NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

Navigable Area

H11295

Type of Survey:

Registry Number:

H11295

LOCALITY

State:

Virginia

General Locality: York River

Sub-locality: Indian Field Creek to the Entrance to the York River

2007

CHIEF OF PARTY Lieutenant Commander Richard T. Brennan NOAA

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DATE

NOAA FORM 77-28 (11-72)

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

H11295

INSTRUCTIONS: The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

| State: | Virginia | | | | |
|----------------------------|---|-----------------------------|----------------------|--|--|
| General Locality: | York River | | | | |
| Sub-Locality: | Indian Field Cr | reek to the Entrance to the | e York River | | |
| Scale: | 1:10,000 | Date of Survey: | 09/11/07 to 10/17/07 | | |
| Instructions Dated: | 03/22/2007 | Project Number: | OPR-E369-RU-07 | | |
| Vessel: | NOAA Ship RUDE | | | | |
| Chief of Party: | Lieutenant Commander Richard T. Brennan | | | | |
| Surveyed by: | RUDE Personnel | | | | |
| Soundings by: | Reson 8125 multibeam echo sounder and ODOM Echotrac MK II | | | | |
| Graphic record scaled by: | N/A | | | | |
| Graphic record checked by: | N/A | | | | |
| Protracted by: | N/A | Automated Plot: N/A | | | |
| Verification by: | Atlantic Hydrog | graphic Branch Personne | 1 | | |
| Soundings in: | Meters at MLL | W | | | |
| | | | | | |

Remarks:

1) All Times are in UTC.

2) This is a Navigable Area Hydrographic Survey.

3) Projection is UTM Zone 18.

4) Office Processor's Comments in Red, Bold, Italic.

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Descriptive Report to Accompany Hydrographic Survey

Project OPR-E369-RU-07 York River, VA Indian Field Creek to the Entrance to York River Scale 1:10,000 September 11th – October 17th 2007 **NOAA Ship RUDE**

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-E369-RU-07*, dated March 22^{nd} 2007. The survey area includes the York River between Indian Field Creek to the entrance of the York River. This area was specified by the Hydrographic Surveys Divisions upon agreement with the Chief of Party to combine sheets H11294 and H11295 into one sheet designated H11295 as documented in Appendix V*. *See Evaluation Report.*

Data acquisition was conducted from September 11th to October 17th 2007.

OPR-E369-RU-07 responds to a request from the Virginia Pilots Association for more modern hydrographic data on the lower York River. The York River is important for U.S. Naval vessels transiting to the Yorktown Naval Weapons Station and for the delivery of oil to the Giant Industries refinery near Goodwin Neck.

Survey limits of H11295 are shown in Figure 1.

*Filed with original field records.



Figure 1. H11295 Survey Limits (Chart 12241).

For statistics on the coverage by different types of data acquisition see Table 1.

| Data Type | NM |
|---------------------------------------|-----|
| Single Beam Only | 0 |
| Multibeam Only | 0 |
| Side Scan Sonar Only | 0 |
| Side Scan/Single Beam | 389 |
| Crosslines | 32 |
| Multibeam Developments | 36 |
| Side Scan Developments | 0 |
| Shoreline Investigation | 1 |
| Data acquired from 9/11 to 10/17 2007 | |
| Number of Bottom samples collected | 23 |
| Number of AWOIS items investigated | 12 |
| Total Square Nautical Miles Surveyed | 11 |

| Table | 1. | Statistics | for | survey | H11295 |
|--------|----|-------------------|-----|--------|--------|
| 1 uvic | 1. | Suusius | 101 | survey | 1112/5 |

B. DATA ACQUISITION AND PROCESSING

Refer to <u>OPR-E369-RU-07 Data Acquisition and Processing Report (DAPR)</u>* for a complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods. Additional information to supplement sounding and survey data, and any deviations from the DAPR* are included in this descriptive report. *Filed with original field records.

B 1. EQUIPMENT AND VESSELS

All data were acquired by NOAA Ship RUDE (s590). RUDE is 90 feet in length, has a 22 foot beam, and a 7 foot draft. *Concur.*

Vertical-beam echo sounding (VBES) data were acquired on RUDE with an Odom Echotrac DF3200 MKII dual-frequency echo sounder (24 and 200 kHz). While vertical-beam data was acquired during multibeam developments the data was not used. *Concur.*

VBES data are logged by HYPACK's software package, and paper records are acquired and retained for comparison with digitized depths during processing whenever the VBES is the primary sounding instrument. *Concur.*

RUDE acquired all side scan sonar (SSS) data using a Klein 5000 side scan sonar system. SSS data were recorded digitally using Triton ISIS software and archived in Extended Triton Format (XTF). *Concur.*

For developments, single frequency (455 kHz) multi-beam data on RUDE were acquired with a Reson SeaBat 8125 shallow water multibeam echo sounder (MBES) system. Positioning and attitude data were measured using an Applanix POS/MV with RTCM differential GPS corrections provided to the POS/MV by a Trimble DSM-212L DGPS receiver. An Odom Hydrographic Systems Digibar Pro was used for measuring the surface sound velocity at the MBES transducer face. *Concur.*

Full water column sound velocity data were acquired using a Sea-Bird SBE 19 SEACAT Conductivity, Temperature and Depth (CTD) Profiler. Processing of CTD data were accomplished using Velocwin version 8.85. *Concur.*

Bottom samples were collected using a Wildco Ponar-type sampler. Bottom sample locations were chosen to coincide with charted seafloor characteristics. Samples were taken, analyzed, logged and discarded. The position of each bottom sample and its associated characteristics were recorded using the HYPACK target tool. *Concur.*

The vessel configurations, equipment operation and data acquisition were consistent with those described in the DAPR* with the following exceptions: **Filed with original field records*.

The entire Klein 5000 SSS system was replaced on October 9, 2007 because of a failure within the TPU. Past experience has shown that a failure within the TPU may be caused by a failure in

the towfish, so the entire system was changed. The failed Klein 5000 SSS system was replaced in kind (albeit a newer TPU) with a system provided by Navigation Response Team 7(NRT7). *Concur.*

The Digibar was replaced on October 9, 2007 due to delaminating in the transducer. This replacement was also provided by NRT7. The calibration sheet for this sensor is included in Appendix V*. *Concur.*

*Filed with original field records.

The Electronic Engineering Branch provided a replacement for a broken SEACAT on October 10th, 2007. This SEACAT was the secondary CTD used for conducting Daily Quality Assurance (DQA) tests. For the first part of the survey no DQA test were conducted. The calibration sheet for this sensor is included in Appendix V*. *Concur.*

Processing of the bathymetric data in CARIS was also adapted earlier in the field season. For this survey settings for Ship Navigation and Attitude in conversion from XTF were changed to use the Raw datagram. Data flow was otherwise the same as expressed in the DAPR*. *Concur.*

B 2. QUALITY CONTROL

B 2.1 System Certification and Calibration

Refer to NOAA Ship RUDE DAPR and Hydrographic Systems Readiness Report (HSRR) * for a complete description of system integration and initial calibration results for equipment and sensors used for the majority of this survey. *Concur.* **Filed with original field records.*

B.2.2 Sounding Coverage

As per the Letter Instructions, this survey was conducted using two hundred percent SSS with MBES development of significant contacts. Daily confidence checks were made by observing known features (i.e. buoy blocks) in the outer ranges of the SSS image. Side scan sonar imagery in the York River frequently showed dense schools of fish. It was often hard to distinguish these schools of fish from areas of the seafloor with higher (darker) backscatter strength. This was typically resolved by reviewing data from the second 100% in the same area. SSS coverage was judged by 1m coverage mosaics for each 100%. Two hundred percent SSS coverage was completed in all areas of this survey except a small area 41 meters by 270 meters in the first 100% between buoys R"22" and R"24". This area was not discovered until after survey operations were completed. The area of this holiday was reviewed for contacts in the second 100% and no contacts were found. *Concur.*

Bathymetric coverage for comparison with the current chart was acquired with VBES. Both digital and paper records were recorded. Contacts detected in the SSS imagery were developed using MBES coverage over the immediate area. All bathymetric data sets (VBES and MBES) were used for the gridded surface of the survey area. *Concur.*

The limits for the surveyed area were modified to include both H11294 and the majority of the H11295 outlined in the original Project instructions*. This combined area was subsequently assigned the registry number H11295, and H11294 was cancelled by the Hydrographic Surveys Division, Operations Branch (see Appendix V*). *See Evaluation Report.* **Filed with original field records.*

B 2.3 Crosslines

RUDE acquired VBES cross-lines totaling 32 lineal nautical miles comprising 8.3 percent of mainscheme VBES as per the project instructions. Comparisons between mainscheme and crossline soundings were accomplished using MapInfo. Mainscheme and crosslines typically agreed within one to two feet in areas of flat bottom with slightly higher differences observed in areas of steep slopes. *See Evaluation Report.*

B 2.4 Junctions and Prior Surveys

There were no contemporary junction surveys with H11295. Concur.

B 2.5 Systematic Errors

All data acquired during H11295 met IHO S-44 Order 1 specifications. A large numbers of submerged piles were found in the York River. These piles proved to be excellent tools for checking for systematic errors. While the side scan data would show only a single pile at a given geographic position, a review of the MBES development data showed, what would appear to be two or three piles at this same location (Figure 2). Further investigation revealed that each of these MBES piles was from a different survey line. Subsequent diver investigations proved the existence of only a single pile. After extensive review of our POS/MV configuration, offset measurements, CARIS vessel configuration files, and patch test data, it was determined that these offsets were produced by uncertainties in the GPS positioning. *Concur with clarification. The finalized CARIS BASE Surface was tested in CARIS to determine whether the grid met INO Order 1 specification. It was determined that 99.65% of all nodes in the grid meet IHO Order 1. This is adequate for charting.*



Figure 2. Three images of each object, one image from each line run over the area.

B 3. CORRECTIONS TO ECHO SOUNDING

All methods and instruments used for sound velocity correction were as described in the DAPR or Appendix V* for the substitute CTD. A table detailing all sound velocity casts is located in Separate II* of this Descriptive Report. *Concur.* **Filed with original field records.*

A patch test for the project was conducted on October 1st 2007 (DN274). A recalibration was necessary due to the removal and reinstallation of the MBES while alongside. This patch test was conducted over a wreck southeast of Old Point Comfort in Hampton Roads, VA. *Concur with clarification. Patch test echosounder data was not provided to AHB. Patch test values were submitted to AHB in the HIPS Vessel File (.HVF).*

B 4. DATA PROCESSING

B 4.1 Total Propagated Error

For the 2007 field season, Total Propagated Error (TPE) parameters for sound speed and tides are calculated separately for each project. The project-specific parameters for OPR-E369-RU-07, Survey H11295 are as follows:

 Table 2: TPE Parameters

| Vessel | Tide Va | alues | Sound Speed Values | | |
|--------|----------|--------|-----------------------|---------|--|
| | Measured | Zoning | Measured | Surface | |
| | 0 | 0.12 | 4 | 0.5 | |

These values were calculated for all MBES and VBES data immediately following CARIS Merge. *Concur.*

B 4.2 BASE Surfaces and Mosaics

Table 3 describes all BASE Surfaces and Mosaics submitted as part of Survey H11295: Concur.

| Tuble 5 Au DASE surjuces una mosaics submitted as part of Survey 111275. | | | | |
|--|------------|-------------|---|--|
| Name of Fieldsheet | Resolution | Туре | Purpose | |
| H11295_mosaics/Mosaic_100%_1m | 1 m | SSS Mosaic | Provide coverage map for 1 st 100% | |
| H11295_mosaics/Mosaic_200%_1m | 1 m | SSS Mosaic | Provide coverage map for 2 nd 100% | |
| H11295_Base_surface/Developments_Cube_50cm | 50 cm | Cube | Development Cube Base Surface | |
| H11295_Base_surface/MBandSB_Uncertainty_2m | 2 m | Uncertainty | Survey Uncertainty Base Surface | |
| H211295_Base_surface/ENCcomp_Swath_80m | 80m | Swath | Comparison to the ENC | |

Table 3 All BASE surfaces and Mosaics submitted as part of Survey H11295.

C. VERTICAL AND HORIZONTAL CONTROL

A complete description of vertical and horizontal control for survey H11295 can be found in the **OPR-E369-RU-07 Horizontal and Vertical Control Report***, submitted with this report. A summary of horizontal and vertical control for this survey follows. **Filed with original field records*.

C 1.1 Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83), zone 18. Differential GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard beacon at Driver, VA (289 kHz), were used during this survey. *Concur.*

No horizontal control stations were established by NOAA Ship RUDE for this survey. *Concur.*

C 1.2 Vertical Control

All sounding data were reduced to mean lower-low water (MLLW). The operating National Water Level Observation Network (NWLON) station at Yorktown, VA (863-7689) served as datum control for H11295 as specified in the Letter Instructions* and illustrated in Figure 3.



Figure 3. Tidal zoning assigned in Project instructions.

All other datum reduction procedures conform to those outlined in the DAPR*.

The letter for acceptance for preliminary zoning as final zoning was received on November 13th, 2007. Verified water levels with final zoning were applied to all sounding data. *Concur.*

*Filed with original field records.

D. RESULTS AND RECOMMENDATIONS

D.1 Chart Comparison

Charts affected by survey H11295 are as follows:

| <u>Chart E</u> | dition | Edition Date | Scale |
|----------------|------------------|---------------------|----------|
| 12241 | 21^{st} | Jan 2002 | 1:20,000 |
| 12238 | 39^{th} | Nov 2006 | 1:40,000 |

Chart comparisons were performed in MapInfo and on paper plots using survey-scale excised soundings exported from Pydro. *Concur.*

D.1.1 Chart 12241 Comparison

Depths from the chart 12241 generally agree with the current survey, with differences generally 2 feet or less. All charted depths have soundings within 45m of their charted positions. Shoaling was evident on the southern side of the York River between the Giant Industries Oil Refinery on Goodwin Neck and G"21" off of the Goodwin Islands. Side scan sonar revealed no significant evidence of shoaling or discrete features between the sounding lines that may have provided depths shoaler than those recorded using the VBES. Areas where soundings disagreed with the chart can be found in the Mapinfo tab file "grid_to12241_comp.TAB". The hydrographer recommends that soundings from this survey supersede those previously charted in the York River. *Concur.*

D.1.2 Chart 12238 Comparison

Depths from the chart 12238 generally agree with the current survey, with differences generally 2 feet or less. All charted depths have soundings within 45m of their charted position. The area of greatest disagreement was around the Coleman Memorial Bridge. This area was found to have high currents which produced sand waves and areas of irregular (not flat) seafloor near the approaches to the bridge and steep slopes near shore. It is expected that these natural characteristics are the cause of the higher than expected differences between survey soundings and charted depths. Side scan sonar revealed no significant evidence of shoaling or discrete features between the sounding lines that may have provided depths shoaler than those recorded using the VBES. Areas where soundings disagreed with the chart can be found in the Mapinfo tab file grid_to12238_comp.TAB". Hydrographer recommends that sounding from this survey supersede those previously described in the York River. *Concur.*

D.1.3 ENC Comparisons

Soundings were also compared to ENC US5VA60M and US5VA24M. The soundings compared to these charts were from an 80m swath angle base surface. Soundings were generally comparable with charted depths, with differences between charted depths and survey soundings less than 1 meter. Since the sounding source for all NOAA ENC's are currently provided by

their raster counterparts, it is not surprising that similar trends to those observed in the raster charts were also observed on the ENC's. *Concur.*

D.2 Additional Results

D.2.1 Item Investigation

Item investigations for this survey mostly consisted of areas of piles thought to be old fish traps. Other objects investigated include wrecks, rocks, and other identified debris. Table 3 lists the uncharted items not included in section 3.1 Dangers to Navigation. Further information on these features can be found in section 2 of the Pydro Survey Feature Report in Appendix 2*.

| No. | Feature Type | Survey Depth | Survey Latitude | Survey Longitude |
|------|--------------|--------------|-----------------|------------------|
| 2.1 | Wreck | 7.65 m | 37°15'16.213" | -076°22'43.607" |
| 2.2 | Obstruction | 10.08 m | 37°14'51.752" | -076°21'01.722" |
| 2.3 | Obstruction | 9.82 m | 37°14'59.846" | -076°21'23.086" |
| 2.4 | Wreck | 8.94 m | 37°14'14.772" | -076°27'09.399" |
| 2.5 | Obstruction | 8.15 m | 37°14'37.850" | -076°25'08.307" |
| 2.6 | Obstruction | 9.28 m | 37°14'38.876" | -076°24'55.054" |
| 2.7 | Obstruction | 14.94 m | 37°13'53.255" | -076°29'13.839" |
| 2.8 | Obstruction | 7.36 m | 37°13'36.262" | -076°26'55.171" |
| 2.9 | Obstruction | 14.86 m | 37°14'15.806" | -076°30'17.480" |
| 2.10 | Obstruction | 6.80 m | 37°13'31.521" | -076°26'58.209" |
| 2.11 | Obstruction | 5.95 m | 37°14'01.914" | -076°29'57.703" |
| 2.12 | Obstruction | 20.80 m | 37°14'23.730" | -076°30'17.450" |
| 2.13 | Obstruction | 6.44 m | 37°14'03.115" | -076°30'00.472" |
| 2.14 | Obstruction | 17.51 m | 37°14'11.653" | -076°30'07.046" |

 Table 3. The least depth and position of all uncharted non-DTONs investigated.

See Evaluation Report. *Filed with original field records.

D.2.2 Automated Wreck and Obstruction Information Service (AWOIS) Items

A total of thirteen AWOIS items located within the modified limits of H11295 were assigned during this survey. AWOIS items were investigated with 200% SSS over the area of the search radius deemed safe for navigation with RUDE. In some cases a MBES development was conducted over the search radius. A detailed description of the AWOIS investigations performed during this survey are provided in Appendix II* under the Pydro Survey Feature Report. Below is a summary of these findings: **Filed with original field records*.

AWOIS 12139 was investigated with SSS and MBES. This obstruction was originally found with SSS and reported to be a pile. MBES development measured a least depth of 10 feet. Current MBES development shows several piles in the area, several to the east of the previously reported position. No contacts in the area had a least depth less than 23 feet (6.94 meters). The hydrographer recommendations include removing the currently charted obstruction and charting an obstruction in the center of the contacts from this survey with a least depth of 23 feet. *Concur.*

AWOIS 12140 was investigated with SSS only. The item was enclosed by a charted fish trap area. Two exploratory passes were made through the area to look for obstructions that would prohibit safe navigation by RUDE. One pass was made only through the corner closest to the item in question. SSS imagery shows only piles on the bottom and none standing significantly off the bottom. The second pass through the fish trap area showed other piles closer to shore that made it unsafe for RUDE to explore the area further. Due to data storage problems during acquisition this particular SSS line showing the inshore piles was lost. Since the area could not be developed fully retain the item as charted. *Concur.*

AWOIS 12141 was investigated with 200% SSS and MBES development. Nothing significant was seen in SSS. MBES development showed minimal structure on the bottom with a least depth of 36 feet (10.90 meters). Hydrographer recommends removing 27 foot obstruction and chart as 36 foot obstruction. *Concur.*

AWOIS 12142 was investigated with 200% SSS and MBES development. Nothing significant was seen in SSS imagery. MBES development measured a least depth of 30 feet (9.12 meters) on a pile that was 4m long and approximately 30 degrees from horizontal in the previously charted position. The hydrographer recommends retaining this item as charted. *Do not concur. Chart an obstruction as described in Appendix II of this report. Refer to Appendix II for detailed description of this item.*

AWOIS 12191 was reported as a wrecked crane barge that originally had part of its boom above the surface. The area was surveyed with 200% SSS and developed with MBES. A light contact in SSS was found to be a pile or pipe sticking up off the bottom at 60° from horizontal with the MBES least depth of 10 feet (3.10 meters). Divers report the item to be a steel pipe approximately eight inches in diameter with no other wreckage apparent above the seafloor within a 50 foot radius. This item was reported as a DTON on 12/7/07. Hydrographer recommended removing charted wreck awash, position approximate, and charting a dangerous wreck in the surveyed location with a least depth of 10 feet in the DTON report. *Concur.*

AWOIS 12192 was an archaeology project being conducted on a wreck. RUDE conducted SSS and MBES as close to area as was safe. There was no evidence of the project or the wreck either on SSS or visually on the surface. Retain this item as charted until it can be further investigated. *Concur.*

AWOIS 12193 was a small vessel that sank in the area. The RUDE conducted SSS as close to the area as was safe with no contacts. This item could not be fully investigated safely and therefore could not be disproved. Retain item as charted. *Concur.*

AWOIS 12194 was deemed outside of the RUDE's safe survey area. Retain as charted. *Concur.*

AWOIS 12195 was apparently a group of submerged piles from 1952. 200% SSS imagery showed no features. MBES development of the area measured a few piles which were designated as contacts and recommended for charting. No other significant contacts were found. *Concur.*

AWOIS 12390 was found with SSS. 200% SSS imagery shows a dark mass on the seafloor with no vertical structure. Multibeam development measures a least depth of 48.60 feet (14.81 meters) on a pile like item that is at 45° from horizontal. The hydrographer recommends to retain this item as charted. *Do not concur. The surveyed least depth is shoaler than the charted least depth. Chart an obstruction as described in Appendix II of this report. Refer to Appendix II for detailed description of this object.*

AWOIS 12391 charts an unknown obstruction. 200% SSS does not show any significant contacts. MBES development measured a least depth as charted with a height of 1.51 feet (0.46 meters). The hydrographer recommends to retain this feature as charted. *Concur.*

AWOIS 12392 was charted as a 37 foot obstruction from a pile seen on SSS. 200% SSS and MBES development of the area found no features. The hydrographer recommends removing the charted obstruction. *Concur.*

AWOIS 12393 was a wreck found on SSS with a least depth of 47 feet from MBES. Current 200% SSS was unable to find evidence of this wreck. MBES development measures a least depth of 47.74 feet (14.55 meters) with a height of 2.23 feet (0.68 meters) above the surrounding seafloor. The hydrographer recommends to retain this feature as charted. *Concur.*

D.2.3 Shoreline

Positions were acquired on the Yorktown City Dock on the southeast side of the Coleman Memorial Bridge. These structures are not currently charted. A Trimble backpack GPS was used to survey the perimeter of this feature. A MapInfo file labeled "Shoreline.TAB" is submitted as part of the survey. *See Evaluation Report.*

D.2.4 Charted Features

There was one charted feature of interest that was not covered under the AWOIS or other section of this report. The remains of a pier awash charted off Stony Point at the Yorktown Naval Weapons Station were not seen above the surface. SSS of the area showed remains of the pier were still present in the area charted. MBES coverage of the area was deemed too dangerous to acquire. The hydrographer recommends deleting the pier awash and charting submerged pier ruins at the currently charted location. All other features in Table 4 are located as charted and their representation on the chart is adequate. *See Evaluation Report.*

| Table 4. Correctly Charted Features. | | | | | |
|--------------------------------------|------------------|-------------------|---------------|--|--|
| Description of Feature | Charted Latitude | Charted Longitude | Least Depth | | |
| Pier | 37°15'29.236" | -076°31'58.578" | Above surface | | |
| Pier | 37°13'36.205" | -076°28'44.274" | Above surface | | |
| Light | 37°13'36.147" | -076°27'15.332" | Above surface | | |
| Pier | 37°13'35.006" | -076°26'30.470" | Above surface | | |
| Fish Trap | 37°14'12.811" | -076°23'38.677" | Subsurface | | |

All other charted features and item investigations are described in detail in Appendix II* of this report. *Concur.* **Filed with original field records.*

D.2.5 Charted Pipelines and Cables

The sewer pipe west of Goodwin Neck was surveyed and is not charted properly. Charting recommendation are deferred to the Marine Chart Division as this is a permitted feature. Further information on this feature is included in the Pydro Survey Feature Report in Appendix II*. Concur. The field unit did not address a charted pipe and cable area in the vicinity of the Coleman Memorial Bridge. Side scan sonar imagery from the area was examined by the office processor. No visible pipes or cables were found. Recommend retaining this notation as charted.

*Filed with original field records.

D.2.6 Bridges, Ferry Routes, and Overhead Cables

Positions of the Coleman Memorial Bridge were derived from the SSS data. A review of these positions shows the Coleman Memorial Bridge at Gloucester Point is charted properly. *Concur. No attempt was made by the field unit to determine the air draft of the Coleman Memorial Bridge.*

D.3 Dangers to Navigation and Shoals

D 3.1 Dangers to Navigation

Eleven dangers to navigation (DTONs) were found and reported to NOAA's Office of Coast Survey, Marine Chart Division (MCD) for verification and final submission to the Eighth Coast Guard District. A copy of each Danger to Navigation Report is included in Appendix I*, and a copy of each DTON email to MCD is located in Appendix I* of this Descriptive Report. Many of the Dangers to Navigation were areas of piles that appear to be the remains of old fish traps. A list of all the individual piles surveyed would not add value to this report, so the pile with the shoalest least depth was chosen as representative for the area. *Concur.* **Filed with original field records.*

A table of all reported Dangers to Navigation identified in this survey, with their submission date to MCD, is included in Table 5.

| DTON Number | Description | Latitude | Longitude | Date Submitted |
|-------------|-------------|---------------|-----------------|----------------|
| 4.1 | Pipe/pile | 37°15'20.149" | -076°31'47.471" | 10/4/07 |
| 4.2 | Pile | 37°15'05.262" | -076°21'37.919" | 12/7/07 |
| 4.3 | Pile | 37°15'11.019" | -076°22'24.167" | 12/7/07 |
| 4.4 | Pile | 37°15'12.468" | -076°21'53.324" | 12/7/07 |
| 4.5 | Pile | 37°14'31.210" | -076°25'33.869" | 12/7/07 |

Table 5. DTONs submitted to the Marine Chart Division.

| 4.6 | Pile | 37°13'52.757" | -076°24'27.697" | 12/7/07 |
|------|-------|---------------|-----------------|----------|
| 4.7 | Pile | 37°15'10.229" | -076°23'14.599" | 12/7/07 |
| 4.8 | Pile | 37°14'44.411" | -076°24'36.773" | 12/7/07 |
| 4.9 | Wreck | 37°14'32.036" | -076°29'18.845" | 12/7/07 |
| 4.10 | Pile | 37°14'41.588" | -076°20'19.184" | 12/7/07 |
| 4.11 | Pile | 37°14'43.216" | -076°20'15.344" | 10/17/07 |

The DTON numbered 4.1 was reported directly to the Navy who took immediate steps to remove the feature. Documentation of communication with the Navy and pictures of its removal can be found in Appendix I*. *Concur with clarification. Several of the above DTONs listed as piles above were submitted to MCD as area obstructions (foul with pile areas). Refer to Appendix I of the Descriptive Report for the correct description of these items.* *Filed with original field records.

D 3.2 Shoals

Evidence of shoaling was observed on the south side of the York River between the Giant Industries Oil Refinery on Goodwin Neck and G"21" off of the Goodwin Islands. *Concur.*

D.4 Aids to Navigation

There are 13 charted Aids to Navigation (ATON) within the revised limits of H11295.

All Aids to Navigation were found to be on station and serving their intended purpose. *Concur.*

D.5 Coast Pilot Information

The Hydrographer has submitted changes and addenda to the Coast Pilot on December 16th, 2007. A copy of the Email and the report can be found in *See Evaluation Report. The previous sentence was not finished by the field party and has not*

been altered by the office reviewer.

D.6 Miscellaneous

Bottom Samples

Bottom samples were collected acquired in accordance with NOAA Hydrographic Survey Specifications and Deliverables. A complete description of all bottom samples acquired during Survey H11295 is contained in the Pydro PSS. A list of all bottom samples acquired during Survey H11295 is contained in Appendix V*. *Concur.* **Filed with original field reports.*

Environmental Conditions and Notes

No Significant environmental phenomena effected data acquisition or quality. *Concur.*

D.8 Adequacy of Survey

This survey is considered complete and adequate to supersede charted depths within the common area as per requirements specified in the Project Letter Instructions*. *Concur.* **Filed with original field reports.*

Summary and Recommendations for Additional Work

No additional survey work is recommended. *Concur.*

E. APPROVAL

As Lead Hydrographer, I have ensured that standard field surveying and processing procedures were followed in producing this examination in accordance with the Office of Coast Survey Hydrographic Surveys Division's *Field Procedures Manual*, and NOS *Hydrographic Surveys Specifications and Deliverables*. Field operations for this basic hydrographic survey were conducted under my daily supervision with frequent checks of progress and adequacy.

All field sheets, this Descriptive Report, and all accompanying records and data are approved. All records are forwarded for final review and processing to N/CS33, Atlantic Hydrographic Branch.

Survey H11295 is adequate to supersede charted soundings in their common areas.

Listed below are supplemental reports submitted separately that contain additional information relevant to this survey:

| <u>Title</u> | Date Sent | Office |
|--|---------------|---------------|
| Data Acquisition and Processing Report for OPR-E369-RU-07 | June 2007 | N/CS33 |
| Horizontal and Vertical Control Report for OPR-E369-RU-07* | Included | N/CS33 |
| Coast Pilot Report for OPR-E369-RU-07* | December 2007 | N/CS26 |
| * Filed with original field records. | | |
| Approved and Forwarded: | | |

ENS Caryn Arnold, NOAA Field Operations Officer LCDR Richard Brennan, NOAA Commanding Officer

In addition, the following individuals were also responsible for overseeing data acquisition and processing of this survey:

Survey Manager:

ENS Glen Rice, NOAA

| Registry Number: | H11295 |
|-------------------------|--|
| State: | Virginia |
| Locality: | York River |
| Sub-locality: | Entrance to York River to Indian Field Creek |
| Project Number: | OPR-E369-RU-07 |
| Survey Dates: | 10/04/2007 - 10/17/2007 |

Charts Affected

| Number | Version | Date | Scale |
|--------|----------|------------|-----------|
| 12241 | 21st Ed. | 01/05/2002 | 1:20000 |
| 12238 | 39th Ed. | 01/01/2006 | 1:40000 |
| 12243 | 13th Ed. | 02/24/2001 | 1:40000 |
| 12221 | 78th Ed. | 04/01/2006 | 1:80000 |
| 12280 | 6th Ed. | 09/01/2005 | 1:200000 |
| 13003 | 48th Ed. | 10/01/2004 | 1:1200000 |

Features

| | | Feature | Survey | Survey | Survey | AWOIS |
|------|--|-------------|--------|-------------------|--------------------|-------|
| No. | Name | Type | Depth | Latitude | Longitude | Item |
| 1.1 | Obstruction (removed) | Sounding | 9.52 m | 37° 15' 20.149" N | 076° 31' 47.471" W | |
| 1.2 | Obstruction (foul area/submerged piles) 1134/161 | Obstruction | 6.77 m | 37° 15' 05.262" N | 076° 21' 37.919" W | |
| 1.3 | Obstruction (foul area/submerged piles) 774/235 | Obstruction | 6.72 m | 37° 15' 11.019" N | 076° 22' 24.167" W | |
| 1.4 | Obstruction (foul area/submerged piles) 368/77 | Obstruction | 5.38 m | 37° 15' 12.468" N | 076° 21' 53.324" W | |
| 1.5 | Obstruction 497/240 | Obstruction | 3.68 m | 37° 14' 31.210" N | 076° 25' 33.869" W | |
| 1.6 | Obstruction 643/188 | Obstruction | 5.99 m | 37° 13' 52.757" N | 076° 24' 27.697" W | |
| 1.7 | Obstruction (foul area/submerged piles) 943/27 | Obstruction | 7.06 m | 37° 15' 10.229" N | 076° 23' 14.599" W | |
| 1.8 | Obstruction (foul area/submerged piles690/33 | Obstruction | 4.45 m | 37° 14' 44.411" N | 076° 24' 36.773" W | |
| 1.9 | Wreck (AWOIS 12191) 609/232 | Wreck | 3.10 m | 37° 14' 32.036" N | 076° 29' 18.845" W | 12191 |
| 1.10 | Obstruction 380/153 | Obstruction | 7.07 m | 37° 14' 41.588" N | 076° 20' 19.184" W | |
| 1.11 | Obstruction | Obstruction | 5.57 m | 37° 14' 43.216" N | 076° 20' 15.344" W | |

1 - DR_DToN

1.1) Obstruction (removed)

DANGER TO NAVIGATION

Survey Summary

| Survey Position: | 37° 15' 20.149" N, 076° 31' 47.471" W |
|------------------|---------------------------------------|
| Least Depth: | 9.52 m |
| Timestamp: | 2007-277.02:31:32.755 (10/04/2007) |
| Survey Line: | h11295 / ru_mb / 2007-277 / 526_0229 |
| Profile/Beam: | 1488/122 |
| Charts Affected: | 12241_1, 12243_1, 12280_2, 13003_1 |

Remarks:

Previously uncharted dangerous obstruction located during H11295 survey operations. Item initially located with 200% SS. Reson 8125 Multibeam bathymetry development data determined a least depth of 31 feet with surrounding depths of 42 feet, corrected with preliminary water levels. Item appears to be a tall thin towering object.

This item has been removed by a government contractor for the navy on October 19, 2007. For further comunication regarding this item, refer to Appendix V of the Descriptive Report.

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|----------|-------|---------|-----------|
| h11295/ru_mb/2007-277/526_0229 | 1488/122 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-275/246_1249 | 0001 | 1.97 | 301.0 | Secondary |
| h11295/ru_ss/2007-275/201_1525 | 0002 | 3.39 | 094.0 | Secondary |
| h11295/ru_ss/2007-275/147_1216 | 0003 | 3.92 | 327.2 | Secondary |

Feature Correlation

Hydrographer Recommendations

This item has been removed. This item is presently charted on (chart), corrected through (Local Notice to Mariners edition and date). Delete charted 31' obstruction from all affected charts.

Cartographically-Rounded Depth (Affected Charts):

31ft (12241_1, 12243_1, 12280_2)

5 ¼fm (13003_1)

S-57 Data

[None]

Office Notes

Concur with clarification. This item has been removed per notification from a Navy contractor, the documentation for which is located in Appendix 1 to the Descriptive Report.

Chart present survey soundings in the common area.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/526_0229_1488_122.JPG does not exist.]

[Image file F:/H11295_DR/I DTON_Reports/DSC02854.JPG does not exist.]

[Image file F:/H11295_DR/I DTON_Reports/DSC02848.JPG does not exist.]

1.2) Obstruction (foul area/submerged piles) 1134/161

DANGER TO NAVIGATION

Survey Summary

| Survey Position: | 37° 15' 05.262" N, 076° 21' 37.919" W |
|------------------|---|
| Least Depth: | 6.77 m |
| Timestamp: | 2007-283.21:30:29.381 (10/10/2007) |
| Survey Line: | h11295 / ru_mb / 2007-283 / 467_2129 |
| Profile/Beam: | 1134/161 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Uncharted area of dangerous obstructions located during H11295 survey operations. Objects appear to be piles from remains of fish traps with more piles laying on the sea floor. Items were initially located using 200% SSS and developed using a Reson 8125 multibeam echosounder. The least depth on this collection of features was found to be 22.20ft (6.77m) relative to the Chart datum. Surrounding water depths were 36.16ft (11.89m). Soundings were adjusted to the MLLW datum using verified water levels and final discrete tide zones.

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|----------|--------|---------|---------------------|
| h11295/ru_mb/2007-283/467_2129 | 1134/161 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-255/224_2308 | 0004 | 27.54 | 317.5 | Secondary |
| h11295/ru_mb/2007-283/467_2129 | 1276/13 | 29.36 | 334.2 | Secondary (grouped) |
| h11295/ru_mb/2007-283/464_2125 | 584/211 | 29.54 | 291.2 | Secondary (grouped) |
| h11295/ru_ss/2007-255/226_2157 | 0003 | 31.31 | 297.9 | Secondary (grouped) |
| h11295/ru_mb/2007-283/464_2125 | 631/240 | 31.87 | 271.3 | Secondary (grouped) |
| h11295/ru_ss/2007-254/124_2035 | 0003 | 36.73 | 322.5 | Secondary (grouped) |
| h11295/ru_mb/2007-283/464_2125 | 935/34 | 66.02 | 193.0 | Secondary (grouped) |
| h11295/ru_ss/2007-254/125_2121 | 0009 | 66.68 | 192.9 | Secondary (grouped) |
| h11295/ru_ss/2007-254/125_2121 | 0008 | 70.67 | 192.3 | Secondary (grouped) |
| h11295/ru_mb/2007-283/464_2125 | 1159/26 | 114.38 | 187.4 | Secondary (grouped) |

Feature Correlation

Hydrographer Recommendations

Chart as dangerous area of obstructions with least depth of 22ft in area bounded by 37°15'11.1"N and 37°15'3.8"N, 076°21'38.5"W and 076°21'36.1"W

Cartographically-Rounded Depth (Affected Charts):

22ft (12241_1, 12238_1, 12221_1, 12280_2) 3 ³/₄fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|---|
| Attributes: | CATOBS - 6:foul area |
| | QUASOU - 1:depth known |
| | SORDAT - 20071010 |
| | TECSOU - 2,3:found by side scan sonar,found by multi-beam |
| | VALSOU - 6.768 m |
| | VERDAT - 12:Mean lower low water |
| | WATLEV - 3:always under water/submerged |

Office Notes

Concur.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/464_2129_1134_161.bmp does not exist.]

Feature Images



Figure 1.2.1

1.3) Obstruction (foul area/submerged piles) 774/235

DANGER TO NAVIGATION

Survey Summary

| Survey Position: | 37° 15' 11.019" N, 076° 22' 24.167" W |
|------------------|---|
| Least Depth: | 6.72 m |
| Timestamp: | 2007-283.23:25:08.406 (10/10/2007) |
| Survey Line: | h11295 / ru_mb / 2007-283 / 473_2324 |
| Profile/Beam: | 774/235 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Uncharted area of dangerous obstructions located during H11295 survey operations. Objects appear to be piles from remains of fish traps with more piles laying on the sea floor. Items were initially located using 200% SSS and developed using a Reson 8125 multibeam echosounder. The least depth on this collection of features was found to be 22.05ft (6.72m) relative to the Chart datum. Surrounding water depths were 32.42ft (9.88m). Soundings were adjusted to the MLLW datum using verified water levels and final discrete tide zones.

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|---------------------|
| h11295/ru_mb/2007-283/473_2324 | 774/235 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-254/126_2158 | 0001 | 4.08 | 031.2 | Secondary (grouped) |
| h11295/ru_mb/2007-283/473_2324 | 725/229 | 10.66 | 355.6 | Secondary (grouped) |
| h11295/ru_ss/2007-255/226_2157 | 0001 | 17.37 | 345.1 | Secondary |
| h11295/ru_mb/2007-283/471_2347 | 480/14 | 33.45 | 331.5 | Secondary (grouped) |
| h11295/ru_mb/2007-283/470_2329 | 497/192 | 35.48 | 334.9 | Secondary (grouped) |
| h11295/ru_ss/2007-254/126_2158 | 0003 | 37.54 | 338.3 | Secondary (grouped) |
| h11295/ru_ss/2007-276/227_1308 | 0001 | 64.39 | 343.7 | Secondary (grouped) |
| h11295/ru_ss/2007-254/126_2158 | 0004 | 64.65 | 344.3 | Secondary (grouped) |
| h11295/ru_ss/2007-254/126_2158 | 0002 | 65.37 | 356.5 | Secondary (grouped) |
| h11295/ru_mb/2007-283/470_2329 | 662/126 | 65.94 | 345.0 | Secondary (grouped) |
| h11295/ru_mb/2007-283/470_2329 | 679/240 | 66.62 | 358.1 | Secondary (grouped) |
| h11295/ru_ss/2007-255/227_2223 | 0001 | 73.20 | 348.8 | Secondary (grouped) |
| h11295/ru_mb/2007-283/470_2329 | 697/85 | 73.24 | 344.9 | Secondary (grouped) |
| h11295/ru_mb/2007-283/470_2329 | 706/143 | 73.76 | 348.6 | Secondary (grouped) |

Feature Correlation

Hydrographer Recommendations

Chart as dangerous area of obstructions with least depth of 22ft in area bounded by 37°15'8.2"N and 37°15'11.6"N, 076°22'22.5"W and 076°22'25.0"W.

Cartographically-Rounded Depth (Affected Charts):

22ft (12241_1, 12238_1, 12221_1, 12280_2)

3 ½fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|---|
| Attributes: | CATOBS - 6:foul area |
| | QUASOU - 1:depth known |
| | SORDAT - 20071010 |
| | TECSOU - 2,3:found by side scan sonar,found by multi-beam |
| | VALSOU - 6.720 m |
| | VERDAT - 12:Mean lower low water |
| | WATLEV - 3:always under water/submerged |

Office Notes

Concur.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/473_2324_774_235.bmp does not exist.]

Feature Images



Figure 1.3.1

1.4) Obstruction (foul area/submerged piles) 368/77

DANGER TO NAVIGATION

Survey Summary

| Survey Position: | 37° 15' 12.468" N, 076° 21' 53.324" W |
|------------------|---|
| Least Depth: | 5.38 m |
| Timestamp: | 2007-283.21:50:35.281 (10/10/2007) |
| Survey Line: | h11295 / ru_mb / 2007-283 / 492_2150 |
| Profile/Beam: | 368/77 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Uncharted area of dangerous obstructions located during H11295 survey operations. Objects appear to be piles from remains of fish traps with more piles laying on the sea floor. Items were initially located using 200% SSS and developed using a Reson 8125 multibeam echosounder. The least depth on this collection of features was found to be 17.64ft (5.38m) relative to the Chart datum. Surrounding water depths were 31.04ft (9.46m). Soundings were adjusted to the MLLW datum using verified water levels and final discrete tide zones.

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|----------|-------|---------|---------------------|
| h11295/ru_mb/2007-283/492_2150 | 368/77 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-254/125_2121 | 0005 | 1.89 | 343.4 | Secondary |
| h11295/ru_ss/2007-276/241_1518 | 0001 | 2.94 | 046.0 | Secondary |
| h11295/ru_ss/2007-254/125_2121 | 0004 | 4.58 | 182.7 | Secondary |
| h11295/ru_ss/2007-255/224_2308 | 0002 | 5.97 | 006.7 | Secondary |
| h11295/ru_ss/2007-254/125_2121 | 0003 | 8.59 | 184.6 | Secondary |
| h11295/ru_ss/2007-255/146_1617 | 0005 | 9.82 | 147.3 | Secondary (grouped) |
| h11295/ru_ss/2007-254/125_2121 | 0002 | 16.79 | 185.4 | Secondary |
| h11295/ru_mb/2007-283/492_2150 | 281/162 | 17.88 | 176.3 | Secondary (grouped) |
| h11295/ru_ss/2007-254/125_2121 | 0001 | 20.43 | 181.0 | Secondary |
| h11295/ru_mb/2007-283/460_2146 | 1324/193 | 52.54 | 276.8 | Secondary (grouped) |
| h11295/ru_ss/2007-255/224_2308 | 0003 | 53.06 | 279.1 | Secondary (grouped) |
| h11295/ru_ss/2007-254/125_2121 | 0006 | 53.50 | 276.3 | Secondary (grouped) |
| h11295/ru_mb/2007-283/492_2150 | 672/31 | 62.33 | 356.8 | Secondary (grouped) |
| h11295/ru_mb/2007-283/460_2146 | 1109/225 | 76.38 | 315.8 | Secondary (grouped) |

Feature Correlation

| h11295/ru_mb/2007-283/460_2146 | 1108/225 | 76.55 | 316.0 | Secondary (grouped) |
|--------------------------------|----------|--------|-------|---------------------|
| h11295/ru_mb/2007-283/492_2255 | 1017/8 | 82.28 | 356.9 | Secondary (grouped) |
| h11295/ru_mb/2007-283/460_2146 | 1043/215 | 87.84 | 322.3 | Secondary (grouped) |
| h11295/ru_mb/2007-283/463_2156 | 731/1 | 109.67 | 357.5 | Secondary (grouped) |
| h11295/ru_mb/2007-283/492_2150 | 907/48 | 112.49 | 356.8 | Secondary (grouped) |
| h11295/ru_mb/2007-283/492_2150 | 988/41 | 129.94 | 356.7 | Secondary (grouped) |
| h11295/ru_mb/2007-283/492_2150 | 1071/52 | 147.83 | 356.8 | Secondary (grouped) |
| h11295/ru_mb/2007-283/460_2146 | 694/182 | 156.89 | 339.4 | Secondary (grouped) |
| h11295/ru_mb/2007-283/461_2202 | 340/228 | 169.22 | 345.7 | Secondary (grouped) |
| h11295/ru_ss/2007-254/124_2035 | 0004 | 174.01 | 338.7 | Secondary (grouped) |
| h11295/ru_ss/2007-255/226_2157 | 0002 | 179.88 | 343.9 | Secondary (grouped) |
| h11295/ru_mb/2007-283/463_2156 | 400/7 | 184.00 | 355.0 | Secondary (grouped) |
| h11295/ru_ss/2007-254/126_2158 | 0005 | 187.63 | 344.3 | Secondary (grouped) |
| h11295/ru_mb/2007-283/461_2202 | 279/16 | 194.07 | 344.6 | Secondary (grouped) |

Hydrographer Recommendations

Chart as dangerous area of obstructions with least depth of 17ft bounded by coordinates 37°15'13.3"N and 37°15'06.0"N, 76°21'54.0"W and 76°21'50.2"W.

Cartographically-Rounded Depth (Affected Charts):

17ft (12241_1, 12238_1, 12221_1, 12280_2)

3fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: CATOBS - 6:foul area

QUASOU - 1:depth known

SORDAT - 20071010

TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 5.378 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/492_2150_368_77.bmp does not exist.]

Feature Images



Figure 1.4.1

1.5) Obstruction 497/240

DANGER TO NAVIGATION

Survey Summary

| Survey Position: | 37° 14' 31.210" N, 076° 25' 33.869" W |
|------------------|---|
| Least Depth: | 3.68 m |
| Timestamp: | 2007-284.05:14:12.970 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 405_0513 |
| Profile/Beam: | 497/240 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Uncharted area of dangerous obstructions located during H11295 survey operations. Objects appear to be piles from remains of fish traps with more piles laying on the sea floor. Items were initially located using 200% SSS and developed using a Reson 8125 multibeam echosounder. The least depth on this collection of features was found to be 12.06ft (3.68m) relative to the Chart datum. Surrounding water depths were 35.64ft (10.86m). Soundings were adjusted to the MLLW datum using verified water levels and final discrete tide zones.

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|---------------------|
| h11295/ru_mb/2007-284/405_0513 | 497/240 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-255/145_1738 | 0001 | 0.40 | 115.5 | Secondary |
| h11295/ru_ss/2007-276/240_1628 | 0001 | 2.59 | 001.3 | Secondary |
| h11295/ru_ss/2007-254/117_2308 | 0001 | 4.98 | 203.1 | Secondary |
| h11295/ru_ss/2007-254/117_2308 | 0002 | 34.14 | 131.9 | Secondary |
| h11295/ru_ss/2007-276/240_1628 | 0002 | 37.73 | 127.2 | Secondary |
| h11295/ru_mb/2007-284/405_0513 | 729/11 | 38.09 | 130.3 | Secondary (grouped) |
| h11295/ru_mb/2007-284/407_0457 | 551/181 | 47.79 | 131.4 | Secondary (grouped) |

Feature Correlation

Hydrographer Recommendations

Chart as dangerous area of obstructions with least depth of 12ft in position 37°14'31.7"N 076°25'34.7"W.

Cartographically-Rounded Depth (Affected Charts):

12ft (12241_1, 12238_1, 12221_1, 12280_2) 2fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN) Attributes: CATOBS - 6:foul area QUASOU - 6:least depth known SORDAT - 20071011 TECSOU - 2,3:found by side scan sonar,found by multi-beam VALSOU - 3.677 m VERDAT - 12:Mean lower low water WATLEV - 3:always under water/submerged

Office Notes

Concur.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/405_0513_497_240.jpg does not exist.]

Feature Images



Figure 1.5.1
1.6) Obstruction 643/188

DANGER TO NAVIGATION

Survey Summary

| Survey Position: | 37° 13' 52.757" N, 076° 24' 27.697" W |
|------------------|---|
| Least Depth: | 5.99 m |
| Timestamp: | 2007-284.19:48:59.521 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 420_1948 |
| Profile/Beam: | 643/188 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Uncharted dangerous obstruction located during H11295 survey operations. Object appears to be a pile with a few other smaller piles within 5m of surveyed position. Item was initially located using 200% SSS and developed using a Reson 8125 multibeam echosounder. The least depth on this feature was found to be 19.65ft (5.99m) relative to the Chart datum. Surrounding water depths were 29.53ft (9.00m). Soundings were adjusted to the MLLW datum using verified water levels and final discrete tide zones.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|-----------|
| h11295/ru_mb/2007-284/420_1948 | 643/188 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-275/243_2045 | 0002 | 1.17 | 259.0 | Secondary |
| h11295/ru_ss/2007-254/119_1815 | 0001 | 4.71 | 096.0 | Secondary |

Hydrographer Recommendations

Chart as dangerous obstruction with least depth of 19ft in surveyed position.

Cartographically-Rounded Depth (Affected Charts):

```
19ft (12241_1, 12238_1, 12221_1, 12280_2)
```

3 ¼fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: CATOBS - 6:foul area

QUASOU - 1:depth known SORDAT - 20071011 TECSOU - 2,3:found by side scan sonar,found by multi-beam VALSOU - 5.989 m VERDAT - 12:Mean lower low water WATLEV - 3:always under water/submerged

Office Notes

Concur.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/420_1948_643_188.bmp does not exist.]



Figure 1.6.1

1.7) Obstruction (foul area/submerged piles) 943/27

DANGER TO NAVIGATION

Survey Summary

| Survey Position: | 37° 15' 10.229" N, 076° 23' 14.599" W |
|------------------|---|
| Least Depth: | 7.06 m |
| Timestamp: | 2007-284.00:54:58.305 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 468_0054 |
| Profile/Beam: | 943/27 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Uncharted area of dangerous obstructions located during H11295 survey operations. Objects appear to be piles from remains of fish traps with more piles laying on the sea floor. Items were initially located using 200% SSS and developed using a Reson 8125 multibeam echosounder. The least depth on this collection of features was found to be 23.15ft (7.06m) relative to the Chart datum. Surrounding water depths were 30.61ft (9.33m). Soundings were adjusted to the MLLW datum using verified water levels and final discrete tide zones.

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|----------|-------|---------|---------------------|
| h11295/ru_mb/2007-284/468_0054 | 943/27 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-276/241_1519 | 0002 | 2.16 | 079.7 | Secondary |
| h11295/ru_ss/2007-255/224_2307 | 0001 | 4.03 | 023.3 | Secondary |
| h11295/ru_mb/2007-284/497_0035 | 467/36 | 12.28 | 283.9 | Secondary |
| h11295/ru_ss/2007-276/240_1631 | 0001 | 15.86 | 111.8 | Secondary |
| h11295/ru_mb/2007-284/496_0031 | 662/3 | 16.43 | 239.5 | Secondary |
| h11295/ru_mb/2007-284/498_0039 | 830/97 | 21.00 | 169.2 | Secondary |
| h11295/ru_ss/2007-255/146_1615 | 0001 | 22.07 | 107.7 | Secondary (grouped) |
| h11295/ru_mb/2007-284/468_0100 | 520/31 | 28.00 | 069.3 | Secondary (grouped) |
| h11295/ru_mb/2007-284/498_0039 | 1024/175 | 37.32 | 222.4 | Secondary (grouped) |
| h11295/ru_ss/2007-255/145_1735 | 0002 | 38.29 | 132.7 | Secondary (grouped) |
| h11295/ru_mb/2007-284/500_0049 | 945/193 | 59.95 | 184.3 | Secondary (grouped) |

Feature Correlation

Hydrographer Recommendations

Chart as dangerous area of obstructions with least depth of 23ft in area bounded by 37°15'12.6"N and 37°15'9.3"N, 076°23'12.9"W and 076°23'16.5"W.

Cartographically-Rounded Depth (Affected Charts):

23ft (12241_1, 12238_1, 12221_1, 12280_2) 3 ³/4fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|---|
| Attributes: | CATOBS - 6:foul area |
| | QUASOU - 1:depth known |
| | SORDAT - 20071011 |
| | TECSOU - 2,3:found by side scan sonar,found by multi-beam |
| | VALSOU - 7.057 m |
| | VERDAT - 12:Mean lower low water |
| | WATLEV - 3:always under water/submerged |

Office Notes

Concur.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/468_0054_943_27.bmp does not exist.]



Figure 1.7.1

1.8) Obstruction (foul area/submerged piles690/33

DANGER TO NAVIGATION

Survey Summary

| Survey Position: | 37° 14' 44.411" N, 076° 24' 36.773" W |
|------------------|---|
| Least Depth: | 4.45 m |
| Timestamp: | 2007-284.03:12:45.949 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 505_0311 |
| Profile/Beam: | 690/33 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Uncharted area of dangerous obstructions located during H11295 survey operations. Objects appear to be piles from remains of fish traps with more piles laying on the sea floor. Items were initially located using 200% SSS and developed using a Reson 8125 multibeam echosounder. The least depth on this collection of features was found to be 14.61ft (4.45m) relative to the Chart datum. Surrounding water depths were 32.78 (9.99m). Soundings were adjusted to the MLLW datum using verified water levels and final discrete tide zones.

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|----------|--------|---------|---------------------|
| h11295/ru_mb/2007-284/505_0311 | 690/33 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-254/142_2225 | 0007 | 4.07 | 297.5 | Secondary |
| h11295/ru_ss/2007-276/241_1521 | 0004 | 4.91 | 254.2 | Secondary |
| h11295/ru_ss/2007-255/146_1614 | 0002 | 5.46 | 270.8 | Secondary |
| h11295/ru_mb/2007-284/505_0311 | 756/239 | 21.42 | 212.6 | Secondary (grouped) |
| h11295/ru_ss/2007-276/227_1306 | 0003 | 34.53 | 322.7 | Secondary (grouped) |
| h11295/ru_mb/2007-284/482_0244 | 565/3 | 39.43 | 194.0 | Secondary (grouped) |
| h11295/ru_ss/2007-254/142_2225 | 0006 | 46.63 | 335.3 | Secondary |
| h11295/ru_mb/2007-284/501_0201 | 1379/218 | 51.57 | 325.4 | Secondary (grouped) |
| h11295/ru_ss/2007-254/142_2225 | 0005 | 51.83 | 324.2 | Secondary (grouped) |
| h11295/ru_ss/2007-276/227_1306 | 0002 | 53.29 | 320.3 | Secondary (grouped) |
| h11295/ru_mb/2007-284/523_0324 | 447/97 | 90.39 | 178.2 | Secondary (grouped) |
| h11295/ru_ss/2007-276/240_1629 | 0002 | 95.12 | 175.5 | Secondary (grouped) |
| h11295/ru_ss/2007-254/142_2225 | 0004 | 116.92 | 268.8 | Secondary (grouped) |
| h11295/ru_mb/2007-284/483_0208 | 709/230 | 120.53 | 274.7 | Secondary (grouped) |

Feature Correlation

| h11295/ru_ss/2007-276/227_1306 | 0004 | 121.36 | 274.6 | Secondary (grouped) |
|--------------------------------|----------|--------|-------|---------------------|
| h11295/ru_mb/2007-284/623_0319 | 498/10 | 122.14 | 177.8 | Secondary (grouped) |
| h11295/ru_ss/2007-276/241_1521 | 0003 | 126.16 | 269.5 | Secondary (grouped) |
| h11295/ru_mb/2007-284/483_0208 | 779/53 | 133.06 | 264.9 | Secondary (grouped) |
| h11295/ru_mb/2007-284/483_0208 | 1470/240 | 298.06 | 261.8 | Secondary (grouped) |
| h11295/ru_ss/2007-276/227_1306 | 0005 | 301.84 | 261.8 | Secondary (grouped) |
| h11295/ru_ss/2007-276/241_1521 | 0002 | 310.51 | 263.8 | Secondary (grouped) |
| h11295/ru_mb/2007-284/481_0302 | 712/234 | 311.51 | 253.5 | Secondary (grouped) |
| h11295/ru_ss/2007-254/142_2225 | 0002 | 312.16 | 254.1 | Secondary (grouped) |
| h11295/ru_ss/2007-276/241_1521 | 0001 | 313.35 | 253.8 | Secondary (grouped) |
| h11295/ru_ss/2007-255/146_1614 | 0003 | 313.63 | 253.8 | Secondary (grouped) |
| h11295/ru_mb/2007-284/481_0302 | 346/210 | 318.96 | 267.3 | Secondary (grouped) |
| h11295/ru_ss/2007-254/142_2225 | 0003 | 319.86 | 267.6 | Secondary (grouped) |

Hydrographer Recommendations

Chart as dangerous area of obstructions with least depth of 14ft in area bounded by 37°14'48.6"N 076°24'38.8"W, 37°14'51.1"N 076°24'24.6"W, 37°14'41.8"N 076°24'36.9"W, 37°14'44.3"N 076°24'22.7"W.

Cartographically-Rounded Depth (Affected Charts):

14ft (12241_1, 12238_1, 12221_1, 12280_2)

2 ¼fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

| Attributes: | CATOBS - 6:foul area |
|-------------|---|
| | QUASOU - 1:depth known |
| | SORDAT - 20071011 |
| | TECSOU - 2,3:found by side scan sonar,found by multi-beam |
| | VALSOU - 4.453 m |
| | VERDAT - 12:Mean lower low water |
| | WATLEV - 3:always under water/submerged |

Office Notes

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/505_0311_690_33.bmp does not exist.]



Figure 1.8.1

1.9) Wreck (AWOIS 12191) 609/232

DANGER TO NAVIGATION

Primary Feature for AWOIS Item #12191

| Search Position: | 37° 14' 30.000" N, 076° 29' 18.000" W |
|-------------------------|---------------------------------------|
| Historical Depth: | [None] |
| Search Radius: | 500 |
| Search Technique: | SD, S2, MB, DI |
| Technique Notes: | [None] |

History Notes:

LNM38/96-- (9/17/96); VIRGINIA-YORK RIVER-HAZARD TO NAVIGATION; A CRANE BARGE IS REPORTED SUNK IN THE YORK RIVER 1 NM SOUTHWEST OF SARAH'S CREEK IN APPROXIMATE POSITION LAT. 37-14.5N, LONG. 76-29.3W DOWNSTREAM FROM THE COLEMAN BRIDGE. IT IS REPORTED THAT ONLY A PORTION OF THE BOOM REMAINS VISIBLE ABOVE THE WATER. MARINERS ARE ADVISED TO TRANSIT THE AREA WITH EXTREME CAUTION. (ENT 2/2/04, SJV)

Survey Summary

| Survey Position: | 37° 14' 32.036" N, 076° 29' 18.845" W |
|------------------|---------------------------------------|
| Least Depth: | 3.10 m |
| Timestamp: | 2007-284.09:47:21.276 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 524_0946 |
| Profile/Beam: | 609/232 |
| Charts Affected: | 12241 1,12238 1,12280 2,13003 1 |

Remarks:

Uncharted dangerous wreck located during H11295 survey operations. Data describes the remains of a crane associated with AWOIS 12191 and charted as wreck awash position approximate. Item was initially located using 200% SSS and developed using a Reson 8125 multibeam echosounder. The least depth of this feature was found to be 10.15ft (3.10m) relative to the Chart datum. Surrounding water depths were 22.82ft (6.96m). Soundings were adjusted to the MLLW datum using verified water levels and final discrete tide zones.

Divers on December 9th, 2007 report the item to be a steel pipe approximately eight inches in diameter. No other wreckage was found above the bottom surface within an 50 foot radius.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|---------|
| h11295/ru_mb/2007-284/524_0946 | 609/232 | 0.00 | 000.0 | Primary |

| h11295/ru_ss/2007-255/221_1946 | 0001 | 6.67 | 089.6 | Secondary |
|--------------------------------|---------------|-------|-------|-----------|
| h11295/ru_ss/2007-255/221_1946 | 0002 | 40.25 | 064.6 | Secondary |
| OPR-E369-RU-06 | AWOIS # 12191 | 66.31 | 341.7 | Secondary |

Hydrographer Recommendations

Chart as dangerous wreck with least depth of 10ft in surveyed position. Delete currently charted wreck awash position approximate.

Cartographically-Rounded Depth (Affected Charts):

10ft (12241_1, 12238_1, 12280_2)

1 3/4fm (13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes:CATWRK - 2:dangerous wreckHEIGHT - 6.96 mSORDAT - 20071011TECSOU - 2,3:found by side scan sonar,found by multi-beamVALSOU - 3.095 mVERDAT - 12:Mean lower low waterWATLEV - 3:always under water/submerged

Office Notes

Concur.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/524_0946_609_232.bmp does not exist.]



Figure 1.9.1

1.10) Obstruction 380/153

DANGER TO NAVIGATION

Survey Summary

| Survey Position: | 37° 14' 41.588" N, 076° 20' 19.184" W |
|------------------|---|
| Least Depth: | 7.07 m |
| Timestamp: | 2007-285.03:25:30.033 (10/12/2007) |
| Survey Line: | h11295 / ru_mb / 2007-285 / 584_0325 |
| Profile/Beam: | 380/153 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Uncharted area of dangerous obstructions located during H11295 survey operations. Objects appear to be piles from remains of fish traps with more piles laying on the sea floor. Items were initially located using 200% SSS and developed using a Reson 8125 multibeam echosounder. The least depth on this collection of features was found to be 23.19ft (7.07m) relative to the Chart datum. Surrounding water depths were 36.33ft (11.07m). Soundings were adjusted to the MLLW datum using verified water levels and final discrete tide zones.

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|---------------------|
| h11295/ru_mb/2007-285/584_0325 | 380/153 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-254/124_2034 | 0003 | 3.13 | 303.5 | Secondary |
| h11295/ru_ss/2007-254/124_2034 | 0004 | 5.33 | 151.3 | Secondary |
| h11295/ru_mb/2007-285/581_0307 | 614/221 | 12.13 | 253.4 | Secondary |
| h11295/ru_ss/2007-254/124_2034 | 0002 | 12.26 | 254.6 | Secondary |
| h11295/ru_ss/2007-254/124_2034 | 0001 | 54.98 | 275.9 | Secondary (grouped) |

Feature Correlation

Hydrographer Recommendations

Chart as dangerous obstructions with least depth of 23ft in surveyed position.

Cartographically-Rounded Depth (Affected Charts):

23ft (12241_1, 12238_1, 12221_1, 12280_2) 3 ³/4fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN) Attributes: CATOBS - 6:foul area QUASOU - 1:depth known SORDAT - 20071012 TECSOU - 2,3:found by side scan sonar,found by multi-beam VALSOU - 7.069 m VERDAT - 12:Mean lower low water WATLEV - 3:always under water/submerged

Office Notes

Concur.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/584_0325_380_153.jpg does not exist.]



Figure 1.10.1

1.11) Obstruction

DANGER TO NAVIGATION

Survey Summary

| Survey Position: | 37° 14' 43.216" N, 076° 20' 15.344" W |
|------------------|---|
| Least Depth: | 5.57 m |
| Timestamp: | 2007-290.23:30:50.309 (10/17/2007) |
| Survey Line: | h11295 / ru_mb / 2007-290 / 401_2329 |
| Profile/Beam: | 1349/209 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Uncharted dangerous obstruction located during H11295 survey operations. Item initially located with 200% SSS. Reson 8125 multibeam bathymetry development data determined a least depth of 18 feet with surrounding depths of 32 feet, corrected with preliminary water levels. Object is located between the 36 foot and 30 foot contours. Item appears to be a tall thin object, possible remains of a fish trap, with other long thin objects laying on the sea floor.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|----------|-------|---------|-----------|
| h11295/ru_mb/2007-290/401_2329 | 1349/209 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-255/224_2309 | 0001 | 2.83 | 354.3 | Secondary |

Hydrographer Recommendations

Chart dangerous Obstn, least depth 18 feet, located at surveyed position.

Cartographically-Rounded Depth (Affected Charts):

18ft (12241_1, 12238_1, 12221_1, 12280_2)

3fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 1:depth known SORDAT - 20071017 TECSOU - 2,3:found by side scan sonar,found by multi-beam VALSOU - 5.572 m VERDAT - 12:Mean lower low water WATLEV - 3:always under water/submerged

Office Notes

Concur. This obstruction is presently charted on 12241. Retain as charted.



Figure 1.11.1

| Registry Number: | H11295 |
|-------------------------|--|
| State: | Virginia |
| Locality: | York River |
| Sub-locality: | Entrance to York River to Indian Field Creek |
| Project Number: | OPR-E369-RU-07 |
| Survey Date: | 10/11/2007 |

Charts Affected

| Number | Version | Date | Scale |
|--------|----------|------------|-----------|
| 12241 | 21st Ed. | 01/05/2002 | 1:20000 |
| 12238 | 39th Ed. | 01/01/2006 | 1:40000 |
| 12243 | 13th Ed. | 02/24/2001 | 1:40000 |
| 12221 | 78th Ed. | 04/01/2006 | 1:80000 |
| 12280 | 6th Ed. | 09/01/2005 | 1:200000 |
| 13003 | 48th Ed. | 10/01/2004 | 1:1200000 |

Features

| | | Feature | Survey | Survey | Survey | AWOIS |
|------|----------------------------|-------------|-----------|-------------------|--------------------|-------|
| No. | Name | Type | Depth | Latitude | Longitude | Item |
| 1.1 | OBSTRUCTION | AWOIS | [no data] | [no data] | [no data] | |
| 1.2 | UNKNOWN | AWOIS | [no data] | [no data] | [no data] | |
| 1.3 | OBSTRUCTION | AWOIS | [no data] | [no data] | [no data] | |
| 1.4 | OBSTRUCTION | AWOIS | [no data] | [no data] | [no data] | |
| 1.5 | Obstruction (AWOIS #12139) | Obstruction | 6.94 m | 37° 14' 17.136" N | 076° 22' 45.983" W | 12139 |
| 1.6 | Obstruction (AWOIS #12141) | Obstruction | 10.90 m | 37° 14' 09.882" N | 076° 28' 36.674" W | 12141 |
| 1.7 | Obstruction (AWOIS #12142) | Obstruction | 9.12 m | 37° 13' 41.069" N | 076° 28' 54.186" W | 12142 |
| 1.8 | Obstruction (AWOIS #12195) | Obstruction | 5.95 m | 37° 14' 01.914" N | 076° 29' 57.703" W | 12195 |
| 1.9 | Obstruction (AWOIS #12390) | Obstruction | 14.81 m | 37° 14' 02.957" N | 076° 26' 21.277" W | 12390 |
| 1.10 | Wreck (AWOIS #12393) | Wreck | 14.55 m | 37° 14' 13.640" N | 076° 25' 16.303" W | 12393 |
| 1.11 | Obstruction | Obstruction | 17.51 m | 37° 14' 11.653" N | 076° 30' 07.046" W | 12192 |
| 1.12 | Obstruction (AWOIS #12391) | Obstruction | 9.92 m | 37° 14' 11.311" N | 076° 28' 49.523" W | 12391 |

1 - DR_AWOIS

1.1) AWOIS #12140 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

| Search Position: | 37° 14' 09.720" N, 076° 23' 35.380" W |
|-------------------------|---------------------------------------|
| Historical Depth: | 3.35 m |
| Search Radius: | 50 |
| Search Technique: | S2, MB |
| Technique Notes: | [None] |

History Notes:

CL1206/02-- DTON FOR PROJECT S-E604-WH/RU; DATED 7/2/02; NOAA SHIP RUDETO MCD.DTON@NOAA.GOV. MAIN SCHEME SIDESCAN SONAR OPS LOCATED AN UNCHARTED OBSTRUCTION DESCRIBED AS "FISH TRAP/PILINGS". SWMB LD OF 11 FEET IN LAT. 37-14-09.706N, LONG. 76-23-35.302W. CHARTED AS AN 11 OBSTN (NO OTHER ANNOTATION). (ENT 1/6/04, SJV) NO REGISTRY NUMBER ASSIGNED-- S-E604-RU-04; HLS PROJECT REPORT; SIDE SCAN SONAR REVEALED A DEBRIS FIELD. SWMB LD OF 11 FEET (3.58 METERS) IN LAT. 37-14-09.72N, LONG. 76-23-35.38W. SONAR IMAGERY DESCRIBES AREA AS LITTERED WITH PILES. EVALUATOR RECOMMENDS CHARTING AN11 OBSTN AS SURVEYED. ALSO RECOMMENDS THAT THE AREA PROPOSED BY THE HYDROGRAPHER BE CHARTED AS "SUBMERGED FISH STAKES". THE PROPOSED CORNERS OF THE AREA ARE: LAT. (N) LONG. (W) 37-14-12..75 76-23-38.81 37-14-12.75 76-23-20.58 37-14-01.66 76-23-20.58 37-14-01.66 76-23-38.81 (UP 4/2/04, SJV)

Survey Summary

Charts Affected: 12241_1, 12238_1, 12221_1, 12280_2, 13003_1

Remarks:

Item is included in Fish Trap Area not safely navigable by RUDE. Side Scan of the area shows horizontal piles in area of charted obstruction. No vertical piles found in SSS imagery.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|----------------|---------------|-------|---------|---------|
| OPR-E369-RU-06 | AWOIS # 12140 | 0.00 | 000.0 | Primary |

Hydrographer Recommendations

Retain as charted.

S-57 Data

[None]

Office Notes

Concur.

1.2) AWOIS #12193 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

| Search Position: | 37° 15' 27.520" N, 076° 30' 50.820" W |
|-------------------------|---------------------------------------|
| Historical Depth: | [None] |
| Search Radius: | 500 |
| Search Technique: | SD, S2, SWMB, DI |
| Technique Notes: | [None] |

History Notes:

LNM32/80-- VIRGINIA-CHESAPEAKE BAY-YORK RIVER SUNKEN VESSEL; A 21-FOOT P/C HAS BURNED AND SUNK IN APPROXIMATE POSITION LAT. 37-15-27N, LONG. 76-30-52W. THE WRECK IS MARKED WITH A BLUE 5-GALLON CONTAINER. MARINERS ARE ADVISED TO TRANSIT THE AREA WITH CAUTION. (ENT 2/2/04, SJV)

Survey Summary

Charts Affected: 12241_1, 12238_1, 12243_1, 12280_2, 13003_1

Remarks:

SSS conducted as close as safely possible to item's position. Nothing found in area.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|----------------|---------------|-------|---------|---------|
| OPR-E369-RU-06 | AWOIS # 12193 | 0.00 | 000.0 | Primary |

Hydrographer Recommendations

Retain as charted.

S-57 Data

[None]

Office Notes

Concur.

1.3) AWOIS #12194 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

 Search Position:
 37° 15' 19.270" N, 076° 23' 04.910" W

 Historical Depth:
 1.52 m

[None]

Search Radius: 0

Search Technique: [None]

History Notes:

Technique Notes:

H07953/53-- CS-350; THIS SURVEY IS PRESENTLY (2/2/04) UNAVAILABLE, HOWEVER, IT HAS BEEN DETERMINED THAT THE STAKE COVERED 5 FEET ORIGINATES MOST LIKELY FROM THIS SOURCE. POSITION SCALED FROM CHART 12241 IN LAT. 37-15-19.27, LONG. 76-23-04.91W. (ENT 2/2/04, SJV)

Survey Summary

Charts Affected: 12241_1, 12238_1, 12221_1, 12280_2, 13003_1

Remarks:

Object is outside of where the Rude is capable of surveying.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|----------------|---------------|-------|---------|---------|
| OPR-E369-RU-06 | AWOIS # 12194 | 0.00 | 000.0 | Primary |

Hydrographer Recommendations

Maintain in AWOIS database.

S-57 Data

[None]

Office Notes

Concur. Retain as charted.

1.4) AWOIS #12392 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 37° 14' 08.720" N, 076° 30' 05.370" W

Historical Depth: 11.28 m

Search Radius: 50

Search Technique: S2, MB Technique Notes: [None]

History Notes:

NO REGISTRY NUMBER ASSIGNED-- S-E604-RU-02; HLS PROJECT REPORT; SIDE SCAN SONAR CONTACT. SWMB LD OF 37 FEET IN LAT. 37-14-08.722N, LONG. 76-30-05.369W. SONAR IMAGERY DESCRIBES SUBMERGED PILING. EVALUATOR RECOMMENDS CHARTING A 37 OBSTN AS SURVEYED. (ENT 4/2/04, SJV)

Survey Summary

Charts Affected: 12241_1, 12238_1, 12243_1, 12280_2, 13003_1

Remarks:

Nothing found in designated area with 200% SSS or MBES development.

Feature Correlation

| Address Feature | | Range | Azimuth | Status |
|-----------------|---------------|-------|---------|---------|
| OPR-E369-RU-06 | AWOIS # 12392 | 0.00 | 000.0 | Primary |

Hydrographer Recommendations

Remove from chart.

S-57 Data

[None]

Office Notes

Concur. Chart present survey soundings.

1.5) Obstruction (AWOIS #12139)

Primary Feature for AWOIS Item #12139

| Search Position: | 37° 14' 16.250" N, 076° 22' 47.790" W |
|-------------------------|---------------------------------------|
| Historical Depth: | 3.05 m |
| Search Radius: | 50 |
| Search Technique: | S2, MB |
| Technique Notes: | [None] |

History Notes:

CL1206/02-- DTON FOR PROJECT S-E604-WH/RU; DATED 7/2/02; NOAA SHIP RUDE TO MCD.DTON@NOAA.GOV. MAIN SCHEME SIDE SCAN SONAR OPS LOCATED AN UNCHARTED DANGEROUS SUBMERGED PILING. SWMB LD OF 9 FEET IN LAT. 37-14-16.300N, LONG. 76-22-47.736W. CHARTED AS A 9 OBSTN AS SURVEYED (NO OTHER ANNOTATION). (ENT 1/6/04,SJV) NO REGISTRY NUMBER ASSIGNED-- S-E604-RU-04; HLS PROJECT REPORT; CONTACTS LOCATED BY SIDE SCAN SONAR. SWMB LD OF 10 FEET (3.11 METERS) IN LAT. 37-14-16.252N, LONG. 76-22-47.788W. SONAR IMAGERY DESCRIBES MORE THAN ONE SUBMERGED PILING IN THE AREA. EVALUATOR RECOMMENDS CHARTING 10 OBSTNS AS SURVEYED. (UP 4/1/04, SJV)

Survey Summary

| Survey Position: | 37° 14' 17.136" N, 076° 22' 45.983" W | |
|------------------|---|--|
| Least Depth: | 6.94 m | |
| Timestamp: | 2007-284.20:36:35.651 (10/11/2007) | |
| Survey Line: | h11295 / ru_mb / 2007-284 / 442_2035 | |
| Profile/Beam: | 684/167 | |
| Charts Affected: | 12241 1, 12238 1, 12221 1, 12280 2, 13003 1 | |

Remarks:

Obstructions found during main scheme SSS investigation of AWOIS 12139 appear to be a group of piles and are likely the remains of a fish trap. Least depth determined using Reson 8125 MBES. The least depth on this group of piles falls outside the charted obstruction circle. None of the piles surveyed were shoaler than 23 feet, thus disproving the 10 foot obstruction.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|---------------------|
| h11295/ru_mb/2007-284/442_2035 | 684/167 | 0.00 | 000.0 | Primary |
| h11295/ru_mb/2007-284/440_2024 | 769/80 | 14.89 | 332.3 | Secondary |
| h11295/ru_mb/2007-284/440_2024 | 756/238 | 25.78 | 351.1 | Secondary (grouped) |

| h11295/ru_mb/2007-284/441_2047 | 531/209 | 44.75 | 091.1 | Secondary (grouped) |
|--------------------------------|---------------|-------|-------|---------------------|
| h11295/ru_mb/2007-284/441_2047 | 642/222 | 51.46 | 069.1 | Secondary (grouped) |
| OPR-E369-RU-06 | AWOIS # 12139 | 52.35 | 058.5 | Secondary (grouped) |
| h11295/ru_ss/2007-254/140_1957 | 0001 | 54.59 | 063.4 | Secondary (grouped) |
| h11295/ru_ss/2007-275/243_2043 | 0001 | 99.89 | 059.8 | Secondary (grouped) |

Hydrographer Recommendations

Remove charted 10 foot obstruction associated with AWOIS 12139. Chart a new area obstruction which will encompass all the secondary correlated features to this item with a least depth for the new obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

23ft (12241_1, 12238_1, 12221_1, 12280_2)

3 ³/₄fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

| Attributes: | CATOBS - 6:foul area |
|-------------|---|
| | QUASOU - 1:depth known |
| | SORDAT - 20071011 |
| | TECSOU - 2,3:found by side scan sonar,found by multi-beam |
| | VALSOU - 6.940 m |
| | VERDAT - 12:Mean lower low water |
| | WATLEV - 3:always under water/submerged |

Office Notes

Concur with clarification. Delete charted 10' obstruction.

Chart an area obstruction (foul with piles), least depth 23 feet (6.94m) as follows: Northeast corner: 37:14:17.506 N, 76:22:45.286W Southwest corner: 37:14:15.951 N, 76:22:48.274W.

Elsewhere chart present survey soundings.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/442_2035_684_167.bmp does not exist.]



Figure 1.5.1

1.6) Obstruction (AWOIS #12141)

Primary Feature for AWOIS Item #12141

| Search Position: | 37° 14' 09.730" N, 076° 28' 36.990" W |
|-------------------------|---------------------------------------|
| Historical Depth: | 8.23 m |
| Search Radius: | 50 |
| Search Technique: | S2, MB |
| Technique Notes: | [None] |

History Notes:

CL1206/02-- DTON FOR PROJECT S-E604-WH/RU; DATED 7/2/02; NOAA SHIP RUDE TO MCD.DTON@NOAA.GOV. MAIN SCHEME SIDE SCAN SONAR OPS LOCATED AN UNCHARTED DANGEROUS SUBMERGED OBSTRUCTION (NOT DESCRIBED). SWMB LD OF 27 FEET IN LAT. 37-14-09.784N, LONG. 76-28-36.963W. CHARTED AS A 27 OBSTN AS SURVEYED. (ENT 1/6/04, SJV) NO REGISTRY NUMBER ASSIGNED-- S-E604-RU-04; HLS PROJECT REPORT; SIDE SCAN SONAR CONTACT. SWMB LD OF 27 FEET (8.338 METERS) IN LAT. 37-14-09.725N, LONG. 76-28-36.994W. EVALUATOR RECOMMENDS CHARTING A 27 OBSTN AS SURVEYED. (UP 4/2/04, SJV)

Survey Summary

| Survey Position: | 37° 14' 09.882" N, 076° 28' 36.674" W |
|------------------|---------------------------------------|
| Least Depth: | 10.90 m |
| Timestamp: | 2007-284.08:31:11.189 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 549_0830 |
| Profile/Beam: | 443/207 |
| Charts Affected: | 12241_1, 12238_1, 12280_2, 13003_1 |

Remarks:

Reson 8125 development of AWOIS 12141 found low-laying remains of this item. The current height off the seafloor of this item is less than 1 foot. Object falls within the York River Explosives Handling Berth and is of interest to anchoring vessels in this area.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------------|-------|---------|-----------|
| h11295/ru_mb/2007-284/549_0830 | 443/207 | 0.00 | 000.0 | Primary |
| OPR-E369-RU-06 | AWOIS # 12141 | 9.12 | 059.0 | Secondary |

Hydrographer Recommendations

Remove Charted 27 foot obstruction associated with AWOIS 12141 and chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

36ft (12241_1, 12238_1, 12280_2) 6fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|---|
| Attributes: | QUASOU - 6:least depth known |
| | TECSOU - 2,3:found by side scan sonar,found by multi-beam |
| | VALSOU - 10.899 m |
| | VERDAT - 12:Mean lower low water |

Office Notes

Concur with clarification. Chart an obstruction, least depth 36 feet (10.9m) in the present survey position. [Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/549_0830_443-207.jpg does not exist.]



Figure 1.6.1

1.7) Obstruction (AWOIS #12142)

Primary Feature for AWOIS Item #12142

| Search Position: | 37° 13' 41.130" N, 076° 28' 54.340" W |
|-------------------------|---------------------------------------|
| Historical Depth: | 5.18 m |
| Search Radius: | 50 |
| Search Technique: | S2, MB |
| Technique Notes: | [None] |

History Notes:

CL1206/02-- DTON FOR PROJECT S-E604-WH/RU; DATED 7/2/02; NOAA SHIP RUDE TO MCD.DTON@NOAA.GOV. MAIN SCHEME SIDE SCAN SONAR OPS LOCATED AN UNCHARTED DANGEROUS SUBMERGED PILING. SWMB LD OF 17 FEET IN LAT. 37-13-41.140N, LONG. 76-28-54.339W. CHARTED AS A 17 OBSTN AS SURVEYED. ENT 1/6/04,SJV) NO REGISTRY NUMBER ASSIGNED-- S-E604-RU-04; SIDE SCAN SONAR CONTACT; SWMB LD OF 17 FEET (5.25 METERS) IN LAT. 37-13-41.133N, LONG. 76-28-54.339W. EVALUATOR RECOMMENDS CHARTING A 17 OBSTN AS SURVEYED. (UP 4/2/04, SJV)

Survey Summary

| Survey Position: | 37° 13' 41.069" N, 076° 28' 54.186" W |
|------------------|---------------------------------------|
| Least Depth: | 9.12 m |
| Timestamp: | 2007-284.15:50:50.509 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 560_1550 |
| Profile/Beam: | 520/1 |
| Charts Affected: | 12241_1, 12238_1, 12280_2, 13003_1 |

Remarks:

Obstruction found during main scheme SSS investigation of AWOIS 12141 appear to be a pile. Least depth determined using Reson 8125 MBES and was significantly deeper than previous surveyed depth. Object falls within the York River Explosives Handling Berth and is of interest to anchoring vessels in this area.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------------|-------|---------|-----------|
| h11295/ru_mb/2007-284/560_1550 | 520/1 | 0.00 | 000.0 | Primary |
| OPR-E369-RU-06 | AWOIS # 12142 | 4.24 | 116.4 | Secondary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

30ft (12241_1, 12238_1, 12280_2)

5fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|---|
| Attributes: | QUASOU - 6:least depth known |
| | TECSOU - 2,3:found by side scan sonar,found by multi-beam |
| | VALSOU - 9.119 m |
| | VERDAT - 12:Mean lower low water |

Office Notes

Concur.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/560_1550_520_1.bmp does not exist.]



Figure 1.7.1

1.8) Obstruction (AWOIS #12195)

Primary Feature for AWOIS Item #12195

| Search Position: | 37° 14' 04.090" N, 076° 30' 00.290" W |
|-------------------|---------------------------------------|
| Historical Depth: | [None] |
| Search Radius: | 100 |
| Search Technique: | SD, S2, SWMB, DI |
| Technique Notes: | [None] |

History Notes:

H07952/52-- CS-350; HYDROGRAPHIC SIGNAL "WET" PLOTTED ON SMOOTH SHEET FROM AIR PHOTO MANUSCRIPT (1952). CHARTED AS SUBMERGED IN 1952. POSITION OF SEAWARD-MOST PILE SCALED FROM CHART 12241 IN LAT. 37-14-04.09N, LONG. 76-30-00.29W. (ENT 2/2/04,SJV)

Survey Summary

| Survey Position: | 37° 14' 01.914" N, 076° 29' 57.703" W |
|------------------|---|
| Least Depth: | 5.95 m |
| Timestamp: | 2007-284.12:24:59.800 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 565_1224 |
| Profile/Beam: | 83/4 |
| Charts Affected: | 12241_1, 12238_1, 12243_1, 12280_2, 13003_1 |

Remarks:

Obstruction found and least depth determined during Reson 8125 development of AWOIS 12192. Object appears to be a pile with debris in area.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------------|-------|---------|-----------|
| h11295/ru_mb/2007-284/565_1224 | 83/4 | 0.00 | 000.0 | Primary |
| OPR-E369-RU-06 | AWOIS # 12195 | 92.79 | 136.5 | Secondary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):
19ft (12241_1, 12238_1, 12243_1, 12280_2) 3 ¼fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN) Attributes: QUASOU - 6:least depth known SORDAT - 20071011 TECSOU - 3:found by multi-beam VALSOU - 5.952 m VERDAT - 12:Mean lower low water WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart an obstruction, least depth 19 feet (5.95m), in the present survey position. Delete charted piles at 37°14'04.090" N, 76°30'00.290" W and 37°14'03.905" N, 76°30'01.675" W.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/565_1224_83_4.bmp does not exist.]



Figure 1.8.1

1.9) Obstruction (AWOIS #12390)

Primary Feature for AWOIS Item #12390

Search Position:37° 14' 02.980" N, 076° 26' 21.230" WHistorical Depth:14.94 mSearch Radius:50Search Technique:S2, MBTechnique Notes:[None]

History Notes:

NO REGISTRY NUMBER ASSIGNED-- S-E604-R0-02; HLS PROJECT REPORT; SIDE SCAN SONAR CONTACT. SWMB LD OF 49 FEET IN LAT. 37-14-02.981N, LONG. 76-26-21.234W. SONAR IMAGERY DESCRIBES SUBMERGED PILING. EVALUATOR RECOMMENDS CHARTING A 49 OBSTN AS SURVEYED. (ENT 4/3/04, SJV)

Survey Summary

| Survey Position: | 37° 14' 02.957" N, 076° 26' 21.277" W |
|------------------|---|
| Least Depth: | 14.81 m |
| Timestamp: | 2007-284.06:22:18.397 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 604_0621 |
| Profile/Beam: | 527/155 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Obstruction found and least depth determined during Reson 8125 MBES development of AWOIS 12390. Given size of object seen in SSS and location of object this obstruction is likely a wreck, and not just a pile as indicated by AWOIS description.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------------|-------|---------|-----------|
| h11295/ru_mb/2007-284/604_0621 | 527/155 | 0.00 | 000.0 | Primary |
| OPR-E369-RU-06 | AWOIS # 12390 | 1.36 | 238.2 | Secondary |
| h11295/ru_ss/2007-255/110_0405 | 0002 | 16.80 | 277.8 | Secondary |

Hydrographer Recommendations

Maintain as charted.

Cartographically-Rounded Depth (Affected Charts):

48ft (12241_1, 12238_1, 12221_1, 12280_2) 8fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|---|
| Attributes: | QUASOU - 6:least depth known |
| | SORDAT - 20071011 |
| | TECSOU - 3: found by multi-beam |
| | VALSOU - 14.812 m |
| | VERDAT - 12:Mean lower low water |
| | WATLEV - 3:always under water/submerged |

Office Notes

Concur. Retain obstruction as charted.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/604_0621_527_155.bmp does not exist.]



Figure 1.9.1

1.10) Wreck (AWOIS #12393)

Primary Feature for AWOIS Item #12393

| Search Position: | 37° 14' 13.710" N, 076° 25' 16.650" W |
|-------------------------|---------------------------------------|
| Historical Depth: | 14.33 m |
| Search Radius: | 50 |
| Search Technique: | S2, MB |
| Technique Notes: | [None] |

History Notes:

NO REGISTRY NUMBER ASSIGNED; S-E604-RU-02; HLSPROJECT REPORT; SIDE SCAN SONAR CONTACT. SONAR IMAGING DESCRIBES A WRECK. SWMB LD OF 47 FEET IN LAT. 37-14-13.712N, LONG. 76-25-16.654W. EVALUATOR RECOMMENDS CHARTING A 47 WK AS SURVEYED. (ENT 4/2/04, SJV)

Survey Summary

| Survey Position: | 37° 14' 13.640" N, 076° 25' 16.303" W |
|------------------|---|
| Least Depth: | 14.55 m |
| Timestamp: | 2007-284.06:00:03.129 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 608_0559 |
| Profile/Beam: | 345/139 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Obstruction found and least depth determined during Reson 8125 MBES development of AWOIS 12393. Charted depth is correct.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------------|-------|---------|-----------|
| h11295/ru_mb/2007-284/608_0559 | 345/139 | 0.00 | 000.0 | Primary |
| OPR-E369-RU-06 | AWOIS # 12393 | 8.84 | 104.1 | Secondary |

Hydrographer Recommendations

Maintain as charted.

S-57 Data

Geo object 1: Wreck (WRECKS) Attributes: CATWRK - 1:non-dangerous wreck SORDAT - 20071011 TECSOU - 3:found by multi-beam VALSOU - 14.550 m VERDAT - 12:Mean lower low water WATLEV - 3:always under water/submerged

Office Notes

Concur. Retain wreck as charted.



Figure 1.10.1

1.11) Obstruction

Primary Feature for AWOIS Item #12192

| Search Position: | 37° 14' 04.520" N, 076° 30' 05.820" W |
|-------------------------|---------------------------------------|
| Historical Depth: | [None] |
| Search Radius: | 500 |
| Search Technique: | SD, S2, MB, DI |
| Technique Notes: | [None] |

History Notes:

LNM21/76-- VIRGINIA-CHESAPEAKE BAY-YORK RIVER-SURVEY OPERATIONS; THE AMERICAN ARCHAEOLOGY INSTITUTE OF NAUTICAL ARCHAEOLOGY ADVISES THEY ARE CONDUCTING SURVEY OPERATIONS ON A WRECK IN APPROXIMATE POSITION 37-14-04N, LONG. 76-30-07W. A 20-FOOT COFFER DAM EXTENDS 2 TO 3 FEET ABOVE THE SURFACE AND VISIBLE BUOYSWILL BE AT THE SITE. WORK WILL BE IN PROGRESS UNTIL APPROXIMATELY 18 JUNE, 1976. MARINERS ARE REQUESTED TO REDUCE WAKE AND USE EXTREME CAUTION WHEN TRANSITING THE AREA. (ENT 2/2/04, SJV)

Survey Summary

| Survey Position: | rvey Position: 37° 14' 11.653" N, 076° 30' 07.046" W | | |
|------------------------------|---|--|--|
| Least Depth: | 17.51 m | | |
| Timestamp: | 2007-284.12:14:50.498 (10/11/2007) | | |
| Survey Line: | vey Line: h11295 / ru_mb / 2007-284 / 564_1212 | | |
| Profile/Beam: 902/224 | | | |
| Charts Affected: | 12241 1, 12238 1, 12243 1, 12280 2, 13003 1 | | |

Remarks:

Obstruction found and least depth determined during Reson 8125 development of AWOIS 12192. Object appears to be a pile.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------------|--------|---------|-----------|
| h11295/ru_mb/2007-284/564_1212 | 902/224 | 0.00 | 000.0 | Primary |
| OPR-E369-RU-06 | AWOIS # 12192 | 222.63 | 352.2 | Secondary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

57ft (12241_1, 12238_1, 12243_1, 12280_2)

9 ½fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|----------------------------------|
| Attributes: | QUASOU - 6:least depth known |
| | TECSOU - 3: found by multi-beam |
| | VALSOU - 17.512 m |
| | VERDAT - 12:Mean lower low water |

Office Notes

Concur. Chart an obstruction, least depth 57 feet (17.51m) in the present survey position. [Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/564_1212_902_224.jpg does not exist.]



Figure 1.11.1

1.12) Obstruction (AWOIS #12391)

Primary Feature for AWOIS Item #12391

 Search Position:
 37° 14' 11.470" N, 076° 28' 49.130" W

 Historical Depth:
 10.36 m

 Search Radius:
 50

 Search Technique:
 S2, MB

Technique Notes: [None]

History Notes:

NO REGISTRY NUMBER ASSIGNED; S-E604-RU-02; HLS PROJECT REPORT; SIDE SCAN SONAR CONTACT. SWMB LD OF 34 FEET IN LAT. 37-14-11.470N, LONG. 76-28-49.132W. EVALUATOR RECOMMENDS CHARTING A 34 OBSTN AS SURVEYED. (ENT 4/3/04, SJV)

Survey Summary

| Survey Position: | 37° 14' 11.311" N, 076° 28' 49.523" W |
|------------------|---------------------------------------|
| Least Depth: | 9.92 m |
| Timestamp: | 2007-284.08:44:36.779 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 544_0843 |
| Profile/Beam: | 538/174 |
| Charts Affected: | 12241_1, 12238_1, 12280_2, 13003_1 |

Remarks:

Low-laying remains of AWOIS 12391. This survey confirms this feature is properly charted. Object falls within the York River Explosives Handling Berth and is of interest to anchoring vessels in this area.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------------|-------|---------|-----------|
| h11295/ru_mb/2007-284/544_0843 | 538/174 | 0.00 | 000.0 | Primary |
| OPR-E369-RU-06 | AWOIS # 12391 | 10.88 | 243.0 | Secondary |
| h11295/ru_mb/2007-284/544_0843 | 496/195 | 11.34 | 256.8 | Secondary |

Hydrographer Recommendations

Maintain as charted.

Cartographically-Rounded Depth (Affected Charts):

32ft (12241_1, 12238_1, 12280_2)

5 ¼fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|---|
| Attributes: | TECSOU - 2,3:found by side scan sonar,found by multi-beam |
| | VALSOU - 9.924 m |
| | WATLEV - 3:always under water/submerged |

Office Notes

Do not concur. Examination of this feature showed a least depth of 9.9m located approximately 10m from the selected least depth.

Delete charted 34' obstruction. Chart a dangerous obstruction, least depth 32 feet (9.92m) in the present survey position.

| Registry Number: | H11295 |
|-------------------------|--|
| State: | Virginia |
| Locality: | York River |
| Sub-locality: | Entrance to York River to Indian Field Creek |
| Project Number: | OPR-E369-RU-07 |
| Survey Dates: | 10/03/2007 - 10/11/2007 |

Charts Affected

| Number | Version | Date | Scale |
|--------|----------|------------|-----------|
| 12241 | 21st Ed. | 01/05/2002 | 1:20000 |
| 12238 | 39th Ed. | 01/01/2006 | 1:40000 |
| 12243 | 13th Ed. | 02/24/2001 | 1:40000 |
| 12280 | 6th Ed. | 09/01/2005 | 1:200000 |
| 13003 | 48th Ed. | 10/01/2004 | 1:1200000 |

Features

| | | Feature | Survey | Survey | Survey | AWOIS |
|-----|------------------------------|---|-----------|-------------------|--------------------|-------|
| No. | Name | Туре | Depth | Latitude | Longitude | Item |
| 1.1 | OBSTRUCTION | AWOIS | [no data] | [no data] | [no data] | |
| 1.2 | Pier ruins | Stationary structure, floating or fixed | [None] | 37° 15' 06.703" N | 076° 31' 38.457" W | |
| 1.3 | Improperly charted sewer | Pipe | 7.13 m | 37° 13' 36.459" N | 076° 27' 07.662" W | |
| 1.4 | Obstruction (submerged pile) | Obstruction | 6.44 m | 37° 14' 03.115" N | 076° 30' 00.472" W | |

1 - DR_Charted

1.1) AWOIS #12392 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 37° 14' 08.720" N, 076° 30' 05.370" W

Historical Depth: 11.28 m

Search Radius: 50

Search Technique: S2, MB Technique Notes: [None]

History Notes:

NO REGISTRY NUMBER ASSIGNED-- S-E604-RU-02; HLS PROJECT REPORT; SIDE SCAN SONAR CONTACT. SWMB LD OF 37 FEET IN LAT. 37-14-08.722N, LONG. 76-30-05.369W. SONAR IMAGERY DESCRIBES SUBMERGED PILING. EVALUATOR RECOMMENDS CHARTING A 37 OBSTN AS SURVEYED. (ENT 4/2/04, SJV)

Survey Summary

Charts Affected: 12241_1, 12238_1, 12243_1, 12280_2, 13003_1

Remarks:

Nothing found in designated area with 200% SSS or MBES development.

Feature Correlation

| Address Feature | | Range | Azimuth | Status |
|-----------------|---------------|-------|---------|---------|
| OPR-E369-RU-06 | AWOIS # 12392 | 0.00 | 000.0 | Primary |

Hydrographer Recommendations

Remove from chart.

S-57 Data

[None]

Office Notes

Concur. Chart present survey soundings.

1.2) Pier ruins

Survey Summary

| Survey Position: | 37° 15' 06.703" N, 076° 31' 38.457" W |
|------------------|---------------------------------------|
| Least Depth: | [None] |
| Timestamp: | 2007-276.02:48:16 (10/03/2007) |
| Survey Line: | h11295 / ru_ss / 2007-275 / 027_1538 |
| Contact/Point: | 0001/1 |
| Charts Affected: | 12241_1, 12243_1, 12280_2, 13003_1 |

Remarks:

Remains of completely submerged ruins of navy pier detected with 200% SSS. Item was determined to be too dangerous to develope with the WIDE MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|---------------------|
| h11295/ru_ss/2007-275/027_1538 | 0001 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-275/027_1538 | 0001 | 0.00 | 000.0 | Secondary |
| h11295/ru_ss/2007-275/027_1538 | 0002 | 22.90 | 298.1 | Secondary |
| h11295/ru_ss/2007-275/147_1216 | 0001 | 57.33 | 250.5 | Secondary (grouped) |
| h11295/ru_ss/2007-275/201_1525 | 0004 | 65.11 | 245.9 | Secondary (grouped) |

Hydrographer Recommendations

Rechart as submerged ruins.

S-57 Data

Geo object 1: Shoreline Construction (SLCONS)

Attributes:

CATSLC - 4:pier (jetty) CONDTN - 2:ruined INFORM - Navy pier in the vicinity of Stony Point, VA WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Part of this feature is shown on chart 12241 as a pier and part as a pier submerged. Google Earth imagery indicates no above water features. See Blue Notes for feature position. Recommend MCD reference photogrametry of area for final charting disposition of above water portion of pier.

[Image file H:/CARIS/H11295/RU_SS/2007-275/027_1538/027_15380001_s.tif does not exist.]



Figure 1.2.1



Figure 1.2.2

1.3) Improperly charted sewer

Survey Summary

| Survey Position: | 37° 13' 36.459" N, 076° 27' 07.662" W |
|------------------|---------------------------------------|
| Least Depth: | 7.13 m |
| Timestamp: | 2007-284.17:19:28.611 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 556_1716 |
| Profile/Beam: | 2644/23 |
| Charts Affected: | 12241_1, 12238_1, 12280_2, 13003_1 |

Remarks:

Charted sewer line, located with 200% SSS and RESON 8125 MBES. This feature consists of a number of secondary designated soundings along the length of the actual pipeline to assist the cartographer in establishing its "as-built" orientation.

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|--------|---------|---------------------|
| h11295/ru_mb/2007-284/556_1716 | 2644/23 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-255/114_1028 | 0003 | 0.89 | 050.0 | Secondary |
| h11295/ru_ss/2007-255/114_1028 | 0002 | 1.16 | 061.7 | Secondary |
| h11295/ru_ss/2007-255/114_0951 | 0002 | 2.68 | 045.5 | Secondary (grouped) |
| h11295/ru_ss/2007-254/119_1813 | 0001 | 5.04 | 074.6 | Secondary |
| h11295/ru_ss/2007-275/200_1809 | 0001 | 14.70 | 246.4 | Secondary |
| h11295/ru_ss/2007-275/200_1746 | 0002 | 15.95 | 187.9 | Secondary |
| h11295/ru_mb/2007-284/556_1716 | 2553/20 | 17.84 | 063.3 | Secondary (grouped) |
| h11295/ru_ss/2007-255/114_0951 | 0003 | 19.28 | 066.7 | Secondary |
| h11295/ru_mb/2007-284/556_1716 | 2461/14 | 36.72 | 062.7 | Secondary (grouped) |
| h11295/ru_ss/2007-255/114_0951 | 0004 | 37.74 | 062.7 | Secondary |
| h11295/ru_mb/2007-284/556_1716 | 2368/1 | 55.18 | 062.7 | Secondary (grouped) |
| h11295/ru_ss/2007-255/114_0951 | 0005 | 59.21 | 063.3 | Secondary (grouped) |
| h11295/ru_mb/2007-284/556_1716 | 2261/1 | 74.31 | 061.3 | Secondary (grouped) |
| h11295/ru_mb/2007-284/556_1716 | 2156/2 | 93.14 | 061.7 | Secondary (grouped) |
| h11295/ru_ss/2007-275/200_1816 | 0002 | 109.60 | 063.7 | Secondary (grouped) |
| h11295/ru_mb/2007-284/556_1716 | 2059/18 | 110.21 | 061.5 | Secondary (grouped) |
| h11295/ru_mb/2007-284/556_1716 | 1966/22 | 128.71 | 061.4 | Secondary (grouped) |

Feature Correlation

| h11295/ru_mb/2007-284/556_1716 | 1880/8 | 147.25 | 061.5 | Secondary (grouped) |
|--------------------------------|---------|--------|-------|---------------------|
| h11295/ru_mb/2007-284/556_1716 | 1790/1 | 165.97 | 061.1 | Secondary (grouped) |
| h11295/ru_mb/2007-284/557_1653 | 1100/4 | 187.05 | 061.8 | Secondary (grouped) |
| h11295/ru_mb/2007-284/557_1653 | 1185/4 | 205.42 | 061.5 | Secondary (grouped) |
| h11295/ru_mb/2007-284/557_1653 | 1270/2 | 223.62 | 061.4 | Secondary (grouped) |
| h11295/ru_ss/2007-275/120_1826 | 0002 | 223.90 | 063.6 | Secondary (grouped) |
| h11295/ru_mb/2007-284/557_1653 | 1358/1 | 242.38 | 061.4 | Secondary (grouped) |
| h11295/ru_ss/2007-255/144_1438 | 0002 | 253.45 | 061.5 | Secondary (grouped) |
| h11295/ru_mb/2007-284/557_1653 | 1444/3 | 260.70 | 061.5 | Secondary (grouped) |
| h11295/ru_mb/2007-284/557_1653 | 1529/5 | 278.81 | 061.5 | Secondary (grouped) |
| h11295/ru_mb/2007-284/557_1653 | 1614/2 | 296.95 | 061.4 | Secondary (grouped) |
| h11295/ru_mb/2007-284/557_1653 | 1705/6 | 315.59 | 061.5 | Secondary (grouped) |
| h11295/ru_mb/2007-284/557_1653 | 1797/5 | 333.40 | 061.3 | Secondary (grouped) |
| h11295/ru_mb/2007-284/557_1653 | 1885/11 | 351.05 | 060.9 | Secondary (grouped) |
| h11295/ru_ss/2007-255/143_1246 | 0001 | 434.14 | 052.9 | Secondary (grouped) |
| | | | | |

Hydrographer Recommendations

This charted sewer is not appropriately charted. Defer charting recommendations to Marine Chart Division.

Cartographically-Rounded Depth (Affected Charts):

23ft (12241_1, 12238_1, 12280_2) 3 ³/4fm (13003_1)

S-57 Data

Geo object 1: Pipeline, submarine/on land (PIPSOL)

Attributes: CATPIP - 4:sewer

SORDAT - 20071011

STATUS - 1:permanent

Office Notes

Concur. Defer charting recommendations to Marine Chart Division.

As this item is located well outside the shipping channel and is marked by a light, the office processor does not feel that this items requires submission as a DTON.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/556_1716_2644_23.bmp does not exist.]



Figure 1.3.1

1.4) Obstruction (submerged pile)

Survey Summary

| Survey Position: | 37° 14' 03.115" N, 076° 30' 00.472" W |
|------------------|---|
| Least Depth: | 6.44 m |
| Timestamp: | 2007-284.12:51:59.620 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 522_1250 |
| Profile/Beam: | 1058/217 |
| Charts Affected: | 12241_1, 12238_1, 12243_1, 12280_2, 13003_1 |

Remarks:

Obstruction found and least depth determined during Reson 8125 development of AWOIS 12192. Object appears to be a pile associated with charted submerged pier ruins.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|----------|-------|---------|---------|
| h11295/ru_mb/2007-284/522_1250 | 1058/217 | 0.00 | 000.0 | Primary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

```
21ft (12241_1, 12238_1, 12243_1, 12280_2)
3 ½fm (13003_1)
```

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20071011

TECSOU - 3:found by multi-beam

VALSOU - 6.444 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart an obstruction (submerged pile), least depth 21 feet (6.44m), in the present survey position.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/522_1250_1058_217.jpg does not exist.]



Figure 1.4.1

| Registry Number: | H11295 |
|-------------------------|--|
| State: | Virginia |
| Locality: | York River |
| Sub-locality: | Entrance to York River to Indian Field Creek |
| Project Number: | OPR-E369-RU-07 |
| Survey Dates: | 10/10/2007 - 10/11/2007 |

Charts Affected

| Number | Version | Date | Scale |
|--------|----------|------------|-----------|
| 12241 | 21st Ed. | 01/05/2002 | 1:20000 |
| 12238 | 39th Ed. | 01/01/2006 | 1:40000 |
| 12243 | 13th Ed. | 02/24/2001 | 1:40000 |
| 12221 | 78th Ed. | 04/01/2006 | 1:80000 |
| 12280 | 6th Ed. | 09/01/2005 | 1:200000 |
| 13003 | 48th Ed. | 10/01/2004 | 1:1200000 |

Features

| | | Feature | Survey | Survey | Survey | AWOIS |
|------|--------------------------------|-------------|---------|-------------------|--------------------|-------|
| No. | Name | Туре | Depth | Latitude | Longitude | Item |
| 1.1 | Uncharted Wreck | Wreck | 7.56 m | 37° 15' 16.213" N | 076° 22' 43.607" W | |
| 1.2 | Obstruction | Obstruction | 10.08 m | 37° 14' 51.752" N | 076° 21' 01.722" W | |
| 1.3 | Obstruction | Obstruction | 9.82 m | 37° 14' 59.846" N | 076° 21' 23.086" W | |
| 1.4 | Wreck | Wreck | 8.94 m | 37° 14' 14.772" N | 076° 27' 09.399" W | |
| 1.5 | Obstruction | Obstruction | 8.15 m | 37° 14' 37.850" N | 076° 25' 08.307" W | |
| 1.6 | Obstruction | Obstruction | 9.28 m | 37° 14' 38.876" N | 076° 24' 55.054" W | |
| 1.7 | Obstruction | Obstruction | 14.94 m | 37° 13' 53.255" N | 076° 29' 13.839" W | |
| 1.8 | Obstruction | Obstruction | 7.36 m | 37° 13' 36.262" N | 076° 26' 55.171" W | |
| 1.9 | Obstructions (submerged piles) | Obstruction | 11.37 m | 37° 13' 36.663" N | 076° 28' 42.404" W | |
| 1.10 | Obstruction | Obstruction | 14.86 m | 37° 14' 15.806" N | 076° 30' 17.480" W | |
| 1.11 | Obstruction | Obstruction | 6.80 m | 37° 13' 31.521" N | 076° 26' 58.209" W | |
| 1.12 | Obstruction | Sounding | 9.51 m | 37° 14' 17.167" N | 076° 27' 10.045" W | |
| 1.13 | Obstruction | Obstruction | 20.80 m | 37° 14' 23.730" N | 076° 30' 17.450" W | |

1 - DR_UnCharted

1.1) Uncharted Wreck

Survey Summary

| Survey Position: | 37° 15' 16.213" N, 076° 22' 43.607" W |
|------------------|---|
| Least Depth: | 7.56 m |
| Timestamp: | 2007-283.23:55:19.464 (10/10/2007) |
| Survey Line: | h11295 / ru_mb / 2007-283 / 432_2354 |
| Profile/Beam: | 507/155 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Wreck found during main scheme SSS. Least depth determined using Reson 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|-----------|
| h11295/ru_mb/2007-283/432_2354 | 507/155 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-254/125_2121 | 0007 | 1.19 | 182.5 | Secondary |
| h11295/ru_ss/2007-255/146_1616 | 0001 | 1.42 | 220.2 | Secondary |
| h11295/ru_mb/2007-284/433_0020 | 711/188 | 1.81 | 032.4 | Secondary |
| h11295/ru_ss/2007-276/241_1519 | 0001 | 5.26 | 352.0 | Secondary |

Hydrographer Recommendations

Chart this wreck based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

25ft (12241_1, 12238_1, 12221_1, 12280_2)

4fm (13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS) Attributes: CATWRK - 1:non-dangerous wreck CONVIS - 2:not visual conspicuous HEIGHT - 1.07 m SORDAT - 20071010 TECSOU - 2,3:found by side scan sonar,found by multi-beam VALSOU - 7.560 m VERDAT - 12:Mean lower low water WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart a wreck, least depth 25 feet, in the present survey position.

1.2) Obstruction

Survey Summary

| Survey Position: | 37° 14' 51.752" N, 076° 21' 01.722" W |
|------------------|---|
| Least Depth: | 10.08 m |
| Timestamp: | 2007-283.20:21:10.447 (10/10/2007) |
| Survey Line: | h11295 / ru_mb / 2007-283 / 449_2020 |
| Profile/Beam: | 691/53 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Obstruction found during main scheme SSS appears to be a pile. Least depth determined using Reson 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|-----------|
| h11295/ru_mb/2007-283/449_2020 | 691/53 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-255/226_2158 | 0002 | 2.31 | 091.3 | Secondary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

33ft (12241_1, 12238_1, 12221_1, 12280_2)

5 ½fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: TECSOU - 2,3:found by side scan sonar,found by multi-beam VALSOU - 10.081 m WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart an obstruction, least depth 33 feet (10.1m) in the present survey position.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/449_2020_691_53.bmp does not exist.]



Figure 1.2.1

1.3) Obstruction

Survey Summary

| Survey Position: | 37° 14' 59.846" N, 076° 21' 23.086" W |
|------------------|---|
| Least Depth: | 9.82 m |
| Timestamp: | 2007-283.20:51:19.181 (10/10/2007) |
| Survey Line: | h11295 / ru_mb / 2007-283 / 456_2050 |
| Profile/Beam: | 523/24 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Obstruction found during main scheme SSS appears to be a pile with debris in area. Least depth determined using Reson 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|---------------------|
| h11295/ru_mb/2007-283/456_2050 | 523/24 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-254/124_2035 | 0002 | 11.84 | 278.2 | Secondary |
| h11295/ru_ss/2007-255/226_2157 | 0004 | 11.86 | 243.0 | Secondary (grouped) |
| h11295/ru_mb/2007-283/456_2050 | 467/7 | 13.17 | 016.6 | Secondary (grouped) |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

32ft (12241_1, 12238_1, 12221_1, 12280_2)

5 ¼fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN) Attributes: CATOBS - 6:foul area QUASOU - 1:depth known SORDAT - 20071010 TECSOU - 2,3:found by side scan sonar,found by multi-beam

VALSOU - 9.820 m VERDAT - 12:Mean lower low water WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart an obstruction, least depth 32 feet (9.82m) in the present survey position.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/456_2050_523_24.bmp does not exist.]


Figure 1.3.1

1.4) Wreck

Survey Summary

| Survey Position: | 37° 14' 14.772" N, 076° 27' 09.399" W |
|------------------|---------------------------------------|
| Least Depth: | 8.94 m |
| Timestamp: | 2007-284.23:00:14.201 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 006_2259 |
| Profile/Beam: | 1133/37 |
| Charts Affected: | 12241_1, 12238_1, 12280_2, 13003_1 |

Remarks:

This vessel sank during survey operations on H11295. RUDE surveyed the location shortly after the crew had been rescued. Position and least depth determined using a RESON 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|---------|
| h11295/ru_mb/2007-284/006_2259 | 1133/37 | 0.00 | 000.0 | Primary |

Hydrographer Recommendations

Chart this wreck based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

29ft (12241_1, 12238_1, 12280_2) 4 ³/4fm (13003_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 1:non-dangerous wreck

SORDAT - 20071011

TECSOU - 3:found by multi-beam

VALSOU - 8.944 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart a wreck, least depth 29 feet (8.94m) in the present survey position.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/006_2259_1133_37.bmp does not exist.]



Figure 1.4.1

1.5) Obstruction

Survey Summary

| Survey Position: | 37° 14' 37.850" N, 076° 25' 08.307" W |
|------------------|---|
| Least Depth: | 8.15 m |
| Timestamp: | 2007-284.04:18:20.680 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 428_0415 |
| Profile/Beam: | 1821/199 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Obstruction found during main scheme SSS appears to be a pile. Least depth determined using Reson 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|----------|-------|---------|-----------|
| h11295/ru_mb/2007-284/428_0415 | 1821/199 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-255/146_1614 | 0001 | 2.61 | 238.9 | Secondary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

```
26ft (12241_1, 12238_1, 12221_1, 12280_2)
4 ½fm (13003_1)
```

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|----------------------|
| | |

Attributes:CATOBS - 6:foul areaQUASOU - 1:depth knownSORDAT - 20071011TECSOU - 2,3:found by side scan sonar,found by multi-beamVALSOU - 8.148 mVERDAT - 12:Mean lower low waterWATLEV - 3:always under water/submerged

Office Notes

Concur. Chart an obstruction, least depth 27 feet (8.15m) in the present survey position.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/428_0415_1821_199.bmp does not exist.]



Figure 1.5.1

1.6) Obstruction

Survey Summary

| Survey Position: | 37° 14' 38.876" N, 076° 24' 55.054" W |
|------------------|---|
| Least Depth: | 9.28 m |
| Timestamp: | 2007-284.04:11:16.033 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 429_0410 |
| Profile/Beam: | 377/58 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Obstruction found during main scheme SSS appears to be a pile. Least depth determined using Reson 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|-----------|
| h11295/ru_mb/2007-284/429_0410 | 377/58 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-254/142_2225 | 0008 | 1.79 | 114.8 | Secondary |
| h11295/ru_ss/2007-276/227_1306 | 0001 | 9.60 | 129.5 | Secondary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

30ft (12241_1, 12238_1, 12221_1, 12280_2)

5fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) | |
|---------------|---|--|
| Attributes: | CATOBS - 6:foul area | |
| | QUASOU - 1:depth known | |
| | SORDAT - 20071011 | |
| | TECSOU - 2,3:found by side scan sonar,found by multi-beam | |
| | VALSOU - 9.282 m | |
| | VERDAT - 12:Mean lower low water | |

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart an obstruction, least depth 30 feet (9.28m) in the present survey position.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/429_0410_377_58.jpg does not exist.]



Figure 1.6.1

1.7) Obstruction

Survey Summary

| Survey Position: | 37° 13' 53.255" N, 076° 29' 13.839" W |
|------------------|---------------------------------------|
| Least Depth: | 14.94 m |
| Timestamp: | 2007-284.10:10:26.119 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 475_1009 |
| Profile/Beam: | 276/130 |
| Charts Affected: | 12241_1, 12238_1, 12280_2, 13003_1 |

Remarks:

Obstruction found during main scheme SSS appears to be box-like in structure. Least depth determined using Reson 8125 MBES. Object falls within the York River Explosives Handling Berth and is of interest to anchoring vessels in this area.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|-----------|
| h11295/ru_mb/2007-284/475_1009 | 276/130 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-255/113_0835 | 0001 | 17.05 | 188.7 | Secondary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

49ft (12241_1, 12238_1, 12280_2)

8fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|---|
| Attributes: | QUASOU - 6:least depth known |
| | SORDAT - 20071011 |
| | TECSOU - 2,3:found by side scan sonar,found by multi-beam |
| | VALSOU - 14.944 m |
| | VERDAT - 12:Mean lower low water |
| | WATLEV - 3:always under water/submerged |

Office Notes

Concur. Chart an obstruction, least depth 48 feet (14.9m) in the present survey position.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/475_1009_276_130a.jpg does not exist.]



Figure 1.7.1

1.8) Obstruction

Survey Summary

| Survey Position: | 37° 13' 36.262" N, 076° 26' 55.171" W |
|------------------|---|
| Least Depth: | 7.36 m |
| Timestamp: | 2007-284.17:41:34.090 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 484_1740 |
| Profile/Beam: | 507/234 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

Obstruction found during main scheme SSS appears to be a significant and lasting structure. Least depth determined using Reson 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|-----------|
| h11295/ru_mb/2007-284/484_1740 | 507/234 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-254/119_1813 | 0004 | 1.41 | 059.7 | Secondary |
| h11295/ru_ss/2007-255/114_1028 | 0004 | 5.22 | 213.3 | Secondary |
| h11295/ru_ss/2007-255/114_0952 | 0001 | 7.06 | 185.6 | Secondary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

24ft (12241_1, 12238_1, 12221_1, 12280_2)

4fm (13003_1)

S-57 Data

Geo object 1:Obstruction (OBSTRN)Attributes:QUASOU - 6:least depth known
SORDAT - 20071011
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 7.360 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart an obstruction, least depth 24.15 feet (7.36m) in the present survey position.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/484_1740_507_234.bmp does not exist.]



Figure 1.8.1

1.9) Obstructions (submerged piles)

Survey Summary

| Survey Position: | 37° 13' 36.663" N, 076° 28' 42.404" W |
|------------------|---------------------------------------|
| Least Depth: | 11.37 m |
| Timestamp: | 2007-284.16:17:15.198 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 521_1615 |
| Profile/Beam: | 1166/210 |
| Charts Affected: | 12241_1, 12238_1, 12280_2, 13003_1 |

Remarks:

Obstructions found during mainscheme SSS and appear to be piles in front of the Coast Guard pier. Least depth determined using Reson 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|----------|-------|---------|---------------------|
| h11295/ru_mb/2007-284/521_1615 | 1166/210 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-255/143_1244 | 0003 | 22.52 | 107.1 | Secondary (grouped) |
| h11295/ru_mb/2007-284/521_1615 | 1268/160 | 22.61 | 105.2 | Secondary (grouped) |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report. Remove "37 ft rep" in front of pier.

Cartographically-Rounded Depth (Affected Charts):

37ft (12241_1, 12238_1, 12280_2)

6 ¼fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|---|
| Attributes: | QUASOU - 6:least depth known |
| | SORDAT - 20071011 |
| | TECSOU - 2,3:found by side scan sonar,found by multi-beam |
| | VALSOU - 11.368 m |
| | VERDAT - 12:Mean lower low water |

WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart an obstruction (submerged piles), least depth 37 feet, in the present survey position. Delete "37 ft rep" at 37:13:35.787 N, 076:28:40.327 W. Chart present survey soundings in common areas.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/521_1615_1166_210.bmp does not exist.]



Figure 1.9.1

1.10) Obstruction

Survey Summary

| Survey Position: | 37° 14' 15.806" N, 076° 30' 17.480" W |
|------------------|---|
| Least Depth: | 14.86 m |
| Timestamp: | 2007-284.13:43:26.304 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 529_1342 |
| Profile/Beam: | 366/89 |
| Charts Affected: | 12241_1, 12238_1, 12243_1, 12280_2, 13003_1 |

Remarks:

Obstruction found during main scheme SSS appears to be a pile. Least depth determined using Reson 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|-----------|
| h11295/ru_mb/2007-284/529_1342 | 366/89 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-275/242_1904 | 0001 | 2.66 | 219.6 | Secondary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

```
49ft (12241_1, 12238_1, 12243_1, 12280_2)
```

8fm (13003_1)

S-57 Data

| Geo object 1: | Obstruction (OBSTRN) |
|---------------|----------------------|
|---------------|----------------------|

Attributes:QUASOU - 6:least depth known
SORDAT - 20071011
TECSOU - 2,3:found by side scan sonar,found by multi-beam
VALSOU - 14.863 m
VERDAT - 12:Mean lower low water
WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart an obstruction, least depth 49 feet (14.86m), in the present survey position.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/529_1342_366_89.bmp does not exist.]

1.11) Obstruction

Survey Summary

| Survey Position: | 37° 13' 31.521" N, 076° 26' 58.209" W |
|------------------|---|
| Least Depth: | 6.80 m |
| Timestamp: | 2007-284.17:59:14.819 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 540_1758 |
| Profile/Beam: | 464/75 |
| Charts Affected: | 12241_1, 12238_1, 12221_1, 12280_2, 13003_1 |

Remarks:

This obstruction was found during main scheme SSS coverage. Object appears to be a pile based on SSS imagery. Least depth determined using Reson 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|-----------|
| h11295/ru_mb/2007-284/540_1758 | 464/75 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-275/120_1826 | 0001 | 5.99 | 004.1 | Secondary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

22ft (12241_1, 12238_1, 12221_1, 12280_2)

3 ³/₄fm (13003_1)

S-57 Data

| Geo object 1: Ot | ostruction (OBS' | TRN) |
|------------------|------------------|------|
|------------------|------------------|------|

Attributes:QUASOU - 6:least depth knownSORDAT - 20071011TECSOU - 2,3:found by side scan sonar,found by multi-beamVALSOU - 6.797 mVERDAT - 12:Mean lower low waterWATLEV - 3:always under water/submerged

Office Notes

Concur. Chart a pile, least depth 22 feet (6.8m) in the present survey position.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/540_1758_464_75.bmp does not exist.]



Figure 1.11.1

1.12) Obstruction

Survey Summary

| Survey Position: | 37° 14' 17.167" N, 076° 27' 10.045" W |
|------------------|---------------------------------------|
| Least Depth: | 9.51 m |
| Timestamp: | 2007-284.22:14:49.896 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 566_2213 |
| Profile/Beam: | 924/203 |
| Charts Affected: | 12241_1, 12238_1, 12280_2, 13003_1 |

Remarks:

Obstruction found during mainscheme SSS appears to be old crab traps. Least depth determined using Reson 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|-----------|
| h11295/ru_mb/2007-284/566_2213 | 924/203 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-255/116_0026 | 0002 | 2.57 | 185.1 | Secondary |
| h11295/ru_ss/2007-255/116_0026 | 0003 | 21.81 | 090.6 | Secondary |

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

31ft (12241_1, 12238_1, 12280_2)

5 ¼fm (13003_1)

S-57 Data

[None]

Office Notes

Chart an obstruction, least depth 31 feet (9.51m) in the present survey position.



Figure 1.12.1

1.13) Obstruction

Survey Summary

| Survey Position: | 37° 14' 23.730" N, 076° 30' 17.450" W |
|------------------|---|
| Least Depth: | 20.80 m |
| Timestamp: | 2007-284.14:12:12.960 (10/11/2007) |
| Survey Line: | h11295 / ru_mb / 2007-284 / 615_1411 |
| Profile/Beam: | 287/127 |
| Charts Affected: | 12241_1, 12238_1, 12243_1, 12280_2, 13003_1 |

Remarks:

Obstruction found during main scheme SSS appears to be a pipe or cable. Least depth determined using Reson 8125 MBES.

Feature Correlation

| Address | Feature | Range | Azimuth | Status |
|--------------------------------|---------|-------|---------|-----------|
| h11295/ru_mb/2007-284/615_1411 | 287/127 | 0.00 | 000.0 | Primary |
| h11295/ru_ss/2007-275/164_2244 | 0001 | 3.06 | 210.6 | Secondary |
| h11295/ru_ss/2007-275/165_2254 | 0001 | 8.62 | 215.1 | Secondary |

Hydrographer Recommendations

Chart this obstruction based on the depth, position, and S-57 attribution specified in this report.

Cartographically-Rounded Depth (Affected Charts):

68ft (12241_1, 12238_1, 12243_1, 12280_2)

11fm (13003_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN) Attributes: TECSOU - 2,3:found by side scan sonar,found by multi-beam VALSOU - 20.800 m WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart an obstruction, least depth 68 feet (20.8m) in the present survey position.

[Image file S:/Pydro_Proj/E-369_York_River/H11295 Sheet A/PSS/Images/615_1411_287_127.bmp does not exist.]



Figure 1.13.1



UNITED STATES DEPARMENT OF COMMERCE National Oceanic and Atmospheric Administration National Ocean Service Silver Spring, Maryland 20910





Subject: [Fwd: Danger to Navigation] From: "CO Rude" <co.rude@noaa.gov> Date: Mon, 17 Dec 2007 18:26:17 -0500 To: Glen Rice <Glen.Rice@noaa.gov>

FYI

--

LCDR Richard Brennan, NOAA

Commanding Officer NOAA Ship RUDE 439 West York Street Norfolk, VA 23510 Ship's Cell: 757-615-6465 CO's Cell: 757-642-4217



Subject: Danger to Navigation

From: Douglas Harpine <Douglas.Harpine@noaa.gov>

Date: Wed, 12 Dec 2007 15:19:34 -0500

To: "Baird, Doug" <Doug.Baird@noaa.gov>, "Danley, Howard" <Howard.Danley@noaa.gov>, "Forster, Ken" <Ken.Forster@noaa.gov>, "Gottschalk, Stephen" <Stephen.Gottschalk@noaa.gov>, "Griffin, Mark" <Mark.Griffin@noaa.gov>, "Hausman, Warren" <Warren.Hausman@noaa.gov>, "Hill, Stephen" <Stephen.Hill@noaa.gov>, "Martin, Ed" <Ed.Martin@noaa.gov>, "Myers, Dave" <Dave.Myers@noaa.gov>, "Neander, Dave" <Dave.Neander@noaa.gov>, "Parker, Castle" <Castle.E.Parker@noaa.gov>, "Poltilove, David" <David.Poltilove@noaa.gov>, "Robinson, Joseph" <Joseph.Robinson@noaa.gov>, "Shaw, Kevin" <Kevin.Shaw@noaa.gov>, "Sillcox, Richard" <Richard.Sillcox@noaa.gov>, "Smith, Shep" <Shep.Smith@noaa.gov>, Caryn.Arnold@noaa.gov, CO.Rude@noaa.gov

To whom it may concern

Chart letter 1461/07 and DD10107 have been processed by the Nautical Data Branch and put into Products Branch C's box. This involves eight submerged obstructions and one wreck on the York River Virginia, from approx lighted buoy "18" west to approx 1.1 NM west of lighted buoy "24".

This affects the following charts: 12241 (KAPP 581) 12238 (KAPP 580) 12221 (KAPP 558)

This also affects ENC Cell US5VA60M.

This was reported by the NOAA Ship RUDE.

REFERENCES: H-11295

OPR-E369-RU-07

Douglas C. Harpine

Douglas Harpine <<u>Douglas.Harpine@noaa.gov</u>> Senior Cartographer NOAA/NOS Marine Chart Division/Nautical Data Branch

| Dangar to Navigation am | Content-Type: | message/rfc822 |
|-------------------------|--------------------------|----------------|
| | Content-Encoding: | 7bit |

email_18ft_DTON.txt From View message header detail Douglas Harpine <Dougl as. Harpi ne@noaa. gov> Thursday, October 25, 2007 4:36 pm Sent "Bai rd, Doug" <Doug. Bai rd@noaa.gov> , "Danl ey, Howard" То <Howard. Danl ey@noaa.gov> , "Forster, Ken" <Ken. Forster@noaa.gov> , "Gottschalk, Stephen" < Stephen. Gottschalk@noaa.gov> , "Griffin, Mark" <Mark.Griffin@noaa.gov> , "Hill, Stephen" <Stephen.Hill@noaa.gov> , "Martin, Ed" <Ed. Martin@noaa.gov> , "Myers, Dave" <Dave.Myers@noaa.gov> , "Neander, Dave" <Dave. Neander@noaa.gov> , "Parker, Castle" <Castle. E. Parker@noaa.gov> , "Poltilove, David" <David. Poltilove@noaa.gov> , "Robi nson, Joseph" < Joseph. Robi nson@noaa. gov> , "Shaw, Kevi n" <Kevin. Shaw@noaa.gov>, "Sillcox, Richard" <Richard. Sillcox@noaa.gov>, "Smith, Shep" <Shep. Smith@noaa.gov> , Caryn. Arnol d@noaa.gov Сс Bcc Subj ect Danger to Navigation Attachments vCard(Dougl as. Harpi ne) 1K To whom it may concern Chart letter 1261/07 and DD9931 have been processed by the Nautical Data Branch and put into Products Branch C's box. This involves a submerged obstruction at 37°14'43.216"N 076°20'15.344"W. This is approx 875 yards NE of the York River Lighted Buoy "18". This affects the following charts: 12241 (KAPP 581) 12238 (KAPP 580) 12221 (KAPP 558) This also affects ENC Cells US5VA24M and US5VA60M. This was reported by the NOAA Ship RUDE.

REFERENCES: H-11295 OPR-E369-RU-07

Douglas C. Harpine

```
[Fwd: FW: Danger to navigation found at York River R3 pier ** IMM...
```

Subject: [Fwd: FW: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED **] From: "CO Rude" <co.rude@noaa.gov> Date: Tue, 11 Dec 2007 10:50:11 -0500 To: Glen Rice <Glen.Rice@noaa.gov>

Glen,

I would include this e-mail and the associated pictures in your DR.

RickSOPKO, STEVEN CDR wrote:

Rob,

Subj danger to navigation removed. See pictures in attached email. $\ensuremath{\mathbb{R}}/$

CDR Steven Sopko Fleet Oceanographer COMSECONDFLT Office: (757) 443-9850 ext. 47192 BB: (757) 343-1931 sopkos@secondflt.navy(.smil).mil

----Original Message-----From: Ferguson, John H LCDR Sent: Friday, October 19, 2007 12:57 PM TO: COSTELLO, JOHN J. CAPT Cc: SMITH, JASON LT; SOPKO, STEVEN CDR Subject: FW: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED ** Capt Costello,

Capt Costello, NWC Yorktown obstruction has been removed. V/r, LCDR Ferguson

-----Original Message-----From: Langlois, Jim LT NAVFAC MidLant, 250 [mailto:james.langlois@navy.mil] Sent: Friday, October 19, 2007 12:41 PM To: Ferguson, John H LCDR Cc: Davis, Darren CIV NS Norfolk Port OPS Subject: RE: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED **

LCDR,

Please see attached Email w/ Photos regarding the obstruction that was in the York river adjacent to the Ammo Pier at NWSY. It was removed today. Please forward this to any concerned party. LT Mike Wanger, the Public Works Officer in Yorktown, worked the issue quickly to identify and remove the 18" steel pile.

V/R LT Jim Langlois Ship Support Officer NAVFAC MIDLANT Phone: (757) 445-7447 DSN: 565-7447 Cell: (757) 636-7177 FAX: (757) 445-4601 Email: james.langlois@cmar.navy.smil.mil SIPR: james.langlois@cmar.navy.smil.mil

-----Original Message-----From: Davis, Darren CIV NS Norfolk Port OPS Sent: Thursday, October 18, 2007 07:37 To: 'Ferguson, John H LCDR' Cc: Langlois, Jim LT NAVFAC MidLant, 250; Davis, Darren CIV NS Norfolk Port OPS Subject: RE: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED **

Good morning John,

I will be out of the office Friday 10/19 - Monday 10/22. LT Langlois (cc'ed) will provide a quick email on Friday once the "danger to navigation" has been removed at NWS Yorktown.

Have a great weekend..

V/r Darren

-----Original Message-----From: Ferguson, John H LCDR [mailto:fergusonj@SECONDFLT.NAVY.MIL] Sent: Wednesday, October 17, 2007 15:48 To: Davis, Darren CIV NS Norfolk Port OPS Subject: RE: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED **

Roger, thanks! R/John

From: Davis, Darren CLV NS Norfolk Port OPS
[mailto:darren.davis@navy.mil]
Sent: Wednesday, October 17, 2007 3:29 PM
To: Ferguson, John H LCDR
Subject: Re: Danger to navigation found at York River R3 pier **
IMMEDIATE ACTION REQUIRED **

John, We are working to have this removed on Fri with govt contractor. I will provide an update as soon as we know the SOE for Fri. Vr Darren Sent from my BlackBerry Wireless Device ----- Original Message ---------- Original Message -----From: Ferguson, John H LCDR <<u>fergusonj@SECONDFLT.NAVY.MIL></u> To: Davis, Darren CIV NS Norfolk Port OPS Sent: Wed Oct 17 15:25:01 2007 Subject: RE: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED ** Darren, What were the results of the dive? R/John LCDR John Ferguson CTF 20 Current Ops -----Original Message-----From: Davis, Darren CIV NS Norfolk Port OPS From: Davis, Darren CIV NS Norfolk Port OPS
[mailto:darren.davisl@may.mil]
Sent: Friday, October 12, 2007 7:48 AM
To: COSTELLO, JOHN J. CAPT
Co: CRAMB, CARL CAPT; Dervay, Dana CIV FFC N3GFMB; Ferguson, John H
LCDR: Davis, Darren CIV NS Norfolk Port OPS; Parker, Joe H CAPT
COMNAVSURFLANT, N3; Lambert, David J CDR Port OPS; Prevot, Alonzo P CW03
Port Operations OIC NWSY
Subject: RE: Danger to navigation found at York River R3 pier **
IMMEDIATE ACTION #FOULTPED ** IMMEDIATE ACTION REQUIRED ** Importance: High Good morning Sir, Divers are scheduled to be on site this morning at 0800 to investigate the obstruction. They will have a pneumatic saw to cut the obstruction at the mud line if possible. More to follow. . . V/r Darren ---Original Message----From: COSTELLO, JOHN J. CAPT [mailto:COSTELLOJ@SECONDFLT.NAVY.MIL]
Sent: Thursday, October 11, 2007 8:09 Sent: Inursday, October 11, 2007 8:09 To: Davis, Darren CIV NS Norfolk Port OPS; Parker, Joe H CAPT COMNAVSURFLANT, N3 Cc: CRAMB, CARL CAPT; Dervay, Dana CIV FFC N3GFMB; Ferguson, John H LCDR Subject: FW: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED ** Importance: High Darren, Are the NAVSTA Norfolk Pilots aware of this Danger to Navigation? Is the CO, WPNSTA aware of this Danger to Navigation? How does Port Operations intend to promulgate this information to the Fleet? Regards, J.J. Costello From: SOPKO, STEVEN CDR Sont: Wednesday, October 10, 2007 12:25 PM To: Ferguson, John H LCDR; McCLOUD, GARY QMC Subject: FW: Danger to navigation found at York River R3 pier Importance: High Gentlemen, Pls read email chain below and "Navy Pier" attachment discussing danger to navigation found near pier at NWS Yorktown. Survey was recently conducted by NOAA. Question: Do we want to consider moving this obstruction (least depth 9.53 m; rising 3.21 m off the seafloor) immediately? Does C2F/CTF-20 need to weigh in? R/ sps CDR Steven Sopko Fleet Oceanographer COMSECONDEFIT Office: (757) 443-9850 ext. 47192 BB: (757) 343-1931 sopkossecondflt.navy(.smil).mil

From: Crofoot, Robert F LCDR COMSUBFOR, N333
[mailto:robert.crofoot@navy.mil]
Sent: Wednesday, October 10, 2007 11:21 AM
To: Soper, Daniel J CIV FFC N37; Wright, Archer A CAPT FFC N37; SOPKO,
STEVEN CDR
Comparison
STEVEN CDR

CC: Thomas, Christopher B CAPT COMSUBFOR, N30/N3A; Olsen, Larry B CAPT COMSUBFOR, N3; Masterson, Jeffrey M CIV COMSUBFOR, N30A; Benjamin, Marl B CDR COMSUBFOR, N7B; beech, robert L ETCM COMSUBFOR, N7SEA; CO Rude; Mark
Zeuner, Jeffrey LCDR CSP, N742; Lewis, Randall K. CDR NAVSUETORPFAC, CO; Steadley, R Scott CAPT OPNAV, N84; Springer, Cory A CAPT OPNAV, N84; Mabey, Deborah L LCDR OPNAV Subject: FW: Danger to navigation found at York River R3 pier

Sirs,

This is obviously a concern not just for the sub force but for the surface fleet as well. After speaking with the CO of the SUBTORPFAC at Yorktown NWS, he says that he really has no authority to direct any kind of removal of this obstruction and that since it is not just a sub issue that it would need to be brought to the attention of USFF and C2F for the resolution requested by the CO of the RUDE in the email below. Just a quick background on this, back in May 06, there was submarine allision with a pier there. As a result, there was an action for CSF in the form of a spreadsheet circulated around the force that also contained other safety related corrective actions. Item 10 of this spreadsheet was to have a survey conducted of the York River IVO the NWS pier to verify the sounding data. I requested to have this survey done and the NOAA Ship RUDE recently completed the survey and the results are attached. Request whether or not we should try to have this obstruction removed immediately or have it put on a new chart. As you know, if it goes on a chart and it is subsequently removed shortly thereafter, it will take far more effort to get it off the chart than was required to get it on the chart.

V/R, Rob

-----Original Message-----From: CO Rude [mailto:CO.Rude@noaa.gov] Sent: Tuesday, October 09, 2007 15:41 To: Sprank <<RUDE_Hitz_small.jpg>> le, Robert BMCS CNI/CNRMA, Chief's Office: Crofoot, Robert F LCDR COMSUBFOR, N333 Subject: Danger to navigation found at York River R3 pier

Gentlemen,

Attached is a "Danger To Navigation" (DTON) report for the item we found during survey operations last week in the York River. This item rises 3.21 meters (10.5 ft) off the sea floor, has a least depth of 9.53 m (31.2 ft), and is approximately 30.3 m (99.4 ft) offshore of the Naval Weapons Station R3 pier. Please see the report for a chartlet showing the location and the exact latitude and longitude of this item. This type of finding would typically be sent directly to the Local Notice To Mariners through our own internal pipelines, however, given its location within your security zone I wanted you to review this information at the Navy and determine if it was significant enough to warrant immediate removal. If you do not think this item will require removal within the next month, please let me know by close of business on Wednesday and I will proceed with our normal distribution to the Local Notke to Mariners on Thursday. The RUDE will be working in the York River for the next three days, if you have any questions about our data or need any assistance positioning this item, please don't hesitate to call.

Rick

--

LCDR Richard Brennan, NOAA Commanding Officer NOAA Ship RUDE 439 West York Street Norfolk, VA 23510 Ship's Cell: 757-615-6465 CO's Cell: 757-642-4217

Subject:

Danger to navigation found at York River R3 pier From: "Wanger, Michael J LT NAVFAC MIDLANT, PWD Yorktown" <<u>michael.wanger@navy.mil></u> Date: Fri, 19 Oct 2007 12:33:33 -0400 To: "Langlois, Jim LT NAVFAC MidLant, 250" <<u>james.langlois@navy.mil></u> To: "Langlois, Jim LT NAVFAC MidLant, 250" <<u>james.langlois@navy.mil></u> Jim, Subject item has been removed in its entirety from the river, see attached pics. Forward to all concerned.

R/ Michael J. Wanger, P.E. LT CEC USN Public Works Officer PWD Yorktown (757) 887-4636

From: Farrow, Al CIV NAVFAC MIDLANT, PWD Yorktown Sent: Friday, October 19, 2007 12:27 To: Wanger, Michael J LT NAVFAC MIDLANT, PWD Yorktown Subject: PICS <<DSC02848.JPG>> <<DSC02854.JPG>>



[Fwd: FW: Danger to navigation found at York River R3 pier ** IMM...



LCDR Richard Brennan, NOAA Commanding Officer NOAA Ship RUDE 439 West York Street Norfolk, VA 23510 Ship's Cell: 757-615-6465 CO's Cell: 757-642-4217



Subject: FW: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED **

From: "SOPKO, STEVEN CDR" <sopkos@SECONDFLT.NAVY.MIL>

Date: Fri, 19 Oct 2007 13:11:49 -0400

To: "Crofoot, Robert F LCDR COMSUBFOR, N333" <robert.crofoot@navy.mil>

CC: "Thomas, Christopher B CAPT COMSUBFOR, N30/N3A" <christopher.b.thomas@navy.mil>, "Olsen, Larry B CAPT COMSUBFOR, N3" <larry.b.olsen1@navy.mil>, "Masterson, Jeffrey M CIV COMSUBFOR, N30/N3A" <christopher.b.thomas@navy.mil>, "Olsen, Larry B CAPT COMSUBFOR, N7B" <mark.b.benjamin@navy.mil>, "Masterson, Jeffrey M CIV COMSUBFOR, N30A" <jeffrey.masterson@navy.mil>, "Benjamin, Mark B CDR COMSUBFOR, N7B" <mark.b.benjamin@navy.mil>, "beech, robert L ETCM COMSUBFOR, N7SEA" <robert.beech@navy.mil>, CO Rude <CO.Rude@noaa.gov>, "Zeuner, Jeffrey LCDR CSP, N742" <jeffrey.zeuner@navy.mil>, "Lewis, Randall K. CDR NAVSUBTORPFAC, CO" <randall.k.lewis@navy.mil>, "Soper, Daniel J CIV FFC N37" <daniel.j.soper@navy.mil>

Rob

Subj danger to navigation removed. See pictures in attached email.

R/

CDR Steven Sopko Fleet Oceanographer COMSECONDFLT Office: (757) 443-9850 ext. 47192 BB: (757) 343-1931 sopkos@secondflt.navy(.smil).mil -----Original Message-----From: Ferguson, John H LCDR Sent: Friday, October 19, 2007 12:57 PM To: COSTELLO, JOHN J. CAPT Cc: SMITH, JASON LT: SOPKO, STEVEN CDR Subject: FW: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED **

Capt Costello, NWC Yorktown obstruction has been removed. V/r, LCDR Ferguson

-----Original Message-----From: Langlois, Jim LT NAVFAC MidLant, 250 [mailto:james.langlois@navy.mil] Sent: Friday, October 19, 2007 12:41 PM To: Ferguson, John H LCDR Cc: Davis, Darren CIV NS Norfolk Port OPS Subject: RE: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED **

LCDR,

Please see attached Email w/ Photos regarding the obstruction that was in the York river adjacent to the Ammo Pier at NWSY. It was removed today. Please forward this to any concerned party. LT Mike Wanger, the Public Works Officer in Yorktown, worked the issue quickly to identify and remove the 18" steel pile.

V/R LT Jim Langlois Ship Support Officer NAVFAC MIDLANT Phone: (757) 445-7447 DSN: 565-7447 Cell: (757) 636-7177 FAX: (757) 445-4601 Email: james.langlois@navy.mil SIPR: james.langlois@cmar.navy.smil.mil

-----Original Message-----From: Davis, Darren CIV NS Norfolk Port OPS Sent: Thursday, October 18, 2007 07:37 To: 'Ferguson, John H LCDR' Cc: Langlois, Jim LT NAVFAC MidLant, 250; Davis, Darren CIV NS Norfolk Port OPS Subject: RE: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED **

Good morning John,

I will be out of the office Friday 10/19 - Monday 10/22. LT Langlois (cc'ed) will provide a quick email on Friday once the "danger to navigation" has been removed at NWS Yorktown.

Have a great weekend..

V/r Darren

----Original Message-----From: Ferguson, John H LCDR [mailto:fergusonj@SECONDFLT.NAVY.MIL] Sent: Wednesday, October 17, 2007 15:48 To: Davis, Darren CIV NS Norfolk Port OPS Subject: RE: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED **

Roger, thanks! R/John

From: Davis, Darren CIV NS Norfolk Port OPS
[mailto:darren.davisl@navy.mil]
Sent: Wednesday, October 17, 2007 3:29 PM
To: Ferguson, John H LCDR
Subject: Re: Danger to navigation found at York River R3 pier **
IMMEDIATE ACTION REQUIRED **

John,

We are working to have this removed on Fri with govt contractor. I will provide an update as soon as we know the SOE for Fri.

Vr Darren

Sent from my BlackBerry Wireless Device

----- Original Message -----From: Ferguson, John H LCDR <u><fergusonj@SECONDFLT.NAVY.MIL></u> To: Davis, Darren CIV NS Norfolk Port OPS Sent: Wed Oct 17 15:25:01 2007 Subject: RE: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED **

Darren, What were the results of the dive? R/John

LCDR John Ferguson CTF 20 Current Ops

----Original Message----From: Davis, Darren CIV NS Norfolk Port OPS [mailto:darren.davisl@navy.mil] Sent: Friday, October 12, 2007 7:48 AM To: COSTELLO, JOHN J. CAPT Cc: CRAME, CARL CAPT; Dervay, Dana CIV FFC N3GFMB; Ferguson, John H Cc: CRAMB, CARL CAPT; Dervay, Dana CIV FFC N3GFMB; Ferguson, Jonn H LCCR; Davis, Darren CIV NS Norfolk Port OPS; Parker, Joe H CAPT COMNAVSURFLANT, N3; Lambert, David J CDR Port OPS; Prevot, Alonzo P CW03 Port Operations OIC NWSY Subject: RE: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED ** Importance: High

Good morning Sir,

Divers are scheduled to be on site this morning at 0800 to investigate the obstruction. They will have a pneumatic saw to cut the obstruction at the mud line if possible.

More to follow. .

Darren

----Original Message---From: COSTELLO, JOHN J. CAPT [mailto:COSTELLOJ@SECONDFLT.NAVY.MIL] Sent: Thursday, October 11, 2007 8:09 To: Davis, Darren CIV NS Norfolk Port OPS; Parker, Joe H CAPT To: Davis, Darren CIV NS NorTolk Port OPS; Parker, Joe H CAPT COMMAVSURFLANT, N3 Cc: CRAMB, CARL CAPT; Dervay, Dana CIV FFC N3GFMB; Ferguson, John H LCDR Subject: FW: Danger to navigation found at York River R3 pier ** IMMEDIATE ACTION REQUIRED ** Importance: High

Darren,

Are the NAVSTA Norfolk Pilots aware of this Danger to Navigation?

Is the CO, WPNSTA aware of this Danger to Navigation?

How does Port Operations intend to promulgate this information to the Fleet?

Regards,

J.J. Costello

From: SOPKO, STEVEN CDR STORNO, STEVEN CDR Sent: Wednesday, October 10, 2007 12:25 PM To: Ferguson, John H LCDR; McCLOUD, GARY QMC Subject: FW: Danger to navigation found at York River R3 pier Importance: High

Gentlemen,

Pls read email chain below and "Navy Pier" attachment discussing danger to navigation found near pier at NWS Yorktown. Survey was recently conducted by NOAA.

Question: Do we want to consider moving this obstruction (least depth 9.53 m; rising 3.21 m off the seafloor) immediately?

Does C2F/CTF-20 need to weigh in?

R/ sps

CDR Steven Sopko Fleet Oceanographer COMSECONDFLT Office: (757) 443-9850 ext. 47192 BB: (757) 343-1931 sopkos@secondflt.navy(.smil).mil

From: Crofoot, Robert F LCDR COMSUBFOR, N333

[mailto:robert.crofoot@navy.mil] Sent: Wednesday, October 10, 2007 11:21 AM

To: Soper, Daniel J CIV FFC N37; Wright, Archer A CAPT FFC N37; SOPKO, STEVEN CDR

Cc: Thomas, Christopher B CAPT COMSUBFOR, N30/N3A; Olsen, Larry B CAPT COMSUBFOR, N3; Masterson, Jeffrey M CIV COMSUBFOR, N3OA; Benjamin, Mark B CDR COMSUBFOR, N7B; beech, robert L ETCM COMSUBFOR, N7SEA; CO Rude; Zeuner, Jeffrey LCDR CSP, N742; Lewis, Randall K. CDR NAVSUBTORPFAC, CO; Steadley, Booth CAFT OPNAV, N84; Springer, Cory A CAPT OPNAV, N84; Mabey, Deborah L LCDR OPNAV

Subject: FW: Danger to navigation found at York River R3 pier

Sirs.

This is obviously a concern not just for the sub force but for the surface fleet as well. After speaking with the CO of the SUBTORPFAC at Yorktown NWS, he says that he really has no authority to direct any kind of removal of this obstruction and that since it is not just a sub issue that it would need to be brought to the attention of USFF and C2F for the resolution requested by the CO of the RUDE in the email below. Just a quick background on this, back in May O6, there was submarine allision with a pier there. As a result, there was an action for CSF in the form of a spreadsheet circulated around the force that also contained other safety related corrective actions. Item 10 of this spreadsheet was to safety related corrective actions. Item 10 of this spreadsheet was to

[Fwd: FW: Danger to navigation found at York River R3 pier ** IMM...

have a survey conducted of the York River IVO the NWS pier to verify the sounding data. I requested to have this survey done and the NOAA Ship RUDE recently completed the survey and the results are attached. Request whether or not we should try to have this obstruction removed immediately or have it put on a new chart. As you know, if it goes on a chart and it is subsequently removed shortly thereafter, it will take far more effort to get it off the chart than was required to get it on the chart.

V/R, Rob

----Original Message----From: CO Rude [mailto:CO.Rude@noaa.gov] Sent: Tuesday, October 09, 2007 15:41 To: Sprank <<RUDE_Hitz_small.jpg>> le, Robert EMCS CNI/CNRMA, Chief's Office: Crofoot, Robert F LCDR COMSUBFOR, N333 Subject: Danger to navigation found at York River R3 pier

Gentlemen,

Attached is a "Danger To Navigation" (DTON) report for the item we found during survey operations last week in the York River. This item rises 3.21 meters (10.5 ft) off the sea floor, has a least depth of 9.53 m (31.2 ft), and is approximately 30.3 m (99.4 ft) offshore of the Naval Weapons Station R3 pier. Please see the report for a chartlet showing the location and the exact latitude and longitude of this item. This type of finding would typically be sent directly to the Local Notice To Mariners through our own internal pipelines, however, given its location within your security zone I wanted you to review this information at the Navy and determine if it was significant enough to warrant immediate removal. If you do not think this item will require removal within the next month, please let me know by close of business on Wednesday and I will proceed with our normal distribution to the Local Notice to Mariners on Thursday. The RUDE will be working in the York River for the next three days, if you have any questions about our data or need any assistance positioning this item, please don't hesitate to call.

Rick

--

LCDR Richard Brennan, NOAA Commanding Officer NOAA Ship RUDE 439 West York Street Norfolk, VA 23510 Ship's Cell: 757-615-6465 CO's Cell: 757-642-4217

Subject: Danger to navigation found at York River R3 pier From: "Wanger, Michael J LT NAVFAC MIDLANT, PWD Yorktown" <michael.wanger@navy.mil> Date: Fri, 19 Oct 2007 12:33:33 -0400 To: "Langlois, Jim LT NAVFAC MidLant, 250" <james.langlois@navy.mil>

Jim,

Subject item has been removed in its entirety from the river, see attached pics. Forward to all concerned.

Michael J. Wanger, P.E. LT CEC USN Public Works Officer PWD Yorktown (757) 887-4636

From: Farrow, Al CIV NAVFAC MIDLANT, PWD Yorktown Sent: Friday, October 19, 2007 12:27 To: Wanger, Michael J LT NAVFAC MIDLANT, PWD Yorktown Subject: PICS

<<DSC02848.JPG>> <<DSC02854.JPG>>



[Fwd: FW: Danger to navigation found at York River R3 pier ** IMM...







| EW: Danger to navigation found at Vark Diver D3 nice ** IMMEDIATE ACTION DEGUIDED ** am | Content-Type: | message/rfc822 | |
|---|--------------------------|----------------|--|
| Tw. Danger to havigation found at Tork River K5 pier ··· Individual TE ACTION REQUIRED ··. enin | Content-Encoding: | 7bit | |

| Dangan to novigation found at York Divor D2 pion and | Content-Type: | message/rfc822 |
|--|--------------------------|----------------|
| Danger to navigation found at York River R3 pier.em | Content-Encoding: | 7bit |

| | Content-Description: | DSC02848.JPG |
|--------------|-----------------------------|--------------|
| DSC02848.JPG | Content-Type: | image/jpeg |
| | Content-Encoding: | base64 |

| | Content-Description: | DSC02854.JPG |
|--------------|-----------------------------|--------------|
| DSC02854.JPG | Content-Type: | image/jpeg |
| | Content-Encoding: | base64 |

Subject: Re: OPR-E369-RU-07 York River Sheet and Project Sketch Revision From: "richard.t.brennan" <richard.t.brennan@noaa.gov> Date: Thu, 30 Aug 2007 10:04:08 -0400 To: "Michael.Riddle" <Michael.Riddle@noaa.gov> CC: Doug Baird <Doug.Baird@noaa.gov>, Gerd Glang <Gerd.Glang@noaa.gov>, Jeremy McHugh <Jeremy.McHugh@noaa.gov>, Caryn Arnold <Caryn.Arnold@noaa.gov>, Glen Rice <Glen.Rice@noaa.gov>, Shep Smith <Shep.Smith@noaa.gov>

Mike,

This is great. Please cancel registry number H11294. We will use H11295 for the entire York River survey.

Rick

Michael.Riddle wrote:

Hi All. H1 All, Attached are the MapInfo tables to update the sheet layout and progress sketch for OPR-E369-RU-07. The entire project is now sheet A, H11295. Please confirm that I can cancel H11294. The survey tracker has been updated, with the exception of canceling H11294. Also attached is a small graphic showing the revision. Mike Doug Baird wrote: Rick, No concerns here - I checked with Shep to see if file size would be a problem for AHB, and he does not think it will be a problem. So, proceed with combining Sheets A & B on project OPR-E369-RU. Since H-11295 has already been started, I assume that the combined sheets will retain that designation. Doug richard.t.brennan wrote: Doug, We have run some numbers on the York River Surveys. It looks like if We nave run some numbers on the fork fiver surveys. It fooks like if we combine both the sheets, it would only take about 76 hours to complete 200% side scan and cross lines (about two weeks of Rude-style 24hr ops). I am assuming it won't take too much more time to do developments, bottom samples, etc.. I think there is a considerable efficiency to combining these. Any reasons they should be kept separate? Rick *LCDR Richard Brennan, NOAA* Commanding Officer Commanding Officer NOAA Ship RUDE 439 West York Street Norfolk, VA 23510 Ship's Cell: 757-615-6465 CO's Cell: 757-642-4217 THE STORE STORE not an OPR-E369-RU-07 YORK RIVER, VIRGINIA project limits and sheet layout sketch CY 2007 Mileage Critical Area 14 total SNM 11 critical SNM Survey Limit Line updated by MCR 8/29/07 SHEET IS 1:10,000-SCALE 88CM X 205CM ġ, 5.64 kilometers CHART 1224 SOUNDINGS IN FEE 10.27

G



LCDR Richard Brennan, NOAA Commanding Officer NOAA Ship RUDE 439 West York Street

A39 West York Street Norfolk, VA 23510 Ship's Cell: 757-615-6465 CO's Cell: 757-642-4217



ATLANTIC HYDROGRAPHIC BRANCH EVALUATION REPORT FOR SURVEY H11295 (2007)

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Reports. Sections in this report refer to the corresponding sections of the Descriptive Reports.

B. DATA ACQUISITION AND PROCESSING

B.1 EQUIPMENT

The following software was used to process data at the Atlantic Hydrographic Branch (AHB):

MapInfo Professional version 8.5 CARIS HIPS/SIPS version 6.1 CARIS Bathy DataBASE Version 2.1 CARIS HOM ENC Version 3.3 SP3 DKART Inspector V. 5.1 SAFE Software FME Universal Translator 2003 PYDRO 7.3 (r2252)

B.2 PROCESSING

B.2.2 SOUNDING COVERAGE

The field unit did not receive a formal change to the Project Instructions for the cancellation of H11294. All documentation related to the modification of H11294 and H11295 is contained in an email from Hydrographic Survey Division to the Commanding Officer of the RUDE dated August 30, 2007.

OFFICE PROCESSING

The field unit submitted one CARIS fieldsheet with BASE Surfaces at 50cm and 2m resolution. The 50cm grid contained MBES-only developments and was created as a CUBE grid. These surfaces were not finalized. The office processor created a VBES-only 2m grid, finalized both the office-generated 2m and field-generated 50cm grids, combined them, and used the combined grid as the source grid for all cartographic products.

The surface "Grid_Uncertainty_2m_Final.hns" was imported to CARIS BASE Editor. This grid was generalized at 1:10,000 scale, with a resolution of 5m and a generalization radius of 100m. This grid is named "H11295_2m_combined_gen_10k_5m." Soundings were extracted from the generalized grid at 5mm at 1:10,000 scale (survey scale) and saved to a CARIS .HOB file "H11295_Soundings.hob." Chart Unit sounding selection was performed in CARIS BASE Editor and was based on existing sounding distribution in raster charts 12241 and 12238. Although H-Cell specifications call for automated sounding selection using a table of radii, due to the complex nature of the bathymetry a manual selection yielded a more representative selection. In areas not adequately covered by VBES data, least depths were retained and included in the H-The following soundings (in meters) were selected from Cell. ENC US5VA60M:

| Latitude | Longitude | Depth | Latitude | Longitude | Depth |
|-----------------|------------------|-------|-----------------|------------------|-------|
| 37-16-45.88536N | 076-32-34.24740W | 7 | 37-14-30.92820N | 076-25-51.92328W | 7.3 |
| 37-16-16.87008N | 076-32-52.90080W | 8.2 | 37-14-35.86668N | 076-25-26.88564W | 7.6 |
| 37-16-13.03320N | 076-32-46.34196W | 7 | 37-14-51.45720N | 076-24-05.84712W | 7 |
| 37-15-55.51704N | 076-32-22.13664W | 7 | 37-14-54.13740N | 076-23-38.47560W | 5.1 |
| 37-15-35.39196N | 076-32-04.14456W | 6.4 | 37-15-23.47272N | 076-22-33.42000W | 6 |
| 37-14-42.06084N | 076-30-21.34332W | 13.4 | 37-15-25.78932N | 076-22-14.30364W | 5.7 |
| 37-14-27.01464N | 076-30-37.35468W | 14.3 | 37-14-13.84044N | 076-22-21.08964W | 9.7 |
| 37-14-38.77080N | 076-28-57.76428W | 5.7 | 37-14-14.13888N | 076-22-30.42444W | 9.4 |
| 37-13-49.36512N | 076-29-37.97304W | 6 | 37-13-45.28560N | 076-20-46.26780W | 5.7 |
| 37-13-57.03708N | 076-29-39.27984W | 13.1 | 37-13-39.00360N | 076-20-20.58252W | 5.4 |
| 37-13-53.55480N | 076-29-43.11528W | 7.3 | 37-14-49.48152N | 076-20-18.05640W | 6 |
| 37-13-42.53052N | 076-29-12.65100W | 7.6 | 37-14-06.42192N | 076-21-33.95268W | 10.6 |
| 37-14-27.96540N | 076-26-43.50876W | 7 | 37-15-38.81736N | 076-31-57.80496W | 11.5 |

A single depth area with no contour or depth area objects was digitized by hand in CARIS HOM by the office processor. As prescribed in H-Cell Specifications v. 2.0, AHB defers contour generation to Marine Chart Division. Soundings from a buffer line run parallel to a charted ruined pier are excluded from the H-Cell as per the H-Cell Specifications. Positions of the footings of the Coleman Memorial Bridge were digitized by hand using raster chart 12241 as source.

Wreck feature objects, obstruction feature objects, and seabed area feature objects (bottom samples) were exported from PYDRO to a Microsoft .mdb file and imported into CARIS HOM using the Object Import Utility funciton. Shoreline verification data was converted from MapInfo format to ESRI Shape file format using FME Universal Translator. The shoreline data was then imported to HOM using the Object Import Utility. Several bottom samples acquired by the field as prescribed in the Statement of Work do not meet S-57 encoding rules. The NOAA H-Cell is an interim product. NOAA H-Cell attributes for seabed area may not meet S-57 encoding rules, particularly for "nature of surface" and "qualitative nature of surface" attributes.

The following files were imported into HOM to create the chart unit file H11295_01.des from which the Base Cell final product US511295_CU was produced:

H11295_Soundings.hob H11295_ENC_Features.hob H11295_Fill_Soundings.hob H11295_Soundings_CU.hob

The following file were imported into HOM to create the survey scale file H11295_01.des from which the Base Cell final product US511295_SS.000 was produced:

H11295_Soundings.hob

H-cell layers in CARIS HOM are organized as follows:

Layer 100 Soundings Layer 200 Skin of the Earth(SOTE) Layer 300 Features Layer 500 Line & Meta data

BASE CELL TESTING

The base cell file US511295_CU.000 was examined using dKart Inspector. Warnings received were all inconsequential. The DSPM.HUNI and DSPM.DUNI were reported to have illegal values, but these errors were expected as originating during ENC conversion to NOAA chart values, so they also can be ignored. All other errors refer to ENC features being retained where QUASOU and TECSOU are attributed as unknown.

Following compilation, the completed H-Cell product was exported to S-57 format in metric units with CARIS default

sounding rounding parameters (-1,-1, T). The S-57 file was then converted from metric units to chart units (feet at MLLW) using the CARIS tool "Convert S-57 BASE Cell Units" with standard NOAA feet rounding parameters (0,0,N). This S-57 file in chart units was opened in D-KART Inspector and checked for errors. Other than the expected errors related to S-57 encoding rules for file name length, units of measurement (imperial rather than metric) and seabed area errors described in the previous paragraph, the S-57 Base Cell File meets all criteria for proper S-57 encoding.

Separate S-57 files (in chart units) were created for the full survey-scale sounding set and for the full point feature set. These files were created in the manner described above. The S-57 survey scale sounding set and feature file are interim products which do not necessarily meet full S-57 encoding rules.

D. RESULTS AND RECOMMENDATIONS

| D.1 | CHART | COMPARISON | 12241 (21 st Edition, Jan /02) |
|-----|-------|------------|---|
| | | | NM date not indicated on chart |
| | | | LNM date not indicated on chart |
| | | | |

12238 (39th Edition, Nov /06) Corrected through NM Jan. 21/06 Corrected through LNM Jan. 17/06

ENC Comparison

US5VA24M

Application/Issue Date 2007-02-01

US5VA60M

Application/Issue date 2006-12-14

HYDROGRAPHY

D.1 Charted Soundings and Items

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in section D.1 of the Descriptive Report. The present survey is adequate to supersede the charted hydrography within the common area.

D.2 RESULTS

D.2.1 ITEM INVESTIGATION

Table #3, displayed in the Descriptive Report in section D.2.1, is incomplete and incorrectly implies that all features described therein are all classified as "DR Uncharted." These features were all reviewed and compared to features described in the Pydro .PSS file. Appendix II of the Descriptive Report, as attached to this document and annotated by the office processor, is complete and correct. Use Appendix II of the Descriptive Report to determine any information required about wreck, obstruction, DTON, and AWOIS items for H11295. Do not use Table #3 in section D.2.1 of the Descriptive Report.

D.2.3 SHORELINE

The field unit submitted the outlines of two previously uncharted piers in the vicinity of Yorktown. These outlines were submitted in Mapinfo format, converted to ESRI .shp files using FME Universal Translator, and imported to CARIS HOM. Line files were filtered and used to create polygon objects. These polygons were used to create Shoreline Construction (SLCONS) objects. Both features lie outside the area of data coverage. Defer final charting status to MCD.

D.2.4 CHARTED FEATURES

The charted pier submerged near Stony Point was detected by the field unit. Part of this feature is shown on chart 12241 as a pier and part as a pier submerged. Google Earth imagery indicates no above water features. See Blue Notes for feature position. Recommend MCD reference photogrametry of area for final charting disposition of above water portion of pier. The features listed below lie outside the area of data coverage. Defer final charting status to MCD.

| Name | Lat | Lon |
|-----------------|---------------|---------------|
| Dangerous Wreck | 37-14-04.410N | 76-30-05.917W |
| Dangerous Wreck | 37-15-27.561N | 76-30-51.134W |
| Stake | 37-15-19.256N | 76-23-04.910W |

D.2.4 AIDS TO NAVIGATION

A privately maintained marker exists at 37-13-36.095N, 76-27-15.572W. All attributes of this feature were retained as indicated in ENC US5VA60M.

ADEQUACY OF SURVEY

The present survey is adequate to supersede the charted hydrography within all common areas. No additional field work is recommended by the office processor.

MISCELLANEOUS

ENC products were created by Atlantic Hydrographic Branch personnel, Norfolk, Virginia, using CARIS HOM v3.3. ENC products and electronic data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

The NOAA H-Cell is an interim product that is not required to meet IHO S-57 specifications. Certain feature objects may have classifications that do not meet S-57 rules, particularly seabed area objects (bottom samples). Six seabed area objects for survey H11504 do not have the "NATQUA" attribute populated. These attributes were not populated by the field.

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland.

For charted features the field unit used positions sourced from the raster chart. These positions appear in the item investigation forms and vary slightly from the positions of corresponding features sourced from the last version of the ENC at the time of processing.

APPROVAL SHEET

Indian Field Creek to the Entrance of York River(H11295)2007

The completed survey has been inspected with regard to survey coverage, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Date: _____

Helen Stewart Physical Scientist Atlantic Hydrographic Branch

All final products have undergone a comprehensive review as per the Atlantic Hydrographic Branch Processing Manual and are verified to be accurate and complete except where noted in the Evaluation Report.

Date: _____

Daniel Wright Physical Scientist Atlantic Hydrographic Branch

I have reviewed the ENC exchange file (*.000), accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Approved: _____

Date: _____

Shepard M. Smith Lieutenant Commander, NOAA Chief, Atlantic Hydrographic Branch