-42' DEPTH), AND 75,000 FROM THE INBOARD SIDE AND NORTHWEST CORNER (-18' DEPTH).

3. DREDGED MATERIAL TO BE DISPOSED OF AT CRANEY ISLAND DISPOSAL AREA, OR OCEAN DUMPING AT THE NORFOLK DUMP SITE UPON APPROVAL FROM EPA.



SECTION "A"-"A"

NOT TO SCALE

PURPOSE: MAINTENANCE DREDGING **DATUM**: MEAN LOW WATER = 0.00 ADJACENT PROPERTY OWNERS 1. NATIONAL PARK SERVICE 2. U.S. NAVY	PLAN AND SECTION	PROPOSED DREDGING IN YORK RIVER AT U.S. NAVAL WEAPONS STATION CITY OF YORKTOWN STATE VA. APPLICATION BY ATLANTIC DIV. NAVAL FACILITIES ENGR. COMM. SHEET 1 of 1 DATE 11/15/91

SECTION 02482

DREDGING

PART 1 GENERAL

1.1 SUMMARY (NOT USED)

1.2 REFERENCES (Not Applicable)

1.3 DREDGING

Dredging includes the removal and disposal of materials encountered, as specified and indicated. Except as otherwise specified, payment will not be made for dredging outside the limits of dredging shown.

1.3.1 Material to be Removed

The material to be removed is silt and mud.

1.3.1.1 Hard Material

The removal of hard material is not included. Hard material is defined as material requiring blasting or the use of special equipment for economical removal, and includes boulders or fragments too large to be removed in one piece by the dredge. Should the Government direct in writing that hard material be removed, the work shall be performed and an adjustment in the contract price or time for completion, or both, will be made in accordance with Contract Clause titled "Differing Site Conditions." If hard material is to be removed, blasting will not be permitted.

1.3.2 Artificial Obstructions

The Government has knowledge of debris such as, but not limited to, broken concrete, metal bands, pallets, pieces of broken cable, rope, fire hose, and broken piles. The Government has no knowledge of existing wrecks, wreckage, or other material of such size or character as to require the use of explosives or special or additional plant for its economical removal. All debris removed from the dredged area shall be removed from the water. Disposal shall be the responsibility of the Contractor and disposal shall be outside the limits of Government property." In case the actual conditions differ from those stated or shown, or both, an adjustment in contract price or time or completion, or both, will be made in accordance with the Contract Clause titled "Differing Site Conditions."

1.3.3 Quantity of Material

The total estimated amount of material to be removed from within the specified limits, including side slopes, but excluding overdepths, is 21,200 cubic yards. The maximum amount of allowable overdepth dredging is estimated to be 4350 cubic yards. The estimated quantity for pricing and for application of the Contract Clause titled "Variation in Estimated Quantity" shall be 25,550 cubic yards, which is the total quantity, including overdepth. The quantities listed are estimates only. Within the limits of

available funds, complete the work specified whether the quantities involved are greater or less than those estimated.

1.3.4 Overdepth Dredging

To cover unavoidable inaccuracies of dredging processes, material actually removed to a depth of two feet below the dredging depth specified and within the dredging limits will be measured and paid for at full contract price.

1.3.5 Side Slopes

Dredging on side slopes shall follow, as closely as practicable, the lines indicated or specified. An allowance will be made for dredging beyond the lines indicated or specified for side slopes. The allowance will be determined by projecting a line upwards, paralleling the project design side slopes, from the intersection of the overdepth dredging limit (at a point located vertically below the limit of dredging at the top of slope). The amount of material excavated from side slopes will be determined by either cross-sections or computer, or both.

1.3.6 Permit

The Contractor shall comply with all conditions and requirements of the Corps of Engineers Permit and other state or federal permits. The Contracting Officer will secure the permit for dredging and disposal of material as indicated. Make arrangements with depth of the Army for disposal of excavated materials.

1.3.7 Charges

The Department of the Navy will pay all charges imposed by the Department of the Army for disposal of material into the Craney Island disposal area. Should the Contractor dredge any areas outside the dredging limits or exceed the allowable overdepth limits, the Contractor shall reimburse the Department of the Navy for the Department of the Army disposal charges for disposal at Craney Island from these areas. Reimbursement shall be made by deduction from the contract amount due to the Contractor.

1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS

SD-61, Provide and maintain during the life of the contract, environmental protective measures. Also, provide environmental protective measures required to correct conditions, such as oil spills or debris, that occur during the dredging operations. Comply with all Federal, state, and local regulations pertaining to water, air, and noise pollution.

1.5 BASIS FOR PRICING

Payment will be at the contract unit price per cubic yard, multiplied by the total cubic yards of acceptable dredging. Base pricing on the total cubic yards of dredging. In the event the Contracting Officer requires an increase or decrease in the total cubic yardage of dredging, the contract

price will be adjusted in accordance with Contract Clause titled "Variation in Estimated Quantity."

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 INSPECTION

The Government will keep a record of work performed and will require that gauges, ranges, and other markers are usable for the intended purpose. Furnish, at the request of the Contracting Officer, boats, boatmen, laborers, and materials necessary for inspecting, supervising, and surveying the work. When required, provide transportation for the Contracting Officer and inspectors to and from the disposal area and between the dredging plant and adjacent points on shore.

3.2 CONDUCT OF DREDGING WORK

3.2.1 Order of Work

The Contracting Officer will direct the Contractor on the order of work. The Government reserves the right to change the order of work at any time.

3.2.2 Interference with Navigation

Minimize interference with the use of channels and passages. The Contracting Officer will direct the shifting or moving of dredges or the interruption of dredging operations to accommodate the movement of vessels and floating equipment, if necessary.

3.2.2.1 Compensation for Interruption of Operations

If dredging operations are interrupted due to the movement of vessels or floating equipment, an adjustment in the contract price or time for completion, or both, will be made as provided by the contract.

3.2.3 Lights

Each night, between sunset and sunrise and during periods of restricted visibility, provide lights for floating plants, pipelines, ranges, and markers. Also, provide lights for buoys that could endanger or obstruct navigation. When night work is in progress, maintain lights from sunset to sunrise for the observation of dredging operations. Lighting shall conform to United States Coast Guard requirements for visibility and color.

3.2.4 Ranges, Gauges, and Lines

SD-87, Furnish, set, and maintain ranges, buoys, and markers needed to define the work and to facilitate inspection. Establish and maintain gauges in locations observable from all parts of the work so that the depth may be determined. Suspend dredging when the gauges or ranges cannot be seen or followed. The Contracting Officer will furnish, upon request by the Contractor, survey lines, points, and elevations necessary for the

setting of ranges, gauges, and buoys.

3.2.5 Plant

Maintain the plant, scows, coamings, barges, and associated equipment to meet the requirements of the work.

3.2.6 Disposal of Excavated Material

The Contractor shall be responsible for the proper and safe transportation and disposal of dredged materials. All dredged material shall be transported to, and disposed of in, the Craney Island Disposal Area Rehandling Basin. Deposit of dredged materials in unauthorized places is strictly forbidden. The Contractor shall comply with all rules and regulations of local port and harbor governing authorities. The Contractor shall comply with the "Regulations Governing Use of Craney Island Disposal Area and Facilities, Norfolk Harbor, Virginia" revised 06 May 1980.

3.2.6.1 Method of Disposal

Deposit dredged material by self-dumping scow or barge. Do not remove loaded or partially loaded scows, or barges from the dredge area until the load has been measured by the Contracting Officer. Notify the Contracting Officer when scows or barges are returned to the dredge area.

3.2.7 Salvaged Material

Anchors, chains, firearms, and other articles of value, which are brought to the surface during dredging operations, shall remain or become the property of the Government and shall be deposited on shore at a convenient location near the site of the work, as directed.

3.2.8 Safety of Structures

The prosecution of work shall assure the stability of piers, bulkheads, and other structures lying on or adjacent to the site of the work, insofar as structures may be jeopardized by dredging operations. Repair damage resulting from dredging operations, insofar as such damage may be caused by variation in locations or depth of dredging, or both, from that indicated or permitted under the contract.

3.2.9 Plant Removal

Upon completion of the work, promptly remove plant, including ranges, buoys, piles, and other markers or obstructions.

3.3 MEASUREMENT

Government will take before and after dredging soundings.

3.3.1 Method of Measurement

The material removed will be measured by cubic yard in place, by means of soundings taken before and after dredging. The drawings represent existing

conditions based on latest available information, but will be verified and corrected, if necessary, by soundings taken before dredging in any locality. Soundings will be taken by lead line or 200 kHz sonic methods, or both, as determined by the Government; results of soundings by either or both methods will be the basis for payment. Areas sounded more than 30 days prior to dredging will be re-sounded when requested by the Contractor. The Contractor has the option of being present when such soundings are made.

3.3.2 Surveys During Progress of Work

Contract depth will be determined by soundings or sweepings taken behind the dredge as work progresses. The Contractor shall take progress soundings or sweepings.

3.3.3 Estimates

SD-91, Estimates of work completed will be based on the result of soundings taken during the progress of the work or, at the option of the Contracting Officer, on 85 percent of the scow or barge measurement. Deductions will be made for dredging and disposal not in accordance with the specifications.

3.4 FINAL EXAMINATION AND ACCEPTANCE

As soon as practicable after the completion of areas, which in the opinion of the Contracting Officer, will not be affected by further dredging operations, each area will be examined by the Government by sounding or sweeping, or both. Remove shoals and lumps by dragging the bottom or by dredging. However, if the bottom is soft and the shoal areas form no material obstruction to navigation, removal may be waived at the discretion of the Contracting Officer. The Contractor will be notified when soundings or sweepings are to be made and will be permitted to accompany the sounding or sweeping party and to inspect the data and methods used in preparing the final estimate. When areas are found to be in a satisfactory condition, the work therein will be accepted as complete. Final estimates will be subject to deductions or correction of deductions previously made because of excessive overdepth, dredging outside or authorized areas, or disposal of material in an unauthorized manner.

-- End of Section --

U. S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS ADMINISTRATION

REQUEST FOR DETERMINATION AND RESPONSE TO REQUEST

(Davis Bacon Act as A
and Related Statut

FOR DEPARTMENT OF LABOR USE

Response To Request

a. [X] Use area determination issued for this area

SEE GPO

VA89-17 for Heavy Construction

b. [X] The attached decision noted below is applicable to this project

Decision Number
89-VA-0638

Date of Decision
12-8-89

Expires
6-5-90

Approved

Alan L Moss

Director
Division of Wage
Determinations

Requesting Officer (typed name and signature)
VIOLET L. CORMLY, CONTRACTOR LABOR RELATIONS ADVISOR, CONSTRUCTION CONTRACTS DIVISION

Department, Agency, or Bureau
DEPARTMENT OF NAVY

Phone Number
(804) 444-9874

Date of Request
3 SEPTEMBER 1989

Est. Advertising Date
15 SEPTEMBER 1989

Est. Bid Opening Date
31 OCTOBER 1989

Prior Decision Number (If any)

Est. $ Value of Contract
☐ Under ½ Mil. ☒ 1 to 5 Mil.
☐ ½ to 1 Mil. ☐ Over 5 Mil.

Type of Work DREDGING
☐ Bldg. ☐ Highway
☐ Resid. ☒ Heavy

Location of Project (city or other description)
NAVAL AMPHIBIOUS BASE, LITTLE CREEK

County
VIRGINIA BEACH

State
VIRGINIA

Address to which wage determination should be mailed. Must be complete and include ZIP Code. (Print or type)

COMMANDER (CODE 02125)
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511-6287

Wage Survey by Agency Attached
☐ YES ☒ NO

Wage Survey by Agency in Progress
☐ YES ☒ NO

Description of Work (Be specific) (Print or type) N62470-88-B-8161, BERTHING PIER EXTENSION. THE WORK INCLUDES THE EXTENSION TO 3 CONCRETE PIERS; CONSTRUCTION OF MOORING ISLANDS; CATWALKS BETWEEN THE PIERS & MOORING ISLANDS; WOODEN FENDER SYSTEMS; CONCRETE PILEDRIVING; PIER PIPING RELOCATING; ELECTRICAL WORK ON PIER AND ON LAND, CONCRETE PLACEMENT; & BUCKET DREDGING OF 106,000CY AND INCIDENTAL RELATED WORK.

CHECK OR LIST CRAFTS NEEDED
(Attach continuation sheet if needed)

- ___ Asbestos workers
- ___ Boilermakers
- ___ Bricklayers
- X Carpenters
- ___ Cement masons
- X Electricians
- ___ Glaziers
- X Ironworkers REINFORCING; ORNAMENTAL & STRUCTURES
- X Laborers, (specify classes)
- X AIR TOOL OP
- ___ Lathers
- ___ Marble & tile setters, terrazzo workers
- X Painters; BRUSH; STRUCTURAL STEEL
- ___ Piledrivermen
- ___ Plasterers
- ___ Plumbers
- ___ Roofers
- ___ Sheet metal workers
- ___ Steamfitters
- X Welders--rate for craft
- X Truck drivers
- X Power equipment operators, (specify types)
- X AIR COMPRESSOR X HOISTS
- X CRANES, DERRICKS, DRAGLINES
- X MIXERS X PILEDRIVERS X PUMPS
- X SHOVELS X TRACTORS

Other crafts
- X FINISHING MACHINE
- X TRENCHING MACHINE

(CONTINUED ON ATTACHED SHEET)

STATE OF VIRGINIA AND WASHINGTON, DC

DREDGING PROJECTS:

EFFECTIVE DATE: 12/8/89

EXPIRATION DATE: 6/5/90

DECISION NUMBER: 89-VA-0638

HYDRAULIC DREDGES	Basic Hourly Rates	Fringe Benefits
LEVERMAN	12.95	2.59+a
ENGINEER	12.82	2.59+a
DERRICK OPERATOR	12.14	2.59+a
ELECTRICIAN	12.34	2.59+a
CARPENTER	12.05	2.59+a
MATE	11.34	2.59+a
WELDER	11.71	2.59+a
SPILL BARGE OPERATOR	11.89	2.59+a
SPIDER BARGE OPERATOR	11.89	2.59+a
TUG MASTER	11.26	2.59+a
TUG MATE	10.76	2.59+a
STEWARD	9.77	2.59+a
OILER	9.48	2.59+a
DECKHAND	8.89	2.59+a
TUG DECKHAND	8.89	2.59+a
SHOREMAN	8.72	2.59+a
SECOND COOK	8.89	2.59+a
MESSMAN	8.72	2.59+a
RODMAN	8.89	2.59+a
HANDYMAN	8.89	2.59+a
NIGHT COOK	8.89	2.59+a
JANITOR/PORTER	8.89	2.59+a
CLAMSHELL DREDGES		
OPERATOR	12.87	2.59+a
ENGINEER	12.15	2.59+a
WELDER	11.55	2.59+a
MATE	11.12	2.59+a
OILER	9.48	2.59+a
DECKHAND	8.89	2.59+a
LAUNCHMAN	9.48	2.59+a
SCOWMAN	9.01	2.59+a
RODMAN	8.89	2.59+a
HANDYMAN	8.89	2.59+a
DIPPER DREDGES		
OPERATOR	13.01	2.59+a
ENGINEER	12.68	2.59+a
WELDER	11.71	2.59+a
MATE	11.34	2.59+a
OILER	9.48	2.59+a
DECKHAND	8.89	2.59+a
LAUNCHMAN	9.48	2.59+a
SCOWMAN	9.01	2.59+a

DIPPER DREDGES CONT'D	Basic Hourly Rates	Fringe Benefits
RODMAN	8.89	2.59+a
HANDYMAN	8.89	2.59+a
TUGS (TENDING DIPPER AND CLAMSHELL DREDGES		
TUG MASTER	11.69	2.59+a
ENGINEER	11.69	2.59+a
TUG MATE	10.86	2.59+a
ASSISTANT ENGINEER	10.65	2.59+a
DECKHAND	8.76	2.59+a
COOK	9.01	2.59+a
STEWARD DEPARMENT (ON DIPPER AND CLAMSHELL DREDGES)		
COOK	8.67	2.59+a
MESS COOK	8.16	2.59+a
MESSMAND AND JANITOR	8.04	2.59+a
DRILL BOATS		
ENGINEER	12.82	2.59+a
DRILLER	12.57	2.59+a
BLASTER	12.57	2.59+a

FOOTNOTE:
a-SIX PAID HOLIDAYS
New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, Plus VACATION CONTRIBUTION of 8% of straight time pay for all hours worked.

UNLISTED CLASSIFICATIONS NEEDED FOR WORK NOT INCLUDED WITHIN THE SCOPE OF THE CLASSIFICATIONS LISTED MAY BE ADDED AFTER AWARD ONLY AS PROVIDED IN THE LABOR STANDARDS CONTRACT CLAUSES (29 CFR 5.5 (a) (1) (ii) (A)).

89-VA-0638

SOLICITATION: N62470-88-I-8161

CRAFTS NEEDED (CONTINUED)

DIPPER & CLAMSHELL DREDGE:
- Operator
- Engineer
- Craneman
- Maintenance Engineer
- Welder
- Mate
- Fireman; Oiler
- Deckhand; Handyman; Tug Deckhand
- Scowman; Rodman

DRAG BUCKET DREDGE:
- Operator
- Engineer
- Maintenance Engineer
- Mate
- Deckhand

HYDRAULIC DREDGES:
- Leverman
- Engineer; Derrick Operator
- Maintenance Engineer
- Electrician; Dredge Welder
- Spider Barge Operator
- Mate
- Fireman; Oiler
- Tug Deckhand
- Deckhand; Handyman; Storeman; Rodman

COMPANY LEAD DREDGEMAN:
- Lead Dredgeman

(TUG BOATS over 1,000 H.P. (with master or captain having license endorsed for 200 miles off shore):
- Tug Engineer
- Tug Deckhand

TUG BOATS over 1,000 H.P. (without master or captain having license endorsed for 200 miles off shore):
- Tug Engineer
- Tug Deckhand

DRILL BOATS:
- Engineer
- Blaster
- Driller, Welder or Machinist
- Fireman
- Oiler

REPRODUCED AT GOVERNMENT EXPENSE

COMMONWEALTH of VIRGINIA

James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

Marine Resources Commission
2600 Washington Avenue
P.O. Box 756
Newport News, Virginia 23607-0756

William A. Pruitt
Commissioner

August 16, 1999

Naval Facilities Engineering Command
c/o Paul T. Kidd, Code 405
Atlantic Division
1510 Gilbert Street
Norfolk, VA 23511-2699

RE: VMRC #99-0370

Dear Mr. Kidd:

Enclosed is the Marine Resources Commission authorization for your proposal to replace the south berth of pier R3 with a structure of the same footprint, the south access trestle of pier R3 with a 27-foot wide trestle (approximately 4'-4" wider than the existing trestle and three existing boathouses with one 105-foot long by 6.5-foot wide covered boathouse with eight (8) precast concrete finger piers adjacent to your property at the Yorktown Naval Weapons Station situated along the York River in York County.

A yellow placard is also enclosed. This placard reflects the authorized activities for inspection purposes and must be conspicuously displayed at the work site throughout the construction phase. Failure to properly post the placard in a prominent location will be considered a violation of your permit conditions.

YOU ARE REMINDED THAT ANY DEVIATION FROM THE PERMIT OR ATTACHED DRAWINGS REQUIRES PRIOR AUTHORIZATION FROM THE MARINE RESOURCES COMMISSION. FAILURE TO OBTAIN THE NECESSARY MODIFICATION WILL BE CONSIDERED A VIOLATION AND COULD SUBJECT YOU TO CIVIL CHARGES IN AMOUNTS NOT TO EXCEED $10,000 PER VIOLATION.

The work authorized by this permit is to be completed by April 27, 2002. Please note that in conformance with Special Condition 17 of your permit you are to notify the Commission prior to commencement of your permitted project. The enclosed self-addressed, stamped post card is to be used for this purpose. All other conditions of the permit will remain in effect.

Please be advised that you may also require issuance of a U. S. Army Corps of Engineers permit before you begin work on this project. You may wish to contact them directly to verify any permitting requirements.

Sincerely,

Robert W. Grabb
Chief, Habitat Management

RWG/amn
HM
Enclosure

cc: U. S. Army Corps of Engineers
Applicant

V...RC# 99-0370
Applicant: Naval Facilities Engineering Command

COMMONWEALTH OF VIRGINIA
MARINE RESOURCES COMMISSION
PERMIT

The Commonwealth of Virginia, Marine Resources Commission, hereinafter referred to as the Commission, on this 27th day of April 1999, hereby grants unto: **Joseph W. Zorica, Capt. USN Code 09A**
Atlantic Division, Naval Facilities Engineering Command
1510 Gilbert Street
Norfolk, Virginia 23511-2699

hereinafter referred to as the Permittee, permission to:

_x_ Encroach in, on, or over State-owned subaqueous bottoms pursuant to Chapter 12, Subtitle III, of Title 28.2 of the Code of Virginia.

____ Use or develop tidal wetlands pursuant to Chapter 13, Subtitle III, of Title 28.2 of the Code of Virginia.

Permittee is hereby authorized to replace the south berth of pier R3 with a structure of the same footprint, the south access trestle of pier R3 with a 27-foot wide trestle (approximately 4'- 4" wider than the existing trestle) and three existing boathouses with one 105-foot long by 6½-foot wide covered boathouse with eight (8) precast concrete finger piers adjacent to the Permittee's property at the Yorktown Naval Weapons Station situated along the York River in York County. All activities authorized herein shall be accomplished in conformance with plans and drawings dated received March 8, 1999, which are attached and made a part of this permit.

This permit is granted subject to the following conditions:

(1) The work authorized by this permit shall be completed by **April 27, 2002**. The Permittee shall notify the Commission when the project is completed. The completion date may be extended by the Commission in its discretion. Any such application for extension of time shall be in writing prior to the above completion date and shall specify the reason for such extension and the expected date of completion of construction. All other conditions remain in effect until revoked by the Commission or the General Assembly.
(2) This permit grants no authority to the Permittee to encroach upon the property rights, including riparian rights, of others.
(3) The duly authorized agents of the Commission shall have the right to enter upon the premises at reasonable times, for the purpose of inspecting the work being done pursuant to this permit.
(4) The Permittee shall comply with the water quality standards as established by the Department of Environmental Quality, Water Division, and all other applicable laws, ordinances, rules and regulations affecting the conduct of the project. The granting of this permit shall not relieve the Permittee of the responsibility of obtaining any and all other permits or authority for the projects.
(5) This permit shall not be transferred without written consent of the Commissioner.
(6) This permit shall not affect or interfere with the right vouchsafed to the people of Virginia concerning fishing, fowling and the catching of and taking of oysters and other shellfish in and from the bottom of acres and waters not included within the terms of this permit.
(7) The Permittee shall, to the greatest extent practicable, minimize the adverse effects of the project upon adjacent properties and wetlands and upon the natural resources of the Commonwealth.
(8) This permit may be revoked at any time by the Commission upon the failure of the Permittee to comply with any of the terms and conditions hereof or at the will of the General Assembly of Virginia.
(9) There is expressly excluded from the permit any portion of the waters within the boundaries of the Baylor Survey.
(10) This permit is subject to any lease of oyster planting ground in effect on the date of this permit. Nothing in this permit shall be construed as allowing the Permittee to encroach on any lease without the consent of the leaseholder. The Permittee shall be liable for any damages to such lease.
(11) The issuance of this permit does not confer upon the Permittee any interest or title to the beds of the waters.
(12) All structures authorized by this permit which are not maintained in good repair shall be completely removed from State-owned bottom within three (3) months after notification by the Commission.
(13) The Permittee agrees to comply with all of the terms and conditions as set forth in this permit and that the project will be accomplished within the boundaries as outlined in the plans attached hereto. Any encroachment beyond the limits of this permit shall constitute a Class 1 misdemeanor.
(14) This permit authorizes no claim to archaeological artifacts which may be encountered during the course of construction. If, however, archaeological remains are encountered, the Permittee agrees to notify the Commission, who will, in turn notify the Department of Historic Resources. The Permittee further agrees to cooperate with agencies of the Commonwealth in the recovery of archaeological remains if deemed necessary.
15) If any loss or damage to the Commonwealth is caused or contributed to, in whole or in part, by the Permittee arising from the establishment, operation, or maintenance of said project , the liability of the Permittee therefore shall be determined in accordance with the applicable provisions of the Federal Tort Claims Act or August 2, 1946, as amended.

The following special conditions are imposed on this permit:

(16) The yellow placard accompanying this permit document must be conspicuously displayed at the work site throughout the construction phase of the authorized activity.

(17) Permittee agrees to notify the Commission a minimum of 15 days prior to the start of the construction activities authorized by this permit.

A permit issuing fee of: $ 100.00

and a royalty of: n/a

for a total of **$ 100.00** This permit consists of 9 sheets.

PERMITTEE

Permittee's signature is affixed hereto as evidence of acceptance of all of the terms and conditions herein.

In cases where the Permittee is a corporation, agency or political jurisdiction, please assure that the individual who signs for the Permittee has proper authorization to bind the organization to the financial and performance obligations which result from activity authorized by this permit.

PERMITTEE

Accepted for Naval Facilities Engineering Command

10TH day of AUGUST, 19 99

By Gary A Engle CODE 09A
(Name) (Title)

State of VIRGINIA
~~City (or County) of~~ COMMONWEALTH OF LARGE, to-wit:

I, SUE R. WATSON a Notary Public in and for said ~~City (or County)~~ and State hereby certify that GARY A. ENGLE, Permittee, whose name is signed to the foregoing, has acknowledged the same before me in my ~~City (or County)~~ and State aforesaid.

Given under my hand this 10TH day of AUGUST, 1999

My Commission Expires: 30 SEP 2000

Notary Public Sue R Watson

COMMISSION

IN WITNESS WHEREOF, the Commonwealth of Virginia, Marine Resources Commission has caused these presents to be executed in its behalf by Robert W. Grabb, Chief, Habitat Management
(Name) (Title) Marine Resources Commission

16th day of August, 19 99 by

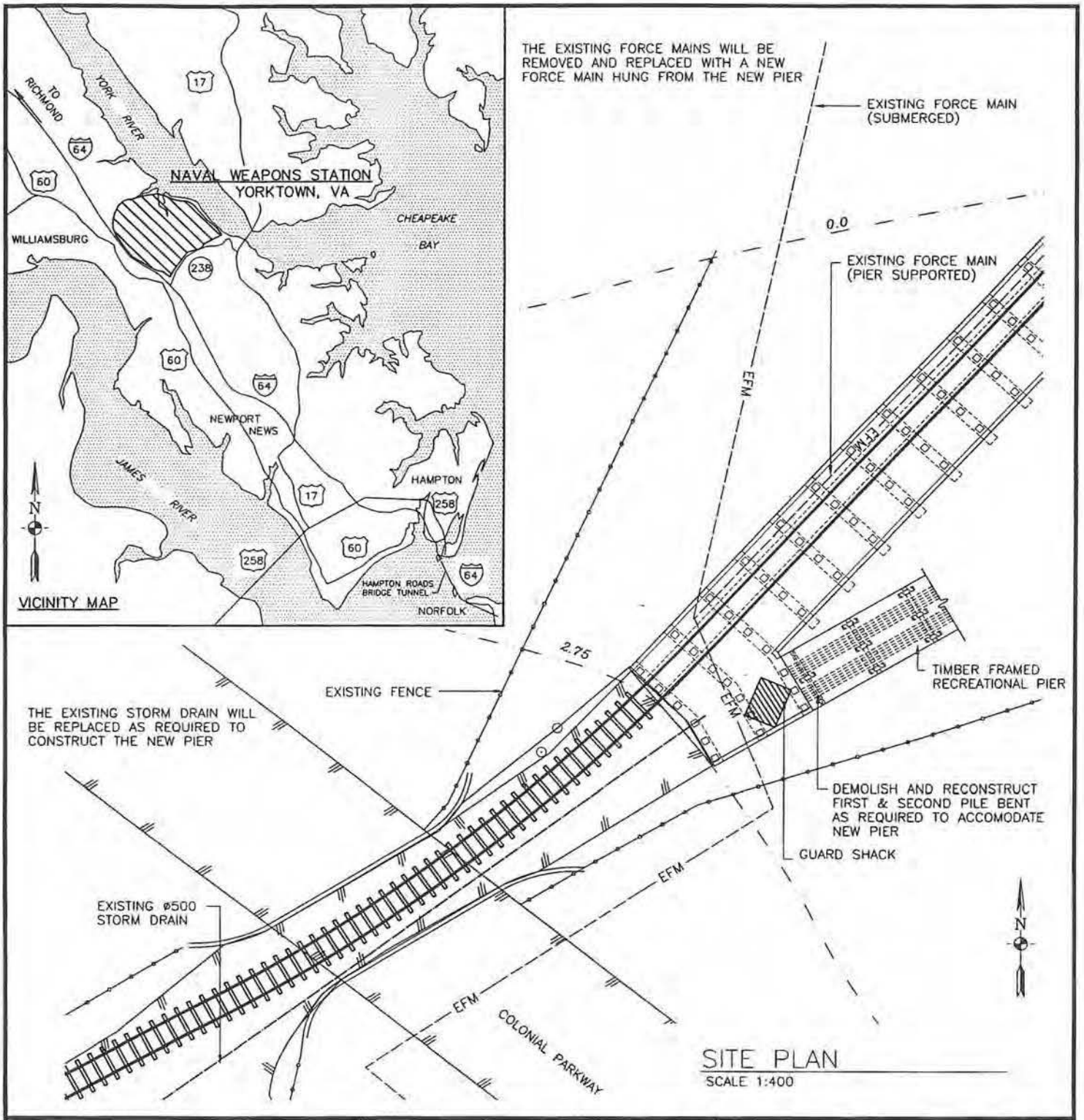
State of Virginia
City of Newport News, to wit:

I, Audrey M. Nichols, a Notary Public within and for said City, State of Virginia, hereby certify that Robert W. Grabb, whose name is signed to the foregoing, bearing the 27th day of April 1999, has acknowledged the same before me in City aforesaid.

Given under my hand this 16th day of August, 19 99

My Commission Expires: April 30, 2003

Notary Public Audrey M Nichols



SITE PLAN
SCALE 1:400

PURPOSE: PIER REPLACEMENT & REPAIR

DATUM: MEAN LOW WATER = 0.0
(1972 ADJUSTMENT)

ADJACENT PROPERTY OWENERS:
1. NATION PARK SERVICE
2. U.S. NAVY

VICINITY MAP & SITE PLAN

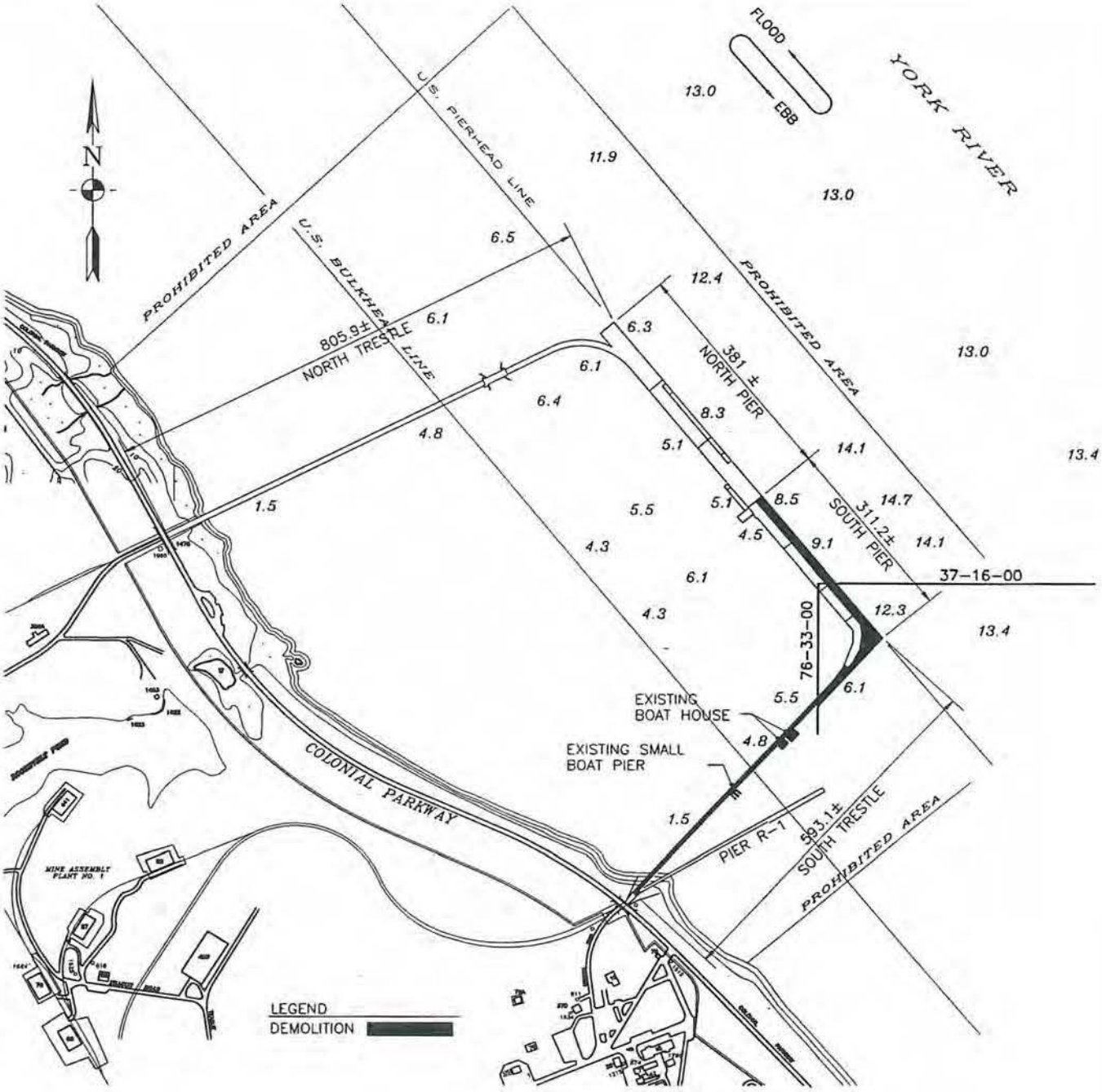
MARINE ARCHAEOLOGY COMMISSION
RECEIVED
MAR 8 1999

SOUTH PIER & TRESTLE REPLACEMENT
PIER R3

IN: YORK RIVER
AT: YORKTOWN, VA

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA

SHEET 1 OF 6 DATE: 1 MARCH 99



PURPOSE: PIER REPLACEMENT & REPAIR

DATUM: MEAN LOW WATER = 0.0
(1972 ADJUSTMENT)

ADJACENT PROPERTY OWENERS:
1. NATION PARK SERVICE
2. U.S. NAVY

LOCATION PLAN
SCALE 1:10000

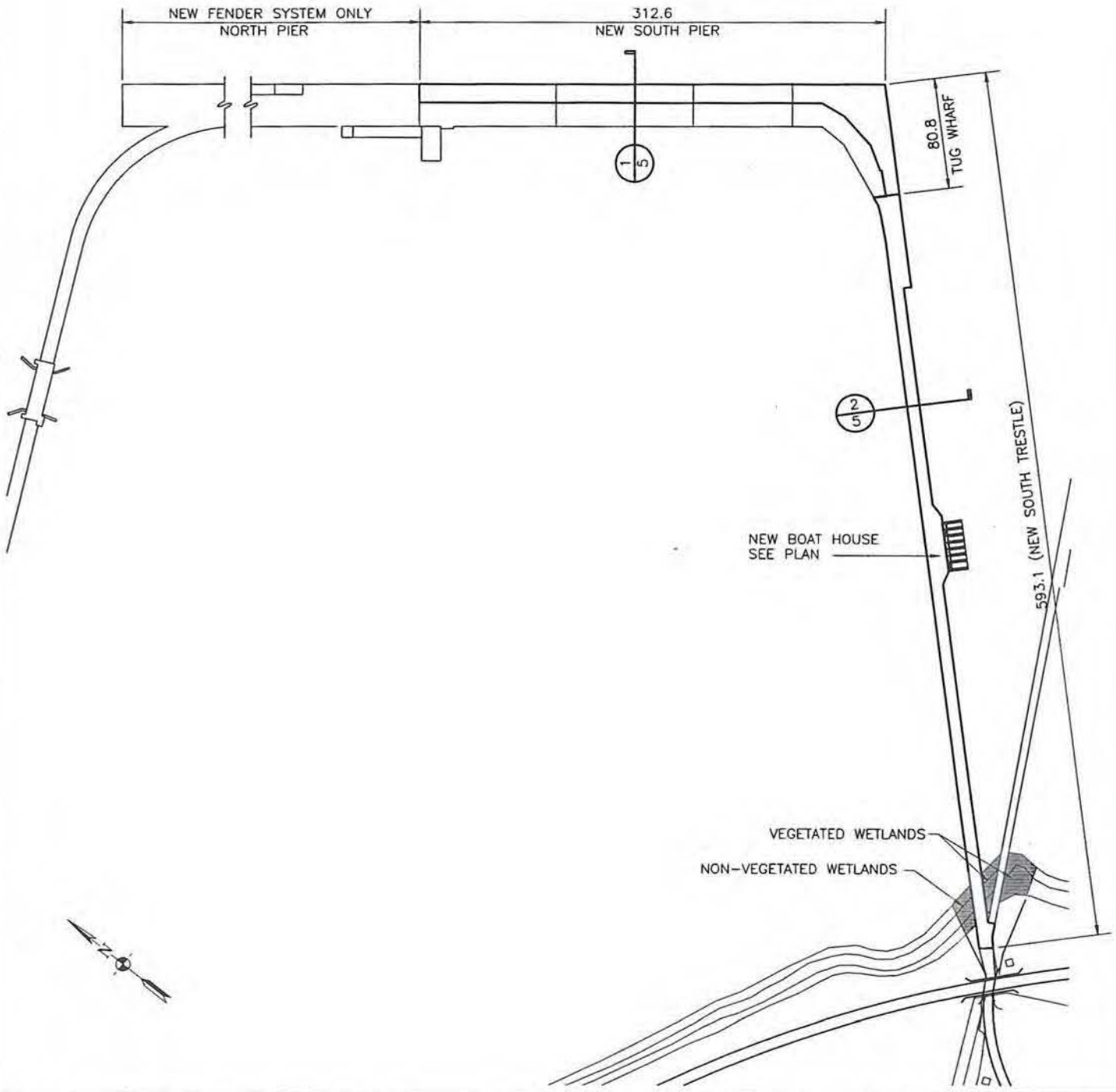
MAR 8 1999

SOUTH PIER & TRESTLE REPLACEMENT
PIER R3

IN: YORK RIVER
AT: YORKTOWN, VA

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA

SHEET 2 OF 6 DATE: 1 MARCH 99



PURPOSE: PIER REPLACEMENT & REPAIR

DATUM: MEAN LOW WATER = 0.0
(1972 ADJUSTMENT)

ADJACENT PROPERTY OWENERS:
1. NATION PARK SERVICE
2. U.S. NAVY

PIER PLAN
SCALE: 1:4000

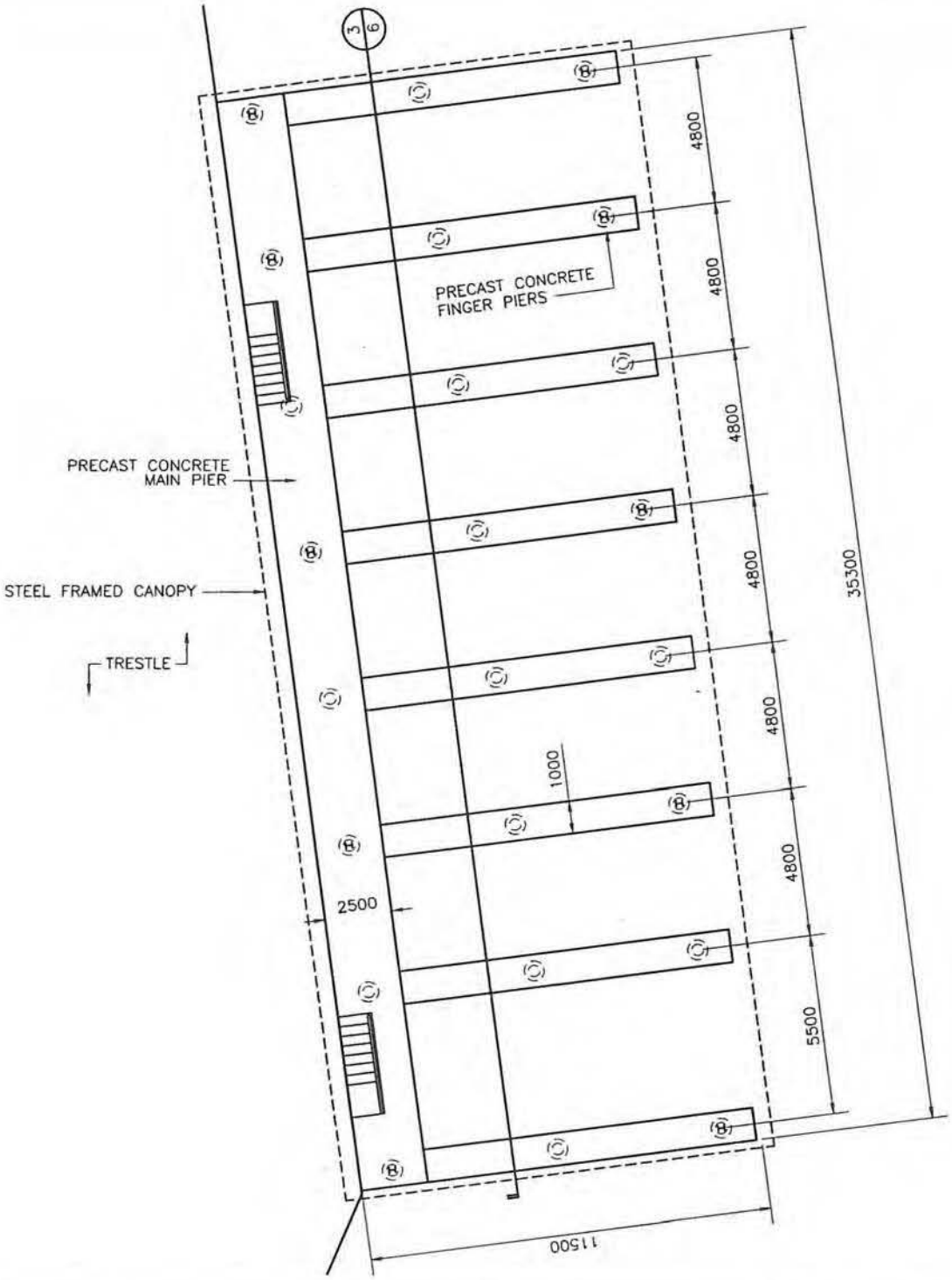
MAR 8 1999

SOUTH PIER & TRESTLE REPLACEMENT
PIER R3

IN: YORK RIVER
AT: YORKTOWN, VA

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA

SHEET 3 OF 6 DATE: 1 MARCH 99



PURPOSE: PIER REPLACEMENT & REPAIR

DATUM: MEAN LOW WATER = 0.0
(1972 ADJUSTMENT)

ADJACENT PROPERTY OWENERS:
1. NATION PARK SERVICE
2. U.S. NAVY

BOAT HOUSE PLAN
SCALE: 1:200

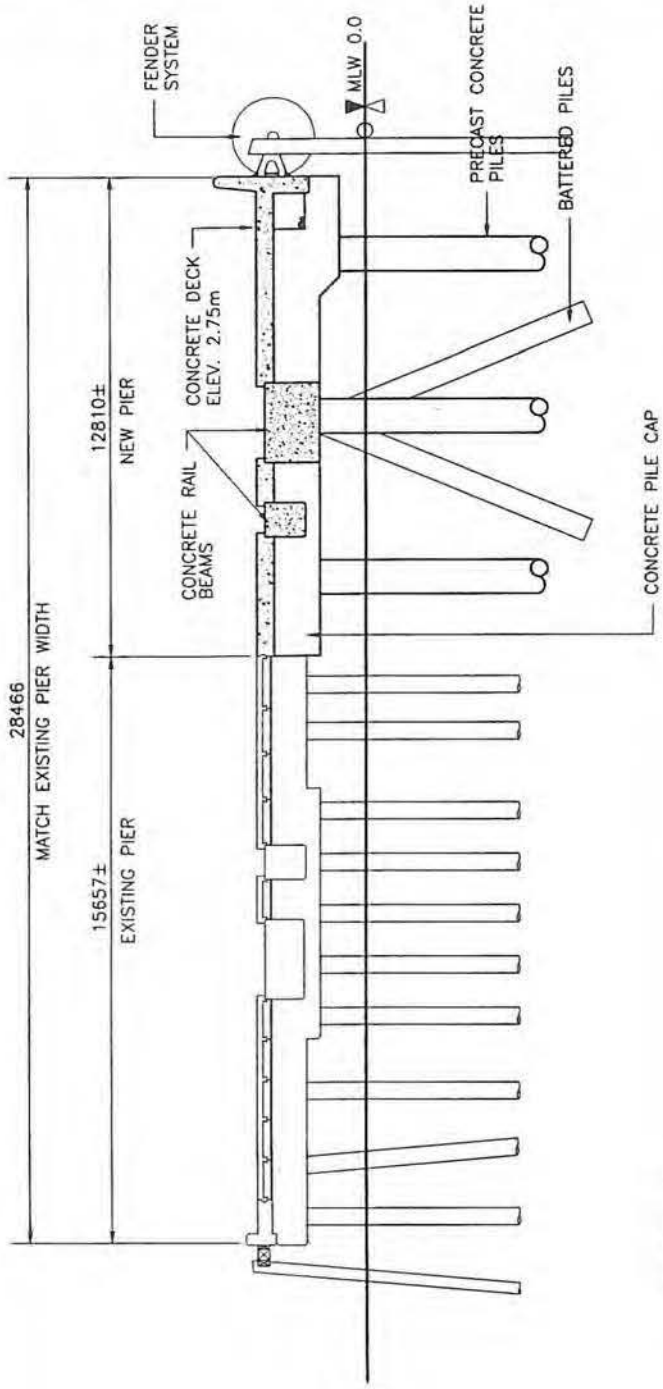
MAR 8 1999

SOUTH PIER & TRESTLE REPLACEMENT
PIER R3

IN: YORK RIVER
AT: YORKTOWN, VA

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA

SHEET 4 OF 6 DATE: 1 MARCH 99



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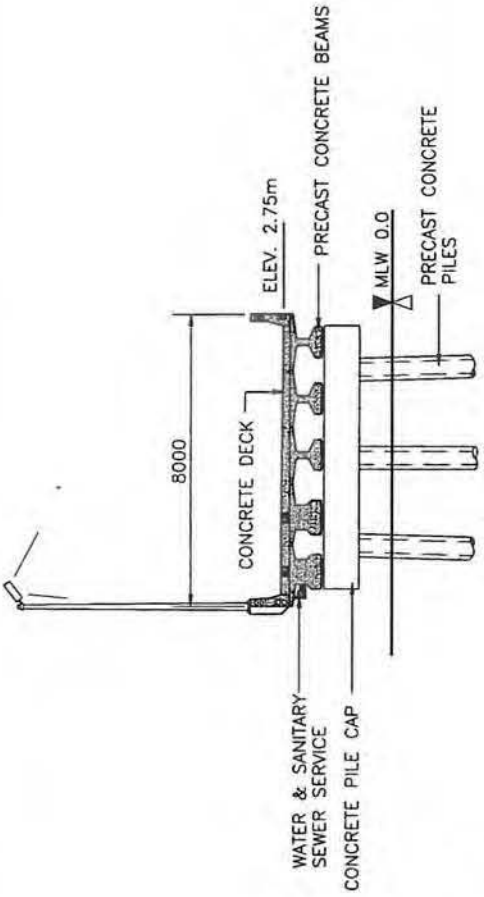
SECTION

SCALE 1:200



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SECTION

SCALE 1:200

PURPOSE: PIER REPLACEMENT & REPAIR

DATUM: MEAN LOW WATER = 0.0
(1972 ADJUSTMENT)

ADJACENT PROPERTY OWENERS:
1. NATION PARK SERVICE
2. U.S. NAVY

SECTIONS

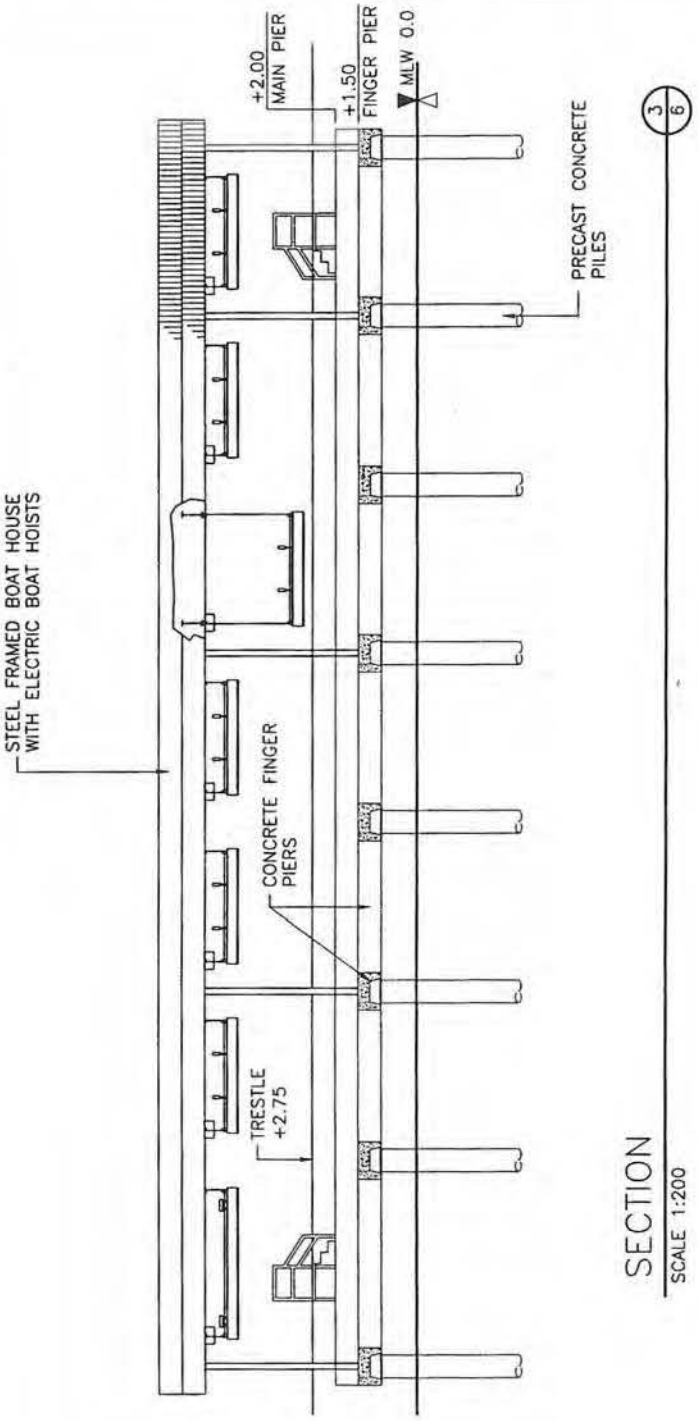
MAR 0 1999

SOUTH PIER & TRESTLE REPLACEMENT
PIER R3

IN: YORK RIVER
AT: YORKTOWN, VA

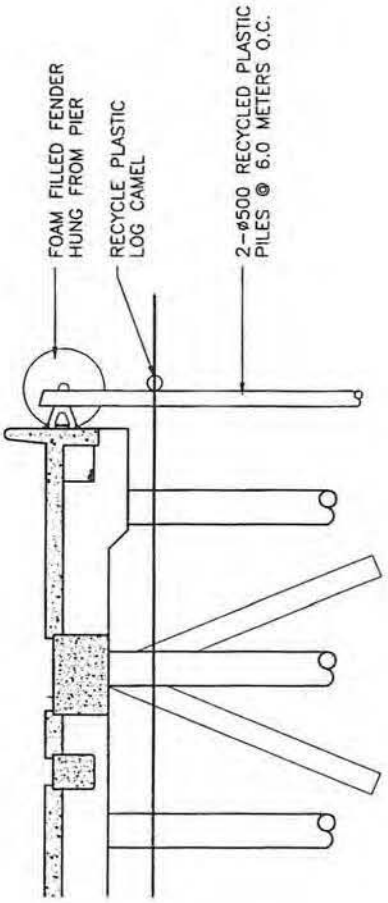
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA

SHEET 5 OF 6 DATE: 1 MARCH 99



SECTION

SCALE 1:200



TYPICAL ALONG PIER FACE AND TUG WHARF

FENDER SYSTEM DETAIL

SCALE 1:200

PURPOSE: PIER REPLACEMENT & REPAIR

DATUM: MEAN LOW WATER = 0.0
(1972 ADJUSTMENT)

ADJACENT PROPERTY OWENERS:
1. NATION PARK SERVICE
2. U.S. NAVY

BOAT HOUSE SECTIONS

MAR 9 1999

SOUTH PIER & TRESTLE REPLACEMENT
PIER R3

IN: YORK RIVER
AT: YORKTOWN, VA

ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA

SHEET 6 OF 6 DATE: 1 MARCH 99

Permit # 99-0370

Commonwealth of Virginia
Marine Resources Commission
Authorization

A Permit has been issued to: Naval Facilities Engineering Command
Joseph W. Zorica, Capt. USN
Code 09A
Atlantic Division
1510 Gilbert Street
Norfolk, Virginia 23511-2699

The Permittee is hereby authorized to:

Replace the south berth of pier R3 with a structure of the same footprint, the south access trestle of pier R3 with a 27-foot wide trestle (approximately 4'-4" wider than the existing trestle) and three existing boathouses with one 105-foot long by 6½-foot wide covered boathouse with eight (8) precast concrete finger piers adjacent to the Permittee's property at the Yorktown Naval Weapons Station situated along the York River in York County.

Issuance Date: 4-27-99 **Expiration Date:** 4-27-2002

Commissioner or Designee

This Notice Must Be Conspicuously Displayed At Site Of Work

National Archives

continued as a satellite of the Boston communications center. Eight years later its name became Naval Security Group Activity, Winter Harbor, a title that it still proudly carries. During the 1960s and 1970s five new buildings were built along with four family housing developments. In 1980 a new Unaccompanied Officer Personnel Housing building opened.

BIBLIOGRAPHY

A. G.B. Anderson to K. J. Bauer, 19 Oct. 1981.

K. JACK BAUER

REPRODUCED AT THE NATIONAL ARCHIVES

Y

YAKUTAT, ALASKA, NAVAL AIR FACILITY, 1942–1944

Yakutat (59°31′N., 139°43′W.) is on the northeastern coast of the Gulf of Alaska. Among the earliest of the Sitka (q.v.) subsector bases it opened as a naval section base in July 1941, became an air facility in September 1942, then was reduced to an auxiliary air facility five months later. Its seaplane facilities could handle twelve scout observation aircraft and a few patrol bombers. Not needed later in the war, it was disestablished in June 1944.

BIBLIOGRAPHY

A. U.S. Navy, Bureau of Yards and Docks, *Building the Navy's Bases in World War II* (Washington: GPO, 1947): II–164, 167; "Aleutian Campaign, World War II Command File" (Washington, Naval Historical Center, Operational Archives Branch).

SUSAN H. GODSON

YORKTOWN, VA., NAVAL COAL, OIL, AND MINE DEPOT; WORLD WAR I KITE BALLOON STATION; NAVAL WEAPONS STATION; AND NAVAL MINE WARFARE SCHOOL, 1917–

The Yorktown naval site is located on the York River about three miles from Yorktown and thirty-five miles from Norfolk, Its first use was as a coal depot, later, an oil depot, but its first major use occurred when the United States was at war in 1917–1918. Then about a thousand mines a day were loaded onto ships and delivered to bases in Invergordon and Inverness, Scotland, where minelayers would pick them up and lay them in the North Sea Mine Barrage. Although improvements in mines had been made since the Bushnell keg mine of 1777 and the Fulton "torpedo" of 1803, it was not until the creation of the U.S. Naval Mine Force on 10 July 1915 and the building of the Bird-class sweepers that U.S. mine warfare came of age. Little progress was made in the interwar years until 1939, when a new class of minelayers replaced the smaller and slower 1917 conversions, some destroyers were built or converted to high speed minelayers and minesweepers, and the historic wooden motor minesweepers (YMS)

reached the fleet. In 1945 the Mine Force consisted of 818 vessels, with training in their use provided mostly at four naval schools in Yorktown: Mines, Operational Planning, Countermeasures, and Degaussing (elimination of magnetism from a ship). While contact mines were still used, World War II saw the development by various nations, including the United States, of acoustic, magnetic, and pressure mines. If little change occurred in the placing of mines in the water, complicated and ingenious devices resulted in four major firing mechanisms: contact, influence, controlled, and combinations of these three. A latecomer is the self-propelled mine.

To regress a bit, in 1938 the Rear Adm. Arthur J. Hepburn Board was charged with recommending sites for new construction or enlargement that would handle the 20 percent increase authorized in the Navy and a naval air strength of 3,000 planes. Included was the subject of mines, but the report, dated 1 December 1938, called for no additional mine bases, provided certain deficiencies were corrected in the existing establishments at Yorktown, Hawthorne, Mare Island (q.v.), and Oahu, Hawaii (q.v.). However, the great increase called for by the Navy in 1940 resulted in expansion at many bases including the NMD at Yorktown. Peacetime practice had been to fill the magazines of ships when they were commissioned and to maintain a reserve supply ashore. Periodically, however, much of the ammunition has to be overhauled, which means removing all explosive material and refilling with new, and checking all mechanical parts. Also, ships entering navy yards must first deposit their ammunition at another shore facility, with Yorktown and an annex to it built at St. Juliens Creek serving well the hundreds of ships at Norfolk. Following a disastrous explosion at Lake Denmark, N.J., in 1926, moreover, ammunition storage called for great dispersal and a reduction of explosives in one building. The policy was adopted that no more than 143,000 pounds of high explosive could be stored in a single magazine and that the magazines had to be at least 500 feet apart. Also, new construction would have to be of noncombustible materials and materials not subject to fragmentation from explosion. In consequence, in 1928 the Yorktown depot was enlarged by the construction of seventy-seven high explosive magazines. Given the capacity of the depot, little beyond the building of a TNT reclamation plant and a mine assembly building was needed there to support the requirements called for in the "Two Ocean" bill of 1940. In 1941, however, the depot was further enlarged by the addition of two storage buildings for inert materials and a new pier and aided by dredging that eased the water approaches to it. The call for the production of 10,000 aircraft that year, among other needs, resulted in some expansion also at the annex at St. Juliens Creek, with eleven magazines and an inert storehouse completed in 1942. Because civilian labor was scarce around depots located in lightly populated areas, military personnel had to be used, which called for the building of barracks and ancillary facilities. From a 1942 construction program totaling $2,340,000, Yorktown acquired four 228-man barracks and barracks at St. Juliens Creek to house 1,200 men. When the Navy began producing 20mm aircraft ammunition, some of it was stored at St. Juliens Creek. If to date emphasis had been placed on storage rather than on production, the advent of a new high explosive called "torpex" required new facilities, with a new loading plant being erected at Yorktown by December 1942.

REPRODUCED AT THE NATIONAL ARCHIVES

New developments such as influence mines, improvements in depth charges, and the advent of rockets called for still more construction at Yorktown. Two new projects were completed there, one a plant for assembling the Mark 29 mine, the other a building for testing the assembled mine, thus divorcing testing and production and stopping the interference of production with testing. Construction in 1943, when demands were being made for munitions to fight the war in the Atlantic and Mediterranean, gave Yorktown a set of four barricaded transfer buildings for assembled mines. To supply weapons and ammunition needed particularly by amphibious forces, a new deep-water marginal wharf was added to the single pier at St. Juliens Creek, the only one in the area that could handle a Liberty ship. Now St. Juliens could ship out 40,000 tons a month. In 1944 the introduction of another superhigh explosive, amatol, called for additional construction at Yorktown in the form of nitrate-preparation and storage buildings and powdered-metal storehouses.

From its establishment, the mission of the Naval Mine Depot was to store high explosives; fill, service, and store mines, depth charges, warheads, and aircraft bombs and their component parts; and overhaul and stock ready torpedoes. With the declaration of a national emergency by President Franklin D. Roosevelt in 1938, employment jumped more than 800 percent. TNT, bombs and fuzes, hardware, drill mines, aerial depth bombs, mousetraps (electrically fired contact charges that left from rails on a metal plate and fell into the water in the shape of an ellipse the size of a submarine), demolition charges, and rockets largely made up shipments destined to reach almost every naval facility in the continental United States by air, road, rail, or barge, every ship in the Atlantic Fleet that could tie up to its loading pier, and to bases overseas, including naval air stations. Another major function was to reclaim TNT returned to it in bombs or mines, with this going first through a reclamation plant and then through a purification plant and finally being loaded into bombs and mines at the mine filling plant. In addition, NMD sponsored the Naval Mine Warfare School.

Despite the greatest precautions taken to insure safety, occasional explosions occurred. For example, at 0027 on 16 November 1943 a warehouse known as Plant 2 Warehouse exploded, causing seven deaths and twenty-five injuries, two of the latter being serious. Nothing was left of the warehouse except a huge hole in the ground to show where it had been. Reconstruction costs were estimated to be $586,000. Again, on 1 April 1947 a fire in Storehouse No. 2 destroyed about 40 percent of the correspondence files kept since 1945 and all those prior to 1945.

As of 1 September 1945, there were 148 officers, 1,314 men, and 1,592 civilians employed at the NMD, but the parent organization, the Bureau of Ordnance, had already directed the discontinuance of high explosive loading and

that its major future task would be to break down and store munitions returned by the fleet. A minor research and development operation on high explosives might continue, however. In consequence, two high explosives plants, No. 1 and No. 2, were closed but held in "ready" status. Between 1 September 1945 and 1 October 1946, the NMD reclaimed and stored 1.5 million pounds of TNT alone, even though the round-the-clock operating schedule had been reduced to a single shift and a forty-hour week. Rather than recruit employees, the depot adopted the policy of hiring veterans and of not blocking retirements. As a result, by May 1946 the labor force had been reduced to 1,030 and, with demobilization complete on 1 October 1946, to 24 officers, 104 men, 60 civilians, and the 165–man Marine Corps security force.

Great emphasis at the NMD was now placed on reorganization and the improvement of industrial management. It processed and sold excess property valued at $2,240,000 for $104,000 in 1945–1946. Great attention was given to overhauling returned stocks and to maintenance projects that had been deferred during the war. An inventory revealed that in 1946 there were overhauled 10,600 mines, 1,600 torpedoes, and 600 exploders, and that 5,500 tons of bombs, 58,200 fuzes, 5,900 depth charges, and 105,000 miscellaneous items had been packaged for permanent storage. In addition, $7.5 million in tools and parts had been degreased, derusted, and preserved for permanent storage.

Late in 1946 NMD received a restatement of its mission. Its primary tasks would be to store, overhaul, asemble, load, and test mines and depth charges, bombs, rockets, torpedoes, and underwater ordnance munitions; reclaim high explosives; overhaul and dispose of returned explosives; issue high explosive munitions; conduct special projects as directed; conduct research and development on explosives; and maintain stocks of ready munitions. Its secondary mission included maintenance and training. These missions were carried out by 1,030 people on 1 October 1946 but only 980 on 1 January 1947, and the Marine Corps security guards were made responsible not only for NMD but its Cheatham Annex and the Naval Mine Warfare School. On 1 January 1947 the depot reorganized again by establishing a Management, Planning, and Review Board to seek to improve all phases of operations. While the overhaul, stowage, and preparations of munitions continued, between 1 October 1946 and 31 March 1947 only 7,100 tons of material were received and shipped, and on 1 April 1947 there were on board only 7 officers, 44 men, 25 civilians, and 393 per diem workers. But 3,713 tons of explosives had been loaded onto six aircraft carriers and six LSTs, and research and development had been conducted on twenty-two projects, fifteen of which had been completed. Surplus sales continued in the amount of $328,473, but materials valued at $192,155 had been dumped at sea while salvage recovered $22,047 worth of materials. The commissary store was closed, and the medical department contained only two medical officers and nine hospital corpsmen.

The workers at NMC produced 75 percent of the total output of explosives during the latter period of the war. Of 11,750 tons of high explosive, 6,400 tons

REPRODUCED AT THE NATIONAL ARCHIVES

had been loaded onto sixty-three ships including light carriers, escort carriers, destroyers, and LSTs. Work continued on overhauling, preserving, reconditioning, and storing torpedo exploders, bombs, depth charges, rockets, and TNT. A group of twelve ordnance Reserve specialists had been given refresher training on the assembly of six types of mines, research and development had been conducted on twelve projects, five of which were completed, and $5,355,080 of materials had been dumped at sea. An inventory taken during the summer of 1947 revealed that the value of the property at NMD added up to $23,531,331.56.

The Korean "police action" revitalized NMD. Personnel employed increased five times by 1 July 1953, and an annex served by 47 officers and 182 men was established at Skiffles Creek at an 800–acre site on the western end of the depot. For the first time, mention was made of handling guided missiles, with a Guided Missile Service Unit responsible for providing *Regulus* missiles in ready condition to the fleet. On 26 January 1954, the NMD was charged with operating guided missile processing facilities and performing assembly, checkout, maintenance, and alterations of assigned guided missiles. Twelve officers and 85 men worked in seven buildings, of which five were specially constructed for the operation. On 1 July 1956 there was established a Naval Mine Engineering Facility served originally by 3 officers and 111 civilians, but as of 1 July 1958 by 8 officers and 160 civilians. In September, however, the facility was relocated to the Naval Base at Roosevelt Roads, Puerto Rico, in conjunction with the relocation there of submarine missile training activities.

On 7 August 1958 a new title for NMD that was more descriptive of its funtions was adopted—Naval Weapons Station. The organization provided for departments dealing with ordnance, public works, communications, supply, disbursing, and industrial relations. In addition, there were the Marine Barracks, BOQ, Safety Office, revived Commissary Store, Legal and Administrative officers, Chaplain, welfare and recreation, and a naval barracks. If the St. Juliens Creek Annex was reduced in 1958 from 2,141 personnel to 1,850, there were on board the following tenant activities: Naval Ophthalmic Support and Training Activity, Branch Dispensary and Naval Regional Medical Center, Branch and Naval Regional Dental Center, Explosive Ordnance Disposal, Service Craft, and Naval Mine Engineering Facility—to which should be added a renovated Mine Museum. The Mine War Schools, however, had been transferred to Charleston, S.C. (q.v.). Major work programs involved the *Captor* (torpedo-firing mine), the Guided Missile Facility (which trained not only American but Dutch, Spanish, and other foreign visitors), increased computer facilities, and the development of cast loading procedures for the *Harpoon* Warhead, Destex explosive, and Mk–23 Mod–0 Underwater Sound Signal system. A "wall to wall" inventory taken in 1958 revealed that the facility had 7,500 different items in 171 magazines and thirty-three warehouses. During that summer, among handicapped people hired were two female deaf mutes as key punch operators. Fourteen youths were hired in the Youth Opportunity Campaign. Completed at a cost of $1.4 million was the newest Marine Barracks, named in honor of Lt. Gen. Lewis Burwell

Puller. Also undertaken was the design of a master plan for the station's future public works construction program.

By 1969 the Naval Ammunition Depot at St. Juliens Creek was consolidated with the Naval Weapons Station, which in November obtained a capability to airlift weapons following the completion of a helicopter pad and the delivery of CH–46 and CH–53 craft. In December 1969, the construction of a Missile Park was completed; it was soon moving out almost 2,000 missiles a year. Funding for NWS in 1973 was $52.3 million; for 1974, $47.7 million, with the reduction largely caused by inflationary pressures. Nevertheless, many old buildings were torn down and new ones constructed, including a $350,000 facility for working on the Air Force *Maverick* missile. While nearly 7,000 persons received training in 1975 in 200 training programs, a Cost Reduction Program resulted in the saving of $1,561,000 or 195 percent of the established goal of $800,000. Funding for FY1976, though reduced to $36.6 million, included the retention of the St. Juliens Creek Annex for functions not connected with explosives and work on the *Spanish Sea Sparrow* and the *Talos* missiles. In 1976, a new tenant activity, Naval Sea Support Center, Atlantic, was established at the St. Juliens Creek Annex, and work continued on various foreign missiles as well as on the *Harpoon* and *Sea sparrow*. Meanwhile construction began on a Mk–48 Torpedo Intermediate Maintenance Activity, the first of its kind. In 1977, in addition to continuing work on mines, torpedoes, and missiles the Naval Sea Support Center developed a load for a new Marine Corps Shoulder-Mounted Assault Weapon designed for use against bunkers. Construction work alone during the year amounted to $15,619,495.

Although the personnel ceiling at the Naval Weapons Station for FY1979 was reduced to 1,650, including 39 officers and 313 military personnel, a new tenant activity, a Personnel Support Detachment, was established; the station was designated as the East Coast Intermediate Level Maintenance Depot for the *Harm* missile and acquired approval for its security procedures with respect to nuclear weapons; tested three 12,000–pound rocket motors for the National Aviation and Space Adminstration (NASA) in its new Air Launched Missile Facility; continued testing such missiles as the *Sidewinder* and *Seasparrow*; and tested for buoyancy various items of naval flight gear.

Since 1979 the NWS has continued its buoyancy studies of aviation survival equipment and a Quick Donning Antiexposure Coverall and has tested various mechanical time fuzes as well as working on such missiles as the *Phoenix*, *Walleye*, and *Seasparrow*. Even though a hiring freeze was mandated in 1980, new equipment significantly increased the station's capability to determine the composition of different elements in metals, analyze for mercury in vapors, determine the presence of asbestos, and test various insulating materials. Work continued on the Quickstrike Mine Program, Submarine Launched Mobile Mine, Intermediate Water Depth Mine, *Harm*, *Tomahawk* and *Penguin* missiles, and on other surface-to-surface and air-to-air missiles. A latecomer was a program to provide a sound-powered telephone system for the huge *Trident* submarines.

Meanwhile work for NASA continued on testing rocket motors used to place satellites in orbit, and on testing some Army projectiles and underwater sound signals. Completed in 1982 was a NATO North American Communications Logistics Depot and a $10 million Family Housing Development.

Among the proud heirlooms at NWS Yorktown is a cable from the British Admiralty acknowledging that 50 percent of the 12,000–pound bombs dropped on a raid that sank the German battleship *Tirpitz* in Norway's Alten Fjord on 12 November 1944 had been loaded at Yorktown.

BIBLIOGRAPHY

A. "Narrative of the U.S. Naval Mine Depot, Yorktown, Virginia, 1 September 1945 to 1 October 1946," and supplements. Command World War II File (Washington: Naval Historical Center, Operational Archives Branch); U.S. Navy, Bureau of Yards and Docks, *Building the Navy's Bases in World War II*, 2 vols. (Washington: GPO, 1947), I:305, 320–26; Eastern Sea Frontier, Fifth Naval District, "U.S. Naval Mine Depot, Yorktown Va., War Diary" (Washington D.C., Navy Yard: Navy Department Library).

B. Paolo E. Coletta, "Naval Mine Warfare (Pictorial)," U.S. Naval Institute *Proceedings* 85 (Nov. 1959): 82–96.

YUMA, ARIZ., MARINE CORPS AUXILIARY AIR STATION, 1959–1962, AND MARINE CORPS AIR STATION, 1962–

While flight operations are possible at Yuma, "the sunniest spot in the nation," 98 percent of the time, three-digit summer temperatures melt its asphalt runways as well as its people. It is tucked in a plateau area in the extreme southwestern corner of the state at 32°39′N., 114°36′30″W., at 213 feet above sea level, about fifty miles east of El Centro, Calif., and twenty-three miles north of the Mexican border, near a natural crossing of the Colorado River. Nothing disturbed this desert area until Col. Benjamin Fly, USA, convinced the federal government to have a municipal airport built there on 600 acres on a forty-year lease—and, of course, received the honor of having it named Fly Field. In 1928 the Army Air Forces, courtesy of the War and Interior Departments, began to use the airport as an outpost. During World War II training was offered first in single-engine and then multi-engine flight. Following a period of inactivation extending from 1946 to 1951, the Air Force took over the site for use as a Weapons Proficiency Center for fighter-interceptors. On 12 October 1956 it named the facility Vincent Field in honor of the late Clinton O. "Casey" Vincent, the youngest general in the Air Force. In 1958, upon learning that the Marines wanted to take over and expand the facility, many Yuma farmers objected—until the mayor pointed out that their property values would collapse if the facility were evacuated.

Of the 2,700 acres of land the government acquired at a cost of $26 million, the 617–acre airfield is the only site enclosed by a fence. Outside of the station, however, is a complex of gunnery ranges that occupies 3 million acres, the largest of which is a supersonic gunnery range 110 miles long by 30 miles wide; smaller target areas are near El Centro, Plaster City, and the Chocolate Mountains. The value of the real estate, permanent improvements, and equipment

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OFFICE OF INDUSTRIAL SURVEY REPORT NO. 81

Survey of

Naval Mine Depot,
Yorktown, Virginia.

12-13 May 1948

A. GENERAL

1. HISTORY AND LOCATION — When the United States, in World War I, undertook the tremendous operation of laying the North Sea mine barrage, a location on the Atlantic Seaboard where mines could be stored, assembled, loaded, tested, and issued to the Service was vitally necessary. Also, a station was needed to build up and train personnel in the assembly and adjustment of mines. As a result, a tract of about 18 square miles on the York River above Yorktown was selected. The land was commandeered by presidential Proclamation dated 7 August 1918. In 1921, the Administration Building and the Officers' Quarters were occupied. The activities of the Depot, after completion of the initial construction, consisted of reclamation of depth charges, overhauling mine anchors, and preparation for shipment and receipt of mines and mine materials. The importance of mines and associated weapons increased tremendously during the course of World War II. This was anticipated and resulted in a great expansion of the facilities of the Naval Mine Depot commencing in 1940. With the cessation of hostilities a drastic curtailment of industrial output took place, with a corresponding decrease in the size of the community and the extent of the industrial effort.

2. MISSION — The mission of the Depot is:

Primary:

(a) Overhaul, storage, assembly, loading, and testing of mines, depth charges, bombs, rockets, torpedoes, and underwater ordnance munitions.

(b) Synthesizing and reclaiming of high explosives.

(c) Inspection, segregation, shipment, overhaul, and disposal of Fleet-return high explosive munitions.

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(d) Issues of high explosive munitions to ships and activities.

(e) Prosecution of special projects, as directed.

(f) Explosive research and development, including production pilot loading procedures.

(g) Maintenance of stocks of ready munitions as directed by the Bureau of Ordnance.

(h) Surveillance of munitions and components.

Secondary or Contributing:

(a) Maintenance of all inactive facilities in the degree of readiness for operation prescribed by the Bureau of Ordnance.

(b) Prosecution of educational programs to insure a trained nucleus of talent in technical phases of preparation, assembly, inspection, and overhaul of material.

B. FACILITIES

3. PRESENT FACILITIES The value of the plant account inventory at the end of April 1948 was $23,635,694.69. The physical inventory and the inventory records were completed on 31 October 1947. In general, the facilities of the Depot appeared adequate for the efficient accomplishment of work assigned, except as noted in Paragraph (4) below.

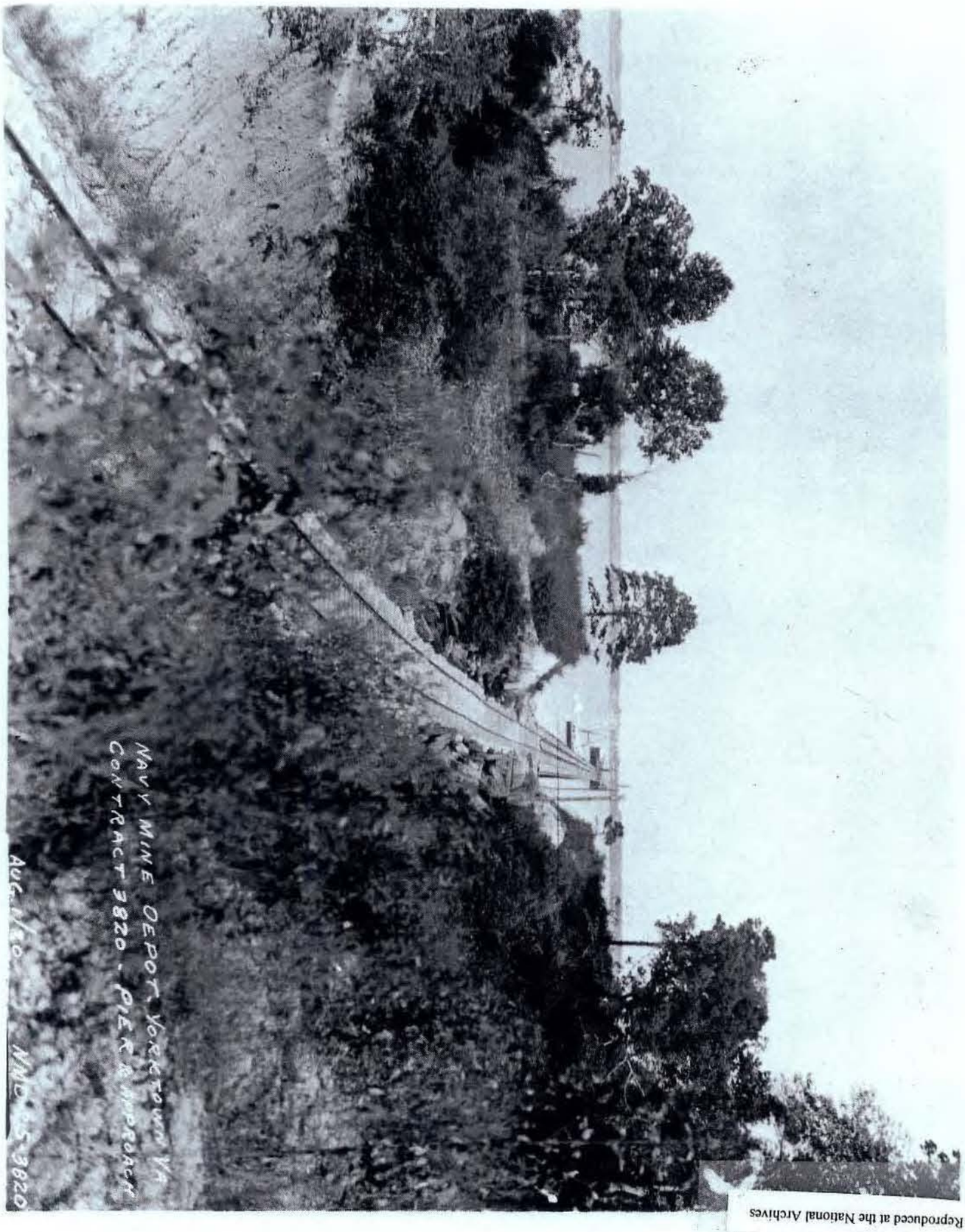
4. PROPOSED FACILITIES The following additions to or modifications of facilities are recommended:

(a) There was no central heating plant to provide heat for the activities in the administrative and main industrial area. It is considered that a considerable saving could be effected if a central heating plant were provided. It was noted, however, that in the five-year development program the Depot had submitted a project for the installation of a central heating plant for the administrative and industrial area at an estimated cost of $300,000 (E-6).

(b) Shipment orders were on hand indicating the return of 2,134 tons of explosives and 25 tons of inert material from overseas depots to Yorktown. The inert material can be ware-

Level 5- STILL PHOTOS
RG 71-CA RECORDS OF BU. Y & D
PHOTOGRAPHS OF CONSTRUCTION PROJECTS, 1879-1943
BOX 530
FOLDER 71-CA-530C YORKTOWN, VA - MINE DEPOT - PIERS

SEARCHED BOXES 528, 529, 530



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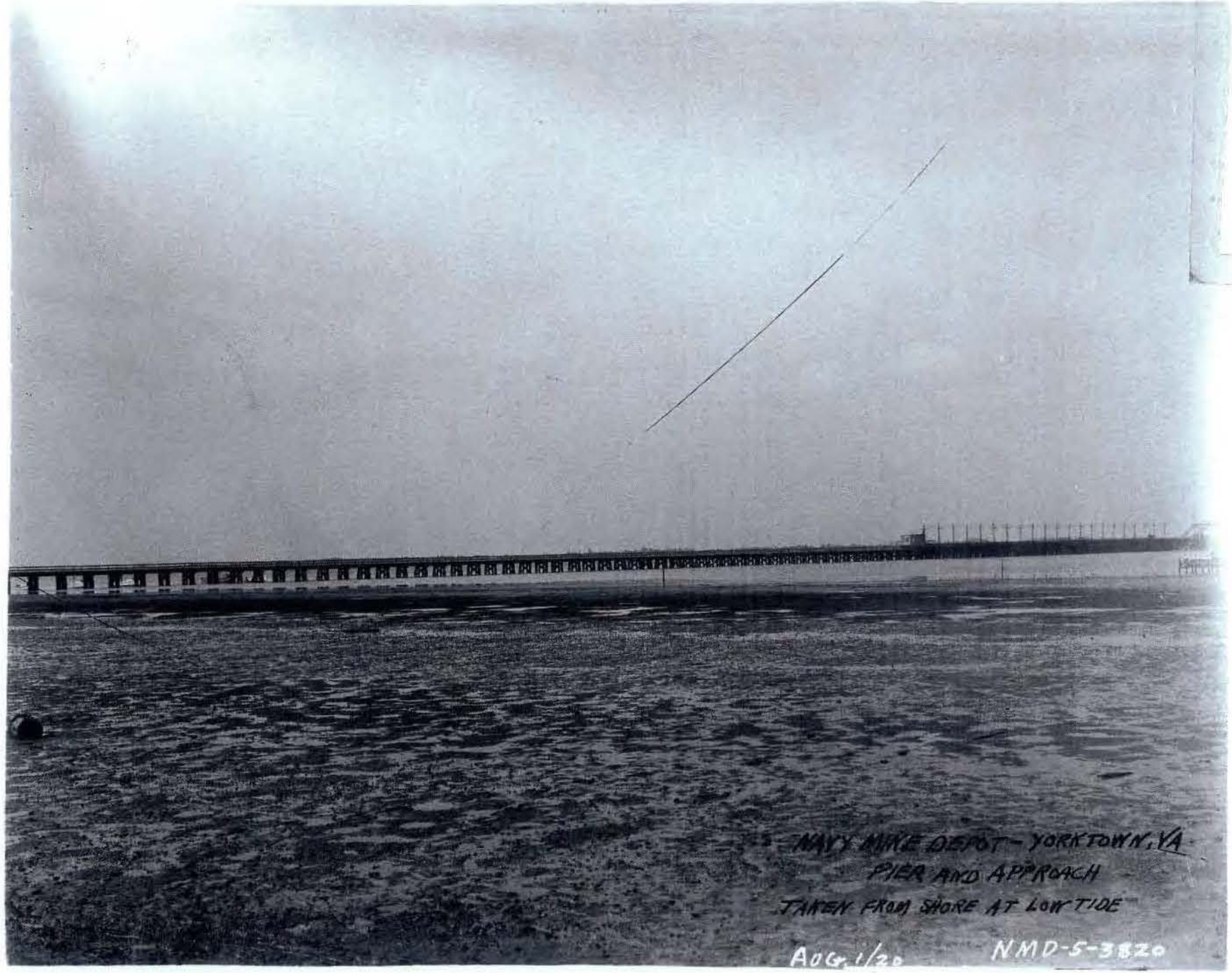
Reproduced at the National Archives



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DEPARTMENT OF THE NAVY
DISTRICT PUBLIC WORKS OFFICE
AND
OFFICER IN CHARGE OF CONSTRUCTION
FIFTH NAVAL DISTRICT
NAVAL BASE, NORFOLK 11, VA.

IN REPLY REFER TO:
DC-210B:ARY:pfs
N1-1

22 JUN 1956

From: District Public Works Officer, Fifth Naval District
To: Chief, Bureau of Yards and Docks

Subj: U. S. Naval Mine Depot, Yorktown, Virginia; Government ownership and jurisdiction over lands in York River

Ref: (a) BUDOCKS ltr R-320/HBT/md ND5/N1-1 Va. Jurisdiction file of 15 Jun 1956 to DPWO FIVE

Encl: (1) Two copies of DPWO FIVE ltr DC-210C:MED:blf N1-1 of 14 Dec 1955 to BUDOCKS with encl thereon

1. Reference (a) advised that enclosure (1) had not been received by the Bureau and requested a copy thereof be submitted. Accordingly, the same is herewith forwarded.

T. J. CROOKS
By direction

Copy to:
COMFIVE

EPRODUCED AT THE NATIONAL ARCHIVES

C
O
P
Y

DC-210C:MED:blf
N1-1

14 Dec 1955

From: District Public Works Officer, Fifth Naval District
To: Chief, Bureau of Yards and Docks

Subj: U. S. Naval Mine Depot, Yorktown, Virginia; Government ownership and jurisdiction over lands in York River

Ref: (a) MEMO from BUDOCKS CODE B-410B to BUDOCKS CODE B-411, B-410B/ecl ND5/N1-1 48-29 48-31 of 21 JAN 1952
(b) Instrument Covering Oystering in York River DTD 9 OCT 1936 from the Government to the Commonwealth of Virginia

Encl: (1) Copy of CO NMD YORKTOWN VA LTR 4211:JMR:jtm of 14 OCT 1955 to DPWO FIVE

1. The original of enclosure (1) requested clarification of the jurisdictional rights of the Government in the properties comprising subject activity, with particular reference to the fishing and oystering rights of third parties in the off-shore limits of the Depot in the York River.

2. Title to the lands comprising subject Depot was acquired by Proclamation of the President No. 1472 dated August 7, 1918, as modified by Presidential Proclamation No. 1492 dated November 2, 1918. The portion of the text of the original Proclamation, which remains unchanged, delineates the extent of the taking to include "all privately-owned rights in the waters lying between the low water line of said tract and the bulkhead or pierhead line in the York River as such line or lines may be hereafter modified." It would appear, therefore, that the Government did not acquire the fee simple title to the submerged lands, but that it merely became subrogated to the existing leases and interests possessed by private individuals in the submerged lands and waters of the York River as may have been granted by the State prior to the date of the Proclamation. This concept is supported by an opinion of Mr. P. S. Twitty, Counsel, Real Estate Division, Bureau of Yards and Docks, dated 21 January 1952, reference (a).

3. In connection with such privately-owned rights, it is provided in Virginia by statute that an initial term for the outlease of oyster grounds by the Commonwealth shall not extend beyond 20 years with prior rights in the leases for renewal. Since no application or other action was taken by the Government for renewal of such private rights so acquired by it under the Presidential Proclamation, it appears that reference (b) is

Enclosure (1)

PRODUCED AT THE NATIONAL ARCHIVES

DC-210C:MED:blf
N1-1

now without purpose and that any private rights which the Government may have acquired in these submerged lands have been extinguished.

4. By Act of the General Assembly of Virginia, approved March 16, 1918, the Government was vested with exclusive jurisdiction over the lands of the Depot, extending to the bulkhead or pierhead line in the York River. This Act did not operate, however, to vest in the United States any additional proprietary right in the submerged land beyond that taken by the President's Proclamation. Nor is it believed that it confers any additional privilege upon the Government in the waters of the York River other than exclusive civil and criminal jurisdiction in the affected area.

5. Considering all of the facts in this matter, it is the opinion of this office that:

(a) The property limits of the Naval Mine Depot extend to the low water line of the York River and no further,

(b) The United States is vested with exclusive political jurisdiction over this property, extending to the bulkhead or pierhead line,

(c) The Commonwealth of Virginia owns the bed of the river extending beyond the low water mark and has full legal authority to grant oyster leases to private individuals in this area,

(d) The Commanding Officer has no authority to interfere with private or public oystering or fishing in the area between the low water mark and the pierhead line, and,

(e) Should the Commanding Officer desire to prevent fishing in this area, he should initiate a recommendation to have same declared a restricted area in accordance with applicable procedures.

6. The views of the Bureau, on the conclusions as expressed above by the District Public Works Officer, are requested.

T. J. CROOKS
By direction

Copy to:
CO NMD YORKTOWN VA
COMFIVE

EPRODUCED AT THE NATIONAL ARCHIVES

for PEACE SAVINGS BONDS

U. S. NAVAL MINE DEPOT
Yorktown, Virginia

IN REPLY REFER TO:
4211:JHR:jtm

OCT 14 1955

From: Commanding Officer, U. S. Naval Mine Depot, Yorktown, Virginia
To: District Public Works Officer, Fifth Naval District

Subj: Waterfront property, boundaries and jurisdictions concerning

1. At various times this activity receives applications for permission to plant and harvest oyster beds in the waters of the York River adjacent to and belonging to this activity. The available information is not sufficient to define legal rights or jurisdiction in granting or withholding the right of individuals to oystering or fishing privileges in the adjacent waters.

2. It is believed that Depot water property "extends channelward from the uplands to the pierhead line". The pierhead line was established by the Corps of Engineers and is approximately 2,000 feet from and parallel to the shore line. It appears that there are three categories of holdings inside this line which are as follows:

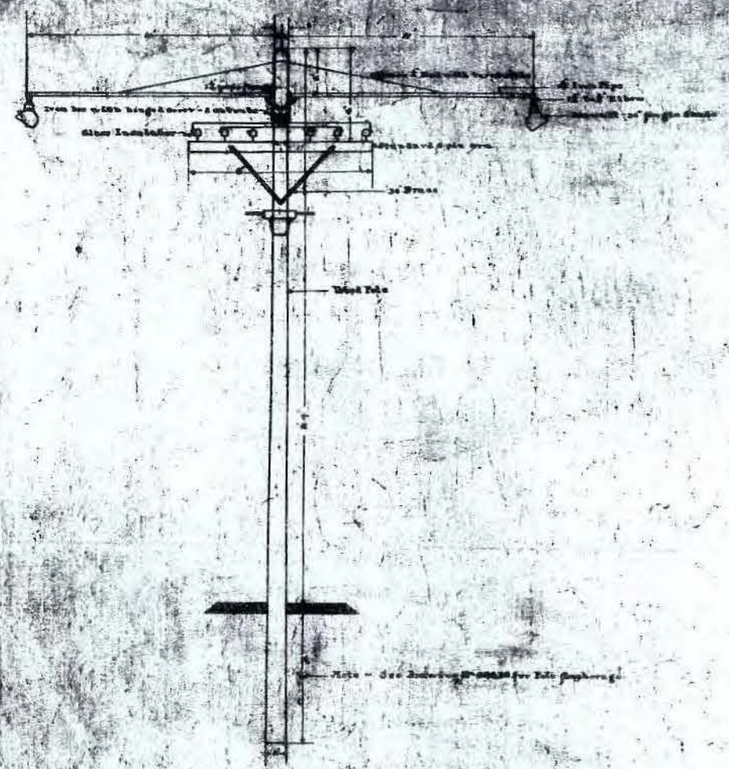
a. Ground acquired by purchase from private individuals. Complete rights, including fishing, are probably vested in the United States.

b. Grounds included in the acquisition which were public grounds or portions of public grounds. Fishing rights are possibly still vested in the Commonwealth of Virginia.

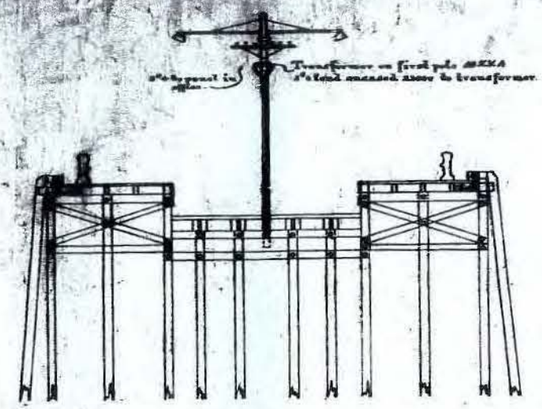
c. Areas in which oyster rights have been released to the Commonwealth of Virginia since acquisition. Fishing rights most probably are vested in the Commonwealth unless subsequently abrogated.

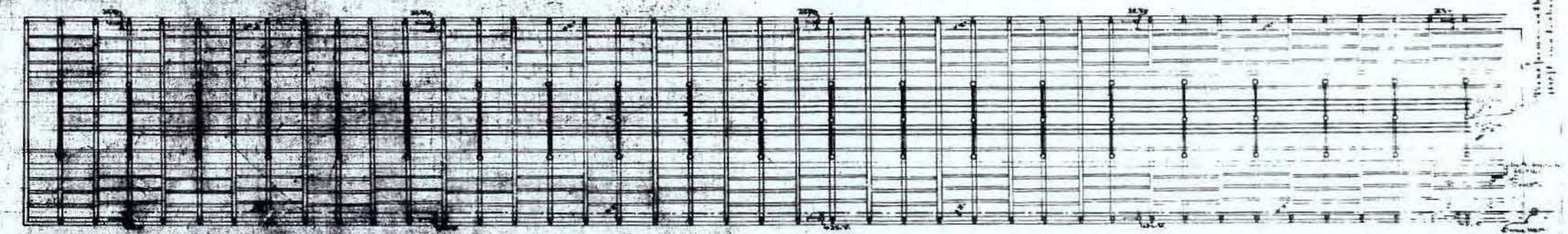
3. It is requested that an investigation be undertaken to clearly define the boundaries of the different jurisdictional areas, and the legal rights of this activity in each area.

W. P. CHILTON



Detail Pole Line





Wooden & Filled Pier
Yorktown Va.

Symbols
H.V.----Hose Valve
———Water Pipe

Department of Navy - Bureau of Yards & Docks
Naval Mine Depot
Yorktown Va
Wooden & Filled Pier
Lighting & Fire Protection

Chief of Bureau

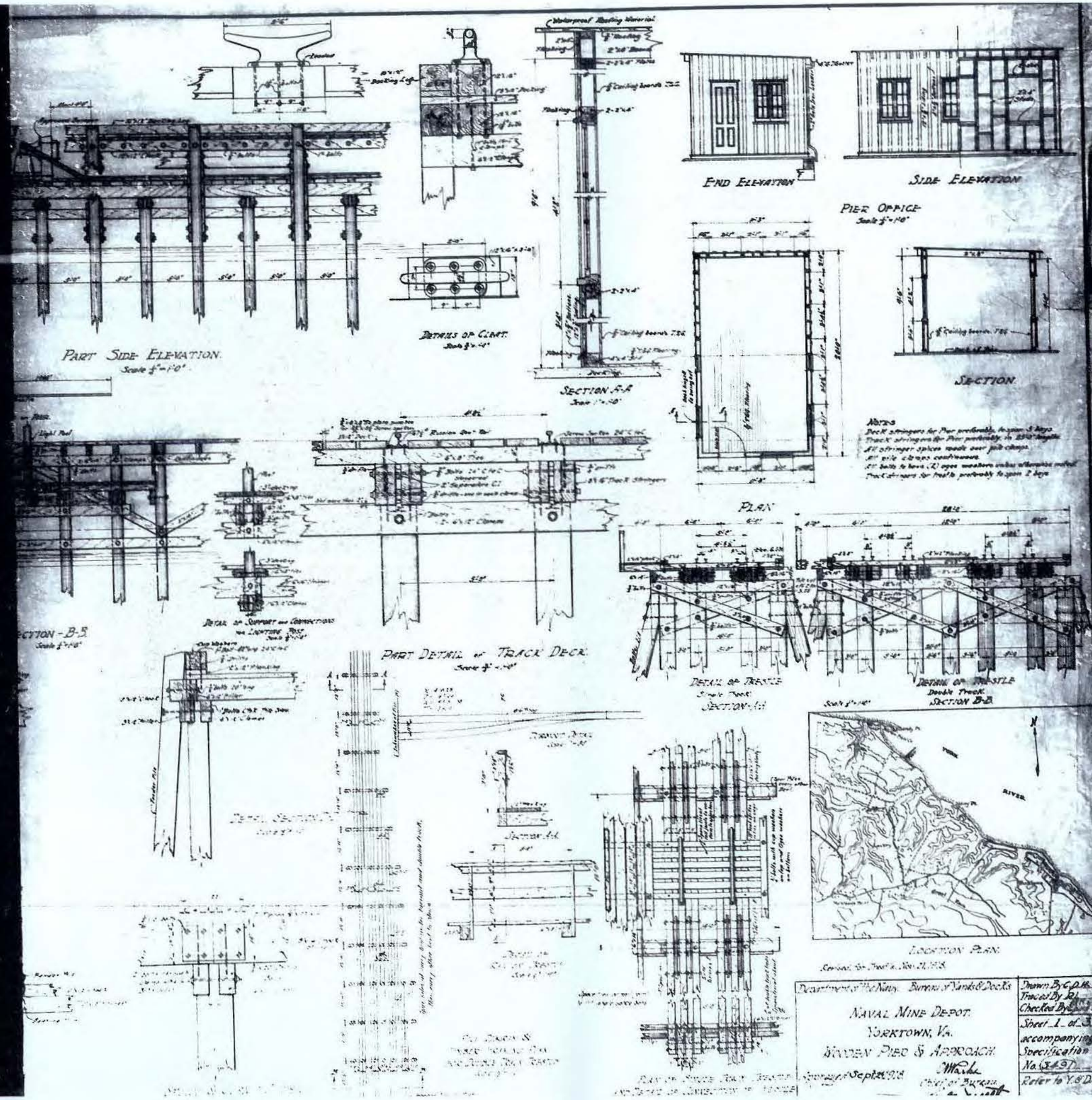
Project Manager

Approved Nov 20 1918

Drawn by
Traced by
Checked by
Sheet 1 of 2
accompanying
Specification
No. 3820
Refer to Ltr
No. 6338

540-6-2

PG71-I
MICROFILM BOX 548


Part Side Elevation.
Details of Cleat.
Section F-F
End Elevation
Side Elevation
Pier Office
Section.
Plan
Notes
Part Detail of Track Deck.
Section - B-B
Detail of Trestle
Single Track
Section A-A
Detail of Trestle
Double Track
Section B-B
Location Plan.
Department of the Navy. Bureau of Yards & Docks
Naval Mine Depot.
Yorktown, Va.
Wooden Pier & Approach.
Chief of Bureau
Drawn By
Traced By
Checked By
Sheet 1 of 3
accompanying
Specification
No. 1487
Refer to Y.&D.

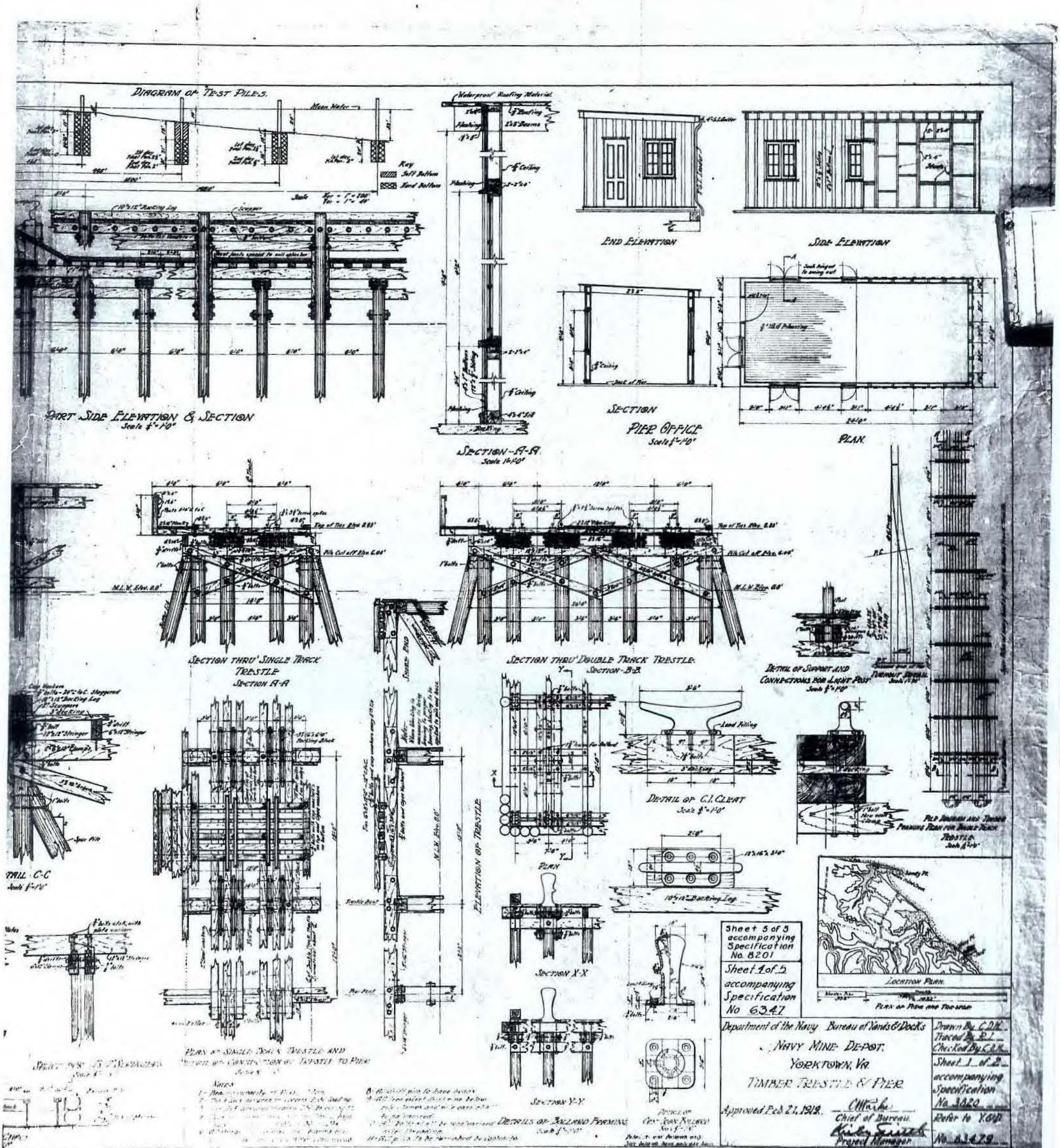
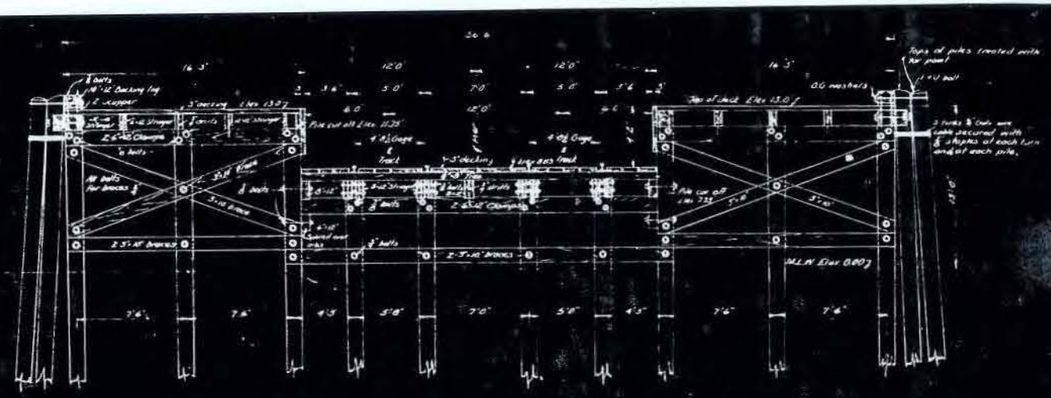
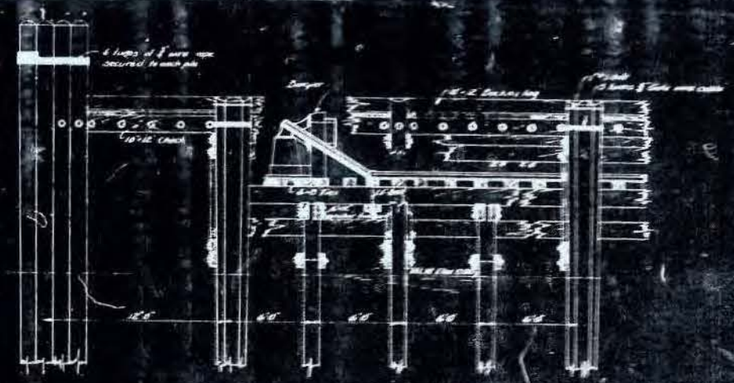


DIAGRAM OF TEST PILES.
Key
Soft Bottom
Hard Bottom
PART SIDE ELEVATION & SECTION
Scale 1/4"=1'-0"
Waterproof Roofing Material
SECTION-A-A
Scale 1/4"=1'-0"
END ELEVATION
SIDE ELEVATION
SECTION
PIER OFFICE
Scale 1/4"=1'-0"
PLAN
SECTION THRU' SINGLE TRACK TRESTLE
SECTION A-A
SECTION THRU' DOUBLE TRACK TRESTLE.
SECTION-B-B
DETAIL OF SUPPORT AND CONNECTIONS FOR LIGHT POST
Scale 1/4"=1'-0"
DETAIL C-C
Scale 1/4"=1'-0"
ELEVATION OF TRESTLE
DETAIL OF C.I. CLEAT
Scale 1/4"=1'-0"
PLAN
SECTION X-X
SECTION Y-Y
DETAILS OF BOLLARD FORMING
Scale 1/4"=1'-0"
PILE DIAGRAM AND TIMBER FRAMING PLAN FOR DOUBLE TRACK TRESTLE
Scale 1/16"=1'-0"
LOCATION PLAN
PLAN OF PIER AND TRESTLE
Sheet 5 of 5 accompanying Specification No. 8201
Sheet 1 of 5 accompanying Specification No 6347
Department of the Navy Bureau of Yards & Docks
NAVY MINE DEPOT, YORKTOWN, VA.
TIMBER TRESTLE & PIER
Approved Feb 21, 1912.
Chief of Bureau
Project Manager
Drawn By C.D.K.
Traced By R.L.
Checked By C.D.K.
Sheet 1 of 2 accompanying Specification No. 3820
Refer to Y&D No. 83479



SECTION C-C
Scale: 1/8"=1'0"



PART SIDE ELEVATION AND SECTION
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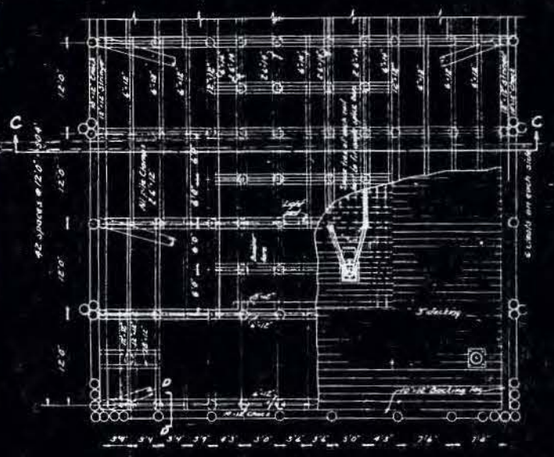
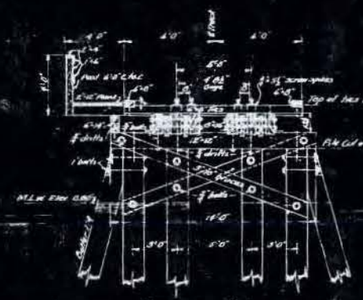


FRAMING PLAN
Scale: 1/8"=1'0"



SECTION A-A
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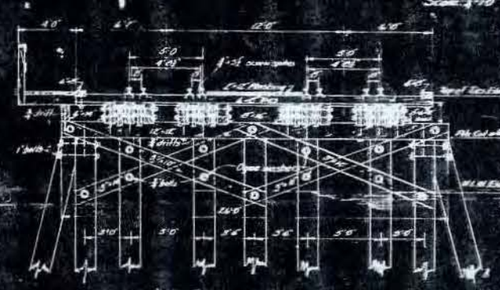
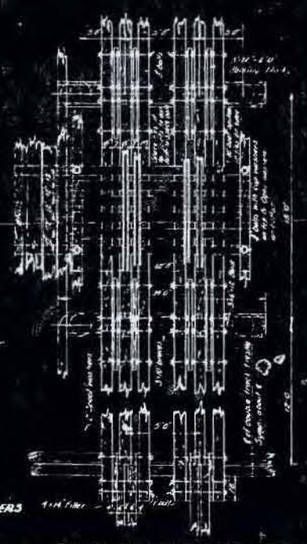
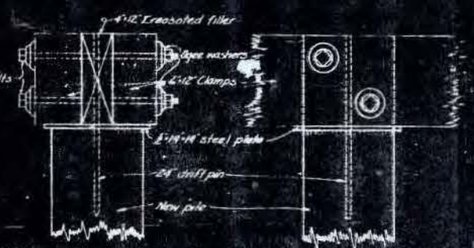


SECTION B-B
Scale: 1/8"=1'0"

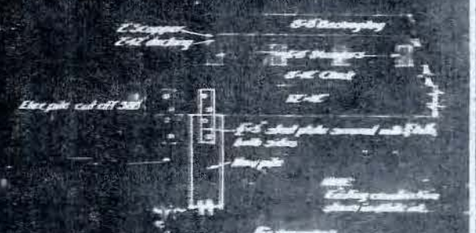
PART PLAN



PLAN OF SINGLE TRACK TRESTLE AND DETAIL OF CONNECTION OF TRESTLE TO PIER
Scale: 1/8"=1'0"



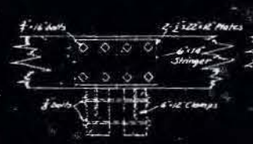
METHOD OF SECURING REPLACEMENT PILES WHERE PRESENT CONSTRUCTION HAS CLAMPS
Scale: 1/2"=1'0"



ELEVATION

METHOD OF SECURING NEW PILES AT SMALL DOCK LANDINGS
Scale: 1/8"=1'0"

DETAIL D-D
Scale: 1/2"=1'0"

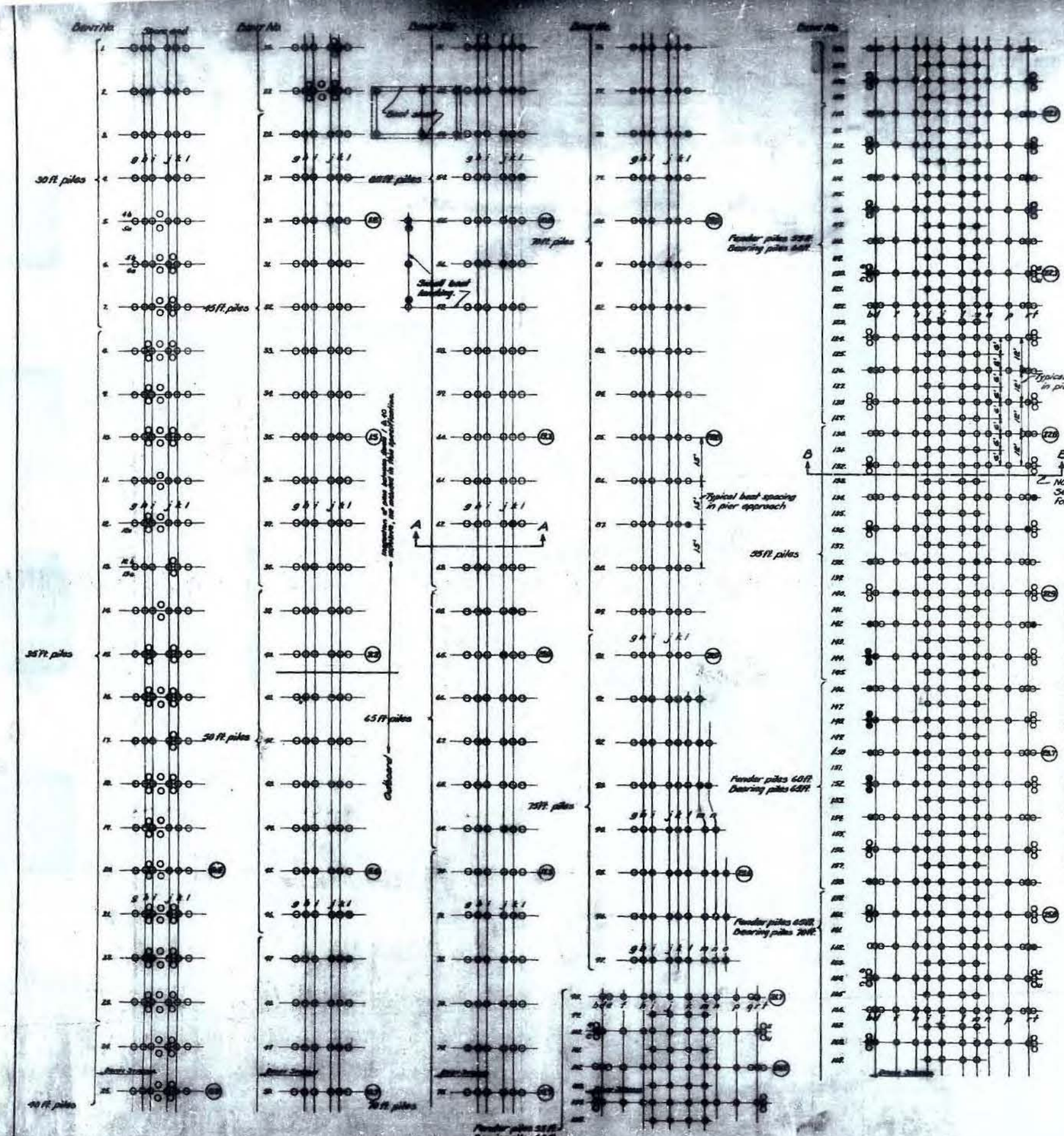


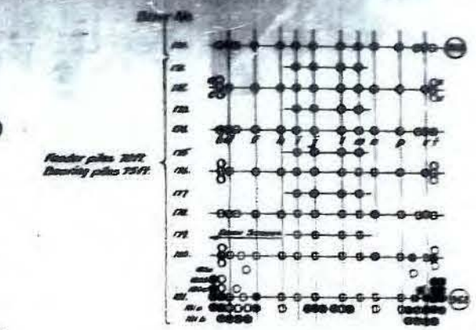
TRACK STRINGER SPLICE & CLAMP DETAIL
Scale: 3/4"=1'0"

SPLICE FOR 12"×12" STRINGERS
Scale: 1/2"=1'0"

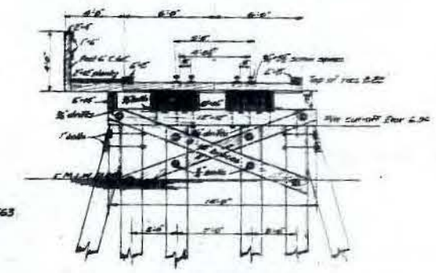
LOCATION PLAN
Scale:

Sheet 2 of 2 accompanying specification No. 9852	NAVAL OPERATING BASE, NORFOLK, VA. NAVAL MINE DEPOT YORKTOWN, VA. REPAIRS TO PIER DETAILS
	J.C.P.
Y.&D.D. Drawing No. 140934	

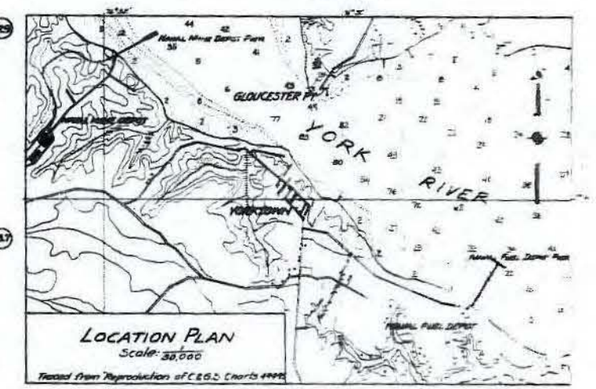




PILE PLAN
No Scale



SECTION "A-A"
Scale: 1/4"=1'0"

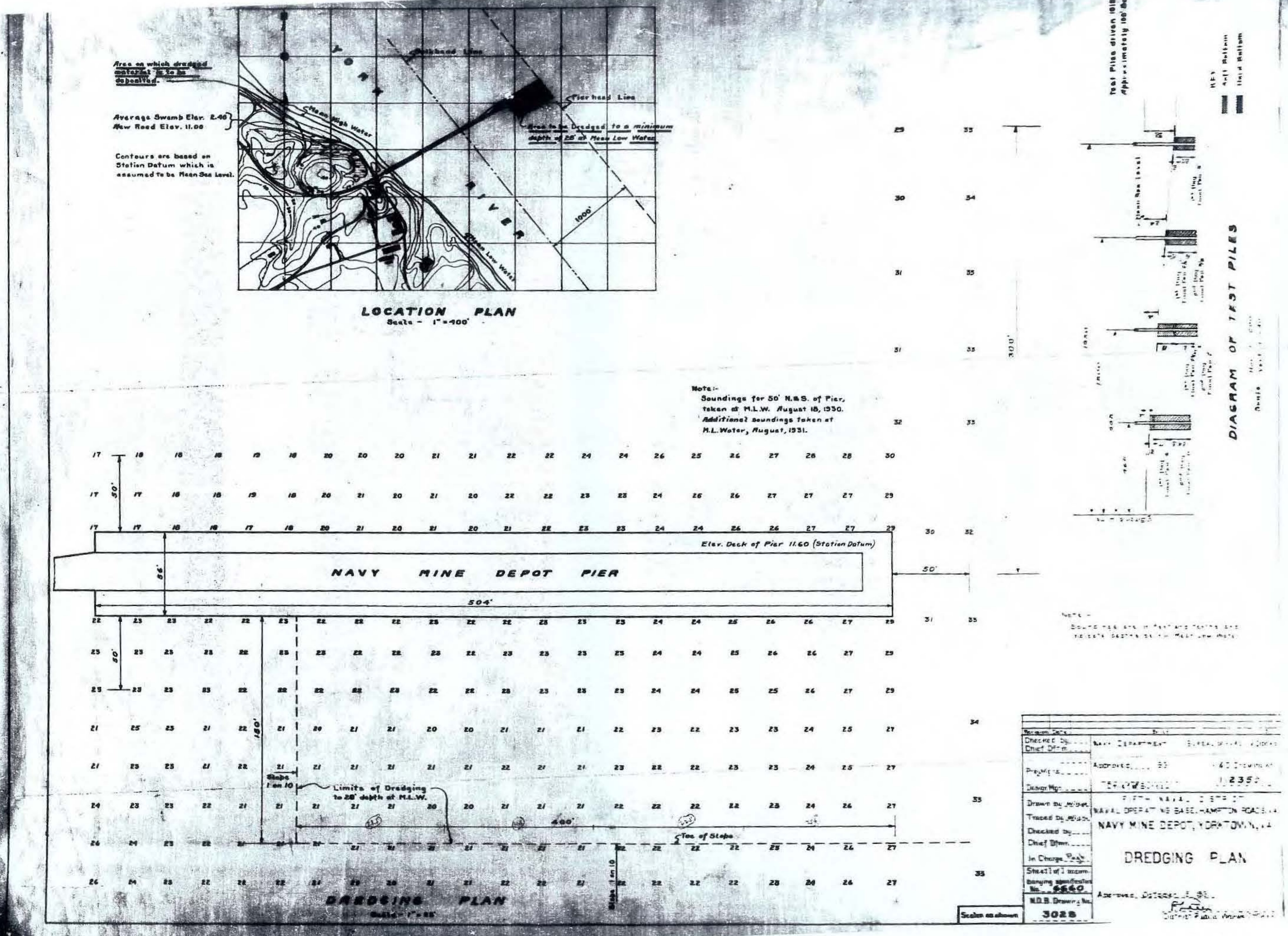


LOCATION PLAN
Scale: 1/30,000
Traced from Reproduction of C.&G.S. Charts 4996

(8.6) Figures shown thus are depths of water in feet and tenths below Mean Low Water.

◆ Piles shown thus outboard of Bent 40 are not to be inspected under this specification.

REVISION DATE	SHEET
Drawn by	NAVAL OPERATING BASE-NORFOLK, VIRGINIA
Traced by	NAVAL MINE DEPOT
Checked by M.E.M.G.	YORKTOWN, VA.
Chief Dfmn. J.C.F.	DIVERS'
In Charge	INSPECTION OF PILES
Sheet 1 of 3 accompanying specification No. 10059	PLAN AND SECTION OF PIER
Y&D Drawing No. 143,595	Approved September 3, 1943
P.W. Drawing No. 4045	Public Works Officer
Scale As noted	



Area on which dredged material is to be deposited.
Average Swamp Elev. 2.46
New Road Elev. 11.00
Contours are based on Station Datum which is assumed to be Mean Sea Level.
Y O R K R I V E R
Bulkhead Line
Pier head Line
Mean High Water
Mean Low Water
Area to be Dredged to a minimum depth of 28' at Mean Low Water
1000'
LOCATION PLAN
Scale - 1" = 400'
Note:-
Soundings for 50' N.&S. of Pier, taken at M.L.W. August 18, 1930.
Additional soundings taken at M.L.Water, August, 1931.
Test Piles driven 1918.
Approximately 100' South
KEY
DIAGRAM OF TEST PILES
300'
50'
56'
504'
Elev. Deck of Pier 11.60 (Station Datum)
NAVY MINE DEPOT PIER
180'
Slope 1 on 10
Limits of Dredging to 28' depth at M.L.W.
400'
Toe of Slope
Slope 1 on 10
DREDGING PLAN
Scale - 1" = 25'
Scales as shown
NAVY DEPARTMENT
FIFTH NAVAL DISTRICT
NAVY MINE DEPOT, YORKTOWN, VA.
DREDGING PLAN
No. 6660
N.D.B. Drawing No. 3028

REPRODUCED AT THE NATIONAL ARCHIVES

Pierson

CONFIDENTIAL

WAR DIARY

U. S. NAVAL MINE DEPOT, YORKTOWN, VIRGINIA

From: March 11, 1942 To: March 31, 1942

40118 - Filmed

RG38 - CHIEF OF Naval Operations (WWII Diaries)
BOX 538

REPRODUCED AT THE NATIONAL ARCHIVES

The Naval Mine Depot is an activity located on the York River about three miles from Yorktown. It is a military command under the Commandant, Fifth Naval District. Funds for the operation of the station and directives as to the work to be accomplished are received from the Bureau of Ordnance.

The mission of the Mine Depot is to store high explosives; to fill, service, and store mines, depth charges, warheads, and aircraft bombs and their component parts; to overhaul and stock ready torpedoes, in order to maintain a supply and provide a reserve for the United States Fleet as directed by the Bureau of Ordnance.

During the past two years as the national emergency became more acute, finally culminating in a declaration of war, the number of persons employed at the Mine Depot has increased approximately 800%. The Mine Depot is now prepared to issue any of the material stocked twenty-four hours a day, seven days a week.

REPRODUCED AT THE NATIONAL ARCHIVES

First Issue

WAR DIARY
0000 - 2400
3/11/42

(a) Events of importance as regards the defense of the Naval Mine Depot and its work in upkeep and supply of the fleet units.

1. One civilian guard employed, making a total of seven civilian guards.

2. Outgoing shipments:

Material	Destination	Via
TNT	Philadelphia, Penn.	C&ORwy
Bombs and fuzes	(Nixon, N. J.) (Long Island, N. Y.) (Chicopee Falls, Mass.) (Langley Field, Va.) (Seattle, Wash.) (Bangor, Maine)	C&ORwy
Hardware	Mare Island, Calif.	Express
Drill Mines	U.S.S. CORMORANT	Pier

3. Plant activities:

Reclaimed TNT at Reclamation Plant
Purified TNT at Purification Plant
Loaded depth charges at Purification Plant
Bombs, mines, and warheads, loaded at Mine Filling Plant

(b) Mobile Units:

U.S.S. CORMORANT departed at 0900 after obtaining experimental mines.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/12/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. At 1300 a plane from Naval Operating Base flew over the Depot to determine the effectiveness of its camouflage.

2. Outgoing shipments:

Material	Destination	Via
Bombs inert loaded;etc.	Anacostia, D.C.	Navy Yd.,Wash.truck
Bombs (empty): Vanes,etc.	Washington, D.C.	"
Bombs (British) inert loaded	"	"
Bombs (empty); etc.	Carderock, Md.	"
Fuzes; Fuzes (hydrostatic)	Washington, D.C.	"
High Explosive (TNT)	Chunking, China	CO&Rwy
Explosive projectiles	U.S.S. Buchanan	"
Hardware; etc.	Boston, Mass.	"
Drill Mines (dummy);etc.	Navy Yd., Pearl Harbor	"
Hardware	Key West, Fla.	REAgency,Lee Hall Va.
High Explosive (TNT)	Quantico, Va.	Hughes Transfer Co.
High Explosive (TNT)	Fort Mifflin, Pa.	"
Depth charges (empty)	N.O.L.,Washington,D.C.	NYd,Wash.,truck

3. Plant activities:

Reclaimed TNT at Reclamation Plant
Purified TNT at Purification Plant
Loaded depth charges at Purification Plant
Loaded bombs, mines, and warheads at Mine Filling Plant

(b) Mobile Units:

U.S.S. CORMORANT arrived 0845 - returned experimental mines.
U.S.S. MIANTONOMAH arrived 1445 - order of Naval operations
U.S.S. MONADNOCK arrived 1755 - order of Naval operations

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

4

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/13/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. The Inspector of Ordnance in Charge, Captain L. L. Hunter, made a short talk to entire station personnel just before payday to promote the sale of defense bonds on the payroll deduction plan; and also, to impress upon employees the procedure in private life during war time and how to economize ~~on~~ during war time ~~productions.~~

2. Outgoing shipments:

Material	Destination	Via
Depth Charges, etc.	Sewall's Point, Va.	FL 720 (lighter)
Bombs, fuzes, etc.	U.S.S. Brooklyn	"
Bombs, fuzes, etc.	Sewall's Point, Va.	"
Bombs, etc.	"	"
Bombs, (empty), etc.	Norfolk, Va.	"
Depth charges, etc.	U.S.S. Tourmaline	"
Depth charges, etc.	U.S.C.G.C. Jackson	"
Bombs, fuzes, etc.	U.S.S. Kilauea	"
Tools	Flour City Ornamental Iron Works, Minneapolis, Minnesota	Express
Hardware,	San Diego, Calif.	"
Depth charges, etc.	U.S.C.G.C. 156	Pier
Depth charges, etc.	U.S.C.G.C. 172	"
Depth charges, etc.	U.S.C.G.C. 139	"
Depth charges, etc.	U.S.C.G.C. 171	"

3. Plant activities:

Reclaimed TNT at Reclamation Plant
Purified TNT at Purification Plant
Loaded depth charges at Purification Plant
Loaded bombs, mines, and warheads at Mine Filling Plant

(b) Mobile Units:

U.S.S. CORMORANT departed 0740.
U.S.S. KEWAYDIN, with barge 266, arrived 0855.
U.S.S. KEWAYDIN departed 1115.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/13/42

(b) Mobile Units: (continued)

U.S.S. KEWAYDIN, with barges 720 and 267, arrived 1415 - in accordance with Naval Operating Base orders.
U.S.S. KEWAYDIN, with barges 720 and 267, departed 1600.
U.S.C.G.Cs. 171, 172, 139, and 156 (arrived 1215 - (departed 1415 - engaged in exercises. Each obtained 4 Mark 6 depth charges.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

6

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/14/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Hardware	Pearl Harbor, T.H.	C&ORwy
Bombs, empty; hardware	Yukon, Fla.	"
Mines (explosive)	Mare Island, Calif.	"
Depth charges, etc.	U.S.S. DICKERSON	Truck to Old Point
Empty bomb crates	U.S.S. ALABAMA	Truck
Empty bomb crates	U.S.S. ARKANSAS	"
Hardware	Iona Island, N.Y.	C&ORwy
Fuzes; Projectiles, exp.	Iona Island, N.Y.	C&ORwy

2. Plant activities:

Reclaimed TNT at Reclamation Plant
Purified TNT at Purification Plant
Loaded depth charges at Purification Plant
Loaded bombs, mines, and warheads at Mine Filling Plant
Testing Mark 6 mine anchors for Base BLEACHER

(b) Mobile Units:

None

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/15/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Explosive projectiles	U.S.S. BUCHANAN	C&ORwy
Depth charges; etc.	U.S.C.G.C. 228	Pier
Explosive projectiles	Fort Mifflin, Pa.	C&ORwy
Depth charges; etc.	U.S.C.G.C. 218	Pier

2. Plant activities:

Plants closed - undergoing overhaul

(b) Mobile Units:

U.S.C.G.C. 218 arrived 1040 to obtain 4 Mark 6 depth charges.
Departed 1233
U.S.C.G.C. 228 arrived 1355 to obtain 4 Mark 6 depth charges.
Departed 1550

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

8

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/16/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

L. Outgoing shipments:

Material	Destination	Via
Adapters, Mk. 19; fuzes	Aberdeen, Maryland	Parcel Post

2. Plant activities:

Loaded Mark 17 bombs at Mine Filling Plant
Purified TNT and poured Mark 6 depth charges at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembled and tested material for BLEACHER at Mine Assembly Plant units

(b) Mobile Units:

U.S.S. KEOKUK arrived 0905

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/17/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. One firefighter employed.

2. Outgoing shipments:

Material	Destination	Via
Drill mines (dummy)	Port Arthur, Texas	C&ORwy
Depth charges, etc.	U.S.C.G.C. CYPRESS	Pier

3. Plant activities:

Loaded Mark 17 bombs at Mine Filling Plant
Purified TNT and poured Mark 6 depth charges at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembled and tested material for BLEACHER at Mine Assembly Plant units

(b) Mobile Units:

U.S.C.G.C. CYPRESS arrived 1400 to obtain 8 Mark 6 depth charges. Departed 1615
U.S.S. MIANTONOMAH departed 1230
U.S.S. MIANTONOMAH reported standing in 1315 - radio orders
U.S.S. SCIOTA arrived 1530

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/18/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth charges, etc.	U.S.S. HOWARD	FL 725
Aircraft depth bombs	Norfolk, Va.	FL 725
Depth charges, etc.	U.S.C.G.C. MODOC	FL 725
Depth charges, etc.	U.S.C.G.C. BIBB	FL 725
Crane truck, batteries	Base "DYNASTY"	FL 266
Depth charges, etc.	Base "DYNASTY"	FL 266
War Heads, Mk. 15 loaded	Base "DYNASTY"	FL 266
War Heads, Mk. 13 loaded	Base "DYNASTY"	FL 266
Bombs, Mk. 13-2, TNT.	Base "DYNASTY"	FL 725
Bombs, fuzes, etc.	Base "DYNASTY"	FL 266
Detonators, Perc.,Mk.1-1	St. Julien's Creek,Va.	FL 725
Depth charges, etc.	U.S.S. KILAUEA	FL 725
Depth charges, etc.	U.S.S. PALMER	FL 725
Hardware	Newport, R. I.	C&ORwy
Delicate Instruments	Newport, R. I.	C&ORwy
Depth charges, etc.	U.S.C.G.C. 143	Pier

2. Plant activities:

Loaded Mark 17 bombs at Mine Filling Plant
Purified TNT and poured Mark 6 depth charges at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembled and tested material for BLEACHER at Mine Assembly Plant units

(b) Mobile Units:

U.S.S. SCIOTA departed 1725 with barges #266 and #275.
U.S.C.G.C. 143 arrive at new pier 1250; departed 1430

A. G. COCK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/19/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth charges, etc.	U.S.C.G.C. 140	Pier
Explosives	Washington, D. C.	Express
Fuzes, Mk. 23-3	Dahlgren, Va.	NMD Truck
Drill Mines, explosives	Cape May, N. J.	C&ORwy.
Drill Mines, explosives	New London, Conn.	C&ORwy.
Explosive projectiles	Inness, S. C.	C&ORwy.
Torpedo parts	U.S.S. ROPER	NMD Truck
Pistols; extenders, etc.	U.S.S. AUK	NMD Truck
Depth charges, etc.	U.S.C.G.C. 128	Pier.

2. Plant activities:

Loaded Mark 17 bombs at Mine Filling Plant
Purified TNT and poured Mark 6 depth charges at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembled and tested material for 975 at Mine Assembly Plant units.

(b) Mobile Units:

U.S.S. MIANTONOMAH departed 1345
U.S.S. MONADNOCK departed 1420
U.S.C.G. CUTTERS #128 and #140 arrived 1510
U.S.C.G. CUTTERS #128 and #140 departed 1751
U.S.S. KEOKUK departed 2005.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

12

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/22/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments.

Material	Destination	Via
Depth Charge Boosters	Old Point Comfort, Va.	NMD Truck
Hardware, High explosives, Blasting caps, Experimental mines, Fuzes.	Iona Island, N. Y.	C&ORwy.
High explosives	Burns City, Ind.	C&ORwy.
Marine Hardware	San Francisco, Cal.	C&ORwy.

2. Plant activities:

Loaded Mark 12 and Mark 13 mines at Mine Filling Plant.
Purified TNT and poured Mark 6 depth charges at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled and tested material for 975 at Mine Assembly Plant units.

(b) Mobile Units:

U.S.S. KEOKUK arrived 1115.
U.S.S. ACUSHNET with two lighters #725 and #245 arrived 1345.
U.S.S. ACUSHNET departed, without barges, 1410.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/23/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments.

Material	Destination	Via
Locking slides	U.S.S. McKEAN	Truck
Depth charges, complete	U.S.S. CHEROKEE	Pier
Warheads	U.S.S. GRUNION	C&ORwy

2. Plant activities:

Loaded Mark 13 mines at Mine Filling Plant
Purified TNT and poured Mark 6 depth charges at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Shipped material for 975
Loaded 316 mines on U.S.S. MONADNOCK from two lighters, total loading time 9½ hours
Loaded 344 mines on U.S.S. MIANTONOMAH (downstream face of new pier) using RO crane, total loading time 11½ hours.
Loaded 335 mines on U.S.S. KEOKUK (outboard face of new pier) using one crane on pier, total loading time 10 hours.

(b) Mobile Units:

U.S.S. MIANTONOMAH arrived 1030.
U.S.S. CHEROKEE arrived 1225.
U.S.S. CHEROKEE departed 1445.
U.S.C.G.C. #610 arrived 1600.
U.S.C.G.C. #610 departed 1640.
U.S.S. CONONICUS arrived 1340.
U.S.S. CONONICUS departed 1925.
U.S.S. KEOKUK departed 2115.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/24/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments.

Material	Destination	Via
Depth charges, etc.	Hawthorne, Nevada	C&ORwy
Warheads, torpedoes, etc.	Charleston, S. C.	Hughes Transfer Co.
Warheads	U.S.S. FARENHOLT	C&ORwy.

2. Plant activities:

Loaded Mark 13 mines at Mine Filling Plant
Purified TNT and poured Mark 6 depth charges at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembled Mark 13 mines at Mine Assembly Plant

3. Two civilian guards employed, making a total of nine.

(b) Mobile Units:

U.S.S. MIANTONOMAH departed 0845

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:

L. L. HUNTER
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/25/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments.

Material	Destination	Via
Depth charges, etc.	U.S.S. ROPER	Navy Barge #245
Depth charges, etc.	U.S.S. WASSUC	Pier
Rubber Gaskets	U.S.S. HATFIELD	Parcel Post
Depth charges, etc.	U.S.S. NITRO	Navy Barge #245.
Depth Charges	Submarine Base, Little Creek,Va.	Navy Barge #245
Explosive bombs, etc.	NAS, Banana River,Fla. (Via Eau Gallie)	C&ORwy
Explosive bombs, etc.	NAS, Banana River,Fla. (Via Eau Gallie)	C&ORwy
Depth charges, etc.	Navy Supply Pier, Casco Bay, Portland, Me.	C&ORwy
Depth charges, etc.	NAS, Cape May,N.J.	C&ORwy.
Practice bombs, hardware,etc.	NAS, Cape May,N.J.	C&ORwy.

2. Plant activities:

Loaded Mark 12 mines at Mine Filling Plant
Purified TNT and poured Mark 7 depth charges at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembled Mark 13 mines at Mine Assembly Plant

(b) Mobile Units:

U.S.S. WASSUC arrived 0700. Departed 1130.
U.S.S. ACUSHNET arrived 1105 with barge #266. Departed with barge #245 1230.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/27/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments.

Material	Destination	Via
M-4 Mechanisms	Philadelphia, Pa.	Express
Hardware	Boston, Mass.	C&ORwy
Depth charges, etc.	U.S.S. KEWAYDIN	Lighter 266
Depth charges, etc.	U.S.S. TARBELL	"
Explosive "D"	St. Juliens Creek,Va.	"
Explosive bombs	Iona Island, N.Y.	C&ORwy
Warheads	Pearl Harbor, T.H.	"
Bombs, fuzes, etc.	Cape May, N.J.	"
Bombs, fuzes, etc.	Lakehurst, N.J.	"

2. Plant activities.

Loaded Mark 12 bombs at Mine Filling Plant
Purified TNT and poured Mark 6 depth charges at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembled Mark 13 mines at Mine Assembly Plant

(b) Mobile Units:

U.S.S. ACUSHNET arrived at 1215 and departed at 1250 with barge 266.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/28/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Testing tools, etc.	U.S.S. GREGORY	Parcel Post
Hardware	San Diego, Calif.	C&ORwy
"	Bremerton, Wash.	C&ORwy
"	Pearl Harbor, T.H.	"
"	Charleston, S.C.	"
"	New London, Conn.	"
"	Cape May, N.J.	"
Warhead, torpedo, etc.	U.S.S. TARBELL	Truck
TNT	Newport, R.I.	C&ORwy
Depth charges, complete	Inness, S.C.	"
High Explosives (D)	Hingham, Mass.	"
Explosive mines & boosters	Indian Head, Md.	B&G Trans.Co.

2. Plant activities:

Loaded Mark 17 bombs at Mine Filling Plant
Purified TNT and poured Mark 6 depth charges and pellets at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembled Mark 13 mines at Mine Assembly Plant

(b) Mobile Units:
USS GOVERNOR arrived at 1245
USS ASSERTIVE arrived at 1310
USS YMS 54 arrived 1815

A. G. COOK, JR.,
Commander, U.S. Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

21

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/29/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Bombs, fuzes, etc.	Sewall's Point, Va.	Lighter 318
Bombs, fuzes, etc.	Sewall's Point, Va.	" 725
Depth charges, etc.	USS HILARY P. JONES	" 318
Depth charges, etc.	Sewall's Point, Va.	" 318
Bomb trailers, etc.	" " "	" 318
Tractors, trailers, etc.	" " "	" 725
Hardware	Washington, D.C.	Express
Tools & testing sets	Mare Island, Calif.	"
Hardware	Oahu, T.H.	"
Warheads	USS HALIBUT	C&ORwy
Booster & detonator	USS TARBELL	Truck
Safety covers	USS TARBELL	"

2. Plant activities:

Loaded Mark 17 bombs at Mine Filling Plant
Purified TNT and poured Mark 6 and pellets at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Mine Filling Plant closed
Loaded material on lighters for BASE STRAW

(b) Mobile Units:

Tug 46 arrived 1415 and departed 1540
USS ACUSHNET arrived with lighters 250 and 266 at 1755.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

52

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/30/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Bomb truck & tractor	Sewall's Point, Va.	Truck
Magnetic drill mines, hardware, etc.	San Francisco, Calif.	C&ORwy
Tractor, bomb trailer	Dahlgren, Va.	C&ORwy

2. Plant activities:

Loaded Mark 12 bombs at Mine Filling Plant
Purified TNT and poured Mark 7 depth charges at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembled Mark 13 mines at Mine Assembly Plant and disassembled Mark 5 mines
Commenced loading lighters for BLEACHER

(b) Mobile Units:

USS ACUSHNET departed at 0700 with barges #318 and YF 250
YMS 54 departed at 0815
USS ASSERTIVE and USS GOVERNOR departed at 0825

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

23

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
3/31/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Bombs, fuzes, etc.	Davisville, R.I.	C&ORwy
Anchor cable	Pearl Harbor, T.H.	C&ORwy
Warheads	Pearl Harbor, T.H.	C&ORwy
Bomb service trucks	Base BLEACHER	NMD personnel
Depth charges, etc.	U.S.S. ROPER	Lighter 266
Bombs, fuzes, tail vanes, etc.	Base BLEACHER	" "
Fuzes	Base BLEACHER	" "
Depth charges, etc.	Base BLEACHER	" "
Mark 6 anchors	Base BLEACHER	" 250

2. Plant activities:

Loaded Mark 17 bombs at Mine Filling Plant
Purified TNT and poured pellets at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Disassembled Mark 5 mines and made preparation for assembly of Mark 6 mines at Mine Assembly Plant
Loaded lighters for BLEACHER

(b) Mobile Units:

None

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Commander, U. S. Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

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REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/1/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Tools, gaskets, etc.	USS FORREST	Parcel Post
Gasket extenders	Washington, D. C.	Parcel Post
Hardware	Mare Island, Calif.	C&ORwy
Washers, bushings, etc.	Base "BLEACHER"	Lighter 481
Bombs, tail vanes	USS RANGER	" "
Bombs	Base "BLEACHER"	" "
Trailers	Base "BLEACHER"	" "
Hardware	USS MELVILLE	Hughes Tran.Co.
"	NOB, Iceland	" "
"	Base "CAST"	" "
"	USS MELVILLE	" "
Torpedo parts, etc.	USS MELVILLE	" "
Hardware	USS MELVILLE	" "

2. Plant activities:

Loaded Mark 17 bombs and Mark 6 depth charges at Mine Filling Plant
Purified TNT and poured pellets at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembling Mark 6 mines at the Mine Assembly Plant

(b) Mobile Units:

USS CYNTHIA arrived 0500 with barges YF 186 and YC 720; departed 0635 with barges YF 250 and YF 266.
USS WOYAT arrived at 1615 with barges YF 264 and YC 696; departed 1710 with barges YC 720 and YC 481.

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Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/2/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
T.N.T.-A	St. Juliens Creek, Va.	NAD truck
Check valve body	U.S.S. JOUETT	Parcel Post
Depth charges, etc.	U.S.C.G.C. 143	Pier
Depth charges, etc.	Sewall's Point, Va.	Lighter 264
Depth charges, etc.	U.S.S. INGRAHAM	Lighter 264
Depth charges, etc.	U.S.S. LANSDALE	Lighter 264
Depth charges, etc.	U.S.S. CHARLES F. HUGHES	Lighter 264
Depth charges, etc.	U.S.S. INGRAHAM	Lighter 264
Explosive "D" for projectile loading	St. Juliens Creek, Va.	Lighter 264

2. Plant activities:

Loaded Mark 6 depth charges and Mark 13-2 bombs at Mine Filling Plant
Purified TNT and poured pellets at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembling Mark 6 mines at the Mine Assembly Plant

(b) Mobile Units:

USS J. ALVA CLARK arrived 0220 with barges YF 209 and YC 319; departed 1230 with barge 264.
USS CGC #143 arrived 1220; departed 1315.

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Approved:
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Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/3/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Bombs, fuzes, etc.	Bermuda	Lighter 186
Depth charge test set	St. Thomas, V.I.	" "
Bombs, fuzes, etc.	Trinidad, BWI	" "
Depth charges, detonators	Bermuda	" "
Depth charges, etc.	Trinidad	" "
Depth charges, detonators	St. Thomas, V.I.	" "
Bombs, fuzes, etc.	Bermuda	" "
" " "	St. Thomas, V.I.	" "
" " "	St. Thomas, V.I.	" "
Bombs, fuzes	USS NEW YORK	" 319
Bombs, Mk. 17-1	Base "BLEACHER"	" 186
Demolition charges, etc.	Trinidad	" 186
Fuzes	USS RANGER	" 319
Bombs, fuzes, etc.	St. Thomas, V.I.	" 186
Torpedoes, war heads, etc.	USS RANGER	" 319
Bombs, vanes, etc.	USS RANGER	" 319
Auxiliary springs	USS MEMPHIS	" 186
" "	USS OMAHA	" 186
" "	USS MILWAUKEE	" 186
" "	USS CINCINNATI	" 186
Depth charges, detonators	Little Creek, Va.	" 319
Mines, complete	Naval Mine Warfare School	Truck
Depth charge gaskets	USS YMS 54	Truck
Depth charges, etc.	U.S.C.G.C. VIOLET	Pier
Containers, etc.	Washington, D.C.	Truck
Mines, Mk 6, empty	Washington, D.C.	W.N.Y. Truck
Flat hooks, eyes, covers	Washington, D.C.	" "
Boosters, fuzes, etc.	Iona Island, N.Y.	Hughes Tran.Co.
Bombs, fuzes,	Base "CAST"	Hughes Tran.Co.
Detonating fuzes	Inness, S.C.	C&ORwy
Hardware	Hawthorne, Nevada	C&ORwy

2. Plant activities:

Loaded Mark 6 depth charges at Mine Filling Plant
Purified TNT and poured pellets at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Assembled Mark 6 mines and wound chain and cable on anchors at the Mine Assembly Plant

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/4/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via	
Bombs, tail vanes, clips, adapters	San Juan, P. R.	Lighter	209
Test set, tool boxes, bombs, tail vanes, etc.	Guantanamo Bay, Cuba.	"	250
Knobbed forks	Bermuda	"	"
" "	Trinidad	"	"
Pistols, extenders, depth charges, forks for pistols, knobbed forks, fuzes, hoisting bands, depth charge test set, bomb fuzes(hydrostatic), etc.	San Juan, P. R.	"	209
Depth charge test sets, demolition charges, cement, varnish, safety forks, depth charges, etc.	Quantanamo Bay, Cuba.	"	250
Depth charges, etc.	U.S.S.NOA	"	"
Knobbed safety forks	St. Thomas, V.I.	"	"
Hardware	Key West, Florida	C&ORwy	
High explosives(TNT)	Philadelphia, Pa.	C&ORwy	
Depth charges, pistols, extenders, boosters, fuzes, etc.	Iona Island, N.Y.	C&ORwy	
Depth charges, pistols, extenders, boosters, fuzes, etc.	Hingham, Mass.	C&ORwy.	
Warheads loaded.	New London, Conn.	C&ORwy.	
K3 Battery Case	Nation Carbon Co.	Parcel Post	

2. Plant activities:

Loaded Mark 6 depth charges at Mine Filling Plant
Purified TNT and poured pellets at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Wound chain and cable on anchors at the Mine Assembly Plant.

(b) Mobile Units:

U.S.S.VIOLET departed 0655.
U.S.S.J.ALVA CLARK arrived 1745 with barge #266; departed 1955 without barge.

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Commander, U. S. Navy,
Executive Officer.

Approved:
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Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/5/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via	
Sylphons for pistols	Balboa, C.Z.	Lighter	245
Warheads	Coco Solo, C.Z.	"	696
Bombs, tail vanes, clips		"	696
Bomb fuzes		"	245
Tail vane for depth bombs		"	696
Wrenches, tools, etc.	Balboa, C.Z.	"	245
Depth charge test sets		"	245
Bombs, fuzes, tail vanes		"	245
Depth charges, pistols	Coco Solo, C.Z.	"	696
Depth charges, detonators	Balboa, C.Z.	"	245
" " "		"	245
Bombs, etc.	Coco Solo, C.Z.	"	696
Fuzes		"	245
Depth charge test set		"	696
Pistols, extenders, etc.	U.S.S. CLEMSON	"	696
Hydrostatic fuzes	Coco Solo, C.Z.	"	696
Arming wires, fuzes	Guantanamo Bay, Cuba	"	245
Bomb fuzes	San Juan, P.R.	"	245
Fuzes		"	245
Fuzes, suspension lugs	Guantanamo Bay, Cuba	"	245
Fuzes, wires, clips, bands		"	245
Fuzes	San Juan, P.R.	"	245
Warheads, Mk. 10	Coco Solo, C.Z.	"	696
Diaphragms, busings, washers	Balboa, C.Z.	"	245
Depth charges, pistols, etc.		"	245
Knobbed safety forks		"	245
" " "	Coco Solo, C.Z.	"	696
" " "	Balboa, C.Z.	"	245
" " "		"	245
Fuzes, hydrostatic fuzes	San Juan, P.R.	"	245

2. Plant activities:

Loaded Mark 6 depth charges and Mark 4 bombs at Mine Filling Plant
Purified TNT and poured pellets at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
The Mine Assembly Plant closed

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/6/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed four civil guards making a total of thirteen.

2. Outgoing shipments:

Material	Destination	Via
Bombs, fuzes, etc.	Argentia, Newfoundland	Lighter 266
Mines, anchors, etc.	Balboa, C.Z.	" "
Bombs, fuzes, etc.	Argentia, Newfoundland	" "
Magnetic drill mines, etc.	Guantanamo Bay, Cuba	" "
Bombs, fuzes, etc.	U.S.S. NITRO	" "
Depth charges, etc.	U.S.S. CORRY	Pier
Torpedoes, oil, machine parts		Pier
Bombs, fuzes, etc.	Sewall's Point, Va.	C&O #6
TNT-A granular	St. Julien's Creek	" "
Explosive "D"	Iona Island, Calif.	C&ORwy
Depth charges, complete	Melville, R.I.	C&ORwy

3. Plant activities:

Loaded Mark 4 bombs and Mark 6 depth charges at Mine Filling Plant
Purified TNT and poured pellets and Mark 5 Mod 1 bombs at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Wound anchors at the Mine Assembly Plant

(b) Mobile Units:

USS CORRY arrived 1205
SS PEERLESS arrived 2220; departed 2330 with lighter 266 and C&O #6

A. G. COOK, JR.,
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Executive Officer.

Approved:
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Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/7/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Cable	Portsmouth, Va.	Y.C. 287
Tail vanes, Mk. 12-2	U.S.S. NITRO	Truck
Depth charges, complete	Iona Island, N.Y.	C&ORwy
Explosives "D"	Philadelphia, Penn.	C&ORwy
Depth charges, complete	U.S.S. LANSDOWNE	C&ORwy
Torpedo Record books, etc.	U.S.S. RANGER	Mail
Aircraft depth bombs, fuzes, clips, wires, etc.	Langley Field, Va.	Army truck

2. Plant activities:

Loaded Mark 4 bombs and Mark 6 depth charges at Mine Filling Plant
Purified TNT and poured pellets and Mark 5 bombs at Purification Plant
Reclaimed TNT from old containers at Reclamation Plant
Commence loading assembled mines in freight cars for shipment at the Mine Assembly Plant

(b) Mobile Units:

none

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/9/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Fuzes, tail vanes, etc.	U.S.S. MATAGORDA	Pier
Depth bombs, crates, fuzes	U.S.S. MATAGORDA	Pier
Bombs, fuzes, etc.	Bynum, Alabama	C&ORwy
Depth charges, complete	Inness, S.C.	"
Hardware	Washington, D.C.	"
Hardware	Hingham, Mass.	"
Hardware	Balboa, C.Z.	Express
Hardware	Washington, D.C.	"
Hardware	Pensacola, Floria	C&ORwy
Depth bombs, complete	U.S.S. EMMONS	tug (PUTNAM)
Depth charges, complete	H.M.S. ST. VINO	"
Bombs, hardware, fuzes	U.S.S. CHARGER	"
Demolition charges, comp.	U.S.S. JUNEAU	"
Depth charges, complete	U.S.S. HERBERT	"
Depth charges, complete	U.S.S. ROPER	"
Depth charges, complete	U.S.S. NOA	"
Demolition charges, comp.	Naval Section Base, Little Creek, Va.	"

2. Plant activities:

Loaded Mark 4 and Mark 13 bombs, Mark 6 depth charges, Mark 6 mines and Mark 16 warheads at Mine Filling Plant.
Purified TNT and poured pellets and Mark 5 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled mines for leg #1 at Mine Assembly Plant.

(b) Mobile Units:

Tug Camden arrived 0835 and departed 0900.
SS GENERAL PUTNAM arrived 1425 and departed 1910.
YMS 54 arrived 2030.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

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Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000--2400
4/11/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth charges, complete, boosters, fuzes.	Moorehead City, N.C.	Brooks Trans. Hughes Trans.
Torpedoes (dummy)	New London, Conn.	C&O Rwy.
Cocking tool, wrenches, etc., gaskets, bolts, valves, springs.	U.S.S.DENEBOLA	Lighter 243
Bombs, fuzes, flight adapter forks, depth charges, detonators, etc.	U.S.S.KILAUEA	" "
Fuzes, Mk.23 mod.1, aircraft bomb fuzes	U.S.S.BISCAYNE	" "
Depth charges, detonators	U.S.S.RODMAN	" "
Aircraft Demolition bombs, etc.	U.S.S.BARNEGAT	" "
Side gears for Mk. 15 torpedoes	U.S.S.HAMBLETON	" "
Bombs, vanes, wires, clips, depth charges, pistols, etc.	Sewall's Point,Va.	" "
Bomb, tail vane, clips, igniters	Norfolk, Va.	" "
Depth charges, detonators,etc.	U.S.S.YP 261	" "
Depth charges, etc.	U.S.S.PC 102	" "
Bombs, fuzes, etc.	U.S.S.LAPWING	" "
Boosters, adapters for fuzes	U.S.S.RANGER	" "
Bombs, fuzes, etc.	Utility Squadron 4	" "

2. Plant activities:

Loaded Mark 5 mines, Mark 6 depth charges, Mark 12 and Mark 13 bombs, and Mark 16 warheads at Mine Filling Plant.
Purified TNT and poured pellets and Mark 5-3 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Wound anchors at Mine Assembly Plant.

(b) Mobile Units:

ACUSHNET arrived 1230 with YF 209 and YF 319; departed 1840 with lighter 243.

A. G. COOK, JR.,
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Approved:
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REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/13/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard making a total of fourteen.

2. Outgoing shipments:

Material	Destination	Via
Springs for bomb fuzes	U.S.S.TUSCALOOSA	Parcel Post
" " " "	U.S.S.SAVANNAH	" "
" " " "	U.S.S.VINCENNES	" "
" " " "	U.S.S.QUINCY	" "
" " " "	U.S.S.NASHVILLE	" "
" " " "	U.S.S.BROOKLYN	" "
" " " "	U.S.S.PHILADELPHIA	" "
Depth charges, etc.	U.S.C.G.C.SEA CLOUD	Pier
" " "	5th Naval District	Lighter 209
Fuzes, depth charges, etc.	U.S.S.LAPWING	" 319
Bombs, fuzes, etc.	Argentia,Newfoundland	" "
Mines, anchors, trucks, etc.	Placida, Fla.	C&ORwy.
Bombs, fuzes, etc.	Norfolk, Va.	Lighter 319
100-boxes explosive "D"	St.Juliens Creek,Va.	NAD truck
900-boxes " "	" " " "	Lighter 209
Torpedo parts	New London, Conn.	C&ORwy.
Bombs, fuzes, hardware	Elizabeth City,N.C.	C&ORwy.

3. Plant activities:

Loaded Mark 6 depth charges, Mark 12 bombs, Mark 16 warheads and Mark 5 mines at Mine Filling Plant.
Purified TNT, poured pellets and Mark 5-3 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled mines for leg #2 at Mine Assembly Plant.

(b) Mobile Units:

C.G.C.SEA CLOUD arrived 1020, and departed 1415.
PEERLESS arrived 1900 with barges YE-186 and YC-265; departed 2000 with barges YF-209 and YC-319.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:
L. L. HUNTER
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

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REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/15/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Bombs, hardware, etc.	Sewall's Point, Va.	Truck
Depth charges	PC 508	Pier
Ohmmeters	Pearl Harbor, T.H.	Express
Detonating fuzes	Parris Island, S.C.	C&ORwy
Plugs, etc.	Hawthorne, Nevada	C&ORwy

2. Plant activities:

Loaded Mark 6 depth charges, Mark 12 bombs, Mark 16 warheads and Mark 5 mines at Mine Filling Plant.
Purified TNT, poured pellets and Mark 5-3 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled mines for leg #2 at Mine Assembly Plant.

(b) Mobile Units:

PC 508 arrived 1230.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/16/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed two civil guard making a total of seventeen.

2. Outgoing shipments:

Material	Destination	Via
Blasting machines	Oahu, T. H.	Express
Torpedoes	New London, Conn.	C&ORwy
Bombs, accessories, fuzes	Brooklyn, N. Y.	"
Dummy projectiles	Newport, R. I.	"
Blasting machines	Oahu, T. H.	"
Accessories	East Boston, Mass.	"
"	Oahu, T. H.	"
Bombs, fuzes, accessories	Squantum, Mass.	"
" " "	Opa Locka, Florida	"
" " "	Inness, S. C.	"
" " "	Yukon, Florida	"
" " "	Key West, Florida	"
" " "	Cape May, N. J.	"
Depth charges, etc.	U.S.C.G.C. OAK	Pier
" " "	U.S.C.G.C. RUSH	Pier

3. Plant activities:

Loaded Mark 6 depth charges, Mark 12 bombs, Mark 16 warheads and Mark 5 mines at Mine Filling Plant.
Purified TNT, poured pellets and Mark 5-3 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled mines for leg #2 at Mine Assembly Plant.

(b) Mobile Units:

U.S.S. RUSH arrived 1045; departed 1145.
U.S.C.G.C. OAK arrived 1335.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
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Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/18/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Explosive "D"	St. Juliens Creek, Va.	Lighter 186
Bombs, fuzes, etc.	Norfolk, Virginia	" "
Aircraft demolition bombs	U.S.S. MATAGORDA	" "
Depth charges, complete	U.S.S. P.C. 524	Pier
Torpedo parts	Philadelphia, Pa.	C&ORwy
Arming wires, clips	Norfolk, Virginia	NAS representative
Depth charges, complete	U.S.C.G.C. ESCANABA)	
" " "	U.S.C.G.C. TAHOMA)	C&ORwy
Mines, anchors, etc.	Placida, Florida	C&ORwy
TNT	Pearl Harbor, T. H.	C&ORwy
Warheads	Pearl Harbor, T. H.	C&ORwy
Scientific instruments	New York, N. Y.	Express

2. Plant activities:

Loaded Mark 6 depth charges, Mark 12 bombs, Mark 17 warheads and Mark 5 mines at Mine Filling Plant.
Purified TNT, poured pellets and Mark 5-3 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled material for leg #3 at Mine Assembly Plant.

(b) Mobile Units:

U.S.S. SCIOTA arrived 1310 with barge YC 457; departed 1725 with barge 186.
P.C. 524 arrived 1545.
U.S.S. WASSUC arrived 1945.

A. G. COOK, JR.,
Commander, U.S. Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR. DIARY
0000 - 2400
4/19/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
TNT	Fort Lafayette, N. Y.	C&ORwy
Accessories, mines	Placida, Florida	Express
Depth charges, complete	U.S.S. HOBSON	Pier
Torpedoes, warheads, etc.	" "	"
Mines, complete with anchor and accessories	U.S.S. WASSUC	Pier

2. Plant activities:

Loaded Mark 6 depth charges, Mark 12 bombs, Mark 17 warheads and Mark 5 mines at Mine Filling Plant.
Purified TNT, poured pellets and Mark 5-3 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled material for leg #3 at Mine Assembly Plant.

(b) Mobile Units:

P.C. 524 departed 1050.
U.S.S. HOBSON arrived 1115; departed 1340.
U.S.S. WASSUC departed 1400.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/20/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard making a total of nineteen. Employed one firefighter making a total of two.

2. Outgoing shipments:

Material	Destination	Via
Wrenches; testing tools	U.S.S. BLUEBIRD	Parcel Post
Depth charges, complete	Little Creek, Va.	Lighter 263
Depth charge test set	U.S.S. JAMESTOWN	Express
Magnets	Pearl Harbor, T.H.	C&ORwy
Booster extender bellow and depth charge accessories	Oahu, T. H.	C&ORwy
Depth charges, complete	Cape May, N. J.	C&ORwy
Mine Assembly tools	Placida, Florida	C&ORwy

3. Plant activities:

Loaded Mark 6 depth charges, Mark 17 bombs, Mark 17 warheads and Mark 5 mines at Mine Filling Plant.
Purified TNT, poured pellets and Mark 5-3 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled material for leg #3 at Mine Assembly Plant.

(b) Mobile Units:

U.S.S. ACUSHNET arrived 0755 with barges 251 and 263; departed 1055 with barge 263.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/22/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Empty depth charge cases, complete, with accessories	Newport, R. I.	C&ORwy
Boxes and crate	Staten Island, N.Y.	"
Empty depth charge cases	Brooklyn, N. Y.	"
Depth charge booster extenders, complete; accessories	San Diego, Calif.	"
Depth charges, detonators, wrenches, boosters	C.G.C. CARRABASSET	Pier
Ratchet wrenches	Charleston, S. C.	Parcel Post
Ratchet wrenches	Pearl Harbor, T. H.	" "
B-3 battery	New Haven, Conn.	" "
Ratchet wrenches	Cape May, N. J.	" "
" "	San Francisco, Calif.	" "
" "	Bremerton, Washington	" "
" "	San Diego, Calif.	" "
" "	Balboa, C. Z.	" "
" "	Guantanamo Bay, Cuba	" "
" "	New London, Conn.	" "

2. Plant activities:

Loaded Mark 6 mines, Mark 17 bombs, and Mark 7 depth charges at Mine Filling Plant.
Purified TNT, poured pellets, and Mark 6 depth charges at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled material for leg #3 at Mine Assembly Plant.

(b) Mobile Units:

U.S.C.G.C. CARRABASSET arrived 1925.
U.S.S. WASSUC arrived 1955.
U.S.S. CORMORANT arrived 2045.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/23/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via	
Loaded mine cases, etc.	Stump Neck, Md.	Lighter	251
TNT	Indianhead, Md.	"	"
Anchors, Mk 3-4	Washington, D.C.	"	"
Bomb trucks and trailers	Officer in Charge, for 1.S.1. Naval Supply Depot, Norfolk	"	720
Arming wires and safety clips	Sewall's Point, Va.	"	251
Depth bombs, fuzes	Norfolk, Va.	"	"
Bombs, etc.	Sewall's Point, Va.	"	"
Bombs, fuzes	Officer in Charge, for 1S1, Naval Supply Depot, Norfolk	"	"
Depth charges, fuzes	Norfolk, Va.	"	720
Mines and parachutes	Sewall's Point, Va.	"	251
Depth charges, detonators	Officer in Charge, Naval Supply Depot, Norfolk	"	720
Bombs, fuzes	Sewall's Point, Va.	"	251
Torpedoes, gyros	U.S.S. DUPONT	"	720
Bombs, fuzes	Jersey City, N. J.	Hughes Trans.	
Delicate mechanisms	Oahu, T. H.	Express	
CS Mk. 1-2 mechanisms	Washington, D. C.	Parcel Post	
Explosive mines and anchors	Placida, Florida	C&ORwy	

2. Plant activities:

Loaded Mark 6 mines, Mark 17 bombs, and Mark 7 depth charges at Mine Filling Plant.
Purified TNT, poured pellets, and loaded Mark 6 depth charges at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled material and shipped leg #3 at Mine Assembly Plant.

(b) Mobile Units:

U.S.C.G.C. CARBASSET departed 0625.
U.S.S. CORMORANT departed 0930.
U.S.S. WASSUC departed 0930.
Tug SCIOTA arrived 1130 with barge 306; departed 1645 with barges 251 and 720.

Approved: L. L. Hunter
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

A. C. DOOK, JR.,
Commander, U.S.Navy,
Executive Officer.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/24/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Mark 6 anchors and floats	Placida, Fla.	Express
Depth charges, accessories	U.S.C.G.C. ILEX	Pier
Torpedo afterbodies	Philadelphia, Pa.	C&ORwy
Torpedo airflasks	Philadelphia, Pa.	C&ORwy
Mark 6 depth charges, complete	Iona Island, N. Y.	C&ORwy

2. Plant activities:

Loaded Mark 6 mines, Mark 17 bombs, and Mark 7 depth charges at Mine Filling Plant.
Purified TNT, poured pellets, and loaded Mark 6 depth charges at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Wound anchors with chain moorings at Mine Assembly Plant.

(b) Mobile Units:

U.S.S. ILEX arrived 1710; departed 1900.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/26/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Description	Via
Mark 16 warheads	New London, Conn.	C&ORwy
Wire rope, dry cells	Oahu, T. H.	C&ORwy
Empty wooden used boxes	Elwood Ill.	C&ORwy
Float releases	Placida, Fla.	Express
Depth charges, comp.	U.S.S. PC 521	Pier
Depth charges, comp.	U.S.S. PC 515	Pier

2. Plant activities:

Loaded Mark 6 mines, Mark 17 bombs, and Mark 7 depth charges at Mine Filling Plant.
Purified TNT, poured pellets, and Mark 6 depth charges at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Wound anchors and assembled material for 2860 project at Mine Assembly Plant.

(b) Mobile Units:

U.S.S. PC 521 arrived 1240; departed 1510.
U.S.S. PC 515 arrived 1240; departed 1510.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/27/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Description	Via
Auxiliary springs	Recife, Brazil	Express
Depth charges, complete	U.S.S. PC524	Pier
Practice bombs, accessories	Dahlgren, Va.	Transfer Co.
Float releases	Placida, Florida	Express
Depth charges, complete	Morehead City, N.C.	Transfer Co.

2. Plant activities:

Loaded Mark 6 mines, Mark 17 bombs, Mark 7 depth charges, and Mark 16 warheads at Mine Filling Plant.
Purified TNT, poured pellets, and Mark 6 depth charges at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled mines for leg #1 on 2860 order at Mine Assembly Plant.

3. Employed one civil guard marking a total of twenty.

(b) Mobile Units:

U.S.S. PC 524 arrived 0840; departed 0950.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/28/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard making a total of twenty one.

2. Outgoing shipments:

Material	Description	Via
Warheads	U.S.S. SPERRY	C&ORwy
Warheads, detonators, boosters	Fallbrook, Calif.	"
Warheads	Pearl Harbor, T.H.	"
Depth charges, detonators, and arbors	H.M.S. ST. LOMAN	Lighter 265
British cartridges	H.M.S. ST. ZINO	" "
Depth charges, comp.,arbors	Norfolk, Va.	" "
Rods	U.S.S. HOLLAND	Parcel Post
Rod for test set	Point Loma, Calif.	" "
Rods	Pearl Harbor, T.H.	" "
Rods	New London, Conn.	" "
Reconditioned and reissued torpedo parts	Newport, R. I.	C&ORwy
Rod for test set	Mare Island, Calif.	Parcel Post

3. Plant activities:

Loaded Mark 6 mines, Mark 13 mines, Mark 7 depth charges, Mark 17 bombs, Mark 13 warheads and 15" projectiles at Mine Filling Plant.
Purified TNT, poured pellets, and Mark 6 depth charges at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled mines for leg #1 on 2860 project at Mine Assembly Plant.

(b) Mobile Units:

U.S.S. ACUSHNET arrived 1105 with barge YC 720;
departed 1145 with barge YC 265.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
4/30/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Bombs, accessories	Washington, D.C.	C&ORwy
Delicate instruments	Erie, Penn.	Express
Depth charges, complete	Iona Island,N.Y.	C&ORwy
Empty depth charges, etc.	Minneapolis,Minn.	C&ORwy
Empty depth charges, etc.	Brooklyn, N.Y.	C&ORwy
Storage cans, wrenches, etc.	U.S.S. PLYMOUTH	Truck
Covers, safety forks	U.S.S. SAN DIEGO	Parcel post
Bombs, vanes, fuzes	Trinidad, BWI	Lighter 720
Pistols, extenders	San Juan, P.R.	Lighter 457
Bombs, fuzes, etc.		
Bombs, fuzes, vanes, etc.	St. Lucia, BWI	Lighter 457
Aircraft bombs, fuzes, etc.		
Aircraft bombs, fuzes, etc.	Antigua, BWI	Lighter 720
Bombs, vanes, fuzes, etc.	Guantanamo Bay, Cuba	" "
" " " "	" " "	" "
" " " "	St. Thomas, V. I.	" 457
" " " "	San Juan, P. R.	" "
" " " "	St. Thomas, V. I.	" "

2. Plant activities:

Loaded bombs 2" AA, Mark 13 and 6 mines, Mark 6 depth charges, and Mark 13 warheads at Mine Filling Plant.
Purified TNT and poured pellets at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembling Mark 6 mines at the Mine Assembly Plant.

(b) Mobile Units:

U.S.S. ACUSHNET arrived at 1410 with YF 943 and YF 965; departed at 2205 with YC 457 and YC 720.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/3/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Detonating fuzes	Gibbstown, N. J.	REAgency
Bombs, fuzes, etc.	Cherry Point, N. C.	C&ORwy
Depth charges, detonators, etc.	U.S.C.G.C.128	Pier.

2. Plant activities:

Loaded Mark 2" AA bombs, Mark 6 depth charges, Mark 13 warheads, Mark 12 and Mark 13 mines at Mine Filling Plant.
Purified TNT and poured pellets at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled mines for project 2860 at Mine Assembly Plant.

(b) Mobile Units:

U.S.C.G.C. #128 arrived 0845;
departed 0950.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

5

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/6/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Booster extenders, depth charges		
Torpedoes, warheads, etc.		
Knobbed safety forks, covers	U. S. S. DAVIS	Pier
Depth charge pistols, boosters	Fort Lauderdale, Fla.	C&ORwy
Tools and inlet valve covers	Morehead City, N.C.	"
Depth charge testing set	Corpus Christi, Texas	"
Sylphons, release plungers	Hawthorne, Nevada	"
Depth charge testing set	Burrwood, Louisiana	"
Adapters	Iona Island, N. Y.	"
Depth charges, etc.	Hingham, Mass.	"
Depth charges, etc.	Inness, S. C.	"
Primers	Naval Mine Warfare School,	MWS trk.

2. Plant activities:

Loaded Mark 2" AA bombs, Mark 12 bombs, Mark 6 depth charges, Mark 17 warheads, and Mark 6 mines at Mine Filling Plant.
Purified TNT and poured pellets at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Wound anchors for project 2860 at Mine Assembly Plant.

(b) Mobile Units:

U.S.S. DAVIS arrived 1300; departed 1510.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

8

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/9/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Traveling circuses, complete	BASE X-RAY (EAST)	C&ORwy.
" " "	" " (WEST)	"
Warheads, exploder mechanisms.	Iona Island, N. Y.	"
Safety forks,	Hawthorne, Nevada	P.P.
Depth charges complete	U.S.S.BAILEY	C&ORwy
Dummy warheads	U.S.S.CORRY	"
Empty mine cases	Washington, D. C.	"
Bomb fuze inert.	Keywest, Fla.	"
Mine cases, inert loaded.	El Segundo, Calif.	"
" " " "	Seattle, Wash.	"
" " " "	Stratford, Conn.	"
" " " "	Baltimore, Md.	"
" " " "	San Diego, Calif.	"
Warheads	Newport, R.I.	"
Mine cases, inert loaded.	Port Columbus, Ohio.	"
" " " "	Norfolk, Va.	"
" " " "	Long Island City, N.Y.	"
Depth charge cases(empty),Pistols		
Depth charge pistol and booster extender test set.	Great Lakes, Ill.	"
Depth charges, etc.	U.S.PC 525	Pier.
" " "	U.S.PC 516	"

2. Plant activities:

Loaded Mark 13 bombs, Mark 17 warheads, Mark 6 mines and Mark 6 depth charges at Mine Filling Plant.
Poured pellets and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Wound anchors for project 2860 at Mine Assembly Plant.

(b) Mobile Units:

UNDAUNTED arrived 1305 with barges 209 and 266; departed without barges 1325.

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REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/10/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
High explosives (TNT)	Iona Island, N. Y.	C&ORwy
Warheads, exploder mechanisms	Bremerton, Wash.	"
Anchors	Washington, D. C.	Brooks Trans.Co.
Cartridges, small arms, loaded	Iona Island, N. Y.	C&ORwy
Small arms, gun sights.	Brooklyn, N. Y.	"
Rifles, bayonets, cartridge belts, caliber pistols, belts, revolvers.	Brooklyn, N. Y.	"
Lock nuts	Miami, Fla.	NMD truck
Depth charges complete	U.S.S. PC 517	Pier
" " "	U.S.S. PC 522	"

2. Plant activities:

Loaded Mark 13 bombs, Mark 17 warheads and Mark 6 mines at Mine Filling Plant. At 1630 Mine Filling Plant shut down due to lack of TNT.
Poured pellets and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

PC 525 departed 0550.
PC 517 arrived 1110; departed 1330.
PC 522 arrived 1110; departed 1310.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/11/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one firefighter, making a total of three.

2. Outgoing shipments:

Material	Destination	Via
Auxiliary booster, arming wires, safety clips, TNT-A granular	St.Juliens Creek,Va.	NAD truck
TNT-A granular	" " " "	FL 209
Fuzes (hydrostatic), Oscillator.	Washington, D.C.	" "
Nose fuzes, bomb bodies, tail vanes.	Dahlgren, Va.	" "
TNT grade A, granular, Explosive "D"	Indian Head, Md.	" "
Bombs, fuzes, vanes.	Natal, Brazil.	" "

3. Plant activities:

Mine Filling Plant closed.
Purified TNT, poured pellets, and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Assembled mines for project 2860 at Mine Assembly Plant.

(b) Mobile Units:

U.S.S.KEYWADIN arrived 1155;
departed 1420 with barge YF 209.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/19/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one firefighter, making a total of four.

2. Outgoing shipments:

Material	Destination	Via
Safety forks, covers, tools,etc.	5ND, Norfolk,Va.	Lighter YF-263
Marine hardware	Mare Island, Calif.	C&ORwy
Depth charge cases and accessories(empty)	Curtis Bay, Md.	REAgency
Aircraft bomb fuze, inert.	Seattle, Wash.	C&ORwy
" " " "	Hingham, Mass.	C&ORwy
Starting piston body	U.S.S.ERICSSON	NMD truck
Inert fuzes	U.S.S.CHARGER	" "
Aircraft bomb fuzes, inert.	Oahu, T.H.	C&ORwy
" " " "	Davisville, R.I.	"
Explosive "D"	St.Juliens Creek,Va.	NAD truck
Torpedo parts	Philadelphia, Pa.	C&ORwy
Bombs, boosters	Portsmouth, N.H.	REAgency
Bomb fuzes (duplicate shipment)	Corpus Christi, Texas.	C&ORwy
Fire hose	Brooklyn, N.Y.	"

3. Plant activities:

Loaded Mark 16 warheads, Mark 6 depth charges, demolition charges, Mark 12 and Mark 13 bombs at Mine Filling Plant.
Purified TNT, poured pellets, and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from damaged containers at Reclamation Plant.
Assembled mines for leg #2 of 2630 project at Mine Assembly Plant.

(b) Mobile Units:

U.S.C.G.C.FORWARD arrived 1005;
departed 1115.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/20/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Mines and accessories	U.S.S.WASSUC	Pier
Mine cases, etc.	Naval Mine Warfare School,	NMW truck
Bombs, fuzes, etc.	Brooklyn, N.Y.	C&ORwy
Cable, supply box	U.S.S.OMAHA	NMD truck
Aircraft bomb fuzes, inert.	Sewalls Point, Va.	" "
Depth charges and accessories	Key West, Fla.	C&ORwy
Detonators (dummy electric)	Washington, D.C.	P.P.
Depth charges and accessories	Miami, Fla.	C&ORwy
H-4 paint remover	Washington, D.C.	P.P.
Mines and accessories	Indian Island, Wash.	C&ORwy
Aircraft bombs, fuzes	Langley Field, Va.	N.S.A. truck

2. Plant activities.

Loaded Mark 16 warheads, Mark 6 depth charges, demolition charges, and Mark 17 bombs at Mine Filling Plant. At 1200 Mine Filling Plant shut down bacause of exhaustion of supply of TNT.
Purified TNT, and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from damaged containers at Reclamation Plant.
Assembled mines for leg #2 of 2630 project at Mine Assembly Plant.

(b) Mobile Units:

U.S.S.MIANTONOMAH arrived 1400.
U.S.S.MONADNOCK arrived 1445.
YMP-14 arrived 1750 with barge 187; departed 1810 without barge.
U.S.S.KEOKUK arrived 1745.

A. C. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 -- 2400
5/21/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Mines and accessories	U.S.S.MIANTONOMAH	Pier
" " "	U.S.S.MONADNOCK	"
" " "	U.S.S.KEOKUK	"
Depth charges and accessories, depth charge extenders, pistols, knobbed safety forks, stowage cans.	Hingham, Mass.	C&ORwy
Warheads	Pearl Harbor, T.H.	"
Torpedo Parts	Philadelphia,Pa.	"

2. Plant activities:

Mine Filling Plant closed.
Purified TNT, poured pellets, and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from damaged containers at Reclamation Plant.
Assembled mines for leg #2 of 2630 project at Mine Assembly Plant.

(b) Mobile Units:

U.S.S.CONONICUS arrived 0700; departed 1720.
U.S.S.KEOKUK departed 1535.
U.S.S.WASSUC departed 1535.
U.S.S.MIANTONOMAH departed 1555.
U.S.S.MONADNOCK departed 1555.
U.S.S.YMP-14 arrived 1750 with barge #187.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/22/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Mines, complete	Morehead City, N.C.	FL 243
Mines, complete	Morehead City, N.C.	FL 250
Mark 16 warheads	Pearl Harbor, T.H.	C&ORwy
Depth charges, etc.	U.S.S. YP 220	Pier
Torpedo parts	Philadelphia, Pa.	C&ORwy
Knobbed safety forks	Balboa, C.Z.	FL 265
Bombs, fuzes, etc.	Balboa, C.Z.	FL 265
Bombs, fuzes, etc.	Coco Solo, C.Z.	FL 306
Bombs, fuzes, etc.	Balboa, C.Z.	FL 265
Bombs, fuzes, etc.	Coco Solo, C.Z.	FL 306
Demolition Charges,detonators	Balboa, C.Z.	FL 265
Depth charges, boosters, TNT	Balboa, C.Z.	FL 265
Aircraft bomb fuzes, inert	Coco Solo, C.Z.	FL 306
Aircraft bomb fuzes, hydrostatic, inert	Coco Solo, C.Z.	FL 306
Torpedo detonators	Coco Solo, C.Z.	Tug UNDAUNTED
Knobbed safety forks	Coco Solo, C.Z.	FL 306
Warhead, torpedo, booster, exploder mechanism	U.S.S BROOME	FL 265

2. Plant activities:

Mine Filling Plant closed.
Purified TNT, poured pellets, and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from damaged containers at Reclamation Plant.
Assembled mines for leg #2 of 2630 project at Mine Assembly Plant.

(b) Mobile Units:

0905 YP 220 arrived; departed 1100.
U.S.S. UNDAUNTED arrived 1245 with barges YC720 and YC 704; departed with barges 265 and 306.
U.S.S. SCIOTA arrived 1530; departed 1615 with barges 250 and 243.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

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REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/23/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Container loaded with Cast TNT	Portsmouth, N.H.	C&ORwy
Depth charge cases, empty, extenders, and accessories	Keyport, Washington	"
D-4 Mod 3 floats, complete with N-6 horns	Cincinnati, Ohio	Express
Mk 6 depth charges, complete with accessories	Philadelphia, Pa.	Trans.truck
Dummy depth charges without pistols and accessories	Dahlgren, Pa.	" "
Marine hardware	Washington, D.C.	Old Point, by NMD truck
Depth charges, detonators	H.M.S. CELINDA	Pier
Knobbed inlet valve covers	Key West, Fla.	Trans.truck
Mines, washers, insulators	U.S.S. MONADNOCK	Pier
25" depth setting springs	Key West, Fla.	Trans.truck
Depth charges, and accessories	Key West, Fla.	" "
Mines, washers, etc.	U.S.S. KEOKUK	Pier
Mines, complete	U.S.S. MIANTONOMAH	"

2. Plant activities:

Mine Filling Plant closed.
Purified TNT, poured pellets, and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from damaged containers at Reclamation Plant.
Completed assembly of mines for leg #2 of Project #2 at Mine Assembly Plant.

(b) Mobile Units:

H.M.S. CELINDA arrived 0830; departed 1045.
CONONICUS arrived 1330; departed
MIANTONAMAH anchored out in stream 1415.
MONADNOCK arrived 1415.
WASSUC arrived 1435.
KEOKUK arrived 1445.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/24/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Mines	Norfolk, Va.	FL 187
Mines	Norfolk, Va.	FL 251
Mines, complete	Norfolk, Va.	FL 266
Mines, complete	Norfolk, Va.	FL 244

2. Plant activities:

Mine Filling Plant closed.
Purified TNT, poured pellets, and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from damaged containers at Reclamation Plant.
Assembled mines for leg #1 of project #2 at Mine Assembly Plant.

(b) Mobile Units:

UNDAUNTED arrived 1040 with barge 251;
departed 1215 with barges 244 and 266.
MONADNOCK departed at 1245.
KEOKUK departed 1245.
MIANTONOMAH departed 1300.
ACUSHNET arrived 1600 ; departed 1710 with barges 187 and 251.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/25/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. One civil guard deceased, making total decrease to twenty-four.

2. Outgoing shipments:

Material	Destination	Via
Bombs, fuzes, and accessories	Iona Island, N.Y.	C&ORwy
Torpedoes and parts	Charleston, S.C.	"
Bombs, fuzes, and accessories	Salem, Mass.	"
" " " "	Philadelphia, Pa.	"
Mines & anchors assembled comp.	U.S.S. MIANTONOMAH	Direct

3. Plant activities:

Loaded Mark 5 mines, Mark 12 Mod 2 bombs, and Mark 16 warheads at Mine Filling Plant.
Purified TNT and poured pellets at Purification Plant.
Reclamation Plant closed.
Assembled mines for leg #1 of project #2 at Mine Assembly Plant.

(b) Mobile Units:

None

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

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REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/26/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Bomb trailers and bomb service trucks	Base X-ray (West)	C&ORwy
Bomb trailers and bomb service trucks	Base X-ray (East)	"
Bombs, fuzes, and accessories	Miami, Florida	"
" " " "	Biloxi, Miss.	"
" " " "	Elizabeth City, N.C.	"
" " " "	St. Petersburg, Fla.	"
TNT for projectile loading	Philadelphia, Pa.	"
British detonators, pistols, and primers	Morehead City, N.C.	"
Depth charges, pistols, detonators	Norfolk, Va.	FL 720
Torpedoes, gyros	U.S.S. WILSON	FL 720
Depth charges and accessories	" "	" "
British detonators and primers	Norfolk, Va.	" "
Marine hardware (floats)	Washington, D.C.	Truck to Old Pt.

2. Plant activities:

Loaded Mark 17 and 12 bombs, Mark 5 mines, wrecking charges, Mark 13 warheads, and Mark 7 depth charges at Mine Filling Plant.
Purified TNT, poured pellets, and loaded Mark 4 bombs at Purification Plant.
Reclaimed TNT from damaged containers at Reclamation Plant.
Preparing to assemble Mark 13 mines and winding chain mooring at Mine Assembly Plant.

(b) Mobile Units:

USS WASSUC departed 0710; arrived 1740.
USS SCIOTA arrived with barge 265 at 1220; departed 1340 with barge 720.
USS MIANTONOMAH arrived 1005.
USS MONADNOCK arrived 1015.
USS KEOKUK arrived 1015.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/29/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Bombs, fuzes, accessories	Opa Locka, Fla.	C&ORwy
Mark 16 warheads	Portsmouth, N.H.	"
Mechanisms	Pearl Harbor, T.H.	Express
Tools, wrenches	USS J.FRED TALBOTT	Parcel Post
Bombs, fuzes, and access.	USS AUGUSTA	USS KEOKUK
TNT blocks, blasting caps, electric detonators	Washington, D.C.	Trans. Co.
Mk 8 Mod 8 torpedoes, and Mk 12 gyros	Alexandria, Va.	" "
Bombs, fuzes, and accessories	Banana River, Fla.	C&ORwy
Mines complete with all access.	Hawthorne, Nevada	"
Thimbles, wire rope clips	Detroit, Mich.	Parcel Post

2. Plant activities:

Loaded Mark 17 and 12 bombs, Mark 13 and 16 warheads, and wrecking charges at Mine Filling Plant.
Purified TNT, poured pellets, and loaded Mark 4 bombs at Purification Plant.
Reclaimed TNT from damaged containers at Reclamation Plant.
Assembling Mark 13 mines and winding chain moorings at Mine Assembly Plant.

(b) Mobile Units:

USS KEOKUK departed 0950.
USS MIANTONOMAH arrived 1805.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
5/30/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Detonating fuzes	Hawthorne, Nevada	C&ORwy
Misc. mine parts	Mare Island, Calif.	"
Torpedoes, gyros	U. S. S. LONG	Lighter 265
Torpedoes, gyros	U. S. S. STERRET	" "
TNT blocks, blasting caps, etc.	U. S. S. BROOKLYN	" "
Bombs, vanes, fuzes	Bermuda	Lighter 265 & 704
Depth charges, complete	Bermuda	" " "
Bombs, vanes, fuzes, etc.		
Bombs, fuzes, vanes, etc.		
Bellows for depth charges	Base X-RAY (WEST)	Lighter 265
Warheads, mechanisms		" 704
Depth charges, etc.	Norfolk, Va.	" "
Bombs, fuzes,	U.S.S. PHILADELPHIA	" "
Tools and wrenches	New Orleans, Louisiana	C&ORwy
Tools and wrenches	San Diego, Calif.	Express

2. Plant activities:

Loaded Mark 17 bombs, Mark 13 mines, Mark 16 warheads, and wrecking charges at Mine Filling Plant.
Purified TNT, and poured pellets at Purification Plant.
Reclaimed TNT from damaged containers at Reclamation Plant.
Assembling Mark 13 mines and winding chain moorings at Mine Assembly Plant.

(b) Mobile Units:

USS ACUSHNET arrived 1510 with barges 186 and 459; departed 1600 with barges 265 and 70 .

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/2/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Anchors with chain moorings	Seattle, Washington	C&ORwy
Dynamite	Shelton Siding, Va.	"
Bombs, fuzes, and accessories	Banan River, Fla.	"
" " " "	Opa Locka, Fla.	"
" " " "	Pensacola, Fla.	"
Warheads, exploder mechanisms	Newport, R. I.	"
Bombs, fuzes, and accessories	Pensacola, Fla.	"
" " " "	Brooklyn, N. Y.	"
" " " "	Key West, Fla.	"
" " " "	Parris Island, S.C.	"
" " " "	Opa Locka, Fla.	"
" " " "	Cherry Point, N.C.	"
Hardened ordnance chain	Washington, D.C.	Wash. NY truck
Depth charge testing set.	U.S.S. STERRETT	Lighter 459
Pistols, depth charge tools, etc.	Balboa, C. Z.	Lighter 459
Bombs, fuzes, and accessories	Balboa, C. Z.	" "
Depth charges, and accessories	U.S.S. BAINBRIDGE	" "
Depth charge tools	U.S.S. PALMER	" "
Knobbed safety forks	Balboa, C. Z.	" "
Warheads, detonators, etc.	Base X-Ray (West)	" "
Torpedoes, gyros, etc.	U.S.S. BAINBRIDGE	" "
Blasting caps	Shelton Siding, Va.	" "
Depth charges, accessories	U.S.S. KEWAYDIN	Pier
Hardware	Washington, D.C.	C&ORwy

2. Plant activities:

Loaded Mark 12 bombs, Mark 13 mines, Mark 16 warheads, Mark 7 depth charges, and wrecking charges at Mine Filling Plant.
Purified TNT, and poured pellets at Purification Plant.
Reclaimed TNT from damaged containers at Reclamation Plant.
Assembled Mark 13 mines and wound chain moorings on anchors at Mine Assembly Plant.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/3/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Empty depth charge case	U.S.S. BLUEBIRD	Rep. of Mine Warfare School
Bombs, fuzes, and accessories	Inness, S. C.	C&ORwy
Charge demolitions and electric detonators	Fallbrook, Calif.	Express
TNT demolition blocks	Indianhead, Md.	"
TNT blocks	Quantico, Va.	C&ORwy
Depth charges, and accessories	U.S.S. YP 105	Pier
Tool boxes, anchors, etc.	MWS, Yorktown, Va.	Rep. of MWS
Boosters and wrenches	U.S.S. YMS 54	Rep. of MWS

2. Plant activities:

Loaded Mark 12 bombs, Mark 13 mines, Mark 16 warheads, Mark 7 depth charges, and wrecking charges at Mine Filling Plant.
Purified TNT, poured pellets, and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from damaged containers at Reclamation Plant.
Wound chain moorings on anchors at Mine Assembly Plant.

(b) Mobile Units:

YMS 54 arrived 0945; departed 1205.
YP 105 arrived 1030; departed 1345.
USS WASSUC departed 1350.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/6/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Plummet cord, antenna, spools, hooks, pins, etc.	Tutuila, Samoa	C&ORwy
Bombs, vanes, fuzes	Sewall's Point,Va.	Lighter 186
Torpedo guages	Norfolk, Va.	" "
Exercise heads	Guantanamo Bay, Cuba	" "
Bombs, fuzes, vanes, etc.	Sewall's Point, Va.	" "
Inert aircraft bomb fuzes		
British depth charges, access.	H.M.S. RANPURA	" "
Depth charges, complete	for "Palisade"	" 313
" " "	for "Beta"	" "
" " "	for "Gamma"	" "
" " "	for "Fliver"	" "
Charging check valve and guide	Norfolk, Va.	NMD truck
Mark 21 fuzes	Sewall's Point, Va.	Lighter 186
Warheads, exploder mechanisms	Alameda, Calif.	Express
Detonating fuzes	Hawthorne, Nev.	"
Warheads	Pearl Harbor, T.H.	"
Explosive mines	Oahu, T.H.	C&ORwy
Insulators, washers, nuts, etc.		
Extending blanking plates	Washington, D. C.	Express
Depth charge testing sets	Seattle, Wash.	"
" " " "	Seattle, Wash.	"
Metal parts (junk)	Carderock, Md.	C&ORwy
Warheads, exploder mechanisms	Keyport, Wash.	"
Extender blanking plates	Washington, D. C.	"
Mines, practice, accessories	El Segundo, Calif.	"
Bombs, vanes	Norfolk, Va.	Lighter 186
Bombs, fuzes, vanes	Sewall's Point, Va.	" "
Fragmentation bombs	Norfolk, Va.	" "
Fuzes	Sewall's Point, Va.	" "
Bombs, fuzes, vanes		
Ordnance stores	Washington, D. C.	NOL truck
Extender blanking plates	" "	C&ORwy

2. Plant activities:

Loaded Mark 12 mines, Mark 16 warheads, Mark 7 depth charges, and wrecking charges at Mine Filling Plant.
Purified TNT, poured pellets, and loaded Mark 5 bombs at Purification Plant.
Steamed off old containers at Reclamation Plant.
Assembled Mark 13 mines and wound chain moorings on anchors at Mine Assembly Plant.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/10/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard, making a total of twenty six.

2. Outgoing shipments:

Material	Destination	Via
Practice bombs	Staten Island, N. Y.	Express
Mine crate carriers	San Francisco, Calif.	"
Mine Crate carriers	Mare Island, Calif.	"
Depth charge, complete	Cleveland, Ohio	"
Mine cases and studs	Oahu, T. H.	"
Igniters and accessories	Inness, S. C.	C&ORwy
Bombs, detonators, etc.	Piney Point, Md.	USS WASSUC
Depth charges, mine cases	USS WASSUC	Pier
Safety forks, fuzes	Newport, R. I.	C&ORwy
Blasting cap boxes	Brooklyn, N. Y.	"
Soluble washers	Bremerton, Wash.	Express & Air Express

3. Plant activities:

Loaded Mark 16 and 13 warheads, Mark 12 mines, Mark 12 bombs, Mark 7 depth charge, wrecking charges at Mine Filling Plant.
Purified TNT, poured pellets, and loaded Mark 5 bombs at Purification Plant.
Reclaimed warheads and scrap; steamed off old containers at Reclamation Plant.
Assembled Mark 12 mines at Mine Assembly Plant.

(b) Mobile Units:

USS WASSUC arrived 0800; departed 1020.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/11/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed two firefighters, making a total of five.

2. Outgoing shipments:

Material	Destination	Via
Tools, valves, keys, etc.	Newport, R. I.	Parcel post
Tools, wrenches	Miami, Fla.	" "
" "	USS CARNELIAN	" "
Adapters for Mk 19 bomb fuze	Trinidad, W. I.	Lighter 263
Bombs, fuzes, etc.	Natal, Brazil	" "
TNT blocks, detonators, etc.	USS OMAHA	" "
Depth charges, pistols, etc.	Saint Thomas, V.I.	" "
Depth charge pistols, safety forks, safety covers	Fort Morgan, Alabama	C&ORwy
Arming wires, and safety forks	Davisville, R. I.	C&ORwy
Boosters, safety clips	St. Juliens Creek	NMD truck
Hardware	Washington, D.C.	C&ORwy
Mine crate carriers	Oahu, T.H.	Express
Household effects	Bay City, Mich.	"
" "	Alameda, Calif.	C&ORwy
Safety forks and covers	San Juan, P. R.	Lighter 263
Boosters, detonators	St. Thomas, V.I.	" "
Depth charges and accessories	Natal, Brazil	" "
Bombs, fuzes, vanes	St. Thomas, V.I.	" "
Specially loaded projectiles	Dahlgren, Va.	" 260
Tetryl	Indianhead, Md.	" "
TNT grade A.		
TNT grade A and Tetryl		
Warheads, exploder mechanisms	San Juan, P. R.	" 263
Bombs, fuzes, etc.	Trinidad, B.W.I.	" "
Detonators, boosters, pistols	Guantanamo Bay, Cuba	" "
Bombs, fuzes, etc.	Trinidad, B.W.I.	" "
Hardware	Hawthorne, Nevada	C&ORwy
Boosters stowage cans	New Orleans, La.	"
Bombs, fuzes	New Orleans, La.	"
Depth charges complete with access.	Inness, S.C.	"

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/11/42

Continued.

3. Plant activities:

Loaded Mark 13 and 16 warheads, Mark 6 mines, Mark 12 bombs, Mark 6 depth charges, and wrecking charges at Mine Filling Plant.
Purified TNT, poured pellets, and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from damaged containers and steamed off old containers at Reclamation Plant.
Assembled Mark 12 mines at Mine Assembly Plant.

(b) Mobile Units:

SCIOTA arrived 1200 with barges 318 and 216; departed 1400 with 318 and 216.
UNDAUNTED arrived 1425 with barges YC 313 and YC 459; departed 1555 with barg 263.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/13/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
K-3 Test Stand, Mk 1-1	Balboa, C.A.	Lighter 459
Tool, wrenches		
Depth charges, complete	Inness, S.C.	Trans. Co.
Hardware	Iona Island, N.Y.	Express
Tetryl	Elkton, Md.	Company's truck
Bombs, vanes, etc.	U.S.S. CHARGER	Lighter 459
Aircraft bomb fuzes		
Depth charges, complete	Project 483 & 487	" 313
Depth charges, complete	U.S.S. SALAMONIE	" "
Mine anchors	Norfolk, Va.	" "
Torpedo storage rack		
Warheads, empty, Mark 15		
Depth charge tool sets	Guantanamo Bay, Cuba	" "
Mark 19 torpedoes, gyros	Atlantic Fleet Schools	" "
Torpedoes, gyros, warheads		
Hardware, fuzes	New London, Conn.	C&ORwy
Bombs, fuzes, etc.	Coco Solo, C.Z.	Lighter 459
Detonators	Natal, Brazil	Tug
American depth charges, complete; British cartridges and arbors	Norfolk, Va.	Lighter 313
Aircraft bomb fuzes	Sewall's Point, Va.	" "
Bombs, fuzes, vanes	U.S.S. NITRO	" 459
Depth charges, and accessories	Key West, Fla.	C&ORwy
Tools and wrenches	Key West, Fla.	"
Valves, covers, gaskets		Parcel post
Depth charge cases, pistols, extenders	Michigan City, Ind.	C&ORwy
Pistol stowage boxes	NAD (307) Balboa	Lighter 459
Dummy loaded cases, TNT loaded cases	New London, Conn.	Express
Wrenches and tools	Mobile, Alabama	"
Tools, inlets valve cover	U.S.S. YMS 1	Tug

2. Plant activities:

Loaded Mark 12 bombs, Mark 6 depth charges, Mark 13 and 16 warheads, Mark 6 mines, and wrecking charges at Mine Filling Plant.
Purified TNT, poured pellets, and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from damaged containers and steamed off old containers at Reclamation Plant.
Assembled Mark 13 mines at Mine Assembly Plant.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/16/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Torpedo, Mk 8	U.S.S. BAINBRIDGE	NMD truck
Bombs, fuzes, etc.	Trinidad, BWI	Lighter 319
Depth charges, complete	Inness, S. C.	Hugh Trans. Co.
Air Demolition bombs, etc.	Dahlgren, Va.	Lighter 313
Bombs, fuzes, etc.	Balboa, C. Z.	" 319
" " "	Guantanamo Bay, Cuba	" "
Steel rail	Forest Park, Ill.	C&ORwy
Specially loaded bomb model	Dahlgren, Va.	Lighter 313
TNT blocks	Fort Eustis, Va.	Rep. of Fort Eustis
Ordnance instruments	Philadelphia, Pa.	Express
Reclaimed explosive "D"	Indianhead, Md.	Lighter 313
S. E. Devices, dashpot oil	Washington, D. C.	Private car

2. Plant activities:

Loaded Mark 12 bombs, Mark 13 warheads, Mark 6 mines, Mark 6 depth charges, and wrecking charges at Mine Filling Plant.
Poured pellets, and loaded Mark 5 bombs at Purification Plant.
Reclaimed TNT from damaged containers and steamed off old containers at Reclamation Plant.
Prepared anchors for chain mooring winding at Mine Assembly Plant.

(b) Mobile Units:

U.S.S. WASSUC arrived 0930; departed 1100.
U.S.S. UNDAUNTED arrived 1100 with barges 459 and 452; departed with barge YC 319 at 1200.
U.S.S. KEWAYDIN arrived 1400 with barges YC 319 and YC 299.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/17/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Detonator box	Quincy, Mass.	Parcel post
Nitromon primers	Piney Point, Md.	USS WASSUC
Depth charge parts	U.S.C.G.C. 454	USS UNDAUNTED
Depth charges, complete	San Juan, P. R.	Lighter 752
" " "	Guantanamo Bay, Cuba	" "
Bombs, tail vanes, fuzes	St. Lucia, BWI	" 8 459
Bombs, fuzes, etc.	San Juan, P. R.	" "
" " "	Natal, Brazil	" "
Empty warheads	Great Lakes, Ill.	C&ORwy
Batteries and blanking plates	Washington, D. C.	"
Booster stowage cans	Charleston, S. C.	"
Marine hardware	Mare Island, Calif.	"
Depth charge pistols, extenders, test set, etc.	Tutuila, Samoa	"
Booster stowage cans	Hingham, Mass.	"
" " "	Iona Island, N. Y.	"
Depth charges, fuzes, etc.	Hingham, Mass.	"
TNT	Elkton, Md.	"
Depth charges, complete	Iona Island, N. Y.	"
Detonating fuzes	Macune, N. M.	"
Booster stowage cans.	Fort Mifflin, Pa.	"
" " "	Cape May, N. J.	"

2. Plant activities:

Loaded Mark 12 bombs, Mark mines, Mark 6 depth charges, Mark 16 warheads, and wrecking charges at Mine Filling Plant.
Poured pellets, and loaded Mark 4 and 5 bombs at Purification Plant.
Reclaimed TNT from damaged containers and steamed off old containers at Reclamation Plant.
Assembled Mark 12 mines at Mine Assembly Plant.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/24/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Air accumulator	Seattle, Washington	Express
Exploder mechanisms	Charleston, S. C.	C&ORwy
Aircraft bomb fuzes	St. Juliens Creek	Lighter 725
Gaskets	Norfolk, Va.	" "
Depth charges, accessories	" "	" "
Depth charge test set, Mk 2	U.S.S. MAC LEISH	NMD truck
TNT	Fort Lafayette, N.Y.	C&ORwy
Bomb trailers	Newport, R. I.	"
Explosive bombs, access.	Toledo, Ohio	"
Dummy torpedoes self propelling	Charleston, S. C.	"
Electric adapters	Mare Island, Calif.	"
Pistol stowage boxes and booster stowage cans	Inness, S. C.	"
Hardware	Miami, Fla.	"
Practice mines, inert dummy	Dayton, Ohio	"
Pistol stowage boxes and booster stowage cans	Inness, S. C.	"
Explosive mines, and fuzes	San Diego, Calif.	"
Fuzes, blasting caps, etc.	Quantico, Va.	"
TNT blocks, blasting caps, etc.	Mare Island, Calif.	"
TNT blocks, blasting caps, etc.	" " "	"
Depth charges, complete	Toledo, Ohio	"
Explosive mines	Hawthorne, Nevada	"
Flight adapters	South Boston, Mass.	"
Pins, etc.	NMWS, Yorktown, Va.	MWS truck

2. Plant activities:

Loaded Mark 17 warheads, Mark 5 mines, Mark 6 depth charges, Mark 17 bombs, wrecking charges, and 15" high explosive projectiles at Mine Filling Plant.

Poured pellets, loaded Mark 4 bombs and mousetrap ammunition at Purification Plant.

Reclaimed TNT from damaged containers and steamed off old containers at Reclamation Plant.

Mine Assembly Plant assembled Mark 13 mines.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/25/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Magnet for S E test set	San Diego, Calif.	Parcel post
Tetryl booster	U.S.S. DUPONT	truck
Depth charges, accessories	U.S.S. YMS 40	Direct
Grade A TNT	Philadelphia, Pa.	C&ORwy
Mark 17 warheads	Alameda, Calif.	"
Arming wires for Mk 13 mines	NAD Oahu, T.H.	Express
Iron or steel rust-preventing compound	San Pedro, Calif.	C&ORwy
Mark 13 mines, complete	Hawthorne, Nevada	"
Warheads, exploder mechanisms	Fallbrook, Calif.	"
Depth charge, and accessories	Hingham, Mass.	"

2. Plant activities:

Loaded Mark 17 warheads, Mark 6 mines, Mark 6 depth charges, Mark 17 bombs, wrecking charges, and 15" high explosive projectiles at Mine Filling Plant.
Poured pellets, loaded Mark 4 bombs and mousetrap ammunition at Purification Plant.
Reclaimed TNT from damaged containers and steamed off old containers at Reclamation Plant.
Assembled Mark 13 mines at Mine Assembly Plant.

(b) Mobile Units:

YMS 40 arrived 1125; departed 1310.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer

Approved:

L. L. HUNTER
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/26/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Valve washers, gaskets, etc.	U.S.S. BAINBRIDGE	Parcel Post
Depth charge gaskets	U.S.S. MACLEISH	Pier
Demo. charges, complete with detonators	St. Juliens Creek, Va.	U.S.S. WORTHINGTON
Pistols, extenders, empty booster cans	U.S.S. McCORMICK	" "
Household effect	Alexandria, Va.	C&ORwy
Warheads, and exploder mechanisms	Bemerton, Wash.	Express
Depth charges, fuzes, etc.	Iona Island, N. Y.	C&ORwy
Demolition mines	Oahu, T. H.	"
Bombs, fuzes, and accessories	Hingham, Mass.	"
Drill material, fuzes, etc.	Annapolis, Md.	"

2. Plant activities:

Loaded Mark 16 warheads, Mark 6 mines, Mark 6 depth charges, Mark 17 bombs, Mark 13 bombs, wrecking charges, and 15" high explosive projectiles at Mine Filling Plant.
Poured pellets, loaded Mark 4 bombs and mousetrap ammunition at Purification Plant.
Reclaimed TNT from damaged containers and steamed off old containers at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

U.S.S. WORTHINGTON arrived 0600; departed 1250.
U.S.S. CORMORANT arrived 1320; departed 1805.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/27/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth setting springs	Key West, Florida	Parcel post
Auxiliary springs		
Hardware, delicate instruments	Mare Island, Calif.	C&ORwy
Inert fuzes, bombs, etc.	Akron, Ohio	"
Aircraft bomb fuzes	North Island, Calif.	"
Inert loaded fuzes	Lakehurst, N. J.	"
Test stand, delicate instruments	Mare Island, Calif.	"
Ordnance instruments	Washington, D. C.	Express
Mk 6 detonators	U.S.S. DUPONT	NMD truck
Hardware	Seattle, Wash.	C&ORwy
Auxiliary booster containers	Burns City, Ind.	"
Depth charge drill mine material	Key West, Florida	"
Pistol stowage boxes, booster stowage cans		
Pistol stowage boxes, booster stowage cans	Sabine Pass, Texas	"
Practice bombs, vanes, wires	Washington, D. C.	"
Aircraft depth bombs, etc.	Norfolk, Virginia	USS WORTHINGTON

2. Plant activities:

Loaded Mark 13 warheads, Mark 6 depth charges, Mark 13 bombs, wrecking charges, and 15" high explosive projectiles at Mine Filling Plant.
Poured pellets, loaded Mark 4 bombs and mousetrap ammunition at Purification Plant.
Reclaimed TNT from damaged containers and steamed off old containers at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

U.S.S. WORTHINGTON arrived 1525; departed 1725.

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
6/29/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard, making a total of twenty seven.

2. Outgoing shipments:

Material	Destination	Via
Depth charge tools	P. C. 533	Parcel post
Hardware	Dayton, N. J.	C&ORwy
Bombs, fuzes, etc.	Charleston, S.C.	"
Depth charges, tools, access.	Norfolk, Va.	Lighter 263
Bombs, fuzes, etc.	Sewall's Point, Va.	Lighter 457
Bombs, tail vanes	Norfolk, Va.	Lighter 457
Bomb fuze (hydrostatic) inert	Sewall's Point, Va.	" "
M-4 "B" assemblies (coils)	Fort Monroe, Va.	Ft Monroe truck
Depth setting springs for fuzes	Key West, Fla.	Trans. Co.
Depth charges		
Depth charges, fuzes, tools	Fort Lafayetts, N.Y.	" "

3. Plant activities:

Loaded Mark 13 warheads, Mark 6 depth charges, Mark 13 bombs, Mark 29 bombs, wrecking charges, 15" high explosive projectiles at Mine Filling Plant.
Poured pellets, loaded Mark 4 bombs at Purification Plant.
Reclaimed TNT from damaged containers and steamed off old containers at Reclamation Plant.
Mine Assembly Plant disassembled mines received from Norfolk.

(b) Mobile Units:

U.S.S. ACUSHNET arrived 1230 with YF 187 and 243; departed 1425 with 263 and 457.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
7/1/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one firefighter, making a total of eight.

2. Outgoing shipments:

Material	Destination	Via
Explosive bombs, fuzes, access.	Inness, S. C.	C&ORwy
Warheads, delicate instruments	Alameda, Calif.	"
Mk 8 torpedoes, gyros	U.S.S. DICKERSON	Lighter 486
" "	U.S.S. STIMPSON	" "
Depth charge pistols	U.S.S. MADISON	" "
Mk 15 torpedoes, warheads, etc.	U.S.S. KEARNY	" "
" " " " "	U.S.S. LIVERMORE	" "
Depth charges, detonators, etc.	U.S.S. KEARNY	" "
Bombs, fuzes, accessories	U.S.S. ARKANSAS	" "
Depth charge tools	Miami, Florida	C&ORwy
" " "	Iona Island, N.Y.	"
Hardware	Mobile, Ala.	Express
Depth charge tools	U.S.S. MCCALLA	Parcel post

3. Plant activities:

Loaded Mark 6 depth charges, Mark 13 and 29 bombs, and wrecking charges at Mine Filling Plant.
Poured pellets and loaded Mark 4 bombs at Purification Plant.
Steamed off old containers at Reclamation Plant.
Disassembled project "F" mines at Mine Assembly Plant.

(b) Mobile Units:

U.S.S. WASSUC departed 1100.
U.S.S. ACUSHNET arrived 1340 with YF 250 and YF 244; departed 1615 with barge 486.

A. G. COOK, JR.,
COMMANDER, U. S. Navy,
Executive Officer.

Approved:
L. L. HUNTER,
CAPTAIN, U. S. Navy,
Inspector of Ordnance in Charge.

3

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
7/6/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard, making a total of 26.

2. Outgoing shipments:

Material	Destination	Via
Anti-aircraft bombs, fuzes	Dahlgren, Va.	Express
Depth charges	Cohasset, Mass.	C&ORwy
Aircraft depth bombs, fuzes	Pensacola, Fla.	"
Bombs, fuzes, vanes, etc.	Sewall's Point, Va.	Lighter 457
Bombs, fuzes, tail vanes		
Bombs, vanes, safety clips, etc.	Norfolk, Va.	" "
Bombs, vanes, safety clips, etc.		
Depth charges, pistols, etc.		
Depth setting tools and wrenches	Fort Mifflin, Pa.	Parcel post
Depth setting wrenches, etc.		
Springs	U.S.S. POCOMOKE	" "
Wrench, depth setting	U.S.S. INGRAHAM	" "
Depth charges, etc.	U.S.S. WASSUC	Direct, pier

3. Plant activities:

Loaded Mark 6 depth charges, Mark 17 and 29 bombs, Mark 16 warheads, and wrecking charges at Mine Filling Plant.
Poured pellets and loaded Mark 5 bombs and mousetrap ammunition at Purification Plant.
Steamed off old containers at Reclamation Plant.
Disassembled mines for project "F" at Mine Assembly Plant.

(b) Mobile Units:

U.S.S. STATE PORT arrived 0705; departed 1610.
U.S.S. UNDAUNTED arrived with barge YF 266 at 1245; departed with barge Yf 266 at 1700.

A. G. COOK, JR.,
Commander, U.S. Navy,
Executive Officer.

Approved:
L. L. HUNTER
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

8

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
7/9/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth charges, etc.	Philadelphia, Pa.	C&ORwy
Bomb fuzes	Washington, D.C.	Wash. truck
Auxiliary springs	Eau Gallie, Fla.	Parcel post
Depth charge pistols and extenders	U.S.S. BROOME	Pier
Bomb vane crates	U.S.S. ALABAMA	NMD truck
Explosive "D"	Iona Island, N.Y.	C&ORwy
Fuzes, bombs, clips, wires	Argentia, Newfoundland	"
Exp. bombs, and accessories	Hingham, Mass.	"
Bombs, and accessories	Argentia, Newfoundland	"
Truck	Burns City, Ind.	"
Bombs and accessories	Argentia, Newfoundland	"
TNT charges, etc.		
Detonators	U.S.S. DICKERSON	Rep. of ship

2. Plant activities:

Loaded Mark 6 depth charges, Mark 13 bombs, Mark 13 warheads, Mark 13 mines, and wrecking charges at Mine Filling Plant.
Poured pellets, loaded Mark 4 bombs and 15" projectiles at Purification Plant.
Steamed off old containers and loaded Mark 5 bombs at Reclamation Plant.
Assembled Mark 13 mines at the Mine Assembly Plant.

(b) Mobile Units:

None

A. G. COOK, JR.,
Commander, U. S. Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

11

REPRODUCED AT THE NATIONAL ARCHIVES

C

WAR DIARY
0000 - 2400
7/10/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth charges, pistols	U.S.S. WASSUC	Pier
Auxiliary springs	Sewall's Point, Va.	Parcel post
" "	Guantanamo Bay, Cuba	" "
Ammunition	St. Juliens Creek, Va.	USS STATE PORT
Depth charges, pistols, etc.	Morehead City, N.C.	Trans.Co.
Wire	Norfolk, Va.	STATE PORT
Mk 6 pistols with covers	U.S.S. KILAUEA	" "
TNT blocks, demolition charges	U.S.S. ARKANSAS	" "
Reel box, blasting caps	U.S.S. ALABAMA	" "
Metal and wooden shipping boxes	Burns City, Ind.	C&ORwy
Depth charge pistols, fuzes	Portland, Maine	"
Screws, wrenches, etc.		
Explosive "D"	Hingham, Mass.	"
Depth charges, access.	Iona Island, N.Y.	"
Depth bombs, fuzes, access.	Brooklyn, N. Y.	"
Depth bombs, fuzes, access.	Portland, Maine	"
Exp. bombs, fuzes, access.	Gallie, Fla.	"
Exp. bombs, fuzes, access.	Davisville, R.I.	"
Exp. bombs, fuzes, access.	Cohasset, Mass.	"
Tractor crane, parts	San Francisco, Calif.	"

2. Plant activities:

Loaded Mark 6 depth charges, Mark 13 bombs, Mark 13 and 16 warheads, 15" projectiles, and wrecking charges at Mine Filling Plant.
Poured pellets, loaded Mark 4 bombs and mousetrap ammunition at Purification Plant.
Steamed off old containers and loaded Mark 5 bombs at Reclamation Plant.
Assembled Mark 13 mines at the Mine Assembly Plant.

(b) Mobile Units:

S.S. STATE PORT arrived 0645; departed 1050.

A. G. COOK, JR.,
Commander, U.S.Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

12

REPRODUCED AT THE NATIONAL ARCHIVES

WARDIARY
0000 - 2400
7/13/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Household effects	San Francisco, Calif.	C&ORwy
Demolition bombs, access.	Cherry Point, N. C.	"
Depth charges, pistols, access.	Key West, Florida	Hughes Trans.Co.
Reel box, demolition charges	Portsmouth, Va.	STATE PORT
Extending testing tools, wrenches	U.S.S. GOFF	Parcel post

2. Plant activities:

Loaded Mark 13 bombs, Mark 17 bombs, Mark 13 mines, and wrecking charges at Mine Filling Plant.
Poured pellets, loaded Mark 14 bombs and mousetrap ammunition at Purification Plant.
Steamed off old containers and loaded Mark 5 bombs at Reclamation Plant.
Assembled Mark 3 mines at Mine Assembly Plant.

(b) Mobile Units:

S.S. STATE PORT arrived 1015; departed 1340.
U.S.S. KEOKUK arrived 1920.
U.S.S. MONADNOCK arrived 1830.
U.S.S. MIANTONOMAH arrived 1935.

L. J. MANEES,
Commander, U.S.Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

15

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
7/15/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Traveling Circus Equipment	Oakland, Calif.	C&ORwy
Torpedoes and gyros	USS EBERLE	STATE PORT
" " "	USS ERICSSON	" "
Depth Charge test set	USS VULCAN	" "
Empty cartridges	NAD, St. Juliens Creek, Va.	" "
Bomb fuzes	Sewell's Point, Va.	" "
Pistols and extenders	USS ROE	" "
Demolition bombs, access.	Iona Island, N.Y.	C&ORwy
Tetryl	Elkton, Md.	Hugh Trans.Co.
Auxiliary springs	Guantanamo Bay, Cuba	Parcel Post
" "	Trinidad, B.W.I.	" "
" "	Lakehurst, N.J.	" "
" "	Jacksonville, Fla.	" "
" "	Charleston, S.C.	" "
" "	Miami, Florida	" "
" "	Pensacola, Florida	" "
" "	Quonset Point, R.I.	" "
" "	Squantum, Mass.	" "
" "	Coco Solo, Canal Zone	" "
" "	Corpus Christi, Texas	" "
" "	Brooklyn, N. Y.	" "
" "	Banana River, Cocoa	" "
Depth Charge Wrench	USS JOUETT	" "

2. Plant activities:

Loaded Mark 12 mines, Mark 13 warheads, Mark 17 bombs, and wrecking charges at Mine Filling Plant.
Poured pellets, loaded Mark 14 bombs, and mousetrap ammunition at Purification Plant.
Steamed off old containers and loaded Mark 5 bombs at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

STATE PORT arrived 0830; departed 1225.

E. J. MANEES,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
7/17/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Rubber gaskets, Mk 6	Norfolk, Virginia	STATE PORT
Depth charges, access.	" "	" "
Plugs	Jersey City, N.J.	Express
TNT	Philadelphia, Pa.	C&ORwy
Depth charge testing set	Brooklyn, N. Y.	Express
Depth charges, boosters	New Orleans, La.	C&ORwy
Auxiliary springs for bombs	Brooklyn, N. Y.	Parcel post

2. Plant activities:

Loaded Mark 12 mines, Mark 13 bombs, Mark 12 bombs, Mark 13 and 16 warheads, and wrecking charges at Mine Filling Plant.
Poured pellets, loaded Mark 14 bombs and mousetrap ammunition at Purification Plant.
Steamed off old containers and loaded Mark 5 bombs at Reclamation Plant.
Assembled Mark 12 mines at Mine Assembly Plant.

(b) Mobile Units:

S.S. STATE PORT arrived 0705; departed 1010.
U.S.S. UNDAUNTED arrived 1220 with barge 243; departed 1250 with barge 266.

L. J. MANEES,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
7/19/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
K-3 Mechanisms cover cans	Washington, D.C.	Parcel post
Depth bombs, access.	Hingham, Mass.	C&ORwy
Bombs with bursting tubes	Edgewood, Md.	Express
Depth charges, pistols, extenders	Miami, Florida	C&ORwy
Exp. mines, access.	Kodiak, Alaska	"
Depth charges, ect.	Philadelphia, Pa.	"
Ordnance instruments	Washington, D. C.	"
Depth charges, access.	Cleveland, Ohio	"
Bombs, access.	Bermuda, B.W.I.	Lighter 251
Warheads, detonators, igniters		
Bombs, fuzes, access.		
Bombs, fuzes, access.		

2. Plant activities:

Loaded Mark 12 bombs, Mark 16 warheads, Mark 6 depth charges, and wrecking charges at Mine Filling Plant.
Poured pellets, loaded Mark 4 bombs and mousetrap ammunition at Purification Plant.
Steamed off old containers and loaded Mark 5 bombs at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

U.S.S. ACUSHNET arrived 1200; departed 1325 with tug 251.

D. J. MANEES,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

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REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
7/20/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Electric primers, Mk. 18	Dahlgren, Virginia	Express
Detonating fuzes		
Bombs, etc.	Philadelphia, Pa.	"
Aircraft bombs, dummy access.	U.S.S. CLEVELAND	"
Demolition bombs	Dahlgren, Va.	"
Auxiliary springs	Long Island, N.Y.	Parcel post
Exp. bombs, access.	New Orleans, La.	C&ORwy
Depth springs	Norfolk, Va.	Rep. of NAS
Depth charges, extenders, etc.	Key West, Florida	Trans. Co.
Bombs, vanes, fuzes, access.	Sewall's Point, Va.	STATE PORT
Bombs, fuzes, springs	Norfolk, Va.	" "

2. Plant activities:

Loaded Mark 12 and 34 bombs, Mark 13 and 16 warheads, Mark 6 depth charges, and 15" projectiles at Mine Filling Plant.
Poured pellets and loaded Mark 4 bombs at Purification Plant.
Steamed off old containers and loaded thirty-pound bombs at Reclamation Plant.
Assembled Mark 12 mines at Mine Assembly Plant.

(b) Mobile Units:

U. S. STATE PORT arrived at 0910; departed 1625.

L. J. MANEES,
Commander, U.S.Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
7/22/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth charges, TNT blocks, dets.	Base "Fliver"	STATE PORT
" " " " "	Base "Beta"	" "
Aircraft demolition bombs, fuzes	Hingham, Mass.	C&ORwy
Depth charges, TNT blocks, dets.	Base "Gamma"	STATE PORT
TNT blocks, electric dets., exp. mines	Hingham, Mass.	C&ORwy
Depth bombs, fuzes, access.		
Depth charges, fuzes, access.	Sturgeon Bay, Wisc.	"
Aircraft demolition bombs, fuzes, accessories	Boston, Mass.	"
Aircraft demolition bombs, fuzes accessories	Davisville, R. I.	"
Household effects	Chapel Hill, N.C.	"
Depth bombs, fuzes, access.	Hingham, Mass.	"

2. Plant activities:

Loaded Mark 12, 34, and 29 bombs, Mark 13 and 16 warheads, Mark 6 depth charges, and 15" projectiles at Mine Filling Plant.
Poured pellets and loaded Mark 4 bombs at Purification Plant.
Steamed off old containers and loaded 30 lb. bombs at Reclamation Plant.
Assembled Mark 12 and 13 mines at Mine Assembly Plant.

(b) Mobile Units:

S.S. STATE PORT arrived 0640; departed 1330.
U.S.S. KEOKUK departed 0530.

L. J. MANEES,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

War Diary
0000 - 2400
7/24/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth charge pistol	Morehead City, N.C.	C&ORwy
Gasoline	Annapolis, Md.	"
Detonating fuzes	Washington, D.C.	Trans. Co.
Traveling circus equipment	Keyport, Wash.	C&ORwy
Depth charges, accessories	Cleveland, Ohio	"
Inert fuzes	Washington, D.C.	Trans. Co.
Detonating fuzes		
Fuze containers, shipping boxes		
Bombs, wires, clips	Norfolk, Va.	STATE PORT
Covers for pistols	San Juan, P.R.	Parcel post
Detonators, loaded boosters	Stump Neck, Va.	NOL truck
Nitramon		Representative
Auxiliary springs	Anniston, Ala.	Parcel post
Springs for depth setting bombs	U.S.S. WASHINGTON	" "
Knobbed inlet valve covers	Bermuda	" "
Covers for Mk. 6 pistols	San Juan, P. R.	" "
Knobbed safety covers	Coco Solo, C. Z.	" "
Depth setting wrenches	U.S.S. MATTAPOLE	" "
Auxiliary spring	St. Thomas, V.I.	" "
Covers for pistols		
Auxiliary springs	Natal, Braxil	" "
Covers for Mk. 6 pistols	Balboa, C.Z.	" "
" " " " "	Trinidad	" "
" " " " "	Balboa, C.Z.	" "
Knobbed safety forks		
Covers for Mk. 6 pistols	Quantanamo Bay, Cuba	" "
Knobbed safety covers	San Juan, P.R.	" "
Covers for Mk. 6 pistols	Balboa, C.Z.	" "
Knobbed inert valve covers	San Juan, P.R.	" "
Tap and die sets	NAD, Balboa, C.Z.	" "
K3 assembly contact pieces	Washington, D. C.	" "

2. Plant activities:

Loaded Mark 12 and 29 bombs, Mark 6 depth charge, Mark 34 bombs, and wrecking charges at Mine Filling Plant.
Poured pellets and loaded 100 lb. bombs at Purification Plant.
Loaded 30 lb. bombs at Reclamation Plant.
no Assembled Mark 13 mines at Mine Assembly Plant.

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REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
7/29/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth charges, pistols, etc.	Coco Solo, C. Z.	Lighter 209
Bombs, fuzes, access.		
Bombs, fuzes, access.		
Bombs, fuzes, access.		
Warheads, detonators, boosters		
Bombs, fuzes, access.	Balboa, C. Z.	Lighter 306
Aircraft bomb fuzes	St. Juliens Creek	STATE PORT
Depth charges, pistols, etc.	Norfolk, Virginia	" "
Test sets, tools	"Base Palisade"	Lighter 306
Test sets, tools	"Base Fliver"	" "
" " "	"Base Gamma"	" "
" " "	"Base Beta"	" "
Cover for Mk. 6 pistols	Coco Solo, C.Z.	" 209
Covers	Key West, Fla.	C&ORwy
Wrenches, bolts, testing tools	Hingham, Mass.	"
" , testing tools	Iona Island, N.Y.	"
Aircraft demolition bombs, fuzes	Cape May, N. J.	"
" " " "	Hingham, Mass.	"
" " " "	Cherry Point, N.C.	"
" " " "	Key West, Florida	"

2. Plant activities:

Loaded Mark 12, 13, 29, type C AA bombs, Mark 13 and Mark 8-3 warheads, 15" projectiles, and wrecking charges at Mine Filling Plant.
Poured pellets, 100 lb. bombs, and mousetrap ammunition at Purification Plant.
Loaded 30 lb. bombs at Reclamation Plant.
Wound anchors with chain moorings at Mine Assembly Plant.

(b) Mobile Units:
STATE PORT arrived 0800; departed 1135.
USS ACUSHNET arrived 1245 with barges 481 and 480; departed 1315 with barges YF 306 and 209.
Landing boat arrived from NOB 1205; departed 1215.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
7/31/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Mark 6 pistols	Newport, R. I.	C&ORwy
Trailers, tractors, parts, etc.	Alameda, Calif.	"
Tools, wrenches	Chelsea, Mass.	Express
Aircraft bomb fuzes	Hawthorne, Nevada	C&ORwy
Depth charges, access.	Philadelphia, Pa.	"
Detonators, electric	Portsmouth, Va.	Rep.
Nose fuze adapters	USS SAVANNAH	Parcel post
Inlet valve covers, plungers, etc.	Portland, Maine	C&ORwy
Wrenches, tools	Inness, S. C.	"
Safety covers, forks	Annapolis, Md.	"
Piston, spring, plungers	Portland, Ma.	"
Key, sleeve, tube, guides	Brooklyn, N. Y.	"
Depth charge case, testing set	Portland, Maine	"
Arming wires, clips	Elizabeth City, N.C.	"
Depth charge testing set	New York, N. Y.	"
Depth setting wrenches	Cape May, N. J.	"
Testing tools	Fort Lafayette, N.Y.	"
Depth charges, pistols, extenders	Balboa, C. Z.	Lighter 486
Inert mines	Norfolk, Va.	STATE PORT
Test set, testing tools	Netherlands, W.I.	Lighter 486
Depth charge pistol covers, forks	Balboa, C.Z.	" "
Test set, knobbed forks		
Bombs, fuzes		
Bombs	Indian Head, Md.	Truck
Exploder mechanisms	U.S.S. OVERTON	STATE PORT
Extenders, pistols		
" "	USS McCORMICK	" "
Bombs, fuzes, access.	Trinidad, B.W.I.	Lighter 486
" " "	San Juan, P. R.	" 286
" " "	Balboa, C. Z.	" 486
" " "	San Juan, P. R.	" 286
" "	Balboa, C. Z.	" 486
Depth charges, detonators, etc.	U.S.S. ALGORMA	" "
Bombs, fuzes, wires, clips	Natal, Brazil	" "
Knobbed inlet valve covers	San Juan, P. R.	" 286
Bombs, bomb fuzes, access.	St. Lucia, B.W.I.	" 486
Detonator holders, cranks	Balboa, C. Z.	" "
TNT blocks, blasting caps, etc.	Natal, Brazil	" "
Bombs, fuzes	San Juan, P. R.	" 286
Demolition charges, etc.	Balboa, C. Z.	" 486
Pistols with covers	U.S.S. KILAUEA	" "

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
7/31/42

Continued.

2. Plant activities:

Loaded Mark 13, 29 and type C bombs, Mark 6 depth charges, 15" projectiles, and Mark 16 warheads at the Mine Filling Plant.
Loaded Mark 4 bombs, mousetrap ammunitions, and poured pellets at Purification Plant.
Loaded Mark 5 bombs at Reclamation Plant.
Wound anchors on chain moorings at Mine Assembly Plant.

(b) Mobile Units:

STATE PORT arrived 0740; departed 1305.
USS SCIOTA arrived 1430 with barges 696, 265, and 319; departed 1520 with barges 486, and 286.

R. J. MANESS,
Commander, U. S. Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

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REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/1/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Empty paper cartons	Tallacoosa, Ala.	C&ORwy
Contacts K3 assembly	Washington, D. C.	Parcel post
Mk. 15 torpedoes, machinery parts	U.S.S. TILLMAN	Direct, pier
Aircraft demolition bombs, etc.	Charleston, S. C.	C&ORwy
Lead weighted load depth charges	Dahlgren, Va.	Transfer Co.
Wrenches, testing tools	USS CYNAPHONE	Air Mail
		Special delivery

2. Plant activities:

Loaded Mark 17 and 12 bombs, Mark 6 depth charges, type C bombs, and Mark 16 warheads at Mine Filling Plant.
Poured pellets, loaded Mark 4 bombs, and mousetrap ammunition at Purification Plant.
Loaded Mark 5 bombs at Reclamation Plant.
Wound anchors on chain moorings at Mine Assembly Plant.

(b) Mobile Units:

U.S.S TILLMAN arrived 1805.

L. J. MANEES,
Commander, U.S.Navy,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U. S. Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/3/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth charges, and access.	NAS, Jamaica	Lighter 481
Bombs, fuzes, access.	St. Lucia, B.W.I.	" "
Boosters, loaded, safety forks	U.S.S. ALTAIR	" 319
Bombs, fuzes, access.	Kingston, Jamaica	" 481
Bombs, fuzes, access.	Guantanamo Bay, Cuba	" 319
Testing tools, wrenches	U.S.S. WOODCOCK	" 319
Extenders Mk. 6 with forks	U.S.S. ALTAIR	" "
Bombs, and access.	St. Thomas, V. I.	" 481
Bombs, fuzes, access.	Guantanamo Bay, Cuba	" 319
Testing tools, wrenches	Sturgen Bay, Wis.	" "
Drawings	USS REINA MERCEDES	Registered mail
Mk. 15 torpedoes, access.	U.S.S. EBERLE	NMD truck
Mk. 15 torpedoes, access.	U.S.S. ERICSSON	" "
Depth setting springs, etc.	U.S.S. ALTAIR	Parcel post
Contact K3, upper & lower	NOL, Washington, D.C.	Parcel post
Ord. instruments, containers	Washington, D. C.	NMD truck
Bombs, fuzes, access.	St. Thomas, V. I.	Lighter 481
" " "	Antigua, B.W.I.	" 319
" " "	Guantanamo Bay, Cuba	" "
Testing set, valve covers	St. Thomas, V. I.	" 481
Bombs, fuzes, access.	Kingston, Jamaica	" "
" " "	St. Thomas, V.I.	" "
Warheads, exploder mechanisms	Key West, Fla.	Trans. Co.
Mousetrap proj. with boosters	Miami, Florida	" "
Depth charges, detonating fuzes	Key West, Florida	" "
Household effects	Lithia, Va.	C&ORwy
" "	Cleveland, Ohio	Express
" "	Lorain, Ohio	"
" "	New Orleans, Va.	"
Mark 17 warheads, loaded	Iona Island, Calif.	C&ORwy
Depth charge test set	Newport, R. I.	Express
" " " "	Sandwick, Mass.	"
" " " "	" "	"
" " " "	South Portland, Ma.	"
Exp. cartridges, arbors	Iona Island, N. Y.	C&ORwy
Trailers, bomb racks	Oakland, Calif.	"
Demolition outfit	U.S.S. CLEVELAND	STATE PORT

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/4/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth charges, boosters, access.	U.S.S. WASSUC	Direct (pier)
Bolts, flange	Hingham, Mass.	Parcel post
Tractor, trailer	San Francisco	C&ORwy
Depth charges	Iona Island,N.Y.	"
British depth charges, access.	Hingham, Mass.	"
Mk. 13, 12, 17, bombs, fuzes	Cherry Point, N.C.	"
Mark 13 & 29 bombs, fuzes,	Key West, Fla.	"
Projectile bodies,tail assemblies	Miami, Fla.	Trans.Co.
" " " "	Key West, Fla.	" "
Warheads, exploder mechanisms	Trinidad, B.W.I.	Lighter 265
Bombs, fuzes, access.	Antigua, B.W.I.	" 696
Warheads, exploder mechanisms	Guantanamo Bay,Cuba	" 265
Depth charges, fuzes, access.		
Bombs, fuzes, access.	Trinidad, B.W.I.	" 696
Depth charges, fuzes, access.	NAS, Trinidad	" 265
" " " "	San Juan, P. R.	" 696
Bomb fuzes	Antigua, B.W.I.	" 481
Rubber gaskets	Mobile, Ala.	Parcel post
Gaskets, bolts	Iona Island, N.Y.	" "

2. Plant activities:

Loaded Mark 6 and 7 depth charges, Mark 16 warheads, Mark 13 and type D AA bombs at Mine Filling Plant.
Poured pellets and mousetrap ammunition at Purification Plant.
Loaded Mark 5 bombs at Reclamation Plant.
Wound anchors on chain moorings at Mine Assembly Plant. cont

(b) Mobile Units:

USS WASSUC arrived 0855; departed 1610.
USS UNDAUNTED arrived with barge 318 at 2015; departed with 265 and 696 at 2045.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

7

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/7/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Extenders, depth charge pistols	Norfolk, Va.	STATE PORT
Extenders, pistols, warheads		
Adapters		
War head rings	USS ROPER	" "
Extenders, pistols	Norfolk, Va.	" "
" "	" "	" "
Depth charges, extenders, pistols	" "	
Bombs	" "	" "
Auxiliary booster containers	Burns City, Ind.	C&ORwy
Trailers, Securing straps	Oakland, Cal.	"
Depth charges, bombs, access.	Coco Solo, C.Z.	Barge 318
Bombs, fuzes, access.	San Juan, P. R.	" 407
Depth charges, pistols, access.	USS KILAUEA	" 318
Bombs, fuzes, access.	Yukon, Florida	C&ORwy
War heads	Newport, R. I.	"
Mines, fuzes, test pot	Nixon, N. J.	"
Tapes, balance grips	Mare Island, Cal.	Express
Bombs, fuzes, access.	Brooklyn, N. Y.	C&ORwy
Torpedo racks	Norfolk, Va.	NMD truck

2. Plant activities:

Loaded Mark 13 and 16 war heads, Mark 12-2, 29 AA "C" bombs, Mark 6 depth charges, and 15" projectiles at Mine Filling Plant.
Poured pellets, Mark 4 bombs loaded and mouse-trap ammunition at Purification Plant.
Loaded Mark 5-3 bombs and reclaimed scraps at Reclamation Plant.
Wound anchors with chain moorings at Mine Assembly Plant.

(b) Mobile Units:
SS STATEPORT arrived 0630; departed 1545.
USS UNDAUNTED arrived 1150 with 481 and 726; departed 1205 with 704 and 318.

L. J. MANZES,
Commander, U.S.N.,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/8/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Bombs, fuzes, etc.	Norman, Okla.	C&ORwy
Pistols	Hingham, Mass.	Express
Pistols, access.		
Bombs, fuzes	Kendaia, N. Y.	C&ORwy
Tails for barrage rocket	Dahlgren, Va.	Trans. Co.
Anti-aircraft bombs	Mare Island, Cal.	C&ORwy
Mousetrap projectiles	Hingham, Mass.	Express
Trailers and equipment	San Diego, Cal.	C&ORwy
Bodies for barrage rocket	Washington, D. C.	Trans. Co.
Depth charges, access.	Southport, N. C.	" "
Booster cans, bolts, sockets, etc.		
Household effects	Kingston, N. Y.	Express
Containers, cast TNT, loaded	Dahlgren, Va.	Trans. Co.
Booster cans	Cincinnati, Ohio	Parcel post
Depth charge pistols	Portland, Ma.	Express
Booster cans, fuzes, bombs	USS KILAUEA	Lighter 726
Bombs, fuzes, etc.	Guantanamo Bay, Cuba	" 481
Bombs, fuzes, etc.	Kira 51	" "
" " "	Halfway 51	" "
" " "	Ocelot 51	" "
Bombs	Guantanamo, Cuba	" "
Empty depth charge cases	Leesbrugh, N.J.	Express
Small accessories	Mare Island, Calif	"
Bombs, fuzes, etc.	Balboa, C. Z .	Lighter 726
" " "	British Guianas	" 481
Trinidad, B.W.I.	Depth charges, pistols	" 726

2. Plant activities:

Loaded Mark 13 and 16 warheads, Mark 6 depth charges, Mark 12 and 650-lb. bombs, and 15" projectiles at Mine Filling Plant, also type D AAA bombs.
Poured pellets, and mousetrap ammunition at Purification Plant.
Loaded 30-lb. bombs at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units: USS ACUSHNET arrived 1700 with barge 486; departed 1705 with barges 481 & 726.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

11

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/10/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
War heads, exploders	Brooklyn, N. Y.	Trans. Line
Depth charges, access.	Miami, Florida	C&ORwy
Depth charges, access.	Buffalo, N. Y.	"
Bombs, fuzes, etc.	South Weymouth, Mass.	"
Tractors, trailers, etc.	San Diego, Calif.	"
Mk. 17 warheads	USS CORRY	STATE PORT
Depth charges, access.	USS BARTON	" "
" " "	USS McCALLA	" "
Stowage boxes, booster cans	USS CORRY	" "
Dummy mine, access.	Portland, Maine	C&ORwy
Depth charges, fuzes, etc.	Key West, Fla.	Trans. Line
Bombs, tails, etc.	Norfolk, Va.	STATE PORT
Exp. bombs	Bynum, Ala.	C&ORwy
Exploder mech., gyros	USS ROPER	NMD truck
Mk. 8-3D torpedoes		

2. Plant activities:

Loaded Mark 6 and 7 depth charges, 15" projectiles, Mark 29, 12-2 bombs, and Mark 13 and 16 warheads.
Poured pellets, mousetrap ammunition and loaded Mark 4 bombs at Purification Plant.
Loaded Mark 5 bombs.
Mine Assembly Plant closed.

(b) Mobile Units:

SS STATE PORT arrived 0815; departed 1300.
USS UNDAUNTED arrived 1930 with barge YF 306.

L. J. MANES,
Commander, U.S.N.,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/13/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard, making a total of 29.

2. Outgoing shipments:

Material	Destination	Via
Stowage cans, boxes	U.S.S. ELLYSON	NMD truck
Bombs, fuzes, access.	U.S.S. ALBERMARLE	STATE PORT
Exp. projectile, access.	Philadelphia, Pa.	Trans. Co.
Clips, caps, wrenches	Motor Torpedo boat, Squadron Four	Parcel post
Loaded tail assemblies	Key West, Fla.	Tran. Co.
Bombs, access.	U.S.S. AUGUSTA	STATE PORT
Loaded tail assemblies	Miami, Florida	Trans. Co.
War heads	Connecticut	C&ORwy
Detonating fuzes	Washington, D.C.	Express
Torpedo testing weight	U.S.S. CORRY	STATE PORT
Adapter band assemblies	Washington, D. C.	Parcel post
Fuzes, bombs	Hawthorne, Nevada	C&ORwy
Demolition charges	Burns City, Ind.	"

3. Plant activities:

Loaded Mark 6 depth charges, 15" projectiles, Mark 12-2, 17-1 bombs, Mark 13 and 17 war-heads at Mine Filling Plant.
Poured pellets, mousetrap ammunition and loaded Mark 4 bombs at Purification Plant.
Loaded Mark 5-3 bombs at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

SS STATE PORT arrived 1100; departed 1610.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

12670

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REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/17/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Stowage cans	Hawthorne, Nevada	C&ORwy
War Heads	Iona Island, N.Y.	"
Practice bombs	Hawthorne, Nevada	"
Exp. bombs		
Conversion parts	San Francisco, Calif.	Express
Depth charges, boosters, etc.	Key West, Florida	Trans. Co.
Inert loaded mines	Washington, D. C.	NOL truck
M4 testing devices, clocks	Washington, D. C.	" "
Torpedoes	Norfolk, Va.	STATE PORT
K Device short circuiting clips	Washington, D. C.	Parcel post
Depth charges, access.	U.S.S. MACLEISH	Truck

2. Plant activities:

Loaded Mark 6 depth charges, Mark 37 bombs, Mark 17-1 bombs, 15" projectiles, and Mark 13 and 17 warheads.
Poured pellets, loaded mousetrap ammunition and loaded Mark 4 bombs at Purification Plant.
Loaded Mark 5 bombs at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

U.S.S. MONADNOCK arrived 1330.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.N.,
Inspector of Ordnance in Charge.

20

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/18/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard, making a total of 30.

2. Outgoing shipments:

Material	Destination	Via
Conversion parts for test set	San Diego, Calif.	C&ORwy
Auxiliary springs	Norfolk, Va.	NMD truck
Knobbed safety forks	U.S.S. HOWARD	" "
Empty bomb, vaves, crates	Newport News, Va.	" "
Valves, covers, pins, rings	Morehead City, N.C.	Trans. Co.
Auxiliary booster containers	Burns City, Ind.	C&ORwy
Depth charges, accessories	U.S.S. YMS-8	Pier
" " "	U.S.S. YMS-45	"
Exp. mines	Mare Island, Calif.	C&ORwy
High exp.	Philadelphia, Pa.	"
Stowage cans	Bremerton, Wash.	"
British detonators, pistols, cartridges	Morehead City, N.C.	Trans. Co.
Depth charges, access.	New Orleans, La.	C&ORwy
Detonating fuzes	Hawthorne, Nevada	Express
Pistols, extenders, etc.	Norfolk, Va.	NMD truck

3. Plant activities:

Loaded Mark 37 bombs, Mark 13 warheads, Mark 12 mines, 15" projectiles at Mine Filling.
Poured pellets, mousetrap ammunition, and loaded Mark 4 bombs at Purification Plant.
Loaded Mark 5-3 bombs at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

USS YMS 44 arrived 0805; departed 1330.
YMS 45 arrived 0815; departed 1305.
YMS 8 arrived 0930; departed 1030.
YMS 7 arrived 1230; departed 1425.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/19/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Composition B LT6	Indian Head, Md.	Gt. Coastal
Auxiliary springs	Coco Solo, C. Z.	REA (Air)
Mousetrap projectiles	Hingham, Mass.	Gt. Coastal
Gaskets	Washington, D. C.	Parcel post
Auxiliary springs	Hingham, Mass.	Parcel post
" "	Elizabeth City, N.C.	" "
" "	Cherry Pt., N. C.	" "
" "	Balboa, C. Z.	" "
Safety forks and covers	Corpus Christi, Tex.	" "
Safety caps and covers	Miami, Fla.	" "
Gaskets, valves, safety forks	USS SAMPSON (NSD Norfolk)	" "
Auxiliary springs	Antiguia, B.W.I.	Air Mail
" "	St. Thomas, V. I.	Parcel post
" "	Natal, Brazil	" "
Depth charges, access.	YMS 46	Pier
Safety covers, forks	Savannah, Ga.	Parcel post

2. Plant activities:

Loaded Mark 13 and 17 war heads, Mark 37 bombs, 15" projectiles at Mine Filling Plant.
Poured pellets, mousetrap ammunition, and loaded Mark 4 bombs at Purification Plant.
Loaded Mark 5-3 bombs at Reclamation Plant.
Converted 80 Mark 12 mines to Mark 12-1 mines at Mine Assembly Plant.

(b) Mobile Units:

YMS 46 arrived 0955; departed 1015.
USS CORMORANT arrived 0915; departed 1200.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U. S. N.,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/20/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Bombs, etc.	Great Lakes, Ill.	C&ORwy
Inert fuzes	Key West, Florida	Express
Depth charge test set	Galveston, Texas	C&ORwy
Practice bombs	San Diego, Calif.	"
Marine hardware	San Francisco, Cal.	Express
Depth charge test set	Sabine Pass, Texas	C&ORwy
Bombs, access.	Johnsville, Pa.	"
Blasting caps, cables	Indian Head, Md.	"
Tractors, trailers, etc.	Oakland, Calif.	Express
Motor tails, loaded bodies	Iona Island, N. Y.	Trans. Co.
Detonating fuzes	Miami, Florida	Express
" "	Hawthorne, Nev.	"
Explosive bombs	" "	"
Exercise heads, boosters	USS OVERTON	Navy truck
Inert fuzes	USS VP 92	STATE PORT
Demolition charges, blocks	Norfolk, Va.	" "
Boosters	Norfolk, Va.	" "

2. Plant activities

Loaded Mark 13 and 17 war heads, Mark 6 depth charges, 15" projectiles at Mine Filling Plant.
Poured pellets, and loaded Mark 4-1 bombs at Purification Plant.
Loaded Mark 5-3 bombs at Reclamation Plant.
Converted 120 Mark 12 mines to Mark 12-1 mines and loaded Mark 12 and 13 mines.

(b) Mobile Units:

SS STATE PORT arrived 0930; departed 1700.

L. J. MANEES,
Commander, U. S. N.,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U. S. N.,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/22/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Adapters	Solomons Island	Truck
5" projectiles	Dahlgren, Va.	"
5" projectiles	Jersey City	C&ORwy
Mines, tool box, etc.	Mare Island	Express
Mines, etc.	" "	C&ORwy
" "	" "	"
Bomb fuzes	Memphis, Tenn.	"
Fuzes	USS ALBEMARLE	Lighter 265
Bomb fuzes	" "	" " and 486
Depth charges, etc.	USS HOGAN	Pier

2. Plant activities:

Loaded Mark 7 depth charges, Mark 17 war heads and 15" projectiles at Mine Filling Plant.
Poured pellets and loaded Mark 4-1 bombs at Purification Plant.
Loaded Mark 5-3 bombs at Reclamation Plant.
Loaded Mark 12-1 mines going to Mare Island at Mine Assembly Plant.

(b) Mobile Units:

USS UNDAUNTED departed 1115 with barges 265 and 486.

L. J. MANEES,
Commander, U.S.Navy,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/30/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Mooring cable	Navy Yard, Washington	Express
Tractors, etc.	Oakland, Calif.	"
Depth charges, booster cans, pistols	Philadelphia, Pa.	C&ORwy
Aircraft demolition bombs, fuzes, access.	" "	"
Stuffing boxes, packing	Navy Yard, Wash.	"
Auxiliary booster containers	Burns City, Ind.	"
Springs	Hingham, Mass.	Parcel post
Torpedoes, gyros, igniters	USS PT#111	Pier
Cartridges, etc.	HMS Lady Elsa	Truck
Springs	Anniston, Ala.	Parcel post

2. Plant activities:

None

(b) Mobile Units:

USS BULLFINCH arrived 2345.
USS CANARY arrived 2345.
USS HUMMINGBIRD arrived 2345.

L. J. MANZES,
Commander, USN.,
Executive Officer.

APPROVED:

L. L. HUNTER,
Captain, U.S.N.,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
8/31/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Depth charges, access.	Iona Island, N.Y.	C&ORwy
Depth charges, access.	Bay City, Mich.	"
Aircraft demolition bombs	Inness, S. C.	"
Depth charges, access.	Key West, Fla.	Trans. Co.
Bombs, boosters, adapters, tunnion bands, etc.	Norfolk, Va.	STATE PORT

2. Plant activities:

Loaded Mark 13 and 16 war heads, Mark 6 depth charges, Mark 12 bombs at Mine Filling Plant.
Poured pellets at Purification Plant.
Loaded Mark 5-3 bombs at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

STATE PORT arrived 0915; departed 1310.
PT #113 arrived 1055.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

APPROVED:

L. L. HUNTER,
Captain, U.S.N.,
Inspector of Ordnance in Charge.

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REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
9/2/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Aircraft dem. bombs	Inness, S. C.	C&ORwy
TNT	Iona Island, N.Y.	"
Expl. projectiles and tails	New Orleans, La.	Express
Taps	Newport, R.I.	NTS truck
MT containers	" R.I.	" "
Torpedo, gyro, and igniter	C.O., USS PT113	

2. Plant activities:

Loaded Mark 16 war heads, Mark 6 depth charges, Mark 12 and 17 bombs at Mine Filling Plant.
Poured pellets at Purification Plant.
Steamed off containers containers at Reclamation Plant.
Assembled 115 Mark 13 mines at Mine Assembly Plant.

(b) Mobile Units:

PT 112 arrived 0825.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

APPROVED:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
9/3/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Detonators	Mare Island, Cal.	Naval Air Transport Service
Torpedoes, gyros	USS PT 112	
Depth charges, access.	Norfolk, Va.	Barge 726
Hoisting band, access.	St. Juliens Creek	STATE PORT
Pistols and extenders	Norfolk, Va.	" "
Dummy aircraft bomb fuzes	C.O., USS AUGUSTA	" "
Impulse charges	St. Juliens Creek	" "
Mine bogies	C.O., USS SALEM	" "
Depth bombs, vanes, fuzes	USS SAVANNAH	" "
Aircraft dem. bombs, fuzes, etc.	Davisville, R. I.	C&ORwy
War heads, torpedoes	Inness, S. C.	"
Boosters, etc., depth charges, access.	New Orleans, La.	"
Stowage box, cans	Miami, Fla.	"
Depth charge cases, empty	Washington, D. C.	"
Dummy aircraft bomb fuzes	Corpus Christi, Texas	"
Military fireworks	New York, N. Y.	"
Wire rope, bogies	Alameda, Cal.	"
Depth charges, boosters, etc.	Washington, D. C.	Express
Fuze seat liners	Cambridge, Mass.	"
Parachute containers	Washington, D.C.	"
Mousetrap, tails	Hingham, Mass.	"
Depth charges, access.	Ft. Mifflin, Pa.	Great Coastal
War heads, fuzes, etc.	"	" "

2. Plant activities:

Loaded Mark 13 and 16 war heads, Mark 6 depth charges, Mark 17 bombs, and I-2 bombs at Mine Filling Plant.
Poured pellets, loaded ammunition for AS projectiles Mark 20 at Purification Plant.
Steamed off containers and loaded Mark 5 Reclamation Plant.
Broke down 167 Mark 13 mines for missing booster at Mine Assembly Plant.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
9/7/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Cocking tools, wrenches	Portland, Maine	C&O Rwy.
Depth charges, detonators, etc.	Sturgeon Bay, Wis.	"
Aircraft depth bombs, fuzes, etc.	Anniston, Ala.	"
Aircraft depth bombs, fuzes, etc.	Nansemond Ord. Depot, Va.	"
Aircraft depth bombs, fuzes, etc.	Delaware Ord. Depot, NJ.	"
Trailer Wagons, Bomb trailers, etc.	Alameda, California	REAgency
Assembley kit	Washington, D.C.	Hughes Trans. Co.
Experimental bombs	Dahlgren, Va.	Navy Barge 250
TNT	Indian Head, Md.	Navy Barge 250
TNT	" " "	" " "
Stowage box, TNT blocks, etc.	USS INDIANA	USS STATE PORT
Bombs, tail vanes, fuzes, etc.	USS INDIANA	" " "

2. Plant activities:

Loaded Mark 6 depth charges, Mark 13 war heads, Mark 17 bombs, 15" projectiles at Mine Filling Plant.
Poured pellets and loaded Mark 5-3 bombs at Purification Plant.
Steamed off old containers at Reclamation Plant.
Assembled 126 Mark 13 mines, at Mine Assembly Plant.

(b) Mobile Units:

USS KEOKUK arrived 1400.
USS STATE PORT arrived 0932; departed 1400.
USS UNDAUNTED arrived 1640 with barges 245 and 226; departed 1700 with barges 250 and 245.
USS LIBERTY BELL arrived 1510.

E. J. MANEES,
Commander, U.S.N.,
Executive Officer.

APPROVED:

L. L. HUNTER,
Captain, U. S. N.,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
9/9/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard making a total of 28.

2. Outgoing shipments:

Material	Destination	Via
Auxiliary booster containers	Burns City, Ind.	C&ORwy
Trailer wagons, bogy wheels	Oakland, Cal.	"
Dummy depth charges	Philadelphia, Pa.	"
Wooden boxes	Plum Brook, Ohio	"
Trailer wagons, bogy wheels	Oakland, Cal.	"
Expl. projectiles, etc.	Belle Chasse, New Orleans, La.	Trans.Co.
Bodies for projector and tails	" " " "	"
War heads, exploder mech.	C.O., USS SANTEE USS SANGAMON	Barge 226
Air dem. bombs, vanes, etc.	C.O., USS SANTEE	" "
Bombs, vanes, fuzes, access.	C.O., USS TEXAS	" "
Bombs, vanes, fuzes, access.	C.O., USS SANGAMON	" "
War heads, expl. mech., booster	Alexandria, Va.	USS LIBERTY BELL

3. Plant activities:

Loaded Mark 13 and 16 war heads, Mark 6 depth charges, Mark 17 bombs, and 15" projectiles at Mine Filling Plant.
Poured pellets at Purification Plant.
Reclaimed TNT and loaded Mark 4-1 bombs at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

PT 116 arrived 0855.
LIBERTY BELL arrived 1300; departed 1608.
SCIOTA arrived at 1817 with barge 457; departed 1850 with barge 226.
CORMORANT arrived with barges 226 and 459 at 1850.

L. J. MANEL,
Commander, U.S.N.,
Executive Officer.

APPROVED:

L. L. HUNTER,
Captain, U.S.N.,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
9/15/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments.

Material	Destination	Via
Empty wooden boxes	Plumbrook, Ohio	C&ORwy
War heads	Iona Island, N. Y.	"
Depth charges, boosters	New Orleans, La.	"
Detonating fuzes	Mare Island, Cal.	"
Ordnance instruments	New London, Conn.	Express
Practice mine	Bay City, Mich.	"
15" projectiles	Hingham, Mass.	Gt. Coastal
" "	Burns City, Ind.	Trans. Co.
" "	Hingham, Mass.	Trans. Co.
Torpedoes, gyros, etc.	USS PT 118	Pier
" "	USS PT 116	"
Nose caps and joint screws	USS ELLIS	Truck
Rifles and pistols	Sewell's Point	"
Inert loaded mines	Langley Field	"

2. Plant activities:

Loaded Mark 13 and 16 war heads, Mark 37 bombs, and 15" projectiles at Mine Filling Plant.
Poured pellets and loaded Mark 4-1 bombs at Purification Plant.
Reclaimed TNT from old containers at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

USS KEOKUK departed 1330.
USS PT 118 departed 1420.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

Approved: L. L. Hunter

L. L. HUNTER,
Captain, U.S.N.,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
9/18/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Gun and gun mount	Columbia, S.C.	C&ORwy
Expl. bombs and fuzes	Pariss Island, S.C.	"
Depth charges, access.	Norfolk, Va.	Barges 459,265
Bombs, vanes, fuzes, access.	Balboa, C. Z.	" " "
" " " "	"	" " "
15" projectiles	Hingham, Mass.	Trans. Co.
" "	" "	"
" "	" "	Gt. Coastal
" "	Burns City, Ind.	Trans. Co.
" "	" "	"
" "	" "	"
HIR projectiles, fuzes, boosters	Lakehurst, N. J.	Express

2. Plant activities:

Loaded Mark 6 and 7 depth charges, 15" projectiles, Mark 13 and 16 war heads, Mark 299 bombs, Mark 12 mines at Mine Filling Plant.
Poured pellets, loaded 4.5 beach rockets, Mark 4-1 bombs, and AS projectiles.
Reclaimed TNT from old containers at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

USS ACUSHNET arrived 1045 with barge 265; departed 1830 with 265 and 459.
PT 119 arrived 1330.
PT 122 arrived 1730.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.N.,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
9/20/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Explosive bombs, wires, clips	Cherry Point, N.C.	C&ORwy
Depth charges, boosters, etc.	Miami, Florida	"
Expl. bombs, det. fuzes, etc.	NAS Brooklyn, N.Y.	"
Empty wooden boxes	Plumbrook, Ohio	"
Depth charges, pistols	Casco Bay, Portland, Ma.	Express
Depth charges, etc.	Ft. Mifflin, Pa.	Gt. Coastal
Torpedoes, gyros, etc.	USS PT 120	Pier
" "	" " 119	"
Soluble washers	S.O., Navy Yard Washington, D.C.	Parcel post

2. Plant activities:

Loaded Mark 12 mines, Mark 13-2 bombs, and Mark 16 war heads at Mine Filling Plant.
Poured pellets at Purification Plant.
Loaded Mark 5-3 bombs and steamed off old containers at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

None

L. J. MANEES,
Commander, U.S.N.,
Executiv e Officer.

Approved:

L. L. HUNTER,
Captain, U.S.N.,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
9/22/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Bombs, tails, wires, clips	Cohasset, Mass.	C&ORwy
Expl. bombs, tails, etc.	Boston, Mass.	"
15" projectiles	Hingham, Mass.	Trans. Co.
15" projectiles		
" "		Gt.Coastal
" "		Gt.Coastal
" "	Burns City, Ind.	Trans. Co.
" "		
Depth setting wrenches	C.O., USS MADISON	Parcel post
Torpedoes and gyros	USS PT 122	NMD pier
Torpedoes, gyros	USS PT 121	" "
Bombs, fuzes, access.	USS NITRO	WORTHINGTON
Depth charge cases, pistols extenders, boosters,		
Depth charge, pistols, access.		
Bombs, fuzes, vanes	USS CHARGER	"

2. Plant activities:

Loaded Mark 16 warheads, Mark 12-2 bombs, Mark 7 depth charges, Mark 12 mines at Mine Filling Plant.
Poured pellets, loaded beach rockets, AS projectiles, and 15" projectiles at Purification Plant.
Reclaimed Mark 6 and 12 mines, loaded Mark 5-3 bombs at Reclamation Plant.
Assembled Mark 6 mines at Mine Assembly Plant.

(b) Mobile Units:

USS WORTHINGTON arrived 0945; departed 1600.
PT 113 and 114 departed 0037.
USS CORMORANT departed 0930.
USS HAMPTON arrived 1940.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

Approved:

L. L. HUNTER,
Captain, U.S.N.,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
9/23/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Two Guards resigned, leaving a total of 27.

2. Outgoing shipments:

Material	Destination	Via
15" projectiles	Hingham, Mass.	C&ORwy
Explosive bombs, tails	New Orleans, La.	"
War heads	Mare Island, Cal.	"
"	Sub. Base, Conn.	"
Depth charges, boosters, pistols, dets.	Miami, Florida	"
Tetryl	Philadelphia, Pa.	"
Explosive bombs, tails	Cherry Pt., N.C.	"
Bombs, wires, clips	Hawthorne, Nev.	"
" " "	Cohasset, Mass.	"
Depth charges, access.	Mayport, Fla.	"
Arming wires, clips	Brooklyn, N.Y.	"
15" projectiles	Baltimore, Md.	"
Empty depth charge cases, forks	Jamestown, N. Y.	"
15" projectiles	Hingham, Mass.	Gt. Coastal
" "	" "	" "
15" projectiles	Burns City, Ind.	Trans. Co.
AS projectors (15")		
AS projectors	Iona Island, N.Y.	" "
15" projectiles	Burns City, Ind.	Motor Co.
Ohmeter	USS OMAHA	Parcel post
Core extension material	Washington, D.C.	" "
D.C. cases, miscel. material	USS TERROR	Pier

2. Plant activities:

Loaded Mark 16 war heads, Mark 12-2 bombs, and Mark 7 depth charges at Mine Filling Plant.
Poured pellets, loaded AS projectors, and 4.5 beach rockets at Purification Plant.
Reclaimed Mark 6 mines at Reclamation Plant.
Assembled drill mines at Mine Assembly Plant.

(b) Mobile Units:
USS HAMILTON arrived 1700.
PT 123, 125, and 126 arrived 1740, also PT 112.
USS HOGAN arrived 2210.
USS OSPREY arrived 1930.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

J. J. MANEES,
Commander, U.S.N.,
Executive Officer.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
00000 - 2400
9/24/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Mine Bogies	USS SALEM	NMD truck
Blasting caps	Washington, D.C.	Express
Expl. bombs, fuzes	Iona Island, N.Y.	Gt. Coastal
Batteries, rubber goods, arming wires	Mare Island, Cal.	Express
Expl. bombs, fuzes, etc.	Squantum, Mass.	C&ORwy
Explosive bombs, access.	New Orleans, La.	"
" " "	Hawthorne, Nev.	"
" " "	Cherry Point, N.C.	"
Steel chain	Provincetown, Mass.	Express
Dummy depth charges	Alameda, Cal.	"
15" projectiles	Hingham, Mass.	Trans. Co.
" "	Burns City, Ind.	"
" "	Hingham, Mass.	"
" "	Hingham, Mass.	"
Percussions detonators	Mare Island, Cal.	C&ORwy
Empty wooden boxes	Plum Brook, Ohio	"
Tractors, spare parts	Atlanta, Georga	"
Cable	Little Creek, Va.	STATE PORT
War heads, exploder mech.	USS SUWANEE	" "
Bombs, vanes, etc.	"	" "
Mine case	Portsmouth, Va.	" "
Testing set	Morehead City, N.C.	" "
Bombs, vanes	Sewall's Point, Va.	" "
" " , etc.	USS SUWANEE	" "
Bomb carriers	USS SANTEE	NMD truck
Testing wrench	USS PC 602	Par. post
Torpedoes, gyros	USS PT 125	NMD pier
" "	USS PT 123	" "
" "	USS PT 126	" "

2. Plant activities:

Loaded Mark 13 and 16 war heads, Mark 6 and 7 depth charges, Marks 12-2, 37, and 13-2 bombs at Mine Filling Plant.
Loaded AS projectors and beach rockets at Purification Plant. Also poured pellets.
Reclaimed Mark 6 mines at Reclamation Plant.
Assembled drill mines at Mine Assembly Plant.

27

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
9/25/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Percussion detonators	Hingham, Mass.	C&ORwy
Explosive bombs	New Orleans, La.	"
" "	Salem, Mass.	"
Aircraft bombs, etc.	Long Island, N.Y.	"
Floats, wedges, washers, etc.	Mare Island, Cal.	Express
" " " "		
15" projectiles	Hingham, Mass.	Trans. Co.
" "	Burns City, Ind.	" "
" "		
Practice bombs	Dahlgren, Va.	"
" " , etc.	Washington, D.C.	"
" " "		
Depth charges, access.	Base "Dog"	Barge 726
Bombs, vanes, etc.	NAS, Norfolk, Va.	" "
Exercise heads	USS HOBSON	" "
Depth charges, pistols, access.	S.American vessel, CALDAS	NMD pier
Depth charges, access.	"	" "
Depth charges, access.		
Tools		
Testing set	ANTIOGUIA, S.Amer.vessel	"
Depth charges, access.		
Depth charges, access.		
Tools		
Depth charges, access.		

2. Plant activities:

Loaded Mark 13 war heads, Mark 13-2 bombs, Mark 6 depth charges at Mine Filling Plant.
Poured pellets at Purification Plant.
Steamed off old containers at Reclamation Plant.
Assembled drill mines at Mine Assembly Plant.
Other activities at Purification Plant - loaded 4.5 beach rockets and AS projectors.

(b) Mobile Units:

USS HOGAN arrived 1050; departed 1300
Columbian ships, CALVAS and ANTIOGUIA tied up 1000; departed 1545.
USS SCIOTA arrived 1345; departed 1555 with barge 726.

Approved:

L. L. HUNTER,
Captain, U.S.N.,
Inspector of Ordnance in Charge.

L. J. MANEES,
Commander, USN
Executive Officer.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
10/3/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
TNT	Elkton, Md.	C&ORwy
War heads	Newport, R.I.	"
Depth charges, access.	New Orleans, La.	"
" " "	Hingham, Mass.	"
Expl. bombs, fuzes, access.	Davisville, R. I.	"
Expl. bombs	Cohasset, Mass.	"
Tetryl	Bristol, Va.	"
Trailer wagons, bogies, etc.	San Francisco, Cal.	"
Expl. bombs, access.	Brooklyn, N.Y.	"
" " "	"	
Bombs, vanes, fuzes	USS BROOKLYN	Navy tug
Knobbed safety forks	Burrwood, La.	Par. post
Suspension bands, trunnion bands	St. Juliens Creek	Motor truck
Knobbed safety covers	Miami, Fla.	Par.post.
K mechanism gaskets	Boston, Mass.	" "
Ohmmeters	USS SALEM	Pier
Drill sleeves	Mare Island,Cub 2	Parcel post
" "		
" "		
" "		

2. Plant activities:

Loaded Mark 13 war heads, Mark 6 depth charges, and Mark 13-2 bombs at Mine Filling Plant.
Poured pellets, loaded Mark 4.5 beach rockets at Purification Plant.
Reclaimed mines from old containers at Reclamation Plant.
Assembled Mark 13 mines at Mine Assembly Plant.

(b) Mobile Units:

USS UNDAUNTED arrived 1555 with barges 245 and 704; departed 1615 with barge 704.

Approved:

L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

W. J. MANEES,
Commander, U.S.Navy,
Executive Officer.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
10/8/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed two civil guards, making a total of 25.

2. Outgoing shipments:

Material	Destination	Via
Detonating fuzes	Salem, Mass.	C&ORwy
Empty wooden boxes	Plumbrook, Ohio	"
Expl. bombs, fuzes, clips	New Orleans, La.	"
Expl. mines, etc.	Hawthorne, Nev.	"
Detonating fuzes		
Charg box, bomb carrier	Washington, D.C.	"
Bomb carrier	Miami, Florida	"
Empty boxes	Plumbrook, Ohio	"
15" projectiles	Burns City, Ind.	Motor Exp.
15" projectiles		
Inert loaded hedgehogs	New London, Conn.	Trans.Co.
Loaded mousetraps	Iona Island, N.Y.	" "
Practice bombs	Dahlgren, Va.	Gt. Coastal
Bombs, vanes, etc.	Sewall's Pt., Va.	STATE PORT
" " "	USS COLUMBIA	" "
Aircraft bomb fuzes	St. Juliens Creek	" "
TNT blocks, etc.	Sewells Pt., Va.	" "
Vanes, fuzes, etc.	USS SANTEE	" "
Torpedo and gyro	USS LIVERMORE	Pier

3. Loaded Mark 13 warheads, Mark 6 depth charges, Mark 12-2 and 13-2 bombs at Mine Filling Plant.
Poured pellets, Mark 4-5 beach rockets, AS projectiles, and Mark 5-3 bombs at Purification Plant.
Reclaimed Mark 17-2 bombs and Mark 5-6 beach rockets at Reclamation Plant.
Assembled Mark 6 mines at Mine Assembly Plant.

(b) Mobile Units:

USS LIVERMORE arrived 0910; departed 0955.
USS TERROR arrived 1745.
USS PT 112 arrived 1850.
SS STATE PORT arrived 0700; departed 1310.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

10

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
10/10/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Expl. proj., hardware	Jersey City, N.J.	C&ORwy
TNT	Philadelphia, Pa.	"
TNT	Elkton, Md.	"
Expl. mines	Nixon, N.J.	"
Depth charges, pistols, etc.	Philadelphia, Pa.	"
British depth charges, pistols	Iona Island, N.Y.	"
Bomb carrier	New Orleans, La.	"
War heads		
Empty boxes	Plumbrook, Ohio	"
Dummy depth charges	Notre Dame, Ind.	"
Dummy depth charges	Charleston, S.C.	"
Tops, dies, tool set, etc.	Mare Island, Cal.	"
15" projectiles	Burns City, Ind.	Trans.Co.
" "		
" "		
Exercise head	USS TILLMAN	Barge 286
Torpedo and gyro	USS RADFORD	" "
Boosters, det., igniters	USS SUWANEE	" "
Fuzes	USS AUGUSTA	" "
Torpedoes, etc.	USS EBERLE	" "
Wrench and testing tools	USS HUMBOLT	Air Mail
Dry TNT	Fort Monroe, Va.	Army truck

2. Plant activities:

Loaded Mark 16 war heads, Mark 6 depth charges, Mark 12-2 and 37 bombs at Mine Filling Plant.
Poured pellets and loaded Mark 4.5 beach rockets, at Purification Plant.
Reclaimed Mark 8-3 and 16 war heads, and Mark 6 depth charges at Reclamation Plant.
Assembled and disassembled Mark 13 mines at Mine Assembly Plant.

(b) Mobile Units:

USS UNDAUNTED arrived 1100 with barge 286; departed 1245 with barge 286.
USS MIANTONOMAH arrived 1835.

Approved: L. L. Hunter
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

L. J. MANREE,
Commander, U.S.N.
Executive Officer.

12

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
10/15/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard, making a total of 27.

2. Outgoing shipments:

Material	Destination	Via
War heads	Jersey City, N.J.	C&ORwy
Guards	Bethlehem, Pa.	"
Empty shipping box	Tacoma, Wash.	"
Expl. bombs, fuzes, clips	Hingham, Mass.	"
Depth charges, pistols	Philadelphia, Pa.	"
War heads	Mare Island, Cal.	"
Trailer wagons, covers, etc	Oakland, Cal.	"
Empty wooden boxes	Plumbrook, Ohio	"
Depth charge cases	Washington, D.C.	NOL truck
Plaster loaded mines		
D4 floats, etc.		
Bomb carriers	Quonset Pt., R.I.	NTS truck
Beach rockets, etc.	Amphibian Force, Atlantic Fleet	NMD truck
Auxiliary boosters	St. Juliens Crk,Va.	STATE PORT
Bombs and vanes	USS BISCAYNE	" "
Reel box, dets., etc.	USS STANSBURY	" "
Reel box,dets., etc.	USS OSPREY	" "
" "	USS RAVEN	" "
" "	USS HOWARD	" "
" "	USS PALMER	" "
" "	USS AUK	" "
Torpedo and gyro	USS TILLMAN	" "
Depth setting springs	USS NEW YORK	" "
" " "	USS TEXAS	" "
Torpedo, gyro	USS KEARNEY	" "
Depth charges, etc.	HEATH HEN	" "
1 crate floats	Little Creek, Va.	" "
Mousetrap bodies, tail assembly, etc.	USS SC704	" "
Depth charges, (British)	Norfolk, Va. (Pool)	" "
Depth charge test set		
Reel box, det., blast.caps		
Projectors, control panel	Lndg.Frce,Eqip,Dep.(NOB)	" "
Depth springs	Sewalls Point, Va.	" "
Bombs, vanes, fuzes	NAS, Norfolk, Va.	" "
Bomb carriers	USS SUWANEE	" "
Dem. bombs, vanes, (inert)	NPG., Dahlgren, Va.	NMD truck
Depth charge cases, empty	" "	
Depth bombs, etc.	USS WICHITA	" "
Depth springs	" "	Parcel post
" "	Boston, Mass.	" "

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
10/19/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Expl. mines, blasting caps, ets.	Cape May, N.J.	C&ORwy
Bomb carrier	Santa Barbara, Cal.	"
Bombs, access.	San Juan, P.R.	Barge 245
Bombs, access.		
Bombs, access.		
War heads	St. Thomas, V.I.	STATE PORT
Pistols	NOB, Norfolk, Va.	" "
Bombs, vanes, etc.	St. Thomas, V.I.	" "
Brackets and thrust rings		
Torpedo, gyro	USS EDISON	" "
" "	USS LUDLOW	" "
Bombs, tail assembles, etc.	USS SC 705	" "

2. Plant activities:

Loaded Mark 13 war heads, Mark 6 depth charges, Mark 37 and 34 bombs, and wrecking charges at Mine Filling Plant.
Poured pellets at Purification Plant.
Steamed off old containers at Reclamation Plant.
Assembled Mark 12 mines at Mine Assembly Plant.

(b) Mobile Units:

USS MIANTONOMAH departed 0700.
USS SALEM arrived 0730.
USS MONADNOCK departed 1215.
USS ACUSHNET arrived with lighter 226 and 266; departed with lighter 245.
USS MIANTONOMAH arrived 1430.
USS MONADNOCK arrived 1520.
SS STATE PORT arrived 1430; departed 2330.

L. J. MANESS,
Commander, U.S.N.,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
10/20/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
AS projectiles, loaded tails	IOna Island, N.Y.	Trasfer Co.
Tetryl	Hingham, Mass.	C&ORwy
Detonating fuzes	Hawthorne, Nev.	"
Expl. mines, complete		
Vanes, fuzes	San Juan, P.R.	Barge 226
Bomb carrier		
Mine cases		
brackets		
vanes, fuzes		
vanes, fuzes		
" "		
" "		
" "		
Bombs		
"		
"		
"		
"		
"		
"		
"		
"		
"		
"		
Depth setting springs	Amphb. Force, Atlantic Fleet	NMD truck
Auxiliary springs	NAS, Norfolk	" "

2. Plant activities:

Loaded Mark 13 war heads, Mark 6 depth charges, Mark 37 and 34 bombs, at Mine Filling Plant.
Poured pellets and loaded AS projectiles at Purification Plant.
Steamed off old containers at Reclamation Plant.
Assembled Mark 6 mines at Mine Assembly Plant.

(b) Mobile Units:
USS ACUSHNET arrived 0545 with 263 and 270; departed 0825 with no barges.
USS WEEHAWKEN departed 0830.
USS SALEM departed 0855.
USS MONADNOCK arrived 0930.

Approved: L. L. Hunter
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

L. J. MANGES,
Commander, U.S.Navy,
Executive Officer.

23

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
10/21/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Dynamite	Service Force, Atlantic Fleet	Lighter 720
TNT blocks, blasting caps, hardware	Miami, Florida	C&ORwy
Tetryl	Carrboro, B.C.	"
Depth charges, boosters	New Orleans, La.	"
Trailer wagons, bogies, etc.	San Francisco, Cal.	"
" " "	San Diego, Cal.	"
Bomb carrier	El Centro, Cal.	"
Depth charges, tools	Ocracoke, N.C.	Trans. Co.
AS projectors	Philadelphia, Pa.	Express
TNT	NOL, Piney Pt., Md.	NMD truck
Booster cans	Knoxville, Tenn.	Par. post

2. Plant activities:

Loaded Mark 13 war heads, Mark 6 depth charges, Mark 6 special depth charges, Mark 37 and 34 bombs at Mine Filling Plant.
Poured pellets and loaded AS projectors at Purification Plant.
Steamed off old containers at Reclamation Plant.
Assembled 180 Mark 6 mines at Mine Assembly Plant.

(b) Mobile Units:

USS ACUSHNET arrived 0600; departed 1130 with barge 720.
USS CONONICUS arrived 0750; departed 1040.

L. J. MANES,
Commander, U.S.N.,
Executive Officer.

Approved:
L. L. HUNTER,
Captain, U.S.N.,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
10/22/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Miscel. stores	USS WEEHAWKEN	NMD pier
Depth charges, extenders	Newport, R.I.	NTS truck
Projectors, etc.	USS SC 706	NOB "
Booster stowage cans	USS PC 481	" "
Pistols, extenders	Pool	" "
Bomb carriers	NAS, Norfolk, Va.	" "
Depth charges, pistols, (British)	Iona Island, N.Y.	C&ORwy
British depth charges	Newport, R. I.	"
Igniters		
Tetryl and TNT	Charlotte, N.C.	"
Tractor and equipment	NOL, Washington	"
" "	Indian Head, Md.	"
Wrenches	Miami, Florida	"
Bombs, etc.	Nashville, Tenn.	"
Valve covers	Cape May, N.J.	"
" "	San Francisco, Cal.	"
Mine carriers		
Bombs	Stump Neck, Md.	NOL truck
M4 mechanisms	Washington, D.C.	" "
" "	"	" "
Bombs	Stump Neck, Md.	" "
Inert mines	NOL, Washington	" "
Mines, etc.	USS MONADNOCK	NMD pier
Mines	USS MIANTONOMAH	" "
Grinder and buffer	USS KEOKUK	" "
Mines, etc.	USS TERROR	" "
Cocking tools	Section Base, Ocracoke, N.C.	Par. post

2. Plant activities:

Loaded Mark 13 war heads, Mark 6 depth charges, Mark 29, 37, and 34 bombs at Mine Filling Plant.
Poured pellets at Purification Plant.
Steamed off old containers at Reclamation Plant.
Assembled Mark 6 mines at Mine Assembly Plant.

(b) Mobile Units:
USS TERROR arrived 0730. USS SALEM arrived 2015.
USS MONADNOCK departed 0725.
USS MIANTONOMAH arrived 1340. Departed 1[illegible]

Approved:
L. L. HUNTER,
Captain, U.S.Navy,
Inspector of Ordnance in Charge.

R. J. MANER,
Commander, U.S.N.,
Executive Officer.

25

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
10/29/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Dummy depth charge, comp.	NOB, Norfolk	STATE PORT
Stowage boxes		
Spare parts for power drive equip.	USS TERROR (NNY)	
Bomb fuzes	USS PC 472	
Fix. for mch gun.	USS TERROR	
Mousetrap tails	USS PC 474	
Dummy depth charges, complete	NOB, Norfolk	
Bombs, vanes, fuzes	NAS, Norfolk, Va.	
Expl. bombs, fuzes, etc.	Cohasset, Mass	C&ORwy
Depth charges, complete	Cleveland, Ohio	"
" " "	Lorain, Ohio	"
Booster cans		
Bomb carriers	NAS, Corpus Christi	Express
" "	Boston, Mass.	"
Gaskets and safety caps	St.Petersburg, Fla.	Par. post
Washers	NOL, Washington,D.C.	" "
Washers	USS MIANTONOMAH	Pier

2. Plant activities:

Loaded Mark 15 war heads, Mark 17-2 and 34-B bombs, and Mark 6 mines at Mine Filling Plant.
Poured pellets at Purification Plant.
Steamed off old containers at Reclamation Plant.
Assembled Mark 6 mines at Mine Assembly Plant.

(b) Mobile Units:

STATE PORT arrived 0810; departed 1845.
USS LIBERTY BELL arrived 1105; departed 1400.
USS SCIOTA arrived 1630 with barge YC 752 and YC 481; departed 1700 without barges.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

APPROVED:
L. J. MANEES,
By direction.

32

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
11/2/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Captain Robert D. Kirkpatrick, USN, Retired, relieved Captain Lunsford L. Hunter, USN, as Inspector of Ordnance in Charge at 0900 this date.

2. Outgoing shipments:

Material	Destination	Via
Depth charge cases, etc.	Minneapolis, Minn.	C&ORwy
Depth charges, complete	Philadelphia, Pa.	"
" " "	Cohasset, Mass.	"
Bombs, fuzes	Yukon, Florida	"
" "	Cherry Point, N.C.	"
" "	Yukon, Florida	"
Fuzes	USS PC 473	STATE PORT
Projectiles	USS SC 524	
Tail assemblies and fuzes	USS SC 525	
" "	USS SC 529	
" "	USS SC 516	
" "	USS SC 515	
" "	USS SC 507	
Impulse charges	St. Juliens Creek, Va.	
Projectiles	USS SC 519	
Depth charge test set	USS ALTAIR	
Depth charges, complete	Key West, Florida	Trans. Co.

3. Plant activities:

Loaded Mk 6 mines, Mk 7 and 8 depth charges, Mk 5 experimental mines, Mk 12-2, 34-B bombs at Mine Filling Plant.
Poured pellets and loaded AS projectors at Purification Plant.
Poured mines, aerial depth bombs, torpex pellets, and experimental charges at Reclamation Plant.
Assembled Mk 6 mines at Mine Assembly Plant.

(b) Mobile Units:

SS STATE PORT arrived 0955; departed 1510.
USS KEOKUK arrived 1150.
USS WEEHAWKEN arrived 1240.
USS SALEM arrived 1240.
YT 187 arrived 1340; departed 1610.
USS SCIOTA arrived 1400 with 286; departed 1500 without barges.

APPROVED:

R. D. Kirkpatrick
R. D. KIRKPATRICK,
Captain, U.S.N., Ret.,
Inspector of Ordnance in Charge.

L. J. Manees
L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400 42
11/4/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard, making a total of 26.

2. Outgoing shipments:

Material	Destination	Via
Mark 6 mine material	Mare Island, Cal.	C&ORwy
Empty war heads	Newport, R. I.	"
Detonating fuzes	Hawthorne, Nev.	"
TNT	Philadelphia, Pa.	"
Safety fuze	Miami, Fla.	"
Expl. bombs	Cohasset, Mass.	"
TNT blocks	Indian head, Md.	Express
" "	West Hanover, Mass.	"
Depth charges, depth charges, pistols, etc.	NOB, Bermuda	Lighter 286
Bombs, vanes, etc.	"	" "
Brackets, etc.	"	" "

3. Plant activities:

Mark 13 and 16 war heads, Mark 7 and 8 depth charges, Mark 6 mines, and 34-B bombs were loaded at Mine Filling Plant.
Poured pellets at Purification Plant.
Loaded torpex A2 bombs and torpex pellets at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

USS ACUSHNET arrived 1140; departed 1345 with barges 286, 481 and 701.
USS KEOKUK arrived 1530.

A. J. MANEES,
Commander, U.S.N.,
Executive Officer.

Approved: R D Kirkpatrick
R. D. KIRKPATRICK,
Captain, U.S.N., Retired,
Inspector of Ordnance in Charge.

6

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
11/12/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Primer cord	Belleville, N.J.	Express
Aluminum powder	Indian Head, Md.	"
Oil, rags, etc.	Bayonne, N.J.	"
Depth charge material with tail vanes	Burrwood, La.	C&ORwy
Bombs	Dayton, Ohio	"
Empty bomb cases with tails	Philadelphia, Pa.	Express
Dummy depth charges	San Mateo, Calif.	C&ORwy
Bomb fuzes	Jacksonville, Fla.	Express
Booster cans	Burns City, Ind.	"
Mines and fuzes	Hawthorne, Nevada.	C&ORwy
Explosives, fuzes	Sub Base, Conn.	"
Ampere ammeters	Burns City, Ind.	Express
Empty depth charges	Lath, Maine	C&ORwy
Arming wires, safety clips	Bynum, Alabama	Express
Depth charges	Norfolk, Va.	EASTERN SHORE
Depth charges		
Charge stowage box, etc.		

2. Plant activities:

Loaded Mark 1-1 bombs, Mark 13 war heads, Mark 6 mines, Mark 6 depth charges and Mine Filling Plant.
Poured pellets at Purification Plant.
Loading torpex ammunition at Reclamation Plant.
Assembled Mark 12-1 mines at Mine Assembly Plant.

(b) Mobile Units:

EASTERN SHORE arrived 1120; departed 1550.

for L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

APPROVED: R. D. Kirkpatrick
R. D. KIRKPATRICK,
Captain, U.S.N., Retired,
Inspector of Ordnance in Charge.

14

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
11/13/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Employed one civil guard, making a total of 27.

2. Outgoing shipments:

Material	Destination	Via
Bombs	Seneca Ord. Depot, New York	C&ORwy
Depth charges	Iona Island, N.Y.	"
War Heads	Keyport, Wash.	"
Boosters, fuzes	Iona Island, N.Y.	"
Depth charges, complete	Belle Chasse, New Orleans	"
Traveling Circus	Alameda, Calif.	"
Aluminum Powder	Kemvil, N.J.	Express
Aluminum Powder		
Chair and rifles	New York, N.YL	"
Bomb carrier	Camden, N.J.	"
Core extensions for mines	San Francisco, Calif.	"
Rubber goods	Akron, Ohio	"
Bomb carriers	Jacksonville, Fla.	"
Mines	USS KEOKUK USS SALEM USS WEEHAWKEN	NMD Pier

3. Plant activities:

Loaded Mark 13 war heads, Mark 6 depth charges, Mark 6 mines and Mark 17-2 bombs at Mine Filling Plant.
Poured pellets at Purification Plant.
Reclaimed mines, poured AD bombs, pellets with TPX-2 at Reclamation Plant.
Assembled Mark 12-1 mines at Mine Assembly Plant.

(b) Mobile Units:

LIBERTY BELL arrived 1135.

for L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

APPROVED:
R. D. KIRKPATRICK,
Captain, U.S.N., Retired,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
11/26/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
War heads	Mare Island, Calif.	C&ORwy.
War heads	Mare Island, Calif.	"
War heads	Miami, Fla.	"
Bombs and fuzes	Cape May, N. J.	"
War heads	Alameda, Calif.	"
Demolition bombs	Hawthorne, Nev.	"
Depth charges	Iona Island, N. Y.	"
War heads	San Diego, Calif.	"
War heads	Keyport, Wash.	"
Bombs and fuzes	Elizabeth City, N. C.	"
Depth charge spare parts, demolition outfit	Mare Island, Calif.	"
Bombs and outline fuzes	Port Columbus, Ohio	"
Depth charge accessories	Staten Island, N. Y.	"
Blasting caps	Indian Head, Md.	REAgency
Testing tools	South Boston, Mass.	"
Ordnance instruments	Washington, D. C.	"
War heads	Philadelphia, Penna.	Hughes Transf
War heads	Philadelphia, Penna.	" "
Aircraft bomb fuzes	St. Juliens Creek, Va.	NMD Truck
Depth charges	C.O., USS Atascosa	EASTERN SHORE
Bombs, vanes	C.O., USS Brooklyn	" "
Bombs and vanes	Indian Head, Md.	" "
Torch pots	Norfolk, Va.	" "
Bombs, vanes	C.O., USS Alabama	" "

2.. Plant activities:

Loaded Mark 37, Mark 13-2 and Mark 34 bombs at Mine Filling Plant.
Poured TNT pellets at Purification Plant.
Loaded Mark 13 mines, Mark 16 war heads, and Mark 17-2 bombs with torpex at Reclamation Plant.
Mine Assembly Plant closed.

(b) Mobile Units:

USS STATE PORT arrived 0900; departed 1330.

L. J. MANEES,
Commander, U.S.N.,
Executive Officer.

APPROVED: R. D. Kirkpatrick
R. D. KIRKPATRICK,
Captain, U.S.N., Retired,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
11/30/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
Torpedoes	Charleston, S. C.	C&ORwy.
Bombs and fuzes	Cape May, N. J.	"
Bombs	Burns City, Ind.	"
Explosive containers	Washington, D. C.	REAgency
Bombs and vanes	C.O., USS SAVANNAH	STATE PORT
Bombs and vanes	C.O., USS AUGUSTA	STATE PORT
Depth charges, pistols, boosters	NOB, Norfolk, Va. (POOL)	STATE PORT
Bombs and vanes	C.O., USS SUWANEE	" "
Depth charge spare parts	C.O., USS PRAIRIE	Parcel post
Depth charges	NOL, Wash., D. C.	NOL truck
War head (empty)	NOL, Wash., D. C.	" "

2. Plant activities:

Loaded Mark 6 and Mark 13 mines, Mark 7 depth charges, and Mark 34-B bombs at Mine Filling Plant.
Poured TNT pellets at Purification Plant.
Loaded Mark 16 war heads at Reclamation Plant.
Disassembled Mark 6 mines returned from Hingham at Mine Assembly Plant.

(b) Mobile Units:

USS STATE PORT arrived 0845; departed 1720.
USS MIANTONOMAH arrived 1740.
USS MONADMOCK arrived 1740.
USS TERROR arrived 1640.

L. J. MANZES,
Commander, U.S.N.,
Executive Officer.

APPROVED:
R. D. KIRKPATRICK,
Captain, U.S.N., Retired,
Inspector of Ordnance in Charge.

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DIARY
0000 - 2400
12/1/42

(a) Events of importance as regards the defense of the Naval Mine Depot, and its work in upkeep and supply of the fleet units.

1. Outgoing shipments:

Material	Destination	Via
HI-X (TNT)	Elkton, Md.	C&ORwy.
Bombs	Lakehurst, N. J.	"
Empty boxes and crates	Lansing, Mich.	"
Detonating fuzes	Pensacola, Fla.	"
Dummy depth charges complete	St. Augustine, Fla.	"
Bombs	Banana River, Fla.	"
Wooden boxes	Sandusky, Ohio	"
Demolition outfit	Puget Sound, Wash.	"
Depth charge pistols	Annapolis, Md.	Brooks Tnsf.
High explosives compo. "C"	Indian Head, Md.	" "
Bombs, vanes	C.O., USS CLEVELAND	Barge 319
Bombs, vanes	C.O., USS RANGER	" "
War heads	NNY, Portsmouth, Va. (USS SANGAMON)	" "
War heads	NNY, Portsmouth, Va. (USS SANGAMON)	" "
War heads	NNY, Portsmouth, Va. (USS SANGAMON)	" "
Bombs, vanes	NNY, Portsmouth, Va.	" "
Bombs, vanes	NNY, Portsmouth, Va.	" "
Detonators,	NNY, Portsmouth, Va. (USS SUWANEE)	" "
Detonators	NNY, Portsmouth, Va. (USS SUWANEE)	" "

2. Plant activities:

Loaded Mark 13 mines, Mark 6 and Mark 7 depth charges, Mark 34-B bombs; also Mark 6 and Mark 7 depth charges (experimental) at Mine Filling Plant.
Poured TNT pellets at Purification Plant.
Loaded Mark 16 war heads at Reclamation Plant.
Disassembled Mark 6 mines at Mine Assembly Plant.

(b) Mobile Units:

USS MIANTONOMAH arrived 1255.
USS UNDAUNTED arrived 1540.

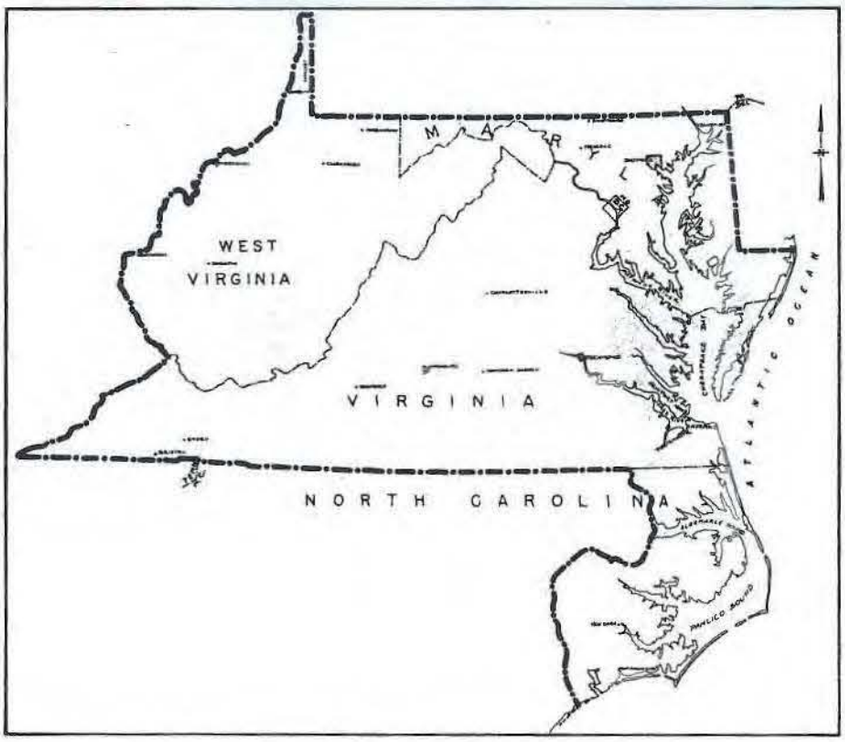
C. S. MANEES,
Commander, U.S.N.,
Executive Officer.

APPROVED:
R. D. KIRKPATRICK,
Captain, U.S.N., Retired,
Inspector of Ordnance in Charge.

3

REPRODUCED AT THE NATIONAL ARCHIVES

[Jan 44]



U.S. NAVAL MINE DEPOT
YORKTOWN, VA.

JANUARY 8:

A draft of 200 colored enlisted personnel arrived on the Depot from the U.S. Naval Training Station, Great Lakes, Illinois.

JANUARY 11:

Army aircraft spotters at the U.S. Naval Mine Depot were secured this date. This detail consisted of 4 U.S. Army privates.

JANUARY 15:

The Torpex Plant which was damaged in the explosion of 16 November and went back into reduced operation 31 December, started back into full operation this date.

JANUARY 31:

As of this date, 5,330 long tons of Ordnance material were shipped during the month of January. 1,181,750 pounds of TNT were loaded during the month of January.

64682

*6/8/1943 - USCD 'NEW' & 'OLD' pier
MS Worthington moored

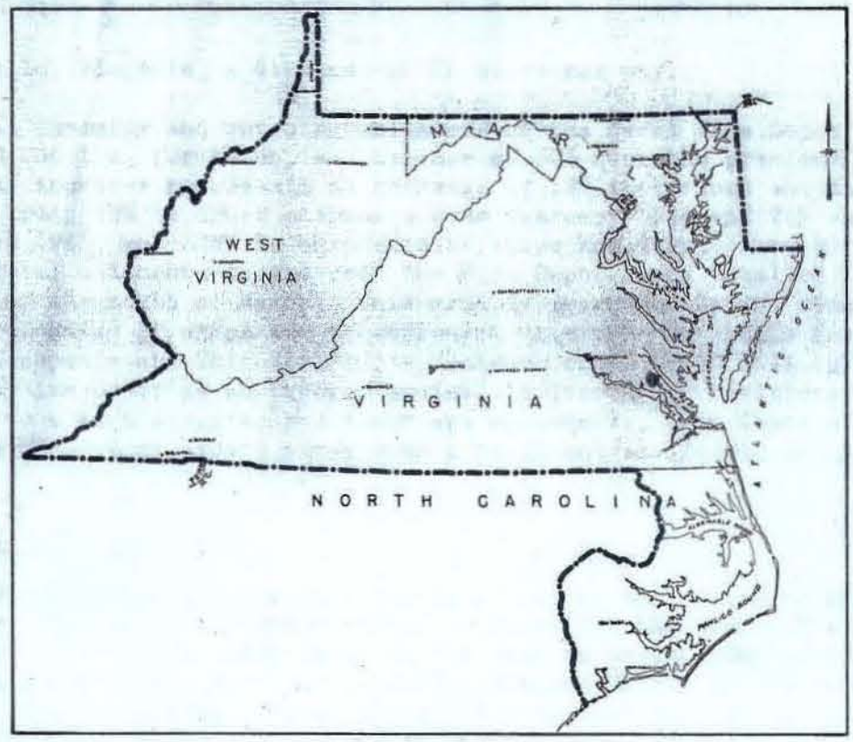
1/1943 - 10/1943

Plant Activities
Mark 6 Depth charges
Mark 4-4 Bombs
" 13-2 "
" 34-B "
" 17 Warheads
" 12-2 Bombs
Poured pellets
AS-P20s Mark 4-3
Mark 16 Warheads
Mark 4a Hedgehog projectiles
Mark 17-2 Bombs
Mark 13 Warheads
" 13-1 "
Mark 12-2 Mines
Mark 18 Warheads
Mark 15 "
Mark 44 Bombs
90 mm
Mark 7 mines
Mark 15-2 Bombs
TPX-2, amatol, 80-20, comp B Bombs
Torpex, minole
15" British projectiles
AA Type B Bombs
Mark 37 Bombs
Mk 8-3 Warheads
70-40 m's
Mk 1 Warheads
AN Mk 44
Mk87 ADB caps

Ships Loaded at piers
Barge 251
" 319
USS State Port
Barge 720
USS SC 1025
British Ships 1171 (depth charges)
" " 1172
USS Terror
USS Chickadee
USS Worthington
USS Eastern Shore
Barge 286
" 457
" 318
20 mm guns USS Port
AS/20 projectiles USS SC 703
Navy Barges 243
" " 486
YC 286
YF 244
Brazilian Ship
Navy Barges 720
" " 752
318
773
NTS 68679
Barge 267
USS General Putnam
USCGD Duane & Mohawk
USS (HMML) 1175
YF 243
USS Wassuc

REPRODUCED AT THE NATIONAL ARCHIVES

[March 1944]



U.S. NAVAL MINE DEPOT
● YORKTOWN, VIRGINIA

Personnel permanently attached or employed at the Naval Mine Depot as of 31 March 1944 are as follows:

Civilian Employees	2067
Enlisted Personnel (Naval)	1378
Officers (Naval)	116
Enlisted Personnel (Marine)	285
Officers (Marine)	8

Officer and enlisted complements for this command are up to full strength, but the total of civilian employees has decreased during the present period by 33 employees. The Commanding Officer in reply to ALSTACON 231433 of 23 March 1944 informed the Assistant Secretary of the Navy that, of the 134 employees in the age group 18 to 26 who are physically qualified for service in the armed forces, deferments will be asked for only 5 such employees.

Naval Mine Depot buses in carrying 84,258 passengers to and from work travelled 176,110 miles during the month of March. The longest bus route during this period was from the Naval Mine Depot

69076

~~Bureau of~~
RG38 Records of the Office of the Chief of Naval Operations (WWII)
WW II Diaries
Yorktown, Naval Mine Depot 1/44-12/45
Box 359

REPRODUCED AT THE NATIONAL ARCHIVES

to Dunnville, Virginia, a distance of 85 miles one way.

Total incoming and outgoing shipments of the Naval Mine Depot amounted to 43,059,038 lbs. for March, an increase of 50% over the previous month. This total increase represents an increase of 19% in carload shipments over February 1944, 15% in truck shipments over February 1944 and 76% as compared with March 1943, and 226% in shipments to ships and lighters to Mine Depot Piers. Total shipments to and from the Mine Depot Piers totalled 11,362,037 lbs. during the month of March. This greatly increased use of Mine Depot piers for loading of ships and transhipment to export terminals has resulted in the Chesapeake and Ohio Railroad's decision on 30 March 1944 to publish the Naval Mine Depot as an Export Terminal in its tariff revisions. In addition to a more advantageous demurrage agreements, this depot will be given the benefit of export rates with a resultant savings in freight charges.

Events of Interest:

On March 2, the Commandant's War Bond Pennant was raised by Mr. G. H. Montgomery, Leadingman Transportation, representing the Transportation Department, the largest department in the station having 100% participation in the Navy Department War Bond Payroll Deduction Plan. At the same ceremony, the Commanding Officer presented citations to: R. L. Farmer, Leadingman Ordnanceman; P. L. Browning, Ordnanceman, Second Class; King Roberts, Snapper Laborer; Norman Harris, Senior Laborer, Third Class; R. R. Roberts, Ordnanceman, Second Class; L. J. Groome, Ordnanceman, Second Class; James Holmes, Leadingman Laborer; Earl R. Jasper, Snapper Laborer and Charles T. Wells, Snapper Laborer - for heroism and unusual devotion to duty when an explosion destroyed the P-2 Warehouse on the Naval Mine Depot on 16 November 1943.

On 11 March, Commander H. P. Rice reported for duty as Executive Officer.

On 29 March, the employee's handbook "Working for Victory" was issued to all civilian employees.

New Construction:

Authority to proceed with a Commissary Store costing $49,000 was received on 25 March from Bureau of Yards and Docks. Plans and specifications for a $80,000 addition to the existing BOQ and a Pilot Plant for Experimental Loading costing $319,000 were issued on 16 March. Notification by the Bureau of Yards and Docks of approval of a $528,000 addition to the Torpex Loading Plant was received on 29 March.

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Ordnance Activities:

1,658,708 lbs. of TNT were loaded at the Mine Depot during the month of March, 1944 as compared to 5,071,970 lbs. loaded in March 1943. This decrease is caused by two factors: (1) increase in quantities of small ammunition being loaded such as demolition charges and boosters which require more time to load than larger items such as mines and depth charges and (2) decreased loading schedules pending a conversion of the Mine Filling Plant #1 to Amatol Loading. 600,000 lbs. of Torpex were loaded for service ammunition in March as contrasted to 558,000 lbs. in February 1943. In addition, 34,000 lbs. of Torpex was poured for experimental ammunition. The production of Torpex is below the monthly production capacity of 1,000,000 lbs. per month due to the destruction of facilities by an explosion on 16 November 1943. These facilities have not been rebuilt as yet. During March, an earth barricade extending for 150 feet from the north side of magazine #3 was completed, thereby doubling the maximum quantity of bulk explosives that may be stored there and at the same time greatly reducing the explosive hazard in the Mine Assembly #2 area. Magazine #3 now has an explosive limit of 600,000 lbs. of cast explosives. In order to provide adequate storage facilities for assembled mines awaiting shipment, four mine trans-shipment sheds, completely barricaded with the exception of railroad entrances, with a total storage capacity of 500,000 lbs. of explosives, have recently been constructed in the vicinity of the Mine Assembly plants.

Facilities for the handling of ammunition at this Depot were severely taxed in order to load LST's 540, 539 and 77. Over 2,000,300 lbs. of torpedoes, warheads, depth charge arbors, rocket bodies and tails, smoke pots and other material were loaded aboard within three days of arrival. There was only one unusual occurrence in the entire loading operation.

At 0545, 21 March 1944, an alarm was registered from the LST 540 loading ammunition at the new pier. The source of the fire was one smoke float, Mk. 2, which had become ignited. This float was in the first of three layers on the cargo deck of the LST 540 necessitating the removal of a considerable part of the cargo. It is believed that the cause of the fire was the contact of water with the contents of the float through defect leaks in the float itself. The defective float and other damaged floats were removed and the cargo restored, no other damage having resulted. On 24 March, the LST 540 returned to the Mine Depot Pier to have all of its Smoke Bombs and Floats removed because other smoke floats had ignited in the Norfolk Area while awaiting sailing orders. This ship was reloaded and departed on 26 March. Total lost hours on this operation were approximately 3600.

Under the direction of the Bureau of Ordnance and with the cognizance of the Commandant, Fifth Naval District, the Naval Mine Depot has assisted in the first quantity production of Net Floatation buoys with cellular plastic filler. Net Defense depends upon the ability of the flotation

REPRODUCED AT THE NATIONAL ARCHIVES

medium to retain positive buoyancy under conditions of normal wear and also when damaged by underwater explosion. The British Admiralty has estimated that 160 feet of flotation is destroyed by the explosion of a torpedo within the net lines. In addition, buoys are damaged both by enemy and defending gun fire. To prevent this damage and to assure positive buoyancy in flotation units, the Bureau of Ordnance has developed a cellular plastic filler which occupies the void in floats and prevents their filling with water and sinking when damaged by enemy action or severe weather conditions.

A sufficient number of 3000 lbs. spherical floats, Mark 1, for two miles of anti-torpedo nets were processed at the Naval Mine Depot. At the outset, the processing of these floats was of the utmost urgency. To understand more fully the obstacles involved in providing this project with adequate facilities, it is felt desirable to briefly summarize the filling process. The floats were first tested hydrostatically to a pressure of 250 lbs. per sq. inch; those floats that developed leaks were repaired by welding and retested. After passing the test, 125 lbs. of Polystyrene, a plastic material in granulated form, was introduced into the floats through the plug openings (1½ inch) by means of a funnel; six inch nipples and valves were attached and the floats evacuated to 20 inches of mercury by connecting to the intake of an air compressor. The evacuated floats were then charged with 70 lbs. of solvent, an impure Butylene fraction. The solvent enters the float as a liquid with a vapor pressure of from 20 p.s.i. to 60 p.s.i. depending upon its temperature. After a period of time, again dependent upon the temperature, a gel-like material is formed within the float. When the pressure is released by means of the previously mentioned valve, ebullition and expansion of the low boiling solvent turns the gel-like mass into a multi-cellular structure that fills the float. These air tight cells prevent flooding of the float when damaged.

Although the process as stated above appears simple in summary, multiple problems developed. For the scene of operations, the Commanding Officer chose what is known locally as the Aviation Field, near the Mine Filling Plant #2 in the explosive area. This spot was chosen because of its nearness to the station railroad line and also because there was a large enough clearing to immediately handle the project. At the outset, 1800 feet of track had to be laid within a period of 5 days to accommodate tank cars of solvent. Two portable electric welding machines and two portable air compressors were secured to test the floats. Eighty-four enlisted men from Naval Construction Training Center, Camp Peary, Virginia, were secured to assist the officers in charge of the project. High temperatures were required to produce the gel formation which necessitated the continuous operation of three steam boilers. Three sheds, 250 feet long, 14 feet wide, and 5½ feet high, each housing 114 floats, were constructed to retain the heat generated by these boilers. Three 2-inch steam lines were built in the ground in each shed to directly apply the heat to the buoys. For proper handling and storage of solvent, 26 floats were provided with dispipes and filled directly from the tank car. When filled, these floats

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were buried in the ground adjacent to the filling area. Equipment to disperse the solvent from these had to be constructed. In addition, sleds to transport the loaded buoys were constructed on the station. Starting from scratch and in the face of the obstacles enumerated above, full production was obtained in less than two weeks.

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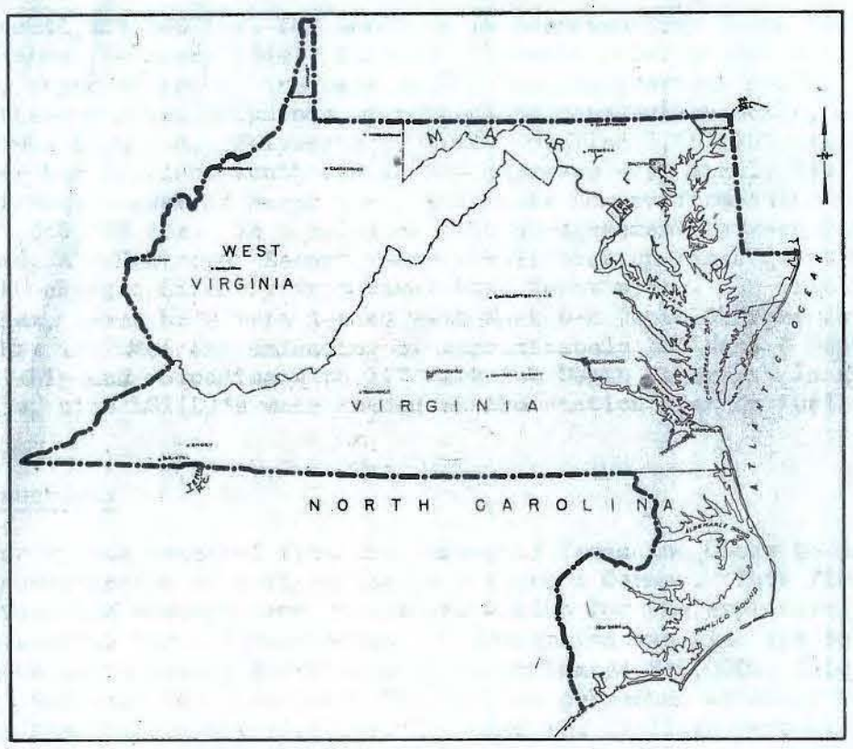
[APRIL 1944]



U.S. NAVAL MINE DEPOT
YORKTOWN, VIRGINIA

Officer and enlisted personnel on board remained virtually at the same level during the month of April 1944, as in March 1944. The number of civilian employees decreased from 2,207 on 30 April 1943 and 2,067 on 31 March 1944 to 2,048 on 30 April, 1944, a total decrease of 159 during the year. This steadily decreasing civilian labor force is caused largely by military separations and resignations coupled with this station's inability to replace all these separations in the tight labor market in the Yorktown area. To check this steady depletion of civilian employees, every effort is being made to recruit women to fill the vacant billets and as of 30 April 1944, 25% of total employees on this station were women.

Naval Mine Depot buses continue to be the principal transportation medium for the vast majority of employees. During the month of April 1944, approximately 90,000 passengers travelled on station buses to and from work on the Naval Mine Depot, an increase of some 6,000 passengers over March 1944.

Total Incoming and Outgoing Shipments of the Naval Mine Depot

71615

amounted to 42,423,709 lbs. for April, a 1% decrease from March 1944 but still 50% above February 1944. Carload shipments total 28,403,051 lbs. for April, representing an increase of 9% over the previous month. In handling these carload shipments, for the 13th consecutive month, no demurrage was incurred. Shipments by truck totalled 5,351,780, an increase of 22% over the previous month and an 88% increase over April, 1943. Although down 31% from the peak of March 1944, shipments to and from ships and lighters totalled 7,869,929 lbs. In compliance with an agreement between Cinclant and ComFive, all Destroyer Escort vessels will pick up large quantities of their depth charges directly from Naval Mine Depot piers. In inititating this program, seven DE's were loaded with Mark 9-2 Depth Charges in four hours. This included the unloading of approximately 100 Mark 6 Depth Charges from each ship and reloading with 117 Mark 9-2 Depth Charges. In addition to the DE's, nine LCI(L)'s were loaded at the station pier on April 28 and 29.

New Construction:

Authority was received from the Bureau of Yards and Docks to proceed with the construction of a firehouse at Shilson's Corner. This firehouse will provide more adequate and prompt protection for the explosive loading plants located in the adjacent areas. Construction was also started during the month on a Commissary Store costing an estimated $49,000. This store when completed will not only serve the service personnel attached to this station or residing in the vicinity, but also the civilian personnel employed at the Naval Mine Depot, who at present in this rural area, have no adequate grocery facilities.

Ground was broken on 20 April 1944 for a Pilot Loading Plant. Due to this station's proximity to the Bureau of Ordnance, it has been called upon to conduct experiments in the loading of new containers and new explosives. At the present time, these experiments must be carried on in explosive plants working on a production basis. These experiments not only interfere considerably with production schedules, but also introduce serious safety hazards. To eliminate this interference and to enable experimentation to proceed with the least possible risk, the Pilot Loading Plant was developed. When completed, all experiments in new containers and explosives will be carried out there.

Ordnance Activities:

5,224,850 lbs. of granular and flake TNT were poured during the month of April 1944, an increase of 3,566,142 over March 1944. 741,850 lbs. of the TNT poured were poured into the Mark 8 Demolition Hose, representing approximately 14,750 lengths of hose and 350 practice charges. The most interesting new item loaded during the month was the Mark 14 Demolition Charge. Containers for this charge were manufactured on AAA priority and shipped here for filling. 8,898 of these charges were loaded during the month.

DOCS AT THE NATIONAL ARCHIVES

A total of 451,086 lbs. of Torpex were poured during April 1944, of which 72,100 lbs. were for experimental use. This figure is 150,000 lbs. short the production for March 1944, due largely to the shortage of containers suitable for loading. In addition to the service loading, inert loading with plaster has been substantially increased in recent months. For April, 1944, 167,800 lbs. of plaster were poured, an increase of 58,500 lbs. over March 1944.

The project for 3,000 lbs. spherical floats, Mark 1 filled with polystyrene was completed on 24 April, 1944 and moved on that date to the Naval Net Depot, Melville, R. I.

Certain re-arrangements are in process at the Torpedo Shop to provide facilities for the overhaul and maintenance of Mark 18 electric type torpedoes. This shop has increased its capacity from the overhauling of 35 torpedoes a month during February 1943 to 108 during the month of April 1944.

Mine Assembly programs now in progress and contemplated, will be greatly facilitated by the addition of nine new warehouses which are currently under construction. Because of the poor quality of incoming parts and assemblies for mines, nearly 100% inspection is required. Sufficient space to inspect these parts will be provided in the new warehouses. In addition, enough space will be provided so that the material handling and storage problems can be solved in an orderly manner with a resultant saving in manpower and elimination of much waste effort.

To investigate fully some of the characteristics of explosives that were emphasized by this station at the time of the explosion on 16 November 1944 and more recently by the explosion at NAD, Hastings, a new test is currently being run at the Naval Mine Depot to determine the cooling characteristics of TNT and Torpex within closed containers. This is in the nature of a surveillance test to get comparative data on the time, temperature and internal pressure characteristics of these two explosives under sealed conditions. It is anticipated that the results of this test will serve as a guide to decreasing the hazards involved in loading and cooling of Torpex loaded containers.

REPRODUCED AT THE NATIONAL ARCHIVES

[MAY 1944]

U.S. NAVAL MINE DEPOT
YORKTOWN, VA.

PERSONNEL:

Officer and enlisted personnel on board remained at virtually the same level in May, 1944, as in the two preceding months. The number of civilian employees increased from 2,048 as of 30 April, 1944 to 2,094 as of 31 May 1944. Military separations and resignations continue to be a drain on the civilian labor supply, but during the month of May, due to a recruiting program for women employees over a larger area in the vicinity of the Mine Depot, labor accessions outnumbered separations. As of 31 May 1944, 26% of the civilian employees were women, as compared with 22% on 31 December 1943.

An ever increasing number of employees are using the transportation facilities supplied by the Naval Mine Depot. During May, 1944, 92,498 passengers were transported to and from their homes, an increase of some 8,500 passengers over March, 1944.

OPERATION:

Total Incoming and Outgoing Shipments of the Naval Mine Depot amounted to 47,773,884 lbs. for May, 1944, a 12% increase over April, 1944 and a 16% increase over May, 1943. Carload shipments totaled 29,784,284 for the month, representing a 5% increase over April, 1944. Despite this increase and for the 14th consecutive month, no demurrage was incurred, either inbound or outbound. Shipments by truck totalled 6,862,076 lbs. for the month of May, an increase of 28% over the previous month, and an increase of 154% over May, 1943. Shipments to and from ships and lighters continue to increase with every indication that this form of transportation will increase materially as soon as the Naval Mine Depot receives the designation as an export terminal. Shipments by water totalled 10,139,267 lbs. for May, an increase of 28% over April, 1944, and an increase of 89% over May, 1943. During the month of May, 42 destroyer escort vessels were loaded with depth charges and accessories totalling 2,050,212 lbs. Due to improved materials, handling methods and operations, the last seven vessels arriving on 30 May, were loaded in approximately three hours.

Ordnance Activities:

2,070,000 lbs. of TNT were poured by all depot activities during the month of May, 1944. A total of 2,861 Mark 9 Mod 2 depth charges were poured as compared with 1,568 in the previous month. The demolition plant used 650,100 lbs. of TNT to fill 11,582 lengths of service demolition charges Mark 8.

The Torpex plant poured 510,175 pounds of torpex into service ammunition.

75726

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REPRODUCED AT THE NATIONAL ARCHIVES

In addition, this plant used 65,569 pounds of torpex and 13,000 pounds of DBX in experimental loadings. At the present time, the Naval Mine Depot is the only explosive plant in the United States loading DBX.

NEW CONSTRUCTION:

The Bureau of Yards and Docks notified this station on 1 May that a project for an Aluminum Powder Storage House had been approved and Contract Noy-9417 assigned to the project. This construction when completed will provide a safety storage house for the highly inflammable aluminum powder which is used in the manufacture of the explosive Torpex.

On 4 May, Contract Noy-7798 was let for the completion of road construction on the Naval Mine Depot. Construction under this project was started on 25 May, 1944.

Alterations are now underway to remodel Warehouse 4. This warehouse will contain mine sub-assembly shops such as electric shop, clock shop, and extender test shop. In addition, there will be a classroom and storage vault. When completed, all test and sub-assembly work on inert mine parts will be accomplished in this warehouse.

EVENTS OF INTEREST:

During the month of May, two men, J. J. Fitzsimmons, MN2c, USNR and F. C. Krouse, MN2c, USN, were awarded the Purple Heart at appropriate ceremonies - for wounds received while serving in the Mediterranean theater on the destroyer, USS MERIDETH.

On 9 May, 1944, the new theater at the depot was put into operation. This theater is large enough to accommodate all members of the Ordnance Battalion not on duty, whereas the old theater only had capacity for approximately 50% of the men who were desirous of attending the shows presented there. It is believed that the new theater has done much to raise the morale and hence the general efficiency of the enlisted personnel attached to this station.

The Naval Mine Depot was inspected on May 30, 1944 by Rear Admiral David McD. LeBreton, USN, Commandant of the Fifth Naval District.

On 31 May, 1944 at approximately 1000, a slight explosion took place at the Temporary Fuze Overhaul Building, Felsgate Crossing, while workmen were disassembling a Mark 230-3 Fuze. One civilian workman lost the thumb and index finger of his left hand and was injured by shrapnel in the abdomen. A second man was injured by shrapnel in his shoulder. No further injuries were incurred, and only superficial glass damage was sustained. On 1 June, 1944, the Commanding Officer of the Naval Mine Depot ordered an investigation conducted into the cause of the explosion, in accordance with Naval Courts and Boards, 1937.

REPRODUCED AT THE NATIONAL ARCHIVES

In Reply
Refer To No.

A12-1
Serial 9928
(Ad2)

U. S. NAVAL MINE DEPOT
YORKTOWN, VA.

EC/vd/mem

4 July 1944

SECRET

Subj: WAR DIARY - June, 1944.

- -

3. GENERAL:

(a) During the month, two corvettes, five P. C. boats, one Coast Guard cutter, one dynamite ship, and twenty-two DE's were serviced at the pier. Servicing operations consisted primarily of unloading depth charges and accessories and loading projectile charge bodies and depth charges.

(b) Total incoming and outgoing shipments for the month amounted to 40,959,573 pounds as against 47,773,884 pounds for May, 1944, and 42,817,154 pounds for June, 1943.

(c) The Torpex Plant poured a total of 483,000 pounds of explosives during June, 50,000 pounds in excess of loading requirements. Of this amount, 34,000 pounds was experimental loading of torpex, DBX, and UWE.

(d) Three Magazines, each 80 feet in length and equipped with concrete truck loading platforms, for the storage of large bombs and mines, were completed during the month.

R. D. Kirkpatrick
R. D. KIRKPATRICK
Captain, USN, Ret.
Commanding Officer

Encl: (HW)
1. Official Navy Photograph, showing Capt. R. D. Kirkpatrick, USN, Ret., CO, pinning SecNav Commendation Ribbon Bar upon Lt.(jg) Kenneth C. Huff, USNR, at NMD, Yorktown, Va., June 6, 1944.

-1

Diary Off Laction Letters

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REPRODUCED AT THE NATIONAL ARCHIVES

In Reply
Refer To No.

A12-1
Serial 9794
(Ad2)

U. S. NAVAL MINE DEPOT
YORKTOWN, VA.

EC/vd

4 August 1944

SECRET

From: Commanding Officer
Naval Mine Depot
Yorktown, Virginia

To: Commandant Fifth Naval District
(War Diary Officer).

Subj: WAR DIARY - July, 1944.

Ref: (a) ComFive restr. ltr ND5(12)/A12-1(2) of 19 June 1944.

1. MISSION - no change.

Record

2. EVENTS OF IMPORTANCE:

July 1 - At a ceremony and parade, the Commanding Officer presented to private first class Donald E. Hitchcock, U.S. Marine Corps Reserve, the Citation awarded him by the Secretary of the Navy for heroic action and devotion to duty while serving as a sentinel at Mine Filling Plant No. 2 at the time of the explosion on November 16, 1943.

July 12 - The Naval Mine Depot Commissary Store opened for business on 12 July 1944. At the end of the month, 340 permits for military personnel and 961 permits for civilian personnel to make purchases at the subject store had been issued.

July 15 - At the ceremony attended by representatives of the Depot, and the office of the Resident Officer, ground was broken for the new Naval Mine Depot dispensary which is located adjacent to the Naval Barracks. Work on the dispensary is progressing satisfactorily.

"Tiny Tim" - During the month of July a high priority project called "Tiny Tim" was inaugurated by the Bureau of Ordnance. This Mine Depot played an integral part in this project. Tiny Tim is now designated as the 11"75 Rocket Body, Mark 1.

This project required liaison between the Navy Bureau of Ordnance, Army Bureau of Ordnance, this Depot and the Washington Navy Yard to reach its status as shipped from NMD/Y.

SECRET

83334

3-P-54

REPRODUCED AT THE NATIONAL ARCHIVES

Paragraph 2 "Tiny Tim" continued.

The rocket body is constructed from a 500 pound AN-M58a1 S.A.P. bomb. As no empty containers were available, it became necessary to use AMATOL loaded bombs obtained from the Army Ordnance Plant at Milan, Tennessee. The reclaiming plant at this Depot which has not been in operating condition since the explosion last fall was hastily and temporarily put in condition to accomplish this unloading.

After the bombs were clean they were immediately shipped to the Washington Navy Yard where they were modified to make them adaptable for rocket use. They were then shipped back to this Depot where they were loaded with cast TNT using a special wax nose pad. They were then equipped with a specially modified Mk.157 fuse which is now designated as the fuse Mk 157 Mod 1.

During July, Yorktown received, unloaded and shipped, 1025 AN-M58A1 bombs and received 450 empty 11".75 Rocket Bodies Mk.1 returned from the Navy Yard. Forty-one were inert loaded for experimental purposes and 187 were TNT loaded. Twenty-nine TNT loaded and 41 inert loaded bodies were shipped. The first nine were shipped to the Naval Ordnance Test Station, Inyokern, California.

Present indications are that this Depot will unload another 1000 bombs and continue to load at an ultimate rate of 1000 per month for an indefinite period. It is expected that proper containers will be available by September 15.

"Tall Boy - M" - The Naval Mine Depot has begun the task of Torpex loading the British aerial bomb "Tall Boy - M", a 12,000 pound bomb known more familiarly as the "earthquake" bomb. It has proved effective against heavily protected targets such as underground supply depots and concrete emplacements.

The bomb itself holds approximately 5,600 pounds of Torpex-D1. Torpex D-1 contains approximately 5% desensitizer. The explosive is fired through an arrangement of three boosters (91% RDX-9% beeswax), each booster being approximately 30 inches long and 6 inches in diameter.

The desensitizer is composed of 84% paraffin wax, 14% nitrocellulose, and 2% lecithin, and is to be prepared at the Depot. A small quantity of paranitrophenol may be incorporated into the material. It is mixed into the Torpex batch prior to the addition of aluminum powder. When the RDX, TNT and desensitizer are thoroughly mixed and melted, the aluminum powder is added.

SECRET
55
3-P-2

REPRODUCED AT THE NATIONAL ARCHIVES

Paragraph 2 "Tall Boy - M" continued.

Handling of the item has presented a difficult problem. The explosive plants are not constructed to provide loading facilities for containers of this weight. The standard handling equipment also is inadequate. Four deep pits have been constructed at the front of the Torpex Plant and the building extended so that molten explosive may be handled in steam jacketed tilting kettles set on casters. High capacity road cranes, with a direct drive on the lowering drum are being secured for the handling task. Forged slings were made at the Washington Navy Yard to support the bomb.

To date, one Tall Boy has been received, loaded with sand, and is being used to test the handling methods and equipment.

Projected loading schedules call for 60 Tall Boys to be loaded in August, 100 in September, and 150 per month thereafter. Cases are being manufactured by the Scullin Steel Works, St. Louis, Missouri. The cases without tail fins are ten feet long and 38 inches maximum diameter.

3. GENERAL

(a) A project covering 25,000 feet of C.I. pipe to furnish additional water supply to the Naval Mine Depot at an estimated cost of $130,000 to be financed under Naval Appropriation Act, 1945, was forwarded by BuDocks to the Secretary of the Navy for approval on 10 July 1944. The OinCC was authorized to proceed with preparation of plans and specificiations by BuDocks letter of 13 July 1944.

(b) A project covering construction of Test Building for Mark 8 Depth Charge has been approved and funds in the amount of $105,000 have been made available from "Public Works, BY&D". The low bid of $321,700 was submitted by Virginia Engineering Company and award of contract has been approved by BuDocks. Notice of acceptance of award was given on 24 July 1944 and allotments in the amounts of $234,700 and $87,200 respectively are being issued to ComFive.

(c) Production - Ordnance.

The Torpex Plant poured a total of 550,000 pounds of explosives in the month of July, an increase of 70,000 pounds over the production in June. The principal items were Mines Mark 19-1 and Mark 36-1, Torpedo Warheads, and Mark 54 Aerial Depth Bombs. Included in the above total was 60,000 pounds of experimental loading of Torpex, DBX and Minol.

SECRET

3-P-56

EC/vd

al 9794
Ad2)

4 August 1944

ET

- -

graph 3 (c) continued.

An increase in Army loading demands was reflected in orders the Bureau of Ordnance to load 10,000 Mark 4-1, 100 G.P. bombs use by the Army. This helped to schedule a full month's pro-ion for the TNT Mine Filling Plant, which loaded a total of 0,000 pounds of TNT during July. In addition to the above lescent bombs, the principal items were Torpedo Warheads, Mk.18 s, and Mk. 9-2 Depth Charges.

(d) Total incoming and outgoing shipments for the month amounted 9,562,674 as against 40,959,573 for June 1944 and 43,225,114 for , 1943.

(e) An addition to the Bachelor Officers' Quarters providing mmodations for 40 officers was completed and placed in use during month.

Transmission by Registered Guard Mail or U.S. registered mail is authorized in accordance with Article 76 (15) (e) and (f), U. S. Navy Regulation.

R. D. Kirkpatrick

R. D. KIRKPATRICK
Captain, USN, Ret.
Commanding Officer

SECRET

3-P-57

REPRODUCED AT THE NATIONAL ARCHIVES

U. S. NAVAL MINE DEPOT
Yorktown, Virginia

HAM/lh

A12-1
Serial 11249
(Ad3)

SECRET

Subj: WAR DIARY - October, 1944.

2.

October 27 - Continued.

activities, a meeting of all hands, remarks by representative civilian workers and an address by the Commanding Officer. The parade was reviewed by the Commanding Officer.

3. GENERAL

(a) A total of 566,000 pounds of explosives was poured into ammunition containers at the Torpex Plant during October. Almost 500,000 pounds of this total consisted of desensitized Torpex poured into 103 - 12,000 lb. bombs, "Tall Boy M". The remaining 70,000 pounds of production was divided between Mk 27 Warheads and Mk 19-1 Mines.

(b) Mine Filling Plant One poured a total of 621,000 pounds of TNT during the month. The principal items in this schedule were 1200 - 500 G.P. Bombs, 135 Torpedo Warheads, 990 Mk 9-3 Depth Charges, 50 Mk 10-6 Mines.

(c) Mine Filling Plant Two used 106,000 pounds of plaster to inert load approximately 377 containers. Most significant items loaded were 97 Mine Cases Mk 16 and 31 Central Sections for Mine Mk 27.

(d) The Explosive Reclaiming Plant R-1 reclaimed 227,000 pounds of TNT from obsolete and rejected containers, and from bulk TNT that had been wet and discolored. This reclaimed TNT is being used by Mine Filling Plant One for production loading.

(e) The Mine Assembly Plants completed the assembly of 1100 Oscillating Mines Mk 19-1 for the Army, 51 Mines Mk 36-1, and 765 Conversion Kits.

(f) The USS BIG CHIEF began dumping at sea 1950 Mk 5 TNT loaded mines which were received from Crane, Indiana.

(g) Three Destroyer-Minelayers docked at the Depot Pier and received 120 Inert Loaded Mines Mk 6. Under supervision of officers from this station, each DM launched 38 of the mines, receiving an efficiency rating between 80% and 90%.

3-F-2

35

REPRODUCED AT THE NATIONAL ARCHIVES

HAM/vs

(A63)

5 December 1944

SECRET

In addition to reclaiming approximately 50,000 lbs. of TNT during last month, the production loading of 60,000 lbs. of TNT was accomplished at the Reclaiming Plant. This loading consisted of Mines, Mark 25, Demolition Charges, Mark 9-1, and 11"75 Rocket Bodies.

d. The assembly of 163 mines, Mark 25, 300 mines, Mark 23, and 100 mines, Mark 36-1 was completed in November.

e. Five lighters were loaded with 1,348,000 lbs. of Aerial Depth Bombs, G.P., S.A.P., and A.P. Bombs, Depth Charges, and Projector Charges for shipment FO-11.

f. During the month, 20 DE's were serviced at the Naval Mine Depot pier and were loaded with approximately 1,480,000 lbs. of Mark 8 Depth Charges and Accessories. During the same period, 4 DM's were serviced with 530,730 lbs. of Mines and Accessories.

g. A program was initiated to place a gas check around the base fuze when it is installed in 11"75 Rocket Body, to prevent hot gases from the burning motor from leaking under the fuze and causing premature explosion of the auxiliary booster.

5. Total incoming and outgoing shipments for the month amounted to 32,153,807 lbs. as against 32,658,260 lbs. for October 1944 and 49,124,022 for November 1943.

Transmission by Registered Guard Mail or U.S. registered mail is authorized in accordance with Article 76 (10) (c) and (f), U. S. Navy Regulation.

R. D. Kirkpatrick

R. D. KIRKPATRICK
Captain, USN, Ret.
Commanding Officer

Encl:
1.(HW) Photograph, Negative No. 1053-U7 dated 23 Nov. 1944

SECRET

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REPRODUCED AT THE NATIONAL ARCHIVES

REPRODUCED AT THE NATIONAL ARCHIVES

HAM/vs

5 March 1945

SECRET

I. EXPERIMENTAL

The Pilot Loading Plant poured a total of 62,059 lbs. of explosives in the experimental loading of 319 containers during February. Among these items were the initial production loading of 50 Depth Charges Mk 11, the pouring and drilling of 250 special shaped castings. Additional items were 12 500 lb. G.P. Bombs modified for gun firing against armor plate, 10 Rocket Bodies 11"75 for special fuzing, five Mk 13-4 warheads with electronic firing mechanisms, and twelve 500 lb. G.P. Bombs for static firing underwater. Explosives poured were TNT, Composition B, HBX, TPX-2, and Tritonal. One experimental warhead for Mine Mk 24 was loaded with plaster.

J. SHIPPING

Seven mine vessels and frigates were serviced with Depth Charges and Depth Charge accessories at the station pier in February.

4. Totoal incoming and outgoing shipments for the month amounted to 35,533,227 lbs. as against 34,736,491 lbs. for January 1945 and 29,675,146 lbs. for February 1944.

Transmission by Registered Guard Mail or U.S. registered mail is authorized in accordance with Article 76 (15) (e) and (f), U. S. Navy Regulation.

R. D. KIRKPATRICK
Captain, USN, Ret.
Commanding Officer

SECRET

REPRODUCED AT THE NATIONAL ARCHIVES

A12-1
Serial 12855
(Ad3)

U. S. NAVAL MINE DEPOT
Yorktown, Virginia

HAM/lh

SECRET SECRET

4 April 1945.

Subj: WAR DIARY - March 1945.

3. GENERAL - Con't.

G. The majority of the man hours and facilities of the Mine Assembly Activities were devoted to the packaging of spare parts for mine units. In addition there were assembled: 921 Mines MK 36 Mod 1, and 330 Mines MK 25.

H. EXPERIMENTAL.

The Pilot Loading Plant poured a total of 62,215 pounds of explosives in March. The most significant work was the loading of approximately 150 "non-quality" molds with Composition B. Six (6) 1000 pound bombs AN-M65A1, modified by the insertion of a cone in the explosive cavity to form the explosive into a shaped charge, were loaded with Composition B. The theoretical penetration of a charge of this size is more than 50 inches of armor plate. Additional items loaded were 125 depth charges MK 9 Mods 3 and 4 with HBX, 12 chemical bombs with an inert mixture of paraffin and woodmeal, six (6) 100 lbs. shaped charge bombs, 74 Depth Charges MK 8 with HBX, two (2) warheads MK 13 Mod 4, and two (2) shaped charge warheads of the MK 13 type.

I. SHIPPING.

On March 6, the Aircraft Carrier ANTIETAM (CV-36) was moored alongside the new pier at this station to receive the vessel's initial allowance of bombs, torpedo warheads and accessories. Loading commenced on the same date and was completed in sixteen (16) hours. The total quantity of ammunition taken aboard flat cars immediately accessible to the pier prior to the ship's arrival facilitated the rapid movement of the material. The Commanding Officer of the ANTIETAM complimented the station for highly satisfactory loading facilities and excellent cooperation by all hands.

J. LST's 1019 and 656 were loaded at the station pier with over 3,500,000 pounds of demolition material. Both shipments were completely palletized.

4. Total incoming and outgoing shipments for the month amounted to 45,772,087 pounds as against 35,533,227 pounds for February 1945 and 43,059,038 for March 1944.

R. D. Kirkpatrick

R. D. Kirkpatrick,
Captain, USN, Ret.,
Commanding Officer.

Transmitted by Registered Guard or by U.S. registered mail is authorized in accordance with Article 76 (15) (e) and (f), U. S. Navy Regulation.

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REPRODUCED AT THE NATIONAL ARCHIVES

Serial 13971
(Ad3)
SECRET

HAM/vs

5 JUN 1945

as a phase of the investigation of "quality" castings of Composition "B" for Project Camel.

J. SHIPPING.

A. USS BOXER - On May 8, this aircraft carrier of the Essex class received 415,600 lbs. of warheads, bombs and accessories, and rockets from the magazines of this depot.

B. USS ANTIETAM - After her last visit to this station, this carrier returned again in May to receive her initial allotment of ammunition, plus an additional quantity for which stowage space had been provided by remodeling her magazines. The total quantity of explosives and ammunition taken aboard totalled approximately 1,500,000 lbs.

C. USS PRINCE WILLIAM - The station loaded the CVE with 200,000 lbs. of bombs and accessories in approximately six hours on May 30, making it possible for this carrier escort to depart in the afternoon of the same day of her arrival.

D. LST 732 - On May 13, this LST was loaded with the second echelon of Ordnance equipment for Project "A" consisting of 843,000 lbs. of Ordnance Stores. The majority of this shipment was palletized.

4. SHIPMENTS.

Total incoming and outgoing shipments for the month amounted to 38,493,872 lbs. as against 32,860,428 lbs. for April, 1945 and 47,773,884 lbs. for May, 1944.

Transmission by Registered Guard Mail of U.S. Registered mail is authorized in accordance with Article 75 (15) (e) and (f), U. S. Navy Regulation.

R. D. Kirkpatrick
R. D. KIRKPATRICK

SECRET

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REPRODUCED AT THE NATIONAL ARCHIVES

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I. The Depth Charge Plant continued the overhaul of Fleet Return Bombs, Depth Charges and Pistols. This plant also checked and tested Factory repaired MK 7 mechanism, repacked MK 14 boosters in MK 1 booster containers, tested 1560 pairs of SC 11 and SC 12 Search Coils.

J. EXPERIMENTAL. Pilot Loading Plant poured a total of 54,000 pounds of explosives during the month of June, items included in this total were approximately 175 experimentally loaded containers with the following explosives: HBX, TNT, Comp. B, HBX-1, TNT D-2, Tritonal D-2.

K. A new method of pouring explosive castings was instituted, which eliminated the cavitation encountered formerly. However, as overcasting is necessary in the new procedure, a method of reducing the cast to its proper dimension by machining has been developed. During the month a total of ninety-one "quality" castings were poured using this new method.

L. SHIPPING. The following ships were loaded as indicated at the NMD, Yorktown pier:

TYPE	NAME	CARGO
CVE	USS CORE	198,370 lbs. of Bombs, Fuzes and accessories.
CVE	USS BOGUE	184,494 lbs. of Bombs, Fuzes and accessories.
CV	USS LAKE CHAMPLAIN	734,876 lbs. of Bombs, Fuzes and accessories. 131,171 lbs. of Rockets, Fuzes and accessories. 950,000 lbs. of Warheads and accessories.
DE	USS OTTERSTETTER	108,388 lbs. of Depth Charge material.
AM	USS MAINSTAY	27,205 lbs. of Depth Charge material.
AM	USS PINNICLE	27,205 lbs. of Depth Charge material.
AM	USS IMPLICIT	27,205 lbs. of Depth Charge material.

REPRODUCED AT THE NATIONAL ARCHIVES

U. S. NAVAL MINE DEPOT
Yorktown, Virginia

A12-1
Serial 13913
(Ad3)

HAM/lh

SECRET

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TYPE	NAME	CARGO
AM	USS INCESSENT	27,205 lbs. of Depth Charge material.
DE	USS WILLIS	27,205 lbs. of Depth Charge material.
DE	USS JANSSON	108,388 lbs. of Depth Charge material.

4. SHIPMENTS.

Total incoming and outgoing shipments for the month amounted to 30,780,722 pounds as against 38,493,872 pounds for May 1945 and 40,959,573 pounds for June 1944.

Transmission by Registered Guard Mail of U.S. registered mail is authorized in accordance with Article 76 (15) (e) and (f), U. S. Navy Regulation.

R. D. Kirkpatrick.
R. D. KIRKPATRICK.

REPRODUCED AT THE NATIONAL ARCHIVES

Serial 14016
(Ad2)

HAM/vs

AUG 1945

SECRET

Extensions. In order to increase production, an early skeleton crew reports for work at 0500, fills the kettles and has several batches ready to pour when the regular 0800 shift reports for work.

B. Mine Filling Plant No. 2 continued the plaster loading of various containers for experimental and practice purposes. It is anticipated that this plant will be used for TNT pouring of Rockets during the month of August. Reclamation Plant continued pouring MK 2-0 Rocket Heads and MK 9-3 Depth Charges. This plant used a total of 482,675 lbs. of TNT during this month.

C. Plant No. 3 is being remodeled and new facilities are being added.

D. Motor Assembly Plant continued inspecting and overhauling Fleet Return Rockets and Projector Charge Ammunition.

E. The Ammunition Overhaul Plant drilled, boostered, and fuzed 2,800 MK 2-0 11"75 Rocket Heads.

F. The Demolition Plant completed the manufacture of experimental types of Desensitizer and was used as a Transfer Depot for 11"75 practice Rocket Heads and motors.

G. The MK 8 Depth Charge Plant continued the overhaul of Fleet Return MK8 and Mk 9 Mods 2 and 3 Depth Charges. Another item of interest at this plant was the experimental work done in conjunction with O.S.R.D. on MK 18-3 Warheads.

H. EXPERIMENTAL. The Pilot Loading Plant continued experimental pourings with different containers for study of cooling time. A total of 53,110 lbs. of explosives was used. Among the items of interest loaded were XHAM-4 Mines and 2,000 lb. 'Shape Charge Bombs'. Some Warheads and Depth Charges were loaded using a very coarse aluminum powder in HBX-1 in connection with bullet sensitivity test requested by BuOrd. Several MK 54 ADB were sectionalized for a study of density and cavitation throughout the charge.

I. SHIPPING. The following ships were loaded at the Naval Mine Depot Pier:

DATE	TYPE	NAME	CARGO
3 July	AM	USS IMPROVE	27,205 lbs. Depth Charge material
8 July	CVE	USS SOLOMNS	32,388 lbs. Bombs
11 July	DD	USS BEATTY	18,920 lbs. Mine material
			88,580 lbs. Depth Charge material
11 July	AM	USS PROWESS	660 lbs. Depth Charge pistols
14 July	DE	USS ROY O. HALE	89,235 lbs. Depth Charge material

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REPRODUCED AT THE NATIONAL ARCHIVES

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A12-1
Serial 14016
(Ad2)

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I. SHIPPING. (continued)

DATE	TYPE	NAME	CARGO
14 July	DE	USS MARTIN RAY	93,841 lbs. Depth Charge material
16 July	DE	USS LOWE	56,260 lbs. Depth Charge material
17 July	DE	USS STURDEVANT	58,240 lbs. " " "
18 July	DE	USS R. E. PEARY	103,600 lbs. " " "
18 July	DD	USS BEATTY	28,230 lbs. " " "
21 July	CV	*USS BOXER	53,298 Warheads
			195 lbs. Demo. material
			7,400 lbs. Bomb Skids
			1,186,582 lbs. Bomb material
23 July	AGP	USS CALLISTO	87,600 lbs. Rocket material

*The loading of this ship with the quantity of ammunition designated was accomplished in 21 hours.

4. SHIPMENTS.

Total incoming and outgoing shipments for the month amounted to 29,932,750 pounds as against 30,780,722 pounds for June 1945 and 39,652,674 pounds for July 1944.

Transmission by Registered Guard Mail or U. S. Mail is authorized in accordance with Article 76 (15) (e) and (f), U. S. Navy Regulation.

H. P. Rice

H. P. RICE
Acting

SECRET

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REPRODUCED AT THE NATIONAL ARCHIVES

D. Mine Filling Plant No. 3 is still under construction and will probably not be used again during this emergency. However, when the plant is complete, it will be held in a "laid-up" condition.

E. Motor Assembly Plant continued inspecting and overhauling Fleet Return Rockets and Projector Charge Ammunition. It is anticipated that this type of work will continue for some time.

F. The Ammunition Overhaul Plant drilled, boostered and fuzed all the MK 2-11"75 Rockets poured at R-1. When this work was completed, the plant was placed in a "laid-up" condition.

G. Demolition Plant was transferred to the Operations Division and is presently being used as a Warehouse.

H. The MK 8 Depth Charge Building continued the reconditioning of Fleet Return Depth Charges and Bombs.

I. EXPERIMENTAL. The Pilot Loading Plant continued experimenting with methods of pouring and machining a complicated form of Composition B. Several MK 54 D.C. were poured and sectionalized in order to study variation in density and cavitation throughout the charge. Several MK 12 mines were poured in order to determine the cooling rates. A number of German warheads were loaded with TNT so that a comparative test of TNT and the German explosive now being used could be completed. In order to fill these various orders, a total of 24,470 lbs. of explosives were poured.

J. SHIPPING. The following ships were loaded at the Naval Mine Depot Pier:

DATE	TYPE	NAME	CARGO
7 Aug.	AM	257	34,800 lbs. Dull Mines
7 Aug.	AM	59	23,200 lbs. Dull Mines
8 Aug.	AVP	USS REHOBOTH	178,858 lbs. Bombs and Accessories
9 Aug.	YMS	79	8,700 lbs. Dull Mines
13 Aug.	LST	7	431,960 lbs. Material for Deep Sea
13 Aug.	LST	980	831,965 lbs. Material for Deep Sea
20 Aug.	CVE	USS SOLOMNS	7,081 lbs. Bombs and Accessories
20 Aug.	YMS	79	8,700 lbs. Dull Mines
27 Aug.	YMS	79	8,700 lbs. Dull Mines
28 Aug.	LST	335	478,199 lbs. Material for Deep Sea
30 Aug.	CV	USS LAKE CHAMPLAIN	23,989 lbs. Warheads
			660 lbs. Demolition Material
			475,111 lbs. Bombs and Accessories.

REPRODUCED AT THE NATIONAL ARCHIVES

B. Reclamation of TNT was begun in the reclamation unit of Plant Two. Operations commenced on a one-shift basis, and about 6,000 lbs. of TNT are being reclaimed per day.

C. Plaster loading continues at Plant Two, the primary item loaded being mines used in sweep tests. The Mining Section assembled 60 inert loaded mines during the month.

D. Limited overhaul of Depth Charges, Mark 9 type, was begun at the cooling and shipping warehouse of Plant Two.

E. Construction was completed on preparation and shipping warehouses of Plant Three except for outside grading. These warehouses have been turned over to the depot. Construction work on all other portions of the plant continues.

F. The operations Section loaded 15 cars of scrap Mark 6 Mine Cases for shipment to a scrap dealer.

G. Experimental. Work at the Pilot Loading Plant continued on about the same level as during the war.

(1) The plant produced two new types of desensitizer for HBX with the assistance of ERL representative, Dr. F. J. Westheimer.

(2) One hundred (100) Mark 53 Depth Bombs were loaded with various explosives for bullet sensitivity tests.

(3) Work on Project Camel continues. A number of castings were made using a "vacuum kettle." In this process the explosives are melted under vacuum, removing the large amount of air entrapped in the normal process.

H. Shipping. The following ships were loaded at the Naval Mine Depot Pier:

DATE	TYPE	NAME	CARGO	
4 Sept.	LST	335	1,448,620 lbs.	Material for Deep Sea.
7 Sept.	YMS	79	8,700 lbs.	Drill Mines
12 Sept.	LST	335	974,000 lbs.	Material for Deep Sea.
14 Sept.	Converted Minelayer	USS WASSUC	3,895 lbs.	Project #1 material.
14 Sept.	YF	286	4,192 lbs.	Depth Charges, Fuses and Accessories.
24 Sept.	LSM	417	83,987 lbs.	Project #1 & inert material.
26 Sept.	YMS	79	8,700 lbs.	Drill Mines

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REPRODUCED AT THE NATIONAL ARCHIVES

SECRET

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29 Oct. - Depot working hours were changed from 0800-1630 to 0730-1600.

3. GENERAL

A. Reclamation of TNT from aerial depth bombs continued, and approximately 146,000 lbs. of TNT were recovered and boxed.

B. At Plant II, 116,600 lbs. of plaster were loaded into mine cases, depth charges, and bombs.

C. Mining activities for the month were as follows:

(1) Overhauled 149 Mark 6 buoys and 734 Mark 6 mine cases. Sectionalized two (2) mine cases.

(2) Assembled 183 empty and inert mines.

(3) Modified 83 Mark 10 Mod 5 anchors.

D. Depth charge overhaul continued. 1,046 Mark 9 type depth charges were inspected, and those requiring rework were reconditioned.

E. The Torpedo Shop overhauled 67 torpedoes. The Mark 18 Overhaul Shop was placed in operation, and work was begun on preparation of Mark 18 electric torpedoes for storage in strippable coating bags. Scrapping commenced on 109 Mark 8, 11, and 12 type torpedoes, which were declared obsolete.

F. Experimental. Pilot Loading Plant continued experimental loading of containers for damage tests. Poundage output from this plant was substantially the same as during the war. Little work was done on Project Camel, but 200 Nord 5130s were loaded with HBX.

G. The following ships were loaded and/or unloaded at the Naval Mine Depot Piers:

DATE	NAME	CARGO
2 October	USS LSMR #507	Unloaded rockets and rocket material
" "	USS LSMR #508	" " " " "
" "	USS LSMR #510	" " " " "
" "	USS LSMR #514	" " " " "
4 "	M/V SEMINOLE	" supplies for Supply Dept.
" "	M/V SEMINOLE	Loaded supplies for Supply Dept.
5 "	USS LSMR #512	Unloaded rockets and rocket material
8 "	USS ORION	Unloaded all types of ammunition and accessories.

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DATE	NAME	CARGO
8 Oct.	USS BLUEFISH	Unloaded torpedoes, warheads and torpedo accessories.
" "	USS CORILLA	Unloaded torpedoes, warheads and torpedo accessories.
" "	USS YMS #397	Unloaded drill mines and mine accessories
" "	USS YMS #228	Loaded drill mines
9 Oct.	USS ORION	Unloaded ammunition and accessories
9 Oct.	USS LST #335	Loaded damaged ammunition for deep water
10 Oct.	USS YMS #25	Unloaded drill mines and loaded hand grenades.
11 Oct.	M/V GEN. PUTNAM	Unloaded supplies for Supply Dept.
" "	M/V GEN. PUTNAM	Loaded supplies from Supply Dept.
12 Oct.	M/V WORTHINGTON	Unloaded fleet return ammunition
15 Oct.	USS GILMORE	Unloaded and loaded ammunition all types
16 Oct.	USS CLYTIE	Unloaded and loaded ammunition all types
17 Oct.	M/V WORTHINGTON	Unloaded fleet return ammunition
18 Oct.	M/V STATEPORT	Loaded and unloaded supplies for Supply Dept.
22 Oct.	USS BIG CHIEF	Loaded material for deep water.
25 Oct.	M/V STATEPORT	Unloaded and loaded supplies for Supply Dept.
25 Oct.	USS LST #497	Loaded material for deep water
30 Oct.	M/V EASTERN SHORE	Unloaded Project #1 material
30 Oct.	M/V EASTERN SHORE	Loaded ammunition for shipment
31 Oct.	USS DE #638	Unloaded depth charges and accessories

Poundage received and shipped at the Pier is as follows:

Received	3,187,060 lbs.
Shipped	3,121,120 lbs.

4. DEMOBILIZATION OF PERSONNEL

A. Officer - Nine (9) officers detached for separation.

B. Enlisted - 100 men transferred for release.

C. Civilian - Number of civilians employed reduced by 40.

5. DISPOSAL OF SURPLUS PROPERTY

A. 592,000 lbs. obsolete and/or unserviceable inert material shipped.
B. 1,700,000 lbs. explosives dumped in deep water.

SECRET

REPRODUCED AT THE NATIONAL ARCHIVES

DEC 3 - 1945

2. GENERAL (Cont'd)

D. The Torpedo Shop overhauled and prepared 81 torpedoes for storage. 109 Mark 8, 11, and 12 type torpedoes were declared obsolete and scrapped. About 359 reject and obsolete loaded warheads were jettisoned at sea and a partial inspection of approximately 700 loaded warheads received during the month show about one third serviceable. Exploder overhaul activities were resumed during the month. Contractors and station maintenance personnel continued repairing roof on the Torpedo Shop.

E. Experimental. A series of new Mark 39 Mod 0 mine was loaded during the month. A program was started to study the advantages of a vacuum pouring kettle for high explosives and also to study the relationship between pouring conditions and segregation, settling, density, and cavitation. Equipment is being installed for work on Baratol and Baronal and work is continuing on the air conditioned magazines and X-Ray building.

F. The following ships were unloaded and/or loaded at the Naval Mine Depot Piers:

11/1/45 - USS DE-214 - Unloaded depth charges and accessories
11/2/45 - USS DE-325 - Unloaded depth charges and accessories
11/2/45 - USS DM-30 - Unloaded and loading mines & accessories
11/2/45 - USS YF-286 - Unloaded ammunition and accessories
11/5/45 - USS DE-243 - Unloading depth charges & accessories
11/5/45 - USS DE-336 - Unloading depth charges & accessories
11/5/45 - USS DE-633 - Unloading depth charges & accessories
11/5/45 - M/V WORTHINGTON - Unloading Project One Material
11/6/45 - USS APOLLO - Unloading torpedoes and accessories
11/6/45 - USS FLASHER - Unloading torpedoes and accessories
11/6/45 - USS PETO - Unloading torpedoes and accessories
11/7/45 - USS DE-133 - Unloading depth charges and accessories
11/7/45 - USS DE-134 - Unloading depth charges and accessories
11/7/45 - M/V EASTERN SHORE - Loading Project One material
11/8/45 - M/V SEMINOLE - Unloading supplies for #8 warehouse
11/15/45 - USS LSM-417 - Unloading and loading Proj. #1 material
11/15/45 - M/V STATEPORT - Unloading supplies for #8 warehouse
11/15/45 - USS LST-335 - Loading ammunition for deep water.
11/16/45 - USS BIG CHIEF - Loading ammunition for deep water
11/21/45 - M/V STATEPORT - Unloading supplies for #8 warehouse
11/23/45 - USS LST-335 - Unloading station equipment
11/25/45 - USS DE-222 - Unloading depth charges and accessories
11/28/45 - USS DIAMOND HEAD - Loading ammunition for deep water.

SECRET

REPRODUCED AT THE NATIONAL ARCHIVES

DEC 5 -1945

Poundage received and shipped at the pier is as follows:

Received	3,058,000
Shipped	3,076,000

3. DEMOBILIZATION OF PERSONNEL

A. Officer - Eleven (11) officers detached for separation

B. Enlisted - 111 men transferred for release

C. Civilian - Number of civilians employed reduced by 36.

During the month of November the employment of Enlisted Women's Reserve was discontinued at this activity. Also the Naval Mine Depot was placed in Class II in accordance with BuPers Cir.Ltr. No. 287-45 and the personnel level reduced by BuOrd to 908 enlisted and 109 officer personnel.

4. DISPOSAL OF SURPLUS PROPERTY

A. 1,102,000 lbs. obsolete and/or unserviceable material shipped.

B. 3,120,000 lbs. explosives dumped in deep water.

5. Total incoming and outgoing shipments for the month amounted to 13,613,160 lbs. as against 15,701,240 lbs. for October 1945 and 32,153,807 lbs. for November 1944.

R. D. KIRKPATRICK.

Transmission by Registered Guard Mail or U.S. registered mail is authorized in accordance with Article 76 (15) (e) and (f), U. S. Navy Regulation.

SECRET

REPRODUCED AT THE NATIONAL ARCHIVES

3. GENERAL (Cont'd)

C. Most of the torpedo production consisted of work on lay-up of torpedoes for storage. A total of 97 Mk 18 afterbodies and 73 Mk 18 battery compartments were completed. Some work was done on the construction of vinylite bags for storage of Mk 18 torpedo afterbodies and overhaul of Mk 8 type exploders. Total receipt of torpedoes for the month was 56 and total issue was 5.

D. Mine activities were as follows:

(1) Assembled 25 Mk 25-2 inert mines
(2) Assembled 1 Mk 6-0 empty mine
(3) Reworked 315 Mk 16 Mine cases
(4) Reworked 37 Mk 16 buoys.

E. Experimental - Pilot Loading Plant continued experiments using a vacuum kettle in an effort to improve density. Additional coding information was obtained on explosive loaded Mk 12 mines. Also a number of hydrostatic cluster bombs were assembled.

F. The following ships were loaded and/or unloaded at the Naval Mine Depit piers:

(a) Unloaded:

12/3/45 - USS HERMMINGER (DE-746), Depth Charges, Pistols, Demolition Outfits, Torpedoes, warheads and accessories.
12/3/45 - USS CELLAND (DE-750) Depth Charges, pistols, demolition outfit, torpedoes, war heads and accessories.
12/3/45 - USS ROBERTS (DE-749) Depth Charges, pistols, torpedoes, war heads and accessories.
12/3/45 - USS SNYDER (DE-745) - Depth Charges, pistols, demolition outfit, torpedoes, warheads and accessories.
12/4/45 - USS TILLS (DE-748) Depth Charges, pistols, demolition outfit, torpedoes, warheads and accessories.
12/4/45 - IX-101 - Bombs and fuzes from NOB, Norfolk, Va.
12/6/45 - Lighter C & O #6 - Empty ammunition containers Mark 1.
12/7/45 - USS KNAVE - AM 256 - Depth Charges, boosters, pistols, extenders, demolition outfit and detonators.
12/7/45 - USS STOCKTON (DD-646) - Depth charges, pistols, extenders, boosters, warheads and accessories for torpedoes.
12/7/45 - M/V STATEPORT - Project #1 material from NOB, Norfolk
12/7/45 - M/V SEMINOLE - Project #1 material from NOB, Norfolk
12/8/45 - M/V WORTHINGTON - Project #1 material from NOB, Norfolk
12/10/45 - M/V EMBLANE - Project #1 material from NOB, Norfolk
12/10/45 - Lighter YC-313 - Supplies for WH #8 and empty torpedo boses.

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REPRODUCED AT THE NATIONAL ARCHIVES

12/12/45 - USS BANDCROFT (DD-598) Depth Charges, pistols, extenders, detonators, torpedoes, warheads and accessories.
12/12/45 - Lighter YC-775 and YC 457 - Bombs, fuzes, tail vanes, trunnion bands, incendiary clusters, arming wires, safety clips, boosters, depth charges and rockets.
12/17/45 - Lighter YC-1064 - From NOB, Norfolk, Va. - Depth Charges, British depth bombs, primers, pistols (British), fuzes, rocket motors, rocket bodies, P.C. bodies, depth bombs and fin assemblies for bombs.
12/17/45 - Lighter YC-457 - War heads from USS PROTEUS AS19 Loaded on Lighter at Pier.
12/20/45 - Lighter YF-798 from NOB, Norfolk, Va. - Bombs, rocket, motors, fuzes, fin assemblies, arming wires, and trunnion bands.
12/20/45 - Lighter YF-368 - From NOB and St. Juliens Creek-Depth Charges - TNT loaded bombs, P.C. bodies, warheads and depth charge accessories.

(b) Loaded:

12/ 3/45 - USS DIAMOND HEAD for dumping in deep water - 1,920,000 lbs.
12/11/45 - IX-101 Loading for dumping in deep water - 156,274 lbs.
12/12/45 - Loading Lighter YC-775 - Inert mine cases for IRON-68 - 135,000 lbs.
12/14/45 - Loading USS PROTEUS AS-19 - Torpedoes and Project #1 material 164,461 lbs.

Poundage received and shipped at the Pier is as follows:

Received - 2,502,000 lbs.
Shipped - 2,380,000 lbs.

4. <u>Demobilization of Personnel</u>

A. Officer - Five (5) officers detached for separation

B. Enlisted - One hundred ninety five (195) men transferred for discharge. Five (5) reenlistments.

C. Civilian - Number of civilians employed reduced by 49.

5. <u>Disposal of Surplus Property</u>

A. 1,519,550 lbs. of obsolete and/or unserviceable inert material shipped.

SECRET

REPRODUCED AT THE NATIONAL ARCHIVES

B. 2,080,000 lbs. explosives dumped in deep water.

C. Total incoming and outgoing shipments for the month amounted to 14,769,081 lbs as against 13,613,160 lbs. per November 1945, and 28,593,749 lbs for December 1944.

Transmission by Registered Guard Mail or U.S. registered mail is authorized in accordance with Article 76 (15) (c) and (f), U. S. Navy Regulation.

R. D. KIRKPATRICK.

RECORD

41

GLOUCESTER CO.
YORK CO.
YORK RIVER.
Sandy Pt.
Stony Pt.
King Creek
Sharps L'd'g
Felgates
Spring
Creek
Lockey
Halsteads Point
Great
Run
Baptist
Run
Grove
B.M.
YORK CO.
JAMES CITY CO.
Booth
Chesapeake
Mill Run
Lebanon Church B.M.
YORK CO.
WARWICK CO.
JAMES RIVER.
BOUNDARY LINE
Ohio
Lee Hall
R.R.
End of Concrete Road
Contract No. indicated in Circles.
SCALE.
0 660 1320 1980 2640 3300 3960 4620 5280
FEET.
Present R.R.
Proposed R.R.
Sheet 1 of 2 Accompanying Specification No. 3970.
SHEET 1 OF 37
ACCOMPANYING SPECIFICATION No 3952
DRAWN BY
TRACED BY T.A.W.
CHECKED BY
SHEET 1 OF
ACCOMPANYING SPECIFICATION No.
REFER TO Y. & D. No. 83480
DEPARTMENT OF THE NAVY. BUREAU OF YARDS & DOCKS.
NAVAL MINE DEPOT
YORKTOWN, VA.
BUILDING LOCATION & RAILROAD PLAN.
APPROVED Feb. 8th, 1919.
CHIEF OF BUREAU.
PROJECT MANAGER.

Area on which material may be deposited if hydraulic method is used.

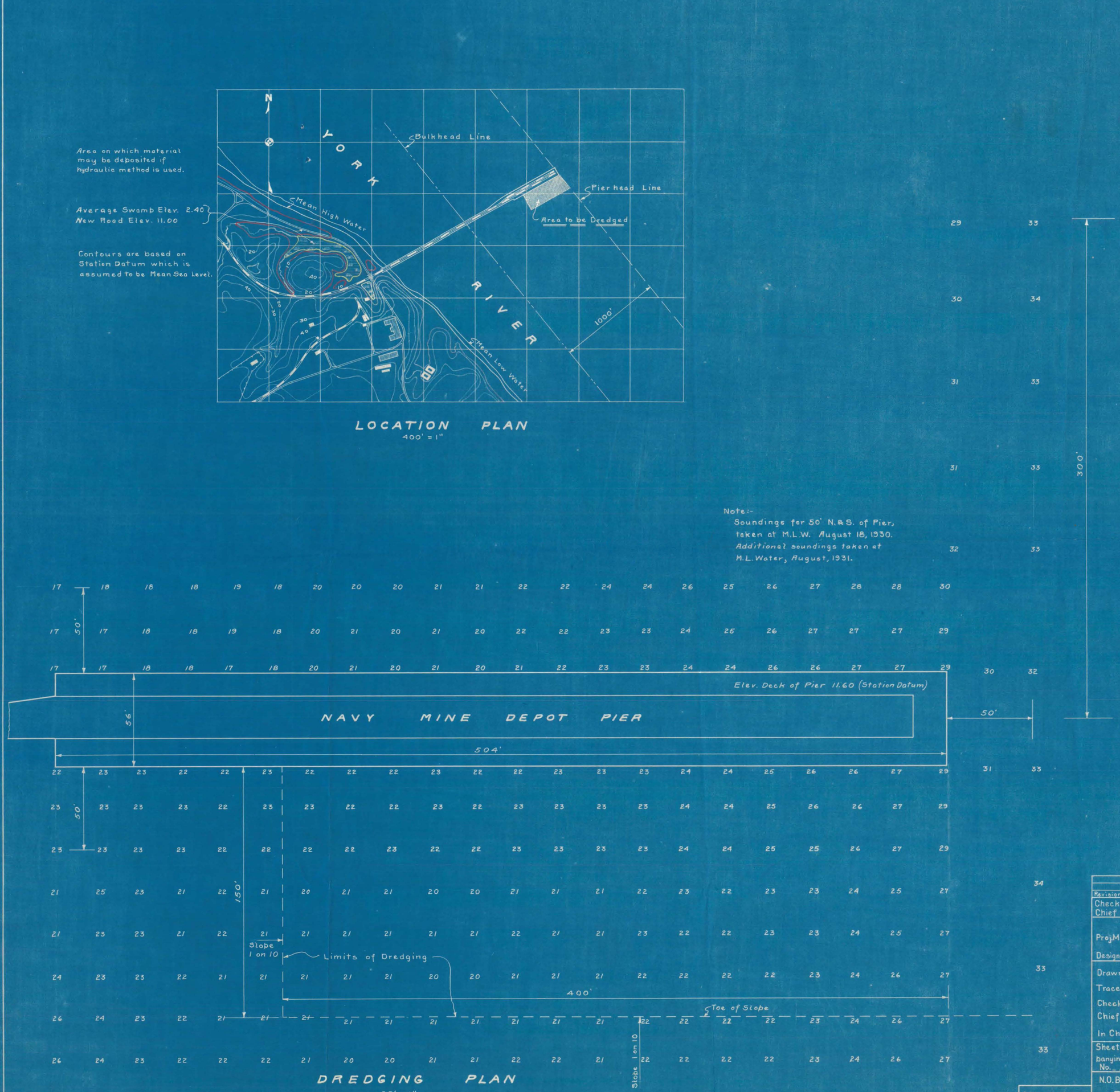
Average Swamp Elev. 2.40
New Road Elev. 11.00

Contours are based on Station Datum which is assumed to be Mean Sea Level.

LOCATION PLAN

400' = 1"

Note:-
Soundings for 50' N. & S. of Pier, taken at M.L.W. August 18, 1930. Additional soundings taken at M.L. Water, August, 1931.



DREDGING PLAN

25' = 1"

Test Piles driven 1918. Approximately 100' South of Pier.

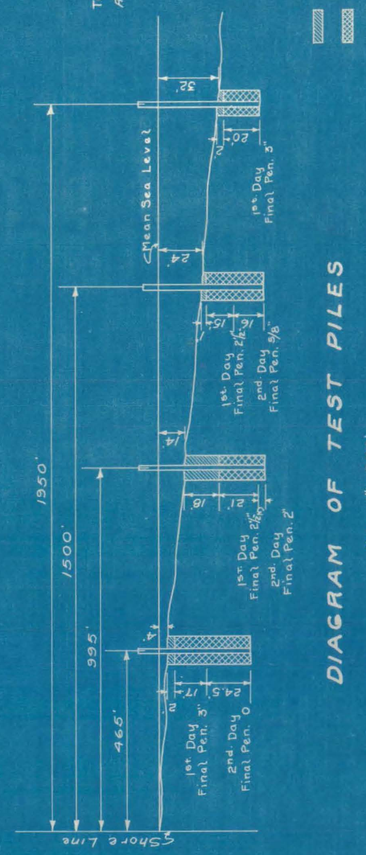


DIAGRAM OF TEST PILES

Hor. 1" = 200'
Vert. 1" = 40'

Note:-
Soundings are in feet and tenths, and indicate depths below Mean Low Water.

Revision	Date	Brief	By

Checked by ____
Chief Dftm. ____
Proj. Mgrs. ____
Design Mgr. ____
Drawn by Wilsex
Traced by Wilsex
Checked by ____
Chief Dfmn. ____
In Charge ____
Sheet 1 of 1 accompanying specification No. 6660
N.O.B. Drawing No. 3028

Scale as shown

NAVY DEPARTMENT — BUREAU OF YARDS & DOCKS

Approved ____ 1931
Chief of Bureau

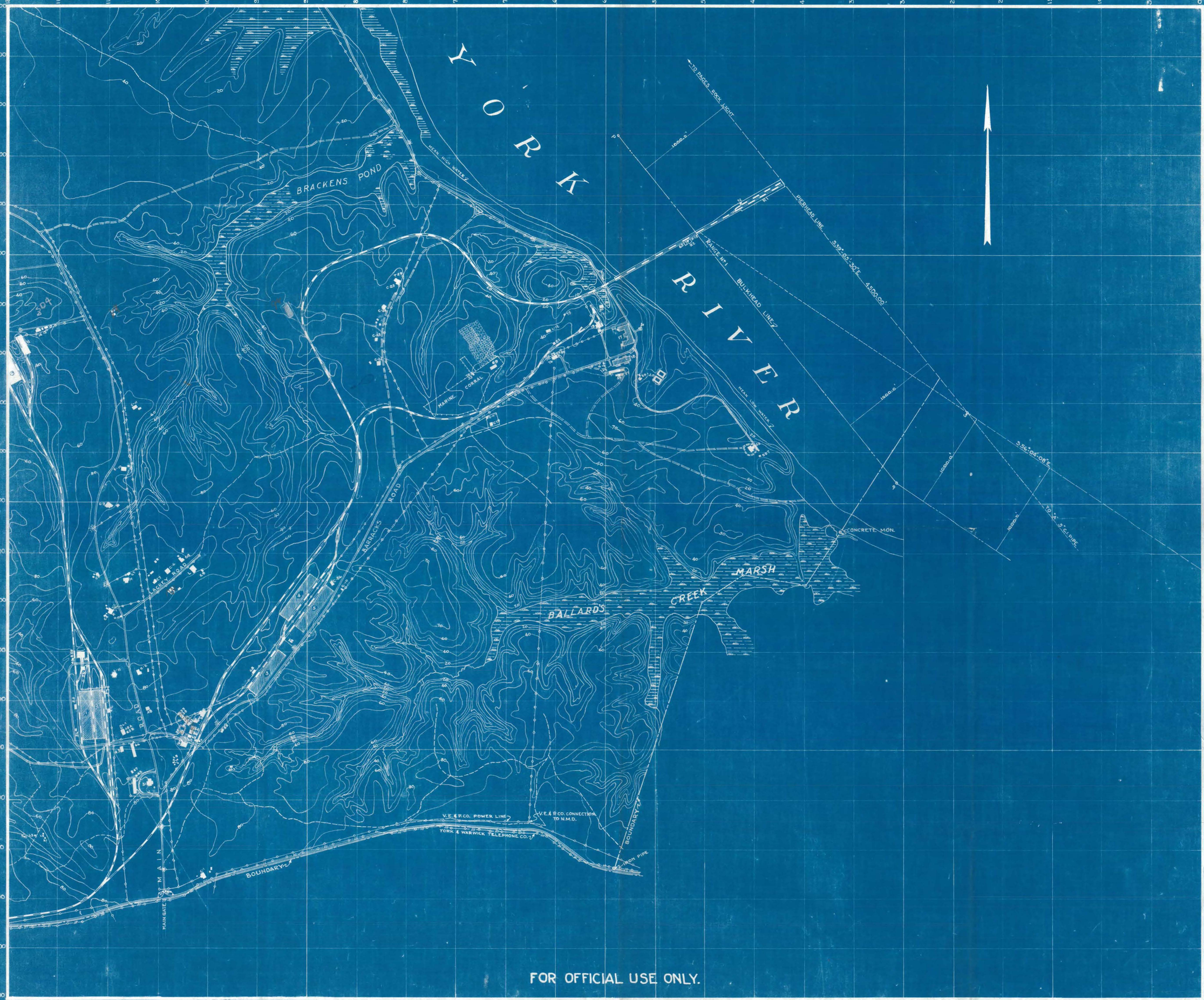
Y. & D. Drawing No. 112359

FIFTH NAVAL DISTRICT
NAVAL OPERATING BASE, HAMPTON ROADS, VA.
NAVY MINE DEPOT, YORKTOWN, VA.

DREDGING PLAN

Approved ____ 1931.
District Public Works Officer.

540-7-E10



FOR OFFICIAL USE ONLY.

SCHEDULE OF STRUCTURES

Nº	USE
1 TO 5 INC.	MINE PARTS STORAGE.
6	EMPTY MINE STORAGE.
11	T.N.T. STORAGE.
13	BOILER HOUSE.
14	WASH HOUSE.
15	GARAGE SHED.
16	MACHINE SHOP.
17	MARINE BARRACKS AND DISPENSARY.
18	MESS HALL AND KITCHEN.
19	BARRACKS HEATING PLANT.
20	SCRUB HOUSE.
31	ADMINISTRATION BLDG
32	NON-MAGNETIC BLDG.
34	SAW MILL.
35	LOCOMOTIVE SHED.
36	AUTO REPAIR SHED.
37	ELECTRIC SHOP.
38	GARAGE SHED.
39	CARPENTER SHOP.
40	CARPENTER STORAGE
41	PAINT SHOP.
42	INDUSTRIAL OFFICE
43	PAINT & OIL STORAGE
45 A	PUMP HOUSE.
45 B	LATRINE.
47	GASOLINE TANK HOUSE
48	TELEPHONE EXCHANGE
49	SAND DRYER HOUSE.
52	OIL HOUSE R.R.
53	FARRIERS SHOP.
54	R.R. TOOL HOUSE.
55	STORAGE HOUSE
56	OIL STORAGE.
57	" " (MARINES)
59	SHED FOR HOSE CART
61	GARAGE AND SURVEY OFFICE
62	OIL & GASOLINE SHED
63	BLACKSMITHS SHOP.
64	AUTO PARTS STORAGE
65	SMALL BOAT SHED PIER
66	GARAGE SHED
67	LOADING RAMP
68	LUNCH ROOM.
69	MARINE STABLE.
70	" POULTRY HOUSE
71	" GARAGE.
72	PIER HOUSE.
75	INCINERATOR
76	POWER PLANT.
77	SENTRY BOX.
78	PHONE BOOTH
82	DIESEL OIL STORAGE TANK POWER PL
83	DRY WELL.
84	PIPE SHED
85	LATRINE.
H3, H5 & H7	HOSE HOUSES.
G7-G11 INC.	GARAGES
R1	N.M.D. PIER.
R2	SMALL BOAT LANDING
L1-L3 INC.	SPRING BOXES
L7	GASOLINE STORAGE TANKS
L9	100 000 GAL. WATER TANK
L11	300 000 GAL. STAND PIPE
L12	COOLING POND
C1 TO C3 INC. C7 TO C11, C19 & C22 TO C26 INC.	CIVILIAN QUARTERS
SD1	SEWAGE DISPOSAL PLANT - MARINE BARR
SD3	SEWAGE DISPOSAL PLA -T INDUSTRIAL AREA
SD 7	SEWAGE DISPOSAL PLANT - NON-MAGN
SD4	SEWAGE DISPOSAL PLANT - MINE FILL PL
A11	BOILER HOUSE FOR WRNDZ. NO 2.
93	Garage
94	Bomb Store
97	Pump house

SURVEYED AND MAPPED 1926. HORIZONTAL CONTROL TRIANGULATION AND TRAVERSE. VERTICAL CONTROL WYE LEVEL. TOPOGRAPHY BY PLANE TABLE.

DATUM IS MEAN SEA LEVEL = 0.0
BULKHEAD AND PIERHEAD LINES TAKEN FROM ENGINEERS OFFICE DRAWING. FILE Nº B-182-1. DATE SEPT. 20, 1922.

LEGEND

FRESH WATER MARSH	POST FENCE
IMPROVED ROADS	CULTIVATION
UNIMPROVED ROADS	POWER LINE
TRAILS	TELEPHONE LINE
STREAMS	LIGHT ON POLE
BARBED WIRE FENCE	TRANSFORMER RACK
SALT WATER MARSH	

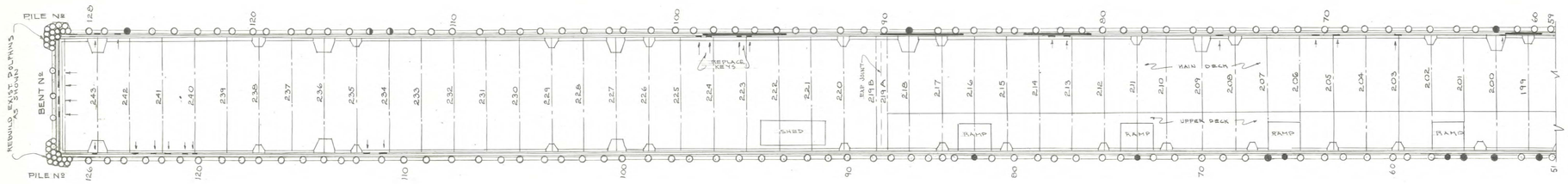
INDUSTRIAL AREA

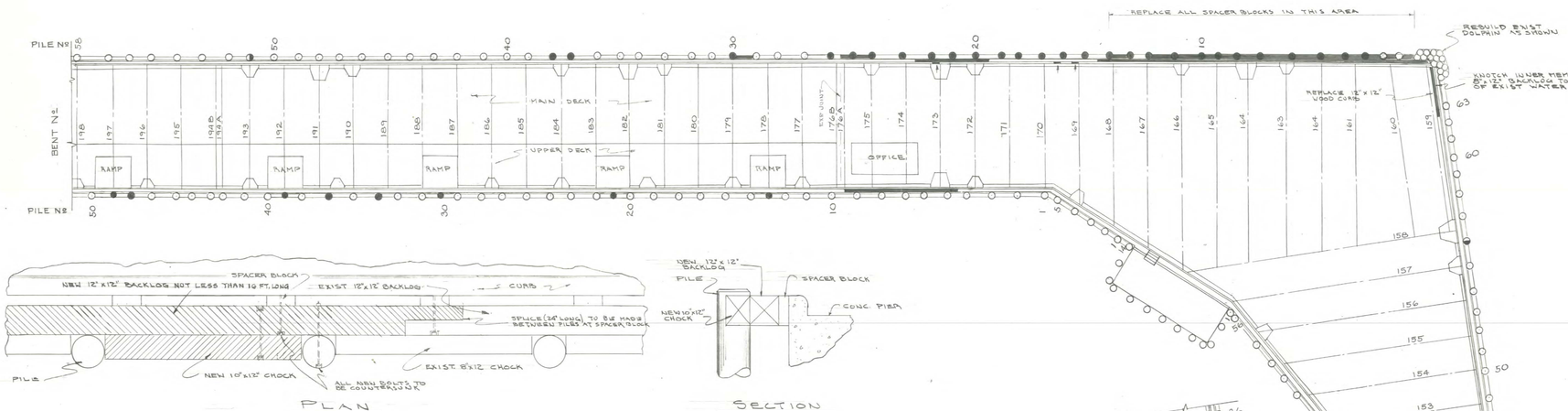
MAPS OF THE NAVY MINE DEPOT YORKTOWN VA.
SHEET 4 OF 9 SHEETS N.M.D. Nº D3-126 (1929).

SCALE 400 FT. = 1 IN.

Corrected March 31, 1931

C5HQ-3-2

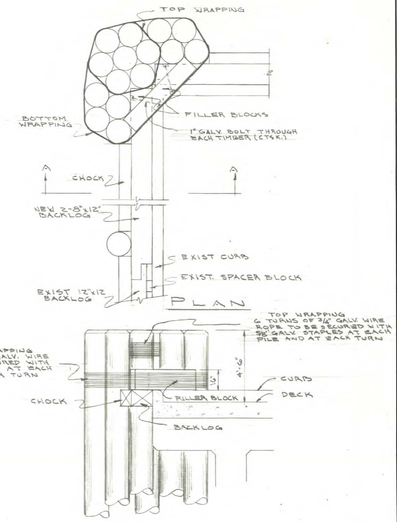




PLAN

SECTION

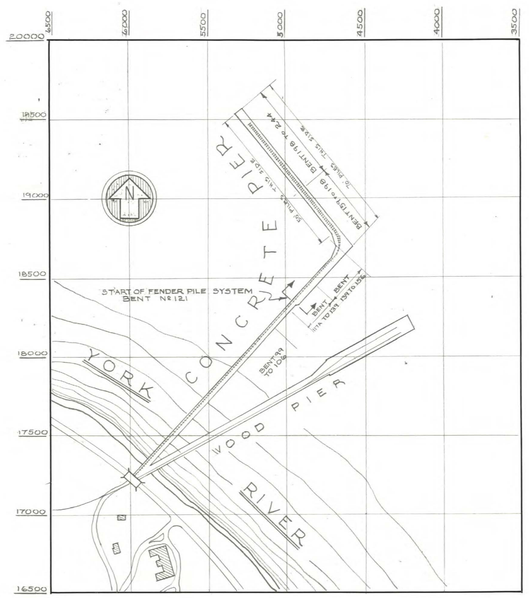
TYPICAL DETAILS OF FENDER REPAIRS
SCALE 1/2"=1'-0"



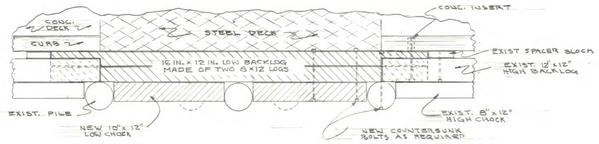
SECTION A-A

DETAIL OF DOLPHIN
SCALE 1/4"=1'-0"

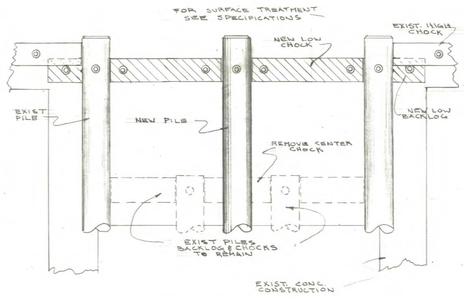
NOTE
FOR LENGTH OF PILES SEE SPECIFICATIONS



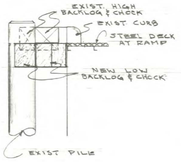
SITE PLAN
SCALE 1"=900'



PLAN

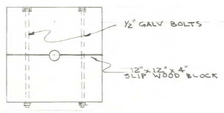


ELEVATION

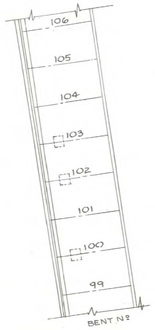


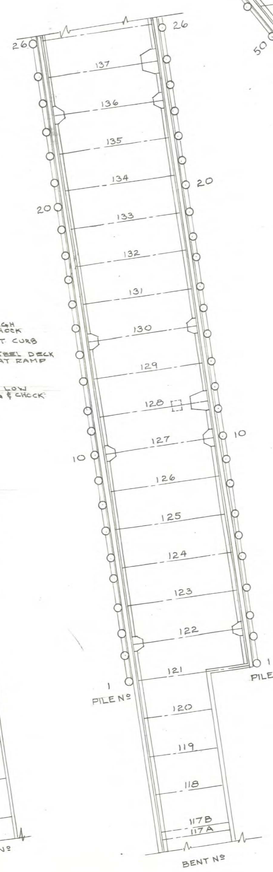
SECTION

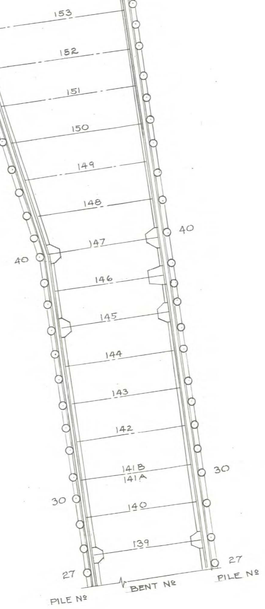
TYPICAL DETAILS OF FENDER REPAIRS AT RAMPS



DETAIL OF SPLIT SPACER BLOCK FOR INSTALLATION BEHIND EXIST. BACKLOG
SCALE 1 1/2"=1'-0"







SCALE 1" = 20'

SYMBOLS

- EXISTING PILE TO REMAIN
- EXISTING PILE TO BE PULLED, TOP CUT OFF, REDRIVEN & RE-TIED.
- NEW PILE TO REPLACE EXISTING PILE (SEE SPECIFICATIONS)
- RENEW CHOCK
- RENEW SECTION OF BACKLOG
- RENEW SPACER BLOCK

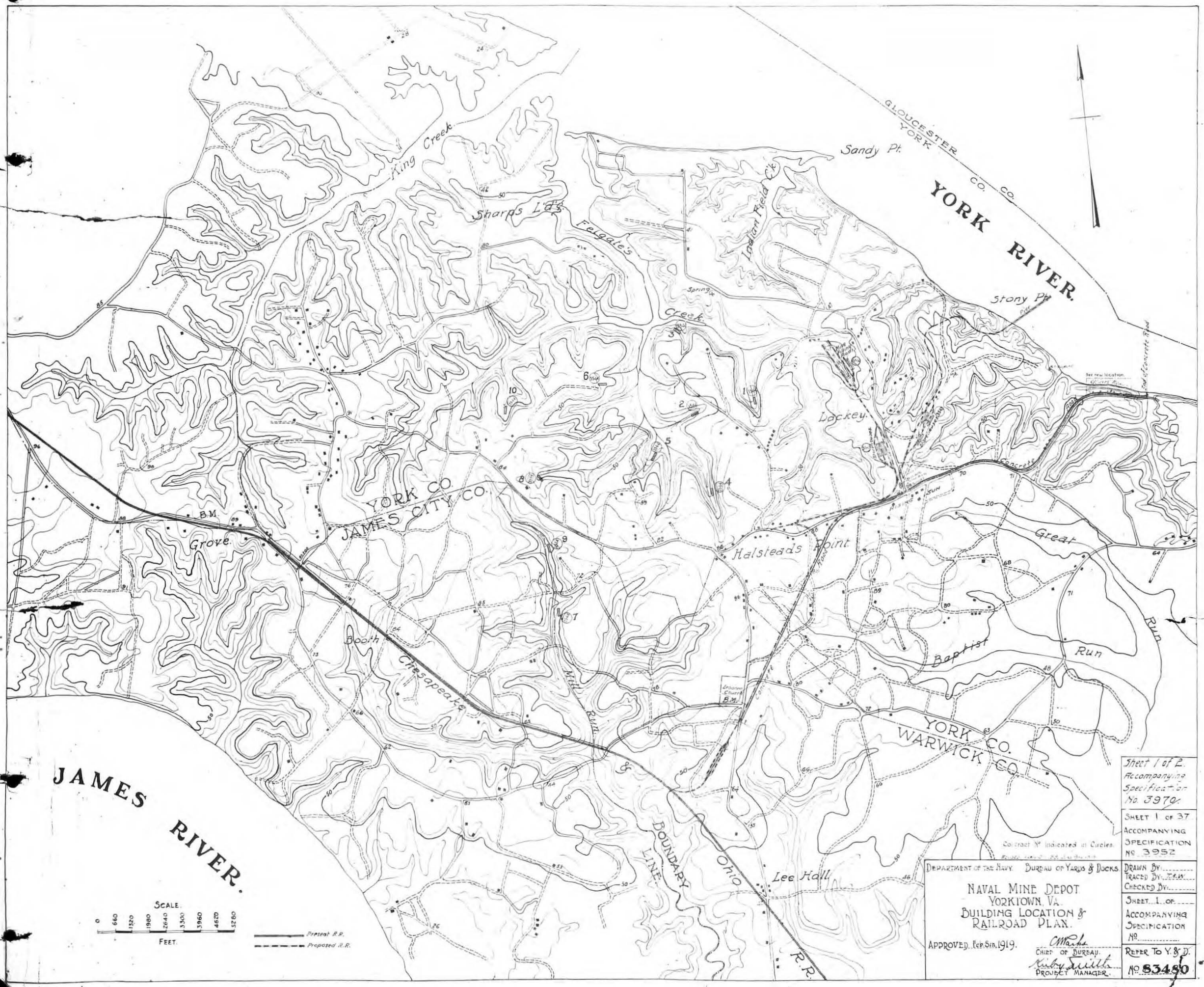
SYMBOL	DESCRIPTION	DATE	APPROVAL
	REVISIONS		

ARCHITECTS JOB NO. 52-44	DEPARTMENT OF THE NAVY DISTRICT PUBLIC WORKS OFFICE — BUREAU OF YARDS & DOCKS 5TH ND NORFOLK, VA.
ARCHITECTS NOV NO. 75738	WILLIAMS, COILE & BLANCHARD ARCHITECTS & ENGINEERS, NEWPORT NEWS, VIRGINIA
DES	U. S. NAVAL MINE DEPOT YORKTOWN VIRGINIA
DRWN Sullivan	
CHK Calvert	
DEPT MGR	
DPWO	REPAIRS TO PIER Nº 2
CHK	
EG MGR H. R. Kallgren	
SR ASST	
DIR DES Cramer	APPROVED _____ DATE 5/21/53
COORD DES	OFFICER IN CHARGE
APPROVED FOR BUREAU OF YARDS & DOCKS	SCALE AS NOTED — SPEC 36510
DPWO FOR CHIEF OF BUREAU	SHEET 1 OF 1 — NO. 75751
DATE 5/21/53	Y&D DRAWING NO. 577721

DPW DRAWING NO. 35769

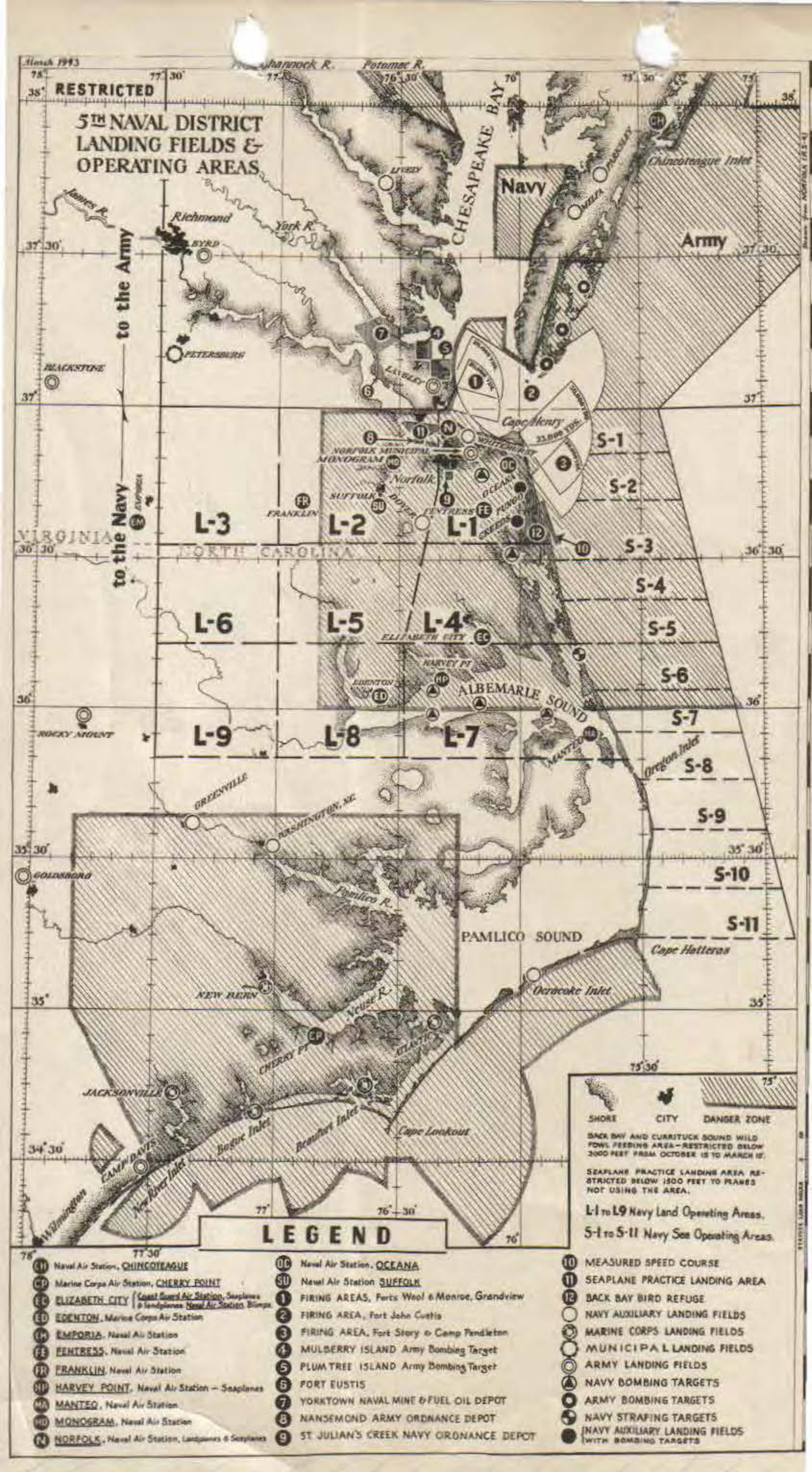
SATISFACTORY TO: E. K. Walker
DATE _____

540-6-?


YORK RIVER.
JAMES RIVER.
GLOUCESTER CO.
YORK CO.
JAMES CITY CO.
YORK CO.
WARWICK CO.
Sandy Pt.
Stony Pt.
King Creek
Sharps L'd's
Felgate's
Creek.
Indian Field Crk.
Lackey.
Halsteads Point
Great
Run
Baptist
Run
Grove.
Booth
Chesapeake
Mill Run
Lee Hall
Ohio
R.R.
BOUNDARY LINE
B.M.
Concrete
Scale.
0 660 1320 1980 2640 3300 3960 4620 5280
Feet.
Present R.R.
Proposed R.R.
Contract No. indicated in Circles.
Sheet 1 of 2.
Accompanying
Specification
No. 3970.
Sheet 1 of 37
Accompanying
Specification
No. 3952
Department of the Navy. Bureau of Yards & Docks.
Naval Mine Depot
Yorktown, Va.
Building Location &
Railroad Plan.
Approved, Feb. 5th, 1919.
Chief of Bureau.
Project Manager.
Drawn By
Traced By
Checked By
Sheet 1 of
Accompanying
Specification
No.
Refer To Y. & D.
No. 83480

Non-Installation Repositories

HR Naval History Museum


March 1943
RESTRICTED
5TH NAVAL DISTRICT
LANDING FIELDS &
OPERATING AREAS
Rappahannock R.
Potomac R.
CHESAPEAKE BAY
Navy
Army
Chincoteague Inlet
James R.
Richmond
York R.
BYRD
PETERSBURG
BLACKSTONE
to the Army
to the Navy
LANGLEY
Cape Henry
NORFOLK MUNICIPAL
MONOGRAM
Norfolk
SUFFOLK
DOVER
FRANKLIN
FENTRESS
OCEANA
PUNGO
CREEDS
VIRGINIA
NORTH CAROLINA
L-1
L-2
L-3
L-4
L-5
L-6
L-7
L-8
L-9
S-1
S-2
S-3
S-4
S-5
S-6
S-7
S-8
S-9
S-10
S-11
ELIZABETH CITY
HARVEY PT
EDENTON
ALBEMARLE SOUND
MANTEO
Oregon Inlet
ROCKY MOUNT
GREENVILLE
WASHINGTON, NC
GOLDSBORO
Pamlico R.
PAMLICO SOUND
Cape Hatteras
Ocracoke Inlet
NEW BERN
Neuse R.
CHERRY PT
ATLANTIC
JACKSONVILLE
Bogue Inlet
Beaufort Inlet
Cape Lookout
CAMP DAVIS
New River Inlet
Wilmington
SHORE
CITY
DANGER ZONE
BACK BAY AND CURRITUCK SOUND WILD FOWL FEEDING AREA—RESTRICTED BELOW 3000 FEET FROM OCTOBER 15 TO MARCH 15.
SEAPLANE PRACTICE LANDING AREA RESTRICTED BELOW 1500 FEET TO PLANES NOT USING THE AREA.
L-1 to L-9 Navy Land Operating Areas.
S-1 to S-11 Navy Sea Operating Areas.
LEGEND
EM Naval Air Station, CHINCOTEAGUE
CP Marine Corps Air Station, CHERRY POINT
EC ELIZABETH CITY (Coast Guard Air Station, Seaplanes & Landplanes. Naval Air Station, Blimps)
ED EDENTON, Marine Corps Air Station
EM EMPORIA, Naval Air Station
FE FENTRESS, Naval Air Station
FR FRANKLIN, Naval Air Station
HP HARVEY POINT, Naval Air Station — Seaplanes
MA MANTEO, Naval Air Station
MO MONOGRAM, Naval Air Station
N NORFOLK, Naval Air Station, Landplanes & Seaplanes
OC Naval Air Station, OCEANA
SU Naval Air Station SUFFOLK
1 FIRING AREAS, Forts Wool & Monroe, Grandview
2 FIRING AREA, Fort John Custis
3 FIRING AREA, Fort Story & Camp Pendleton
4 MULBERRY ISLAND Army Bombing Target
5 PLUM TREE ISLAND Army Bombing Target
6 FORT EUSTIS
7 YORKTOWN NAVAL MINE & FUEL OIL DEPOT
8 NANSEMOND ARMY ORDNANCE DEPOT
9 ST JULIAN'S CREEK NAVY ORDNANCE DEPOT
10 MEASURED SPEED COURSE
11 SEAPLANE PRACTICE LANDING AREA
12 BACK BAY BIRD REFUGE
NAVY AUXILIARY LANDING FIELDS
MARINE CORPS LANDING FIELDS
MUNICIPAL LANDING FIELDS
ARMY LANDING FIELDS
NAVY BOMBING TARGETS
ARMY BOMBING TARGETS
NAVY STRAFING TARGETS
NAVY AUXILIARY LANDING FIELDS WITH BOMBING TARGETS

HRPDC

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT, CORPS OF ENGINEERS
FORT NORFOLK, 803 FRONT STREET
NORFOLK, VIRGINIA 23510

IN REPLY REFER TO

NAOOP-P (York River)
2SD OXZ 1 003723-01

28 November 1977

SUBJECT: Permit for Construction of Boathouse at U.S. Naval Weapons Station, Yorktown, Virginia

Commander
Atlantic Division
Naval Facilities Engineering Command
405:HLK 11460
Norfolk, Virginia 23511

1. In accordance with your request of 27 October 1977, you are hereby authorized under Section 10 of the River and Harbor Act of March 3, 1899 to construct an open-pile timber boathouse alongside an existing pier (R-3) in the York River at the U.S. Naval Weapons Station, Yorktown, Virginia. The boathouse will extend 42 feet off the existing pier on the downstream side and will be 52 feet long. The structure shall be maintained in good repair or completely removed from the waterway.

2. If the work herein authorized is not completed on or before the thirty-first day of December 1980, this authorization, if not previously revoked or specifically extended, shall cease and be null and void.

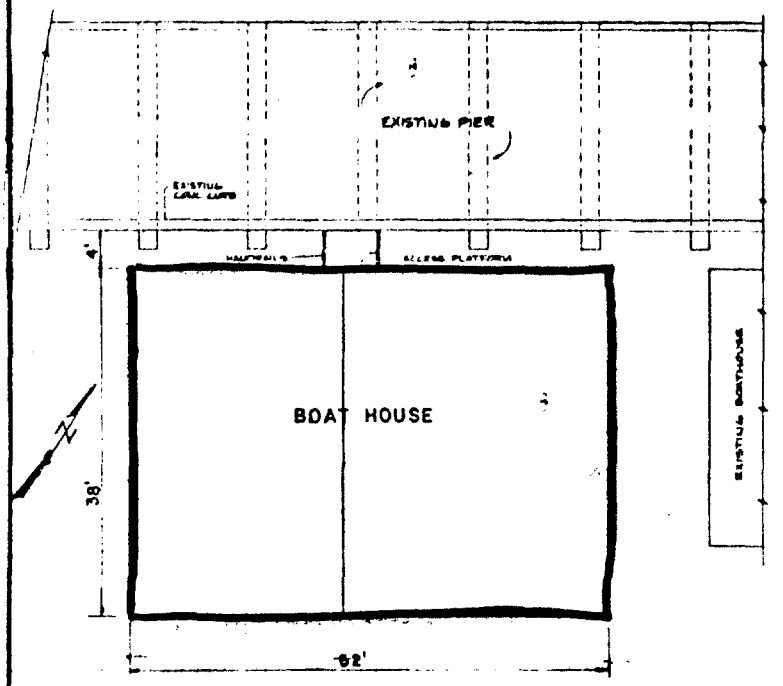
3. This permit is subject to the attached conditions. Please note that Condition (m) requires you to notify this office of certain dates concerning the progress of the work.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

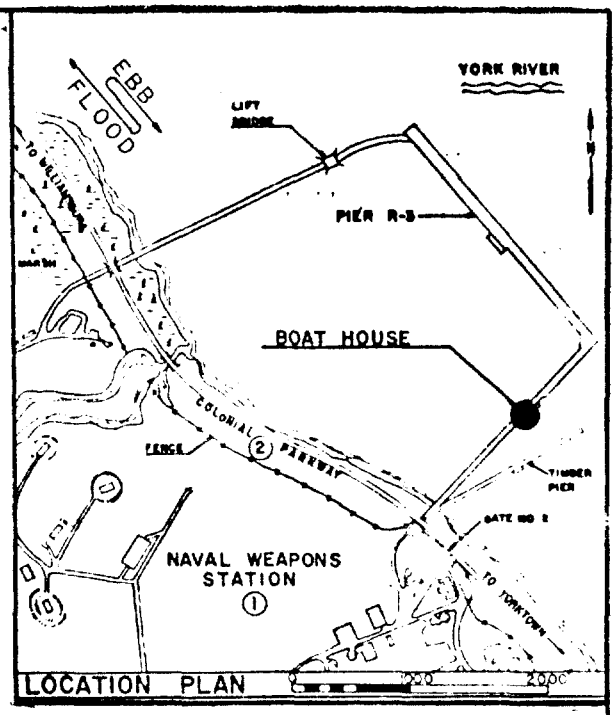
3 Attachments:
1. Drawing
2. Standard Conditions
3. Notice of Authorization

NEWMAN A. HOWARD, JR.
Colonel, Corps of Engineers
District Engineer

Copy furnished w/dwg and conditions:
NOAA, Atlantic Marine Center, Norfolk
Va. Marine Resources Commission, Newport News
Fish & Wildlife Service, Gloucester Point
Environmental Protection Agency, Philadelphia
Virginia Institute of Marine Science, Gloucester Point
National Marine Fisheries Service, Oxford
Fish and Wildlife Service, Annapolis



SITE PLAN 0' 5' 10' 15' 20' 25' 30'

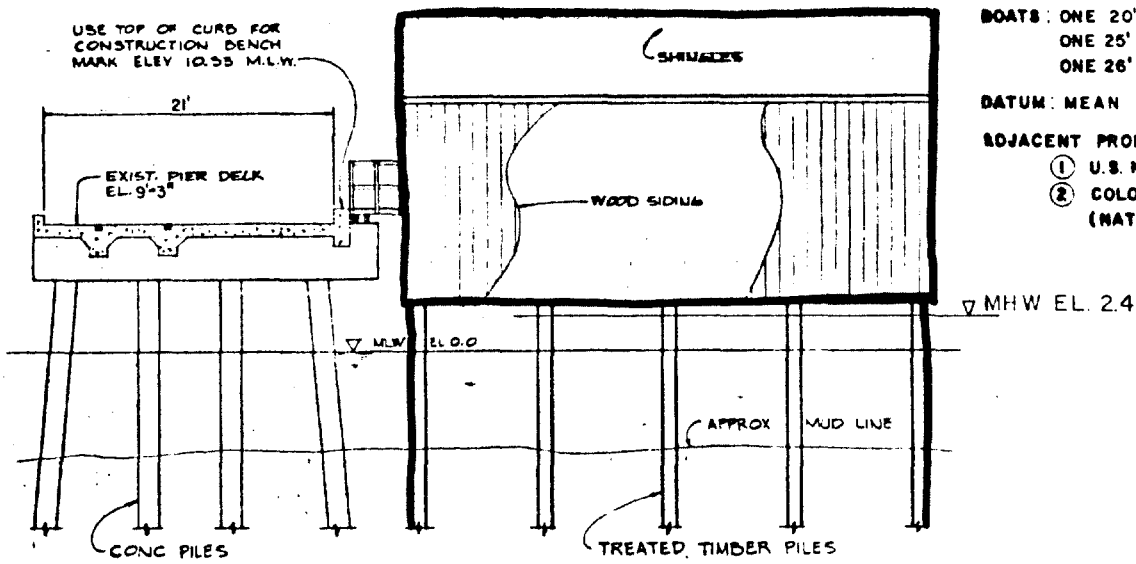


PURPOSE: BOAT HOUSE FOR OIL SPILL CLEAN-UP BOATS

BOATS: ONE 20' UTILITY BOAT
ONE 25' OIL SKIMMER SYS.
ONE 26' FLOATING PLATFORM

DATUM: MEAN LOW WATER

ADJACENT PROPERTY OWNERS:
1. U.S. NAVY
2. COLONIAL PARKWAY (NATIONAL PARKS SERVICE)



ELEVATION 0' 5' 10' 15'

PROPOSED BOAT HOUSE

ON PIER R-3 IN YORK RIVER
AT NAVAL WEAPONS STATION, YORKTOWN
CITY OF YORKTOWN - STATE OF VIRGINIA
APPLICATION BY ATLANTIC DIVITION
NAVAL FACILITIES ENGINEERING COMMAND

DATE: 27 OCT 1977 SHEET 1 OF 1

372-1

STANDARD CONDITIONS

(a) That this instrument does not convey any property rights either in real estate or material, or any exclusive privileges; and that it does not authorize any injury to private property or invasion of private rights, or any infringement of Federal, State or local laws or regulations, nor does it obviate the necessity of obtaining State or local assent required by law for the structure or work authorized.

(b) That the structure or work authorized herein shall be in accordance with the plans and drawings attached hereto and construction shall be subject to the supervision and approval of the District Engineer, Corps of Engineers, in charge of the District in which the work is to be performed.

(c) That the District Engineer may at any time make such inspections as he may deem necessary to assure that the construction or work is performed in accordance with the conditions of this permit and all expenses thereof shall be borne by the permittee.

(d) That the permittee shall comply promptly with any lawful regulations, conditions, or instructions affecting the structure or work authorized herein if and when issued by the Federal Water Quality Administration and/or the State water pollution control agency having jurisdiction to abate or prevent water pollution, including thermal or radiation pollution. Such regulations, conditions or instructions in effect or hereafter prescribed by the Federal Water Quality Administration and/or the State agency are hereby made a condition of this permit.

(e) That the permittee will maintain the work authorized herein in good condition in accordance with the approved plans.

(f) That this permit may, prior to the completion of the structure or work authorized herein, be suspended by authority of the Secretary of the Army if it is determined that suspension is in the public interest.

(g) That this permit may at any time be modified by authority of the Secretary of the Army if it is determined that, under existing circumstances, modification is in the public interest. That permittee, upon receipt of a notice of modification, shall comply therewith as directed by the Secretary of the Army or his authorized representative.

(h) That this permit may be revoked by authority of the Secretary of the Army if the permittee fails to comply with any of its provisions or if the Secretary determines that, under the existing circumstances, such action is required in the public interest.

(i) That any modification, suspension or revocation of this permit shall not be the basis for a claim for damages against the United States.

(j) That the United States shall in no way be liable for any damage to any structure or work authorized herein which may be caused by or result from future operations undertaken by the Government in the public interest.

(k) That no attempt shall be made by the permittee to forbid the full and free use by the public of all navigable waters at or adjacent to the structure or work authorized by this permit.

(l) That if the display of lights and signals on any structure or work authorized herein is not otherwise provided for by law, such lights and signals as may be prescribed by the United States Coast Guard shall be installed and maintained by and at the expense of the permittee.

(m) That the permittee shall notify the District Engineer at what time the construction or work will be commenced, as far in advance of the time of commencement as the District Engineer may specify, and of its completion.

(n) That the legal requirements of all Federal agencies be met.

(o) That this permit does not authorize or approve the construction of particular structures, the authorization or approval of which may require action by the Congress or other agencies of the Federal Government.

(p) That all the provisions of this permit shall be binding on any assignee or successor in interest of the permittee.

(q) That if the recording of this permit shall be binding on any State or local law, the permittee shall take such action as may be necessary to record this permit with the Registrar of Deeds or other appropriate official charged with the responsibility for maintaining records of title to and interests in real property.

(r) That the permittee agrees to make every reasonable effort to prosecute the construction or work authorized herein in a manner so as to minimize any adverse impact of the construction or work on fish, wildlife and natural environmental values.

(s) That the permittee agrees that it will prosecute the construction of work authorized herein in a manner so as to minimize any degradation of water quality.

JOINT PERMIT APPLICATION
FOR ACTIVITIES IN WATERS OF THE COMMONWEALTH OF VIRGINIA

PRIVACY ACT STATEMENT

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of P. L. 92-500 and Section 103 of P. L. 92-532. These laws require permits authorizing structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided in NAO Form 1065 will be used in evaluating the application for a permit. Information in the application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

Please refer to instructions (Page 1) for explanation of numbered items before you begin to fill in the application. If additional space is needed, attach extra 8 X 10-1/2" sheets.

1. Name and address of applicant.

Naval Weapons Station
Yorktown, Virginia 23461

Attention: Mr. Welford Harlan

Telephone no. during business hours
Home A/C ( )
Office A/C (804) 887-4121

2. Name, address and title of authorized agent (if any). Telephone no. during business hours

Mr. Welford Harlan
Naval Weapons Station
Yorktown, Virginia 23461

Home A/C ( )
Office A/C (804) 887-4121

3. Provide a concise description of the proposed activity:

Project requires that a sewage force main be placed approximately 6' below the existing bottom of the York River and will run from an existing sewage pumping station, located on a cargo pier, to a point located on the shore approximately 2,300' away. Project will require that a trench be dredged to allow placement of the proposed force main.

4. Name of waterway at location of activity:

York River a tributary to the Chesapeake Bay

5. Location where proposed activity exists or will occur:

York County — County/City
U.S. Naval Weapons Station — Street, Road or Other descriptive location

approximately 3 miles from Yorktown, Virginia
Name of and distance to local town, community, or other identifying location

6. Proposed use: ☐ Private ☐ Commercial ☒ Government ☐ Other (explain)

Sewage force main to handle waste from cargo ships.

Date Stamp RECEIVED MAY 12 1981

For office use only
Application No. VA 81-0354

NAO Form 1065, 1 June 1977 WRO 30-1

HCB III 5/13/81

7. Project Purpose:

Primary: To provide sewage outfall for existing sewage pumping station

Secondary: None

8. What public benefit may be derived from your project?

Existing sewage force main now runs under the existing pier and tends to freeze during cold weather which tends to stop sewage flow. New buried line will eliminate this situation.

9. Does this proposal involve dumping, filling on, or altering of wetlands (For definition of wetlands see page 3)? ☐ YES ☒ NO If "YES," in your opinion, approximately how much? _____ square feet

10. Will there be any discharge (either direct or indirect) of waste material from construction or operation of the proposed facility into State waters? ☐ YES ☒ NO

11. Is your proposal to be a marina or boatyard or an addition and/or maintenance of same? ☐ YES ☐ NO If "YES," have you obtained the State Health Department's approval for your sanitary facilities as required by Section 62.1-3 of the Code of Virginia: ☐ YES ☒ NO

12. Have you previously applied to, or obtained a permit from, any agency (Federal, State, Interstate, or local) for any structures, construction, discharge, deposits, or other activities described in this application? ☒ YES ☐ NO If "YES," provide the following information:

Issuing Agency	Type of Approval	ID. No.	Appl. Date	Approval Date
	Dredging permit along side of existing pier.			

13. Is any portion of the proposal for which you are seeking a permit now complete? ☒ YES ☐ NO If answer is "YES," give details below. State when the work was completed. Please clearly differentiate on your drawings that portion of the work which is existing and that which is proposed.

Existing sewage force main now is suspended below existing pier and was completed approximately five years ago. This line will be abandoned when new line is installed.

14. Approximately how long will it take to complete the proposed project after construction is begun?

4 months

15. Total cost of the proposed project (Including materials and labor)
$ 200,000

16. Is proposed project adjacent to your highland property?
☒ YES ☐ NO

For office use only
Application No. VA _____

17. Give the names and addresses of all adjoining property owners to the proposed project:

U.S. Government owns this property; no adjacent property owner within close proximity.

18. Give the names and addresses of waterfront property owners across the waterway (if less than 500 feet wide). If work is within a cove, give the names and addresses of property owners located on the cove.

Not Applicable (York River is over 500' wide)

19. Give the names and addresses of known claimants of Water Rights and/or Oyster Planting Grounds:

None

20. List the name and address of the newspaper having general circulation in the area of the project. Failure to complete will delay processing.

Daily Press

21. Check appendices completed and attached as part of this application.

APPENDIX

- ☐ A. Bulkheads, Dredging, Filling, or Riprap
- ☐ B. Piers, Boat Ramps, Moorings, or Marinas
- ☒ C. Submarine/Overhead Crossings
- ☐ D. Jetties, Groins, and Breakwaters

For office use only
Application No. VA _____

ALL APPLICANTS MUST SIGN THIS DOCUMENT. However, it may be signed by a duly authorized agent if the statement of authorization is completed and returned.

I hereby make application for permits and a Certificate of Water Quality Compliance (401), if required, to authorize the activities I have described herein. Upon my signature, I agree to allow the duly authorized agents of the Marine Resources Commission, Army Corps of Engineers, National Marine Fisheries Service, Environmental Protection Agency, U. S. Fish and Wildlife Service, State Water Control Board, State Health Department, local wetlands board, if applicable, and the Virginia Institute of Marine Science to enter upon the premises of the proposed project at a reasonable time for the purpose of inspection.

The permittee agrees, as evidenced by acceptance of the permit or certificate granted and payment of the consideration, to comply with all of the terms and conditions as set forth in the permit or certificate. The Permittee further agrees that the project will be constructed within the boundaries as outlined in the drawings attached hereto. (In the case of a dredging permit, the Permittee agrees that the dredging and disposal material will be confined within the boundaries as outlined in the drawings attached hereto.)

I hereby certify that the information submitted in this application is true and accurate to the best of my knowledge, and that I possess the authority to undertake the proposed activity

8 May 19 81
Date

WELFORD HARLAN
APPLICANT'S/AGENT'S NAME (PRINTED/TYPED)

Welford Harlan ENGRG.TECH,GS-11
APPLICANT'S/AGENT'S SIGNATURE AND TITLE

STATEMENT OF AUTHORIZATION

I hereby designate and authorize Welford Harlan (AGENT) to act on my behalf as my agent in the processing of this permit application and to furnish, upon request, supplemental information in support of the application.

J. A. BUCK, CAPT.,USN
COMMANDING OFFICER
JAMES F. MORTON,By direction
APPLICANT'S NAME (PRINTED/TYPED)

James F. Morton
APPLICANT'S SIGNATURE

NAVAL WEAPONS STATION
YORKTOWN, VIRGINIA

NOTE: Mail the original application (pages 5 - 8) and applicable appendices (pages 9 - 15) with attached drawing(s) to the Marine Resources Commission, Environmental Affairs Division, P. O. Box 756, Newport News, Virginia 23607.

BULKHEADS, DREDGING, FILLING, OR RIPRAP

ACTIVITIES (CHECK APPROPRIATE BOXES FOR APPLICABLE SECTION TO BE USED)

☐ A. BULKHEADING ☒ B. DREDGING ☐ C. FILLING ☐ D. RIPRAP

A. BULKHEADING: Please reflect answers to the following on application drawings:

1. What type of material will be used for construction of the bulkhead? (Reinforced concrete; steel sheet pilings; treated tongue-and-groove timber; etc.)

   Not Applicable

2. Is the proposal considered "MAINTENANCE" of an existing bulkhead?
   ☐ YES ☐ NO

3. Is it possible to construct your new bulkhead not more than two (2) feet channelward of the old deteriorated bulkhead which is to be replaced?
   ☐ YES ☐ NO

4. Will deadmen be utilized? (See sample drawing page 18 for "DEADMEN" illustration.)

   ☐ N/A ☐ YES ☐ NO If "NO," explain below methods to be used to anchor bulkhead. If "YES," explain type and location:

5. Will the bulkhead be placed landward of the mean high water line? ☐ YES ☐ NO

6. Will the bulkhead be placed channelward of the mean low water line? ☐ YES ☐ NO

7. Will wooden materials be:

   ☐ SALT TREATED ☐ CREOSOTE TREATED ☐ OTHER (Explain)

8. Will all metal fittings and cables or tie rods be galvanized? ☐ YES ☐ NO

9. Will both ends of the proposed bulkhead have return walls to prevent the bulkhead from being outflanked by normal or storm tides? ☐ YES ☐ NO

10. Will both ends be tied into existing bulkheads which are in good repair?
    ☐ YES ☐ NO

11. Will the bulkhead be backfilled? ☐ YES ☐ NO If "YES," please complete Part C, Appendix A, for Filling.

B. DREDGING: Please reflect answers to the following on the application drawings:

1. How many cubic yards of dredged material will you dredge channelward of mean low water line? 2,000 cubic yards (SEE EXAMPLE CALCULATION ON PAGE 23)

2. How many cubic yards of dredged material will you dredge between the mean high and mean low water line? 500 cubic yards (SEE EXAMPLE CALCULATION ON PAGE 23)

B. DREDGING (CONTINUED)

3. What method will be used to perform the dredging?

Amount hydraulically dredged: _____ cubic yards

Amount dragline (clamshell) dredged: 2,500 cubic yards

4. What are the characteristics (type and composition of the dredged material)? Sandy material

5. What is the location of the disposal area? (IN RELATION TO THE DREDGED AREA, WHERE WILL THE SPOIL BE PLACED?)

Request that contractor be allowed to place material on barges during construction and replace dredged material in trench after pipe is in place.

6. How will the spoil be retained? (BY BULKHEAD, EARTHEN BERM, LEVEES, ETC.)

Not Applicable

Note: Bottom samples to determine heavy metal or other toxic material must be taken and analyzed if deemed necessary by the State Water Control Board staff and/or the Corps of Engineers. The responsibility, as well as the expenses incurred for obtaining and analyzing these samples, will be borne by the applicant.

C. FILLING: Please reflect answers to the following on the application drawings:

1. Will there be fill placed between the mean high and mean low water line?
☐ YES ☒ NO If "YES," indicate number of cubic yards _____.

2. Will there be fill placed channelward of the mean low water line?
☐ YES ☒ NO If "YES," indicate number of cubic yards _____.

3. Will the fill be one of the following: ☐ A. Hauled in from upland sources. ☐ B. Obtained from dredged material. Not Applicable

4. What will be the method of placement of the fill material? N/A

5. What are the characteristics (type and composition) of the fill material? N/A

6. What is the total area to be filled? N/A square feet

7. What is the total area of wetlands to be filled? N/A square feet

D. What type of ground cover will be provided for denuded areas associated with the proposed activity to arrest soil erosion and prevent sediment from reaching State waters? N/A

E. Describe type of structure, if any, to be erected on filled area.

None

SUBMARINE/OVERHEAD CROSSING

Please reflect answers to the following on application drawings:

1. What is the purpose of the submarine/overhead crossing? _____

   Underwater (buried below bottom) sewage force main

2. Briefly outline procedure(s) for placement of submarine/overhead structure:

   Dredge trench, place new pipe in trench and with dredged material, cover pipe. Dredge material will be stored on barges during construction.

3. Distance submarine/overhead structure will cross State-owned bottom (from mean low water to mean low water) No feet

4. Will dredging or filling be required? ☒ YES ☐ NO If "YES," insure completion of APPENDIX A.

5. Will there be any permanent towers, poles, platforms, or other structures (excluding submarine cable) on State-owned bottom or wetlands?
   ☐ YES ☒ NO If "YES," give description and number of structures. (The location of all structures must be shown on the attached drawings or the application cannot be processed.)

6. What depth will submarine crossing be placed below bottom? 6 feet

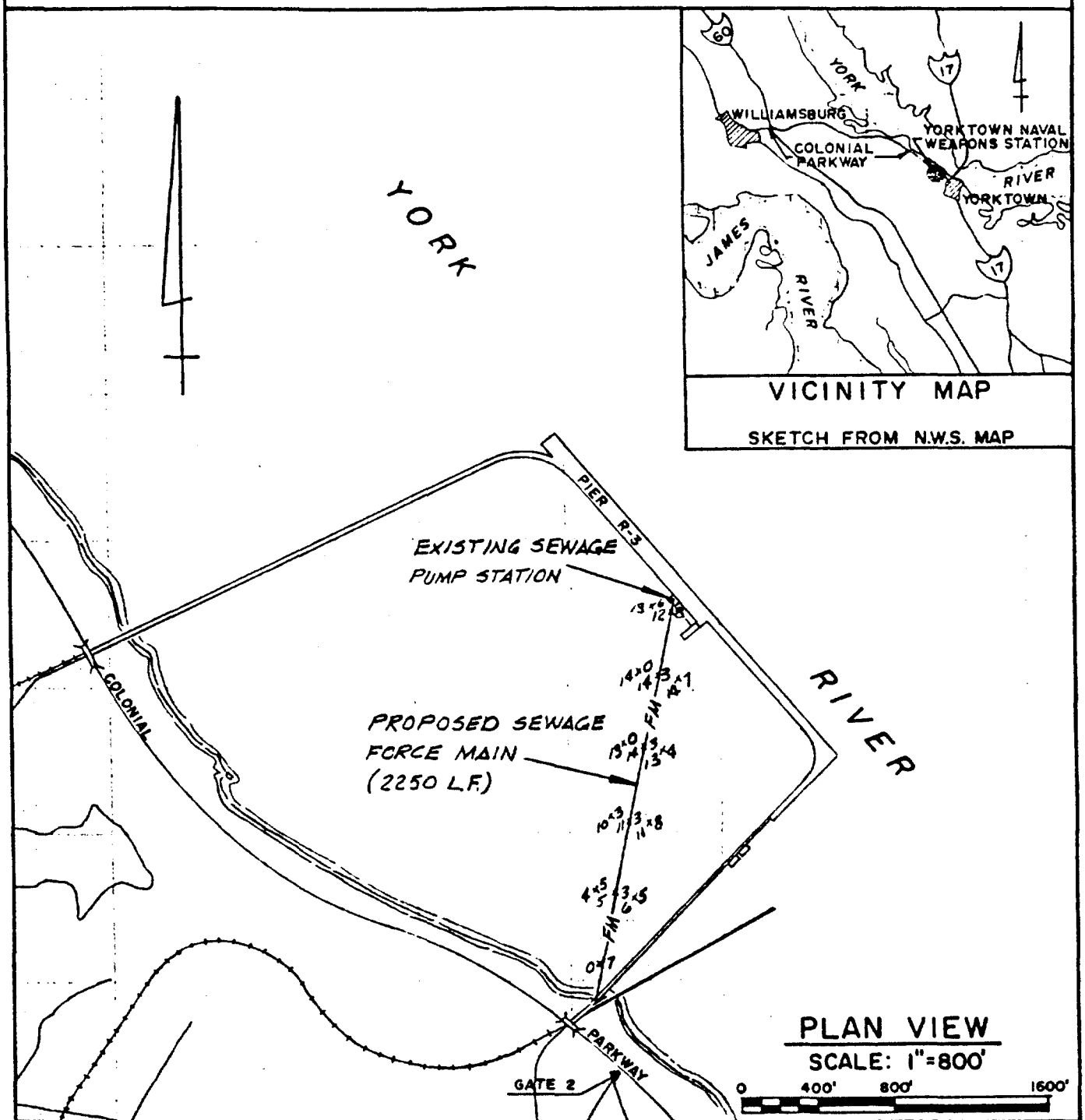
7. What is the vertical clearance from the surface of the water at mean high tide to overhead crossing's lowest point? In areas above tidal influence, give the vertical clearance above the 100 year flood level. 16 feet

8. If there are overhead crossings in the general vicinity, how high are they above the water surface at mean high tide or the 100-year flood level? None feet

9. What is the nominal system voltage kilovolt? None

VICINITY MAP

SKETCH FROM N.W.S. MAP



PLAN VIEW

SCALE: 1"=800'

PURPOSE: DREDGING FOR NEW SEWAGE FORCE MAIN

DATUM: M.L.W.

ADJACENT PROPERTY OWNERS:

1 COLONIAL NATIONAL HISTORICAL PARK

2 CITY OF YORKTOWN

3

GEORGE F. HOGGARD & ASSOCIATES, INC.

ENGINEERS - PLANNERS

SURVEYORS

PORTSMOUTH, VIRGINIA

PROPOSED FORCE MAIN, DREDGING

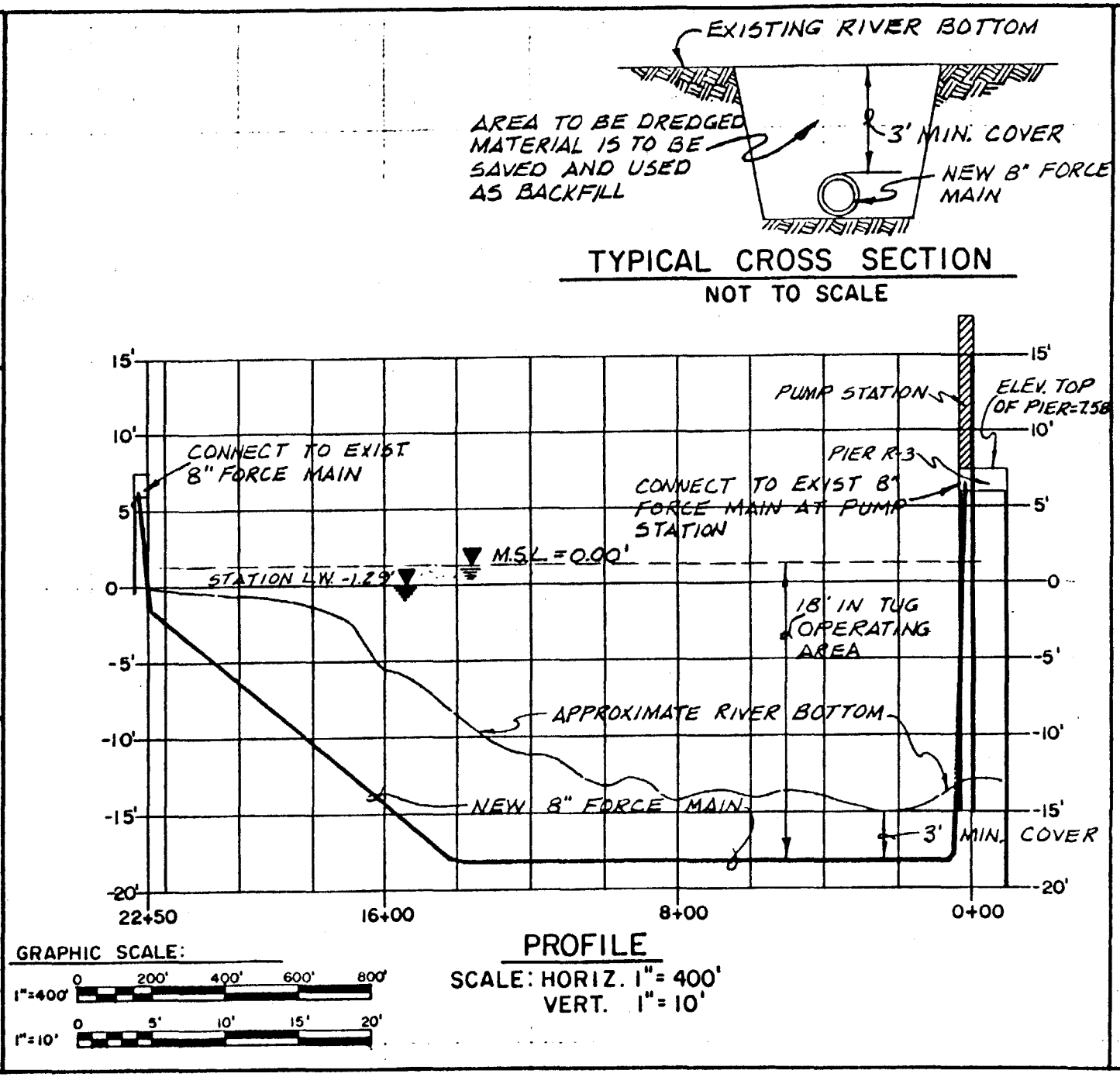
IN YORK RIVER

AT YORKTOWN NAVAL WEAPONS STATION

COUNTY OF YORK STATE VA.

APPLICATION BY: G.F. HOGGARD

SHEET 1 OF 2 DATE



PURPOSE: DREDGING FOR NEW SEWAGE FORCE MAIN

DATUM: M.L.W.

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1 COLONIAL NATIONAL HISTORICAL PARK

2 CITY OF YORKTOWN

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GEORGE F. HOGGARD & ASSOCIATES, INC.

ENGINEERS - PLANNERS

SURVEYORS

PORTSMOUTH, VIRGINIA

PROPOSED FORCE MAIN, DREDGING

IN YORK RIVER

AT YORKTOWN NAVAL WEAPONS STATION

COUNTY OF YORK STATE VA.

APPLICATION BY: G.F. HOGGARD

SHEET 2 OF 2 DATE

Cal 8/24/84

MEMORANDUM

DATE: August 22, 1984

REQUEST FOR AGENCY EVALUATION OF PERMIT APPLICATION # 84-0875

TO: [X] VIMS [X] SWCB [X] SHD-BWE [X] SHD-BSS [X] VHLC [] ____ [] ____ [] ____ [] ____

FROM: Virginia Marine Resources Commission, Environmental Division

Attached is a permit application from Naval Facilities Engineering Command for your review and evaluation. Your evaluation is requested no later than September 12, 1984 in order to permit expeditious processing. By statute, we are obliged to refer an objection by any State Agency to the full Commission in public hearing.

An unacceptable evaluation will be considered an AGENCY OBJECTION. Evaluations suggesting modifications or indicating that the proposal is unacceptable should include attached justification.

Tony R. Watkinson
Environmental Engineer
(Tony R. Watkinson)

****

AGENCY EVALUATION

I have conducted a thorough review of the proposed project based upon the statutory perspectiv of this agency and my evaluation is that:

[] the proposed project is ACCEPTABLE.

[] certain aspects of the proposal are objectionable and unless the attached suggested modifications are incorporated, the project is UNDESIRABLE (see attached).

(Suggested modifications should be provided to the applicant expeditiously for his consideration).

[] there are aspects that are objectionable and in our opinion not reconcilable; therefore, the project is UNACCEPTABLE (see attached).

(Will be considered an AGENCY OBJECTION requiring review by the full Commission in accordance with Section 62.1-3.01(b) of the Code of Virginia; it must be fully justified and may require appearance to testify at public hearing).

Was a field investigation of the proposal performed by a member of your Agency?

____ Yes ____ No

Date of investigation ____

Name of investigator ____

BY ____

TITLE ____

AGENCY ____

DATE ____

FOR STATE WATER CONTROL BOARD ONLY:

[] CERTIFICATE REQUIRED [] NO CERTIFICATE REQUIRED

4/81

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

TELEPHONE NO.
444-9784

IN REPLY REFER TO
11010
405:PES:srw
30 July 1984

RECEIVED
AUG 3 1984
MARINE RESOURCES COMMISSION
By_____

Virginia Marine Resources Commission
Post Office Box 756
Newport News, Virginia 23607

Gentlemen:

There is a continuing requirement for Maintenance Dredging at the Yorktown Naval Weapons Station, Yorktown, Virginia. Variations in silting rates and the uncertainty of available funds make it most difficult to project Maintenance Dredging requirements with any degree of accuracy. The ability to respond in a timely matter to urgent needs for Maintenance Dredging is often further constrained by necessity to obtain permits on a job by job basis.

The existing Maintenance Dredging permit (#2 SD 0x2 1 003553) expired 31 December 1981.

It is requested that a 10 year Maintenance Dredging permit be issued to this Command for Yorktown Fuel Pier as listed and delineated on enclosures (1), and (2).

The Navy will continue to notify the Corps of Engineers by letter on particular areas to be dredged advising specific times and conditions. It is further suggested that when the permits are granted, the special conditions be updated to eliminate time restrictions for accomplishing dredging.

Your prompt attention to this request will be appreciated as some Maintenance Dredging is presently being planned for late 1984 and 1985. If additional information is needed, please contact Mr. E. L. Fulford, telephone 444-9905.

E. L. Fulford
E. L. FULFORD
Head, Civil Engineering Branch
Engineering and Design Division
By direction of the Commander

Enclosure
(1) Permit Drawings
(2) Application Form

BASIC APPLICATION FORM
JOINT PERMIT APPLICATION FOR ACTIVITIES IN WATERS OF THE COMMONWEALTH OF VIRGINIA

Please refer to the definitions on page 4-7 and explanations on page 8-10 before you begin to complete this application. PLEASE ANSWER ALL QUESTIONS ON THE BASIC APPLICATION FORM. IF A QUESTION DOES NOT APPLY TO YOUR PROJECT, WRITE NOT APPLICABLE (N/A) IN THAT BLOCK. PLEASE PRINT OR TYPE. USE BLACK INK, (BLUE INK OR PENCIL ARE NOT EASILY REPRODUCIBLE; THEREFORE NEITHER WILL BE ACCEPTED). If additional space is needed, attach extra 8-1/2" X 11" sheets of paper.

1. **Applicant's (Property Owner's) name and complete address:**

   Commander
   Atlantic Divisiion
   Naval Facilities Engineering Command
   Norfolk, VA 23511

   Telephone number:
   Home (A/C) _____
   Work (A/C) _____

2. **Authorized agent's name and complete address (if applicable):**

   Ernest L. Fulford
   Atlantic Division, Code 405
   Naval Facilities Engineering Command
   Norfolk, VA 23511

   Telephone number:
   Home (A/C) _____
   Work (A/C 804) 444-9905

3. **Have you obtained a contractor for the project?** ☐ **YES** ☒ **NO** **If your answer is "YES", complete the remainder of this question and submit the Applicant's and Contractor's Acknowledgement Form on page 17 with your application.**

   Contractor's name and complete address:

   Telephone number:
   Home (A/C) _____
   Work (A/C) _____

4. **List the name and address of the newspaper having general circulation in the area of the project. Failure to complete this question may delay Local and State processing.**

   Daily Press Inc.
   7505 Warwick Blvd.
   Newport News, Virginia 23607

FOR OFFICE USE ONLY
Date Stamp

AUG 3 1984

MARINE RESOURCES COMMISSION

Application No. VA 84-0875

NAO Form 1065, Rev 1 Mar 83/VMRC 30-300

13. Does the project involve filling, alteration or development of wetlands?
☐ YES ☒ NO ☐ UNCERTAIN If your answer is "YES", what will be the approximate total of:

A. vegetated wetlands area(s) to be impacted? _____ square feet

B. nonvegetated wetlands area(s) to be impacted? _____ square feet

(See page 36 for How to Calculate Square Feet.) Also, if your answer is "YES" or "UNCERTAIN" contact the Corps for an on-site meeting before submitting this application.

14. Will there be any discharge (either direct or indirect) of waste material from construction or operation of the project into State waters? ☐ YES ☒ NO

15. If the project will be a marina or other places where boats are moored or an addition to or maintenance of the same, have you obtained the State Health Department's approval for sanitary facilities? ☒ YES ☐ NO ☐ N/A
If your answer is "NO", contact your Local Health Department. You are required by Section 62.1-3 of the Code of Virginia to obtain this approval or a variance before a VMRC permit can be issued.

16. Have you previously applied to, or obtained a permit from, any agency (Interstate, Federal, State or Local) for any portion of the project described in this application? ☒ YES ☐ NO ☐ UNCERTAIN If your answer is "YES", provide the following information:

Issuing or Denying Agency	Type of Action	ID No.	Application Date	Action Date
U.S. Army C.O.E.	Approved	2SD OXZ 1 003553	July 5, 77	Dec 27, Expiration d Dec 31, 81

17. Has any work commenced or has any portion of the project for which you are seeking a permit been completed? ☐ YES ☒ NO If your answer is "YES", give detail below. State when the work was completed and who performed the work. Please clearly differentiate on your drawings that portion of the work which has been completed from that which is proposed.

18. Approximately how long will it take to complete the project after all required permits have been issued? 6 months

19. Approximate total cost of the project (including materials and labor):
$ 2,000,000

5. Have you discussed the project with any representative(s) of the Local, State or Federal regulatory agencies? ☐ YES ☒ NO If your answer is "YES", complete the information below concerning the on-site pre-application meeting.

Name of Representative(s): _____
Name of Agency: _____
Date: _____

If your answer is "NO", and you wish an on-site inspection, contact one of the pertinent agencies as listed on page i.

6. Provide a concise description of the project.

Pier R-3 is used for the berthing of Naval Ships and requires maintenance dredging ever 8 years of Approx. 400,000 Cu Yds of mud and silt.

7. Name of the water body at the location of the project:

York River a tributary to _____

8. The water body at the project site is: (check one on A and check one on B)

A. ☒ natural ☐ man-made ☐ uncertain
B. ☒ tidal ☐ non-tidal ☐ uncertain

9. Location where project exists or will take place:

Yorktown, Virginia
County/City

Pier R-3, Yorktown Naval Weapons Station
Street, road or other descriptive location (lot #, tract, section, subdivision, etc.)

For rural area: Name of and distance to local town, community, or other identifying location

10. Proposed use (check one):
☐ Private ☐ Commercial ☒ Government ☐ Other (explain below):

11. Primary purpose of the project:

To maintenance dredge existing pier slips

Secondary purpose of the project:

12. Will any public benefit be derived from the project? ☒ YES ☐ NO ☐ UNCERTAIN
If your answer is "YES", explain below.

National Defense

20. Have you discussed this project with all adjacent property owners and had them sign the Adjacent Property Owner's Acknowledgement Form on page 16? ☐ YES ☒ NO
If your answer is "NO", refer to page 9, explanation number 20.

21. Give the names and complete addresses of all adjacent property owners to the project.

National Park Service

22. Give the names and complete addresses of all waterfront property owners across the waterway from the project, if the body of water is less than 500 feet wide. If the project is within a cove, give the names and addresses of all property owners located on the cove.

None

23. Give the names and addresses of known claimants of Riparian Rights and/or Oyster Planting Grounds in the vicinity of the project:

None

24. Check the appendices below which apply to your project. (NOTE: The applicable appendices must be completed and submitted as part of your application).

LIST OF APPENDICES

		PAGE
___ A.	Piers, Marginal Wharves, Boathouses or Marinas or Moorings	18
___ B.	Boat Ramps	21
___ C.	Bulkheads and Fill	22
___ D.	Riprap	25
X E.	Dredging or Excavating	27
___ F.	Jetties, Groins or Breakwaters	29
___ G.	Intake or Outfall Structures	31
___ H.	Channel Modifications or Impoundment Structures (Dams)	33
___ I.	Submarine or Overhead Crossings	35

REMINDER: UPON COMPLETION OF ALL NECESSARY SIGNATURES AND APPLICABLE FORMS (PAGES 11-15), BE SURE TO COMPLETE THE APPENDIX(CES) YOU CHECKED ABOVE. AFTER COMPLETION OF APPROPRIATE APPENDIX(CES), TURN TO THE SAMPLE DRAWINGS INFORMATION ON PAGE 37 AND COMPLETE YOUR APPLICATION DRAWINGS.

BASIC APPLICATION FORM (Continued)

ALL APPLICANTS MUST SIGN THIS DOCUMENT OR THE STATEMENT OF AUTHORIZATION. If the Statement of Authorization below is completed and returned with this application all future application correspondence may be signed by a duly authorized agent.

I hereby make application for permits and a Certificate of Water Quality Compliance (401), if required, to authorize the activities I have described herein. Upon my signature, I agree to allow the duly authorized representatives of the Local Wetlands Board, Virginia Marine Resources Commission, State Water Control Board, State Health Department, the Virginia Institute of Marine Science, Shoreline Erosion Advisory Service, Virginia Soil and Water Conservation Commission, U. S. Army Corps of Engineers, National Marine Fisheries Service, Environmental Protection Agency, U. S. Fish and Wildlife Service, and the Tennessee Valley Authority to enter upon the premises of the project site at reasonable times for the purpose of inspection.

I hereby certify that the information submitted in this application is true and accurate to the best of my knowledge.

30 July 19 84
DATE

Ernest L. Fulford

APPLICANT'S/AGENT'S SIGNATURE

ERNEST L. FULFORD, P.E.
Head, Civil Engineering Branch
APPLICANT'S/AGENT'S NAME (PRINTED/TYPED)

STATEMENT OF AUTHORIZATION

I hereby designate and authorize ERNEST L. FULFORD, P.E. (AGENT'S NAME to act on my behalf as my agent in the processing of this permit application and to furnish, upon request, supplemental information in support of the application. (The agent must sign the signature block above.)

APPLICANT'S SIGNATURE

C. P. O'NEILL, Captain, CEC, USN
APPLICANT'S NAME (PRINTED/TYPED)

Reminder: Upon completion of all necessary signatures, applicable forms (pages 11-15), appendix(ces) and drawings, mail to:

Virginia Marine Resources Commission
Environmental Affairs Division
P. O. Box 756
Newport News, Virginia 23607

APPENDIX E
DREDGING OR EXCAVATING

NOTE 1 - If dredging for borrow material, minerals, etc., a permit may be required from

Virginia Department of Conservation and Economic Development
Division of Mined Land and Reclamation
Drawer U
Big Stone Gap, Virginia 24219
(703) 523-2925

NOTE 2 - If dredged material is to be placed in a disposal site, a separate map showing the location of the disposal site should be attached. This drawing must indicate the proposed retention levees, weirs, spillways, and/or devices for retaining the materials.

NOTE 3 - Bottom samples to determine heavy metals or other toxic materials must be taken and analyzed if deemed necessary by the Virginia State Water Control Board staff or the US Army Corps of Engineers. The responsibility, as well as the expense incurred for obtaining and analyzing these samples, will be borne by the applicant.

NOTE 4 - See page 36 How to Calculate Square Feet and Cubic Yards

NOTE 5 - If maintenance dredging is to be done, evidence of previous dredging must be provided (see question 16 on page 13). Any previously-issued permit with drawings which indicates the date the dredging occurred, the area involved and dredging depth constitutes acceptable proof.

NOTE 6 - Please make sure answers to all of the the questions in this appendix correspond to information on the application drawings.

---

1. What will the dimensions of the dredged or excavated area relative to mean low water (for tidal areas only) or ordinary high water (for non-tidal areas only)?
   * - See Permit Dwgs
   _____ length _____ depth _____ base width _____ top width

2. This dredging or excavation is considered to be:
   (check one) [ ] new [X] maintenance [ ] both

3. How many cubic yards of material will be dredged or excavated channelward of the mean high water line (for tidal areas only) or ordinary high water line (for non-tidal areas only)?

   A. new -0- cubic yards

   B. maintenance 400,000 cubic yards

   C. total amount 400,000 cubic yards

4. How many cubic yards of the new material (as indicated in question 3) will be dredged or excavated on subaqueous land? N/A cubic yards

5. How many cubic yards of total material will be dredged or excavated by:

   A. hydraulic -0- cubic yards

   B. clamshell (dragline) 400,000 cubic yards

   C. other (explain below) -0- cubic yards

6. State the type and composition percentage of the dredged or excavated material (e.g. clay 25%, sand 25%, silt 50%) silt 100%

7. How will the dredged or excavated material be transported to its disposal area?

   Barge

8. How will the dredged or excavated material be retained to prevent re-entry into the water body (e.g. bulkhead, earthen berm, hay bales, levees, etc.)?

   N/A

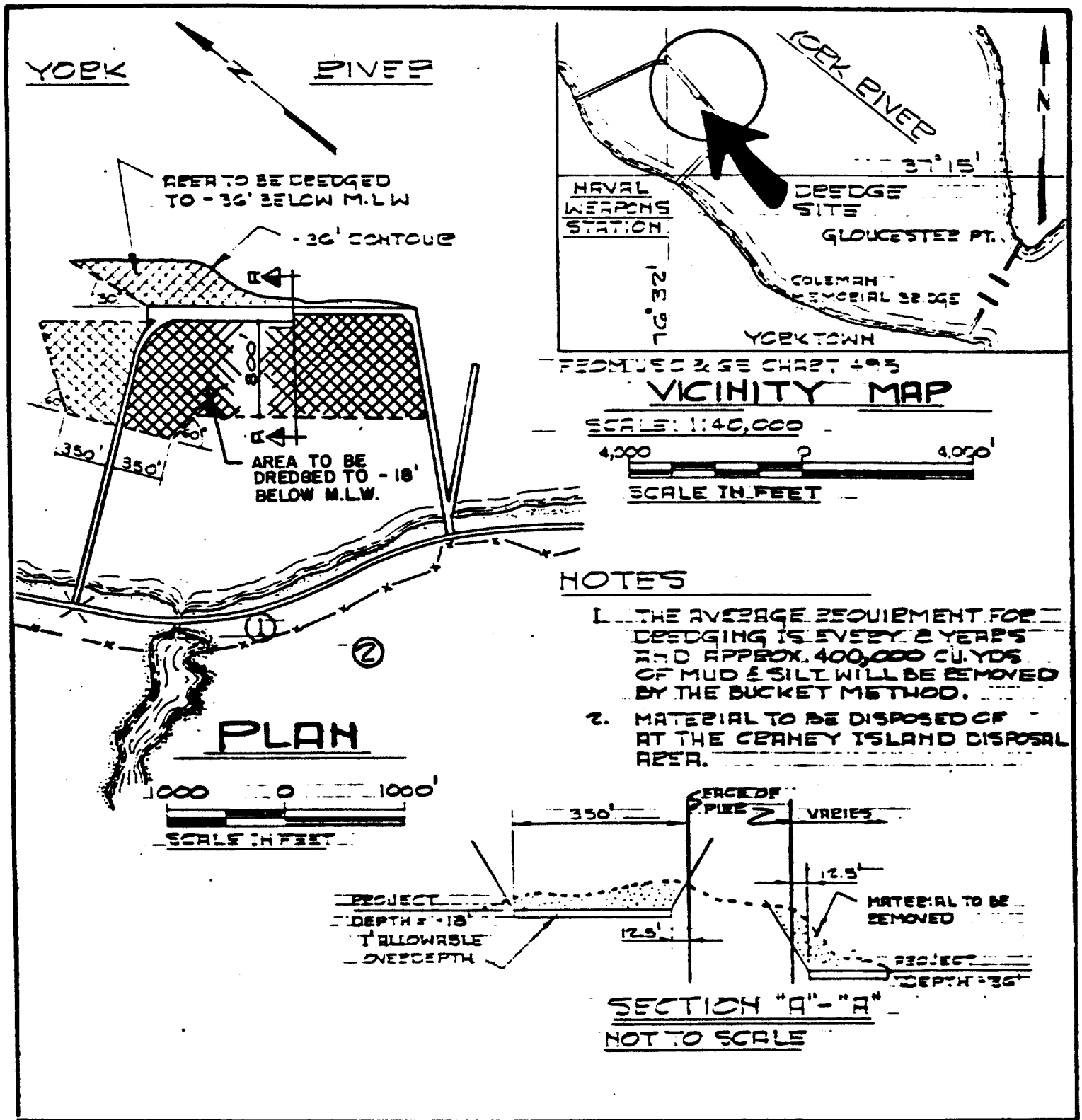
9. What is the size of the disposal site (see Note 2 above)? N/A

   _____ surface area

   _____ ponding depth

   _____ levee height

10. Will you make any commercial use of the dredged material? ___ YES X NO
    If your answer is "YES", explain: _____



PURPOSE: MAINTENANCE DREDGING DATUM: MEAN LOW WATER = 0.00 ADJACENT PROPERTY OWNERS 1. NATIONAL PARK SERVICE 2. U.S. NAVY	PLAN AND SECTION	PROPOSED DREDGING IN YORK RIVER AT U.S. NAVAL WEAPONS STATION CITY OF YORKTOWN STATE VA. APPLICATION BY ATLANTIC DIV. NAVAL FACILITIES ENGR. COMM. SHEET 1 OF 1 DATE 8-15-84

Kirk JAN. 24 1992

BASIC APPLICATION FORM

JOINT PERMIT APPLICATION FOR ACTIVITIES IN WATERS OF THE COMMONWEALTH OF VIRGINIA

Before you complete this application please refer to the definitions on pages 5-8 and explanations on pages 9-11. PLEASE ANSWER ALL QUESTIONS ON THE BASIC APPLICATION FORM. IF A QUESTION DOES NOT APPLY TO YOUR PROJECT, WRITE NOT APPLICABLE (N/A) IN THAT BLOCK. PLEASE PRINT OR TYPE. **USE BLACK INK (BLUE INK OR PENCIL ARE NOT EASILY REPRODUCIBLE; THEREFORE, NEITHER WILL BE ACCEPTED)**. If additional space is needed, attach extra 8-1/2" x 11" sheets of paper.

1. Applicant's (Property owners) name and complete address:

   Commander
   Atlantic Division
   Naval Facilities Engineering Command
   Norfolk, VA 23511-6287

   Telephone number:
   Home (A/C)_____
   Work (A/C 804) 444-9653

2. Authorized agent's name and complete address (if applicable):

   James E. Butler
   Code 405
   Atlantic Division
   Naval Facilities Engineering Command
   Norfolk, VA 23511-6287

   Telephone number:
   Home (A/C)_____
   Work (A/C 804) 444-9905

3. Have you obtained a contractor for the project? |_| YES |X| NO If your answer is "YES", complete the remainder of this question and submit the Applicant's and Contractor's Acknowledgment Form on page 21 with your application.

   Contractor's name and complete address:

   Telephone number:
   Home (A/C)_____
   Work (A/C)_____

FOR OFFICE USE ONLY
Date Stamp

Application No. 92-0085-3

By_____

NAO Form 1065, Rev 10 May 85/VMRC 30-300

BASIC APPLICATION FORM (Continued)

4. List the name, address, and telephone number of the newspaper having general circulation in the area of the project. Failure to complete this question may delay Local and State processing.

   Name Daily Press and Times Herald
   Address 7505 Warwick Boulevard
   Newport News, Virginia 23607
   Telephone #(804) 244-8421

5. Have you discussed the project with any representative(s) of Local, State, or Federal regulatory agencies? |X| YES |_| NO If your answer is "YES", complete the information below concerning the on-site pre-application meeting.

   Name of Representative(s): Mark Harrell

   Name of Agency: Corps of Engineers

   Date: _____

   If your answer is "NO", and you wish an on-site inspection before submitting this application, contact one of the pertinent agencies as listed on pages b and c.

6. Provide a brief description of the project.
   Pier R-3 is used for the operation and berthing of naval ships and requires maintenance dredging every 8 years. Current condition soundings indicate the approach and north side berthing area will require the removal of 250,000 cubic yards and the inboard side of pier 75,000 cubic yards. Normal cycle 400,000 cubic yards every 8 years.

7. Name of the water body at the project location:

   York River a tributary to _____

8. The water body at the project site is: (check one on line A and check one on line B)

   A. |X| natural |_| man-made |_| uncertain

   B. |X| tidal |_| non-tidal |_| uncertain

9. Location of the project:

   Yorktown, Virginia — County/City
   Yorktown Naval Weapons Station — Street, road or other descriptive location (lot #, tract, section, subdivision, etc.)

   Name of and distance to local town, community, or other identifying landmark (For Rural Areas):

10. Proposed use (check one):

    |_| Private |_| Commercial |_| Industrial |X| Government |_| Other (explain below):

BASIC APPLICATION FORM (Continued)

11. Primary purpose of the project:

To maintenance dredge existing Pier R-3.

Secondary purpose of the project:

12. Will any public benefit be derived from the project? |X| YES |_| NO |_| UNCERTAIN If your answer is "YES", explain below.

National Defense

13. Does the project involve destruction or alteration of wetlands? (See definition on page 8.) |_| YES |X| NO |_| UNCERTAIN If your answer is "YES", what will be the approximate total of:

A. vegetated wetlands area(s) to be impacted? 0 square feet

B. nonvegetated wetlands area(s) to be impacted? 0 square feet

(See page 45 for How to Calculate Square Feet.) Also, if your answer is "UNCERTAIN" contact the Corps or VMRC for an on-site inspection before submitting this application.

14. Will there be any discharge (either direct or indirect) of waste material into State waters from the construction or operation of the project? |_| YES |X| NO

15. If the project will be a marina or other place where boats are moored or an addition to or maintenance of the same, have you obtained the State Health Department's approval for sanitary facilities? |_| YES |_| NO |X| N/A If your answer is "NO", contact your Local Health Department. You are required by Section 62.1-3 of the Code of Virginia to obtain this approval or a variance before a VMRC permit can be issued.

16. Have you previously applied to, or obtained a permit from, any agency (Interstate, Federal, State, or Local) for any portion of the project described in this application? |X| YES |_| NO |_| UNCERTAIN If your answer is "YES", provide the following information:

Issuing or Denying Agency	Type of Action	ID NO.	Application Date	Action Date
U.S. Army C.O.E.	Approved	84-0875	30 July 1984	expired 31 Dec 1989

BASIC APPLICATION FORM (Continued)

17. Has any work commenced or has any portion of the project for which you are seeking a permit been completed? |_| YES |X| NO If your answer is "YES", give details below. State when the work was completed and who performed the work. Please clearly differentiate on your application drawings that portion of the work which has been completed from that which is proposed.

18. Approximately how long will it take to complete the project after all required permits have been issued? 12 - 120 months

19. Approximate total cost of the project (including materials and labor): $1,500,000 each contract

20. List the name and complete address of each adjacent property owner (see definition on page 5) to the project.

    None

21. List the name and complete address of each waterfront property owner across the waterway from the project, if the water body is less than 500 feet wide. Also, if the project is within a cove, list the name and address of each property owner located on the cove.

    None

22. Have you discussed this project with all adjacent property owners and property owners across the waterway (if applicable) and had them sign an Adjacent Property Owner's Acknowledgment Form on page 19? |_| YES |X| NO If your answer is "NO", refer to page 11, explanation number 20.

23. List the name and address of each known claimant of Riparian Rights and/or Oyster Planting Grounds in the vicinity of the project:

    None known

24. Check the appendices below which apply to your project. (NOTE: The applicable appendices must be completed and submitted as part of your application.)

LIST OF APPENDICES			PAGE
[ ]	A.	Piers, Marginal Wharves, Boathouses, or Marinas	23
[ ]	B.	Dolphins or Moorings	25
[ ]	C.	Boat Ramps	27
[ ]	D.	Bulkheads	29
[ ]	E.	Fill	31
[ ]	F.	Riprap	33
[X]	G.	Dredging or Excavating	35
[ ]	H.	Jetties, Groins, or Breakwaters	37
[ ]	I.	Intake or Outfall Structures	39
[ ]	J.	Channel Modifications or Impoundment Structures (Dams)	41
[ ]	K.	Submarine Crossings, Overhead Crossings, or Tunnels	43

REMINDER: BE SURE TO COMPLETE THE APPENDICES YOU CHECKED ABOVE UPON COMPLETION OF THE BASIC APPLICATION FORM (PAGES 13-18). AFTER COMPLETION OF THE APPROPRIATE APPENDICES, TURN TO THE SAMPLE DRAWINGS INFORMATION ON PAGE 48 AND PREPARE YOUR APPLICATION DRAWINGS. MAIL ALL INFORMATION TO:

Virginia Marine Resources Commission
Habitat Management Division
P. O. Box 756
Newport News, Virginia 23607

BASIC APPLICATION FORM (Continued)

ALL APPLICANTS MUST SIGN THIS PAGE. If the Certification of Authorization below is completed and returned with this application all future application correspondence may be signed by the duly authorized agent. Also, please provide the name(s) and complete address(es) of the legal property owner(s) as shown on your recorded deed.

I hereby make application for all permits and a Certificate of Water Quality Compliance (401), as required, to authorize the activities I have described herein. Upon my signature, I agree to allow the duly authorized representatives of any Local Wetlands Board, Virginia Marine Resources Commission, State Water Control Board, State Health Department, Virginia Institute of Marine Science, Shoreline Erosion Advisory Service, Virginia Soil and Water Conservation Commission, U.S. Army Corps of Engineers, National Marine Fisheries Service, Environmental Protection Agency, U. S. Fish and Wildlife Service, and the Tennessee Valley Authority to enter upon the premises of the project site at reasonable times for the purpose of inspection.

I hereby certify that the information submitted in this application is true and accurate to the best of my knowledge.

13 Jan 19 92
DATE

Kenneth E. Godfrey P.E. for JAMES S. SPORE III, CAPT, USN
APPLICANT'S SIGNATURE APPLICANT'S NAME (PRINTED/TYPED)

- -

CERTIFICATION OF AUTHORIZATION
(Only agents need to complete this form)

I hereby certify that I am designated and authorized by CAPT. JAMES S. SPORE [APPLICANT'S NAME] to act on his/her/their/its behalf as agent and take all actions necessary to the processing, issuance, acceptance, and implementation of this permit and any and all standard and special conditions attached hereto.

James E. Butler JAMES E. BUTLER
AGENT'S SIGNATURE AGENT'S NAME (PRINTED/TYPED)

APPENDIX G
DREDGING OR EXCAVATING

NOTE 1 - If dredging for borrow material, minerals, etc., a permit may be required from

Virginia Department of Conservation and Economic Development
Division of Mined Land Reclamation
Drawer U
Big Stone Gap, Virginia 24219
(703) 523-2925

NOTE 2 - If dredged material is to be placed in a disposal site, a separate map showing the location of the disposal site should be attached. This drawing must indicate the proposed retention levees, weirs, spillways, and/or devices for retaining the materials.

NOTE 3 - Bottom samples to determine heavy metals or other toxic materials must be taken and analyzed if deemed necessary by the Virginia State Water Control Board staff or the US Army Corps of Engineers. The responsibility, as well as the expense incurred for obtaining and analyzing these samples, must be borne by the applicant.

NOTE 4 - See page 45 - How to Calculate Square Feet, Cubic Feet, and Cubic Yards.

NOTE 5 - If maintenance dredging is to be done, evidence of previous dredging must be provided (see question 16 on page 15). Any previously-issued permit with drawings which indicates the date the dredging occurred, the area involved and dredging depth constitutes acceptable proof.

NOTE 6 - Please make sure answers to all of the questions in this appendix correspond to information on the application drawings.

---

1. This dredging or excavating is considered to be:

   (check one) |_| new |X| maintenance |_| both

2. How many cubic yards of new material will be dredged or excavated channelward of the:

   A. tidal waters: mean high water line? _____ cubic yards

   mean low water line? _____ cubic yards

   B. non-tidal waters: ordinary high water line? _____ cubic yards

3. How many cubic yards of material will be maintenance dredged or excavated channelward of the:

   A. tidal waters: mean high water line? 325,000 cubic yards

   mean low water line? _____ cubic yards

   B. non-tidal waters: ordinary high water line? _____ cubic yards

4. How many cubic yards of material will be dredged or excavated from:

   A. vegetated wetlands: new _____ cubic yards N/A

   maintenance _____ cubic yards

   B. non-vegetated wetlands: new _____ cubic yards

   maintenance _____ cubic yards

5. How many cubic yards of total material will be dredged or excavated by:

   A. hydraulic method? _____ cubic yards

   B. clamshell (dragline) method? 325,000 cubic yards

   C. other method (explain below)? _____ cubic yards

6. What will be the maximum dimensions of the dredged or excavated area relative to mean low water (for tidal areas only) or ordinary high water (for non-tidal areas only)?

700	length	18'	depth	350' to 750'	base width	400' to 800'	top width
2000	length	18'	depth	350' to 450'	base width	400' to 500'	top width
2000	length	42'	depth	25' to 600'	base width	25' to 600'	top width

7. State the type and composition percentage of the dredged or excavated material (e.g., clay 25%, sand 25%, silt 50%) USCS Classification

   CH (inorganic clay)

8. What is the size of the disposal site (see Note 2 on page 35)?

   A. surface area _____ square feet

   B. ponding depth _____ square feet

   C. levee or berm height _____ square feet

   Craney Island Disposal Area

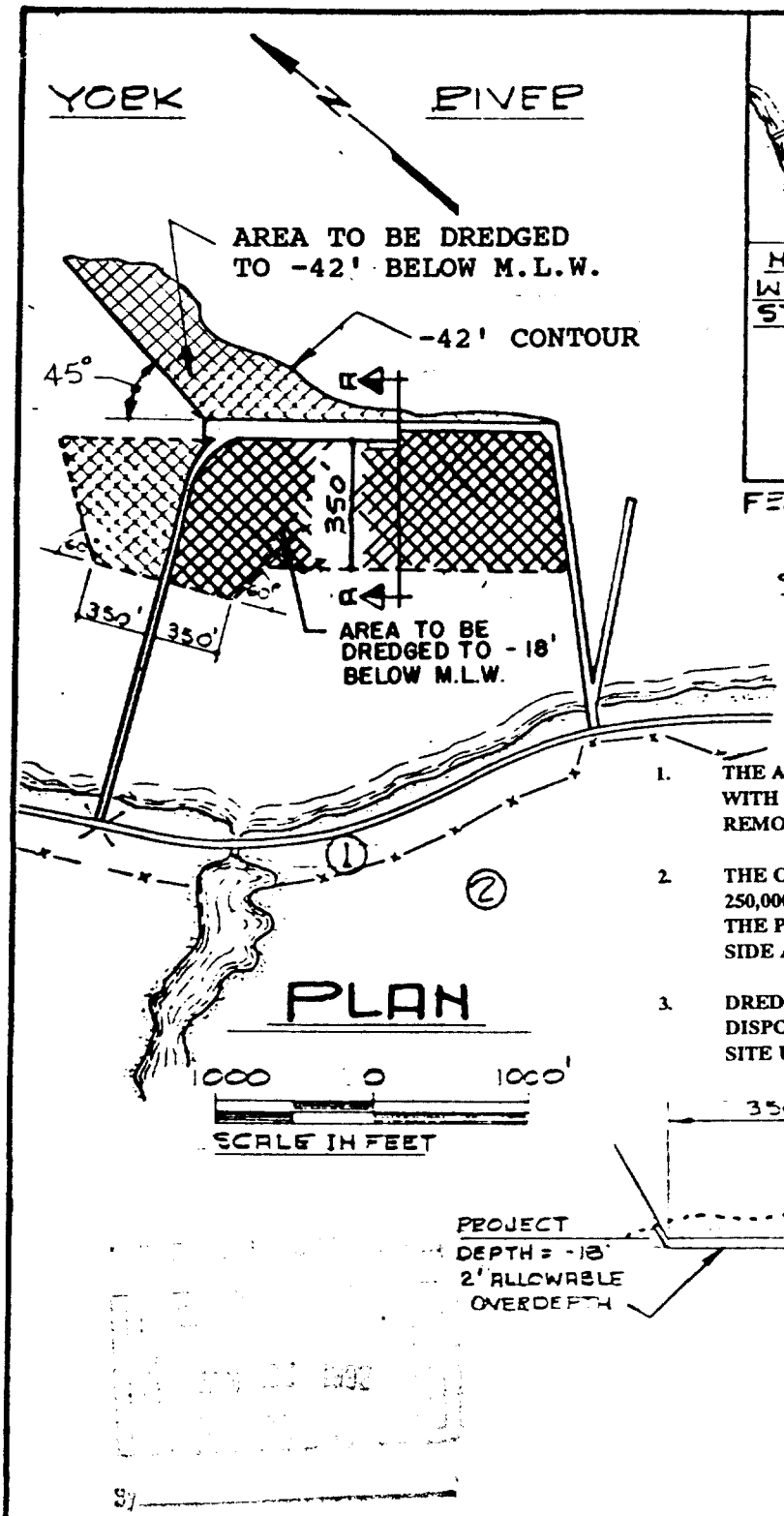
9. How will the dredged or excavated material be transported to its disposal area?

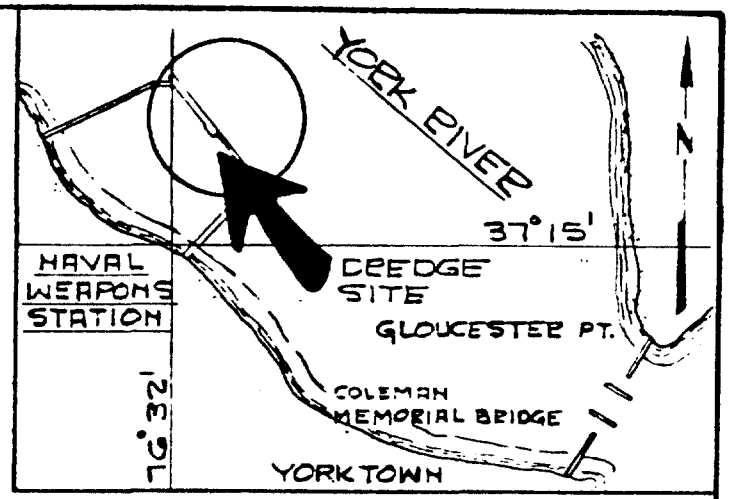
   Dump scow

10. How will be dredged or excavated material be retained to prevent its reentry into the water body (e.g., bulkhead, earthen berm, hay bales, levees, etc.)?

    N/A

11. Will you make any commercial use of the dredged material? [_] YES [X] NO if your answer is "YES", explain: _____





FROM USC & GS CHART 495

VICINITY MAP

SCALE: 1:40,000

4,000 0 4,000'

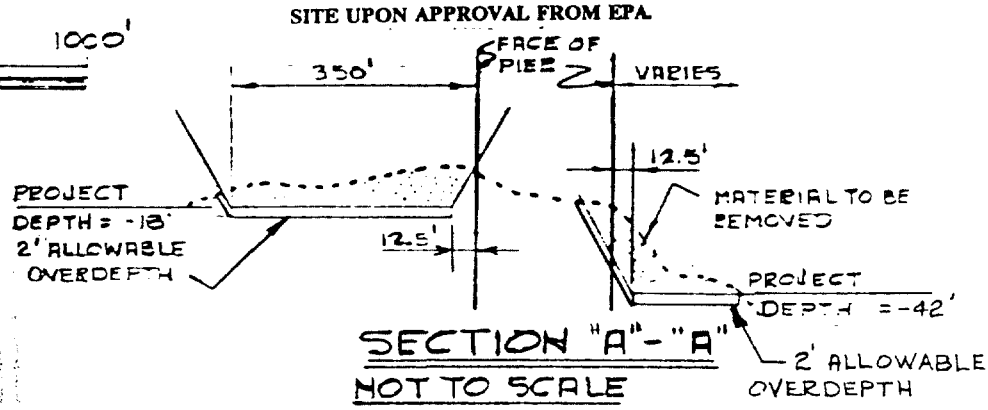
SCALE IN FEET

NOTES:

1. THE AVERAGE REQUIREMENT FOR DREDGING IS EVERY 8 YEARS, WITH APPROX. 400,000 CU. YDS OF MUD AND SILT TO BE REMOVED BY THE BUCKET METHOD.

2. THE CURRENT PROJECT INVOLVES THE REMOVAL OF APPROX. 250,000 CU. YDS. OF SILT FROM THE OUTBOARD SIDE OF THE PIER (-42' DEPTH), AND 75,000 FROM THE INBOARD SIDE AND NORTHWEST CORNER (-18' DEPTH).

3. DREDGED MATERIAL TO BE DISPOSED OF AT CRANEY ISLAND DISPOSAL AREA, OR OCEAN DUMPING AT THE NORFOLK DUMP SITE UPON APPROVAL FROM EPA.



SECTION "A"-"A"

NOT TO SCALE

PURPOSE: MAINTENANCE DREDGING DATUM: MEAN LOW WATER = 0.00 ADJACENT PROPERTY OWNERS 1. NATIONAL PARK SERVICE 2. U.S. NAVY	PLAN AND SECTION	PROPOSED DREDGING IN YORK RIVER AT U.S. NAVAL WEAPONS STATION CITY OF YORKTOWN STATE VA. APPLICATION BY ATLANTIC DIV. NAVAL FACILITIES ENGR. COMM. SHEET 1 of 1 DATE 11/15/91

VIMS Shoreline Permit Application Report # 02-0552

APPLICANT:	CORPS OF ENGINEERS
Immediate Waterway:	York River
Locality:	YORK COUNTY
Purpose:	Improve Navigation
Application Type:	Subaqueous
Site Inspection:	2/3/03
Report Date:	2/19/03

Type of Activity	Proposed Extent
Aquatic Disposal (ft2)	102000000
Aquatic Disposal (yd3)	600000
Impact Subaqueous Bottom (ft2)	102000000
Maintenance dredging (yd3)	600000
Impact Subaqueous Bottom (ft2)	18700000
Total Impacts (ft2)	120700000
Total Impacts (Wetlands)	0
Total Impacts (Subaqueous)	120700000
Total Impacts (Beach/Dune)	0
Total Fill (ft2)	0

Project Location

Virginia Institute of Marine Science
School of Marine Science
P.O. Box 1346, Route 1208 Greate Road
Gloucester Point, Virginia 23062-1346
phone: (804)684-7380, fax: (804)684-7179, e-mail: wetlands@vims.edu

ANNOUNCEMENT

Information provided in this report is only the environmental and marine resources input into the decision making process and is based on biological, chemical, geological, and physical factors affecting the marine environment at and in the vicinity of the proposed activity. Parameters of the marine environment which may influence recreational, commercial, or industrial activities which are dependent on the marine environment are also considered where applicable.

The Virginia Institute of Marine Science (VIMS) is aware that regulatory or administrative bodies who weigh the overall potential public and private benefits and detriments in arriving at decisions must also consider other factors such as economics, aesthetics, zoning, or community desires.

Comments:

We have reviewed this proposal from a marine environmental perspective and it is our opinion that the adverse environmental impacts resulting from the proposed dredging and overboard disposal can and should be minimized due to concerns for blue crab stocks. The following report summarizes these impacts and, where appropriate, suggests alternatives to minimize potential adverse environmental effects.

The Corps of Engineers proposes to dredge approximately 600,000 cubic yards of sandy mud substrate from the York River Entrance Channel and place the material overboard in an unconfined manner at the previously designated, Wolf Trap Alternate Disposal Site. Both the channel and the disposal area lie within the primary Chesapeake Bay blue crab spawning migration corridor. The dredging and disposal operation have the potential to adversely affect significant numbers of migrating adult females moving from the upper and mid bay areas and out of the York River. Research over the last ten years has documented an 81% decline in blue crab spawning stock abundance as well as declines in average female size and spawning stock biomass.

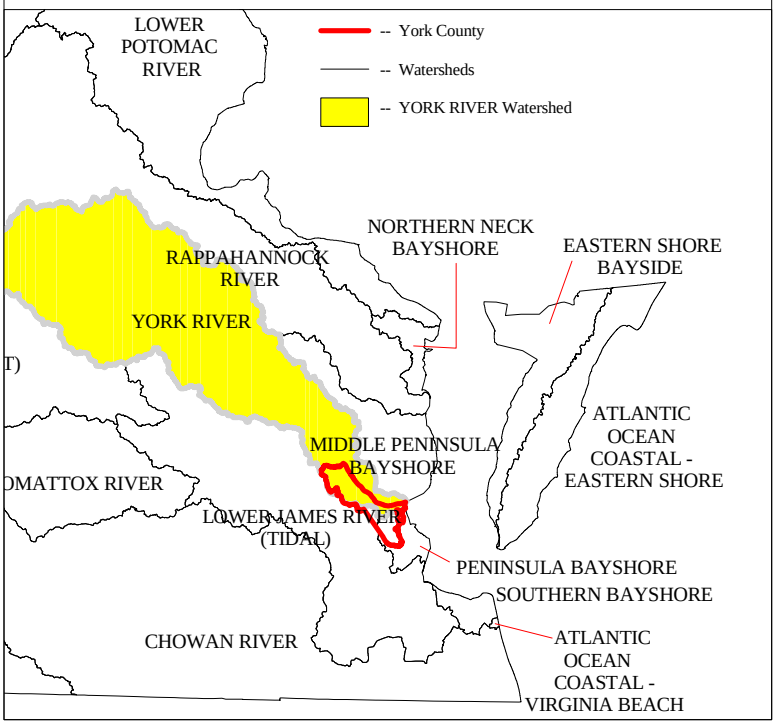
Given the forgoing, there is no good time to dredge the channel and use the Wolf Trap site from a blue crab perspective. Given the Corps' stated desire to dredge the channel this fiscal year however, it is our recommendation that for the present dredging cycle, all dredging and disposal at the alternate site be limited to the periods of February 1st through June 1st or September 1st through December 1st . The former is the better of these two windows from a marine perspective. We also recommend that in either case, the dredge begin at the upstream end of the channel and work down in order to have the least interference with migrating spawners. Additionally, it is recommended that VIMS monitor the impact of the dredging on the blue crab stock and its benthic prey through surveys before and after the dredging activities.

For future dredging cycles, we recommend consideration be given to utilizing another overboard disposal area for the York River material. Two sites which are presently designated for the disposal of material are the Ocean Disposal Site and the Dam Neck Disposal Site. Another , less desirable alternative would be the relocation of the Wolf Trap site to a more northerly location that would significantly reduce the potential adverse effects of overboard disposal on the blue crab spawning stock.

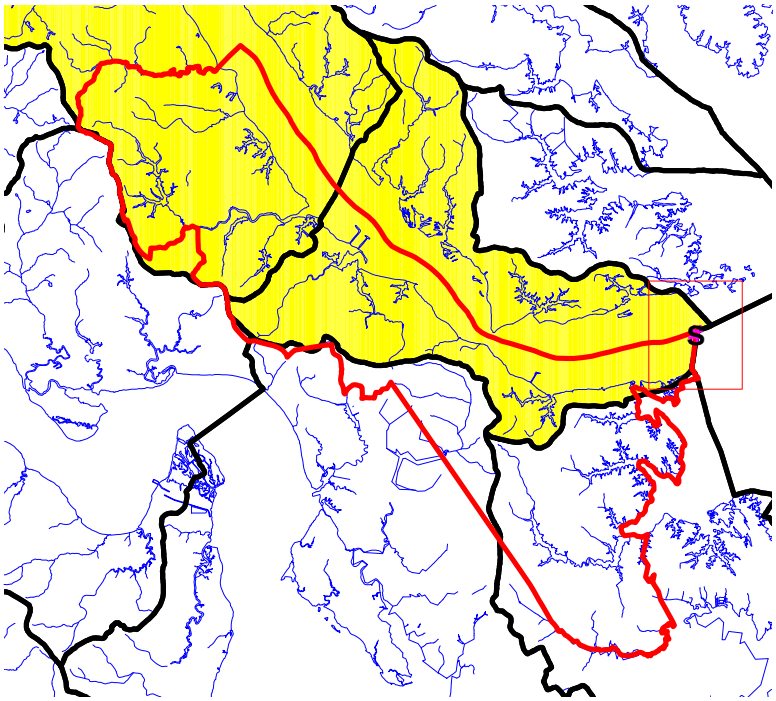
Thomas A. Barnard, Jr.
Marine Scientist

VIMS Shoreline Permit Application Report # 02-0552

YORK RIVER Watershed



York County



Hydrologic units represent smaller, isolated watersheds defined by topography and flow direction. These units can be thought of as insulated ecosystems or landscapes within which resources can be managed at a larger scale. The cumulative impact of a project to resources within a hydrologic unit may be significantly greater than the impact to the larger watershed above.

Total Permitted Wetlands Loss by Type for YORK RIVER : 1996-1999

Community Type	Extent
Vegetated Wetlands	32846 ft2
Non-Vegetated Wetlands	69511 ft2
Subaqueous Bottom	19157 ft2

Total Permitted Wetlands Loss by Type for York County : 1996-1999

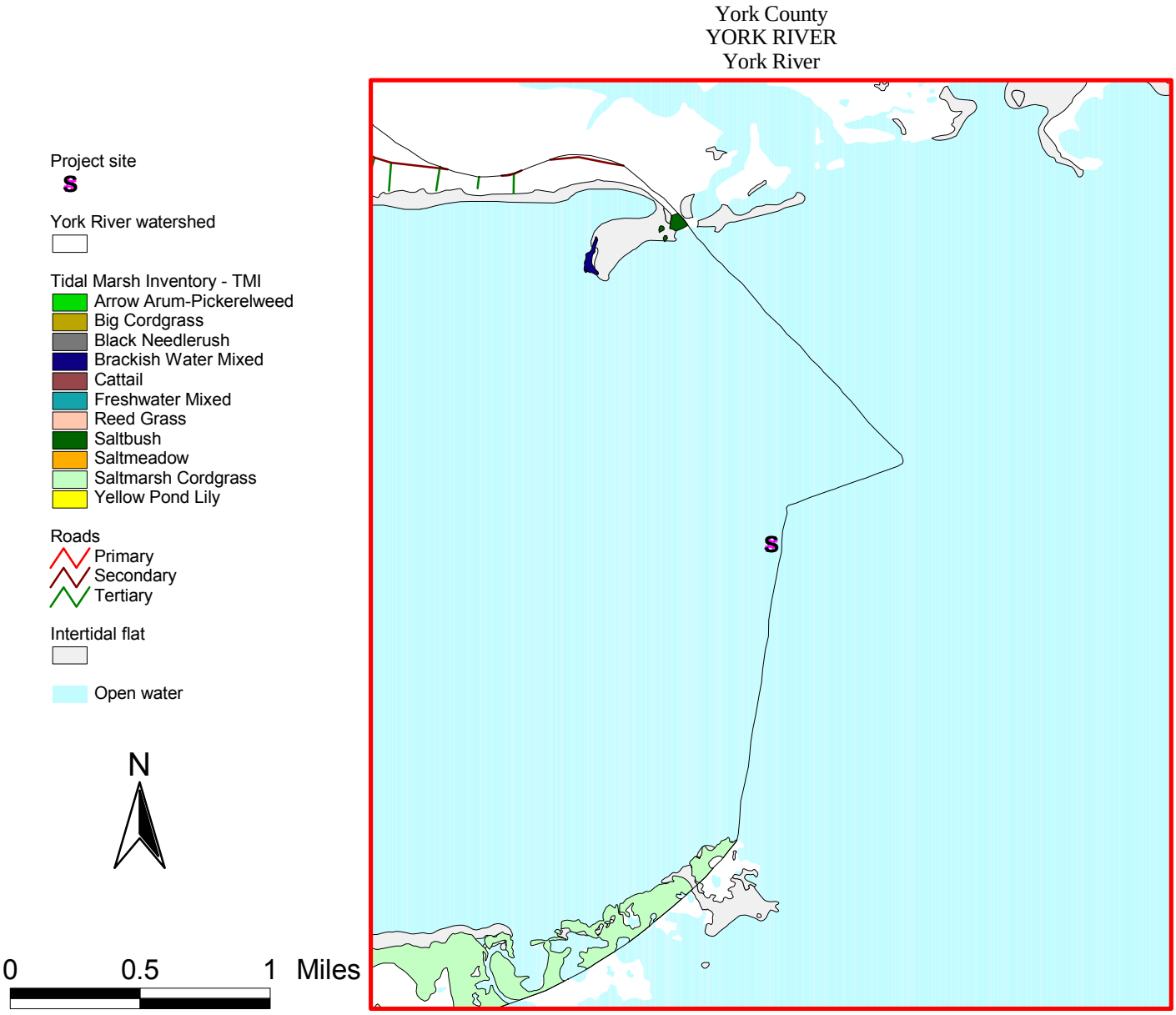
Community Type	Extent
Vegetated Wetlands	10864 ft2
Non-Vegetated Wetlands	33578 ft2
Subaqueous Bottom	10687 ft2

Total Proposed Shoreline Structures and Activities for York County -- 1996-1999

Structure Type	Extent
Boat Ramps	840 ft2
Boat Slips	34
Breakwater	1908 ft
Bulkhead	1932 ft
Commercial Structure	173072 ft2
General Fill	1650 ft2
Groins	5
Groins	160 ft
Bulkhead Toe Protection	2063 ft
Bulkhead Replacement	1720 ft
Beach Nourishment	75450 ft2
Beach Nourishment	800 ft
Mitigated Wetlands	420 ft2
New Dredging	17426 yd3
Maintenance dredging	57 yd3
Riprap	12025 ft

- Permit site study area shown on next page
- Hydrology
- Hydrologic units
- York County
- S Permit site

Permit Site Study Area



To Wetlands Board: Please indicate Wetlands Board action on this sheet and return to VIMS

Application Number: 02-0552
Name: Corps of Engineers
Locality: York County
Waterway: York River

Please check here if this application was approved as proposed ____
Complete the form below if the application was modified.

	ACTIVITIES	
	PROPOSED	PERMITTED
Aquatic Disposal (ft2)	102000000	_____
Aquatic Disposal (yd3)	600000	_____
Impact Subaqueous Bottom (ft2)	102000000	_____
Maintenance dredging (yd3)	600000	_____
Impact Subaqueous Bottom (ft2)	18700000	_____

Comments: _____
_____
_____
_____
_____

Certified by: _____

Virginia Institute of Marine Science
School of Marine Science
P.O. Box 1346, Route 1208 Greate Road
Gloucester Point, Virginia 23062-1346
phone: (804)684-7380, fax: (804)684-7179, e-mail: wetlands@vims.edu

CLASS 2 PROPERTY RECORD

FACILITY NAME AMMUNITION TRANSFER PIER

FACILITY NUMBER R3

REPORT DATE 27 NOV 2012

INSTALLATION UIC	N69212	NAVAL WEAPONS STATION YORKTOWN	**REAL PROPERTY UNIQUE ID**		101266
FACILITY ID	NFA100001641137		**LAST UPDATED**		23 OCT 2012
INSTAL MGMT CLMT	N00052	CNI	**PROPERTY RECORD NO**		200499
MANPOWER BSO	CFFC		**FACILITY TYPE**	3	STRUCTURE
OPERATIONAL STATUS	ACT	Active	**ACTION TYPE**	2	CAP IMP
SPECIAL AREA			**FAMILY HOUSING INDICATOR**		N

LOCATION

REGION	N61463	CNR MIDLANT
COUNTRY	US	UNITED STATES
STATE	51	VIRGINIA
COUNTY	199	YORK
CITY	2690	YORKTOWN
MAP GRID	R36	
STREET ADDRESS	1797 OLD WILLIAMSBURG RD	

DISPOSAL

CONSOLIDATED PROPERTY NO	
DISPOSAL METHOD CODE	
DISPOSAL COMPLETION DATE	
DISPOSAL CONTRACT NO	
EXCESS DECLARATION DATE	
SURPLUS DETERMINATION DATE	

ACQUISITION

ESTATE CODE	1G	REASSIGN MCON	**ACQUISITION DATE**	18 AUG 1999
INTEREST TYPE	FEE	U.S. Government owned property	**GOVERNMENT COST**	$ 16,044,324
LAND CCN	91140	LAND - CONDEMNATION		
ACQ CONTRACT NO	NOY4375			

MAINTENANCE

PREPONDERANT USER	N00109	NMC DET YORKTOWN VA
PRIME USE CAT CODE	15190	ACCESS TRESTLE PIERS WHRVS
PRIME FAC CODE	1513	PIER/WHARF ACCESS TRESTLE
MNT FUND SOURCE CODE	A	O&M, N
MNT RESPONSIBILITY UIC	N69212	NAVAL WEAPONS STATION YORKTOWN
ASSET EVALUATION DATE	05 FEB 2009	
CURRENT PRV	$ 83,296,121	
PRV AT EOY 12	$ 83,296,121	

MEASUREMENTS

	ENGLISH	METRIC
LENGTH	2,272.00	692.51
WIDTH	93.00	28.35
HEIGHT	9.00	2.74
AREA	36,329.00	30,375.67
AREA UM	SY	M2
FLOOR ABOVE GROUND QUANTITY		1
FLOOR BELOW GROUND QUANTITY		0

CONSTRUCTION

FACILITY BUILT DATE	01 JUL 1942	
CONSTRUCTION TYPE	PERM	PERMANENT
HISTORIC STATUS DATE	10 NOV 1999	
HISTORIC STATUS CODE	DNE	Determined Not Eligible for Listing

READINESS FACTORS

MDI	99	**DATE**	24 SEP 2009
CONDITION RATING	60	**DATE**	21 JUN 2008
CONFIGURATION RATING	47	**DATE**	16 MAY 2011
PHYSICAL QUALITY RATE	47		

CLASS 2 PROPERTY RECORD

FACILITY NAME AMMUNITION TRANSFER PIER **FACILITY NUMBER** R3

REPORT DATE 27 NOV 2012

UTILIZATION

UTILIZATION ID	1				
FAC USE CCN	15110 AMMUNITION PIER	**SET BACK VALUE**	2,000.00	**DOD FAC**	1511
FACILITY USE	AMMUNITION TRANSFER PIER	**MAX VALUE**	100,000.00	**DOD UM**	SY
USER ACTIVITY	N00109 NMC DET YORKTOWN VA	**OUTGRANT IDENTIFIER**		**PRIMARY UM**	FB

CONFIGURATION

	AREA		OTHER		ALTERNATE	
	English	Metric	English	Metric	English	Metric
ADEQUATE						
SUBSTANDARD						
INADEQUATE	23,609.00	19,740.13	2,244.00	683.97	42.00	12.80
TOTAL	23,609.00	19,740.13	2,244.00	683.97	42.00	12.80
UNIT OF MEASURE	SY	M2	FB	M	DW	M

SUSTAINMENT FUND SOURCE 1804 Operation and Maintenance, Navy

SUSTAINMENT ORGANIZATION 06 NAVY ACTIVE

OPERATIONAL FUND SOURCE 1804 Operation and Maintenance, Navy

OPERATIONAL FUNDING ORG 06 NAVY ACTIVE

DEFICIENCIES

CONFIGURATION	CODE	DEFINITION
INADEQUATE	W53	CODE COMPLIANCE - FIRE CODES
DESCRIPTION REQUIRED BY NFPA 307		
INADEQUATE	Z3 1	INADEQUATE CAPACITY/COVERAGE - DEPTH OF WATER
DESCRIPTION REQUIRES MAINTENANCE DREDGING		

UTILIZATION DETAILS

NAME	DESCRIPTION	QUANTITY	UM

CLASS 2 PROPERTY RECORD

FACILITY NAME AMMUNITION TRANSFER PIER **FACILITY NUMBER** R3

REPORT DATE 27 NOV 2012

UTILIZATION

UTILIZATION ID	3				
FAC USE CCN	15190 ACCESS TRESTLE PIERS WHRVS	**SET BACK VALUE**	5,000.00	**DOD FAC**	1513
FACILITY USE	NORTH & SOUTH ACCESS TRESTLE	**MAX VALUE**	7,500.00	**DOD UM**	SY
USER ACTIVITY	N00109 NMC DET YORKTOWN VA	**OUTGRANT IDENTIFIER**		**PRIMARY UM**	SY

CONFIGURATION

	AREA		OTHER		ALTERNATE	
	English	Metric	English	Metric	English	Metric
ADEQUATE						
SUBSTANDARD						
INADEQUATE	12,720.00	10,635.54			114,480.00	10,635.54
TOTAL	12,720.00	10,635.54			114,480.00	10,635.54
UNIT OF MEASURE	SY	M2			SF	M2

SUSTAINMENT FUND SOURCE 1804 Operation and Maintenance, Navy

SUSTAINMENT ORGANIZATION 06 NAVY ACTIVE

OPERATIONAL FUND SOURCE 1804 Operation and Maintenance, Navy

OPERATIONAL FUNDING ORG 06 NAVY ACTIVE

DEFICIENCIES

CONFIGURATION	CODE	DEFINITION
INADEQUATE	W53	CODE COMPLIANCE - FIRE CODES

DESCRIPTION
REQUIRED BY NFPA 307

UTILIZATION DETAILS

NAME	DESCRIPTION	QUANTITY	UM

NOTES

10 AUG 2010	North access trestle is 7,477 SY (2,639 FT long). South access trestle is 5,243 SY (1,815 FT long); 39' @ boathouse. Could not show them separately in the utilization record
10 AUG 2010	N. Pier R3 is 1,251 FT long, 93.5 FT wide; S. Pier R3 is 1021.5 FT long, 93.5 FT wide

DOCUMENTS

FILE NAME	DESCRIPTION	DOCUMENT UPLOAD DATE
20081027 Yorktown Preliminary Assesment Letter.pdf	Yorktown Preliminary Assesment Letter.	21-NOV-08

LOCATION DIRECTIONS TEXT

Internet Search

An era comes to an end at Naval Weapons Station Yorktown

By Mark O. Piggott, Naval Weapons Station Yorktown Public Affairs | Posted: Wednesday, July 13, 2011 9:46 am

YORKTOWN

The Naval Surface Warfare Center (NSWC) Indian Head Division, Detachment Yorktown, located at Naval Weapons Station (WPNSTA) Yorktown-Cheatham Annex (CAX), ended its experimental explosive development, June 30, bringing more than 70 years of weapons research to a close.

NSWC Detachment Yorktown is scheduled to transfer operations to NSWC Indian Head Division in Maryland by late August 2011 as part of the Base Re-alignment and Closure (BRAC) recommendations.

“This brings a major chapter in the history of Yorktown Weapons Station to a close,” said Capt. Lowell Crow, Commanding Officer, WPNSTA Yorktown. “We will continue to support the warfighters and the Navy’s mission as a ‘Global Force for Good’ by providing to the best ordnance support to the fleet.”

The Yorktown Detachment has been working with a variety of experimental explosive materials for many years. All of these formulations and experiments are over-sighted by the New Explosive Material Review Committee (NEMRC). YKT-79 is the last new formulation to be developed onboard WPNSTA Yorktown-CAX.

YKT-79 is a new explosive formulation with potential as an improved booster material. The goal of this material is to have improved output and performance while at the same time remaining non -reactive to unplanned stimuli (such as burning or shock/impact). YKT-79 may have economic advantages as well, because the ingredients that go into YKT-79 are more readily available and potentially less costly than those of certain current booster explosives.

Prior to 1940, Naval Mine Depot Yorktown was used for the receipt, reclamation, storage and issue of mines, depth charges and related materials. Following the outbreak of World War II, the Naval Mine Depot’s mission expanded to include explosive research and experimentation and the development of tests and procedures for highly technical ordnance devices. This was characterized by the rapid expansion of production facilities, diversification of activities and the establishment of highly specialized technical divisions and sections.

As a Department of Defense (DoD) Energetics Center, NSWC Indian Head Division’s mission is to research, develop, test, evaluate and produce explosives, propellants, pyrotechnics, reactive

Naval Weapons Station Yorktown celebrates 93rd birthday

Posted: Wednesday, August 17, 2011 10:12 am

By MC2 Jamica Johnson, Navy Public Affairs Support Element East |

YORKTOWN-- Retired and active duty service members, local government officials and the citi
Yorktown Riverwalk to commemorate the 93rd birthday of Naval Weapons Station (NWS) Yorkt

During the ceremony, Don Wiggins, a member of the York County Board of Supervisors, recalle
evolution to today's weapons station. Wiggins made the presentation meaningful with a moment
them to stand and be acknowledged with a round of applause. Among those standing were militar
recently entered into the Navy's Delayed Entry Program.

"Today it gives me great privilege to be here with our Sailors and wish them a happy birthday," s
County supervisors when I say that we are proud to have the Navy here and we look forward to t
the new housing."

The weapons station originated as Naval Mine Depot in 1918 and was combined with a Seabee t
becoming NWS Yorktown housing 18 departmental facilities, 38 tenant activities and home to m
families.

During the celebration, Wiggins took a moment to mourn the loss of the Sailors assigned to Nava
honor the sacrifice that the Sailors made and convey the gratitude of the local citizens. As he spo
Sailors in attendance sat proud and tall as they listened to every word.

"When I got up this morning I thought about the birthday party we were having today and I got e
my normal routine I started to read the newspaper, I read about the catastrophe that occurred wit
lives. It reminded me of a saying that I learned in boot camp, back when I was drafted during the
why, ours is but to do or die.'"

"I say that because, those young boys that go and fight for our freedom, are not in dangerous situ
there to defend our country. So I just want to take a moment to thank them for their sacrifice."

The presentation ended with a proclamation declaring Aug. 7 as United States Naval Weapons S
a few words from Capt. Lowell D. Crow, Commanding Officer, NWS Yorktown.

"Yorktown was chosen because of its prime location were both the Ohio and Chesapeake railroa
It was also in close proximity to Naval Station Norfolk. We have been with this great county for
all support the military and that is greatly appreciated," said Crow. "We will cherish this proclam
down and celebrate Yorktown's birthday here on the Riverwalk."

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THE VIRGINIA GAZETTE

News

EDITORIAL: Danger lurks

Print Page

Published:
Wednesday, April 11, 2012 8:33 AM EDT

The crash of the Navy jet in Virginia Beach was indeed a "Good Friday miracle" in that no one was killed. It's a stark reminder of the dangerous military business that goes on in Hampton Roads.

So, too, the article on the Mine Depot blast of Torpex bombs conveyed the exception of disaster that defied a long history of safety.

Another fellow who was there read the piece and called the Gazette. Benny Lacks, 91, lives in Toano and was in Hampton at the time working on a utility job. "I knew it must have been something terrible in the night," when he was awakened at his home near Langley.

He was a contractor for Vepco, and his crew was sent here to restore power. He recalled a vivid scene. "The concussion rattled buildings and raised the roofs on some of them so bad that when they fell back down the impact crushed the electrical lines underneath the buildings."

Like Doug Johnson who was interviewed, Lacks thought someone had dropped a warhead, "but it was very closely held about the deaths."

It was fortuitous that the munitions plant was built so close to the York River, and that was entirely intentional for dispersal purposes. "Tractor parts were found clear over to Gloucester," across the water, Lacks said. As for the blast site, "The hole was as large as a building." He said it took Vepco two months to restore power.

The suspicion of a Nazi collaborator seems a stretch, but not back then. Writing in the journal of the Hampton Roads Naval Museum, Gordon Calhoun set the context. "Just two months before, a massive explosion at Naval Air Station Norfolk killed several sailors. There was a tremendous amount of anxiety that German spies or submarines were active in the area. Within 12 hours of the [Yorktown] explosion, the Bureau of Ordnance opened an investigation and convened a court of inquiry."

The FBI suspected that one of the workers, Jay Remie, had made a suspicious phone call about

20 minutes past midnight on Nov. 16, and seven minutes later the building exploded.

“One witness stated that Remie had called to ask where to move a mine,” Calhoun wrote. “Others, however, were not so sure.” It turned out he had a troubled childhood but went on to become a second lieutenant in the Army. Other evidence on him was tantalizing but circumstantial.

As bad as the blast was, there were worse. In 1944 an explosion of the same Torpex bombs in the San Francisco Bay Area killed 320 naval personnel at Port Chicago. Two ships and a pier were obliterated.

The point here is not to dwell on the Mine Depot explosion but to stress how safe the place has been ever since. The inquiry eventually blamed the cause on too many explosives too tightly stored within the base, as if it were an accident waiting to happen.

Today, Naval Weapons has identified two accidents in the 1980s and 1990s that led to fires but no loss of life or injury. That’s an awesome safety record, especially when you consider how many millions of tons of munitions have transited the base over seven decades.

Not to mention nuclear.

The story that ran last week evolved from a longer history of the Naval Weapons Station that I put together as an illustrated talk for civic clubs. The Navy has been very cooperative but understandably circumspect about certain weapons.

An independent website called Global Security found that the base once handled 120 Tomahawk nuclear missiles, but no longer. Another 160 nuclear aerial bombs were deployed for jets on aircraft carriers. Global Security thinks Yorktown does not accommodate nuclear weapons today. If they do, no one is saying.

For decades, strategists thought the Peninsula was a prime target of the Soviets during the Cold War, given our density of six military bases. Safety precautions have been imbedded over the years, and comparable security has been imposed to safeguard against suspected provocateurs like Jay Remie. It’s one more reason to salute Yorktown Naval Weapons Station and its sister base Cheatham Annex.

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Interviews

Naval Weapons Station Yorktown UXO 3 Preliminary Assessment
INTERVIEW LOG SHEET

Interviewee: Dr. Francis Holt, PhD and Mr. Mike Foley, PE

Date and Location: July 10, 2012 at NWS Yorktown

Interviewer: Angela P. Jones/CH2M HILL

Note: This record was not transcribed from a recorded conversation. It was reconstructed from interview notes, so the conversation is paraphrased.

What is/was your affiliation with the site?

Dr. Holt has held several positions throughout her tenure at NWS Yorktown beginning in 1987. Currently, she serves as the Deputy to the Commanding Officer of the Naval Munitions Command CONUS East Division.

Mr. Foley serves as a Facilities Engineer for Ordnance Detachment. He began his tenure at NWS Yorktown in 1982.

What munitions were loaded along the pier area?

NWS Yorktown was focused on munitions considered "high munitions" and considered a "bombs-r-us" (almost all known munitions were loaded including experimental munitions). Dr. Holt and Mr. Foley do not know if chemical warfare material was loaded at the pier area.

Do you have any knowledge of the use of Pier R-1?

Pier R-1 was constructed in 1920 for the use of loading mines (MK6). The use of the pier was eventually changes to recreational use only prior to demolition of the pier in the 1990s.

Do you have any knowledge of dredging operations and pier maintenance activities?

Dredging operations occur as needed (approximately every 6 years) however natural scouring action by the river limits the need for dredging.

Maintenance activities along the pier occur approximately every 10 years. Construction along Pier R-3 has been extensive throughout the operation of Pier R-3, an approximate timeline of construction is as follows:
1940 – Initial construction of pier R-3 ("L-shape")
1962 – Completion of "U-shape"
1990s – Extensive renovations along pier

The switch from rail cranes to mobile cranes occurred in the 1990s for efficiency.

Other information?

Cultural resources at the base are the Lee House and the cemetery; the houses along Mason Row have been studied but are not considered official cultural resources.

An abandoned sewer utility may be seen running along the center of the "U" shape may still be present at Pier R-3.

An artificial oyster reef was created in early 2000.

The use of barges for munitions loading operations ceased in the 1990s.

Naval Weapons Station Yorktown UXO 3 Preliminary Assessment
INTERVIEW LOG SHEET

Interviewee: Mr. Richard Eanes

Date and Location: July 10, 2012 at NWS Yorktown

Interviewer: Angela P. Jones/CH2M HILL

Note: This record was not transcribed from a recorded conversation. It was reconstructed from interview notes, so the conversation is paraphrased.

What is/was your affiliation with the site?

Mr. Eanes currently serves as the Naval Munitions Command CONUS East Division Detachment Yorktown Deputy; his tenure at NWS Yorktown began in 1977 loading and unloading ships along the munitions loading pier.

What types of ordnance or military munitions were used?

All types of munitions were loaded along the pier with the exception of chemical warfare weapons. Examples of munitions loaded include mines (MK6), low drag bombs (1000 to 2000 lbs), hand grenades, pyrotechnics, powder charges, projectiles (3" to 16"), various small arms (9MM, 20-25 MM); the majority of munitions loaded consist of tomahawk missiles, standard missiles, and torpedoes.

Where did munitions loading activities occur (please provide time frame if possible)?

Munitions loading/unloading activities along the pier have occurred throughout my tenure at NWS Yorktown. We loaded barges and tugboats along the inboard portion of Pier R-3 (sometimes up to 5 barges wide moored side by side to one another, a forklift would drive between the barges) along the berthing area to the North to the boathouse on the Southern portion of the pier.

Do you know of any areas of concern, possible drop points, or areas where MEC may have been released?

No munitions have been dropped overboard by the pier during my tenure at NWS Yorktown. In the early 1970s I recall a forklift operator went over the side (the forklift was recovered); however, no munitions were being moved by the forklift at the time of the incident.

If a ship lost munitions overboard, EOD would be called in to retrieve the munitions although this has not occurred during his tenure either. EOD regularly runs exercises to keep certifications.

Do you know of any previous incidents involving MEC at or near the site?

No. Incidents have occurred along the pier (fatalities resulting from a blunt force trauma (struck by a beam) and confined spaced entry) but these were not munitions related.

SOPs (OP5, P-724, NWS Yorktown specific) for loading and unloading munitions a strictly enforced at the base however loading operations have been modified significantly at the pier. In the 1940s according to Mr. Eanes's father (worked at NWS Yorktown sporadically from 1940 to 1980), loading operations occurred by rolling bombs and cargo up scaffolding run between the pier and the ships. Today, heave machinery (cranes) load palletized cargo/munitions onto ships.

Do you know of any disposal operations or dumping that may have occurred at or near the site?

No.

Other information?

Mr. Eanes recalls Pier R-1 use as a recreational pier. Employees could use the pier after munitions loading operations ceased at Pier R-3 in the 1970s. Hurricane Isabelle destroyed what was left of the pier in 2003.

The steel banding for palletized materials were to be thrown overboard (per the SOP at the time, this practice no longer occurs).

A dredging operation in 1977 recovered chairs, steel banding, and desks. This dredging operation damaged the contractor equipment and occurred over a period of 6 months.

No MLSR reports have been filed during Mr. Eanes tenure.

The water depth changes approximately 3' to 4' with the tidal change twice daily.

An abandoned sewer utility may be seen running along the center of the "U" shape at low tide.

Interviewee: Mr. Mark Piggott

Date and Location: July 23, 2012 at NWS Yorktown

Interviewer: Angela P. Jones/CH2M HILL

Note: This record was not transcribed from a recorded conversation. It was reconstructed from interview notes, so the conversation is paraphrased.

What is/was your affiliation with the site?

Mr. Piggott currently serves as the Public Affairs Officer for NWS Yorktown; his tenure at NWS Yorktown began in 2008.

Do you have any knowledge of pier operations or munitions loaded at the pier?

My knowledge and incidents at the pier is limited due to strict security measures at the pier, however NWS Yorktown is the owner of the pier (CONUS Detachment Yorktown is the tenant of the pier).

What security measures occur along the pier?

When a ship is moored along the pier, two boats patrol from the Gloucester bridge to Camp Peary and a 24 hour security guard is posted at the guard station at the pier gate. When no ship is moored along the pier; only one harbor patrol boat is in operation.

What cultural resources are located at NWS Yorktown?

Cultural resources at NWS Yorktown include the Mason Row houses, the Lee House, and several cemeteries. NWS Yorktown also contains several natural resources.

Other information?

The National Park Service is currently working on plan to install breakwaters along the York River in the vicinity of the pier.

The Navy is currently in the process of archiving NWS Yorktown historical files.

Appendix C
Munitions Response Site Prioritization Protocol Worksheets

Table 1

EHE Module: Munitions Type Data Element Table

DIRECTIONS: Below are 11 classifications of munitions and their descriptions. Circle the scores that correspond with **all** the munitions types known or suspected to be present at the MRS.

Note: The terms *practice munitions, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Sensitive	◆ UXO that are considered most likely to function upon any interaction with exposed persons (e.g., submunitions, 40mm high-explosive [HE] grenades, white phosphorus [WP] munitions, high-explosive antitank [HEAT] munitions, and practice munitions with sensitive fuzes, but excluding all other practice munitions). ◆ Hand grenades containing energetic filler. ◆ Bulk primary explosives, or mixtures of these with environmental media, such that the mixture poses an explosive hazard.	30
High explosive (used or damaged)	◆ UXO containing a high-explosive filler (e.g., RDX, Composition B), that are not considered "sensitive." ◆ DMM containing a high-explosive filler that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	25
Pyrotechnic (used or damaged)	◆ UXO containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades). ◆ DMM containing a pyrotechnic filler other than white phosphorus (e.g., flares, signals, simulators, smoke grenades) that have: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	20
High explosive (unused)	◆ DMM containing a high-explosive filler that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	15
Propellant	◆ UXO containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor) that are: ▪ Damaged by burning or detonation ▪ Deteriorated to the point of instability.	15
Bulk secondary high explosives, pyrotechnics, or propellant	◆ DMM containing mostly single-, double-, or triple-based propellant, or composite propellants (e.g., a rocket motor). ◆ DMM that are bulk secondary high explosives, pyrotechnic compositions, or propellant (not contained in a munition), or mixtures of these with environmental media such that the mixture poses an explosive hazard.	10
Pyrotechnic (not used or damaged)	◆ DMM containing a pyrotechnic filler (i.e., red phosphorus), other than white phosphorus filler, that: ▪ Have not been damaged by burning or detonation ▪ Are not deteriorated to the point of instability.	10
Practice	◆ UXO that are practice munitions that are not associated with a sensitive fuze. ◆ DMM that are practice munitions that are not associated with a sensitive fuze and that have not: ▪ Been damaged by burning or detonation ▪ Deteriorated to the point of instability.	5
Riot control	◆ UXO or DMM containing a riot control agent filler (e.g., tear gas).	3
Small arms	◆ Used munitions or DMM that are categorized as small arms ammunition. (Physical evidence or historical evidence that no other types of munitions [e.g., grenades, subcaliber training rockets, demolition charges] were used or are present on the MRS is required for selection of this category.)	2
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
MUNITIONS TYPE	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	15

DIRECTIONS: Document any MRS-specific data used in selecting the ***Munitions Type*** classifications in the space provided.

These selections are based on items recorded as loaded to ships in War Diaries. The potential exists for all types of DMM to be present at the Site. See Section 4.1.3.1 of the Preliminary Assessment.

Table 2

EHE Module: Source of Hazard Data Element Table

DIRECTIONS: Below are 11 classifications describing sources of explosive hazards. Circle the scores that correspond with **all** the sources of explosive hazards known or suspected to be present at the MRS.

Note: The terms *former range, practice munitions, small arms range, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Former range	◆ The MRS is a former military range where munitions (including practice munitions with sensitive fuzes) have been used. Such areas include impact or target areas and associated buffer and safety zones.	10
Former munitions treatment (i.e., OB/OD) unit	◆ The MRS is a location where UXO or DMM (e.g., munitions, bulk explosives, bulk pyrotechnic, or bulk propellants) were burned or detonated for the purpose of treatment prior to disposal.	8
Former practice munitions range	◆ The MRS is a former military range on which only practice munitions without sensitive fuzes were used.	6
Former maneuver area	◆ The MRS is a former maneuver area where no munitions other than flares, simulators, smokes, and blanks were used. There must be evidence that no other munitions were used at the location to place an MRS into this category.	5
Former burial pit or other disposal area	◆ The MRS is a location where DMM were buried or disposed of (e.g., disposed of into a water body) without prior thermal treatment.	5
Former industrial operating facilities	◆ The MRS is a location that is a former munitions maintenance, manufacturing, or demilitarization facility.	4
Former firing points	◆ The MRS is a firing point, where the firing point is delineated as an MRS separate from the rest of a former military range.	4
Former missile or air defense artillery emplacements	◆ The MRS is a former missile defense or air defense artillery (ADA) emplacement not associated with a military range.	2
Former storage or transfer points	◆ The MRS is a location where munitions were stored or handled for transfer between different modes of transportation (e.g., rail to truck, truck to weapon system).	2
Former small arms range	◆ The MRS is a former military range where only small arms ammunition was used. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present to place an MRS into this category.)	1
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that no UXO or DMM are present, or there is historical evidence indicating that no UXO or DMM are present.	0
SOURCE OF HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	2

DIRECTIONS: Document any MRS-specific data used in selecting the ***Source of Hazard*** classifications in the space provided.

Munitions were historically loaded and unloaded at Piers R-1 and R-3. Pier R-3 is still in operation.

Table 3

EHE Module: Location of Munitions Data Element Table

DIRECTIONS: Below are eight classifications of munitions locations and their descriptions. Circle the scores that correspond with **all** the locations where munitions are known or suspected to be present at the MRS.

Note: The terms *confirmed, surface, subsurface, small arms ammunition, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	◆ Physical evidence indicates that there are UXO or DMM on the surface of the MRS. ◆ Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report that an incident or accident that involved UXO or DMM occurred) indicates there are UXO or DMM on the surface of the MRS.	25
Confirmed subsurface, active	◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS, and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM. ◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose UXO or DMM.	20
Confirmed subsurface, stable	◆ Physical evidence indicates the presence of UXO or DMM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed. ◆ Historical evidence indicates that UXO or DMM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause UXO or DMM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause UXO or DMM to be exposed.	15
Suspected (physical evidence)	◆ There is physical evidence (e.g., munitions debris such as fragments, penetrators, projectiles, shell casings, links, fins), other than the documented presence of UXO or DMM, indicating that UXO or DMM may be present at the MRS.	10
Suspected (historical evidence)	◆ There is historical evidence indicating that UXO or DMM may be present at the MRS.	5
Subsurface, physical constraint	◆ There is physical or historical evidence indicating that UXO or DMM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the UXO or DMM.	2
Small arms (regardless of location)	◆ The presence of small arms ammunition is confirmed or suspected, regardless of other factors such as geological stability. (There must be evidence that no other types of munitions [e.g., grenades] were used or are present at the MRS to place an MRS into this category.)	1
Evidence of no munitions	◆ Following investigation of the MRS, there is physical evidence that there are no UXO or DMM present, or there is historical evidence indicating that no UXO or DMM are present.	0
LOCATION OF MUNITIONS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 25).	5

DIRECTIONS: Document any MRS-specific data used in selecting the ***Location of Munitions*** classifications in the space provided.

UXO 3 is located under water. Historical evidence (historical records) of munitions loading/unloading operations at the site indicate the potential exists for munitions to have been dropped during transfer operations, particularly during the increased wartime activities.

Table 4

EHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds with the ease of access to the MRS.

Note: The term *barrier* is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	◆ There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	◆ There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	◆ There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	◆ There is a barrier preventing access to all parts of the MRS, and there is active, continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.	0
EASE OF ACCESS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	10

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ease of Access*** classification in the space provided.

The restricted area (40 CFR 334.260), surrounding the Munitions Loading Piers, is monitored and enforced by the Navy. Additionally the site is located under water, limiting access to the MRS; however, a complete physical barrier is not present surrounding the MRS.

Table 5

EHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	◆ The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal, or local governments; and land or water bodies managed by other federal agencies. ◆ The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day.	5
Scheduled for transfer from DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to the control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD must control access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the ***Status of Property*** classification in the space provided.

The Navy owns all underwater land out to the 30-ft depth curve, or the original pier-head line (A.H. Miles, 1926).

Table 6

EHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the **highest** population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	◆ There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100–500 persons per square mile	◆ There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	◆ There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Density*** classification in the space provided.

Based on the 2010 census, there are approximately 533 persons per square mile in Yorktown, VA.

Table 7

EHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	◆ There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	◆ There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	◆ There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	◆ There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	◆ There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	◆ There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Near Hazard*** classification in the space provided.

There are at least 26 inhabited structures within the 2 mile radius of the UXO 3 boundary including portions of Gloucester, VA and Yorktown, VA.

Table 8

EHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the types of activities that occur and/or structures that are present within two miles of the MRS and circle the scores that correspond with **all** the activities/structure classifications at the MRS.

Note: The term *inhabited structure* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering.	5
Parks and recreational areas	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4
Agricultural, forestry	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	◆ There are no known or recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	5

DIRECTIONS: Document any MRS-specific data used in selecting the ***Types of Activities/Structures*** classifications in the space provided.

Residential, industrial, and commercial activities are present within 2 miles of the UXO 3 boundary.

Table 9

EHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the types of resources present and circle the score that corresponds with the ecological and/or cultural resources present on the MRS.

Note: The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	◆ There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	◆ There are ecological resources present on the MRS.	3
Cultural resources present	◆ There are cultural resources present on the MRS.	3
No ecological or cultural resources present	◆ There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	**DIRECTIONS:** Record **<u>the single highest score</u>** from above in the box to the right (maximum score = 5).	3

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ecological and/or Cultural Resources*** classification in the space provided.

Ecological receptors may be present within the MRS including aquatic plants and animals. Although Colonial National Historic Parkway is listed in the National Register of Historic Places, it only borders the western boundary of UXO 3 and is not located within the MRS boundaries.

Table 10
Determining the EHE Module Rating

DIRECTIONS:

1. From Tables 1–9, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **EHE Module Total** box below.
4. Circle the appropriate range for the **EHE Module Total** below.
5. Circle the **EHE Module Rating** that corresponds to the range selected and record this value in the **EHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
Explosive Hazard Factor Data Elements			
Munitions Type	Table 1	15	17
Source of Hazard	Table 2	2	
Accessibility Factor Data Elements			
Location of Munitions	Table 3	5	20
Ease of Access	Table 4	10	
Status of Property	Table 5	5	
Receptor Factor Data Elements			
Population Density	Table 6	5	18
Population Near Hazard	Table 7	5	
Types of Activities/Structures	Table 8	5	
Ecological and/or Cultural Resources	Table 9	3	
EHE MODULE TOTAL			55

EHE Module Total	EHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected Explosive Hazard
EHE MODULE RATING	E

Table 11

CHE Module: CWM Configuration Data Element Table

DIRECTIONS: Below are seven classifications of CWM configuration and their descriptions. Circle the scores that correspond with **all** the CWM configurations known or suspected to be present at the MRS.

Note: The terms *CWM/UXO, CWM/DMM, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
CWM, that are either UXO, or explosively configured damaged DMM	The CWM known or suspected of being present at the MRS are: ◆ CWM that are UXO (i.e., CWM/UXO) ◆ Explosively configured CWM that are DMM (i.e., CWM/DMM) that have been damaged.	30
CWM mixed with UXO	◆ The CWM known or suspected of being present at the MRS are undamaged CWM/DMM or CWM not configured as a munition that are commingled with conventional munitions that are UXO.	25
CWM, explosive configuration that are undamaged DMM	◆ The CWM known or suspected of being present at the MRS are explosively configured CWM/DMM that have not been damaged.	20
CWM/DMM, not explosively configured or CWM, bulk container	The CWM known or suspected of being present at the MRS are: ◆ Nonexplosively configured CWM/DMM either damaged or undamaged ◆ Bulk CWM (e.g., ton container).	15
CAIS K941 and CAIS K942	◆ The CWM/DMM known or suspected of being present at the MRS are CAIS K941-toxic gas set M-1 or CAIS K942-toxic gas set M-2/E11.	12
CAIS (chemical agent identification sets)	◆ CAIS, other than CAIS K941 and K942, are known or suspected of being present at the MRS.	10
Evidence of no CWM	◆ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
CWM CONFIGURATION	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 30).	0

DIRECTIONS: Document any MRS-specific data used in selecting the ***CWM Configuration*** classifications in the space provided.

Information identified during the PA indicates that CWM may have been stored and transported from Naval Weapons Station Yorktown; however, documentation indicates that there were no incidents or releases of CWM at the MRS (Brankowitz, 1987). Therefore, CWM is not suspected to be present at UXO 3.

Table 12

CHE Module: Sources of CWM Data Element Table

DIRECTIONS: Below are 11 sources of CWM hazards and their descriptions. Review these classifications and circle the scores that correspond with **all** the sources of CWM hazards known or suspected to be present at the MRS.

Note: The terms *CWM/UXO, CWM/DMM, CAIS/DMM, surface, subsurface, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Live-fire involving CWM	◆ The MRS is a former military range that supported live-fire of explosively configured CWM and the CWM/UXO are known or suspected of being present on the surface or in the subsurface. ◆ The MRS is a former military range that supported live-fire with conventional munitions, and CWM/DMM are on the surface or in the subsurface commingled with conventional munitions that are UXO.	10
Damaged CWM/DMM surface or subsurface	◆ There are damaged CWM/DMM on the surface or in the subsurface at the MRS.	10
Undamaged CWM/DMM surface	◆ There are undamaged CWM/DMM on the surface at the MRS.	10
CAIS/DMM surface	◆ There are CAIS/DMM on the surface.	10
Undamaged CWM/DMM, subsurface	◆ There are undamaged CWM/DMM in the subsurface at the MRS.	5
CAIS/DMM subsurface	◆ There are CAIS/DMM in the subsurface at the MRS.	5
Former CA or CWM Production Facilities	◆ The MRS is a facility that formerly engaged in production of CA or CWM, and CWM/DMM is suspected of being present on the surface or in the subsurface.	3
Former Research, Development, Testing, and Evaluation (RDT&E) facility using CWM	◆ The MRS is at a facility that formerly was involved in non-live-fire RDT&E activities (including static testing) involving CWM, and there are CWM/DMM suspected of being present on the surface or in the subsurface.	3
Former Training Facility using CWM or CAIS	◆ The MRS is a location that formerly was involved in training activities involving CWM and/or CAIS (e.g., training in recognition of CWM, decontamination training) and CWM/DMM or CAIS/DMM are suspected of being present on the surface or in the subsurface.	2
Former Storage or Transfer points of CWM	◆ The MRS is a former storage facility or transfer point (e.g., intermodal transfer) for CWM.	1
Evidence of no CWM	◆ Following investigation, the physical evidence indicates that CWM are not present at the MRS, or the historical evidence indicates that CWM are not present at the MRS.	0
SOURCES OF CWM	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	0

DIRECTIONS: Document any MRS-specific data used in selecting the ***Sources of CWM*** classifications in the space provided.

Information identified during the PA indicates that CWM may have been stored and transported from Naval Weapons Station Yorktown; however, documentation indicates that there were no incidents or releases of CWM at the MRS (Brankowitz, 1987). Therefore, CWM is not suspected to be present at UXO 3.

Table 13

CHE Module: Location of CWM Data Element Table

DIRECTIONS: Below are seven classifications of CWM locations and their descriptions. Review these locations and circle the scores that correspond with **all** the locations where CWM are known or suspected of being found at the MRS.

Note: The terms *confirmed, surface, subsurface, physical evidence,* and *historical evidence* are defined in Appendix C of the Primer.

Classification	Description	Score
Confirmed surface	◆ Physical evidence indicates that there are CWM on the surface of the MRS. ◆ Historical evidence (i.e., a confirmed report such as an explosive ordnance disposal [EOD], police, or fire department report, that an incident or accident that involved CWM, regardless of configuration, occurred) indicates there are CWM on the surface of the MRS.	25
Confirmed subsurface, active	◆ Physical evidence indicates the presence of CWM in the subsurface of the MRS and the geological conditions at the MRS are likely to cause CWM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose CWM. ◆ Historical evidence indicates that CWM are located in the subsurface of the MRS and the geological conditions at the MRS are likely to cause CWM to be exposed, in the future, by naturally occurring phenomena (e.g., drought, flooding, erosion, frost heave, tidal action), or intrusive activities (e.g., plowing, construction, dredging) at the MRS are likely to expose CWM.	20
Confirmed subsurface, stable	◆ Physical evidence indicates the presence of CWM in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause CWM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause CWM to be exposed. ◆ Historical evidence indicates that CWM are located in the subsurface of the MRS and the geological conditions at the MRS are not likely to cause CWM to be exposed, in the future, by naturally occurring phenomena, or intrusive activities at the MRS are not likely to cause CWM to be exposed.	15
Suspected (physical evidence)	◆ There is physical evidence, other than the documented presence of CWM, indicating that CWM may be present at the MRS.	10
Suspected (historical evidence)	◆ There is historical evidence indicating that CWM may be present at the MRS.	5
Subsurface, physical constraint	◆ There is physical or historical evidence indicating that CWM may be present in the subsurface, but there is a physical constraint (e.g., pavement, water depth over 120 feet) preventing direct access to the CWM.	2
Evidence of no CWM	◆ Following investigation of the MRS, there is physical evidence that there is no CWM present or there is historical evidence indicating that no CWM are present.	0
LOCATION OF CWM	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 25).	0

DIRECTIONS: Document any MRS-specific data used in selecting the ***Location of CWM*** classifications in the space provided.

Information identified during the PA indicates that CWM may have been stored and transported from Naval Weapons Station Yorktown; however, documentation indicates that there were no incidents or releases of CWM at the MRS. Therefore, CWM is not suspected to be present at UXO 3.

Table 14

CHE Module: Ease of Access Data Element Table

DIRECTIONS: Below are four classifications of barrier types that can surround an MRS and their descriptions. The barrier type is directly related to the ease of public access to the MRS. Circle the score that corresponds with the ease of access to the MRS.

Note: The term *barrier* is defined in Appendix C of the Primer.

Classification	Description	Score
No barrier	◆ There is no barrier preventing access to any part of the MRS (i.e., all parts of the MRS are accessible).	10
Barrier to MRS access is incomplete	◆ There is a barrier preventing access to parts of the MRS, but not the entire MRS.	8
Barrier to MRS access is complete but not monitored	◆ There is a barrier preventing access to all parts of the MRS, but there is no surveillance (e.g., by a guard) to ensure that the barrier is effectively preventing access to all parts of the MRS.	5
Barrier to MRS access is complete and monitored	◆ There is a barrier preventing access to all parts of the MRS, and there is active continual surveillance (e.g., by a guard, video monitoring) to ensure that the barrier is effectively preventing access to all parts of the MRS.	0
EASE OF ACCESS	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 10).	0

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ease of Access*** classification in the space provided.

Information identified during the PA indicates that CWM may have been stored and transported from Naval Weapons Station Yorktown; however, documentation indicates that there were no incidents or releases of CWM at the MRS. Therefore, CWM is not suspected to be present at UXO 3.

Table 15

CHE Module: Status of Property Data Element Table

DIRECTIONS: Below are three classifications of the status of a property within the Department of Defense (DoD) and their descriptions. Circle the score that corresponds with the status of property at the MRS.

Classification	Description	Score
Non-DoD control	◆ The MRS is at a location that is no longer owned by, leased to, or otherwise possessed or used by DoD. Examples are privately owned land or water bodies; land or water bodies owned or controlled by state, tribal or local governments; and land or water bodies managed by other federal agencies. ◆ The MRS is at a location that is owned by DoD, but that DoD has leased to another entity and for which DoD does not control access 24 hours per day.	5
Scheduled for transfer from DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD, and DoD plans to transfer that land or water body to control of another entity (e.g., a state, tribal, or local government; a private party; another federal agency) within 3 years from the date the Protocol is applied.	3
DoD control	◆ The MRS is on land or is a water body that is owned, leased, or otherwise possessed by DoD. With respect to property that is leased or otherwise possessed, DoD controls access to the MRS 24 hours per day, every day of the calendar year.	0
STATUS OF PROPERTY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the ***Status of Property*** classification in the space provided.

Information identified during the PA indicates that CWM may have been stored and transported from Naval Weapons Station Yorktown; however, documentation indicates that there were no incidents or releases of CWM at the MRS. Therefore, CWM is not suspected to be present at UXO 3.

Table 16

CHE Module: Population Density Data Element Table

DIRECTIONS: Below are three classifications for population density and their descriptions. Determine the population density per square mile that most closely corresponds with the population of the MRS, including the area within a two-mile radius of the MRS's perimeter. Circle the most appropriate score.

Note: Use the U.S. Census Bureau tract data available to capture the **highest** population density within a two-mile radius of the perimeter of the MRS.

Classification	Description	Score
> 500 persons per square mile	◆ There are more than 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	5
100–500 persons per square mile	◆ There are 100 to 500 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	3
< 100 persons per square mile	◆ There are fewer than 100 persons per square mile in the U.S. Census Bureau tract in which the MRS is located.	1
POPULATION DENSITY	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Density*** classification in the space provided.

Information identified during the PA indicates that CWM may have been stored and transported from Naval Weapons Station Yorktown; however, documentation indicates that there were no incidents or releases of CWM at the MRS. Therefore, CWM is not suspected to be present at UXO 3.

Table 17

CHE Module: Population Near Hazard Data Element Table

DIRECTIONS: Below are six classifications describing the number of inhabited structures near the MRS. The number of inhabited buildings relates to the potential population near the MRS. Determine the number of inhabited structures within two miles of the MRS boundary and circle the score that corresponds with the number of inhabited structures.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
26 or more inhabited structures	◆ There are 26 or more inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	5
16 to 25 inhabited structures	◆ There are 16 to 25 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	4
11 to 15 inhabited structures	◆ There are 11 to 15 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	3
6 to 10 inhabited structures	◆ There are 6 to 10 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	2
1 to 5 inhabited structures	◆ There are 1 to 5 inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	1
0 inhabited structures	◆ There are no inhabited structures located up to 2 miles from the boundary of the MRS, within the boundary of the MRS, or both.	0
POPULATION NEAR HAZARD	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the ***Population Near Hazard*** classification in the space provided.

Information identified during the PA indicates that CWM may have been stored and transported from Naval Weapons Station Yorktown; however, documentation indicates that there were no incidents or releases of CWM at the MRS. Therefore, CWM is not suspected to be present at UXO 3.

Table 18

CHE Module: Types of Activities/Structures Data Element Table

DIRECTIONS: Below are five classifications of activities and/or inhabited structures and their descriptions. Review the types of activities that occur and/or structures that are present within two miles of the MRS and circle the scores that correspond with **all** the activities/structures classifications at the MRS.

Note: The term *inhabited structures* is defined in Appendix C of the Primer.

Classification	Description	Score
Residential, educational, commercial, or subsistence	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with any of the following purposes: residential, educational, child care, critical assets (e.g., hospitals, fire and rescue, police stations, dams), hotels, commercial, shopping centers, playgrounds, community gathering areas, religious sites, or sites used for subsistence hunting, fishing, and gathering.	5
Parks and recreational areas	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with parks, nature preserves, or other recreational uses.	4
Agricultural, forestry	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with agriculture or forestry.	3
Industrial or warehousing	◆ Activities are conducted, or inhabited structures are located up to two miles from the MRS's boundary or within the MRS's boundary, that are associated with industrial activities or warehousing.	2
No known or recurring activities	◆ There are no known of recurring activities occurring up to two miles from the MRS's boundary or within the MRS's boundary.	1
TYPES OF ACTIVITIES/STRUCTURES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the ***Types of Activities/Structures*** classifications in the space provided.

Information identified during the PA indicates that CWM may have been stored and transported from Naval Weapons Station Yorktown; however, documentation indicates that there were no incidents or releases of CWM at the MRS. Therefore, CWM is not suspected to be present at UXO 3.

Table 19

CHE Module: Ecological and/or Cultural Resources Data Element Table

DIRECTIONS: Below are four classifications of ecological and/or cultural resources and their descriptions. Review the types of resources present and circle the score that corresponds with the ecological and/or cultural resources present on the MRS.

Note: The terms *ecological resources* and *cultural resources* are defined in Appendix C of the Primer.

Classification	Description	Score
Ecological and cultural resources present	◆ There are both ecological and cultural resources present on the MRS.	5
Ecological resources present	◆ There are ecological resources present on the MRS.	3
Cultural resources present	◆ There are cultural resources present on the MRS.	3
No ecological or cultural resources present	◆ There are no ecological resources or cultural resources present on the MRS.	0
ECOLOGICAL AND/OR CULTURAL RESOURCES	**DIRECTIONS:** Record **the single highest score** from above in the box to the right (maximum score = 5).	0

DIRECTIONS: Document any MRS-specific data used in selecting the ***Ecological and/or Cultural Resources*** classification in the space provided.

Information identified during the PA indicates that CWM may have been stored and transported from Naval Weapons Station Yorktown; however, documentation indicates that there were no incidents or releases of CWM at the MRS. Therefore, CWM is not suspected to be present at UXO 3.

Table 20
Determining the CHE Module Rating

DIRECTIONS:

1. From Tables 11–19, record the data element scores in the **Score** boxes to the right.
2. Add the **Score** boxes for each of the three factors and record this number in the **Value** boxes to the right.
3. Add the three **Value** boxes and record this number in the **CHE Module Total** box below.
4. Circle the appropriate range for the **CHE Module Total** below.
5. Circle the **CHE Module Rating** that corresponds to the range selected and record this value in the **CHE Module Rating** box found at the bottom of the table.

Note:
An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more data elements, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

	Source	Score	Value
CWM Hazard Factor Data Elements			
CWM Configuration	Table 11	0	0
Sources of CWM	Table 12	0	
Accessibility Factor Data Elements			
Location of CWM	Table 13	0	0
Ease of Access	Table 14	0	
Status of Property	Table 15	0	
Receptor Factor Data Elements			
Population Density	Table 16	0	0
Population Near Hazard	Table 17	0	
Types of Activities/Structures	Table 18	0	
Ecological and/or Cultural Resources	Table 19	0	
CHE MODULE TOTAL			0

CHE Module Total	CHE Module Rating
92 to 100	A
82 to 91	B
71 to 81	C
60 to 70	D
48 to 59	E
38 to 47	F
less than 38	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected CWM Hazard
CHE MODULE RATING	

Table 21

HHE Module: Groundwater Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's groundwater and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional groundwater contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the groundwater, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	0
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the groundwater is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in groundwater has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the groundwater to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the groundwater receptors at the MRS.

Classification	Description	Value
Identified	There is a threatened water supply well downgradient of the source and the groundwater is a current source of drinking water or source of water for other beneficial uses such as irrigation/agriculture (equivalent to Class I or IIA aquifer).	H
Potential	There is no threatened water supply well downgradient of the source and the groundwater is currently or potentially usable for drinking water, irrigation, or agriculture (equivalent to Class I, IIA, or IIB aquifer).	M
Limited	There is no potentially threatened water supply well downgradient of the source and the groundwater is not considered a potential source of drinking water and is of limited beneficial use (equivalent to Class IIIA or IIIB aquifer, or where perched aquifer exists only).	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Groundwater MC Hazard ❑

Table 22

HHE Module: Surface Water – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios
CHF Scale	**CHF Value**	**Sum The Ratios**	0
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Surface Water (Human Endpoint) MC Hazard ❑

Table 23

HHE Module: Sediment – Human Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with human endpoints present in the sediment, select the box at the bottom of the table.

Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
Aluminum	20,000	7.6E+04	0.263
Antimony	0.093 JB	3.1E+01	0.003
Arsenic	9.4	2.2E+01	0.427
Barium	40 B	1.6E+04	0.003
Beryllium	0.94	1.5E+02	0.006
CHF Scale	**CHF Value**	**Sum The Ratios**	3.178
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right maximum value = H).		M

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	L

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	L

No Known or Suspected Sediment (Human Endpoint) MC Hazard ☐

Table 24

HHE Module: Surface Water – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface water and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface water contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the surface water, select the box at the bottom of the table.

Contaminant	Maximum Concentration (μg/L)	Comparison Value (μg/L)	Ratios
CHF Scale	**CHF Value**	**Sum the Ratios**	0
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface water is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface water has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface water to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface water receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface water to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface water to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface water to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Surface Water (Ecological Endpoint) MC Hazard ❑

Table 25

HHE Module: Sediment – Ecological Endpoint Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's sediment and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional sediment contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard with ecological endpoints present in the sediment, select the box at the bottom of the table.

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Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratios
Aluminum	20,000	7.6E+04	0.263
Antimony	0.093 JB	3.1E+01	0.003
Arsenic	9.4	2.2E+01	0.427
Barium	40 B	1.6E+04	0.003
Beryllium	0.94	1.5E+02	0.006
CHF Scale	**CHF Value**	**Sum the Ratios**	3.178
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		M

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the sediment is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in sediment has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the sediment to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	L

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the sediment receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to sediment to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to sediment to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to sediment to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	L

No Known or Suspected Sediment (Ecological Endpoint) MC Hazard ❑

Table 26

HHE Module: Surface Soil Data Element Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Record the **maximum concentrations** of all contaminants in the MRS's surface soil and their **comparison values** (from Appendix B of the Primer) in the table below. Additional contaminants can be recorded on Table 27. Calculate and record the **ratios** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** by adding the contaminant **ratios** together, including any additional surface soil contaminants recorded on Table 27. Based on the **CHF**, use the **CHF Scale** to determine and record the **CHF Value**. If there is no known or suspected MC hazard present in the surface soil, select the box at the bottom of the table.

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Contaminant	Maximum Concentration (mg/kg)	Comparison Value (mg/kg)	Ratio
	0.46		
	41 B		
	8.6		
	18		
	34,000		
CHF Scale	**CHF Value**	**Sum the Ratios**	0
CHF > 100	**H (High)**	$CHF = \sum \frac{\text{[Maximum Concentration of Contaminant]}}{\text{[Comparison Value for Contaminant]}}$	
100 > CHF > 2	**M (Medium)**		
2 > CHF	**L (Low)**		
CONTAMINANT HAZARD FACTOR	**DIRECTIONS:** Record **the CHF Value** from above in the box to the right (maximum value = H).		

Migratory Pathway Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil migratory pathway at the MRS.

Classification	Description	Value
Evident	Analytical data or observable evidence indicates that contamination in the surface soil is present at, moving toward, or has moved to a point of exposure.	H
Potential	Contamination in surface soil has moved only slightly beyond the source (i.e., tens of feet), could move but is not moving appreciably, or information is not sufficient to make a determination of Evident or Confined.	M
Confined	Information indicates a low potential for contaminant migration from the source via the surface soil to a potential point of exposure (possibly due to the presence of geological structures or physical controls).	L
MIGRATORY PATHWAY FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

Receptor Factor

DIRECTIONS: Circle the value that corresponds most closely to the surface soil receptors at the MRS.

Classification	Description	Value
Identified	Identified receptors have access to surface soil to which contamination has moved or can move.	H
Potential	Potential for receptors to have access to surface soil to which contamination has moved or can move.	M
Limited	Little or no potential for receptors to have access to surface soil to which contamination has moved or can move.	L
RECEPTOR FACTOR	**DIRECTIONS:** Record **the single highest value** from above in the box to the right (maximum value = H).	

No Known or Suspected Surface Soil MC Hazard ❑

Table 27

HHE Module: Supplemental Contaminant Hazard Factor Table

Contaminant Hazard Factor (CHF)

DIRECTIONS: Only use this table if there are more than five contaminants in any given medium present at the MRS. This is a supplemental table designed to hold information about contaminants that do not fit in the previous tables. Indicate the **media** in which these contaminants are present. Then record all **contaminants**, their **maximum concentrations** and their **comparison values** (from Appendix B of the Primer) in the table below. Calculate and record the **ratio** for each contaminant by dividing the **maximum concentration** by the **comparison value**. Determine the **CHF** for each medium on the appropriate media-specific tables.

Note: Do not add ratios from different media.

Media	Contaminant	Maximum Concentration	Comparison Value	Ratio
Sediment (Human and Eco)	Cadmium	0.46	3.9E+01	0.012
Sediment (Human and Eco)	Chromium	41 B	1.6E+03	0.026
Sediment (Human and Eco)	Cobalt	8.6	1.4E+03	0.006
Sediment (Human and Eco)	Copper	18	3.1E+03	0.006
Sediment (Human and Eco)	Iron	34,000	2.3E+04	1.478
Sediment (Human and Eco)	Lead	22	4.0E+02	0.055
Sediment (Human and Eco)	Manganese	720	3.3E+03	0.218
Sediment (Human and Eco)	Mercury	0.071	2.3E+1	0.003
Sediment (Human and Eco)	Nickel	19	1.6E+03	0.012
Sediment (Human and Eco)	Selenium	1	3.9E+02	0.003
Sediment (Human and Eco)	Silver	0.12 J	3.9E+02	0.0003
Sediment (Human and Eco)	Vanadium	51 B	7.8E+01	0.653
Sediment (Human and Eco)	Zinc	100	2.3E+04	0.004

Table 28

Determining the HHE Module Rating

DIRECTIONS:

1. Record the letter values (H, M, L) for the **Contaminant Hazard**, **Migration Pathway**, and **Receptor Factors** for the media (from Tables 21–26) in the corresponding boxes below.
2. Record the media's three-letter combinations in the **Three-Letter Combination** boxes below (three-letter combinations are arranged from Hs to Ms to Ls).
3. Using the **HHE Ratings** provided below, determine each media's rating (A–G) and record the letter in the corresponding **Media Rating** box below.

Media (Source)	Contaminant Hazard Factor Value	Migratory Pathway Factor Value	Receptor Factor Value	Three-Letter Combination (Hs-Ms-Ls)	Media Rating (A-G)
Groundwater (Table 21)					
Surface Water/Human Endpoint (Table 22)					
Sediment/Human Endpoint (Table 23)	M	L	L	MLL	F
Surface Water/Ecological Endpoint (Table 24)					
Sediment/Ecological Endpoint (Table 25)	M	L	L	MLL	F
Surface Soil (Table 26)					

DIRECTIONS (cont.):

4. Select the single highest Media Rating (A is highest; G is lowest) and enter the letter in the **HHE Module Rating** box.

Note:

An alternative module rating may be assigned when a module letter rating is inappropriate. An alternative module rating is used when more information is needed to score one or more media, contamination at an MRS was previously addressed, or there is no reason to suspect contamination was ever present at an MRS.

HHE MODULE RATING	F

HHE Ratings (for reference only)

Combination	Rating
HHH	A
HHM	B
HHL	C
HMM	
HML	D
MMM	
HLL	E
MML	
MLL	F
LLL	G
Alternative Module Ratings	Evaluation Pending
	No Longer Required
	No Known or Suspected MC Hazard

Two pre-dredge, composite sediment samples were collected within the boundaries of the MRS in 2012. The data provided in Tables 23 and 27 has not been validated. Site-specific sediment background criteria were not available for comparison. All detected metals are included in these tables. Explosives data were collected for these samples and no detections were recorded. Collection of background data will be necessary for a more thorough scoring and characterization.

Table 29
MRS Priority

DIRECTIONS: In the chart below, circle the letter **rating** for each module recorded in Table 10 (EHE), Table 20 (CHE), and Table 28 (HHE). Circle the corresponding numerical **priority** for each module. If information to determine the module rating is not available, choose the appropriate alternative module rating. The MRS Priority is the single highest priority; record this relative priority in the **MRS Priority or Alternative MRS Rating** at the bottom of the table.

Note: An MRS assigned Priority 1 has the highest relative priority; an MRS assigned Priority 8 has the lowest relative priority. Only an MRS with CWM known or suspected to be present can be assigned Priority 1; an MRS that has CWM known or suspected to be present cannot be assigned Priority 8.

EHE Rating	Priority	CHE Rating	Priority	HHE Rating	Priority
		A	1		
A	2	B	2	A	2
B	3	C	3	B	3
C	4	D	4	C	4
D	5	E	5	D	5
E	6	F	6	E	6
F	7	G	7	F	7
G	8			G	8
Evaluation Pending		Evaluation Pending		Evaluation Pending	
No Longer Required		No Longer Required		No Longer Required	
No Known or Suspected Explosive Hazard		No Known or Suspected CWM Hazard		No Known or Suspected MC Hazard	
MRS PRIORITY or ALTERNATIVE MRS RATING					

Table A
MRS Background Information

DIRECTIONS: Record the background information below for the MRS to be evaluated. Much of this information is available from Service and DoD databases. If the MRS is located on a FUDS property, the suitable FUDS property information should be substituted. In the **MRS Summary**, briefly describe the UXO, DMM, or MC that are known or suspected to be present, the exposure setting (the MRS's physical environment), any other incidental nonmunitions-related contaminants (e.g., benzene, trichloroethylene) found at the MRS, and any potentially exposed human and ecological receptors. If possible, include a map of the MRS.

Munitions Response Site Name: Munitions Loading Pier, UXO 3

Component:

Installation/Property Name: Naval Weapons Station Yorktown

Location (City, County, State): Yorktown, VA

Site Name/Project Name (Project No.): CTO-WE06

Date Information Entered/Updated: 8/17/2012

Point of Contact (Name/Phone): Adam Forshey/VBO 757-671-6267

Project Phase (check only one):

■ PA	❑ SI	❑ RI	❑ FS	❑ RD
❑ RA-C	❑ RIP	❑ RA-O	❑ RC	❑ LTM

Media Evaluated (check all that apply):

❑ Groundwater	■ Sediment (human receptor)
❑ Surface soil	❑ Surface Water (ecological receptor)
■ Sediment (ecological receptor)	❑ Surface Water (human receptor)

MRS Summary:

MRS Description: Describe the munitions-related activities that occurred at the installation, the dates of operation, and the UXO, DMM, or MC known or suspected to be present. When possible, identify munitions, CWM, and MC by type: Munitions have been loaded from Pier R-3 from the 1960's to present. Pier R-1 was used for loading munitions between 1920 and the 1960's.

Description of Pathways for Human and Ecological Receptors: The Pathway Analysis for UXO 3 is included in Section 4.2 of the Preliminary Assessment.

Description of Receptors (Human and Ecological): Reasonably anticipated human receptors include construction workers, Navy EOD divers, and trespassers. Submerged vegetation, fringing marsh vegetation, estuarine benthic-dwelling and aquatic organisms, and avian and mammalian life are possible receptors.

Appendix D
Tier I Sediment Transport Evaluation

Tier 1 Sediment Transport Evaluation, Site UXO 0003 – Naval Munitions Command Detachment, Yorktown Munitions Loading Pier, Naval Weapons Station Yorktown, Yorktown, Virginia

PREPARED FOR: James Gravette/ Naval Facilities Engineering Command Mid-Atlantic

COPY TO: Adam Forshey/CH2M HILL - VBO

PREPARED BY: Patricia White and Theresa Himmer/CH2M HILL – BOS

DATE: August 23, 2012

PROJECT NUMBER: 424160.RP.DR

1. Introduction and Background

CH2M HILL has been tasked with performing a Preliminary Assessment (PA) for Site Unexploded Ordnance (UXO) 0003 (UXO 3) – Naval Munitions Command Detachment (NMC Det), Yorktown Munitions Loading Pier, Naval Weapons Station (WPNSTA) Yorktown in Yorktown, Virginia. The purpose of this sediment transport evaluation is to assess how the hydrodynamics of the York River influence the transport and fate of munitions and explosives of concern (MEC) that may have been dropped into the river during loading operations at the munitions loading pier.

The sediment transport evaluation follows guidance provided in the *User's Guide for Assessing Sediment Transport at Navy Facilities* (User's Guide) (Blake et al., 2007). The evaluation focuses on two management questions related to sediment and potential MEC transport in the vicinity of the WPNSTA Yorktown munitions loading pier:

- Will sediment transport processes lead to the redistribution of MEC within the pier area, or movement of MEC outside of this area?
- Will natural processes lead to the burial and isolation of MEC by newly deposited sediment?

These questions are addressed using Tier 1 analysis methods. A Tier 1 evaluation is based on available data from site-specific and regional studies and other publicly available sources, and relatively uncomplicated data analysis methods. A Tier 1 evaluation has relatively simple data needs and a higher level of uncertainty than a Tier 2 evaluation. A Tier 2 evaluation, which typically requires collection of site-specific data and use of more-detailed and complex data analysis methods, can be performed if the Tier 1 evaluation does not address the management questions with an acceptable level of certainty. The User's Guide does not specifically address MEC transport. Because of differences in size, shape, and weight, munitions show variable responses to hydrodynamic forces and diverse modes of mobility (Wilson et al., 2008).

This memorandum is organized according to the framework provided in Section 1.2 of the User's Guide. Section 2 presents a site description and conceptual site model for sediment transport. Section 3 presents the Tier 1 sediment transport evaluation and discusses the application of the results to the management questions identified above. Conclusions and recommendations are presented in Section 4, and references are provided in Section 5.

2. Site Description

WPNSTA Yorktown is located on the Virginia Peninsula in York and James City counties, Virginia, on the southwest shore of the York River. The waterfront area of WPNSTA Yorktown consists of a "U"-shaped munitions loading pier that extends approximately 760 meters (2,500 feet) into the York River; the pier is connected to the mainland by two trestle structures. Remnants of a former pier are located southeast of the existing pier.

WPNSTA Yorktown was established in 1918 to support the laying of mines in the North Sea during World War I. Since that time, the depot has received, reclaimed, stored, and issued mines, depth charges, and related

materials. During World War II, the facility was expanded to include trinitrotoluene loading plants and torpedo overhaul facilities. Today, the primary mission of WPNSTA Yorktown is to provide ordnance, technical support, and related services to the Atlantic Fleet. Historical records indicate that a variety of munitions and munitions constituents were handled at WPNSTA Yorktown, including but not limited to bombs, fuzes, incendiary clusters, depth charges, pistols, detonators, torpedoes, warheads, rockets, and accessories.

2.1 Site Setting

The York River is a tidally influenced sub-estuary of Chesapeake Bay. The WPNSTA Yorktown munitions loading pier is approximately 13 kilometers (km) (8 miles) upstream from the mouth of the river, and approximately 2.5 km (1.5 miles) upstream of Gloucester Point, where the river channel constricts and changes direction (Figure 1). At this location, the river is characterized by a deeper main channel bordered on either side by well-developed shoals.

The bathymetry of the river in the vicinity of WPNSTA Yorktown is shown on Figure 1. The outer edge of the munitions loading pier borders the main channel, which has a depth of 12 to 14 meters (40 to 45 feet). The trestles traverse the shoals from the pier to the shoreline. The area bordering the inside of the pier is 2.5 to 6 meters (15 to 20 feet) deep.

Maintenance dredging information for WPNSTA Yorktown indicates that the berthing area adjacent to the main channel is maintained at a depth of -13.4 meters (-44 feet) mean lower low water. The areas on the inner edge of the pier and to the north of the pier are maintained at a depth of -6.1 meters (-20 feet) mean lower low water. The Department of the Navy (Navy) has reported an average requirement for dredging of approximately 390,000 cubic yards (300,000 cubic meters) every 8 years.

2.2 Hydrodynamic Processes

The York River is a partially mixed estuarine system (Friedrichs, 2009). The mean tidal range near WPNSTA Yorktown is approximately 0.75 meter (2 feet). The lower York River exhibits salinity stratification, with bottom salinities of 20 to 22 practical salinity units and surface salinities of 16 to 17 practical salinity units. Circulation is driven by tides, wind, and freshwater inflow. Tidal currents are stronger in the main channel than over the adjacent shoals. Spring tidal velocities near WPNSTA Yorktown are on the order of 0.6 meter per second (2 feet per second). The flood tides tend to be stronger and more turbulent than the ebb tides, and more sediment is suspended and moved landward (upriver) on the flood tide. In the absence of wind or major freshwater discharge events, the mean estuarine circulation is weak, at approximately 5 to 7 centimeters per second (2 to 3 inches per second) in a landward (upriver) direction in the channel. Because the York River has a relatively small watershed, freshwater inflow is minor.

Current predictions for Pages Rock (approximately 6 km [4 miles]) upstream of WPNSTA Yorktown) for 2011 were obtained from the National Oceanic and Atmospheric Administration[1]. The maximum flood and maximum ebb currents at the Pages Rock station in 2011 are shown in Table 1. Maximum flood velocities are higher than ebb velocities.

TABLE 1
Estimated Maximum Currents approximately 4 miles Upstream of WPNSTA Yorktown in 2011

Tide	Current Velocity (meter per second [m/s])	Direction
Maximum ebb	0.77	SE
Maximum flood	0.98	NW

[1] *http://tidesandcurrents.noaa.gov/get_predc.shtml?year=2011&stn=5134+Chesapeake+Bay+Entrance&secstn=Yorktown+&sbfh=%2D0&sbfm=30&fldh=%2D0&fldm=28&sbeh=%2D0&sbem=19&ebbh=%2D0&ebbm=17&fldr=1.5&ebbr=1.3&fldavgd=302&ebbavgd=124&footnote=*. Accessed 4/2/12.

and

http://tidesandcurrents.noaa.gov/get_predc.shtml?year=2011&stn=5134+Chesapeake+Bay+Entrance&secstn=Pages+Rock,+1+mile+SSE+of+&sbfh=%2D0&sbfm=10&fldh=%2B0&fldm=24&sbeh=%2B0&sbem=13&ebbh=%2D0&ebbm=22&fldr=1.2&ebbr=0.8&fldavgd=303&ebbavgd=125&footnote=, Pages Rock Station 37°17.6' north, 76°34.8' west. Accessed 4/2/12.

Waves are generally small in the York River except when strong winds line up with the axis of the estuary (Friedrichs, 2009). Conditions for wind-wave growth are present only 3 to 4 percent of the time. However, large waves can occur during extreme events such as Tropical Storm Isabel in September 2003, when significant wave heights of 1.6 meters (5 feet) were measured at Gloucester Point.

Sources of sediment to the York River include influx from the tributaries at the head of the river (the Mattaponi and Pamunkey rivers), influx from Chesapeake Bay, and shoreline erosion. The net movement of sediment is from Chesapeake Bay into the York River, although sediment is transported out of the river into the bay during storms and hurricanes (Friedrich, 2009; United States Geological Survey, 2003).

2.3 Sediment Characteristics

Sediments in the main channel of the York River are predominately mud, with the percentage of mud generally exceeding 80 percent. Sediments on the shoals tend to be sandier (Nichols et al., 1991, as cited in Friedrichs, 2009). Analytical data collected to support dredge material characterization indicate that the shallow surface sediments around the WPNSTA Yorktown pier are composed of predominantly silts and clays (92 to 99 percent) with a trace of sand. The total organic carbon content ranged from 2.2 percent to 3.2 percent, and the specific gravity ranged from 2.0 to 2.5 (Geo-Marine, Incorporated, 2001; NAVFAC, 2000). Sampling performed in 2011 yielded similar results, with the total fines (silt plus clay) content of 93 to 95 percent for two composite samples representing the areas adjacent to the pier. Total organic carbon concentrations were 2.6 and 2.9 percent and the percent solids were 30.8 percent and 31.6 percent.

2.4 Sediment Transport Conceptual Site Model

A sediment transport conceptual site model for the WPNSTA Yorktown munitions loading pier is provided in Figure 2. Sediment sources to the York River include influx from Chesapeake Bay and upstream tributaries, and shoreline erosion. Sediments tend to be transported upriver on flood tides. The York River is an area of net sediment accumulation except during storm events, when sediments may be transported out of the river into Chesapeake Bay. Bottom sediments are episodically resuspended and redistributed by waves and tides. The need for periodic maintenance dredging at WPNSTA Yorktown indicates that this part of the river is a net depositional environment.

3. Tier 1 Evaluation

Sediment transport is caused by interactions between hydrodynamic forces (tides, currents, and waves) and bottom sediments. The potential for erosion and resuspension of sediments and MEC due to tidal circulation and wind-generated waves was evaluated using the methods outlined in Section 3 of the User's Guide.

Sediments are eroded when the bottom shear stress produced by waves and currents (T_b) exceeds the critical shear stress of the sediment bed (T_{ce}). For the purposes of this evaluation, the effects of currents and waves are considered separately. Table 2 summarizes the parameters used for estimating the erosion potential at the WPNSTA Yorktown munitions loading pier due to tidal currents. The maximum flood and ebb current velocities from Table 1 were used to represent the upper range of hydrodynamic conditions. Bottom shear stresses were calculated separately for the deeper area adjacent to the main channel and the shallower areas inside the pier and to the north and south of the pier. The median particle diameter is based on the shallow sediment samples collected for dredge material characterization (Section 2.3), and is assumed to be silt. Because the critical shear stress for cohesive sediments (that is, particles smaller than 0.2 millimeter [mm], or fine sand) is influenced by a number of sediment variables in addition to particle size, it cannot be readily calculated. Therefore, a conservative estimate of 1 dyne per square centimeter (dyne/cm^2) is used for T_{ce} (Blake et al., 2007).

Based on these parameters, the bottom shear stresses were calculated using the methods outlined in Section 3.4.1 of the User's Guide. Results of these calculations show that the bottom shear stresses under both maximum flood and maximum ebb tide conditions exceed the estimated critical shear stress in both deeper and shallower areas. This indicates that fine-grained bed sediments may be resuspended by maximum tidal currents.

TABLE 2
Parameters for Estimating Erosion Potential

Parameter	Maximum Flood Main Channel Area	Maximum Flood Shallower Area	Maximum Ebb Main Channel Area	Maximum Ebb Shallower Area
Current velocity (m/s)	0.98	0.98	0.77	0.77
Water depth (meters)	13	5	13	5
Median particle diameter (mm)	<0.062	<0.062	<0.062	<0.062
Bottom Shear Stress (dynes/cm^2), T_b	15	18	9.2	11
Critical Shear Stress (dynes/cm^2), T_{ce}	1	1	1	1
Resuspension?	Yes	Yes	Yes	Yes

Table 3 shows the approximate equivalent sediment particle diameter for munitions ranging in weight from 45 grams (0.1 pound) to 11,000 grams (25 pounds). The estimated critical shear stresses for each of these equivalent particle sizes are greater than 100 dynes/cm^2. These values substantially exceed the bottom shear stresses under maximum tidal conditions, indicating that tidal currents are unlikely to transport MEC greater than 45 grams (0.1 pound) in weight.

TABLE 3
Equivalent Particle Size for MEC

Parameter	Range of MEC Sizes					
MEC weight (pounds)	0.1	0.25	1	5	10	25
MEC weight (grams)	45	114	454	2,270	4,540	11,350
Equivalent sediment particle diameter (mm)	32	43	68	116	146	197
Equivalent sediment particle size	Coarse pebble	Very coarse pebble	Cobble	Cobble	Cobble	Cobble

Sediment particle density assumed to be 2.65 grams per cubic centimeter

Wave-forced resuspension of sediment and potential MEC could occur at the WPNSTA Yorktown munitions loading pier under storm conditions. Tropical Storm Isabel in 2003 was identified as a 100-year event because strong onshore winds (greater than 20 m/s [66 feet per second]) persisted for more than 12 hours, causing sustained, up-estuary wind stress (Brasseur et al., 2005). Additionally, the period of high tide, maximum storm surge, and maximum wave heights coincided. At the peak of the storm, current velocities were dominated by up-estuary, wind-driven flow. The maximum velocities at Gloucester Point at the height of the storm were almost twice the maximum spring tide velocities.

A maximum velocity of 2 m/s (6.5 feet per second) was conservatively assumed at the WPNSTA Yorktown munitions loading pier during an extreme event. The associated bottom shear stresses would be approximately 75 dynes/cm^2. Even if munitions as small as 45 grams (0.1 pound) in weight were resuspended by wave activity, these current velocities would not be sufficient to transport the munitions substantial distances upriver.

Sediment Management Questions

This section addresses the questions that are likely to influence management decisions for the WPNSTA Yorktown Munitions Loading Pier.

1. **Will sediment transport processes lead to the redistribution of MEC within the munitions loading pier area, or movement of MEC outside of this area?**

   Although the fine-grained bed sediments may be resuspended by tidal currents and by waves during storm events, current velocities would not be sufficient to transport intact munitions substantial distances from the

pier area or transported out of the area. Likewise, current velocities are not sufficient under normal conditions to transport MEC from the pier.

2. Will natural processes lead to the burial and isolation of MEC by newly deposited sediment?

The need for periodic maintenance dredging at the WPNSTA Yorktown munitions loading pier indicates that the area is net depositional. In addition, fine-grained sediments tend to accumulate in dredged areas. Therefore, MEC in the vicinity of the pier will tend to be buried over time by newly deposited sediment.

4. Conclusions and Recommendations

The Tier 1 sediment transport evaluation for the WPNSTA Yorktown munitions loading pier indicates that sediment transport may occur in the vicinity of the pier complex, but current velocities are not sufficient to substantially mobilize MEC. However, the Tier 1 evaluation should be considered an initial, simplified assessment of site conditions. A geophysical survey would confirm the location and distribution of MEC near the pier. If a more detailed and site-specific evaluation of sediment and MEC transport is warranted, a Tier 2 study including site-specific current and wave measurements and numerical modeling could be performed.

5. References

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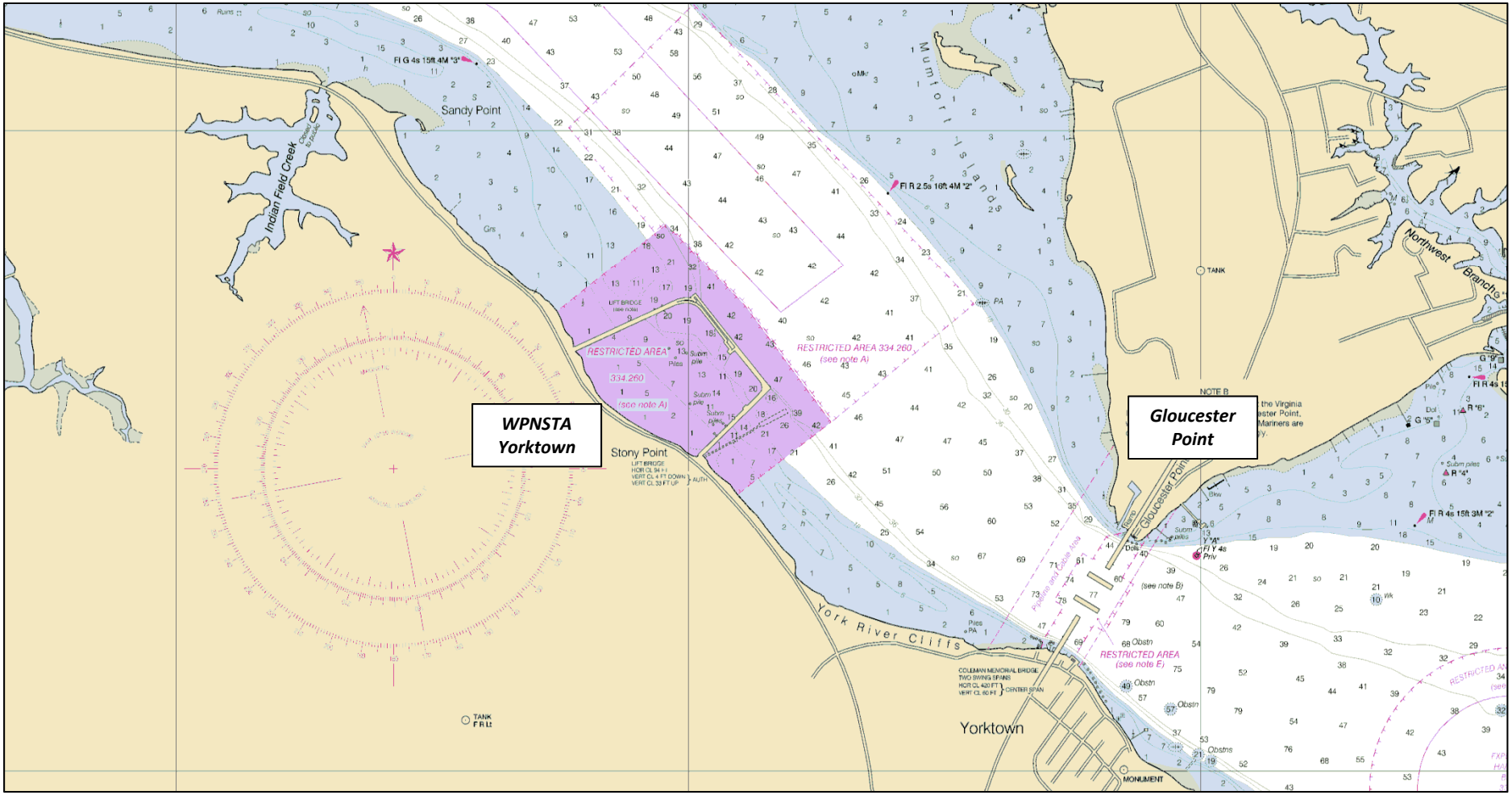

Scale 1:20,000

FIGURE 1
York River Bathymetry
Tier 1 Sediment Transport Evaluation
Naval Weapons Station Yorktown, Virginia

Bathymetry data from the National Oceanic and Atmospheric Administration (NOAA)
http://www.charts.noaas.gov/OnLineViewer/12241.html

CH2MHILL

Legend

Sediment source

Base map from Microsoft Bing
http://www.bing.com/maps/?FORM=L8SP16#

FIGURE 2
Sediment Transport Conceptual Site Model
Tier 1 Sediment Transport Evaluation
Naval Weapons Station Yorktown, Virginia

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