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SECTION 01100

GENERAL

PART 1 GENERAL

1.1 PRECONSTRUCTION CONFERENCE

1.1.1 Conference

A Preconstruction Conference will be arranged by the Contracting Officer's Representative after award of contract and before commencement of work. The Contracting Officer's Representative will notify the Contractor of the time and date set for the meeting. At this conference, the Contractor shall be oriented with respect to Government procedures and line of authority, contractual, administrative, and construction matters. Additionally, a schedule of required submittals will be discussed.

1.1.2 Submittals

The Contractor shall bring to this conference the following items in completed form:

(a) Minimum Basic Outline for Accident Prevention Program (including Diving Plan if required) (See ATTACHMENTS)
(b) Emergency Response Procedures including employee certificates for current First Aid and CPR training
(c) Letter appointing Contractor Quality Control System Manager
(d) Quality Control Plan
(e) Environmental Protection Plan
(f) Hazard Analysis Plan
(g) List of Subcontractors including written statement that no first tier subs are presently debarred or suspended from Government work

1.1.3 Quality Control System

The Contractor shall bring the “Export to RMS” file for import to the Corps of Engineers RMS (Resident Management System). This file shall be in accordance with the Section 01312, QUALITY CONTROL SYSTEM (QCS) and shall include current information on the following:

(a) Prime Contractor Data
(b) Subcontractor Data
(c) Insurance Data
(d) Equipment Data
(e) Submittal Register
(f) Correspondence
(g) Features of Work
(h) Activity Schedule
(i) Pay Activity Data

1.1.4 Letter of Record

A Letter of Record will be written documenting all items discussed at the conference and a copy will be furnished by the Contracting Officer's Representative to all in attendance.

1.2 PROGRESS CHARTS

1.2.1 Periodic Progress Charts

In consonance with the Contract Clause, SCHEDULES FOR CONSTRUCTION CONTRACTS, the Contractor shall be guided by the following requirements and procedures as pertain to submission of an initial and subsequent periodic construction progress charts. These charts as approved and updated shall provide the basis for determination of the amounts of partial payments.

1.2.2 Submittal of Progress Chart (ENG Form 2454)

The Contractor shall submit three copies of the initial Progress Chart after the receipt of the Notice to Proceed and prior to the commencement of work. Blank ENG Form 2454 (See ATTACHMENTS) will be furnished the Contractor as soon after award as practicable for his use in submitting his contract progress schedules for approval. Three copies of monthly updated progress schedules are to be furnished by the Contractor and submitted with all progress payments. All copies of the chart shall be full-size and legible.

1.2.3 Preparation of Progress Chart

The Contractor shall indicate on the progress chart the bid items contained in the contract, showing the amount of the item and its relative weighted percentage of the total contract. The Contractor may separate features of work under each item to show salient work elements such as procurement of materials, plant, and equipment, and supplemental work elements such as excavation, reinforcing steel, backfill, etc. These salient features shall total to the cost and weighted percentages shown for the major bid item. When quantity variations impact the weighted percentage of a separate item by five percent or more, the Contractor shall revise the contract progress charts to accurately reflect the impact of such variations.

1.2.4 Modifications

Modifications to the contract which are minor in nature shall be listed and scheduled separately in order of their issuance and as reported on the associated request for partial payment. Completion of work on minor modifications shall be noted as work progresses. When major modifications are issued in which one or more of the bid items are significantly changed monetarily or in time of completion, the progress schedule should be revised to incorporate such changes showing revised item completion dates and overall new completion date, as applicable.

1.3 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in one (1) copy unless otherwise specified. Each certificate shall be signed by an official authorized to certify in behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test

reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

1.4 CONSOLIDATED REPORT

The Contractor shall submit a consolidated report within 30 days after completion of all work associated with this contract and shall include, as a minimum, the information listed on the form, CONSOLIDATED REPORT provided in the ATTACHMENTS. Final payment to the Contractor will not be made until this report has been received by the Contracting Officer.

1.5 PHYSICAL CONDITIONS AND DATA

1.5.1 General

Data and information furnished or referred to below are for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

1.5.2 Physical Conditions

The physical conditions indicated on the drawings and in the specifications are the result of site investigations by the U.S. Army Corps of Engineers, Charleston District. It highly recommended that bidders conduct their own investigations and decide for themselves the character of the materials and difficulties of performing the work.

1.5.3 Weather Conditions

The areas in which work is to be done under these specifications are workable during the entire year; however, tropical storms may require that operations be suspended temporarily. The season for tropical storms is during the period June - October; during such disturbances precaution should be taken to secure all plant and equipment.

1.5.4 Transportation Facilities

1.5.4.1 Charleston Entrance Channel

The Port of Charleston is served by the Southern Railway System and the Seaboard Coastline Railroad Company. Marine repair facilities, docking and fueling facilities, provisions, and marine supplies are also available.

1.5.4.2 Georgetown Entrance Channel

The Port of Georgetown is served by the Seaboard Coastline Railroad Company. Docking and fueling facilities, provisions, and limited marine supplies area also available.

1.5.4.3 Port Royal Entrance Channel

The Port Royal is served by the Southern Railway System. Docking and fueling facilities, provisions, and limited marine supplies area also available.

1.5.5 Tides

1.5.5.1 Charleston Harbor

The mean range of tide at Charleston Harbor, South Carolina is 5.2 feet and the spring range is 6.1 feet.

1.5.5.2 Charleston Entrance Channel Tidal Corrections

In Charleston Entrance Channel, tidal corrections to all observed subsurface elevations shall be based upon either the digital global positioning system-real time kinematic (DGPS-RTK) reference station or the tidal gradient variation method as follows.

(1) If the tidal gradient variation method is used from Station –121+99 thru Station 36+00 the Fort Sumter Gage will be used for corrections. The corrections are as follows:

LOCATION	TIME TO ADD MINUTES (From Ft. Sumter Gage)
-600+00 to –160+00	25
-160+00 to –122+00	20
-121+99 to –110+00	20
-110+00 to -60+00	15
-60+00 to -10+00	10
-10+00 to 36+00	5

NOTE:

The tidal gradient variation method will be used if the DGPS-RTK System becomes inoperable. If the COE reference station fails to operate, the Contractor shall notify the Contracting Officer (843-329-2339, office) and Mr. Millard Dowd (843-297-2673, cell; 843-329-8202, office) in order for the Contracting Officer or his representative to approve the use of the tidal gradient variation method during the -period the DGPS-RTK SYSTEM is inoperable.

1.5.5.2 Georgetown Harbor

The mean range of tide and spring tide at Georgetown Harbor, South Carolina is 3.8 feet and the spring range is 5.4 feet.

1.5.5.3 Port Royal Harbor

The mean range of tide and spring tide at Port Royal, South Carolina is as follows:

LOCATION	MEAN RANGE	SPRING RANGE
Fort Freemont	6.6 feet	7.8 feet
Parris Island	7.0 feet	8.2 feet

Port Royal	7.2 feet	8.5 feet
Beaufort	7.4 feet	8.7 feet

1.5.5.3.1 Tide Adjustment for Port Royal Entrance Channel

The tide adjustment for Port Royal Entrance channel, Tangent 1, Station –26+00 to sta. 245+15 is +30 minutes based on the tide gage located at the entrance to Station Creek.

1.5.5.4 Additional Tidal Information

Tidal benchmark information may be obtained from U.S. Department Of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service at the NOS website, www.co-ops.nos.noaa.gov.

1.5.6 Channel Traffic

Charleston, Georgetown, and Port Royal Harbors are served by large, commercial, ocean-going vessels, small freight boats, tugs, tow boats, barges, launches, pleasure crafts and fishing vessels. Traffic in the Atlantic Intracoastal Waterway consists mainly of small freight boats, tugs, tow boat and barges, oyster barges, pleasure crafts and fishing boats all having drafts of eleven feet and under. It may be necessary to suspend dredging operations temporarily and swing the dredge to the side of the channel for the passage of the larger of these vessels.

1.5.7 Obstruction of Channel

The Government will not undertake to keep the channel free from vessels or other obstructions, except to the extent of such regulations, if any, as may be prescribed by the Secretary of the Army, in accordance with the provisions of Section 7 of the Rivers and Harbors Act approved 8 August 1917. The Contractor will be required to conduct the work in such a manner as to obstruct navigation as little as possible, and in case the Contractor's plant so obstructs the channel as to make it difficult or endanger the passage of vessels, said plant shall be promptly moved on the approach of any vessel to such an extent as may be necessary to afford a practicable passage. Upon completion of the work the Contractor shall promptly remove his plant, including ranges, buoys, piles and other markers placed by him under the contract in navigation waters or on the shore.

1.5.8 Condition of Site

It is highly recommended that prospective bidders examine the areas of work, prior to submission of bids, in order to determine for themselves the accessibility for transportation of personnel, supplies and equipment and also to familiarize themselves as to the nature and general arrangement of work areas. The Contractor shall obtain any and all right-of-entries across private lands which he may use.

1.5.9 Records

Maps indicating previously dredged depths and recent dredging records are available for review at the Corps of Engineers, Charleston District, Navigation Section, 69A Hagood Avenue, Charleston, South Carolina. Bidders can schedule appointments to view these records with Mr. Doug

Holmes, phone (843) 329-8135. Copies of historical files other than those which Mr. Holmes has assembled may be requested under the Freedom of Information Act, attention Office of Counsel. These records will be released to the Contractor within ten working days after the receipt of a proper Freedom of Information Act request.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

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GENERAL REQUIREMENTS

SECTION 01312

QUALITY CONTROL SYSTEM (QCS)

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SECTION 01312

QUALITY CONTROL SYSTEM (QCS)

1.1 GENERAL

The Government will use the Resident Management System for Windows (RMS) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit various information throughout the contract period. The Contractor module, user manuals, updates, and training information can be downloaded from the RMS web site. This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

Administration
Finances
Quality Control
Submittal Monitoring
Scheduling
Import/Export of Data

1.1.1 Correspondence and Electronic Communications

For ease and speed of communications, both Government and Contractor will, to the maximum extent feasible, exchange correspondence and other documents in electronic format. Correspondence, pay requests and other documents comprising the official contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents will govern, in the event of discrepancy with the electronic version.

1.1.2 Other Factors

Particular attention is directed to Contract Clause, "Schedules for Construction Contracts", Contract Clause, "Payments", Contract Clause, PROJECT SCHEDULE, Section 01330, SUBMITTAL PROCEDURES, and Section 01451, CONTRACTOR QUALITY CONTROL, which have a direct relationship to the reporting to be accomplished through QCS. Also, there is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the contract pricing for the work.

1.2 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. The Government will make available the QCS software to the Contractor after award of the construction contract. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website. Upon specific justification and request by the

Contractor, the Government can provide QCS on CD-ROM. Any program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available.

1.3 SYSTEM REQUIREMENTS

The following listed hardware and software is the minimum system configuration that the Contractor shall have to run QCS:

1.3.1 **Hardware**

(a) IBM-compatible PC with 500 MHz Pentium or higher processor
(b) 128+ MB RAM for workstation / 256+ MB RAM for server
(c) 1 GB hard drive disk space for sole use by the QCS system
(d) Compact disk (CD) Reader, 8x speed or higher
(e) SVGA or higher resolution monitor (1024 x 768, 256 colors)
(f) Mouse or other pointing device
(g) Windows compatible printer (Laser printer must have 4+ MB of RAM)
(h) Connection to the Internet, minimum 56 BPS

1.3.2 **Software**

(a) MS Windows 98, ME, NT, or 2000
(b) Word Processing software compatible with MS Word 97 or newer
(c) Latest version of: Netscape Navigator, Microsoft Internet Explorer, or other browser that supports HTML 4.0 or higher
(d) Electronic mail (E-mail), MAPI compatible
(e) Virus protection software that is regularly upgraded with all issued manufacturer's updates

1.4 RELATED INFORMATION

1.4.1 QCS User Guide

After contract award, the Contractor shall download instructions for the installation and use of QCS from the Government RMS Internet Website; the Contractor can obtain the current address from the Government. In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

1.4.2 Contractor Quality Control (CQC) Training

The use of QCS will be discussed with the Contractor's QC System Manager during the mandatory CQC Training class.

1.5 CONTRACT DATABASE

Prior to the pre-construction conference, the Government shall provide the Contractor with basic contract award data to use for QCS. The Government will provide data updates to the Contractor as needed, generally by files attached to E-mail. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

1.6 DATABASE MAINTENANCE

The Contractor shall establish, maintain, and update data for the contract in the QCS database throughout the duration of the contract. The Contractor shall establish and maintain the QCS database at the Contractor's site office. Data updates to the Government shall be submitted by E-mail with file attachments, e.g., daily reports, schedule updates, payment requests. If permitted by the Contracting Officer, a data diskette or CD-ROM may be used instead of E-mail (see Paragraph DATA SUBMISSION VIA CD-ROM). The QCS database typically shall include current data on the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

The database shall contain the Contractor's name, address, telephone numbers, management staff, and other required items. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver Contractor administrative data in electronic format via E-mail.

1.6.1.2 Subcontractor Information

The database shall contain the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor must be listed separately for each trade to be performed. Each subcontractor/trade shall be assigned a unique Responsibility Code, provided in QCS. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver subcontractor administrative data in electronic format via E-mail.

1.6.1.3 Correspondence

All Contractor correspondence to the Government shall be identified with a serial number. Correspondence initiated by the Contractor's site office shall be prefixed with "S". Letters initiated by the Contractor's home (main) office shall be prefixed with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C".

1.6.1.4 Equipment

The Contractor's QCS database shall contain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.6.1.5 Management Reporting

QCS includes a number of reports that Contractor management can use to track the status of the project. The value of these reports is reflective of the quality of the data input, and is maintained in the various sections of QCS. Among these reports

are: Progress Payment Request worksheet, QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

1.6.2 Finances

1.6.2.1 Pay Activity Data

The QCS database shall include a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total contract amount, including modifications. Pay activities shall be grouped by Contract Line Item Number (CLIN), and the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract Amount.

1.6.2.2 Payment Requests

All progress payment requests shall be prepared using QCS. The Contractor shall complete the payment request worksheet and include it with the payment request. The work completed under the contract, measured as percent or as specific quantities, shall be updated at least monthly. After the update, the Contractor shall generate a payment request report using QCS. The Contractor shall submit the payment requests with supporting data by E-mail with file attachment(s). If permitted by the Contracting Officer, a data diskette may be used instead of E-mail. A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

1.6.3 Quality Control (QC)

QCS provides a means to track implementation of the 3-phase QC Control System, prepare daily reports, identify and track deficiencies, document progress of work, and support other contractor QC requirements. The Contractor shall maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report. The Contractor shall provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01451, CONTRACTOR QUALITY CONTROL. Within seven calendar days of Government acceptance, the Contractor shall submit a data diskette or CD-ROM reflecting the information contained in the accepted CQC Plan: schedule, pay activities, features of work, submittal register, QC requirements, and equipment list.

1.6.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. The Contractor may use other formats to record basic QC data. However, the Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Daily CQC Reports shall be submitted as required by Section 01451A, CONTRACTOR QUALITY CONTROL. Reports shall be submitted electronically to the Government using E-mail or diskette within 24 hours after the

date covered by the report. Use of either mode of submittal shall be coordinated with the Government representative. The Contractor shall also provide the Government a signed, printed copy of the daily CQC report.

1.6.3.2 Deficiency Tracking.

The Contractor shall use QCS to track deficiencies. Deficiencies identified by the Contractor will be numerically tracked using QC punch list items. The Contractor shall maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list items. The Government's QA punch list items will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA punch list items.

1.6.3.3 Three-Phase Control Meetings

The Contractor shall maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS.

1.6.3.4 Accident/Safety Tracking.

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, the Contractor shall utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports, e.g., ENG Form 3394 and OSHA Form 300.

1.6.3.5 Features of Work

The Contractor shall include a complete list of the features of work in the QCS database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph "Pay Activity Data" of paragraph "Finances") will only be linked to a single feature of work.

1.6.3.6 QC Requirements

The Contractor shall develop and maintain a complete list of QC testing, transferred and installed property, and user training requirements in QCS. The Contractor shall update all data on these QC requirements as work progresses, and shall promptly provide this information to the Government via QCS.

1.6.4 Submittal Management

The Government will provide the initial submittal register, ENG Form 4288, SUBMITTAL REGISTER, in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be

included in its export file to the Contractor. The Contractor shall use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update, ENG Form 4288, shall be produced using QCS. RMS will be used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

1.6.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Contract Clause "Schedules for Construction Contracts", or Section 01320A, PROJECT SCHEDULE, as applicable. This schedule shall be input and maintained in the QCS database either manually or by using the Standard Data Exchange Format (SDEF) (see Section 01320A PROJECT SCHEDULE). The updated schedule data shall be included with each pay request submitted by the Contractor.

1.6.6 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data, and schedule data using SDEF.

1.7 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. The Contractor shall ensure that sufficient resources are available to maintain its QCS database, and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

1.8 DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM

The Government-preferred method for Contractor's submission of updates, payment requests, correspondence and other data is by E-mail with file attachment(s). For locations where this is not feasible, the Contracting Officer may permit use of computer diskettes or CD-ROM for data transfer. Data on the disks or CDs shall be exported using the QCS built-in export function. If used, diskettes and CD-ROMs will be submitted in accordance with the following:

1.8.1 File Medium

The Contractor shall submit required data on an approved media format, CD-ROMs may be used. Approved media format shall conform to industry standards used in the United States. All data shall be provided in English.

1.8.2 Media format Labels

The Contractor shall affix a permanent exterior label to each approved media format submitted. The label shall indicate in English, the QCS file name, full contract number, contract name,

project location, data date, name and telephone number of person responsible for the data.

1.8.3 File Names

The Government will provide the file names to be used by the Contractor with the QCS software.

1.9 MONTHLY COORDINATION MEETING

The Contractor shall update the QCS database each workday. At least monthly, the Contractor shall generate and submit an export file to the Government with schedule update and progress payment request. As required in Contract Clause "Payments", at least one week prior to submittal, the Contractor shall meet with the Government representative to review the planned progress payment data submission for errors and omissions. The Contractor shall make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be returned. The Government will not process progress payments until an acceptable QCS export file is received.

1.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected non-compliance with the requirements of this specification. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification.

-- End of Section 01312 --

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GENERAL REQUIREMENTS

SECTION 01330

SUBMITTAL PROCEDURES

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GENERAL REQUIREMENTS

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUBMITTAL IDENTIFICATION

Submittals required are identified by SD numbers as follows:

SD-01 Data

SD-04 Drawings

SD-06 Instructions

SD-07 Schedules

SD-08 Statements

SD-09 Reports

SD-13 Certificates

SD-14 Samples

SD-18 Records

SD-19 Operation and Maintenance Manuals

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.2.1 Government Approved

Governmental approval is required for extensions of design, critical materials, deviations, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered ”shop drawings."

1.2.2 Information Only

All submittals not requiring Government approval will be for information only. They are not considered ”shop drawings" within the terms of the Contract Clause referred to above.

1.3 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory.

Approval will not relieve the Contractor of the responsibility for any error that may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials will be considered unless accompanied by an explanation of why a substitution is necessary.

1.4 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

1.5 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

2 PRODUCTS (NOT APPLICABLE)

3 EXECUTION

3.1 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) System Manager and each item shall be stamped, signed, and dated by the CQC System Manager indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts; diagrams; test reports; samples; certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations. The Contractor Control System (QCS) module shall be used to track all submittals. The Contractor shall review the submittal register in the QCS module and make additions as necessary. ENG Form 4288 can be viewed and printed from the QCS module.

3.2 SUBMITTAL REGISTER (ENG FORM 4288)

At the end of this section is one set of ENG Form 4288 listing items and materials for which submittals are required by the specifications; this list may not be all-inclusive and additional submittals may be required.

3.3 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of 14 calendar days exclusive of mailing time, except as otherwise specified) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

3.4 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. This form will be furnished to the Contractor in the QCS module. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

3.5 SUBMITTAL PROCEDURE

Submittals shall be made as follows:

3.5.1 Procedures

The Contractor shall submit to the Contracting Officer 3 copies of all shop drawings and information submittals, unless otherwise specified in the specifications. These data shall be submitted sufficiently in advance of the particular work for which they are a part, to allow time for review prior to incorporation into the work, but shall be submitted not later than 30 calendar days after receipt of notice to proceed, unless otherwise specified or notified by the Contracting Officer. The drawings, plans, and data shall be complete and shall contain all required detailed information. The Contractor shall identify each separate sheet of drawings and data and each item of descriptive literature with the contract number and their respective transmittal numbers. Included on the drawings and data sheets shall be an identification of materials (by specification number or otherwise) to be used for the items shown thereon.

3.5.2 Deviations

For submittals that include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

3.6 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

3.7 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. Two copies of the submittal will be retained by the Contracting Officer and 1 copy of the submittal will be returned to the Contractor.

3.8 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated into the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

3.9 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

CONTRACTOR

(Firm Name)

_____ Approved

_____ Approved with corrections as noted on submittal data and/or attached sheets(s).

SIGNATURE: _____

TITLE: _____

DATE: _____

-- End of Section --

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SECTION 01351
SAFETY REQUIREMENTS

PART 1 GENERAL

1.1 PAYMENT

Separate payment will not be made for providing and maintaining an effective Safety Program, and all associated costs therewith shall be included in the applicable unit prices or lump sum prices contained in the Bidding Schedule.

1.2 REGULATORY REQUIREMENTS

In accordance with the Contract Clause, ACCIDENT PREVENTION, the Contractor will insure that all pertinent provisions of the US Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, dated September 1996, (copies available upon request), the latest Occupational Safety and Health Administration (OSHA) standards, and applicable Coast Guard safety regulations, as well as requirements listed in these specifications are complied with by all personnel within the area of operations. Work performed under this contract shall comply with applicable Federal, state, and local safety and occupational health laws and regulations.

1.2.1 Revisions to Safety Manual, EM 385-1-1

The Contractor shall be responsible for complying with the current edition and all changes posted on the web as of the effective date of this solicitation. EM 385-1-1 and its changes are available at http://www.hq.usace.army.mil (at the HQ homepage, select Safety and Occupational Health).

1.3 ACCIDENT PREVENTION PLAN

1.3.1 Accident Prevention Plan

After award and no later than the pre-construction conference, the Contractor shall submit, in writing, his proposal for Accident Prevention, using the format "Minimum Basic Outline For Accident Prevention Program" found in the ATTACHMENTS and Appendix A of the Safety and Health Requirements Manual EM 385-1-1 dated 3 September 1996.

1.3.2 Certificate of Compliance for the Contractor Program and the Dredge(s)

The Contractor shall comply with the provisions of EM 385-1-1. If the Contractor is a currently accepted participant in the Dredging Contractors of America (DCA)/United States Army Corps of Engineers (USACE) Dredging Safety Management Program (DSMP), as determined by the DCA/USACE Joint Committee, and holds a current valid Certificate of Compliance for both the Contractor Program and the Dredge(s) to be used to perform the work required under this contract, the Contractor may, in lieu of the submission of an Accident Prevention Plan (APP),

(1) make available for review, upon request, the Contractor's current Safety Management System (SMS) documentation,
(2) submit to the Contracting Officer the current valid Company Certificate of Compliance for its SMS,
(3) submit the current dredge(s) Certificate of Compliance based on third party audit, and
(4) submit for review and acceptance, site-specific addenda to the SMS as specified in the solicitations

1.4 SAFETY PROGRAM CONFERENCE

Prior to commencement of work, the Contractor shall meet in conference with representatives of the Contracting Officer to discuss and develop mutual understanding relative to administration of overall safety program and Accident Prevention Plan.

1.5 ACTIVITY HAZARD ANALYSIS

Prior to the commencement of each major phase of construction, the Contractor will have available for review a detailed written analysis of the activity hazards for the subject phase of construction under this contract. An example is mobilization, piping, hazards to navigation, lockout/tagout, confined space entry, diving, personal protective equipment, etc. This analysis will be prepared using the form "Activity Hazard Analysis" shown in the ATTACHMENTS. The final form shall reflect the mutual understanding between the Contractor and Government representative of the potential hazards involved and the controls to be employed. The Activity Hazard Analysis shall be reviewed with all supervisors and employees prior to performing the work and this review recorded in the QC report. This analysis shall address the principal steps of each work activity, an analysis of each step for its potential hazards, and a detailed list of each specific control for the potential hazard, and the identification and use of Personal Protective Equipment (PPE). The analysis shall be submitted attached to the Contractor's "Construction Quality Control Report".

1.6 SAFETY MEETINGS

Regularly scheduled safety meetings shall be held once a month for supervisors and at least one safety meeting shall be conducted weekly by supervisors for all employees. An outline report, "Report of Weekly Safety Meeting" (SAC Form 253), is shown in ATTACHMENTS, and shall be completed and submitted to the designated authority, weekly.

1.7 SAFETY PROGRAM STAFF REQUIREMENTS

Safety is the responsibility of each and every Contractor employee associated with this contract. The Contractor Quality Control System Manager will be responsible for insuring that the Safety Program is being administered in strict compliance with the contract requirements.

1.8 SAFETY PROGRAM FOR FLOATING PLANT

1.8.1 Certification of Floating Plant

1.8.1.1 Seagoing Barge Act--Special Standard of Responsibility (JUN 1979 OCE)

The Seagoing Barge Act (46 USC 2101 et seq.) applies to this project. In the event the low bidder contemplates using plant that requires U.S. Coast Guard certification to comply with this act, the low bidder shall, within 10 calendar days after bid opening, submit a copy of said certificate to the Contracting Officer. Failure to produce the certificate within the required time shall be cause for determining the bidder non-responsive.

1.8.1.2 Certification by National Association of Marine Surveyors (NAMS) or the Society of Accredited Marine Surveyors (SAMS)

All dredges and quarter boats not subject of USCG inspection and certification or not having a current American Bureau of Shipping (ABS) classification shall be inspected in the working mode annually by a marine surveyor accredited by the National Association of Marine Surveyors (NAMS) or Society of Accredited Marine Surveyors (SAMS)and having at least five years experience in commercial marine plant and equipment. All other plant shall be inspected annually by a qualified person. The inspection shall be documented, and a copy of the most recent inspection report shall be posted in a public area on board the vessel and a copy shall be furnished at the pre-construction conference. The inspection shall be appropriate for the intended use of the plant and shall, as a minimum, evaluate structural integrity, seaworthiness, and compliance with NFPA 302, Fire Protection Standard for Pleasure and Commercial Motor Craft.

1.8.2 Personal Flotation Device (PFD)

Type III, Type V, or better U.S. Coast Guard approved international orange floatation device (PFD) shall be provided by the employer and properly worn by all persons in a work or non-work status while exposed to a drowning hazard and in the following circumstances:

(a) At all times on dredges, boosters, and other attendant floating plant except in the following areas: Engine rooms, pump rooms, sleeping quarters, galley, rest rooms and showers. Also, when coming on duty or leaving the job PFD's will be properly donned prior to boarding any floating plant that will transport the employee to or from the dredge, other floating plant or his duty station.
(b) Other areas may be excluded from this requirements, but only after the Contractor has received permission from the Contracting Officer or the Resident Engineer.
(c) Instructions stating these requirements will be posted on board the vessel, along with a clear definition of what actions will be taken when employees violate these requirements.
(d) These requirements will be communicated to every employee on each shift in the Preparatory Meeting and Weekly Tool Box Safety Meeting

and a copy of the notes from these meetings will be signed and dated by all in attendance and a copy furnished to the Government.

(e) Before and after each use, the PFD shall be inspected for defects or unauthorized alterations, which would alter its strength or buoyancy. Defective devices with less than 13 pounds buoyancy shall be immediately removed from service.

(f) All PFD's shall be equipped with retro-reflective tape as specified in 29 CFR 25.25-15.

(g) These requirements are not intended to negate any other COE, Coast Guard or OSHA PFD requirements that apply to Contractor activities while under contract in the Charleston District. Where more stringent requirements are set forth, they will be applied by the Contractor unless a written waiver has been issued.

(h) Personal Flotation Devices will be marked with a symbol or sign that during daylight hours and hours of darkness clearly identifies the wearer as a non-swimmer. All employees who cannot swim will be instructed to take extra precautions when working over or near water, and all supervisors and employees who can swim should be advised to pay special attention to non-swimmers when a drowning hazard is present.

(i) The employer is responsible for insuring that this specification is implemented and all levels of management should insure through a series of normal inspections that the requirement is being adhered to.

1.8.3 Safety Drills

On all floating plant which has a regular crew or on which people are quartered, the following drills shall be held at least monthly. Where persons are quartered overnight, every fourth drill shall be at night.

(a) Boat or abandon ship drills
(b) Fire Drills
(c) Person overboard or rescue drills
(d) The first set of drills shall be conducted within 24 hours of the vessel’s occupancy or commencement of work. Drills shall include, where appropriate, how to handle a pump shell or pipe rupture or failure within the hull (proper shutdown procedures, system containment, etc.), and how to handle leaks or failures of the hull or portions of it (what compartments to secure, how to handle power losses, pulling spuds to move to shallow water, etc.)
(e) A record of all drills and emergency system checks, including any deficiencies noted in equipment and corrective action taken, shall be made in the station log.

1.8.4 Smoke Alarms

Smoke alarms are required for all floating plant barracks utilizing the same electrical system as that of the electrical alarms. Although battery operated smoke alarms are allowed, the Contractor is required to have a written plan or schedule indicating the date he intends on performing an electrical upgrade to accommodate for hard wired smoke alarms.

1.8.5 Fire Extinguisher - Mobile Construction Equipment

In compliance with Item 6 required SAD Form 1666-R, it is specifically required to provide a fire extinguisher with a minimum extinguisher rating of 20-B:C, which is equivalent to a 10-15 pound dry chemical extinguisher, compatible to the hazard involved--combustible, flammable liquids and materials used in areas remote to other fire extinguisher equipment.

1.8.6 Electrical Installations

All electrical installations shall comply with the National Electric Safety Code (NESC), National Electric Code (NEC), or United States Coast Guard Regulation.

1.8.7 Safe Clearance Procedures

Safe clearance procedures shall be included and discussed in detail in the Accident Prevention Plan or Activity Hazard Analysis. This discussion will include a description of personnel responsibilities and a tracking system for the clearance procedure as well as a listing of signs, tags, lockouts, or other devices to be used. A safe clearance procedure shall be required on all systems and equipment if unauthorized removal or return to service could result in injury, damage, loss of content, loss of protection, or loss of operating capacity.

1.8.8 Work in Confined Spaces

Work in confined spaces shall be in accordance with Section 6 (paragraph 06.l) of the US Army Corps of Engineers Safety and Health Requirements Manual EM 385-1-1, dated September 1996, National Safety Council Data Sheet 1-704-85 and DHEN (N10AH) publication No. 80-106.

1.8.9 Hazard Communication Program and Material Safety Data Sheets (MSDS)

The Contractor agrees to maintain on board the dredge a copy of his Hazard Communication Program Document and the Material Safety Data Sheets (MSDS). The MSDS for all hazardous chemicals/materials will be made readily available to employees who are routinely exposed to hazardous material.

1.8.10 Hazardous Weather Plan

Where floating plant may be endangered by hurricanes, storms or floods, plans shall be made for removing or securing plant and evacuation of personnel in emergencies. This plan shall be in accordance with Corps of Engineers Safety Manual (EM 385-1-1) and shall be submitted with the Accident Prevention Plan for review.

1.9 SAFETY INSPECTION

1.9.1 Contractor Safety Inspection

Prior to the commencement of work, the Contractor will conduct an independent safety inspection of his entire operation. This inspection will be conducted to insure and demonstrate that:

(a) He is providing his employees a place of employment, which is free from recognized hazards.
(b) His employees will not be required to work in surrounding or under conditions, which are unsafe, or dangerous to their life or health.
(c) He is committed to accident prevention by initiating and maintaining a safety and health program which will comply with US Army Corps of Engineers Safety and Health Requirements Manual, U.S. Coast Guard requirements, OSHA Standards, and any other safety requirements the Contracting Officer may deem necessary through the life of this contract.
(d) He has identified and abated all known hazards.

1.10 EMERGENCY RESPONSE PROCEDURES

1.10.1 Emergency Response Procedures

The Contractor will be responsible for developing and testing his written Emergency Response Procedures to insure total rapid response for rescue and evacuation of injured employees.

1.10.2 Communications

Radio or cellular phone communications shall be established, readily available to the employees and tested to insure rapid response by properly equipped emergency vehicle, helicopter or mobile first aid unit.

1.10.3 Telephone Numbers, Call Signs and Instructions

Emergency telephone number or radio call signs and reporting instructions for ambulance, helicopter, physician, hospital, fire department, police, etc. shall be posted in all vehicles and equipment operating at the jobsite.

1.10.4 First Aid and CPR Requirements

At least two employees on each shift and each separate work area shall be certified to administer First Aid and CPR.

1.10.5 Submittal

The Contractor's written Emergency Response Procedures including employee current First Aid and CPR Certification shall be submitted attached to the Accident Prevention Plan. Work will not proceed until the plan has been reviewed and accepted by the Government and Contractor's emergency procedures are tested to insure rapid response in the field.

1.10.6 Machinery and Mechanized Equipment Checklist

In accordance with 18.A.01, EM 385-1-1, all machinery and mechanized equipment, will be checked out as it arrives on the job, using the format shown on SAD Form 1666-R, "Safety Inspection Checklist for Mobile Construction Equipment" found in the ATTACHMENTS.

1.10.7 Welding Equipment

All oxyacetylene or other fuel gas-oxygen combination used in cutting or welding equipment shall have reverse-flow check valves between torch and regulator.

1.10.8 Anchor Points

All anchor points shall be clearly identified and shall be inspected prior to applying a load or putting cables under tension. Anchor points not structurally sound shall be cut out, removed, and/or welded over to preclude usage. Visual checks and ?all clear? warnings shall be made prior to tensioning cables.

1.10.9 Exceptions

Some of the technical requirements of the COE Safety and Occupational Health Requirements Manual, EM 385-1-1, may not always be applicable to certain marine operations due to conflicting circumstances, practices, and laws or regulations of the locality or the unavailability of equipment. In such instances, means other than the ones specified in the COE Safety Manual may be used to achieve the required protection. When this occurs, a detailed Activity Hazard Analysis (AHA) must be prepared by the Contractor to document that the required protection will be achieved by the alternate means. The AHA must be submitted to the government for review prior to implementation.

1.11 NOTICE TO MARINERS

Should the Contractor, during operations, encounter any objects in the channel prism, which could be a hazard to navigation, he will immediately notify the Contracting Officer and the U.S. Coast Guard as to the location of said object/hazard and any other pertinent information necessary for the Contracting Officer to issue a Notice to Mariners.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section 01351 --

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SECTION 01355

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

The Contractor shall minimize environmental pollution and damage that may occur as the result of dredging operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. The Contractor shall comply with all applicable Federal, state and local environmental laws and regulations. The Contractor shall be responsible for any delays resulting from failure to comply with environmental laws and regulations. The Contractor shall furnish all labor, materials and equipment and perform all work required to prevent environmental pollution and damage as the result of dredging operations under this contract.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

33 CFR 328	Definitions
40 CFR 68	Chemical Accident Prevention Provisions
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 279	Standards for the Management of Used Oil
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
49 CFR 171 - 178	Hazardous Materials Regulations

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(1996) U.S. Army Corps on Engineers Safety and Health Requirements Manual
ER 1110-1-5	(1984) Plant Pest Quarantined Areas and Foreign Soil Samples, ENG Form 1743, ENG Form 1743A

WETLAND MANUAL	Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1

NATIONAL MARINE FISHERIES SERVICE

Regional Biological Opinion	Hopper Dredging in Southeastern United States (September 25, 1997)

1.3 DEFINITIONS

1.3.1 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

1.3.2 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during dredging operations. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.3.3 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of dredging. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

1.3.4 Pesticide

Pesticide is defined as any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant.

1.3.5 Pests

The term "pests" means arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

1.3.6 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

1.3.7 Wetlands

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with WETLAND MANUAL.

1.4 SUBCONTRACTORS

The Contractor shall ensure that all subcontractors comply with the requirements of this section.

1.5 PAYMENT

The Contractor shall be responsible for payment of fees associated with environmental permits, applications, and/or notices obtained by the Contractor. The Contractor shall also be responsible for payment of all fines and fees for violation of, or non-compliance with, Federal, state, regional, and local laws and regulations. No separate payment will be made for work covered under this section, except as follows: (a) Payment for complying with the requirements of Paragraph COMPLIANCE WITH ENDANGERED SPECIES ACT AND MARINE MAMMALS PROTECTION ACT and (b) Payment for Abundance or Relocation Trawling. Payment for complying with the requirements of Paragraph COMPLIANCE WITH ENDANGERED SPECIES ACT AND MARINE MAMMALS PROTECTION ACT, as specified below, will be made at the applicable contract lump sum price in the bidding schedule for complying with Endangered Species Act and Marine Mammals Protection Act. Payment for Abundance or Relocation Trawling will be made at the applicable contract price listed for that item on the Bid Schedule and as specified below. All other costs associated with this section shall be included in the contract prices for other items of work

1.5.1 Payment for Abundance or Relocation Trawling

The use of trawlers for abundance or relocation work will be made at the applicable contract price listed on the Bid Schedule. Depending on site conditions, only one trawler may be needed or a maximum of one trawler for each hopper dredge may be needed at any one time. The Contracting Officer will make the determination if a separate trawler is needed for each hopper dredge being used on the job.

1.5.1.1 Abundance Trawling

Measurement for payment for abundance trawling will be on a lump sum basis for each initial 24-hour trawl, and on a daily basis for each

additional 12-hour day extension of that work. Trawling shall be performed as described in paragraph HOPPER DREDGING AND TURTLE TRAWLING, and the Contractor shall be directed in writing by the Contracting Officer to perform the work. Following the initial 24-hour trawl (12-hours per day covering two contiguous days) a day of trawling is defined as 12 hours of continuous trawling for each 24-hour day. Payment for abundance trawling will be made at the applicable contract unit price in the schedule for each abundance trawl conducted by the Contractor as specified herein. Payment shall include all costs for furnishing labor, equipment, fuel, oil, materials, and supplies required for each day of trawling to determine the relative abundance of sea turtles in the channel area, and shall include the cost of handling and returning sea turtles to the area where they were captured and the cost of reporting as specified. Payment for each day of abundance trawling will only be made when that trawling is directed in writing by the Contracting Officer.

1.5.1.2 Relocation Trawling

Measurement for payment for relocation trawling will be on a daily basis. A day of trawling is defined as 12 hours of continuous trawling. Trawling shall be performed as described in paragraph HOPPER DREDGING AND TURTLE TRAWLING. Relocation trawling shall be performed 12 hours a day for each 24-hour day as directed in writing by the Contracting Officer. Payment for relocation trawling, as specified herein, will be made at the applicable contract unit price per day on the bid form, which price shall include all costs for furnishing labor, equipment, fuel, oil, materials, and supplies required for trawling to remove sea turtles in the vicinity of the dredge as specified; and shall include the cost of handling and transporting sea turtles to the point of release (see section HOPPER DREDGING AND TURTLE TRAWLING) and the cost of reporting as specified. Payment for relocation trawling will only be made if the trawling is directed in writing by the Contracting Officer.

1.6 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G

Submit a draft plan detailing Contractor’s procedures for protecting the environment at the preconstruction conference.

Inflow/Overflow Plan; G

The Inflow/Overflow Plan for hopper dredges shall be submitted with the Environmental Protection Plan.

SD-04 Drawings

Turtle deflectors; G

Submit drawings of the turtle deflectors used on hopper dredges to show the approach angles over the range of dredging depths that may be encountered.

SD-09 Reports

Manatee Sighting Form;

Completed Manatee Sighting Form documenting each manatee sighted, as specified in Paragraph Manatee Sightings.

Sea Turtle Observation Sheet and Major Incident Report;

Completed and submitted for each load cycle as specified in Paragraph Sea Turtle Observation Sheet and Major Incident Report.

Weekly Observer Report;

Prepared and submitted each week to cover observation of threatened and endangered species, problems, and recommendations as specified in Paragraph Weekly Reports by Class II Observers.

Environmental Report; G

Final report shall be submitted documenting and detailing sightings, collisions, injuries, and other incidents associated with threatened and endangered species during the performance of the contract, as specified in Paragraph Environmental Report.

1.7 ENVIRONMENTAL PROTECTION REQUIREMENTS

1.7.1 Environmental Protection

It is the responsibility of the Contractor to investigate and comply with all Federal, state, county, and municipal laws concerning pollution of air and water, and for the protection of public and employee health, and for damages to shellfish, fish, and wildlife. The Contractor shall provide sufficient safeguards to prevent pollution to the waterways by spillage or waste of paints, pesticides, fuels, oils, bitumen, calcium chloride, or other similar materials harmful to public health, water quality, fish, shellfish, or wildlife. The Contractor shall undertake immediate corrective action in response to any violation of applicable environmental protection laws and regulations, or the environmental protection provisions of this section. Federal immunity, supremacy, or preemption may preclude the application of some state or local laws and regulations.

1.7.2 Environmental Litigation

If the performance of all or any part of the work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the Contracting Officer, at the request of the Contractor, shall determine whether the

order is due in any part to the acts or omissions of the Contractor or a Subcontractor at any tier not required by the terms of this contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a Subcontractor at any tier other than as required by the terms of this contract, such suspension, delay, or interruption shall be considered as if ordered by the Contracting Officer in the administration of this contract under the terms of the Contract Clause SUSPENSION OF WORK.

The term "environmental litigation", as used herein, means a criminal or civil proceeding alleging a violation or potential violation of an environmental law, regulation or ordinance related to the work to be performed under this contract.

1.8 ENVIRONMENTAL PROTECTION PLAN

At the preconstruction conference, the Contractor shall submit a written Environmental Protection Plan for review and approval by the Contracting Officer. Implementation of the Environmental Protection Plan will be discussed at the preconstruction conference along with reporting requirements, possible subsequent additions and revisions, and methods for administration of the plan. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during dredging operations. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this section. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction tasks. Topics or issues which are not identified in this section, but which the Contractor considers necessary, shall be identified and discussed after those items formally identified in this section. The Environmental Protection Plan shall be current and maintained onsite by the Contractor.

1.8.1 Compliance

No requirement in this Section shall be construed as relieving the Contractor of any applicable Federal, state, and local environmental protection laws and regulations. During dredging, the Contractor shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.

1.8.2 Contents

The environmental protection plan shall include, but shall not be limited to, the following:

a. Name of person within the Contractor's organization who is responsible for ensuring adherence to the Environmental Protection Plan.

b. Name and qualifications of person responsible for manifesting hazardous waste to be removed from the site, if applicable.

c. Name and qualifications of person responsible for training the Contractor's environmental protection personnel.

d. Description of the Contractor's environmental protection personnel training program.

e. A list of the primary Federal, state, and local laws and regulations concerning environmental protection that are applicable to the Contractor’s proposed operations and the principal requirements imposed by those laws and regulations which apply to the work under this contract.

f. The Spill Control plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under state or local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. This plan shall include as a minimum:

1. The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the Contracting Officer and U.S. Coast Guard in addition to the legally required Federal, state, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.

2. The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.

3. Training requirements for Contractor's personnel and methods of accomplishing the training.

4. A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazards identified.

5. The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.

6. The methods and procedures to be used for expeditious contaminant cleanup.

g. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal. The plan shall include schedules for disposal. The Contractor shall identify any subcontractors responsible for the transportation and disposal of solid waste. Licenses or permits shall be submitted for solid waste disposal sites that are not a commercial operating facility. Evidence of the disposal facility's acceptance of the solid waste shall be attached to this plan during dredging operations. Reports shall be submitted on the first working day of each month after non-hazardous solid waste has been disposed. The report shall indicate the total amount of waste generated.

h. A recycling and solid waste minimization plan with a list of measures to reduce consumption of energy and natural resources. The plan shall detail the Contractor's actions to comply with and to participate in Federal, state, regional, and local government sponsored recycling programs to reduce the volume of solid waste at the source.

i. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and do not travel offsite.

j. A contaminant prevention plan that identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, state, and local laws and regulations for storage and handling of these materials. In accordance with EM 385-1-1, a copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the contaminant prevention plan. The plan shall be updated if new hazardous materials are brought on site or removed from the site.

k. A historical, archaeological, cultural resources, and biological resources plan that identifies procedures to be followed if historical archaeological, cultural resources, and biological resources not previously known to be onsite or in the area are discovered during dredging operations. The plan shall include methods to assure the protection of known or discovered resources and shall identify lines of communication between Contractor personnel and the Contracting Officer.

l. A pesticide treatment plan shall be included and updated, as information becomes available. The plan shall include the sequence of treatment, dates, times, locations, pesticide trade name, EPA registration numbers, authorized uses, chemical composition, formulation, original and applied concentration, application rates of active ingredient (i.e. pounds of active ingredient applied), equipment used for application and calibration of equipment. The Contractor is responsible for Federal, state, regional, and local pest management record keeping and reporting requirements as well as any additional specific requirements.

m. A biological resources protection plan that defines procedures for identifying and protecting endangered or threatened species, or other biological resources, known to be on the projects site, and/or identifies procedures to be followed if such resources not previously known to be onsite or in the area are discovered during dredging activities. The plan shall include methods to assure the protection of known or discovered resources and shall identify lines of communication between Contractor personnel and the Contracting Officer. The plan shall include procedures for compliance with any other applicable biological opinions or incidental take statements, including without limitations, the Regional Biological Opinion (including the Incidental Take Statement) in the case of hopper dredging.

1.8.3 Appendix

Copies of all certifications, reports, and termination documents shall be attached, as an appendix, to the Environmental Protection Plan.

1.9 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

Contractor personnel shall be trained in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities to insure adequate and continuous environmental pollution control. Quality control and supervisory personnel shall be thoroughly trained in the proper use of monitoring devices and abatement equipment, and shall be thoroughly knowledgeable of Federal, state and local laws and regulations as listed in the Environmental Protection Plan submitted by the Contractor. Quality control personnel will be identified in the Quality Control Plan submitted in accordance with SECTION 01451 CONTRACTOR QUALITY CONTROL.

1.10 NONCOMPLIANCE

The Contracting Officer will notify the Contractor, in writing, of any observed noncompliance with the aforementioned Federal, state, or local laws and regulations, and other elements of the Contractor’s environmental protection plan. This shall not relieve the contractor of the responsibility to comply with the aforementioned Federal, state, or local laws and regulations, and other elements of the Contractor’s environmental protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and take such action as may be approved. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No extensions shall be granted or costs or damages allowed to the Contractor for any such suspension.

1.11 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Contracting Officer and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.12 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the

Contractor for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

1.13 QUALITY CONTROL

The Contractor shall establish and maintain quality control for environmental protection of all items set forth herein. The Contractor shall record on daily quality control reports or attachments thereto, any problems in complying with laws, regulations and ordinances, and corrective action taken.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 ENVIRONMENTAL COMMITMENTS

The Contractor shall be responsible for obtaining and complying with any additional environmental permits required by Federal, state, regional, and local environmental laws and regulations.

3.2 WATER RESOURCES

The Contractor shall monitor dredging activities to prevent pollution of surface waters. Toxic or hazardous chemicals shall not be applied unless otherwise specified. All water areas affected by dredging activities shall be monitored by the Contractor.

3.3 AIR RESOURCES

Equipment operation, activities, or processes performed by the Contractor shall be in accordance with all Federal and state air emission and performance laws and standards. Dust particles, aerosols, and gaseous by-products from dredging activities shall be controlled at all times, including weekends, holidays and hours when work is not in progress. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs.

3.4 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes shall be as directed below, unless otherwise specified in other sections and/or shown on the drawings.

3.4.1 Solid Wastes

Solid wastes generated by the Contractor (excluding dredged material) shall be placed in containers that are emptied on a regular schedule. Handling, storage, and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste to shore and dispose of it in compliance with Federal, state, and local requirements for solid waste

disposal. A Subtitle D RCRA permitted landfill shall be the minimum acceptable off-site solid waste disposal option. The Contractor shall verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate.

3.4.2 Chemicals and Chemical Wastes

Chemicals shall be dispensed ensuring no spillage to the ground or water. Periodic inspections of dispensing areas to identify leakage and initiate corrective action shall be performed and documented. This documentation will be periodically reviewed by the Government. Chemical waste shall be collected in corrosion resistant, compatible containers. Collection drums shall be monitored and removed to a staging or storage area when contents are within 6 inches of the top. Wastes shall be classified, managed, stored, and disposed of in accordance with Federal, state, and local laws and regulations.

3.4.3 Contractor Generated Hazardous Wastes/Excess Hazardous Materials

Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171-178. The Contractor shall, at a minimum, manage and store hazardous waste in compliance with 40 CFR 262. The Contractor shall take sufficient measures to prevent spillage of hazardous and toxic materials during dispensing. The Contractor shall segregate hazardous waste from other materials and wastes, shall protect it from the weather by placing it in a safe covered location, and shall take precautionary measures against accidental spillage. The Contractor shall be responsible for storage, describing, packaging, labeling, and marking of hazardous waste and hazardous material in accordance with 49 CFR 171 - 178, state, and local laws and regulations. The Contractor shall transport Contractor generated hazardous waste in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. The Contractor shall dispose of hazardous waste in compliance with Federal, state and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the Contracting Officer. Cleanup and cleanup costs due to spills shall be the Contractor's responsibility. Disposal of Contractor generated hazardous waste and excess hazardous materials shall be the responsibility of the Contractor.

3.4.4 Fuel and Lubricants

Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Fuel, lubricants and oil shall be managed and stored in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations. Storage of fuel shall be accordance with all Federal, state, and local laws and regulations.

3.5 RECYCLING AND WASTE MINIMIZATION

The Contractor shall participate in State and local government sponsored recycling programs. The Contractor is further encouraged to minimize solid waste generation throughout the duration of the project.

3.6 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

During dredging operations, if any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; bone, or other deposits; constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. The Contractor shall cease all activities that may result in impact to or the destruction of these resources. The Contractor shall secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

3.7 BIOLOGICAL RESOURCES

The Contractor shall minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The Contractor shall be responsible for the protection of threatened and endangered animal and plant species including their habitat in accordance with Federal, state, regional, and local laws and regulations. Compliance with the Endangered Species Act and Marine Mammals Protection Act shall be in accordance with Paragraph COMPLIANCE WITH THE ENDANGERED SPECIES ACT AND THE MARINE MAMMALS PROTECTION ACT, below.

3.8 COMPLIANCE WITH THE ENDANGERED SPECIES ACT AND THE MARINE MAMMALS PROTECTION ACT

During dredging and open water disposal operations, the Contractor shall comply with requirements for trained observers, reports, and all other items in this section. Failure by the Contractor to comply with these requirements is a violation of the Endangered Species Act and could result in prosecution of the Contractor under the Endangered Species Act or the Marine Mammals Protection Act.

3.8.1 Manatees

3.8.1.1 Protection of Manatees

Manatees are protected under the Marine Mammal Protection Act of 1972 and the Endangered species Act of 1973. All personnel associated with this project shall be instructed on the potential presence of manatees and the need to avoid collisions with manatees. Personnel will be advised that there are civil and criminal penalties for harming, harassing, or killing manatees. The Contractor may be held responsible

for any manatee harmed, harassed, or killed because of dredging activities. Failure by the Contractor to follow the requirements of this specification is a violation of the Endangered Species Act and could result in prosecution of the Contractor under the Endangered Species Act or the Marine Mammals Protection Act.

3.8.1.2 Time Manatee Conditions Apply

The standard manatee conditions shall apply during the time period from 1 June to 30 September of each year.

3.8.1.3 Avoidance of Manatees

It is the responsibility of the Contractor to take necessary precautions to avoid any contact with Florida manatees. If manatees are sighted within 100 yards of the dredging area including the open water disposal area, all appropriate precautions shall be implemented to ensure protection of the manatee. The Contractor shall stop, alter course, or maneuver as necessary to avoid operating moving equipment any closer than 50 feet of the manatee. Operation of equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment.

3.8.1.4 Vessel Speed

All vessels associated with the project shall operate at "no wake/idle" speeds at all times while in water where the draft of the vessel provides less than four feet clearance from the bottom. Vessels will follow routes of deep water whenever possible.

3.8.1.5 Sightings and Reporting

All manatee sightings in the project area shall be documented on a Manatee Sighting Form (Attachment M) and reported to the Government within 72 hours. In case of physical contact with a manatee, the Contractor shall immediately notify by telephone the Contracting Officer’s Representative and the South Carolina Department of Natural Resources contacts listed below:

Tom Murphy	(W) 843-844-2473	(H) 843-846-6929
Sally Murphy	(W) 843-953-9014	(H) 843-846-6929

3.8.2 Avoidance of Right Whales

3.8.2.1 General

Avoidance of right whales has been included in a Biological Opinion and Incidental Take Statement from the National Marine Fisheries Service (NMFS). It is the responsibility of the Contractor to take necessary precautions to avoid any contact with right whales and to avoid approaching a right whale closer than 1,000 feet. The Contractor will stop, alter course, or maneuver as necessary to avoid approaching right whales and will slow vessel speed to a maximum of 5 knots when right whales have been sighted in the vicinity. All dredging personnel shall be trained to recognize right whales and shall be familiarized with the information on ATTACHMENT K.

3.8.2.2 Endangered Species Observers

If dredging operations are being performed with hopper dredges, the Contractor shall have onboard a NMFS Class II endangered species observer with at-sea large whale identification experience to conduct daytime observations for whales during the period from 1 December to 31 March. While dredging at night during this same period, the Contractor shall designate a lookout on the dredge with the responsibility for making whale observations; this observer shall review thoroughly and understand the information provided by NMFS to aid dredge personnel in recognizing and avoiding right whales (See ATTACHMENT K).

3.8.2.3 Sightings and Reporting

Each right whale observation shall be reported within 72 hours to both the Contracting Officer and NMFS. Contact information for NMFS is provided in Paragraph Environmental Report, below. Any physical contact with a right whale shall be immediately reported to both the Contracting Officer and NMFS.

3.8.3 Sea Turtles

3.8.3.1 Dredging Window for Hopper Dredges

The Biological Opinion and Incidental Take Statement has restricted hopper dredging activities to be accomplished between 1 November and 31 May; however, due to the large number of turtles encountered from 1 November to 30 November and from 1 April to 31 May, the performance period for hopper dredges for this contract shall be 1 December to 31 March.

3.8.3.2 Equipment Requirements for Hopper Dredges

3.8.3.2.1 Dragheads

Hopper dredges shall be equipped with either IHC or California style dragheads equipped with sea turtle deflectors that are rigidly attached. No dredging shall be performed by a hopper dredge without a rigid turtle deflector device that has been approved by the Contracting Officer. Refer to the ATTACHMENTS for turtle deflector details.

a. Leading Edge of Deflector. The leading Vee-shaped portion of the deflector shall have an included angle less than 90 degrees. Internal reinforcement shall be installed in the deflector to provide rigidity and prevent structural failure of the deflector. The leading edge of the deflector shall be designed to have a plowing effect of at least 6″ depth when the draghead is being operated. Appropriate instrumentation or indicators shall be used and kept in proper calibration to ensure the critical approach angle is maintained. Informational Note: The design approach angle, which is the angle formed between the lower draghead pipe and the surface being dredged (average sediment plane) is very important to the proper operation of a deflector. If the lower dragpipe angle varies significantly from the design angle of approach used in the development of the deflector, the 6″ plowing effect does not occur. Therefore, every

effort shall be made to ensure the design approach angle is maintained.

b. Approach Angle. The Contractor shall submit for approval by the Contracting Officer drawings to show the approach angle for any and all depths to be dredged during this contract. A copy of these approved drawings and calculations shall be available on the vessel during the life of this contract.

c. Installation of Depth Deflectors. If adjustable depth deflectors are used, they shall be rigidly attached to the dragheads using either hinged aft attachment points or aft trunnion attachment points in association with adjustable pin front attachment points or cable front attachment points with a stop set to obtain the 6″ plowing effect. This arrangement allows fine-tuning the 6″ plowing effect for varying depths. After the deflector is properly adjusted, there shall be no openings between the deflector and the draghead with dimensions that are greater than 4 inches by 4 inches.

3.8.3.2.2 Baskets or Screening

The Contractor shall provide 100 percent inflow screening during the performance period from 1 December through 31 December and 1 March through 31 March. The Contractor shall provide an Inflow/Overflow Screening Plan along with the Environmental Protection Plan. If conditions during dredging operations prevent 100 percent inflow screening, the Contractor shall have prior approval from the Contracting Officer to reduce the inflow-screening rate. If the inflow screening is reduced, 100 percent overflow screening shall be required.

a. Submerged Openings. All submerged openings, other than the underside of the draghead, that are or can be used to draw water for dredge operation larger than 4″ square shall be screened with a mesh opening size not larger than 4″ x 4″.

b. Inflow Basket Design. The Contractor shall install baskets or screening over the hopper inflow(s) with no greater than 4″ x 4″ openings. The method selected shall depend on the construction of the dredge used and shall be approved by the Contracting Officer’s Representative prior to commencement of dredging. The screening shall provide 100% screening of the hopper inflow(s). The baskets and/or screens shall remain in place throughout the performance of the work.

c. Inflow Hopper Screening. The Contractor shall install screens under the hopper inflows between the dredge pump and the hopper(s), The screens shall have approximately 4-inch openings and be visible to allow for observation at all times.

d. Overflow Hopper Screens. The Contractor shall install overflow screening between the hopper and any area that allows overflow. Screens shall have approximately 4-inch openings and be visible to allow for observation at all times.

e. Observation of Inflow and Overflow Screens. The Contractor shall arrange for NMFS approved observers aboard hopper dredges to monitor the hopper screening and dragheads for sea turtles and shortnose

sturgeon and their remains. Observers shall be aboard the dredges during the performance periods from 1 December through 30 December and 1 March through 31 March and shall provide 100 percent coverage during dredging operations.

3.8.3.2.3 Floodlights

The Contractor shall install and maintain floodlights providing suitable illumination of baskets or screening to allow the observer to safely monitor the hopper basket(s) during non-daylight hours or other periods of poor visibility. Safe access shall be provided to the inflow baskets or screens to allow the observer to inspect for turtles, turtle parts or damage.

3.8.3.3 Hopper Dredge Operation

3.8.3.3.1 Operation

The Contractor shall operate the hopper dredge to minimize the possibility of taking sea turtles or shortnose sturgeon and to comply with the requirements stated in the Incidental Take Statement provided by the National Marine Fisheries Service in their biological opinion.

3.8.3.3.2 Priming the Dredge Pump

When initiating dredging, suction through the dragheads shall be allowed only long enough to prime the pumps; then the dragheads shall immediately be placed firmly on the bottom. When lifting the dragheads from the bottom, suction through the dragheads shall be allowed just long enough to clear the lines, and then must cease. No water shall be pumped through the dragheads while maneuvering or during travel to or from the disposal area.

Note (For Information Only):
Optimal suction pipe densities and velocities occur when the deflector is operated properly. If the required dredging section includes compacted fine sands or stiff clays, a properly configured arrangement of teeth may enhance dredge efficiency, which, in turn, reduces total dredging hours, and “turtle takes.” The operation of a draghead with teeth must be monitored for each dredged section to insure that excessive material is not forced into the suction line. When excess high-density material enters the suction line, suction velocities drop to extremely low levels causing conditions for plugging of the suction pipe. Dredge operators must configure and operate their equipment to eliminate all low-level suction velocities. Pipe plugging in the past was easily corrected when suction velocities occurred by raising the draghead off the bottom until the suction velocities increased to an appropriate level. This practice of raising the draghead off the bottom to increase suction velocities is not acceptable. Arrangement of teeth and/or the reconfiguration of teeth shall be made during the dredging process to optimize the suction velocities.

3.8.3.3.3 Water Ports

Dragheads shall not be raised off the bottom to increase suction velocities. The primary adjustment for providing additional mixing water to the suction line shall be through water ports or ports with the stand pipes as needed. To insure that suction velocities do not drop below appropriate levels, the Contractor's personnel shall monitor production meters throughout the job and adjust the number and opening sizes of water ports. All water port openings on top of the draghead or on raised standpipes above the drag head shall be screened. If a section to be dredged includes sandy shoals on one end of a tract line and mud sediments on the other end of the tract line, the Contractor shall adjust the equipment to eliminate draghead pick-ups to clear the suction line.

3.8.3.3.4 Clean-up Procedures

Near the completion of each acceptance section, the Contractor shall perform sufficient surveys to accurately depict those portions of the acceptance section requiring clean-up. The Contractor shall keep the draghead buried at least 6 inches in the sediment at all times. Although the overdepth prism is not the required dredging prism, the Contractor shall remove material from the allowable overdepth prism to achieve the required prism.

3.8.3.3.5 Turning Operations

During turning operations, pumps shall either be shut off or reduced in speed whereby no suction velocity or vacuum exists.

3.8.3.3.6 Hopper Dredge Operations Plan

The Contractor shall develop and utilize additional procedures and methods in addition to the operation procedures specified above to achieve a balance between the suction pipe densities and velocities in order to keep from taking sea turtles. The Contractor shall prepare a written operations plan detailing the specific procedures to minimize turtle takes. The hopper dredge operations plan shall be submitted as part of the Environmental Protection Plan.

3.8.3.4 Processing Dead Sea Turtles and Shortnose Sturgeon or Parts

All turtles lethally taken by the dredge shall have a tissue sample collected for genetic analysis by the observer. The observer shall follow the protocols found in ATTACHMENT K-5. After sample collection, remaining positively identified turtle parts shall be placed in plastic bags labeled to note the location, load number, and time taken, and placed in a freezer. Any dead shortnose sturgeons or their parts taken shall also be placed in plastic bags labeled to note the location, load number, and time taken, and placed in a freezer. Dead turtles and shortnose sturgeons or their parts will be further labeled as recent or old kills based on evidence such as fresh blood, odor, and length of time in water since death. The Contractor shall contact Sally Murphy at South Carolina Wildlife Marine Resources Department, Endangered Species Office, Fort Johnson Laboratory, Charleston, South Carolina (telephone 843-953-9014) for disposition of dead turtles and shortnose sturgeons or their parts.

3.8.3.5 Taking of Live Sea Turtles and Shortnose Sturgeons

Any live sea turtle or shortnose sturgeon taken shall be examined for injury, and data on the take shall be recorded on the Observation Sheet and the Major Incident Report. Any live, uninjured sea turtle or shortnose sturgeon taken shall be released by the trained observer. If injured, sea turtles and shortnose sturgeons shall be held on board the dredge until such time as the trained observer determines that the sea turtle or shortnose sturgeon is ready for either release or transport to the Fort Johnson Laboratory in Charleston, South Carolina, for care and rehabilitation.

3.8.3.6 Reporting

The Government shall be notified within 8 hours of the time any turtle or shortnose sturgeon has been taken.

3.9 Class II Observers

All trained observers required by these specifications shall be chosen from names provided by the National Marine Fisheries Service (NMFS), whose address is provided below in Paragraph Environmental Reports. The Contractor shall provide the observers with on-board sleeping quarters and meals.

3.10 ADDITIONAL REPORTING REQUIREMENTS

3.10.1 Weekly Reports by Class II Observers

The Contractor shall ensure that weekly reports are prepare by trained observers and submitted to the Corps of Engineers, Charleston District, and to NMFS (addresses listed below). These reports shall include descriptions of any problems with observation of the endangered or threatened species and recommendations for modifications to improve observation.

3.10.2 Sea Turtle Observation Sheet and Major Incident Report

Sea Turtle Observation Sheet and Major Incident Report shall be prepared by trained observers using the format provided in the ATTACHMENTS. A Sea Turtle Observation Sheet shall be completed and submitted for each dredging cycle (load), whether or not sea turtles were present during that load cycle.

3.10.3 Environmental Report

The Contractor shall maintain a record detailing all sightings, collisions, or injuries to all endangered or threatened species that occur during the contract period. Following project completion, a written report covering all incidents and sightings shall be submitted to the Contracting Officer and one copy thereof. A copy of the report shall also be submitted to each of the other agencies listed below. The report shall be submitted within 15 working days after dredging has been completed on the project.

(1) U.S. Army Corps of Engineers, Charleston District
ATTN: Resident Engineer
Low Country Resident Office
431 Meeting Street
Charleston, South Carolina 29403-5525
Phone: (843) 329-2339

(2) S.C. Wildlife and Marine Resources Department
Heritage Trust Section
P.O. Box 12559
Charleston, South Carolina 29422-2559

(3) U.S. Fish and Wildlife Service
176 Croghan Spur Road
Charleston, South Carolina 29407-7558
ATTN: Paula Sisson

(4) National Marine Fisheries Service
Habitat Conservation Division
9721 Executive Center Drive, North
St. Petersburg FL 33702
ATTN.: Eric Hawk
Phone (813) 570-5312

3.10.4 Hopper Dredging and Turtle Trawling

3.10.4.1 Abundance and Relocation Trawling

3.10.4.1.1 Government Option

Abundance/relocation trawling, as specified herein, will be at the option and in the discretion of the Government to aid in preventing the taking of sea turtles during dredging operations with the approved turtle deflector in place. Within 48 hours after receiving written directions from the Contracting Officer, the Contractor shall begin trawling for turtles to determine their relative abundance in, or to relocate them from, the channel area. Abundance/relocation trawling shall be performed so as to not interfere with dredging operations in progress.

3.10.4.1.2 Trawling Period

Each separate abundance trawling effort will start with 24-hours of trawling, equally divided over two contiguous days. During a 48-hour period there will be one 12-hour daytime trawl (6 a.m. – 6 p.m.) and one 12-hour nighttime trawl (6 p.m. – 6 a.m.). Trawling can start with either the daytime or nighttime trawl; however, each trawl must be on a separate day during the 48-hour period. Further, each subsequent day of abundance trawling, and all relocation trawling, will be defined as 12 hours of continuous trawling in each 24-hour period.

3.10.4.1.3 Trawling Requirements

Trawling operations will be conducted in the vicinity of dredge operations, but will maintain a safe distance from that dredge. Trawling shall be conducted with and against the tidal flow at a speed between 2.5 to 3.0 knots using repetitive 15- to 30-minute (total time) trawls in the channel or other work area. Trawls will be made in the center, green, and red sides of a channel, such that a sufficient number of trawls will be made in each of the stations for the survey so that the total width of the channel bottom is sampled. As much as practicable, the channel shall be trawled in random order consistent with NMFS survey protocol.

3.10.4.1.4 Trawling Nets

The trawler shall be equipped with two 60-foot flat-style trawling nets fabricated from 8-inch mesh (stretch). The nets shall be fitted with mud rollers and floats. The nets shall conform to the following:

(a) Design: 4-Seam, 4-legged, 2-bridle trawl net.
(b) Webbing: 4-Inch bar, 8-inch stretch top; 36 gauge twisted nylon dipped side; and 36 gauge twisted nylon dipped bottom.
(c) Net Length: 60 Feet from cork line to cod end.
(d) Body Taper: 2 to 1.
(e) Wing End Height: 6 Feet.
(f) Center Height: Dependent on depth of trawl, 14 to 18 feet.
(g) Cod End: Length 50 meshes X 4 inches (16.7 feet); webbing 2-inch bar, 4-inch stretch, 84 gauge braid nylon dipped, 80 meshes around, 40 rigged meshes with ¼ X 2-inch choker rings, 1 each X 4-inch at end; cod end cover – none; chaffing gear – none.
(h) Head Rope: 60-Foot combination rope (braided nylon with stainless steel cable center).
(i) Foot Rope: 65-Foot (2-inch) combination rope.
(j) Leg Line: Top, 6 feet; bottom, 6 feet.
(k) Floats: 12 Tuna floats (football style), 7 inches in diameter, 9 inches long; center on top net, spaced 2 inches apart.
(l) Mud Rollers: 22 each, 5 Inch diameter by 5.5-inch length, 3-foot spacing; attach with 3/8-inch polypropylene rope (replaced with Snap-On rollers when broken).
(m) Tickler chain: None. (discontinued – but previously used ¼ inch X 74 foot galvanized chain).
(n) Weight: 20 Feet of ¼-inch galvanized chain on each wing, 40 feet per net looped and tied.
(o) Door Size: 7 feet by 40 inches or 8 feet by 40 inches; 1-inch by 6-inch shoe; 3/8-inch high test chain bridles.
(p) Cable Length: 7/16-inch cable, 240 to 300 feet (total bridle length), varies with bottom conditions.
(q) Float Ball: None.
(r) Lazy Lines: 1-Inch nylon.
(s) Pickup Lines: 3/8-Inch polypropylene.
(t) Whip Lines: 1-Inch nylon.

3.10.4.1.5 Turtle Handling and Measurements

At least one crewmember, who possesses the required permits for handling endangered species and who is experienced in turtle capture, shall be on

board the trawler during the trawl. Each turtle that is caught shall be identified, measured, tagged, and released in the area of capture during abundance trawling. During relocation trawling, captured sea turtles shall be transported and released at a location at least 3 miles east of the easternmost point of the channel area. Turtle measurements shall be recorded and shall include, at a minimum, weight, straight-line length, straight-line width, and tail length. Turtles shall be tagged with NMFS #681 Inconel tags in each of the front flippers according to NMFS protocol. Aseptic conditions shall be maintained for tags and tag attachment. The contractor shall be responsible for obtaining any and all permits related to trawling from the appropriate state and Federal agencies. All aspects of the trawling shall be coordinated with the U.S. Army Corps of Engineers, Charleston District; the National Marine Fisheries Service; South Carolina Department of Natural Resources, Marine Resources Division; and other appropriate technical personnel.

3.10.4.1.6 Reporting

Immediately after completing each day of abundance/relocation trawling, the Contractor shall notify the Contracting Officer by telephone conveying the results of the trawl. A letter report documenting turtle captures, including the data gathered during the trawl, shall be furnished by the contractor to the Low Country Resident Office, U.S. Army Corps of Engineers, Charleston District, within 24 hours after completing the abundance/relocation trawl (fax number 843-329-2549). Copies of the report shall also be furnished to the National Marine Fishery Service and the South Carolina Department of Natural Resources.

3.10.4.2 Suspension of Dredging and Relocation Trawling

If the number of turtles netted during abundance trawling, as specified above, is considered excessive as determined by the Contracting Officer, then, at the Corps' discretion, the Contracting Officer may direct the Contractor to either immediately suspend dredging operations or to exercise the relocation trawling option within 48 hours and continue dredging but only with continuous turtle trawling in the vicinity of the dredge to remove turtles from the channel area. Any added costs to the production dredging caused by abundance/relocation trawling shall be included in the bid item, Relocation Trawling, on the bid form in Section 00010. Such trawling in the vicinity of the dredge shall be conducted in successive trawls, stopping after each 30-minute period to check the nets and remove captured turtles. As specified above for abundance trawling, captured sea turtles shall be identified, measured, tagged, transported, and released at a point near the area of capture, but relocation trawling will release captured turtles at a point at least 3 miles east of the easternmost tip of the channel area. Nets used to trawl for turtles in the vicinity of the dredge shall be as specified above. During subsequent dredging, dredging may be suspended by the Contracting Officer if two sea turtles are taken by a dredge in any one day, when a total of five turtles are taken by a dredge for any one specific project, when a dredging window deadline is reached, or when the total number of turtles taken within the Corps of Engineers South Atlantic Division is determined to be excessive based upon the 1997 Biological Opinion and Incidental Take Statement.

Should there be a tearing of nets, or breakdown of other equipment that would cause the trawler to leave the area where dredging is underway during any period of time when relocation trawling is required, the dredge may continue to operate for up to 48 hours, as long as no turtles are taken, and subject to the discretion of the Contracting Officer. Should there be dangerously high seas that would cause the trawler to leave the dredging area when relocation trawling is required, the dredge may continue to operate, as long as no turtles are taken; subject to the discretion of the Contracting Officer.

3.10.4.3 General Guidelines For Corps Discretionary Authority To Initiate Turtle Trawling **FOR INFORMATION ONLY**

In general, there should be a heightened awareness of the potential to take turtles (1) any time that the water temperature reaches and/or exceeds 55 degrees Fahrenheit (13 degrees Centigrade), (2) work is ongoing in early December or late March, (3) other Districts in the Corps' South Atlantic Division (SAD) have taken, or are taking turtles, or (4) work has entered a rocky area where the deflector cannot rest properly on the bottom. If a turtle is taken, relocation trawling may be required to begin immediately and continue until the completion or halting of dredging. Halting could be caused by either taking two (2) sea turtles by a dredge in one day, or a project total of five (5) turtles in any fiscal year for any given project, when a dredging window deadline is reached, or when the total number of turtles taken within SAD is determined to be excessive based upon the 1997 Biological Opinion and Incidental Take Statement. The following are some general trawling guidelines that the Corps may weigh in determining whether to trawl or not:

Trawling Guidelines

(a) Currently, Charleston District utilizes a hopper dredging window which extends from December 1 to March 31. Initiation of trawling before, during and after this window will depend primarily on the water temperatures and the time of year. However, conditions and turtle takes in our sister SAD Districts will also be used to evaluate the need for trawling.

(b) Prior to December 1. If water temperatures are above 55 degrees Fahrenheit (13 degrees Centigrade), or if it is anticipated based on expected weather patterns that water temperatures will be above 55 degrees Fahrenheit in early December, abundance trawling may be initiated prior to dredging to determine the relative abundance of turtles in the area proposed for dredging. The information obtained from the abundance trawling will be used to evaluate the need for relocation trawling when dredging activity begins.

(c) December 1 – March 31. If temperatures are above 55 degrees Fahrenheit, dredging may begin without trawling, however, the Charleston District reserves the right to require the initiation of relocation trawling based on the water temperatures and evidence of any turtle takes in our sister districts. However, under these circumstances, if a turtle is taken, relocation trawling will be initiated immediately and continue until

temperatures drop below 55 degrees Fahrenheit. and/or no turtles are netted for at least three (3) consecutive days.

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GENERAL REQUIREMENTS

SECTION 01451
CONTRACTOR QUALITY CONTROL

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SECTION 01451
CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump sum prices contained in the Bidding Schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled INSPECTION OF CONSTRUCTION. The quality control system shall consist of plans, procedures, and organization necessary to assure compliance with all of the requirements of the contract drawings and specifications. The system shall cover all construction operations and shall be keyed to the proposed construction sequence. The project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with quality requirements specified in the contract. The project superintendent in this context shall mean the individual with the responsibility for the overall management of the project including quality and production. The Contractor shall use the Contractor Quality System (QCS) module to record, maintain and submit information in accordance with Section 01312, QUALITY CONTROL SYSTEM.

3.2 QUALITY CONTROL PLAN

3.2.1 General

The Contractor shall furnish for review by the Government, after award but not later than the Preconstruction Conference, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause, INSPECTION OF CONSTRUCTION. The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Government will consider an interim plan for the first 10 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

3.2.2 Content of the CQC Plan

The CQC Plan shall provide for sufficient inspection of all items of work, including that of his subcontractors, to ensure conformance to applicable specifications and drawings with respect to the materials, workmanship, construction finish, functional performance, and identification. The CQC Plan shall specifically include the surveillance required in Section 02325, DREDGING, of the contract specifications. This document shall include, as a minimum:

A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the Project Superintendent. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.

(a) A copy of the letter to the CQC System Manager signed by an authorized official of the firm, which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work, which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters will also be furnished to the Government.
(b) Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, to ensure conformance to applicable specifications and drawings with respect to the materials, workmanship, construction finish, functional performance, and identification. These procedures shall be in accordance with Section 01330, SUBMITTAL PROCEDURES.
(c) Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer).
(d) Procedures for tracking preparatory, initial, and follow-up control phases and control, and verification, including documentation.
(e) Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.
(f) Reporting procedures, including proposed reporting formats.
(g) A list of the definable features of work. A definable feature of work is a task, which is separate and distinct from other tasks and has separate control requirements and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there is frequently more than one definable feature under a particular section. This list will be agreed upon during the coordination meeting.

(h)This plan shall include name of employee responsible for overall supervision of accident prevention activities, applicable safety requirements in work methods, and method for inspecting the work to insure that safety measures and instructions are actually applied.

3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.4 Notification of Changes

After acceptance of the CQC plan, the Contractor shall notify the Contracting Officer in writing a minimum of seven (7) calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction operations, and prior to acceptance by the Government of the Quality Control Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, inspections, administration of the system, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures, which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 General

The requirements for the CQC organization are a CQC Manager and sufficient number of additional qualified personnel to ensure contract compliance. The Contractor shall provide a CQC organization, which shall be at the site at all, times during progress of the work and with complete authority to take any action necessary to ensure compliance with the contract. All CQC staff members shall be subject to acceptance by the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify an individual within his organization at the worksite who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. This CQC System Manager shall insure that qualified supplemental personnel are on the site at all times during construction. The CQC System Manager will be employed by the Contractor. An alternate for the CQC System Manager will be identified in the plan to serve in the event of the System Manager's absence. Period of absence may not exceed one week at any one time, and not more than 30 workdays during a calendar year. The requirements for the alternate will be the same as for the designated CQC Manager.

3.4.2.1 Experience and Responsibility

The CQC System Manager shall be an experienced construction person with a minimum of 2 years management experience in related work. The CQC System Manager shall be responsible for CQC and as part of that responsibility shall insure that the Safety Program is in strict compliance with the contract requirements. The CQC System Manager shall be assigned no other duties.

3.4.2.2 Work Schedule

The CQC System Manager shall work a minimum of 40 hours per week on a rotating shift. Over a two week period of time, the CQC System Manager shall be present at least twice for each of the three eight hour shifts being worked. Over a two week period of time the CQC System Manager shall be present at least once for each of the weekend days. The CQC System Manager shall not discuss with the Contractor's staff anticipated hours to be worked. The CQC shall be required to submit a general anticipated work schedule to the Contracting Officer's Representative for approval on a monthly basis.

3.4.3 CQC Personnel

In addition to CQC personnel specified elsewhere in the contract, the Contractor shall provide as part of the CQC organization specialized personnel to assist the CQC System Manager. Each person will be responsible for assuring the construction complies with the contract requirements for their area of specialization. These individuals shall: be employed by the prime Contractor and be responsible to the CQC System Manager for all CQC related issues and matters; be physically present at the construction site during work on their areas of responsibility; have the necessary education and/or experience to ensure contract compliance. The supplemental staff shall be maintained under the direction of the CQC System Manager to perform all CQC activities. The staff must be of sufficient size to ensure adequate CQC coverage of all work phases, work shifts, and work crews involved in the construction. These personnel may perform other duties, but must be fully qualified by experience and technical training to perform their assigned CQC responsibilities and must be allowed sufficient time to

carry out these responsibilities. The CQC plan will clearly state the duties and responsibilities of each staff member.

3.4.3.1 Supplemental CQC Personnel

The actual strength of the CQC staff may vary during any specific work period. When necessary to meet the CQC requirements of a specific work period and to assure an adequate CQC organization, the Contractor shall provide additional staff as necessary at no additional cost to the Government. This listing of a minimum staff in no way relieves the Contractor of meeting the basic requirements of quality construction in accordance with contract requirements. All CQC staff members shall be subject to acceptance by the Contracting Officer.

3.4.4 Additional Requirements

In addition to the above experience and education requirements the CQC System Manager shall have completed the course entitled "Construction Quality Management For Contractors".

3.4.5 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all time. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance before replacing any member of the CQC staff. Requests shall include the names, qualifications, duties, and responsibilities of each proposed replacement.

3.5 SUBMITTALS

Submittals shall be made as specified in Section 01330, SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of work as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each major feature of work, and after all required plans, documents, and materials are accepted and/or approved. This phase shall include:

(a) A review of each paragraph of applicable specifications.
(b) A review of the contract drawings.

(c) A check to assure that all materials and/or equipment have been tested,
submitted, and approved.
(d) Review of provisions that have been made to provide required control
inspection and testing.
(e) Examination of the work area to assure that all required preliminary work
has been completed and is in compliance with the contract.
(f) A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
(g) A review of the appropriate Activity Hazard Analysis to assure safety requirements are met.
(h) Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that major feature of work.
(i) A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
(j) Discussion of the initial control phase.
(k) The Government shall be notified at least 72 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the major feature of work. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily Quality Control Report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a major feature of work. The following shall be accomplished:

(a) A check of preliminary work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
(b) Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
(c) Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Comparison with sample panels is appropriate.
(d) Resolve all differences.
(e) Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
(f) The Government shall be notified at least 24 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

(g) The initial phase should be repeated for each new crew to work on-site, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work, which may be affected by the deficient work. The Contractor shall not build upon or conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phase

Additional preparatory and initial phases may be conducted on the same major features of work if the quality of on-going work is unacceptable, if there are changes in the applicable CQC staff, on-site production supervision or work crew, if work on a major feature is resumed after a substantial period of inactivity, or if other problems develop.

3.7 INSPECTIONS AND TESTS

Except for tests specifically noted to be made by the Government, the Contractor shall be responsible to make such inspections and tests as may be necessary to assure compliance with all requirements of the various sections of these specifications. All costs connected with and incidental to the sampling, inspections, testing and preparations of reports pertaining thereto shall be borne by the Contractor. Daily reports of all inspections and test, and remedial action taken when required, shall be submitted to the Contracting Officer.

3.8 COMPLETION INSPECTION

At the completion of all work or any increment thereof established by a completion time stated in the Section 00800, Special Contract Requirements, COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK, or stated elsewhere in the specifications, the CQC System Manager shall conduct an inspection of the work and develop a punch list of items which do not conform to the approved drawings and specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph DOCUMENTATION below, and shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected and so notify the Government. These inspections and any deficiency corrections required by this paragraph will be accomplished within the time stated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

3.9 DOCUMENTATION

3.9.1 Report of Operations

The Contractor shall prepare and maintain a "Report of Operations" recorded on ENG. Form No. 4267 daily, and furnish the original and one copy thereof to the Contracting Officer's Representative. In addition to the daily reports, the Contractor shall prepare a monthly report using ENG. Form 4267, Report of Operations for each month or partial month's work. The monthly report shall be submitted on or before the seventh of each month, consolidating the previous month's work. Upon the completion of the job and before final payment is made to the Contractor, the Contractor shall submit a job report for consolidating the monthly reports using ENG. Form 4267. Further instructions on the preparation of the report will be furnished at the Preconstruction Conference.

3.9.2 Construction Quality Control Report

The Contractor shall prepare and maintain daily records of all quality control operations and activities, identified safety and occupational health deficiencies and corrective measures, inspections, and tests performed, including work of subcontractors. These records shall be recorded and submitted daily on the "Construction Quality Control" form. Documentation on the appropriate form shall include factual evidence that required quality control activities and /or tests have been performed, including but not limited to the following information:

(a) Contractor/subcontractor and their area of responsibility.
(b) Operating plant/equipment with hours worked, idle, or down for repair.
(c) Work performed each day, giving location, description, and by whom.
(d) Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.
(e) Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements. Submittals reviewed, with contract reference, by whom, and action taken.
(g) Off-site surveillance activities, including actions taken.
(h) Job safety evaluations stating what was checked, results, and instructions or corrective actions.
(i) Instructions given/received and conflicts in plans and/or specifications.
(j) Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report

form shall be furnished to the Government daily within 48 hours after the date(s) covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every seven days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 SAMPLE FORMS

Sample forms are included in the ATTACHMENTS located at the back of these specifications.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the worksite, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

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SITE WORK

SECTION 02325
DREDGING

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SECTION 02325

DREDGING

PART 1 GENERAL

1.1 WORK COVERED BY CONTRACT PRICE

1.1.1 General

The work covered by this section consists of furnishing all plant, equipment, labor and materials, and performing all work required for the removal and disposal of all material, layout and accomplishment of all dredging work, and the movement of plant in accordance with these specifications and as indicated on the contract drawings.

1.1.2 Work Required by Bid Items 0001 and 0007 (Base Bid) and Bid Item 0013 (Option 1)

The work required by Bid Items 0001 and 0007 (Base Bid) and Bid Item 0013 (Option 1) shall include the mobilization and demobilization of all the Contractor's plant and equipment for all areas of work.

1.1.3 Work Required by Bid Items 0002 and 0008 (Base Bid) and Bid Item 0014 (Option 1)

The work required by Bid Items 0002 and 0008(Base Bid) and Bid Item 0014 (Option 1) shall include the removal and disposal of all material; layout and accomplishment of all work; and the movement of plant between the various shoals as specified herein or indicated on the contract drawings. The contract unit price per cubic yard for dredging shall be applicable to quantities in any extensions of these shoals except as provided in Section 00800 Paragraph VARIATIONS IN ESTIMATED QUANTITIES and Paragraph VARIATIONS IN ESTIMATED QUANTITIES - DREDGING.

1.1.4 Work Required by Bid Items 0003 and 0009 (Base Bid) and Bid Item 0015 (Option 1)

The work required by Bid Items 0003 and 0009 (Base Bid) and Bid Item 0015 (Option 1) shall include the Dredge Data Logging System and preparation of the Disposal Area Report required by these specifications.

1.1.6 Work Required by Bid Items 0004 and 0010 (Base Bid) and Bid Item 0016 (Option 1)

The work required by Bid Items 0004 and 0010 (Base Bid) and Bid Item 0016 (Option 1) shall include compliance with the Endangered Species Act the Marine Mammals Protection Act as specified in Section 01355 ENVIRONMENTAL PROTECTION, i.e. (such as trained observers, screens, and required reports).

1.1.6 Work Required by Bid Items 0005 and 00011 (Base Bid) and Bid Item 0017 (Option 1)

The work required by Bid Items 0005 and 00011 (Base Bid) and Bid Item 0017 (Option 1) shall include furnishing labor, equipment, fuel, oil, materials, and supplies required for each day of trawling to determine the relative abundance of sea turtles in the channel area, and shall include the cost of handling and returning sea turtles to the area where they were captured and the cost of reporting as specified.

1.1.7 Work Required by Bid Items 0006 and 00012 (Base Bid) and Bid Item 0018 (Option 1)

The work required by Bid Items 0006 and 00012 (Base Bid) and Bid Item 0018 (Option 1) shall include furnishing labor, equipment, fuel, oil, materials, and supplies required for each day of trawling to remove sea turtles in the vicinity of the dredge, and shall include the cost of handling and transporting sea turtles to the to the point of release and the cost of reporting as specified.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Data

DDLS removable storage media and electronic data transfer; G

Data collected daily for each vessel shall be provided to the Contracting Officer’s Representative both electronically and on removable storage media in accordance with the ATTACHMENT, Dredge Data Logging System.

SD-04 Drawings

Ullage Charts;

The Contractor shall furnish certified ullage charts for all barges.

Summary Disposal Area Maps;

Submit weekly summary maps of all dumps to date.

At the end of dredging work, the Contractor shall submit a compilation of all disposal area maps as specified in Paragraph Disposal of Excavated Material.

Sketch of Pipeline Outfall Points;

If a pipeline is used for disposal, the Contractor shall submit a drawing showing proposed pipeline outfall locations within the disposal area.

SD-08 Statements

Dredging Plan of Operation; G

The Contractor shall submit a plan of operation prior to commencing dredging operations. The plan shall be prepared as specified in Paragraph Dredging Plan of Operations, below.

SD-09 Reports

Report of Daily Dump Logs;

A report shall be furnished for each hopper or skow load.

1.3 CHARACTER OF MATERIALS

1.3.1 Character of Materials

Materials to be excavated under this contract have accumulated because of shoaling since the areas were last dredged. The materials to be removed are typically composed of very loose or very soft mixtures of saturated sand, silt, and clay size particles in varying proportions, containing free water.

1.3.2 Debris

Various debris such as timber, rip rap, sheet metal, rope, cable, chain, etc., may be encountered during dredging operations. If in the judgment of the Contracting Officer it can be removed during normal dredging operations, it shall be removed by the Contractor. This debris shall become the property of the Contractor and shall be removed from the jobsite. The removal and disposal of this debris shall be accomplished at no additional cost to the Government. Disposal of debris shall not be permitted on the riverbanks, in navigable waterways or disposal areas unless otherwise specified.

1.4 ESTIMATED QUANTITIES

1.4.1 Estimated Quantities

The total estimated quantity of material necessary to be removed from within the specified limits to complete the work are as follows:

SHOAL NUMBER	LOCATION	REQUIRED DREDGING PRISM C.Y. PL. MEAS. *	ALLOWABLE OVERDEPTH PRISM C.Y. PL. MEAS. **	TOTAL C.Y. PL. MEAS.
Charleston Entrance Channel				
	Sta. –328+00 to Sta. –128+00	750,000	1,200,000	1,950,000
Georgetown Entrance Channel				
1	Sta. 30+00 to Sta. 70+00	97,000	177,000	274,000
2	Sta. 188+00 to Sta. 232+00	185,000	70,000	255,000
	TOTAL	282,000	247,000	529,000
Port Royal Entrance Channel				
	Sta. –26+00 to Sta. 176+00	530,000	436,000	966,000

Notes:

1. Required depths shall be as shown on the contract drawings.
2. The required dredging prism quantities include the optional side slope material associated with the required depth.
3. Allowable overdepth quantities include optional side slope materials associated with the allowable overdepth.

1.4.2 Shoaling Rates

In order to allow for shoaling which will occur between the times of surveys shown on the contract drawings and pre-dredging surveys, the computed quantities for the required depth have been increased based on historical shoaling rates for the individual shoals. The resulting increased quantities are shown above.

1.4.3 Funds

Within the limit of available funds, the Contractor will be required to excavate the entire quantity of material necessary to complete the work specified herein, be it more or less than the amounts above estimated, all work to be done in accordance with the contract at the contract price or prices, except as may be affected by Section 00800, Contract Clause, VARIATIONS IN ESTIMATED QUANTITIES - DREDGING.

1.5 OVERDEPTH AND SIDE SLOPES

1.5.1 Required Dredging Prism

The Contractor shall dredge all shoals to the required depths as indicated on the contract drawings. The Contractor is required to cut the channel vertically to the required depth along each toe; however, the Contractor will be paid for material removed from the side slopes as described in Paragraph Side Slopes, below.

1.5.2 Allowable Overdepth Prism

To cover unavoidable inaccuracies of the dredging process, material actually removed from within the specific areas to be dredged, will be measured to a depth not to exceed the allowable overdepth below the required dredging depth in that area as shown on the contract drawings, and will be paid for at the applicable contract price. This material is optional and shall not be considered for purposes of determining any variation in quantity. Refer to Section 0800, Paragraph VARIATION IN ESTIMATED QUANTITY-DREDGING.

1.5.3 Side Slopes

Dredging of side slopes is not required; however, the Contractor is required to cut the channel vertically to the required depth at the channel toe. Material actually removed from outside the required section shown on the contract drawings as lying between the vertical cut and maximum pay slope plane will be computed and paid for at the dredging unit cost per cubic yard. Up to 100 percent of the material lying in this zone as calculated from the before dredging survey will be paid for at the applicable contract unit price per cubic yard, if actually removed. For the purpose of dredging, the side slopes constitute a payment prism and are not intended as a design criteria, side slopes may fall flatter than those shown on the contract drawings; however, no payment will be made for material removed outside these specified limits.

1.5.4 Excessive Dredging

Material taken from beyond the limits as extended in the provisions of Paragraphs Overdepth and Paragraph Side Slopes, above, will be considered as excessive dredging for which payment will not be made. Nothing herein shall be construed to prevent payment for the removal of shoals performed in accordance with Paragraph Final Examination and Acceptance or Paragraph Shoaling, and as applicable and as further set forth under Paragraph Measurement and Payment.

1.6 SHOALING (1965 APR OCE)

If, before the contract is completed, shoaling occurs in any section previously accepted, including shoaling in the finished channel because of the natural lowering of the side slopes, dredging at contract price, within the limits of available funds, may be done if agreeable to both

the Contractor and the Contracting Officer. This shall include the dredging of adjacent horizontal extensions to the shoals included under this contract.

1.7 CONTINUITY OF WORK (1965 APR OCE)

No payment will be made for work done in any area designated by the Contracting Officer until the full depth required under the contract is secured in the whole of such area, nor will payment be made for excavation in any area not adjacent to and in prolongation of areas where full depth has been secured except by decision of the Contracting Officer. Should any such nonadjacent area be excavated to full depth during the operations carried on under the contract, payment for all work therein may be deferred until the required depth has been made in the area intervening. The Contractor may be required to suspend dredging at any time when for any reason the gages or ranges cannot be seen or properly followed.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 DREDGING

3.1.1 Dredging Plan of Operation

Prior to any dredging work, the Contractor shall submit a dredging plan to the Contracting Officer for review and comment. Dredging shall not commence until all comments have been answered to the satisfaction of the Contracting Officer. The plan shall show barge anchoring locations; dredging lines; description of hopper or scow overflow operations; instrumentation used; coordinates and land elevation of all control points for electronic positioning and mean low water determination; estimated daily dredge advances; quality control survey procedures; anticipated problem areas of project; and procedures to assure that dredging will proceed within the contract template and will be performed in the most economical manner. The plan shall be updated on a weekly basis to allow notification to harbor and boat owners of dredge progress.

3.1.2 Dredge Data Logging System

The dredging equipment used on this project shall be operated with instrumentation to monitor the position and performance of each dredge, scow or disposal barge, and separate booster pump or pumpout facility. The Dredge Data Logging System (DDLS) shall meet the requirements detailed in the ATTACHMENTS describing the requirements, calibration, performance, data storage, delivery, and inspection requirements for the dredging operations monitoring system. The DDLS shall be acquired, installed, calibrated, operated, and maintained by the Contractor.

3.1.3 Electronic Positioning of the Dredge

During all dredging operations, the Contractor shall use a differential global positioning system (DGPS) to monitor and control the horizontal positioning of the dredge and scows. This equipment shall be installed on the dredge and scow and be in operation at all times during dredging and disposal operations. This equipment shall also be utilized to locate discharge of the pipeline dredge, if used.

3.1.4 Positioning for Surveys

3.1.3.2.1 Horizontal and Vertical Positioning for Surveys in Charleston Entrance Channel

The Contractor shall utilize the Corps of Engineers (COE) real-time kinematic differential global positioning system (RTK-DGPS) for conducting hydrographic surveys in the Charleston Entrance Channel. This system is capable of providing real-time water levels (tide corrected) and horizontal positioning of survey vessels based on DGPS carrier phase technology. Vertical datum is Mean Lower Low Water (MLLW), National Tidal Datum Epoch 1983-2001. The COE reference station is located at the U.S. Coast Guard lighthouse on Sullivan’s Island. The Contractor’s survey vessel shall be equipped with an Ashtech A Extreme GPS receiver, VHF Data Radio Modem programmed at 163.000 mHz, processor running HYPACK hydrographic survey software, and geodetic quality GPS antenna. Use of this system will be coordinated with the Contractor prior to beginning work. The Contractor may use this system to dredge by; however, The Government will not be responsible for down time due to problems with the reference station GPS equipment.

3.1.3.2.1.1 Kinematic Tidal Datum

A file containing the separations between the Reference Ellipsoid and the chart datum (Mean Lower Low Water) for Charleston Harbor will be provided to the Contractor for loading into the hydrographic survey software.

3.1.3.2.1.2 Non-Operational Reference Station

If the COE reference station fails to operate, the Contractor shall notify the Contracting Officer (843-329-2339, office) and Mr. Millard Dowd (843-297-2673, cell; 843-329-8202, office)

3.1.3.2.2 Horizontal Positioning for Surveys in Georgetown and Port Royal Entrance Channels

For the entrance channels at Georgetown and Port Royal, the Contractor shall use an electronic horizontal positioning system for conducting hydrographic surveys. The electronic horizontal positioning system for

the survey processes shall be a range/range, range/azimuth, GPS, DGPS, etc., with manufacturer's guarantee of no greater than 1.5 meter positional error at any time after calibration. The electronic horizontal positioning system for the survey processes shall be similar or equal in design, performance, accuracy, operating characteristics, and frequency to those identified in the EM 1110-2-1003, Hydrographic Surveying, dated 1 January 2002.

3.1.4 Overflow Time

The time of overflow of water and dredged material from hopper bins, dump scows or barges shall be limited to the most economical load based on load charts as approved. All overflow from hopper bins shall be discharged below the water surface. During transport to the disposal site, water and dredged material shall not be permitted to overflow or spill out of barges, hopper bins or dump scows. Containers having more than 10% loss in either draft or volume while transporting material to the disposal site shall not be further utilized until repaired. The Contractor shall record both draft of hull and freeboard of bin for each scow load immediately after loading and prior to dumping. Readings shall be taken by approved methods. The dump scows shall be measured at the four corners on the outside of the scow for displacement at completion of loading at the dredge site and prior to dumping at the disposal site. For all barges, Contractor shall furnish certified ullage charts indicating the amount and for each barge load furnish report shown in the ATTACHMENTS.

3.1.4.1 Bulk Density

The bulk density shall be measured by displacement of the dredge material barge, scow or hopper dredge in the water, converted to weight divided by the volume of material in the barge, bin or scow obtained from a Contractor furnished capacity plan chart and barge, scow, or hopper dredge hull displacement curves.

3.2 INSPECTION

3.2.1 Inspection Requirements

The presence of a Quality Assurance Representative shall not relieve the Contractor of responsibility for the proper execution of the work in accordance with the specifications.
The Contractor will be required:

(a) To furnish, upon request by the Contracting Officer or any Quality Assurance Representative, the use of such boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the dredging plant as may be reasonably necessary in inspecting and supervising the work. However, the Contractor will not be required to furnish such facilities for the surveys prescribed in the Paragraph FINAL EXAMINATION AND ACCEPTANCE.

(b) To furnish, upon request by the Contracting Officer or any Quality Assurance Representative, suitable transportation from all points on shore designated by the Contracting Officer to and from the various pieces of plant, and to and from the dumping grounds.

3.2.2 Noncompliance

Should the Contractor refuse, neglect, or delay compliance with these requirements, the specific facilities may be furnished and maintained by the Contracting Officer and the cost thereof will be deducted from any amounts due or to become due the Contractor.

3.3 ORDER OF WORK

The order of work shall be the dredging of Charleston Entrance Channel, Georgetown Entrance Channel, and Port Royal Entrance Channel, in that order. No order of work for individual shoals is specified. See paragraph FINAL EXAMINATION AND ACCEPTANCE for acceptance sections.

3.4 PLANT

3.4.1 General

The Contractor agrees to keep on the job sufficient plant to meet the requirements of the work. The plant shall be in satisfactory operating condition and capable of safely and efficiently performing the work as set forth in these specifications. Inspection of equipment listed in "Plant and Equipment Schedule" shall be made prior to commencement of work in order to determine if it is satisfactory so as to meet the requirements of work. The plant shall be subject to inspection by the Contracting Officer and the U.S. Coast Guard at all times. The plant listed on the Plant and Equipment Schedule, as specified in Section 0100, Contract Clause 52.209-4006 PLANT AND EQUIPMENT SCHEDULE and Section 0800, Contract Clause 52.203-4002 PLANT AND EQUIPMENT SCHEDULE-LIST, is the minimum which the Contractor agrees to place and maintain on the job unless otherwise determined by the Contracting Officer, and its listing thereon is not to be construed as an agreement on the part of the Government that it is adequate for the performance of the work.

3.4.2 Pipelines

3.4.2.1 Condition of Pipelines

The Contractor shall be responsible for proper maintenance of pipelines during this contract. All pipelines for hydraulic machines must be kept in good condition at all times and any leaks or breaks along their length must be promptly and properly repaired. The Contractor shall comply with lighting of the floating pipeline in accordance with USCG Regulations.

3.4.2.2 Buoyant or Semi-buoyant Pipeline

Whenever buoyant or semi-buoyant pipeline is used, the dredge operator shall assure that the pipeline remains fully submerged and on the bottom; whenever it is necessary to raise the pipeline, proper clearances shall be made and maintained and the entire length of the pipeline shall be adequately marked.

3.4.2.3 Marking the Location of the Pipeline

The location of the entire length of submerged pipeline shall be marked with signs, buoys, lights, or flags as required by the USCG and as approved by the Contracting Officer.

3.4.2.4 Inspection of Submerged Pipelines

Routine inspections of the submerged pipe shall be conducted to ensure anchorage.

3.4.2.5 Removal of Related Equipment

All anchors and related material shall be removed when the submerged pipe is removed.

3.4.2.6 Floating Pipeline

Floating pipeline is any pipeline which is not anchored on the channel bottom. Floating pipeline, to include rubber discharge hoses, shall be clearly marked.

3.4.2.7 Location of Pipelines

Pipelines shall not be permitted to fluctuate between the water surface and the channel bottom or lie partially submerged.

3.4.3 Capacity of Plant

No reduction in the capacity of the plant employed on the work shall be made except by written permission of the Contracting Officer. The measure of the "capacity of the plant" shall be its actual performance on the work to which these specifications apply.

3.4.4 Placement of Lights

All lights on dredge pipelines (floating or supported) shall be displayed as follows at night and in periods of restricted visibility (such as fog).

(1) One row of yellow lights. The lights must be:
   (a) Flashing 50 to 70 times per minute;
   (b) Visible all around the horizon (360 degrees);
   (c) Visible for at least 2 miles on a clear dark night;
   (d) Not less than 1 and not more than 3.5 meters above the water;

(e) Approximately equally spaced; and
(f) Not more than 10 meters apart where the pipeline crosses a navigable channel. Where the pipeline does not cross a navigable channel, the lights must be sufficient in number to clearly show the pipeline's length and course.

(2) Two red lights at each end of the pipeline including the ends in a channel where the pipeline is separated to allow vessels to pass (whether open or closed). The lights must be:
(a) Visible all around the horizon (360 degrees);
(b) Visible for at least 2 miles on a clear dark night;
(c) One meter apart in a vertical line with the lower light at the same height above water as the flashing yellow light.

3.4.5 Buoys

All marker buoys shall be painted yellow and display the same yellow flashing light as required for floating or supported dredge pipelines meeting the requirements of paragraph PLACEMENT OF LIGHTS above.

(1) Buoys used to anchor booster pumps;
(2) Buoys used to anchor or mark stored equipment i.e. (barges, pipeline etc.);
(3) Buoys used to mark or anchor dredge pipelines and this includes floating and submerged pipeline leading to disposal areas;
(4) Any other buoys the U.S. Coast Guard or Contracting Officer requires to insure a safe harbor free from hazards to navigation must be marked and display yellow flashing lights meeting the requirements stated in paragraph PLACEMENT OF LIGHTS above.

3.4.6 Submerged Pipeline or Fittings

All submerged pipeline or fittings with less than six (6) feet of clearance between the top of the pipeline and mean low water shall:

(1) Be marked with the same type of light meeting the requirements of paragraph PLACEMENT OF LIGHTS above;
(2) Be spaced approximately one hundred (100) feet apart.

3.4.7 Lights, Lighted Buoys, and Dredging Aids Markers

All lights, lighted buoys and dredging aids markers must be maintained, operable and on station at all times to insure a safe harbor.

3.4.8 Noncompliance

The Contracting Officer will notify the Contractor in writing of any noncompliance with the foregoing provisions. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. Within 24 hours after receipt of such notice, the Contractor shall mail, or personally deliver to the Contracting Officer, a complete proposal of the prompt correction of the noncompliance. The Contracting Officer will review the proposal

and return it to the Contractor approved, subject to such changes or conditions as he finds necessary to assure correction of noncompliance. Immediately upon receipt of such approval, the Contractor shall begin the corrective work and shall carry it to completion. If the Contractor fails or refuses to submit his proposal or to proceed with the corrective work, the Contracting Officer may suspend all or any part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such suspension shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor. If he so elects, the Contracting Officer may cause the corrective work to be accomplished by others, in which event the cost thereof shall be chargeable against moneys otherwise due the Contractor from the Government.

3.4.9 Plant Removal

Upon completion of the work, the Contractor shall promptly remove all plant, including all pipeline, ranges, buoys, piles, and other markers or obstructions.

3.5 SIGNAL LIGHTS (DAEN PRP ON-TIME 12 JUL 1984)

The Contractor shall display signal lights and conduct his operations in accordance with the General Regulations of the Department of the Army and of the Coast Guard governing lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, vessels working on wrecks, dredges, and vessels engaged in laying cables or pipe or in submarine or bank protection operations, lights to be displayed on dredge pipe lines, and day signals to be displayed by vessels of more than 65 feet in length moored or anchored in a fairway or channel, and the passing by of other vessels of floating plant working in navigable channels, as set forth in Commandant U.S. Coast Guard Instruction M16672.2, Navigation Rules: International-Inland (COMDTINST M16672.2), or 33 CFR 81 Appendix A (International) and 33 CFR 84 through 33 CFR 89 (Inland) as applicable.

3.6 NAVIGATION AIDS AND DREDGING AIDS

3.6.1 Relocation of Navigation Aids for Dredging

The U. S. Coast Guard (USCG) requires notification 60 days in advance to remove or relocate any navigation aids to facilitate dredging operations. Due to time constraints, the Government will notify the USCG in advance of an estimated time and location that dredging operations will be accomplished. However, after award and prior to commencing dredging, it is the responsibility of the Contractor to coordinate with the USCG for the actual removal or relocation of any navigation aids within or near the areas to be dredged. The Contractor shall also notify the Contracting Officer in advance as to the time and location of the aids that will require relocation. The Contractor shall coordinate the removal or relocation of navigation aids with the following:

(1) Commander, 7th Coast Guard District (OAN)
Brickell Plaza Federal Building, Room 406
909 S.E. 1st Avenue
Miami, Florida 33131-3050
ATTN: Chief of Planning and Marine Information
Telephone: (305)350-5621

(2) Commander, Charleston District
U.S. Coast Guard
196 Tradd Street
Charleston, South Carolina 29401
ATTN: Joe Cocking
Telephone: (843) 724-7627

3.6.2 Aids to Navigation within the Dredging Area

The Contractor shall be responsible for any damage to aids to navigation within the dredging areas or areas adjacent thereto caused by his operations.

3.7 COMMUNICATIONS

The Contractor shall furnish, maintain, and operate one FM narrow-band radio transmitter-receiver with a capacity of not less than (1) watt, equipped for operating on the maritime channel 13 at 156.65 MHz. This frequency shall be used for communications with passing vessels, harbor pilots, and bridge operators and has been approved by the Federal Communications Commission for this purpose. It is not required that this frequency be disabled after termination of the contract. The Contractor shall maintain a Contractor-owned cellular phone for communication with Corps of Engineers personnel.

3.8 CERF IMPLEMENTATION (83 JUN OCE).

If the work specified in this contract is performed by a hopper dredge(s), the owner must have an active Basic Ordering Agreement (BOA) for the hopper dredge(s) on file with the Corps. The Contractor shall be obligated to make the hopper dredge(s) available to serve in the Corps of Engineers Reserve Fleet (CERF) at any time that the hopper dredge(s) is performing work under this contract. When the Contracting Officer is notified of the decision to activate this dredge(s) into the CERF, he shall take appropriate action to release the dredge(s). He may then extend or terminate the contract to implement whichever action is in the best interest of the Government. The CERF Contractor shall also be subject to the following conditions:

(a) The Director of Civil Works may require the Contractor to perform emergency dredging at another CONUS (48 contiguous states) site for a period of time equal to the remaining time under this contract at the date of notification plus up to ninety (90) days at the previously negotiated rate which appears on the schedule of prices in the BOA.

(b) The Chief of Engineers may require the Contractor to perform emergency dredging at an OCONUS (Outside CONUS which includes Alaska, Hawaii, Puerto Rico, the Virgin Islands, or U.S. Trust Territories) site for a period of time equal to the time remaining under this contract at the date of notification plus up to one hundred eighty (180) days at the negotiated rate which appears on the schedule of prices in the BOA.

(c) The CERF shall be activated by the Chief of Engineers or the Director of Civil Works; then the Ordering Contracting Officer will notify the Contractor. From the time notification, the selected hopper dredge(s) must depart for the emergency assignment within seventy-two (72) hours for CONUS or ten (10) days for OCONUS assignments.

(d) A confirming delivery order will be issued pursuant to the Basic Ordering Agreement (BOA) by the Ordering Contracting Officer. Such delivery order shall utilize the schedule of rates in the BOA for the specific hopper dredge(s).

(e) If during the time period specified in a, b, or c, above, a CERF vessel(s) is still required, the contract performance may be continued for additional time by mutual agreement.

3.9 DISPOSAL OF EXCAVATED MATERIAL

3.9.1 Dump Logs

In addition to the requirements of Paragraph Dredge Data Logging System, above, the Contractor shall prepare and submit a breakdown of the loads dredged and hauled using the form included in the ATTACHMENTS. This form shall be submitted with the daily construction quality control reports.

3.9.2 Location of Disposal of Dredged Material

Material dredged under this contract shall be transported to and dumped within the EPA-Approved Ocean Disposal Site(s) as shown on the contract drawings and in accordance with these specifications. The doors on the dredge material scows or hopper dredges shall be closed before leaving the Ocean Dredge Material Disposal Site (ODMDS) to insure that all disposal materials are released within the authorized area and that no trails of sediment are left outside the ODMDS. In the event of “misdumps” an investigation shall be conducted by the Corps of Engineers to determine what remediation measures will be required of the Contractor to restore or to mitigate the impacted bottoms as appropriate.

3.9.2.1 Charleston Entrance Channel

The Contractor shall dispose of all dredged material in the Government-furnished ocean dredged material disposal site (ODMDS) as shown on the contract drawings. The dredged material shall be dumped within 50 feet either side of the dump lines shown on the drawings, beginning at Line 25-26, until the bottom elevation of the dump site has been altered such

that no area along these lines is above elevation -25 feet MLLW (mean lower low water). When the area along Line 25-26 is no longer able to receive disposal material, Line 27-28, immediately to the west, shall be used until the fill along it reaches an elevation of -25 feet MLLW, then the next line to the west shall be used, etc. No material shall be placed above elevation -25 feet MLLW in the disposal area. The dredge material scows or hopper dredges (loaded or unloaded) shall never use routes that cross known live bottom areas. Currently this includes any area outside of the ODMDS and south of a line from the center of the ODMDS to the seaward tip of the south jetty. The doors on the dredge material scows or hopper dredges shall be closed before leaving the ODMDS to insure that all disposal materials are released within the authorized area and that no trails of sediment are left outside the ODMDS. In the event of “misdumps” an investigation shall be conducted by the Corps of Engineers to determine what remediation measures will be required of the Contractor to restore or to mitigate the impacted bottoms as appropriate.

3.9.2.2 Georgetown Entrance Channel

The Contractor shall dispose of all dredged material in the Government-furnished ocean dredged material disposal site (ODMDS) as shown on the contract drawings. The dredged material shall be dumped within 50 feet either side of the dump lines shown on the drawings, beginning at Line 25-26, until the bottom elevation of the dump site has been altered such that no area along these lines is above elevation -25 feet MLW (mean low water). When the area along Line 25-26 is no longer able to receive disposal material, Line 27-28, immediately to the south, shall be used until the fill along it reaches an elevation of -25 feet MLW, then the next line to the south shall be used, etc. No material shall be placed above elevation -25 feet MLW in the disposal area.

3.9.2.3 Port Royal Entrance Channel

The Contractor shall dispose of all dredged material in the Government-furnished ocean dredged material disposal site (ODMDS) as shown on the contract drawings. The dredged material shall be dumped within 50 feet either side of the dump lines shown on the drawings, beginning at Line 90E-90W, until the bottom elevation of the dump site has been altered such that no area along these lines is above elevation -30 feet MLW (mean low water). When the area along Line 90E-90W is no longer able to receive disposal material, Line 85E-85W, immediately to the west, shall be used until the fill along it reaches an elevation of -30 feet MLW, then the next line to the west shall be used, etc. No material shall be placed above elevation -30 feet MLW in the disposal area.

3.9.3 Disposal Area Maps

The Contractor shall prepare a series of maps at a scale that shall clearly show the individual dumps, labeled by the same number that is used to record the dump in the daily log. A cumulative summary map or maps of all dumps to date shall be submitted to the Contracting Officer's Representative each week in addition to the daily logs. The

Contractor may continue to use the same map until the density of dumps makes it difficult to identify the individual dumps by number. Maps shall be labeled as map numbers in a series, and lowest and highest dump numbers that appear on each map shall be shown near the map title.

3.9.4 Report

At the end of the contract, the Contractor shall compile the maps, as necessary, into a series, and reduce to eleven inches on the smallest side and folded into a bound (8-1/2"x11") report. Two copies of this report shall be submitted with the daily dump logs and the Consolidated Report.

3.9.5 Location of Pipeline Outfall Points

If work is accomplished by pipeline dredge, a sketch of the disposal area showing the location(s) of the pipeline outfall point(s) shall be included with the daily "Construction Quality Control Report". The limits of the ocean disposal site shall be the same as described in these specifications and as indicated on the contract drawings.

3.10 MISPLACED MATERIAL

Any material that is deposited other than in places designated or approved by the Contracting Officer will not be paid for. Should the Contractor deposit any material outside the designated disposal areas approved by the Contracting Officer, the Contractor shall give immediate notification of the location of the misplaced material and when required, mark or buoy this location. If in the opinion of the Contracting Officer, this misplaced material requires removal, the Contractor shall be required to remove the misplaced material immediately and deposit it in an area designated by the Contracting Officer at no additional cost to the Government.

3.11 SURVEILLANCE OF OCEAN DISPOSAL.

3.11.1 Responsibility

Under the Marine Protection, Research and Sanctuary Act of 1972, the Environmental Protection Agency's Final Ocean Dumping Regulations and Criteria (Federal Register, Vol. 38, No. 198, dated 15 October 1972), the Coast Guard has the responsibility for the surveillance of ocean dumping.

3.11.2 Coast Guard Notification

The Contractor shall notify the local Coast Guard Captain of the Port, at least five days prior to the first ocean disposal. The notification shall be by certified mail with a copy to the Contracting Officer. The following information shall be included in the notification letter:

(1) Project Designation, Corps of Engineer's contract number and name, and Contractor's address and telephone number;

(2) Port of departure
(3) Location of Ocean Disposal Area;
(4) Quantity of material to be deposited in ocean;
(5) Schedule for ocean disposal, giving date and time proposed for first ocean disposal;
(6) Name of vessel or towboat and barge.

3.11.3 Quarters and Meals

The Coast Guard may require Coast Guard personnel to be on board the tow or dump vessel during complete cycles of loading, travel, and disposal in the ocean. Coast Guard personnel will monitor the disposal of the material and obtain any necessary dredged material samples. Meals as normally provided to the crew shall be served to the Coast Guard personnel on board. Likewise, quarters shall be provided for Coast Guard personnel if the dump operation requires two or more continuous shifts. Any charge for these meals and quarters will be paid by the Coast Guard.

3.11.4 Documentation

Any Coast Guard directions concerning the Contractor's method of operation shall be documented and channeled through the Contracting Officer or his authorized representative. This information may be included in the Daily Quality Control or any other method deemed appropriate by the Contractor.

3.12 MEASUREMENT AND PAYMENT

3.12.1 Measurement

The required amount of material removed and placed by dredging according to contract specifications will be measured and paid for by the cubic yard in situ. The volume will be computed between the bottom surface shown by soundings from the last survey made before dredging and the bottom surface shown by the soundings from a survey made within 14 days (weather permitting) after the entire work (i.e. Acceptance Section) specified has been completed. This includes the area within the limits of the overdepth and side slopes described in Paragraph OVERDEPTH AND SIDE SLOPES, less any deductions that may be otherwise required by these specifications.

3.12.1.1 Adjacent Shoals

When two shoals are adjacent to each other and share a common end area (cross section), the common cross section taken to compute the quantity of material available before dredging takes place in the first shoal will be used to compute the quantity of material available for the second adjacent shoal. This cross section will be used in lieu of the cross section taken after dredging occurred in the first adjacent shoal.

3.12.2 Surveys

The maps and/or drawings already prepared, as stated in Section 00800, Paragraph CONTRACT DRAWINGS, MAPS AND SPECIFICATIONS, are believed to represent accurately conditions existing at the time surveyed; however, the depths shown thereon will be verified by the Government and corrected by before dredging soundings taken of the entire area to be dredged under this contract. The first shoal will be sounded by the Government commencing not less than 20 days after Notice to Proceed has been given the Contractor or sooner if requested in writing by the Contractor. The before dredging surveys for the remaining shoals will be sounded commencing not more than 14 days prior to arrival of the Contractor on each section to be dredged. The Contractor shall notify the Government a minimum of ten days prior to estimated time of arrival on each shoal to allow time for before dredging surveys to be conducted. The estimated time of arrival shall be determined by the Contractor. The request for all Government surveys shall be in writing by the Contractor and shall include the shoal number, stationing, and the estimated date of arrival on the section to be dredged, or time of completion. Determination of quantities removed and the deductions made therefrom to determine quantities by place measurement to be paid in the area specified, after having once been made, will not be reopened except on evidence of collusion, fraud, or obvious error.

3.12.2.1 Survey Equipment

The soundings for all dredging surveys under this contract will be taken by the Government with Ross Fathometers or Innerspace Depth Recorders operating on frequency band of 200 KHz.

3.12.3 Payments

Monthly partial payments will be based on approximate quantities estimated by the construction representative using information taken from the surveys as described in Section 00800, paragraph QUANTITY SURVEYS.

3.13 DATUM AND BENCH MARKS

The plane of reference as used in these specifications is that determined by benchmarks shown on Monumentation Maps available for review upon request to Navigation Section (TS-ON), U.S. Army Corps of Engineers, 69A Hagood Avenue, Charleston, South Carolina 29403-5107.

3.14 FINAL EXAMINATION AND ACCEPTANCE (1965 APR OCE)

3.14.1 Examination

Dredging soundings will be taken within 14 days (weather permitting) after the completion of the acceptance section or any section thereof as in the opinion of the Contracting Officer will not be subject to damage by further operations under the contract. Such work will be thoroughly

examined at the cost and expense of the Government by soundings or by sweepings, or both as determined by the Contracting Officer. Should any shoals, lumps, or other lack of contract depth be disclosed by this examination, the Contractor shall be required to remove same by dredging at the contract rate of dredging, but if the bottom is soft and the shoal areas are small and form no material obstruction to navigation, the removal of such shoal may be waived at the discretion of the Contracting Officer. The Contractor or his authorized representative will be notified when soundings and/or sweepings are to be made and will be permitted to accompany the survey party. When the area is found to be in a satisfactory condition, it will be accepted finally. Should more than two soundings or sweeping operations by the Government over an area be necessary by reason of work for the removal of shoals disclosed at a prior sounding or sweeping, the cost of such third and any subsequent soundings or sweeping operations will be charged against the Contractor at the rate of $3,700.00 per day for each day in which the Government plant is engaged in sounding or sweeping and/or is en route to or from the site or held at or near the said site for such operations. The plant and method used for third and subsequent surveys will duplicate that used in previous surveys to the fullest possible extent. The request for acceptance surveys on any shoal shall be given at least five (5) days in advance of the estimated date of completion. The estimated date of completion shall be determined by the Contractor. The request for all Government surveys shall be in writing by the Contractor and shall include the shoal number, stationing, and the expected date of completion.

3.14.2 Acceptance

Final acceptance of the whole or a part of the work and deductions or corrections of deductions made thereon will not be reopened after having once been made, except on evidence of collusion, fraud or obvious error, and the acceptance of a completed section shall not change the time of payment of the retained percentages of the whole or any part of the work.

3.14.4 Acceptance of Work

3.14.4.1 Charleston and Port Royal Entrance Channels

Surveys will be conducted and acceptance of the dredging work for Charleston and Port Royal Entrance Channels will be made after completion of the required dredging for each project in its entirety or the Contractor may elect to request surveys for each 7000-foot section that has been completed in its entirety. No partial survey will be made for the 7000 foot sections. The Contractor shall request surveys in accordance with the paragraph EXAMINATION above.

3.14.4.2 Georgetown Entrance Channel

Each shoal in Georgetown Entrance Channel will be considered an acceptance section and surveys will be conducted for each shoal as

requested by the Contractor in accordance with the paragraph EXAMINATION above.

3.15 ACCOMMODATIONS AND MEALS FOR QUALITY ASSURANCE REPRESENTATIVES (1965 APR OCE)

3.15.1 Office

The Contractor shall furnish regularly to Quality Assurance Representatives on board the dredge or other craft upon which they are employed a suitable separate room for office purposes. The room shall be fully equipped and maintained to the satisfaction of the Contracting Officer; it shall be properly heated, ventilated, and lighted, and shall have a desk which can be locked and chair for each Quality Assurance Representative, and washing conveniences. The entire cost to the Contractor for furnishing, equipping, and maintaining the foregoing accommodations shall be included in the contract price. If the Contractor fails to meet these requirements, the facilities referred to above will be secured by the Contracting Officer, and the cost thereof will be deducted from payments to the Contractor.

3.15.2 Subsistence

If the Contractor maintains on this work an establishment for the subsistence of his own employees, he shall when required furnish to Quality Assurance Representatives employed on the work, and to all Government agents who may visit the work on official business, meals of a quality satisfactory to the Contracting Officer. The meals furnished will be paid for by the Government at a rate of $1.75 per person for each meal.

-- End of Section 02325 --

ATTACHMENTS

ATTACHMENTS

FORMAT

CONTRACTOR'S NAME
(Address)

CONSTRUCTION QUALITY CONTROL REPORT

Date:_____ Report No._____

Contract No._____

Description and Location of Work:_____
_____

Weather: (Clear) (P. Cloudy) (Cloudy): Temperature:_____-Min,_____Max:;
Rainfall_____Inches

Contractor/Subcontractors and Area of Responsibility .
a. _____
b. _____
c._____
d._____
e._____
f._____
g._____

1. Work Performed Today:

(Indicate location and description of work performed. Refer to work performed by prime and/or subcontractors by letter in Table above.)

_____

2. Results of Control Activities:

(Indicate whether: P-Preparatory, I-Initial, or F-Follow-up and include satisfactory work completed or deficiencies with action to be taken.)

_____

3. Test Required by Plans and/or Specifications Performed and Results of Tests:

_____

4. Monitoring of Materials and Equipment:

_____

5. Off-Site Surveillance Activities:

_____

6. Job Safety and Health Deficiencies:

(Daily Comment Required)

_____

7. Remarks:

a. (Cover any conflicts in plans and specifications or instructions.)

b. (Action taken in review of submittal.)

c. (Verbal instructions received.)

_____

CONTRACTOR'S VERIFICATION:

The above report is complete and correct and all material and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications except as noted above.

_____
Chief of Contractor Quality Control

REPORT OF OPERATIONS-PIPELINE, DIPPER OR BUCKET DREDGES

REPORTS, CONTROLS SYMBOL ENGCW-0-13

THRU:	T0:	FROM:	REPORT NO.

CHARACTER OF REPORT: ☐ MAINTENANCE ☐ NEW WORK ☐ DAILY ☐ STATUS ☐ COMPLETION ☐ ANNUAL — DATE OF PERIOD

DREDGE

NAME AND TYPE	SIZE ---->	PIPELINE in. dia. disch.	DIPPER OR BUCKET cu. yds. cap.

HORSEPOWER OF ------->	DREDGE PUMP	SUCTION PIPE JET	CUTTER OR BUCKET	PROPULSION

NUMBER OF CREW MEMBERS ------->	DREDGE	SHORE	OTHER PLANT	TOTAL	WORK SCHEDULE -------->	SHIFTS PER DAY	DAYS PER WEEK
				0			

PROJECT AND BAR

NAME

LOCATION *(include station numbers)*

CHARACTER OF MATERIAL

ABSOLUTE DENSITY GMS/liter	IN PLACE DENSITY GMS/liter	VOIDS RATIO

GRAIN SIZE *D."* *MM D."* *MM D."* *MM* — GEOLOGICAL CLASSIFICATION

CONTRACT OR DREDGING ORDER: NUMBER — ☐ CONTRACTOR ☐ HIRED LABOR — TOTAL NO. OF DAYS ON WHICH WORK WAS DONE

CHANNEL CONDITION

AVERAGE DEPTH ------>	BEFORE DREDGING	AFTER DREDGING	MINIMUM SOUNDING ---->	BEFORE DREDGING	AFTER DREDGING

RIVER STAGE

MINIMUM	TIME	MAXIMUM	TIME	GAGE LOCATION

WEATHER CONDITION: *(clear, cloudy, rain, snow, and fog)* — VISIBILITY *miles* — WIND (maximum velocity & direction)

WORK PERFORMED

ITEM	UNIT	QUANTITY
AVERAGE WIDTH OF CUT	FEET	
TOTAL ADVANCE THIS PERIOD	FEET	
TOTAL ADV. PREVIOIUS TO THIS PERIOD	FEET	
TOTAL ADVANCE TO DATE	FEET	
FLOATING PIPE: SHORE PIPE:		
TOTAL LENGTH OF DISCHARGE PIPE	FEET	
AVERAGE LIFT	FEET	
AVERAGE PUMP SPEED	R.P.M.	
AVG. DREDGED PER PUMP. HR, GROSS	CU. YDS.	
SCOWS LOADED	NUMBER	
AVERAGE LOAD PER SCOW	CU. YDS.	

CUBIC YARDS REMOVED

AMOUNT DREDGED THIS PERIOD:	
(1) GROSS *(computed amount)*	
(2) CREDITED *(pay place)*	
AMOUNT PREVIOIUSLY REPORTED:	
(1) GROSS *(computed amount)*	
(2) CREDITED *(pay place)*	
TOTAL AMOUNT DREDGED TO DATE:	
(1) GROSS *(computed amount)*	
(2) CREDITED *(pay place)*	

ATTENDANT PLANT

ITEM	NAME OR NUMBER	HOURS

NUMBER OF INSPECTIONS: BY DISTRICT PERSONNEL — BY DIV & OCE PERSONNEL

CONTRACT USE ONLY: HAS ANYTHING DEVELOPED WHICH MIGHT LEAD TO A CHANGE ORDER OR CLAIM? ☐ NO ☐ YES (If "YES" explain under remarks on back)

DISTRIBUTION OF TIME

EFFECTIVE WORKING TIME *(chargeable to cost of work)*	HOURS	MIN.
PUMPING OR DREDGING		
PCT. OF EFFECTIVE RENTAL TIME %		
BOOSTER *(in line)* Hrs Min.		
NON-EFFECTIVE WORKING TIME *(chargeable to cost of work)*		
HANDLING PIPE LINES		
HANDLING ANCHOR LINES		
CLEARING PUMP AND PIPE LINE		
WAITING FOR SCOWS		
TO AND FROM WHART OR ANCHORAGE		
CHANGING LOCATION OF PLANT ON JOB		
LOSS DUE TO OPPOSING NATURAL ELEMENTS		
LOSS DUE TO PASSING VESSELS		
SHORE LINE AND SHORE WORK		
WAITING FOR BOOSTER		
MINOR OPER. REPAIRS		
WAITING FOR ATTENDANT PLANT		
PREPAATION AND MAKING UP TOW		
TRANSFERRING PLANT BETWEEN WORKS		
LAY TIME OFF SHIFT AND SATURDAYS		
SUNDAY AND HOLIDAYS		
FIRE DRILL		
MISCELLANEOUS *(explain in remarks)*		
TOTAL NON-EFFECTIVE WORKING TIME	0.00	
PCT. OF NON-EFFECTIVE RENTAL TIME %		
TOTAL EFFECTIVE AND NON-EFFECTIVE TIME *(not chargeable to cost of work)*	0.00	
PCT. OF TOTAL TIME IN PERIOD %		
LOST TIME *(not chargeable to cost of work)*		
MAJOR REPAIRS AND ALTERATIONS		
CESSATION		
COLLISIONS		
MISCELLANEOUS *(explain in remarks)*		
TOTAL LOST TIME	0.00	
PERCENTAGE OF TOTAL TIME %		
TOTAL TIME IN PERIOD	0.00	

ENG FORM 4267 JAN 70 REPLACES ENG FORM 28 *(Costs)*, MAR 53, AND ENG FORM 29 *(Costs)*. 1 JAN 62, WHICH ARE OBSOLETE. *(ER 1125-2-304)*

(Signature and Remarks required on reverse side).

SUMMARY OF COSTS

ITEMS	COST
DIRECT PLANT OPERATING COSTS	
UNIFORM DAILY RATE BASIS *(To be completed when submitting Status and Completion reports).*	
CHARGES: _____ DAYS AT $ _____ PER DAY *(Item 19, ENG Form 22 (Costs) - adjusted to exclude plant increment costs.)*	
➡ OR ⬅	
ACUTAL PLANT COSTS *(To be completed when submitting Annual report.)*	
PAYROLLS *(gross)*	$
Subsistence & quarters or per diem & mileage	$
Fuel _____ BARRELS AT $ _____ PER BARREL	$
WATER	$
LUBRICANTS	$
PLANT OWNERSHIP COSTS *(as computed below)*	$
INSURANCE	$
ATTENDENT PLANT	$
MISCELLANEOUS	$
SUBTOTAL -- UNIFORM DAILY RATE OR ACTUAL COSTS	$
SUBTOTAL -- PLANT UNIT COST $ _____ PER CUBIC YARD.	
SHORE WORK	
SUBTOTAL -- SHORE WORK COSTS	$
SUBTOTAL -- SHORE WORK UNIT COSTS $ _____ PER CUBIC YARD.	
OTHER COSTS	
SURVEYS	$
INSPECTION AND SUPERVISION	$
OVERHEAD	$
OTHER INDIRECT COSTS	$
SUBTOTAL -- OTHER COSTS	$
SUBTOTAL -- OTHER UNIT COSTS $ _____ PER CUBIC YARD.	
GRAND TOTAL - ALL COSTS	$
GRAND TOTAL - OTHER UNIT COSTS $ _____ PER CUBIC YARD.	

OPERATING SUPPLIES

COMMODITIES	CONSUMED		INVENTORY	
	UNIT	QUANTITY	QUANTITY	VALUE
FUEL *(oil)*	BBS			
LUBRICANT *(oil)*	GAL			
LUBRICANT *(grease)*	LBS			
WATER	GAL			
SUBSISTENCE SUPPLIES.....				
MISCELLANEOUS SUPPLIES.....				
TOTAL.....				$0.00

ANNUAL REPORT DATA

(complete when submitting Annual report)

	per min.
COST PER RENTAL MINUTE *(Based on total operating cost)*	$
TOTAL COST OF PLANT *(End of F.Y. reporting period)*	$
BOOK VALUE *(End of F.Y. reporting period)*	$
BALANCE IN PLANT ACCOUNT *(End of F.Y. reporting period)*	$
PLANT OWNERSHIP COSTS *(Actual for F.Y. reporting period):*	
DEPRECIATION	$
REPAIRS	$
CESSATION OF WORK	$
SMALL TOOLS, ETC.	$
TOTAL.....	$ 0.00

REMARKS

SUBMITTED BY *(Name, title, and signature)*	RECOMMENDED BY *(Name, title, and signature*	APPROVED BY *(Name, title, and signature)*

U.S. GOVERNMENT PRINTING OFFICE: 1970 OF-376-047

REPORT OF OPERATIONS -- HOPPER DREDGES

RCS: ENGCW-O-13

TO: COMMANDER/DIRECTOR
U.S. ARMY WATER RESOURCES SUPPORT CENTER
ATTN: WRSC-D, FORT BELVOIR, VA 22060

DISTRICT

DREDGE

EXACT LOCATION OF WORK

☐ MAINTENANCE
☐ NEW WORK
☐ CONSOLIDATED
☐ JOB REPORT

DATE

AV. NUMBER OF PERSONS IN CREW

AV. LENGTH OF CUT FT.	CHARACTER OF MATERIAL		
AV. WIDTH OF CUT FT.	ABSOLUTE DENSITY GMS/LITER	IN PLACE DENSITY GMS/LITER	WATER DENSITY GMS/LITER
AV. DIST. TO DUMP MILES	VOIDS RATIO	GRAIN SIZES: D_{20} MM. D_{50} MM. D_{80} MM.	
HOPPER CAPACITY CU. YDS.	AV. VOLUME OF WATER CU. YDS.	AV. UNFILLED CAPACITY CU. YDS.	

NAVIGATION AND OTHER AIDS, INCLUDING STATEMENT AS TO ADEQUACY

WORK PERFORMED

CUBIC YARDS	THIS PERIOD	PREVIOUSLY	TO DATE
A. HAULED			
B. AGITATED			
C. PAY PLACE *(Credited)*			
D. EXCESS			
E. NATURAL SHOALING OR SCOURING			
F. TOTAL (C&E)			

NUMBER OF LOADS HAULED	NUMBER OF TEST LOADS
AV. LOAD CU. YDS.	AV. ECONOMIC LOAD CU. YDS.
AV. PUMPING TIME	AV. ECONOMIC PUMPING TIME MINS.

ATTENDANT PLANT

NAME OF PLANT	TYPE	HOURS

OPERATING SUPPLIES

COMMODITIES	CONSUMED		INVENTORY	
	UNIT	QUANTITY	QUANTITY	VALUE
FUEL (Oil)	BBLS.			
LUBRICANTS (Oil)	GALS.			
LUBRICANTS (Greased)	LBS.			
WATER	GALS.			
SUBSISTENCE SUPPLIES				
MISCELLANEOUS SUPPLIES				
		TOTAL		

DISTRIBUTION OF TIME

EFFECTIVE WORKING TIME *(Chargeable to Cost of Work)*	HOURS	MINUTES
DREDGING AND HAULING		
PUMPING		
TURNING		
TO AND FROM DUMP		
DUMPING		
TOTAL		
AGITATION		
PUMPING AND TURNING		
TOTAL EFFECTIVE WORKING TIME		
PERCENTAGE OF RENTAL TIME		
NONEFFECTIVE WORKING TIME *(Chargeable to Cost of Work)*		
TAKING ON FUEL AND SUPPLIES		
TO AND FROM WHARF OR ANCHORAGE		
LOSS DUE TO OPPOSING NATURAL ELEMENTS		
LOSS DUE TO TRAFFIC AND BRIDGES		
MINOR OPERATING REPAIRS		
TRANSFERRING BETWEEN WORKS		
LAY TIME		
FIRE AND BOAT DRILLS		
MISCELLANEOUS		
TOTAL NONEFFECTIVE WORKING TIME		
PERCENTAGE OF RENTAL TIME		
TOTAL RENTAL TIME		
PERCENTAGE OF TOTAL TIME		
LOST TIME *(Not Chargeable to Cost of Work)*		
MAJOR REPAIRS AND ALTERATIONS		
CESSATION		
COLLISIONS		
TOTAL LOST TIME		
PERCENTAGE OF TOTAL TIME		
TOTAL TIME IN PERIOD		

MISCELLANEOUS DATA

NUMBER OF INSPECTIONS BY FIELD SUPERVISORY PERSONNEL	PERCENT OF TOTAL PUMPING TIME GAS EJECTION IN USE
NUMBER OF INSPECTIONS BY OFFICE SUPERVISORY PERSONNEL	HOURS DURING PERIOD RADAR IN USE

COST DATA

ITEMS	COST

PAYROLLS *(gross)* $ _____
LESS SUBSISTENCE AND QUARTERS _____ $ _____
SUBSISTENCE _____
FUEL _____ BBLS. AT $ _____ _____
WATER _____ _____
LUBRICANTS _____ _____
PLANT RENTAL _____ _____
INSURANCE _____ _____
ATTENDANT PLANT _____ _____
MISCELLANEOUS _____ _____
TOTAL PLANT OPERATING COST _____ _____
$_____ HAULED $ _____ AGITATED
SURVEYS _____ $ _____
INSPECTION AND SUPERVISION _____ _____
OVERHEAD _____ _____
OTHER INDIRECT COSTS _____ _____
SUBTOTAL _____ _____
TOTAL COST _____ _____

TOTAL COST PER CUBIC YARD:	CREDITED	+ SHOALING CREDITED - SCOURING	TOTAL COST TO REMOVE EXCESS
JOB EST	$	$	$
THIS PERIOD	$	$	$
JOB TO DATE	$	$	$

OPERATING COST PER MINUTE AT WORK $

FORMULA:

$$\frac{\text{EXCESS YARDAGE}}{\text{EXCESS + CREDIT}} \times \text{TOTAL COST}$$

X SHOALING
\- SCOURING

(Based on effective plus noneffective time)

ANNUAL

DATA FROM PLANT COST AND RENTAL LEDGERS
BOOK VALUE _____ 19 _____ $ _____
BALANCE IN PLANT RENTAL ACCOUNT _____ _____
ADDITIONS AND BETERMENTS TO VESSELS _____ _____
COSTS CHARGED TO PLANT RENTAL:
DEPRECIATION _____ _____
CESSATION OF WORK _____ _____
REPAIRS TO HULL _____ _____
REPAIRS TO MACHINERY _____ _____
SMALL TOOLS, ROPE, ETC. _____ _____
TOTAL COST _____ _____

_____
CHIEF BUDGET AND ACCOUNTS BRANCH

REMARKS

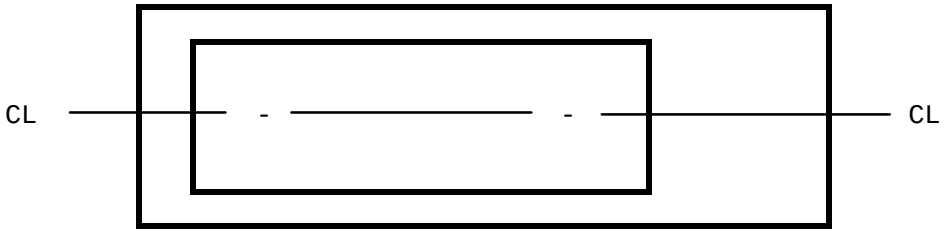
SUBMITTED BY	RECOMMENDED	APPROVED
TITLE	TITLE	TITLE CORPS OF DISTRICT ENGINEER

LOAD REPORT

BULK DENSITY AND HAUL LOSSES

SCOW I.D._____ CONTRACT NO. _____
CAPACITY CHART NO. _____ DATE _____
DISPLACEMENT CHART NO._____ REPORT NO. _____

DUMP COORDINATES: E_____
N_____



HEAVY SCOW PRIOR TO SAIL:

1. DISPLACEMENT: _____(FEET)
_____(TONS)

2. CAPACITY: _____(FEET)
_____(C.Y.)

BULK DENSITY = $\frac{\text{DISPLACEMENT}}{\text{CAPACITY}}$ x (1.1865) = _____GM/CC

HEAVY SCOW PRIOR TO DUMP:

3. DISPLACEMENT: _____(FEET)
_____(TONS)

4. CAPACITY: _____(FEET)
_____(C.Y.)

LOSSES: (1) - (3) = _____(TONS)
(2) - (4) = _____(C.Y.)

10% LOSSES = _____REPAIR REQUIRED

BREAKDOWN OF LOADS DREDGED AND HAULED																DATE					
		TIME PUMP		MINUTES						CUBIC YARDS RETAINED (in terms of in place material)						MID-DEPTH SAMPLES		WEIR HEIGHT FWD		AFT	
Load NO	Unwatered*	Started	Stopped	Pumping	Turning	To Dump	Dumping	To cut	Total	Settled Solids * * *	Suspended Solids * * *	Bin Water Solids	Total * *	Per Pumping Minute	Per Elapsed Minute	Density GMS/ Liter * * *	% Solids (In Place) * * *	E L E V	E L E V	E L E V	E L E V
ECONOMIC LOAD DATA																					
PUMPING TIME (Minutes)				ECONOMIC LOAD (Cu Yds)						TEST LOAD NO.						DATE OF TEST					
REMARKS										MATES											
										DRAG TENDERS											

NOTE: *When Load Is Dredged With Hoppers Unwatered, Indicate By Letter "U"
* * Total Cubic Yards Retained = Settled Solids + Suspended Solids-Bin Water Solids Or Determined Directly By Yardage Meter
* * * Not Necessary When Measuring Load By Yardage Meter

DEFICIENCY TRACKING LOG

DEFICIENCY NUMBER	INITIAL REPORT		SCHEDULED Corrective Action		When Corrected		REMARKS
	Report#	DATE*	Report#	DATE	Report#	DATE**	

*Include initials of who identified deficiency
** Include initials of who corrected deficiency

Log Prepared by:_____

OSHA Form 200

U.S. Department of Labor

For Calendar Year 19____ Page ___ of ___

Company Name

Establishment Name

Establishment Address

Form Approved
O.M.B. No. 1220-0029

Extent of and Outcome of INJURY						Type, Extent of, and Outcome of ILLNESS											
Fatalities	Nonfatal Injuries					Type of Illness							Fatalities	Nonfatal Illness			
Injury Related	Injuries With Lost Workdays				Injuries Without Lost Workdays	CHECK Only One Column for Each Illness (*See other side of form for terminations or permanent transfers.*)							Illness Related	Illnesses With Lost Workdays			Illnesses Without Lost Workdays
Enter DATE of death. Mo./day/yr.	Enter a CHECK if injury involves days away from work, or days of restricted work activity, or both.	Enter a CHECK if injury involves days away from work.	Enter number of DAYS *away from work.*	Enter number of DAYS of *restricted work activity.*	Enter a CHECK if no entry was made in columns 1 or 2 but the injury is recordable as defined above.	Occupational skin diseases or disorders	Dust diseases of the lungs	Respiratory conditions due to toxic agents	Poisoning (systemic effects of toxic materials	Disorders due to physical agents	Disorders associated with repeated trauma	All other occupational illnesses	Enter DATE of death. Mo./day/yr.	Enter a CHECK if illness involves days away from work, or days of restricted work activity, or both.	Enter a CHECK if illness involved days away from work.	Enter number of DAYS *away from work.*	Enter number of DAYS of *restricted work activity.*	Enter a CHECK if no entry was made in columns 8 or 9.
(1)	(2)	(3)	(4)	(5)	(6)	(7)							(8)	(9)	(10)	(11)	(12)	(13)
						(a)	(b)	(c)	(d)	(e)	(f)	(g)						

Certification of Annual Summary Totals By _____ Title _____ Date _____

OSHA No. 200 POST ONLY THIS PORTION OF THE LAST PAGE NO LATER THAN FEBRUARY 1.

Bureau of Labor Statistics
Log and Summary of Occupational
Injuries and Illnesses

NOTE: This form is required by Public Law 91-596 and must be kept in the establishment for *5 years*. Failure to maintain and post can result in the issuance of citations and assessments of penalties. (*See posting requirements on the other side of form.*)

RECORDABLE CASES: You are required to record information about every occupational **death**, every nonfatal occupational **illness**, and those nonfatal occupational **injuries** which involve one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment (other than first aid). (*See definitions on the other side of form.*)

Case or File Number	**Date of Injury or Onset of Illness**	**Employee's Name**	**Occupation**	**Department**	**Description of Injury or Illness**
Enter a nondupli-cating number which will facilitate com-parisons with supple-mentary records.	Enter Mo./day.	Enter first name or initial, middle initial, last name.	Enter regular job title, not activity employee was performing when injured or at onset of illness. In the absence of a formal title, enter a brief description of the employee's duties.	Enter department in which the employee is regularly employed or a description of normal workplace to which employee is assigned, even thought temporarily working in another department at the time of the injury or illness	Enter a brief description of the injury or illness and indicate the part or parts of body affected. Typical entries for this column might be: Amputation of 1st joint right forefinger; Strain of lower back; Contact dermatitis on both hands; Electrocution—body.
(A)	(B)	(C)	(D)	(E)	(F)
					PREVIOUS PAGE TOTALS
					TOTALS (Instructions on other side of form)

MINIMUM BASIC OUTLINE FOR ACCIDENT PREVENTION PROGRAM

This outline is intended to be a guide and may be incomplete dependent on the type of operations to be performed. Its only purpose is to assist the contractor when submitting his proposal for carrying out the accident prevention provisions of the contract. When composing the proposals the Contractor must be mindful to be relevant, specific, and not copy or reproduce statements from safety regulations. Rather, his submitted proposals are to relate "how, who, why, what, where" he plans to perform the contracted work requirements in a safe manner using the Safety and Health Requirements Manual, EM 385-1-1, Revised September 1996 and current revisions to date.
Non-applicable parts of this outline should be disregarded.

1. CONTRACT NO: DATE SUBMITTED:

2. CONTRACTORS NAME, ADDRESS AND TELEPHONE NO:

3. PROJECT LOCATION:

4. CONTRACTORS PAST SAFETY RECORD: (Including work with other Districts.)

A. Analysis of Accident experience

B. Years experience covers

C. Types of Accidents

D. Causes of Accidents

E. Corrective measures taken

F. Statement giving percent debit or credit of annual rate of compensation insurance

5. INVESTIGATION: All accidents investigation for the purpose of preventing similar accidents and gather facts

A. Procedures used in investigation accidents

B. Completeness and promptness of reports

6. SAFETY INSPECTIONS:

A. Who will perform these inspections

B. How often will they be conducted

C. What items will be inspected

1) Hand Tools

2) Equipment

3) Motor Vehicles

4) Housekeeping

5) Safe work practices

6) Sanitation

7) Personal Protective Equipment

7. SAFETY TRAINING

A. Orientation and Instruction of new employee (safety topics)

B. Who will give the orientation and instruction

C. Knowledge of Corps of Engineers Safety Requirements

8. SAFETY MEETINGS:

A. Who will conduct safety meetings

B. What subjects will be discussed

C. How often will meetings be conducted

D. When will reports of these meetings be submitted

E. Do you have an incentive program for safety consciousness

F. Who will administer your overall Accident prevention Program

9. HEALTH AND SANITATION:

A. Drinking Water

1) Source

2) Type of Dispensing Unit

a. methods

b. care of units

B. Toilet Facilities

1) Location

2) Type of Unit

3) Quantity

4) Service Frequency

C. Housing and/or office facilities

1) Location

2) Type of Accommodations

D. Medical Facilities

1) First Aid Capabilities

a. Number of trained personnel and certificate of qualifications

b. Number and type of first aid kits and supplies

c. How often are instructions given to employees

2) Professional care and services (names, addresses and phone numbers)

a. Local physicians

b. Hospital Facilities

c. EMS or Ambulance Service

3) Emergency Evacuation for Critically Injured personnel

a. Procedure

b. Helicopter Service and Phone Number

10. FIRE PREVENTION AND PROTECTION:

A List your Fire Fighting Personnel

1) Who has definite responsibility

2) How often are personnel trained

B. Fire Fighting Equipment/Extinguishers

1) Type of Service

2) Is it adequate

3) Where is it located

4) When is maintenance and inspection performed

C. Flammable

1) Types stored

2) How stored (methods)

3) Where stored (containers, cabinets, etc)

4) Dispensing methods

11. PERSONAL PROTECTIVE EQUIPMENT (PPE): (Safety hats, goggles, personal flotation devices, safety shoes, respirators, etc.

A. Provided

B. Use required

C. Maintenance of PPE

D. Storage

12. LIGHTING:

A. On mobile equipment

B. Work areas

C. Access to work areas

13. TRANSPORTING PERSONNEL:

A. Equipment used

1) Design

2) Capacity

3) Maintenance and frequency

B. Operators and Qualifications

14. MACHINERY AND EQUIPMENT: (includes floating plant)

A. Number and type equipment

B. Pre-work safety checks

C. Guards and safety devices

D. Maintenance and Servicing

E. Load tests

F. Operating Personnel

1) Qualifications and Certification

2) Responsibilities

3) Observance of instructions, etc.

15. CLEARING OPERATIONS:

A. Burning

16. ACCESS FACILITIES:

A. Ladders

B. Stairways

17. HANDTOOLS

A. Electric

B. Pneumatic

C. Explosive activated

D. Other (specify)

18. WELDING AND BURNING OPERATIONS:

A. Type Equipment

B. Personal Protective Equipment and Devices

C. Storage of compressed cylinders (full and empty)

D. Safe practices

19. HEATING DEVICES:

A. Types

B. Fuel

C. Maintenance

D. Locations

20. RIPRAP - METHODS OF PLACEMENT:

21. PROTECTION OF THE PUBLIC:

A. Visitors

B. Pedestrians

C. Motor vehicles

D. Controls and procedures

22. HOUSEKEEPING POLICY:

A. Procedures

B. Methods

C. Debris Disposal

23. EXCAVATIONS:

A. Type

B. Depth

C. Shoring

D. Sloping

24. WATER SAFETY:

A. Type and size floating plant

B. Use of personal protective equipment (PPE)

C. Life saving skiff

D. Lifesaving and rescue drills

E. Diving policy and notifications procedures (Separate plan must be submitted)

25. ELECTRICAL WIRING

A. Voltage and uses

B. Elevated and/or buried

C. Grounding

D. Ground fault circuit interrupters (GFCI's)

E. Operators adjacent to overhead lines

26. NOISE ABATEMENT:

A. Hearing Conservation Program

B. Source

C. Exposure controls (PPE)

27. HAZARD COMMUNICATION PROGRAM:

A. Description of Company Policy

B. Materials Safety Data Sheets (MSDS)

C. Communication Methods with Employees

28. ALCOHOL AND DRUG POLICY:

29. COMPLIANCE STATEMENT:

(All work will be performed in accordance with Corps of Engineers' Safety and Health Requirements Manual, EM 385-1-1, Revised September 1996, and current revisions to date, and will included any additional measures the Contracting Officer deems necessary for the prevention of Accidents.)

30. OTHER SAFETY HAZARDS:

(Describe any other hazards you may anticipate for this particular job and those measures that will be taken to eliminate them.)

31. ACTIVITY HAZARD ANALYSIS:

EM 385-1-1, requires an Activity Hazards Analysis to be prepared by the Contractor. This (phase plan) will be attached to the accident prevention plan. Work will not proceed until these plans have been accepted by the Government.

This plan has been reviewed and determined appropriate for the safe operations of this job.

_____

PRIME CONTRACTOR

_____

AUTHORIZED REPRESENTATIVE
OF THE CONTRACTING OFFICER

_____

CHIEF, SAFETY OFFICE

ACTIVITY HAZARD ANALYSIS

ACTIVITY_____ANALYZED BY/DATE_____REVIEWED BY/DATE_____

PRINCIPAL STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS	
Identify the principal steps involved and the sequence of work activities	Analyze each principal step for its potential hazards	Develop specific controls for each potential hazard.	
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	SUPERVISORY REQUIREMENT	TRAINING REQUIREMENT
List of equipment/machinery to be used in conducting the work activities.	List inspection requirements for the equipment/machinery listed.	List the names of the individuals responsible for the safe execution of these activities	Determine requirements for worker training including hazard communicaton.

REPORT OF WEEKLY SAFETY MEETING_____
(DR 385-1-4)

TO: Chief, Safety Office	FROM

DATE:_____ TIME:_____ (A.M./P.M.)

No. Employees Present_____ Duration:_____

Old Business: (Review report of last meeting. Follow up on action taken or anticipated to correct any safety deficiencies brought up at last meeting. Discuss any unfinished business.)

New Business: (Discuss any unsafe acts or conditions observed since last safety meeting and any mishaps or injuries which occurred during the week.)

Safety Presentation: Safety talk, movie, or slide presentation on subject that is relevant to operation at hand.)

_____	_____
SIGNATURE & DATE Government Representative	SIGNATURE & DATE Contractor Safety Representative

SAFETY CHECKLIST FOR FLOATING PLANT

Contract # and title:	
Contractor:	Subcontractor:
Plant Name:	Owner:
Superintendent:	Captain:
Engineer:	Number in crew:
Contract inspector:	Date inspected:

	Yes	No	N/A
1. Is a copy of the current USCG Form 835 available for plants regulated by USCG? (19.A.01)			
2. Is documentation of an accredited marine surveyor (SAMS or NAMS) available for non USCG inspected plants? (19.A.01)			
3. Do all officers and crew posses an appropriate USCG license or USACE license and certification? (19.A.02)			
4. Are periodic inspections and test records of all floating plant, equipment, and machinery available as part of the official project file? (19.A.01)			
5. Is there a severe weather plan which contains the following available? (19.A.03) a. a description of potential types of severe weather hazards and steps to guard against the hazards? b. the time frame for implementing the plan? c. the name and location of the safe harbor? d. the name of the vessels which will be used to move any non-self propelled plant, and their type, capacity, speed, and availability? e. river gage readings at which floating plant must be moved away from dams, river structures, etc. to safe areas?			

	Yes	No	N/A
6. Is the station bill conspicuously posted throughout the vessel? (19.A.04)			
7. Has each crew member been given a written description of their emergency duties and are they familiar with them? (19.A.04)			
8. Have the following drills and tests been recorded in the station log? (19.A.04) a. abandon ship drill? b. fire drill? c. man overboard drill? d. pump shell or pipe rupture? e. hull failure? f. emergency power and lighting tests? g. bimonthly emergency power generator tests? h. bimonthly emergency lighting storage batteries tests?			
9. Are material safety data sheets(MSDSs) available for all hazardous materials on board? (06.B.01)			
10. Are employees trained to handle hazardous materials? (06.B.01)			
11. Are at least two employees on each shift certified in CPR and first aid? (03.A.02)			
12. Is there a first aid log at each first aid station? (01.D.04)			
13. Are first aid kits located in a readily accessible location and adequately stocked? (03.B.01 & .02)			
14. Is there an adequate supply of approved, potable drinking water available? (02.A.01)			
15. Are outlets dispensing non-potable water clearly marked “Water Unfit For Drinking, Washing or Cooking”?(02.A.07)			
16. Are the proper numbers of toilets, washbasins and showers provided? (02.B.06 & .07)			

	Yes	No	N/A
17. Are water, soap, and a means of drying available? (02.C.02)			
18. Is the latest information published by the USCG regarding aids to navigation available on board the vessel? (19.A.11)			
19. Is the vessel equipped with: (19.A.05) a. fenders? b. axes or other emergency cutting equipment? c. an appropriate navigational signal device? d. general alarm system operated from primary electrical system with standby batteries on trickle charge? e. easily accessible emergency controls that are adequately protected against accidental operation? f. explosion-proof lights around gasoline and oil barges or other locations where a fire or explosive hazard exists? g. interconnected emergency alarms? h. smoke alarms in living quarters? i. doors that open from both sides? j. clearly marked emergency exits? k. emergency stops for prime movers operating a dredge pump? l. GFCI protection on grounded 120 or 240 volt systems in toilet/shower spaces, galley, machinery spaces, weather deck, exterior or near any sinks? m. properly maintained and identified water tight compartments?			
20. Fuel systems: (19.A.06) a. Are tanks or lines free of gauge glasses or try cocks? b. Do all fuel tanks have shutoff valves that can be operated outside the compartment in which the tank is located and outside the engine compartment and outside the house bulkheads at or above the weather deck? c. Is there a shut off valve at the engine end of the fuel lines that are 6 feet or more in length and can it be operated from outside the house bulkheads at or above the weather deck? overboard discharge?			

	Yes	No	N/A
d. Are all carburetors on gasoline engines equipped with a backfire trap or flame arrestor? e. Are all carburetors (except downdraft type) equipped with a drip pan, with flame screen, which is continuously emptied by suction from the intake manifold or if permitted by the overboard discharge? f. Are fuel storage tanks diked or curbed IAW NAVFAC DM-22? If not are portable tanks used IAW USCG requirements in 46CFR Parts 64 and 98.3?			
21. Are cables which cross the waterways between floating plants or between plant and mooring marked? (19.A.07)			
22. Is there a fire and emergency warning system (or an established fire watch) on all vessels where people are quartered? (19.A.07)			
23. Are all floors, decks, and bilge's free of accumulation of fuel and grease? (19.A.07)			
24. Are there holdbacks or rings available to secure equipment during rough weather? (19.A.07)			
25. Are all deck openings, elevated surfaces, and similar locations provided with guardrails, bulwarks, or taut cable guardlines? (19.A.07)			
26. Are all rotating machinery, hot pipes, and moving cables guarded against accidental contact? (16.B.03)			
27. Are hazardous energy control procedures available to insure that machinery will not be operated while greasing or making repairs? (12.A.01 & 16.A.08)			
28. Are decks free of tripping hazards? or adequately marked in yellow? (19.A.07)			
29. Is all deck cargo carried on fuel barges placed on dunnage? (19.A.07)			
30. Are all pieces of floating plants operating as one unit securely fastened together with no openings(or with guarded openings)? (19.A.07)			
31. Is there a list of confined spaces available? (19.A.08)			

32. Are all permitted required confined spaces labeled? (19.A.08)	Yes	No	N/A
33. Are engine spaces housing internal combustion engines having electric spark ignition systems equipped with exhaust fans? (19.A.10)			
34. Are all machinery spaces and non-diesel fuel tanks compartments equipped with at least 2 ventilators, fitted with fans? (19.A.10)			
35. Are the following spaces provided with an adequate natural ventilation system? (19.A.10) a. spaces containing a portable fuel tank? b. living spaces or galley? c. other compartment spaces?			
36. Do vent intakes extend to within 1 foot of the bottom of the compartment? (19.A.10)			
37. Is suitable eye protection provided at battery charging stations? (05.B.01 & .05)			
38. Are eye wash stations provided at battery charging stations? (6.B.02)			
39. Are flammable items such as paint and thinners properly stored? (9.B)			
40. Are gasoline and other flammable liquids properly stored, dispensed, and handled? (09.B.01-.30)			
41. Does all electrical wiring meet requirements of USCG-259, the National Electrical Safety Code and the National Electric Code? (11.A.01)			
42. Are insulated mats provided at locations where machinery has exposed live parts? (11.A.07)			
43. Are switch and transformer banks adequately protected and marked to keep unauthorized personnel out of the danger area? (11.A.02)			
44. Are portable electric tools grounded by a multiconductor cord with an identified conductor and a multicontact polarized plug-in receptacle? (11.C.01)			

	Yes	No	N/A
45. Are ground fault circuit interrupters provided in locations where portable tools could be used? (11.C.05)			
46. Are flexible cords protected in work area, appropriately secured or suspended and are they used for appropriate useages. (11.A.03 and Table 11-1?)			
47. Are all means of access properly secured, guarded and free of slipping and tripping hazards? (19.B.01)			
48. Are all working decks, stair treads, ship ladders, platforms, catwalks, and walkways, provided with non-slip surfaces? (19.B.01)			
49. Are grab bars provided on the sides of super structure of tugs, tenders, and launches except where railings are present? (19.B.01)			
50. Are double rung or flat tread type Jacob's ladders restricted to use only when no safer form of access is practical? (19.B.01)			
51. Is there a safe means for boarding or leaving the vessel? (19.B.02)			
52. Is there a stairway, ladder, ramp, gangway, or personnel hoist provided at all personnel points of access with breaks of 19" or more in elevation? (19.B.02)			
53. Are gangways and ramps: (19.B.02) a. secured at one end by at least one point on each side with lines or chains to prevent overturning? b. supported at the other end in such a manner as to support them and their normal loads in the event they slid off their supports? c. placed at an angle no greater than that recommended by the manufacturer? d. provided with a standard guardrail?			
54. Are stairs or permanent inclined ladders provided for vertical access between decks? (9.B.03)			

	Yes	No	N/A
55. Is there at least 2 feet of clearance on outbord edges used for passageways? (19.B.3)			
56. Is the vessel equipped with at least one portable or permanent ladder with at leastr one portable or permanent ladder with which to rescue a person in the water? (19.B.04)			
57. Are there at least 2 means of escape from all assembly, sleeping and messing areas on the plant? (19.B.04)			
58. Are all means of access maintained safe and functional? (19.B.04)			
59. Are all floating pipelines used as walkways equipped with a walkway which is at least 20″ wide and has a handrail on at least one side? (19.B.05)			
60. Are floating pipelines that are not intended as walkways barricaded on both ends?(19B.05)			
61. Are positive measures taken to raise and secure the ladder and to block suction and discharge lines during maintenance on pumps and suction or discharge lines? (19.D.01)			
62. Do floating or trestle supported dredge pipelines display the following lights at night and in periods of restricted visibility: (19.D.02) a. One row of yellow lights that : (1) flash 50-70 times per minute? (2) are visible all around the horizon? (3) are visible for at least 2 miles on a clear night? (4) are between 3-10 feet above the water? (5) are approximately evenly spaced? (6) are not more than 30 feet apart where the pipeline crosses a navigable channel? (7) are sufficient in number to clearly show the pipeline's length and course? b. two red lights at each end of the pipeline (including ends in a channel where the pipeline is separated to allow vessels to pass) that: (1) are visible all around the horizon? (2) are visible for at least 2 miles on a clear dark night? (3) are 3 feet apart in a vertical line with the lower light at the same height above the water as the flashing yellow light?			

	Yes	No	N/A
63. Is the dredge designed such that a failure or rupture of any dredge pump component including the pipe shall not cause the dredge to sink? (19.D.04)			
64. Is submerged pipeline resting on the bottom where it crosses the navigation channel and is it and the anchoring system no higher than the required project depth? (19.D.03)			
65. Is buoyant or semi-buoyant pipeline fully submerged and on the bottom? (19.D.03)			
66. Is raised pipeline adequately marked? (19.D.03)			
67. Is a bilge alarm or shutdown interface available on any dredge with the dredge pump below the waterline? (19.D.07)			
68. Are two positive means available to secure “stone boxes” when the boxes are under positive pressure? (19.D.08)			
69. Remarks: (Enter actions taken for “no” answers.)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

SAFETY CHECKLIST FOR LAUNCHES, MOTORBOATS AND SKIFFS

Contract # and title:	
Contractor:	Subcontractor:
Name of equipment:	Superintendent:

	Yes	No	N/A
1. Is a qualified crew person assigned to assist with deck duties under the following circumstances: (19.C.01) a. when extended trips(more than 2 hours) are made from the work site? b. when conditions of navigation make it hazardous for an operator to leave the wheel while underway? c. when operation other than tying-in require the handling of lines? d. when operating at night or in inclement weather? e. when towing?			
2. Are all motorboats, launches and skiffs posted with the number of passengers and weight they can carry? (19.C.02)			
3. Is there a PFD available for each passenger and crew member? (19.C.02)			
4. Do all launches and motorboats that are less than 26 feet in length have at least one 1A-10B:C fire extinguisher on board? (19.C.03)			
5. Do all launches and motorboats that are 26 feet or more in length have at least 2 1A-10B:C fire extinguishers on board? (19.C.03)			

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	Yes	No	N/A
6. Do all launches and motorboats that have gasoline or liquid petroleum gas power plants or equipment in cabins, compartments, or confined spaces have built-in automatic CO2 or other equally effective type of fire extinguishing system? (19.C.03)			
7. Remarks: (Enter actions taken for “no” answers.)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

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SAFETY CHECKLIST FOR CRAWLER, TRUCK & WHEEL MOUNTED CRANES

Contract # and title:			
Equipment name & number: owned or leased?			
Contractor:	Subcontractor:		
Contract Inspector:	Date inspected:		
	Yes	No	N/A
1. Unless the manufacture has specified an on-rubber rating, outriggers will be fully extended and down? (16.D.10)			
2. Are lattice boom cranes equipped with a boom angle indicator, load indicating device, or a load moment indicator? (16.D.01)			
3. Are lattice boom and hydraulic cranes equipped with a means for the operator to visually determine levelness? (16.D.02)			
4. Are lattice boom and hydraulic cranes, except articulating booms cranes, equipped with drum rotation indicators located for use for the operator? (16.D.03)			
5. Are lattice boom and hydraulic mobile cranes equipped with a boom angle or radius indicator within the operator's view? (16.D.04)			
6. Are lattice boom cranes, with exception of duty cycle cranes, equipped with an anti-two blocking device? (16.D.05)			
7. When duty cycle machines are required to make a non-duty lift, is the crane equipped with an international orange warning device and is a signal person present? (16.D 05)			
8. Are the following with the crane at all times: (16.C.02) a. the manufacturer's operating manual? b. the load rating chart? c. the crane's log book documenting use, maintenance, inspections and tests? d. operating manual for crane operator aids used on the crane.			

	Yes	No	N/A
9. Are the following on the project site: a. completed periodic inspection report prior to initial work? (16.C.12) b. pre-operational checklist used for daily inspection? (16.C.12) c. written reports of the operational performance test? (16.C.13) d. written reports of the load performance test? (16.C.13)			
10. Are all operators physically qualified to perform work? (16.C.05)			
11. Are all operators qualified by written and practical exam or by appropriate licensing agency for the type crane they are to operate? (16.C.05)			
12. Is the crane designed and constructed IAW the standards listed in Table 16-1? (16.C.06)			
13. Is a hazard analysis for set-up and set-down available? (16.C.08)			
14. Are accessible areas within the swing radius of the rear of the crane barricaded? (16.C.09)			
15. Are there at least 3 wraps of cable on the drum? (16.C.10)			
16. Are the hoisting ropes installed IAW the manufacturer’s recommendations? (16.C.10)			
17. Are critical lift plans available? (16.C.18)			
18. Are minimum clearance distance for high voltage lines posted at the operator’s position? (11.E.04)			
19. Do older lattice boom cranes with anti-two block warning devices in lieu of anti-two block prevention devices have a written exemption? (16.D.05)			
20. Is the slow moving emblem used on all vehicles which by design move at 25 MPH or less on public roads? (08.A.04)			
21. Are all vehicles which will be parked or moving slower than normal traffic on haul roads equipped with a yellow flashing light or flasher visible from all directions? (16.A.13)			

	Yes	No	N/A
22. Is all equipment to be operated on public roads provided with: (16A.07) a. headlights? b. brake lights? c. taillights? d. back-up lights? e. front and rear turn signals?			
23. Are seat and seat belts provided for the operator and each rider on equipment? (16.A.07 and 16.B.08)			
24. Is all equipment with windshields equipped with powered wipers and defogging or defrosting devices? (16.A.07)			
25. Is the glass in the windshield or other windows clear and unbroken to provide adequate protection and visiblity for the operator? (16.A.07, 16.B.10)			
26. Is all equipment equipped with adequate service brake system and emergency brake system? (16.A.18)			
27. Are areas on equipment where employees walk or climb equipped with platforms, footwalks, steps, handholds, guardrails, toeboards and non-slip surfaces? (16.B.03)			
28. Is all self propelled equipment equipped with automatic, audible, reverse signal alarms? (16.B.01)			
29. Is there a record of manufacturer's approval of any modification of equipment which affects its capacity or safe operation? (16.A.18)			
30. Are truck and crawler cranes attached to a barge or pontoon by a slack tiedown system? (16.F.06)			
31. Have the following conditions been met for land cranes mounted on barges or pontoons: (16.F.04) a. Have load ratings been modified to reflect the increased loading from list, trim, wave, and wind action? b. Are all deck surfaces above the water? c. Is the entire bottom area of the barge or pontoon submerged? d. Are tie downs available? e. Are cranes blocked and secured?			
32. Are all belts, gears, shafts, spindles, drums, flywheels, or other rotating parts of equipment guarded where is a potential for exposure to workers? (16.B.03)			

	Yes	No	N/A
33. Is the area where the crane is to work level, firm and secured? (16.A.10)			
34. Is a dry chemical or carbon dioxide fire extinguisher rated at least 5-B:C on the crane? (16.A.26)			
35. Are trucks, for truck mounted cranes, equipped with a working reverse signal alarm? (16.B.01)			
36. Is a signal person provided where there is danger from swinging loads, buckets, booms, etc.? (16.B.13)			
37. Is there adequate clearance from overhead structures and electrical sources for the crane to be operated safely? (16.C.09)			
38. Is there adequate lighting for night operations? (16.C.19)			
39. Has the the boom stop test on cable-supported booms been performed? (16.D.06)			
40. Is the boom disenaging device functioning as required? (16.D.06)			
41. Has all rigging and wire rope been inspected? (Section 15)			
Remarks:(Enter actions taken for all “no” answers.)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

SAFETY CHECKLIST FOR PORTAL, TOWER, AND PILLAR CRANES

Contract # and Title:			
Equipment name & number: owned or leased?			
Contractor:	Subcontractor:		
Contract Inspector:	Date Inspected:		
	Yes	No	N/A
1. Are the following available: (16.E.02) a. written erection instructions? b. listing of the weight of each component? c. an activity hazard analysis for the erection? d. does the activity hazard analysis contain (1.) location of crane and adjacent structures? (2.) foundation design and construction requirements? (3.) clearance and bracing requirements?			
2. Is there a boom angle indicator within the operator's view? (16.E.04)			
3. Are luffing jib cranes equipped with: (16.E.05) a. shock absorbing jib stops? b. jib hoist limit switch? c. jib angle indicator visible to operator?			
4. If used, do rail clamps have slack between the point of attachment to the rail and the end fastened to the crane? (16E.06)			
5. Are the following with the crane at all times: (16.C.02) a. the manufacturer's operating manual? b. the load rating chart? c. the crane's log book documenting use, maintenance, inspections and tests? d. the operating manual for crane operational aids used on the crane?			

	Yes	No	N/A
6. Are the following on the project site: a. completed periodic inspection report prior to initial work? (16.C.12) b. pre-operational checklist used for daily inspections? (16.C.12) c. written reports of the operational performance tests? (16.C.13) d. written reports of the load performance tests? (16.C.13)			
7. Is every crane operator certified by a physician to be physically qualified to perform work? (16.C.05)			
8. Are all operators qualified by written and practical exam or by appropriate licensing agency for the type crane they are to operate? (16.C.05)			
9. Is the crane designed and constructed IAW the standards listed in Table 16-1? (16.C.05)			
10. Is a hazard analysis for set-up and set-down available? (16.C.08)			
11. Are there at least 3 wraps of cable on the drum? (16.C.10)			
12. Are the hoisting ropes installed IAW the manufacturer’s recommendations? (16.C.10)			
13. Is the a record of manufacturer’s approval of any modification of equipment which affects its capacity or safe operation? (16.A.07)			
14. Remarks: (Enter actions taken)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

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SAFETY CHECKLIST FOR RIGGING

Contract # and title:			
Equipment name & number: owned or leased?			
Contractor	Subcontractor:		
Contractor inspector:	Date inspected:		
	Yes	No	N/A
1. Has all defective rigging been removed? (15.A.01)			
2. Is rigging stored properly? (15.A.01)			
3. Are running lines within 6.5’ of the ground or working level guarded? (15.A.03)			
4. Are all eye splices made in an approved manner with rope thimbles? (sling eyes excepted) (15.A.04)			
5. Are positive latching devices used to secure loads? (15.A.05)			
6. Are all custom lifting accessories marked to indicate their safe working loads? (15A.07)			
7. Are all custom designed lifting accessories proof-tested to 125% of their rated load? (15.A.07)			
8. Are the following conditions met for wire rope: (15.B.01-09) a. Are they free of rust or broken wires? b. Are defective ropes cut up or marked as unusable? c. Do rope clips attached with U-bolts have the U-bolts on the dead end or short end of the rope? d. Are protruding ends of strands in splices on slings and bridles covered or blunted? e. Except for eye splices in the end of wires and for all endless wire rope slings, are all wire ropes used in hoisting, lowering, or pulling loads one continuous piece, free of knots or splices?			

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	Yes	No	N/A
f. Do all eye splices have at least 5 full tucks? g. If used, are wedge sockets fastening attached without attached the dead end of the wire rope to the live rope? h. Are they free of eyes or splices formed by wire rope clips or knots?			
9. Are the following conditions met for chain? (15.C.01-04) a. Are all chains alloyed? b. Do all coupling links or other attachments have rated capacities at least equal to that of the chain. c. Are makeshift fasteners restricted from use?			
10. Are the following conditions met for fiber rope:(15.D.01-07) a. Are all ropes protected from freezing, excessive heat or corrosive materials? b. Are all ropes protected from abrasion? c. Are splices made IAW manufacture's recommendations? d. Do all eye splices in manila rope contain at least 3 full tucks and do all short splices contain at least 6 full tucks(3 on each side of the centerline of the splice)? e. Do all splices in layed synthetic fiber rope contain at least 4 full tucks and do short splices contain at least 8 full tucks (4 on each side of the centerline of the splice)? f. Do the tails of fiber rope splices extend at least 6 rope diameters (for rope 1" diameter or greater) past the last full tuck? g. Are all eye splices large enough to provide an included angle of not greater than 60* at the splice when the eye is placed over the load or support?			
11. Are the following conditions met for all slings:(15.E.01-06) a. Is protection provided between the sling and sharp surfaces? b. Do all rope slings have minimum clear length of 40 times the diameter of component ropes between each end fitting or eye splice? c. Do all braided slings have a minimum clear length of 40 times the diameter of component ropes between each end fitting or eye splice?			

	Yes	No	N/A
d. Do all welded alloy steel chain slings have affixed permanent identification stating size, grade, rated capacity and manufacturer? e. Is each synthetic web sling marked or coded to identify its manufacturer, rated capacities for each type hitch and the type material?			
12. Are drums, sheaves, and pulley smooth and free of surface defects? (15.F.01)			
13. Is the ratio of the diameter of the rigging and the drum, block sheave or pulley thread diameter such that the rigging will adjust without excessive wear, deformation, or damage? (15F.02)			
14. Have all damaged drums, sheaves and pulleys been removed from service? (15.F.04)			
15. Are all connections, fittings, fastenings, and attachments of good quality, proper size and strength, and installed IAW manufacturer's recommendations? (15.F.05)			
16. Are all shackles and hooks sized properly? (15.F.06 & .07)			
17. Are hoisting hooks rated at 10 tons or greater provided with safe handling means? (15.F.07)			
18. Do all drums have sufficient rope capacity? (15.F.08)			
19. Is the drum end of the rope anchored by a clamp securely attached to the drum in a manner approved by the manufacturer? (15.F.08)			
20. Do grooved drums have the correct groove pitch for the diameter of the rope and is the groove depth correct? (15.F.08)			
21. Do the flanges on grooved drums project beyond the last layer of rope at a distance of either 2″ or twice the diameter of the rope, whichever is greater? (15.F.08)			
22. Do the flanges on ungrooved drums project beyond the last layer of rope a distance of either 2.5″ or twice the diameter of the rope, which ever is greater.			

	Yes	No	N/A
23. Are the sheaves compatible with the size of rope used and as specified by the manufacture? (15F.09)			
24. Are sheaves properly aligned, lubricated, and in good condition? (15.F.09)			
25. When rope is subject to riding or jumping off a sheave, are sheaves equipped with cablekeepers? 915.F.09)			
26. Are eye bolts loaded in the plane of the eye and at angles less than 45* to the horizontal? (15.F.10)			
27. Remarks: (Enter actions taken for “no” answers.)			
Contractor inspector signature			
Contractor QC/safety/project manager signature			

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SAFETY CHECKLIST FOR MOTOR VEHICLES , TRAILERS AND TRUCKS

Contract # and title: owned or leased?	
Equipment name & number:	
Contractor:	Subcontractor:
Contractor inspector:	Date inspected:

	Yes	No	N/A
1. Are records of safety inspections of all vehicles available? (18.A.02)			
2. Are all vehicles to be operated between sunset and sunrise equipped with: (18.A.04) a. 2 headlights? b. taillights and brake lights? c. front and back turn signals? d. 3 emergency flares, reflective markers, or equivalent portable warning devices?			
3. Are vehicles, except trailers or semi-trailers having a gross weight of 5000 lbs or less, equipped with service brakes and manually operated parking brakes? (18.A.05)			
4. Are service brakes on trailers and semitrailers controlled from the driver's seat of the prime mover? (18A.06)			
5. Does the vehicle have: (18.A.06) a. a speedometer? b. a fuel gage? c. an audible warning device (horn)? d. a windshield & adequate windshield wiper? e. an operable defroster and defogging device? f. an adequate rearview mirror? g. a cab, cab shield, and other protection to protect the driver from the elements and falling or shifting materials? h. non-slip surfaces on steps? I. a power-operated starting device?			

	Yes	No	N/A
6. Is all the glass safety glass and is all broken or cracked glass replace? (18.A.07)			
7. Do trailers meet the following: (18A.08) a. Are all towing devices adequate for the weight drawn? b. Are all towing devices properly mounted? c. Are locking devices or a double safety system provided on every 5th wheel mechanism and tow bar arrangement to prevent accidental separation? d. Are trailers coupled with safety chains or cables to the towing vehicle? e. Are trailers equipped with the power brakes equipped with a break-away device which will lock-up the brakes in the event the trailer separates from the towing vehicle?			
8. Are all dump trucks:(18.A.10) a. equipped with a holding device to prevent accidental lowering of the body? b. equipped with a hoist lever secured to prevent accidental starting or tipping? c. equipped with means to determine (from the operator’s position) if the dump box is lowered? d. equipped with trip handles for tailgates that allow the operator to be clear?			
9. Are all buses, trucks and combination of vehicles with a carrying capacity of 1.5 tons or more, to be operated on public roads equipped with: (18.A.11) a. 3 reflective markers? b. 2 wheel chocks for each vehicle? c. at least one 2A:10B:C fire extinguisher? d. at least two properly rated fire extinguishers (for vehicles carrying flammable cargo)? e. a red flag not less than 1 foot square.			
10. Is vehicle exhaust controlled so as not to present a hazard to personnel? (18.A.13)			
11. Are all rubber tired motor vehicles equipped with fenders or with mud flaps if the vehicle is not designed for fenders? (18.A.14)			

	Yes	No	N/A
12. Are all vehicles, except buses, equipped with seat belts? (18.B.02)			
13. Does all self-propelled construction and industrial equipment have a working reverse signal alarm? (16.B.01)			
14. Are all hot surfaces of equipment, including exhaust pipes or other lines, guarded or insulated to prevent injury or fire? (16.B.03)			
15. If an off the road vehicle, is it equipped with rollover protective structures? (16.B.12)			
16. Remarks: (Enter actions taken for “no” answers)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

SAD Form 1666d-R Mar 97 Previous editions may be used for contracts referencing the 1992 edition of EM 385-1-1.

SAFETY CHECKLIST FOR CRAWLER TRACTORS AND DOZERS

Contract # and title:	
Equipment name & number: owned or leased?	
Contractor:	Subcontractor:
Contractor inspector:	Date inspected:

	Yes	No	N/A
1. Are initial and daily/shift inspection records available? (16.A.01& .02)			
2. Are only qualified operators assigned to operate mechanized equipment? (16.A.04)			
3. Are sufficient lights provided for night operations? (16.A.11)			
4. Is the unit shut down before refueling? (16.A.14)			
5. Does the unit have as a minimum a 5-B:C fire extinguisher? (16.A.26)			
6. Is there an effective, working reverse alarm? (16.B.01)			
7. Are moving parts, shafts, sprockets, belts, etc., guarded? (16.B.03 ,07, and 13)			
8. Is protections against hot surfaces, exhausts, etc., provided? (16.B.03 and .13)			
9. Are fuel tanks located in a manner to prevent spills or overflows from running onto engine exhaust or electrical equipment?			

SAD Form 1666e-R Mar 97 Previous editions may be used for contracts referencing the 1992 edition of EM 385-1-1.

	Yes	No	N/A
10. Are exhaust discharges directed so they do not endanger person of obstruct operator vision?(16.B.05)			
11. Are seat belts provided? (16B.08)			
12. Is protection (grills, canopies, screens) provided to shield operator from falling or flying objects? (16.B.10 and .11)			
13. Is roll over protection provided? (16.B.12)			
14. Remarks: (Enter actions taken for “no” answers)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

SAD Form 1666e-R Mar 97 Previous editions may be used for contracts referencing the 1992 edition of EM 385-1-1.

SAFETY CHECKLIST FOR SCRAPERS, MOTOR GRADERS , AND OTHER MOBILE EQUIPMENT

Contract # and title:			
Equipment name and number: owned or leased?			
Contractor:	Subcontractor:		
Contractor inspector:	Date inspected:		
	Yes	No	N/A
1. Are initial and daily/shift inspection records available? (16.A.01 & .02)			
2. Are only qualified operators assigned to operate equipment? (16.A.04)			
3. Are sufficient lights provided for night operations? (16.A.11)			
4. Does the unit have as a minimum a 5-B:C fire extinguisher? (16.A.26)			
5. Is there an effective working reverse alarm? (16.B.01)			
6. Is the unit shut down for refueling? (16.A.14)			
7. Are moving parts, shafts, sprockets, belts, etc., guarded? (16.B.03, .07 and .13)			
8. Is protection against hot surfaces, exhausts, etc., provided? (16.B.03 and .13)			
9. Are fuel tanks located in a manner to prevent spills or overflow from running onto engine exhaust or electrical equipment? (16.B.04)			
10. Are exhaust discharges directed so they do not endanger persons or obstruct operator vision? (16.B.05)			

SAD Form 1666f-R Mar 97 Previous editions may be used for contracts referencing the 1992 edition of EM 385-1-1.

	Yes	No	N/A
11. Are seat belts provided for each person required to ride on the equipment? (16.B.08)			
12. Is protection (grills, canopies, screens) provided to shield operators from falling or flying objects? (16.B.10 and .11)			
13. Is roll over protection provided? (16.B.12)			
14. Is a safe means of access to the cab provided (steps, grab bars, non-slip surfaces)? (16.B.03)_			
15. Are adequate head and tail lights provided? (16.A.07)			
16. Have brakes been tested and found satisfactory? (16.A.07)			
17. Does the unit have an emergency brake which will automatically stop the equipment upon brake failure? Is this system manually operable from the drivers position? (16.A.07)			
18. Is all equipment with windshields equipped with powered wipers and defogging or defrosting system? (16.A.07)			
19. Are all vehicles which will be parked or moving slower than normal traffic on haul roads equipped with a yellow flashing light or flasher visible from all directions? (16.A.13)			
20. Is the slow moving emblem used on all vehicles which by design move at 25 MPH or less on public roads? (08A.04)			

	Yes	No	N/A
21. Have air tanks been tested and certified? (20.A.01)			
22. Is an air pressure gage in working condition installed on the unit? (20.A.12)			
23. Does the air tank have an accessible drain valve? (20.B.17)			
24. Remarks: (Enter action taken for all “no” answers)			
Contractor inspector signature			
Contractor QC/safety officer/project manager			

SAD Form 1666f-R Mar 97 Previous editions may be used for contracts referencing the 1992 edition of EM 385-1-1.

SAFETY CHECKLIST FOR MATERIAL HOISTS

Contract # and title:			
Equipment name & number:			
Contractor:	Subcontractor:		
Contract Inspector:	Date inspected:		
	Yes	No	N/A
1. Are all hoist towers, masts, guys or braces, counterweights, drive machinery supports, sheave supports, platforms, supporting structures, and accessories designed by a licensed engineer? (16.K.02)			
2. Is a copy of the hoist operating manual available? (16.K.04)			
3. Do all floors and platforms have slip-resistant surfaces? (16.K.08)			
4. Are landings and runways adequately barricaded and is overhead protection provided where needed? (16.K.08)			
5. Are hoisting ropes installed IAW manufacturer's instructions? (16.K.10)			
6. Are operating rules posted at the hoist operator's station? (16.K.14)			
7. Are air powered hoists connected to an air supply of sufficient capacity and pressure to safely operate the hoist? (16.K.15)			
8. Are pneumatic hoses secured by some positive means to prevent accidental disconnection? (16.K.15)			
9. Remarks: (Enter actions taken for all "no" answers.)			
Contractor inspector signature			
Contractor QC/safety officer/project manager signature			

SAD Form 1666g-R Mar 97 Previous editions may be used for contracts referencing the 1992 edition of EM 385-1-1.

SAFETY CHECKLIST FOR EARTH DRILLING EQUIPMENT

Contract # and title:			
Equipment name & number:			
Contractor:	Subcontractor:		
Contractor inspector:	Date inspected:		
	Yes	No	N/A
1. Is a copy of the manual for all drilling equipment available? (16.M.01)			
2. Have all overhead electrical hazards and potential ground hazards been identified in a site layout plan and addressed in an activity hazard analysis? (16.M.02)			
3. Are MSDSs for all drilling fluids available? (16.M.05)			
4. Does the drilling equipment have 2 easily accessible emergency shut down devices (one for the operator and one for the helper)? (16.M.06)			
5. Is the equipment posted with a warning of electrical hazards? (16.M.06)			
6. Is there a spotter or an electrical proximity warning device available to ensure safe distances from power lines are maintained? (16.M.06)			
7. Remarks: (Enter actions taken for “no” answers)			
Contractor inspector signature			
Contractor QC/safety officer/project manager			

SAD Form 1666h-R Mar 97 Previous editions may be used for contracts referencing the 1992 edition of EM 385-1-1.

SUBMITTAL REGISTER (ER415-1-10)																								CONTRACT NO.
TITLE AND LOCATION Maintenance Dredging In Charleston, Georgetown, & Port Royal Entrance Channels IFB DACW60-03-B-0008															CONTRACTOR									SPEC SECTION
				TYPE OF SUBMITTAL									CLASSIFICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTIONS		
TRANSMITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM NUMBER	DATA	DRAWINGS	INSTRUCTIONS	SCHEDULES	STATEMENTS	REPORTS	CERTIFICATES	SAMPLES	RECORDS	INFORMATION ONLY	GOVERNMENT APPROVED	REVIEWER	SUBMIT	APPR NEED BY	MAT NEED BY	CODE	DATE	SUBMIT TO GOV'T	CODE	DATE	REMARKS
a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.	m.	n.	o.	p.	q.	r.	s.	t.	u.	v.	w.	x.	y.
		01100,1.1.2	Accident Prevention Program						x					x										
		01100,1.1.2	EmergencyResponseProcedures						x					x										
		01100,1.1.2	CQC Manager					x					x											
		01100,1.1.2	QC Plan					x						x										
		01100,1.1.2	Environmnetal Protection Plan						x					x										
		01100,1.1.2	Hazard Analysis Plan						x					x										
		01100,1.1.2	List o f Subcontractors					x					x											
		01100,1.2.1	Progress Chart					x					x											
		01100,1.4	Consolidated Report						x					x										
		01351,1.5	Accident Prevention Plan					x						x										
		01351,1.6	Activity hazard Analysis						x					x										
		01351,1.9.1.1	Coast Guard Certification							x			x											
		01351,1.9.1.2	Inspection Report						x				x											
		01351,.1.11.5	Emergency Response			x								x										
			Procedures																					

SUBMITTAL REGISTER (ER415-1-10)																								CONTRACT NO.
TITLE AND LOCATION Maintenance Dredging In Charleston, Georgetown, & Port Royal Entrance Channels IFB DACW60-03-B-0008														CONTRACTOR										SPEC SECTION
				TYPE OF SUBMITTAL									CLASSIFICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTIONS		
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a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.	m.	n.	o.	p.	q.	r.	s.	t.	u.	v.	w.	x.	y.
		01355, 1.6	Environmental Plan						x				x											
		01355, 1.6	Inflow/Overflow Plan					x							x									
		01355, 1.6	Drawings and Calculations							x				x										
			For Turtle Deflectors																					
		01355,1.6	Manatee Sighting Form						x				x											
		01355,1.6	Sea Turtle Observation Sheet						x				x											
		01355, 1.6	Weekly Reports						x				x											
		01355, 1.6	Environmental Report						x				x											
		01451,3.2.1	CQC Plan					x						x										
		01451,3.4.2.1	Work Schedule				x							x										
		01451,3.6.1	PreparatoryPhaseMinutes						x				x											
		01451,3.8.1	CQC Report						x				x											
		01451,3.8.2	Report of Operations						x				x											

SUBMITTAL REGISTER (ER415-1-10)																							CONTRACT NO.
TITLE AND LOCATION Maintenance Dredging In Charleston, Georgetown, & Port Royal Entrance Channels IFB DACW60-03-B-0008														CONTRACTOR									SPEC SECTION
				TYPE OF SUBMITTAL									CLASSIFICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTIONS		
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a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.	m.	n.	o.	p.	q.	r.	s.	t.	u.	v.	w.	x.	y.
		02325,1.2	DDLS Removable	x										x										
			Storage Media																					
			and Electronic																					
			Data Transfer																					
			on Ocean Disposal																					
		02325,1.2	Ullage Charts						x				x											
		02325,1.2	Dsiposal Area Maps		X								x											
		02325,1.2	Pipeline Outfall																					
			Sketch		x								x											
		02325,1.2	Dredging Plan					x						x										
		02325,1.2	Report of Daily						x				x											
			Dump Logs																					
		01100,1.1.2	CQS Data File						x					x										

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE *(Read instructions on the reverse side prior to initiating this form)*	DATE	TRANSMITTAL NO.

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS *(This section will be initiated by the contractor)*

TO:	FROM:	CONTRACT NO.	CHECK ONE: ☐ THIS IS A NEW TRANSMITTAL ☐ THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SEC. NO. *(Cover only one section with each transmittal)*	PROJECT TITLE AND LOCATION		

ITEM NO. *a.*	DESCRIPTION OF ITEM SUBMITTED *(Type size, model number/etc.)* *b.*	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. *(See instruction no. 8)* *c.*	NO. OF COPIES *d.*	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE *g.*	VARIATION *(See instruction No. 6)* *h.*	FOR CE USE CODE *i.*
				SPEC. PARA. NO. *e.*	DRAWING SHEET NO. *f.*			

REMARKS	**I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated.** NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED *(List by Item No.)*	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.

2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.

3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288 for each entry on this form.

4. Submittals requiring expeditious handling will be submitted on a separate form.

5. Separate transmittal form will be used for submittals under separate sections of the specifications.

6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".

7. Form is self-transmittal, letter of transmittal is not required.

8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.

9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A	--	Approved as submitted.	E	--	Disapproved (See attached).
B	--	Approved, except as noted on drawings.	F	--	Receipt acknowledged.
C	--	Approved, except as noted on drawings. Refer to attached sheet resubmission required.	FX	--	Receipt acknowledged, does not comply as noted with contract requirements.
D	--	Will be returned by separate correspondence.	G	--	Other *(Specify)*

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

Approved by OM
0348-0046

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:

☐ a. contract
b. grant
c. cooperative agreement
d. loan
e. loan guarantee
f. loan insurance

2. Status of Federal Action:

☐ a. bid/offer/application
b. initial award
c. post-award

3. Report Type:

☐ a. initial filing
b. material change

For Material Change Only:
year _____ quarter _____
date of last report _____

4. Name and Address of Reporting Entity:

☐ Prime ☐ Subawardee
Tier _____, *if known*:

Congressional District, *if known:*

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:

Congressional District, *if known*:

6. Federal Department/Agency:

7. Federal Program Name/Description:

CFDA Number, *if applicable*: _____

8. Federal Action Number, *if known*:

9. Award Amount, *if known*:

$

10. a. Name and Address of Lobbying Entity (*if individual, last name, first name, MI):*

b. Individuals Performing Services *(including address if different from No. 10a) (last name, first name, MI)*:

(attach Continuation Sheet(s) SF-LLL-A, *if necessary*)

11. Amount of Payment *(check all that apply)*:

$ _____ ☐ actual ☐ planned

12. Form of Payment *(check all that apply)*:

☐ a. cash
☐ b. in-kind; specify: nature _____
value _____

13. Type of Payment *(check all that apply)*:

☐ a. retainer
☐ b. one-time fee
☐ c. commission
☐ d. contingent fee
☐ e. deferred
☐ f. other; specify: _____

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment indicated in Item 11:

(attach Continuation Sheet(s) SF-LLL-A, *if necessary*)

15. Continuation Sheet(s) SF-LLL-A attached: ☐ Yes ☐ No

16. Information requested through this form is authorized by title 31 U.S.C section 1352. This disclosure of lobbyig activities is a materia representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352 . This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature: _____

Print Name: _____

Title: _____

Telephone No.: _____ **Date:** _____

Federal Use Only:

Authorized for Local Reproduction
Standard Form - LLL

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individuals(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).

11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.

12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.

13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.

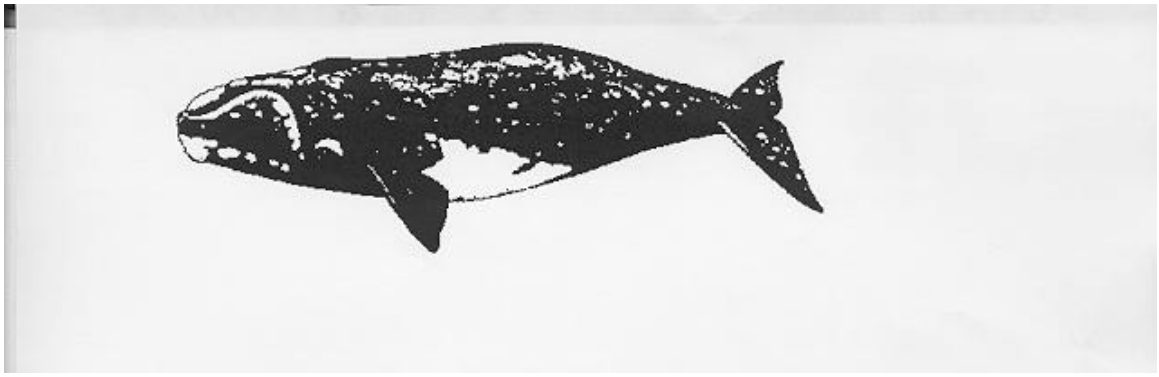
    Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in

Approved by OM
0348-0046

DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET

Reporting Entity: _____ Page _____ of _____ _____

1. Picture of a Right Whale



2. Right Whale (Eubalaena glacialis):

The northern right whale was listed as endangered throughout its range on June 2, 1970 under the Endangered Species Conservation Act of 1969. Current estimates of the northern right whale populations indicate there are no more than 500 individuals, with 295 found in the North Atlantic Ocean and less than 200 in the North Pacific Ocean.

Commercial whaling was the major reason for the decline of the northern right whale. For a period that started more than 800 years ago and lasted well into the 20th century, the species was hunted extensively, primarily for its oil and baleen plates. The animal's commercially valuable products, slow swimming speed, the characteristic of floating when dead, and generally coastal distribution combined to make this whale the "right" whale to kill - hence its common name. Hunting was largely restricted to the eastern North Atlantic at first. As that population was depleted and knowledge of the world's oceans increased, hunting pressure shifted to the western North Atlantic and then to the Pacific, eventually encompassing the species' entire range.

Observers noted that the northern right whale was in trouble as early as the 18th century. By 1935, the species had declined to such low numbers that the League of Nations was able to get most whaling nations to agree to stop hunting the northern right whale. Since that time, hunting or other purposeful take has been responsible for the death of only a few additional animals, and is no longer a serious threat to the species.

The northern right whale remains in a precarious position because a combination of human actions and natural forces appears to be preventing significant increases in the number of animals. Evidence suggests that certain human actions are significantly impeding the recovery of this species. Principal among these are (in decreasing order of importance)

ship collisions, entanglement in certain types of fishing gear, degradation of the northern right whale's habitat (especially the areas where they feed), and disturbance.

There is reason to believe that if mortalities due to human actions were reduced or eliminated, the chance for recovery would be significantly improved. Even in the best of circumstances, rapid recovery cannot be anticipated. It is not expected that the northern right whale will increase in numbers in the next 75 years to a point where efforts can be relaxed.

Biology

The northern right whale is a robust, medium-sized baleen whale. Adults are 13.5 to 16.5 meters long (53 feet). Distinctive features include: no dorsal fin, a large head, narrow upper jaw, strongly bowed lower jaw. Callosities are used to identify individuals. The blow forms a distinctive "V" shape due to separated blowholes. Calving occurs in the winter along the southeast coast of the U.S. Calves are about 4.5 meters long at birth, and nurse for at least 9 months. Age at sexual maturity is 5-9 years, with females giving birth to one calf every 3-5 years.

Distribution

Five known areas are used by the North Atlantic population:

1. Coastal Florida and Georgia; 2.Great South Channel east of Cape Cod, MA; 3.Cape Cod and Massachusetts bays; 4.Bay of Fundy; and 5.Browns and Baccaro banks south of Nova Scotia.

The population migrates seasonally, spending spring and summer off the coast of New England, and late summer and fall in waters off southern Canada. The only known calving area is the coastal waters of Georgia and Florida.

3. The Northern Right Whale (Balena glacialis)

The term "right whale" comes from the whalers, who considered these whales the right whales to hunt because of their coastal habits, slow speed and tendency to float when harpooned.

Due to these early whale hunting practices, the right whale almost became extinct. Today, right whales are the most endangered of whales--less than 350 survive in the entire north Atlantic ocean. The right whale is the official state marine mammal for both Georgia and Massachusetts. It has been sighted as far north as Iceland and as far south as Florida. The coastal waters of Georgia and east Florida are the only known calving grounds of these rare animals. These waters are designated as U.S. Critical Habitat for right whales.

Northern right whales are black with variable gray patches on their throats and bellies. Right whales have wart-like patches of skin (callosities) on their heads, often covered by white "whale lice." They have no dorsal fin on their broad, almost flat back. The tail is deeply notched in the middle and is dark on top and bottom. The trailing edge of the tail is smooth and the pointed tips can span 15 feet. The flippers of the right whale are short and very broad. Sparse hair appears on the tips of the chin and upper jaw, often associated with callosities. Though right whales can be 50 feet long, they often swim at the surface with only the top of the head and the back visible. A calf, 1/3 the length of the adult, may be seen swimming with its mother.

Right whales are baleen whales. Baleen whales, although large, consume primarily krill (small shrimp-like animals) and copepods (microscopic marine crustaceans), the smallest food of any whale. These large mammals, eating some of the smallest prey, need upwards of a million calories a day to maintain body functions. They must consume up to 2,000 kilograms (4,400 pounds) of plankton daily. While this may seem like a lot, it isn't. A million calories to a 50-ton animal is equivalent to 1,500 calories to a 150 pound person.

Blow holes of right whales are divided on the surface, forming two holes typical of baleen whales (toothed whales have one blow hole). Visible from a distance, the blow is identified by a nearly vertical "V" shape. When viewed from the side or affected by wind, however, this double blow may appear as one. A single whale breath equals over 3,000 human breaths.

MAJOR INCIDENT REPORT

SPECIES:

VESSEL:

DATE:

LOCATION:

LOAD:

DESCRIPTION:

DISCUSSION:

OBSERVER:

IF TURTLE KILL, INJURY, OR TURTLE PARTS WERE OBSERVED, PROVIDE EVIDENCE THAT KILL OR INJURY WAS RECENT OR TOOK -PLACE PRIOR TO INTAKE BY DREDGE:

BLOOD PRESENT
ODOR

BLOATING

COLORATIONS

OTHERS

IF DEAD TURTLES OR PARTS WERE PRESENT, PROVIDE TAG NUMBER ON PLASTIC BAG USED FOR STORAGE AND NAME OF PERSON TO WHOM TURTLE OR PARTS WERE DELIVERED.
IF A LIVE TURTLE (INJURED OR UNINJURED) WAS TAKEN,

(1) DESCRIBE PROCEDURES TAKEN TO REVIVE OR REHABILITATE TURTLE.

(2) TAG NUMBER, MEASUREMENTS, SEX, CONDITION & OTHER RELEVANT INFORMATION

(3) RELEASE LOCATION

SEA TURTLE OBSERVATION SHEET

SEA TURTLE/DREDGING TASK FORCE

TURTLE OBSERVER NOTES

_____

LOAD NUMBER _____ DATE _____ TIME _____

PORT SCREEN CONTENTS

_____

_____

_____

STARBOARD SCREEN CONTENTS

_____

_____

_____

CONTENTS OF SKIMMER SCREENS OR OTHER SCREENS OVER HOPPERS

_____

_____

_____

CONTENTS OF DRAGHEAD

_____

_____

_____

TURTLE OR TURTLE PARTS PRESENT YES___NO_____

COMMENTS AND OTHER OBSERVATIONS

_____

_____

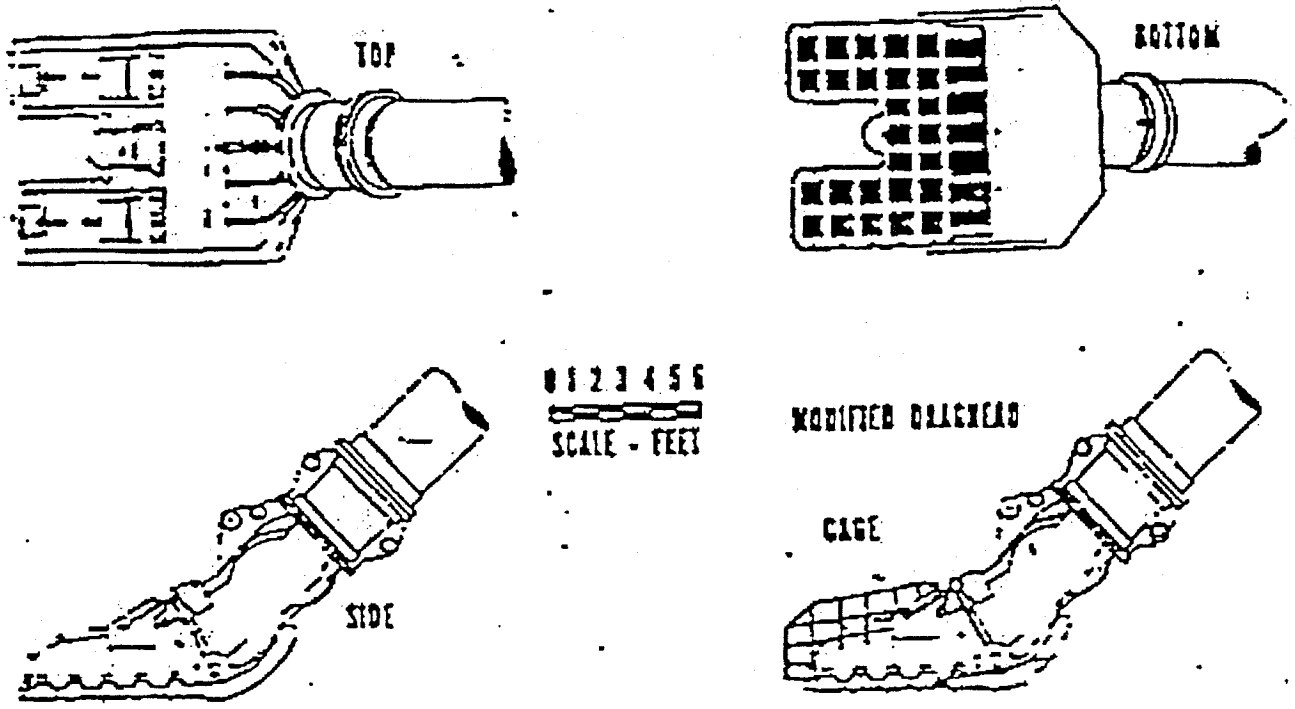
_____

BRIDGE WATCH: TIME_____LOCATION_____

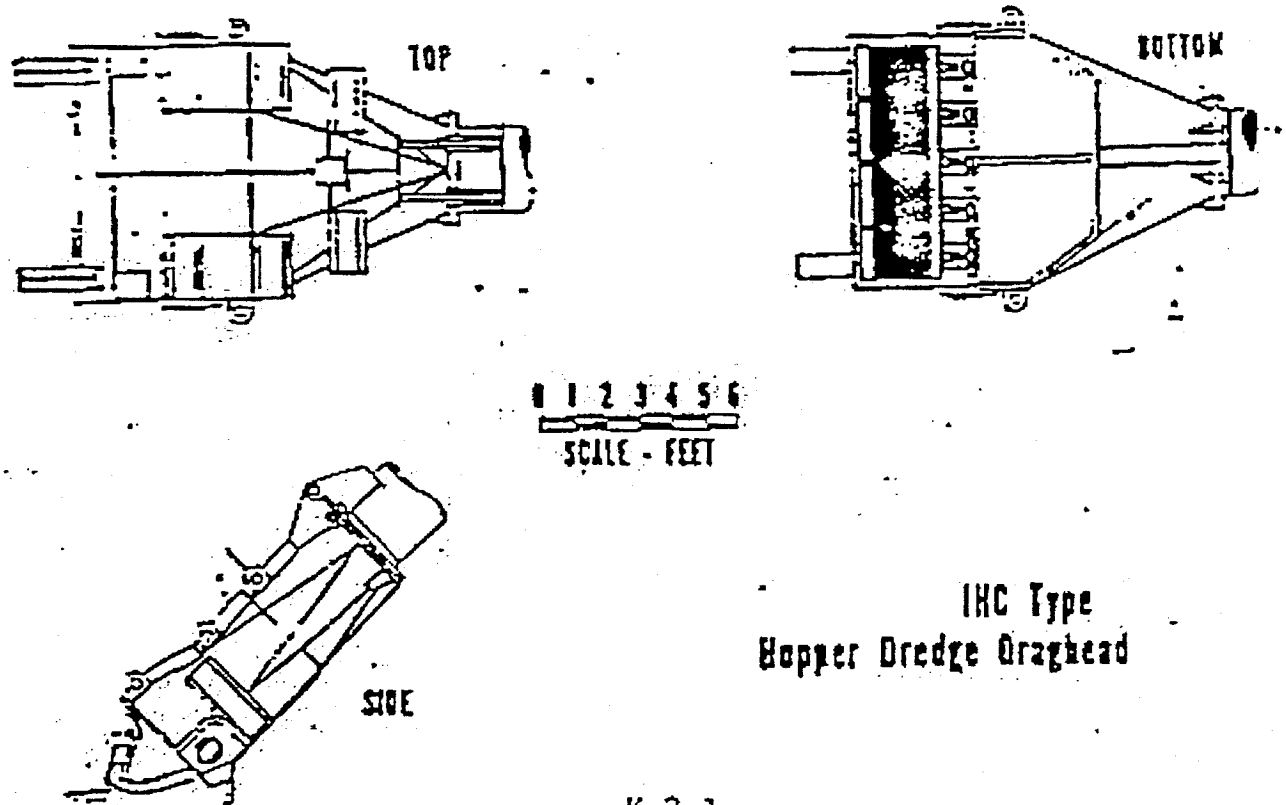
NUMBER OF TURTLES SIGHTED_____

_____

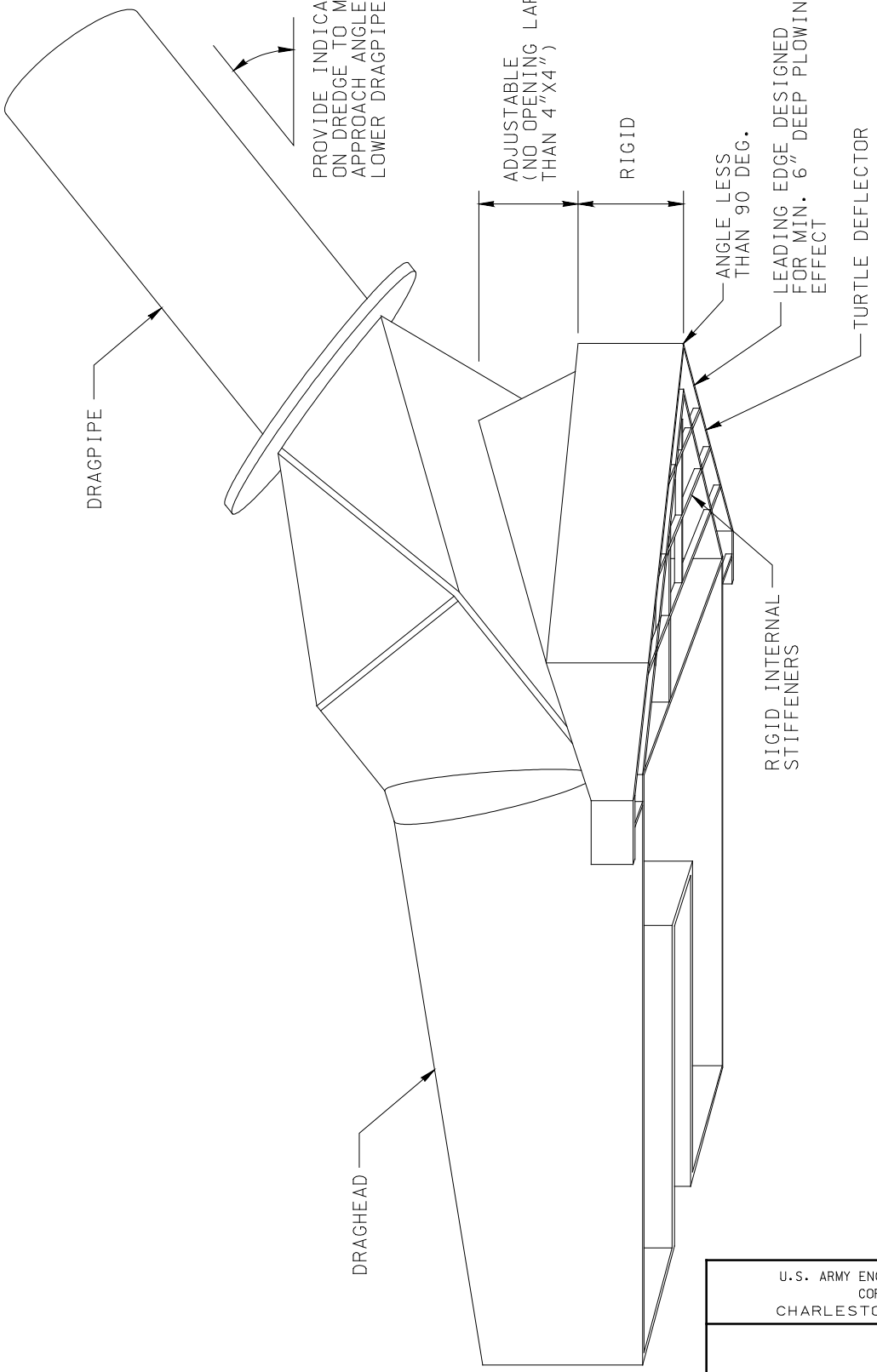
OBSERVER'S NAME



– California Type Hopper Dredge
Draghead Utilized On Corps Dredges



IHC Type
Hopper Dredge Draghead

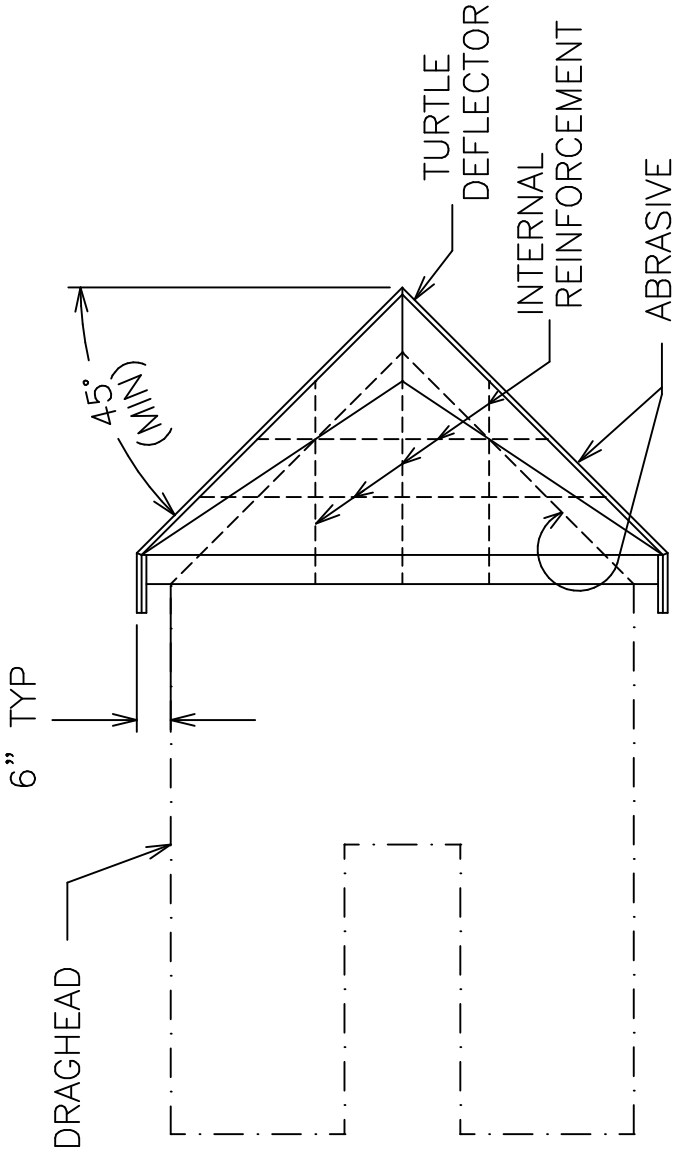


U.S. ARMY ENGINEER DISTRICT.CHARLESTON
CORPS OF ENGINEERS
CHARLESTON, SOUTH CAROLINA

ATTACHMENT K-3
ADJUSTABLE TURTLE DEFLECTOR

SCALE: NO SCALE	INVITATION NO.			SHEET OF
DATE: 12/97	DR. BY	CK. BY	CK. BY	

draghead.dgn



PLAN VIEW

RIGID TURTLE DEFLECTOR

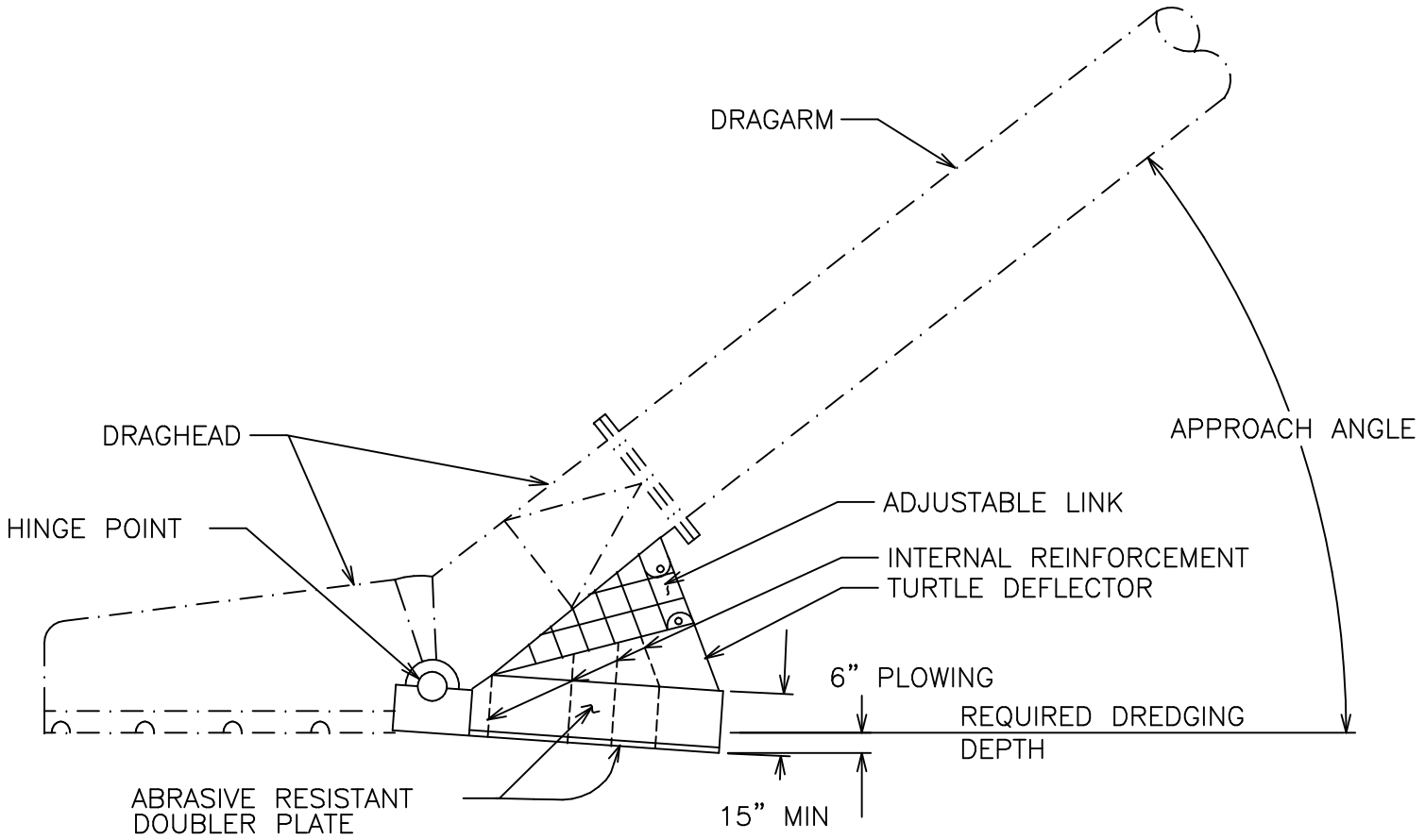
SCALE:NONE

U.S. ARMY ENGINEER DISTRICT,CHARLESTON
CORPS OF ENGINEERS
CHARLESTON, SOUTH CAROLINA

ATTACHMENT K-3
RIGID PLAN TURTLE DEFLECTOR

SCALE: NO SCALE	INVITATION NO.			SHEET OF
DATE: 9/98	DR. BY	CK. BY	CK. BY	

turtle1.dgn



ELEVATION

RIGID ADJUSTABLE TURTLE DEFLECTOR
SCALE:NONE

K-3-4

U.S. ARMY ENGINEER DISTRICT,CHARLESTON
CORPS OF ENGINEERS
CHARLESTON, SOUTH CAROLINA

ATTACHMENT K-3
RIGID ADJUSTABLE
TURTLE DEFLECTOR
ELEVATION

SCALE:	INVITATION NO.	SHEET
NO SCALE		OF
DATE: 9/98	DR. BY	
	CK. BY	
	CK. BY	

turtle2.dgn

MANATEE SIGHTING FORM

Date of sighting_____

Animal: Dead or Alive (circle one) Time of Sighting_____am/pm

Location:_____
(county) (nearest town)

_____
(river) (specifics)

Observer's name_____

Phone #: _____
(work) (home)

Number or manatees_____Size(s) of animal_____

Type of activity (feeding, resting,actively swimming, drinking, etc.)

_____

Direction of movement: (upriver, downriver or local)_____

Remarks:(Scars, marks, injuires)_____

_____

Report received by: Name_____

Date and time of report:_____

Source of report:(phone call, infield)_____

Contact Tom or Sally Murphy Immediately with manatee sighting(s)
Green Pond 843-844-2473 Fort Johnson 843-762-5015
Home: 843-846-6929

PROTOCOL FOR COLLECTING TISSUE FROM DEAD TURTLES FOR GENETIC ANALYSIS

General Requirements:

It is critical to use a new scalpel blade and gloves for each turtle to avoid cross-contamination of the samples.

The vials (both before and after samples are taken) should be stored at room temperature or in a cooler. Storing the vials in a refrigerator will prolong the life of the sample. DO NOT store the vials where they will experience extreme heat (such as in a car!) as this could cause the buffer to break down and not preserve the sample properly.

Sample Collection Procedure:

1. Put on a new pair of latex or nitrile gloves.
2. Use a new disposable scalpel to cut out an approximately 1 cm (~1/2 in) cube (bigger is NOT better) piece of muscle. Easy access to muscle tissue is in the neck region or on the ventral side where the front flippers "insert" near the plastron. It does not matter what stage of decomposition the carcass is in.
3. Place the muscle sample on a hard uncontaminated surface (plastron willdo) and make slices through the sample so the buffer solution will penetrate the tissue.
4. Put the sample into the plastic vial containing saturated NaCl with 20% DMSO*
5. Use the pencil to write the sample ID number (observer initials, year, month, day, turtle number by day), species, state, and carapace length on the waterproof paper label and place it in the vial with the sample. EXAMPLE: For a 35.8 cm curved carapace length green turtle documented by Jane M. Doe on July 15, 2001 in South Carolina, the label should read "JMD200l0715-01, C. mydas, South Carolina, CCL=35.8 cm". If this had been the third turtle Jane Doe responded to on July 15, 2001, it would be JMD200l07l5-03.
6. Label the outside of the vial with the same information (sample ID number, species, state, and carapace length) using the permanent marker.
7. Place clear scotch tape over the writing on the vial to protect it from being smeared or erased.
8. Wrap parafilm around the cap of the vial by stretching it as you wrap.
9. Place vial within whirl-pak and close.
10. Dispose of the scalpel.
11. Note on the incidental take reporting form that a genetic sample was taken and specify the location on the turtle where the sample was obtained.
12. Submit the vial to the National Marine Fisheries Service - La Jolla, CA Laboratory, care of Dr. Peter Dutton at the address shown below.

* The 20% DMSO buffer in the plastic vials is nontoxic and nonflammable. Handling the buffer without gloves may result in exposure to DMSO. This substance soaks into skin very rapidly and is commonly used to alleviate muscle aches. DMSO will produce a garlic/oyster taste in the mouth along with breath odor. The protocol requires that you WEAR gloves each time you collect a sample and handle the buffer vials.

Sample Submission Address

NOAA/NMFS/SWFSC
Dr. Peter Dutton
8604 La Jolla Shores Drive
La Jolla, CA 92037-1508

Genetic Sample Kit Materials - DEAD turtles

latex or nitrile gloves
single-use scalpel blades (Fisher Scientific 1-800-766-7000, cat. # 08-927-5A or equal)
plastic screw-cap vial containing saturated NaCl with 20% DMSO, wrapped in parafilm
waterproof paper label, ¼" x 4"
pencil to write on waterproof paper label
permanent marker to label the plastic vials
scotch tape to protect writing on the vials
piece of parafilm to wrap the cap of the vial
whirl-pak to return/store sample vial

CONSOLIDATED REPORT - DREDGING

TITLE: MAINTENANCE DREDGING IN CHARLESTON, GEORGETOWN, AND PORT ROYAL ENTRANCE CHANNELS, CHARLESTON, GEORGETOWN, AND BEAUFORT COUNTIES, SOUTH CAROLINA

IFB NO.: DACW60-03-B-0008 CONTRACT NO.: DACW60-04-C-000?
DRAWING NO.:
CHARLESTON ENTRANCE CHANNEL 8957
GEORGETOWN ENTRANCE CHANNEL 8949
PORT ROYAL ENTRANCE CHANNEL 8952

GOVERNMENT INSPECTOR:

CONTRACTOR:

CONTRACTOR'S SUPERINTENDENT:

TYPE EQUIPMENT USED ON JOB:

DREDGE(S): (NAME, SIZE, PUMP HP, BOOSTER, ETC.)

OTHER EQUIPMENT: (DRAGLINES, DOZERS, ETC.)

SUBCONTRACTORS:

DATES:

ADVERTISEMENT: BID OPENING:
AWARD: NOTICE TO PROCEED:

REQUIRED STARTING: ACTUAL STARTING:
REQUIRED COMPLETION DATE: ACTUAL COMPLETION:

NUMBERS DAYS ON JOB (PUMPING):
NUMBERS DAYS ON JOB (TOTAL):

DREDGING QUANTITIES:

REQUIRED PRODUCTION RATE:
ACTUAL PRODUCTION RATE:

CHARACTER OF MATERIALS:

NOTE: HARD MATERIAL OR ANY CHANGE OF CONDITIONS SHOULD BE NOTED. ANY DEBRIS ENCOUNTERED SHOULD ALSO BE LISTED WITH EXPLANATION OF HOW IT WAS REMOVED AND WHAT EQUIPMENT WAS USED FOR REMOVAL.

ADVERTISED QUANTITIES:

SHOAL NUMBER	LOCATION	REQUIRED DREDGING PRISM C.Y. PL. MEAS. *	ALLOWABLE OVERDEPTH PRISM C.Y. PL. MEAS. **	TOTAL C.Y. PL. MEAS.
Charleston Entrance Channel				
	Sta. –328+00 to Sta. –128+00	750,000	1,200,000	1,950,000
Georgetown Entrance Channel				
1	Sta. 30+00 to Sta. 70+00	97,000	177,000	274,000
2	Sta. 188+00 to Sta. 232+00	185,000	70,000	255,000
	TOTAL	282,000	247,000	529,000
Port Royal Entrance Channel				
	Sta. –26+00 to Sta. 176+00	530,000	436,000	966,000

BEFORE DREDGING QUANTITIES:

SHOAL NUMBER	LOCATION	REQUIRED DREDGING PRISM C.Y. PL. MEAS. *	ALLOWABLE OVERDEPTH PRISM C.Y. PL. MEAS. **	TOTAL C.Y. PL. MEAS.
Charleston Entrance Channel				
	Sta. –328+00 to Sta. –128+00	000,000	0,000,000	0,000,000
Georgetown Entrance Channel				
1	Sta. 30+00 to Sta. 70+00	00,000	000,000	000,000
2	Sta. 188+00 to Sta. 232+00	000,000	00,000	000,000
	TOTAL	000,000	000,000	000,000
Port Royal Entrance Channel				
	Sta. –26+00 to Sta. 176+00	000,000	000,000	000,000

BEFORE DREDGING QUANTITIES:

SHOAL NUMBER	LOCATION	REQUIRED DREDGING PRISM C.Y. PL. MEAS. *	ALLOWABLE OVERDEPTH PRISM C.Y. PL. MEAS. **	TOTAL C.Y. PL. MEAS.
Charleston Entrance Channel				
	Sta. –326+00 to Sta. –128+00	000,000	0,000,000	0,000,000
Georgetown Entrance Channel				
1	Sta. 30+00 to Sta. 70+00	00,000	000,000	000,000
2	Sta. 188+00 to Sta. 232+00	000,000	00,000	000,000
	TOTAL	000,000	000,000	000,000
Port Royal Entrance Channel				
	Sta. –26+00 to Sta. 176+00	000,000	000,000	000,000

EFFECTIVE AND NON-EFFECTIVE TIME:

NAME OF DREDGE

PUMPING:
HANDLING PIPE LINES:
HANDLING SWING LINES:
CLEARING PUMP AND PIPELINES:
CLEARING CUTTER:
CHANGING LOCATION ON JOB:
PASSING VESSELS:
SHORE LINE & SHORE WORK:
MINOR REPAIR:
PREPARATION:
MISCELLANEOUS:
MOBILIZATION AND DEMOBILIZATION:
PRIVATE WORK:
SUNDAYS AND HOLIDAYS:
MAJOR REPAIRS:
LOST TIME:
LOST TIME NOT CHARGEABLE TO COST AT WORK:

TOTAL TIME:

AVERAGES:

WIDTH OF CUT:
LIFT:

CUBIC YARDS PUMPED PER HOUR - CREDIT:
CUBIC YARDS PUMPED PER HOUR - GROSS:

CUBIC YARDS PUMPED PER DAY - CREDIT:
CUBIC YARDS PUMPED PER DAY - GROSS:

PUMPING TIME - HOURS PER DAY

TIME DELAYS AND CAUSES OF SUCH DELAYS:

DISPOSAL AREA(S):
TOTAL GROSS CYDS PLACED IN THE DISPOSAL AREA: (FOR EACH DISPOSAL AREA)
(ANY REMARKS CONCERNING DISPOSAL AREA)

CHARLESTON ENTRANCE CHANNELDISPOSAL AREA:

REMARKS:

GEORGETOWN ENTRANCE CHANNELDISPOSAL AREA:

REMARKS:

PORT ROYAL ENTRANCE CHANNELDISPOSAL AREA:

REMARKS:

WATER QUALITY:

NOTE: DOCUMENTATION SHOULD LIST ALL EFFORTS MADE TO INSURE WATER QUALITY HAS BEEN MAINTAINED AND ANY PROBLEMS THAT WERE ENCOUNTERED.

OTHER - EXPLAIN:

REMARKS, COMMENTS, AND LESSONS LEARNED:

COSTS/PRICES:

ORIGINAL CONTRACT PRICE:

ITEM NO	DESCRIPTION	ESTIMATED QUANTITY	U/I	UNIT PRICE	AMOUNT
BASE BID					
0001	MOBILIZATION AND DEMOBILIZATION FOR MAINTENANCE DREDGING IN THE CHARLESTON ENTRANCE CHANNEL	1	JB	LUMP SUM	$_____
0002	MAINTENANCE DREDGING OF UNCLASSIFIED MATERIAL IN CHARLESTON ENTRANCE CHANNEL	1,950,000 (a)	CY	$_____	$_____
0003	DREDGE DATA LOGGING SYSTEM AND DISOSAL AREA REPORT (CHARLESTON ENTRANCE CHANNEL)	1	JB	LUMP SUM	$_____
0004	COMPLIANCE WITH ENDANGERED SPECIES ACT AND MARINE MAMMALS PROTECTION ACT (CHARLESTON ENTRANCE CHANNEL)	1	JB	LUMP SUM	$_____
0005	ABUNDANCE TRAWLING (24 HOURS) (CHARLESTON ENTRANCE CHANNEL)	3	EA	LUMP SUM	$_____
0006	TRAWLING (12 HOUR DAYS) (CHARLESTON ENTRANCE CHANNEL)	10	EA	LUMP SUM	$_____
0007	MOBILIZATION AND DEMOBILIZATION FOR MAINTENANCE DREDGING IN THE GEORGETOWN ENTRANCE CHANNEL	1	JB	LUMP SUM	$_____
0008	MAINTENANCE DREDGING OF UNCLASSIFIED MATERIAL IN GEORGETOWN ENTRANCE CHANNEL	529,000 (a)	CY	$_____	$_____
0009	DREDGE DATA LOGGING SYSTEM AND DISOSAL AREA REPORT (GEORGETOWN ENTRANCE CHANNEL)	1	JB	LUMP SUM	$_____
0010	COMPLIANCE WITH ENDANGERED SPECIES ACT AND MARINE MAMMALS PROTECTION ACT (GEORGETOWN ENTRANCE CHANNEL)	1	JB	LUMP SUM	$_____

0011	ABUNDANCE TRAWLING (24 HOURS) (GEORGETOWN ENTRANCE CHANNEL)	3	EA	LUMP SUM	$_____
0012	TRAWLING (12 HOUR DAYS) (GEORGETOWN ENTRANCE CHANNEL)	10	EA	LUMP SUM	$_____

TOTAL (COMBINATION OF ITEMS 0001-0012) $_____

OPTION 1

0013	MOBILIZATION AND DEMOBILIZATION FOR MAINTENANCE DREDGING PORT ROYAL ENTRANCE CHANNEL	1	JB	LUMP SUM	$_____
0014	MAINTENANCE DREDGING OF UNCLASSIFIED MATERIAL IN PORT ROYAL ENTRANCE CHANNEL	966,000 (a)	CY	$_____	$_____
0015	DREDGE DATA LOGGING SYSTEM AND DISOSAL AREA REPORT (PORT ROYAL ENTRANCE CHANNEL)	1	JB	LUMP SUM	$_____
0016	COMPLIANCE WITH ENDANGERED SPECIES ACT AND MARINE MAMMALS PROTECTION ACT (PORT ROYAL ENTRANCE CHANNEL)	1	JB	LUMP SUM	$_____
0017	ABUNDANCE TRAWLING (24 HOURS) (GEORGETOWN ENTRANCE CHANNEL)	3	EA	LUMP SUM	$_____
0018	TRAWLING (12 HOUR DAYS) (GEORGETOWN ENTRANCE CHANNEL)	10	EA	LUMP SUM	$_____

TOTAL (COMBINATION OF ITEMS 0013-0018 $_____

ACTUAL CONTRACT PRICE:

ITEM NO	DESCRIPTION	ESTIMATED QUANTITY	U/I	UNIT PRICE	AMOUNT
BASE BID					
0001	MOBILIZATION AND DEMOBILIZATION FOR MAINTENANCE DREDGING IN THE CHARLESTON ENTRANCE CHANNEL	1	JB	LUMP SUM	$_____
0002	MAINTENANCE DREDGING OF UNCLASSIFIED MATERIAL IN CHARLESTON ENTRANCE CHANNEL	1,950,000 (a)	CY	$_____	$_____
0003	DREDGE DATA LOGGING SYSTEM AND DISOSAL AREA REPORT (CHARLESTON ENTRANCE CHANNEL)	1	JB	LUMP SUM	$_____
0004	COMPLIANCE WITH ENDANGERED SPECIES ACT AND MARINE MAMMALS PROTECTION ACT (CHARLESTON ENTRANCE CHANNEL)	1	JB	LUMP SUM	$_____
0005	ABUNDANCE TRAWLING (24 HOURS) (CHARLESTON ENTRANCE CHANNEL)	3	EA	LUMP SUM	$_____
0006	TRAWLING (12 HOUR DAYS) (CHARLESTON ENTRANCE CHANNEL)	10	EA	LUMP SUM	$_____
0007	MOBILIZATION AND DEMOBILIZATION FOR MAINTENANCE DREDGING IN THE GEORGETOWN ENTRANCE CHANNEL	1	JB	LUMP SUM	$_____
0008	MAINTENANCE DREDGING OF UNCLASSIFIED MATERIAL IN GEORGETOWN ENTRANCE CHANNEL	529,000 (a)	CY	$_____	$_____
0009	DREDGE DATA LOGGING SYSTEM AND DISOSAL AREA REPORT (GEORGETOWN ENTRANCE CHANNEL)	1	JB	LUMP SUM	$_____
0010	COMPLIANCE WITH ENDANGERED SPECIES ACT AND MARINE MAMMALS	1	JB	LUMP SUM	$_____

	PROTECTION ACT (GEORGETOWN ENTRANCE CHANNEL)				
0011	ABUNDANCE TRAWLING (24 HOURS) (GEORGETOWN ENTRANCE CHANNEL)	3	EA	LUMP SUM	$_____
0012	TRAWLING (12 HOUR DAYS) (GEORGETOWN ENTRANCE CHANNEL)	10	EA	LUMP SUM	$_____

TOTAL (COMBINATION OF ITEMS 0001-0012) $_____

OPTION 1

0013	MOBILIZATION AND DEMOBILIZATION FOR MAINTENANCE DREDGING PORT ROYAL ENTRANCE CHANNEL	1	JB	LUMP SUM	$_____
0014	MAINTENANCE DREDGING OF UNCLASSIFIED MATERIAL IN PORT ROYAL ENTRANCE CHANNEL	966,000 (a)	CY	$_____	$_____
0015	DREDGE DATA LOGGING SYSTEM AND DISOSAL AREA REPORT (PORT ROYAL ENTRANCE CHANNEL)	1	JB	LUMP SUM	$_____
0016	COMPLIANCE WITH ENDANGERED SPECIES ACT AND MARINE MAMMALS PROTECTION ACT (PORT ROYAL ENTRANCE CHANNEL)	1	JB	LUMP SUM	$_____
0017	ABUNDANCE TRAWLING (24 HOURS) (GEORGETOWN ENTRANCE CHANNEL)	3	EA	LUMP SUM	$_____
0018	TRAWLING (12 HOUR DAYS) (GEORGETOWN ENTRANCE CHANNEL)	10	EA	LUMP SUM	$_____

TOTAL (COMBINATION OF ITEMS 0013-0018 $_____

MODIFICATIONS:

MOD 1: (BRIEF DESCRIPTION)
MOD 2: (BRIEF DESCRIPTION)

CLAIMS:

CLAIM 1: (BRIEF DESCRIPTION)
CLAIM 2: (BRIEF DESCRIPTION)

ADDITIONAL COSTS:

NOTE: INCLUDE ALL OTHER COSTS NOT LISTED ABOVE.

General Decision Number SC030036
Superseded General Decision No. SC020036
State: **South Carolina**
Construction Type:
DREDGING
County(ies):

ABBEVILLE	DILLON	MARION
AIKEN	DORCHESTER	MARLBORO
ALLENDALE	EDGEFIELD	MCCORMICK
ANDERSON	FAIRFIELD	NEWBERRY
BAMBERG	FLORENCE	OCONEE
BARNWELL	GEORGETOWN	ORANGEBURG
BEAUFORT	GREENVILLE	PICKENS
BERKELEY	GREENWOOD	RICHLAND
CALHOUN	HAMPTON	SALUDA
CHARLESTON	HORRY	SPARTANBURG
CHEROKEE	JASPER	STATEWIDE
CHESTER	KERSHAW	SUMTER
CHESTERFIELD	LANCASTER	UNION
CLARENDON	LAURENS	WILLIAMSBURG
COLLETON	LEE	YORK
DARLINGTON	LEXINGTON	

DREDGING

Modification Number	Publication Date
0	06/13/2003

COUNTY(ies):

ABBEVILLE	DILLON	MARION
AIKEN	DORCHESTER	MARLBORO
ALLENDALE	EDGEFIELD	MCCORMICK
ANDERSON	FAIRFIELD	NEWBERRY
BAMBERG	FLORENCE	OCONEE
BARNWELL	GEORGETOWN	ORANGEBURG
BEAUFORT	GREENVILLE	PICKENS
BERKELEY	GREENWOOD	RICHLAND
CALHOUN	HAMPTON	SALUDA
CHARLESTON	HORRY	SPARTANBURG
CHEROKEE	JASPER	STATEWIDE
CHESTER	KERSHAW	SUMTER
CHESTERFIELD	LANCASTER	UNION
CLARENDON	LAURENS	WILLIAMSBURG
COLLETON	LEE	YORK
DARLINGTON	LEXINGTON	

ENGI0025E 02/01/2003

	Rates	Fringes
HYDRAULIC DREDGES 20" & OVER		
Leverman	19.90	4.01+a
Engineer	18.72	4.01+a
Derrick Operator	17.37	4.01+a
Mate	16.25	3.81+a
Welder	16.79	3.81+a
Spill Barge Operator	17.03	3.81+a
Carpenter	17.27	4.01+a
Electrician	17.70	4.01+a
Oiler	12.75	3.61+a
Deckhand	11.93	3.61+a
Shoreman	11.70	3.61+a
Handyman	11.93	3.61+a
Fill Placer	17.27	4.01+a
Asst. Fill Placer	15.71	4.01+a

Leverman	10.03	1.73+b
Engineer	9.59	1.73+b
Welder	9.79	1.73+b
Mate	8.82	1.73+b
Oiler & Fireman	8.11	1.73+b
Deckhand	7.77	1.73+b
Launchman	8.19	1.73+b
Shoreman	7.82	1.73+b
Spill Barge Operator	8.68	1.73+b
Spider Barge Operator	8.68	1.73+b
Cook	8.11	1.73+b
Mess Cook	7.71	1.73+b
Messman & Janitor	7.53	1.73+b
CLAMSHELL DREDGES:		
Operator	19.80	4.01+a
Engineer	17.71	4.01+a
Welder	16.52	3.81+a
Mate	15.91	3.81+a
Oiler	12.75	3.61+a
Deckhand	11.93	3.61+a
Scowman	12.10	3.61+a
Handyman	11.93	3.61+a
DIPPER DREDGES:		
Operator	19.99	4.01+a
Engineer	18.54	4.01+a
Welder	16.79	3.81+a
Mate	16.25	3.81+a
Oiler	12.75	3.61+a
Deckhand	11.93	3.61+a
Scowman	12.10	3.61+a
Handyman	11.93	3.61+a
TUGS LESS THAN 600 HP:		
Tug Master	15.88	4.01+a
Tug Captain	15.37	4.01+a
Tug Deckhand	11.93	3.61+a
TUGS 600 HP TO 1350 HP:		
Tug Master	16.87	401+a
Tug Captain	15.53	4.01+a
Tug Deckhand	11.93	3.61+a
TUGS GREATER THAN 1350 HP		
Tug Master	17.95	4.01+a
Tug Captain	17.02	4.01+a
Tug Engineer	17.02	4.01+a
Tug Deckhand	11.93	3.61+a
STEWARD DEPARTMENT:		
Steward	13.14	3.81+a
2nd Cook	11.93	3.61+a
Night Cook	11.93	3.61+a
Messman	11.70	3.61+a
Janitor	11.93	3.61+a
DRILL BOATS:		
Engineer	18.72	4.01+a
Driller	18.03	4.01+a
Blaster	18.03	4.01+a

FOOTNOTE:

a. New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day and Good Friday. Plus Vacation Contribution of 7% of straight time pay for all hours worked.

b. New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day. Plus Vacation Contribution of 7% of stright time pay for all hours worked.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

CONSTRUCTION PROGRESS CHART

(EP 415-1-260)

REQUIREMENTS CONTROL SYMBOL

1. CONTRACTOR	3. PROJECT	5. CONTRACT DESCRIPTION	6. SUBMITTED FOR APPROVAL — DATE
2. CONTRACT NUMBER	4. LOCATION		7. APPROVAL RECOMMENDED — DATE
			8. APPROVED — DATE

LEGEND

BARS. 0 5 10

Scheduled progress to date of report

Actual progress

CURVES.

Scheduled progress _____ Actual progress .....

PRINCIPAL CONTRACT FEATURE	LINE ITEM	WT	ESTIMATED COST	
				SCHED.
				ACTUAL
				SCHED.
				ACTUAL
				SCHED.
				ACTUAL
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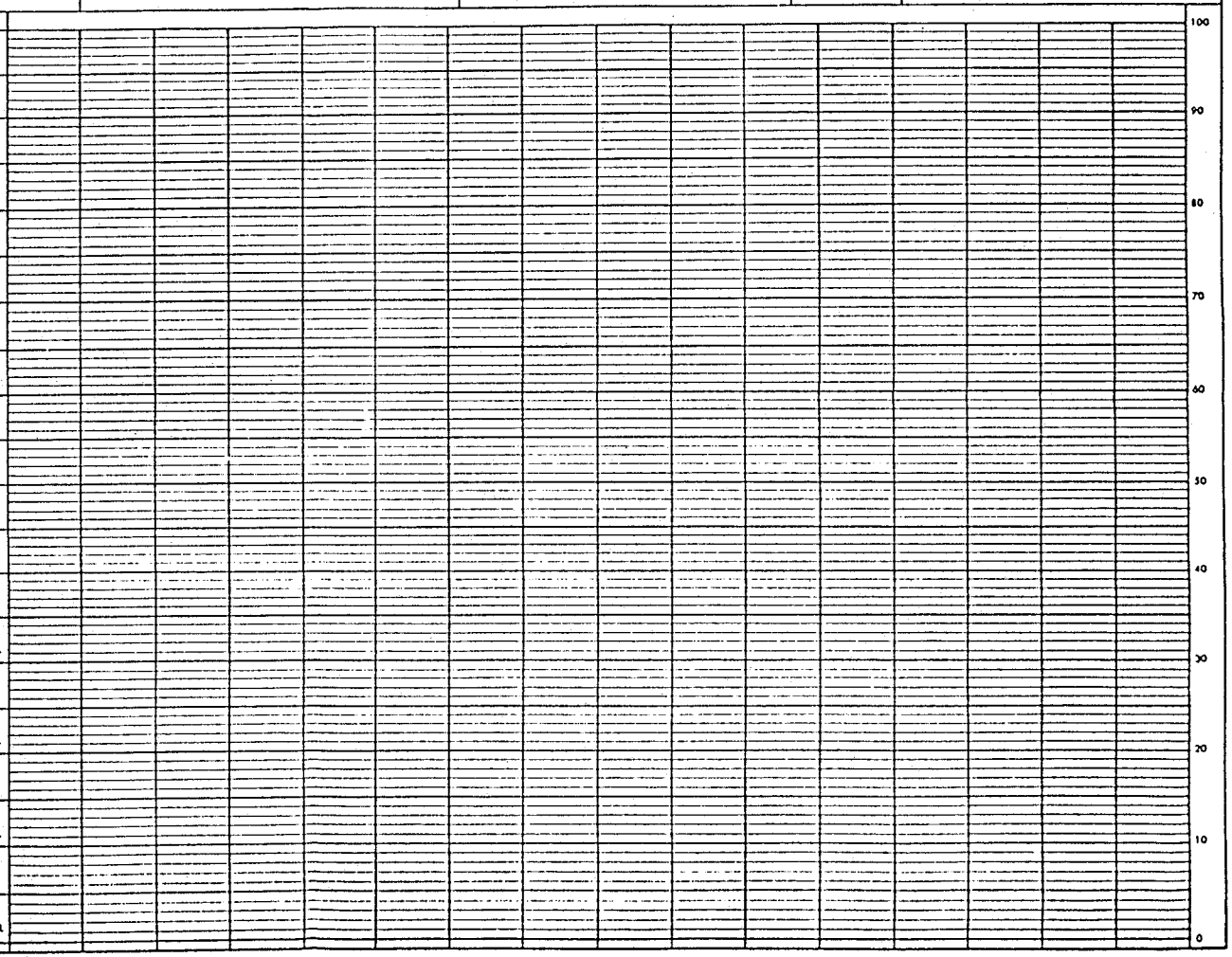
				ACTUAL



ENG FORM 2454
1 JUNE 65

PREVIOUS EDITION MAY BE USED

N-1

ATTACHMENT N

Dredge Data Logging System

1. INTRODUCTION

1.1 **Purpose**. The dredge excavation plant used on this Project is required to operate with instrumentation so that position and performance parameters of the dredging vessels can be monitored at specified intervals. This document describes the hardware, calibration, performance, data storage, delivery, and inspection requirements for the dredging monitoring system. Section 1 gives a brief introduction of the DDLS. Section 2 describes the sensor, sensor output and data collection. Section 3 describes the specific format and parameters to be measured and collected for each type of dredging equipment that shall be fitted and equipped to comply with this document.

1.2 **Definitions**. The dredging monitoring system described above will be termed the Dredging Data Logging System (DDLS). The DDLS shall be acquired, installed, calibrated, operated, and maintained by the Contractor. DDLS performance varies according to the type of dredging equipment used. Types of dredging equipment are described in detail in Engineer Manual 1110-2-5025 "Dredging and Dredged Material Disposal."

1.3 **Minimum Plant Instrumentation.** The vessels required to be configured with instrumentation meeting the requirements for the DDLS shall include the following types of equipment / plant: This attachment applies to all dredging/excavating equipment that could be used on a dredging contract. All equipment identified in this attachment may not apply to the anticipated equipment used in this contract.

A. Each and any type of dredge / excavating equipment. Hopper, cutterhead, bucket, dipper, etc.
B. Each scow or disposal barge used to transport dredged material to or from a designated disposal location.
C. Each separate pumping / booster station or pumpout facility not covered as part of the equipment in 1.3 A above. A hopper dredge with pumpout capability should record similar parameters on the same file as dredging. The hopper dredge usually cannot be dredging and pumping out at the same time thus the same sensors and equipment are generally used to measure and record the required data whether dredging or pumping out.

2. SENSOR AND SENSOR OUTPUT REQUIREMENTS

2.1 **General**. The DDLS sensor requirements are compatible with standard dredging industry monitoring equipment and signal outputs. Sensor output signal strengths and quality at the DDLS storage and logging unit(s) shall be in accordance with manufacturer' s specifications. The Contractor is responsible to provide data to the Contracting Officer' s Representative, COR using industry standard sensors.

2.1.1 **Instrumentation Plan** The contractor shall develop an Instrumentation Plan that shows how he will gather data, perform quality control on the data, calibrate and repair sensors/data reporting equipment when they fail, and distribute the sensor data and computed dredge specific data to the COR. The contractor shall keep a log of sensor problems and repairs. Re-calibration may be directed at any time during contract execution as deemed necessary. No re-calibration or adjustments to the

calibration controls shall be performed without notification to the COR. Physical documentation of the calibration procedures and corresponding printed verification data shall be provided for every calibration and repair event.

The Instrumentation Plan shall be submitted prior to commencement of dredging operations by the contractor at the preconstruction conference. Prior to dredging operations or within 48 hours after dredging operations have begun, the COR or a designated representative of the contracting officer shall physically inspect each instrumented dredging plant to verify the Instrumentation Plan; this may include verification of each sensor, sensor location and position, sensor signal conditioning and routing, data acquisition equipment performance and location, power supplies and charging system, calibration equipment, documentation, computations and equations, plant dimensions, etc.

The contractor shall be allowed up to 72 hours after dredging has commenced to have a fully operational DDLS system in accordance with this attachment - DDLS or the contractor shall be subject to Par. **Sensor and Collection Performance Requirements** and possible suspension of dredging operations until the DDLS system becomes and remains fully operational in accordance with this attachment.

2.1.2 **DDLS Data ASCII File Format**. The data shall be capable of being read and manipulated with software running on an operating system of MS-DOS 3.3 or newer version. The files shall include all applicable sensor values in the units described in this section (as applicable to the type of dredging equipment used, in ASCII, comma delimited, floating point data. Signs and decimal points are indicated as stated for specific parameters measured. The required record fields as applicable to the type of dredging equipment used described in Section 3 shall be separated with a comma (ASCII 32, 20 Hex) and terminated with a carriage return, line feed (CR/LF) sequence (OD/OA Hex). Examples of maximum record lengths are shown in Section 3 as they apply to the type of dredging equipment used. The length of each data field shall not exceed the number of characters described for each DDLS sensor in Section 2 and these fields shall contain only those characters described (in engineering units) for each particular DDLS sensor described in Section 2. No additional characters or data shall be included with specified DDLS data file fields and records on the DDLS data files without COR approval.

2.1.3 **Required Data and Filenames**. The Contractor shall store data in one separately identified data file per instrumented vessel or piece of equipment on removable storage media. Data shall be transmitted as required in Par. **Data Inspection and Collection** and become Government property. Once recorded by the data logger the data shall not be edited or modified by the contractor unless given approval to make changes by the COR. Data files shall not be returned to the Contractor. Data files shall include data for daily operations for each vessel beginning at 0000 hours and concluding at 2400 hours or an agreed upon increment with the COR for each individual DDLS, except as noted in Par. **Time and Julian Date** to account for daylight savings time adjustments. Data filenames will be created as jjjyyccc.bbb where jjj will be replaced with the Julian day; yy will be replaced with current year e.g. 02 for 2002; ccc will represent the contract number such that DACW60-02-C-0009 will be shown 209 with the 3 digits representing the last digit of the year and last 2 digits in the contract number; bbb will be replaced with a 3-character abbreviation for the vessel that the DDLS operates on. Each 3 character vessel abbreviation shall be approved for data filenames by the COR. Brief DDLS data collection interruptions for file storage and next-day setup procedure completion are necessary and expected. Excessive downtime shall be treated as described in Par. **Sensor and Collection Performance Requirements**.

2.1.4 **Data Inspection and Collection**

2.1.4.1 **Viewable Data** All required data shall be viewable in real time on a monitor located on each vessel so that the recorded data can be compared against the actual physical properties being measured. For example, if 15 different measurements are required on a vessel all those parameters must be viewable as they are recorded. Once the cycle is updated the refreshed readings should then be viewable and so on. The screen must be easily read during bright sunlight or low lighting conditions and shall be kept clean of moisture and other impediments restricting clear viewing of data.

2.1.4.2 **Daily Data Storage** Each vessel's daily data shall be provided to the COR on removable storage media. The contractor shall make available daily vessel data to the COR on 3-1/2" (1.44Mbyte) diskettes or other removable storage format approved by the COR no later than 24 hours after the data has been recorded. Collection of the recorded data media shall be arranged with the COR at agreed upon intervals.

2.1.5 **Power and Storage Requirements**. Continuous, filtered system power sources, sufficient to maintain 24 hour supply to the computer/logger and analog/digital sensors shall be provided. The computer data logger shall be capable of storage/data collection for a minimum 30 day period at 1 minute or more frequent intervals depending upon vessel requirements data collection interval, 24 hours per day, 7 days per week. The on-board logger shall be able to log the specified parameters for each vessel.

2.1.6 **DDLS Sample, Logging, and Storage Interval**. Each DDLS must operate with the capability to adjust sample, logging, and storage interval settings. The DDLS must be capable of sampling sensor outputs, logging, and storing those outputs at 1 second or more frequent intervals. The DDLS may also be required to operate at the minimum 1 second or otherwise specified sample rate and average values over a longer interval (i.e., 1 minute, 5 minutes, etc.) for logging and storage. An initial sample, logging and storage time interval (with or without data averaging) will be based on the approved instrumentation plan. As data are reviewed by the COR during and throughout the dredging operations, the Contractor shall be responsible to adjust DDLS sample, logging, and storage intervals as prescribed by the COR. Initial anticipated logging data recording intervals shall be 1 minute / 60 seconds for all the required parameters on each vessel except as noted in the paragraphs below requiring more frequent recording intervals for Hopper Dredges, Scow Barges and Mechanical Dredges.

2.1.6.1 **Additional Requirements for Hopper Dredges and Scow Barges**
Initial logging data recording intervals shall be 1 minute / 60 seconds for all the required parameters on each vessel except bottom dumping vessels transporting material for open water disposal, i.e. hopper dredges and scow barges. These vessels shall also record position and draft every 6 seconds while near and within the designated open water disposal area. A longer period, 1 minute / 60 seconds of recording frequency is required for the hopper dredge and scow barge when traveling to and from the disposal area or while loading.
Hopper dredges and scow barges will be required to record all parameters every six seconds when the vessel begins its approach approximately 1000 feet outside the designated disposal area bounded by the perimeter line enclosing the designated dump lines/lanes as shown on the contract drawings, into the area and during dumping and continuing the six secondrecording intervals until the dump vessel

is then approximately 1000 feet outside of the perimeter of the designated disposal area enclosing the dump lines/lanes.

2.1.6.2 **Additional Requirements for Mechanical Dredges, Bucket, Dipper, Clamshell, Backhoe, etc.**
Initial data logging recording intervals shall be 1 minute / 60 seconds for all the required parameters on each vessel except mechanical type dredges during excavation operations. These vessels shall also record the required parameters for this type vessel every 6 seconds when dredging operations are in process. A longer period, 1 minute / 60 seconds of recording frequency is required for the mechanical dredge when idle.

2.1.7 **Sensor and Collection Performance Requirements**. The Contractor shall be responsible for replacement of system components and sensors to provide DDLS data (within 24 hours if failure occurs) of the DDLS for the duration of dredging, transport and pumpout operations. Any compromise of DDLS system operation or DDLS component failure beyond this 24 hour time period during dredging operations may result in suspended dredging operations at the discretion of the Contracting Officer until the DDLS system operates with all specified data properly recorded. Manufacturer's descriptions of sensors, sensor operation, and sensor calibration procedures and calibration intervals shall be provided to the COR prior to dredging operations for each vessel meeting the requirements for instrumentation and monitoring.

2.1.7.1 **Data not Recorded** It shall be presumed if no recording of data is made the vessel is not operational. If any part of the required data string is missing for any recording interval the performance of the DDLS is subject to Par. **Sensor and Collection Performance Requirements.**

2.1.7.8 **Resolution of Missing Data Report** Missing data from interval strings or complete missing data intervals shall be reconciled immediately. Justification for the failure or lack of data shall be forwarded to the COR on a regular basis. A weekly or more frequent summary report as determined by the COR shall be forwarded to the COR explaining any recording failures and the resolution of the missing data for each vessel requiring instrumentation according to this attachment. An instrumented vessel not operating shall also be reported in the report. Exact times and reasons for each interval or partial interval recording failure shall be reconciled in this report.

2.1.8 **System of Measurement** The English system (foot-pounds) will be utilized for this contract however, if directed by the COR the contractor shall convert all future data to a metric system of measurement with units specified at the time of conversion. The contractor shall be allowed 14 days to convert all sensor and recording equipment after written notification.

2.1.9 **Year 2000 Compliant** All hardware and software used with the DDLS shall be certified Y2K compliant. Downtime or erroneous data because of the year 2000 problem will be considered a component failure and shall be subject to the Par **Sensor and Collection Performance Requirements.**

2.2 **Recorded Parameters**

2.2.1 **Header File Field Labels** At the beginning of each day' s data recording the following data shall be listed one time: If not applicable state NA.

Current Date: Month-Day-Year
Contract Number: DACW60-
Vessel Name: Name Of Vessel
Vessel Captain: Captain' s Full Name
Volume of Hopper Dredge or Scow Barge : Rating Volume Cubic Yards
Distance of Scow From Tow Vessel: Stern of Tow Vessel to Bow of Barge
Disposal Technique: Bottom Dump, Pumpout, etc.
Draft Empty: Feet rounded up at .5 Ft
Datum: SC State Plane NAD83, Etc.
Phase 1: Save Data Every 60 Seconds
Phase II: Save Every Data Every 06 Seconds
Phase III: Save Data Every __ Seconds

A field ID heading is required beginning in the first column and progressing across to include all required columns for each type of vessel recorded. A sample of column labels for a hopper dredge would be as follows:

Time,Jul,x83,y83,Lat83,Lon83,Head,Foredr,Aftdr,Pdepth,PRPM,Ppres,Pvac,Sdepth,SRPM, Spres,Svac,DumpID

Other vessel types would be similar. Approval of the COR is required before header data and field ID heading are finalized for recording.

2.2.2 **Time and Julian Date**. The contractor shall calibrate time daily from any national or internationally recognized time source such as Greenwich mean time. Local time shall be recorded in the DDLS to the nearest second in military-style 24-hour format Eastern Standard time. Adjustments shall be made to account for daylight savings time, meaning that DDLS data will cover a 25 hour time period for one day and 23 hour time period for one day of operations per year. The time and julian date data field will occupy 12 characters in an hour-minute-second and julian date form so that a typical DDLS time entry representing 1 minute and 30 seconds past 4 o'clock PM on Jan 31, 2002 would appear as: Year not recorded electronically here.

Time (local hour-minute-second) Julian Date (calendar day of the year)
Julian dates shall be recorded in the DDLS to the calendar day as jjj from 1 to 365/366.

16 01 30,031

2.2.3 **Horizontal Positioning**. Horizontal positioning for all instrumented vessels shall be recorded in the DDLS in Eastings and Northings and Latitude and Longitude using differential global positioning system equipment operating with a minimum accuracy level of 10 feet or better horizontal. The coordinates shall be corrected to display and record the physical centerline location of each vessel measured at the intersection point longitudinally and transversely projected along the vessel unless otherwise specified. Cutterhead or bucket positions shall be recorded instead of the vessel centerline. Easting and Northing Positioning ,1983 NAD Geographic Coordinates, shall be recorded with a typical positioning value in the DDLS output string that would occupy a seven and six character field with zero decimal places and Latitude and Longitude Positioning, NAD 83 shall be

recorded with a typical positioning value in the DDLS output string that would occupy two nine character fields carried to six decimal places and appears as:

Eastings, Northings, (0 decimal places) Latitude, Longitude (degrees, 6 decimal places)

2389000,312220,32.362878,79.364565

Coast Guard DGPS

Information and reference/description of the U.S. Coast Guard Differential Global Positioning System can be obtained from the U. S Coast Guard or their internet website.

2.2.4 **Compass Heading**. Compass Heading shall be recorded by the Contractor into the DDLS using industry standard equipment described in written form and approved by the COR prior to dredging. Compass headings shall be recorded for position in positive degrees only from 0 to 360 degrees and to the nearest whole degree. The Contractor shall input data into the DDLS with 0 degrees equal to true north and with a sign convention so that positive degrees are in a clockwise direction. Headings shall be measured longitudinally in a direction from the aft portion of the vessel toward the excavating devices or direction of travel for hopper and scow vessels. Pumping stations do not require compass heading measurements. Compass headings shall occupy a data field 3 characters long so that a typical heading of 89.5 would rounded up to next whole number at or above .5 degrees due east would be:

Compass Heading (degrees)
090

2.2.5 **Draft**. Hopper dredges and barges (scows) used to transport dredged material shall input draft measurements into the DDLS in feet to the nearest foot. Industry standard bubbler systems or equivalent system may be used by the Contractor. Fore and aft draft readings are required for each vessel. Calibration of draft measurements are required to assure accurate readings and shall be included in the instrumentation plan. Draft data will occupy two data fields with 2 characters each rounded up to the next whole number at a fractional value of .5 or higher reading so that the DDLS entry would appear as:

Draft (fore and aft, respectively, in feet)
15,14

2.2.6 **Depth of Cut**. Hopper dredges, cutterhead dredges and and bucket dredges shall input depth of excavation measurements into the DDLS in feet to the nearest .1 foot. Industry standard bubbler systems or equivalent system may be used by the Contractor. Readings are required for each excavation device's lowest cutting or dredging depth capability. Calibration of depth measurements are required to assure accurate readings and shall be included in the instrumentation plan. Depth of Cut data will occupy 1 data field 4 characters long. The DDLS entry would appear as:

Depth of Cut Below Datum (feet)
45.1

2.2.7 **Pump Drive RPM.** As required based on the type of dredging equipment used by the Contractor i.e. cutterhead main and ladder pumps, hopper dredging and pumpout, pump stations, etc. where pumping systems are used to pump excavated slurry or pump out from a scow or hopper barge. Each pump drive RPM shall be recorded by a measuring device or calculated from prime mover RPM approved for use by the COR and calibrated according to manufacturer's specifications prior to commencement of work. A typical Pump Drive RPM value in the DDLS output string would occupy three character field and appear as:

Pump Shaft RPM (revolutions per minute)
150

2.2.8 **Pump Discharge Pressure and Vacuum.** As required based on the type of dredging equipment used by the Contractor ie. cutterhead main and ladder pumps, hopper dredging and pumpout main pumps, pump stations, etc. where pumping systems are used to pump excavated slurry or pump out from a scow or hopper barge. Each discharge pressure and vacuum measurement shall be recorded by a measuring device approved for use by the COR and calibrated according to manufacturer's specifications prior to commencement of work. The discharge pressure device shall be located as close to the discharge flange and vacuum device shall be located as close to the eye of the pump as practicable attached to the suction piping. A pressure or vacuum value output string would occupy two data fields two characters long rounded up to next whole number at a fractional value of .5 or higher reading and appear as:

Pump Discharge Pressure (pounds per square inch),Pump Vacuum (inches of mercury)
10,05

2.2.9 **Dump Identification Number.** The contractor shall record each dump at the ODMDS using a sequential identification numbers, which will occupy 5 characters, starting with number 1.

Dump ID
00001

3.0 **DDLS Input Variations by Dredging Equipment Type.**

3.1 **General.** Data file format and organization by sensor outputs are specified according to the type of equipment put in service by the Contractor. This section describes the required data and sensor requirements for hopper dredges, bucket dredges, cutterhead dredges, barge (scows) and pumping / booster and pumpout stations. The **Time and Julian Date** data field shall occupy column 1 in the data record followed by the remainder of the specified **Time and Julian Date** field characters and sequentially by other data fields as specified in this section for each type of dredging equipment.

3.2 Hopper Dredge Requirements

3.2 1 **Hopper Dredge Dimensions**. Additional information provided for each hopper dredge will include a schematic of the dredge showing:

a. Scaled vessel dimensions including hull and decks.

b. Dragarm and draghead dimensions.

c. Draghead dimensions.

This information will be used to transfer DGPS position to the vessel. Also to be provided with the hopper dredge dimensions is the inside discharge pipe diameter along the locations of the slurry velocity and slurry density metering devices for each main pump. Hopper Dredge dimensions are to be certified by a licensed marine architect.

3.2.2 **Hopper Dredge Parameters** The hopper type dredge shall include the following parameters separated by commas:

Time, Julian Date,Vessel Horizontal Positioning -> E,N,Lat,Long,Heading,Fore Draft, Aft Draft,Port Draghead Depth, Port Main Pump Drive RPM,Port Main Pump Discharge Pressure,Port Main Pump Vacuum,Starb Draghead Depth, Starb Main Pump Drive RPM,Starb Main Pump Discharge Pressure,Starb Main Pump Vacuum,Dump ID

3.2.3 **DDLS Sample Data for Hopper Dredges.** Typical data line for each recording interval shall be written to file in the format as shown below:

12 12 34,123,2389000,312220,45.343212,79.365434,209,15,16,00.5,099,00,00,35.2,150,1005,00001

3.3 Mechanical /Bucket, Clamshell, Etc. Dredge Requirements

3.3.1 **BucketDredge Dimensions**. Additional information provided for each bucket dredge will include a schematic of the dredge showing:

a. Scaled vessel dimensions including hull and decks.

b. Boom dimensions

c. Bucket dimensions.

This information will be used to transfer DGPS position to the bucket and must be certified accurate by a licensed marine architect.

3.3.2 **Bucket Dredge Parameters** The bucket type dredge shall include the following parameters separated by commas:

Time and Julian Date, Bucket Horizontal Positioning, Bucket Depth, Dump ID

16 01 30,031,2389000,312220,32.366728,79.367845,46.0,00001

3.4 Scow Barge Requirements

3. 4.1 **Scow Dimensions**. Additional information provided for each scow will include a schematic of the dredge showing scaled vessel dimensions.

3.4.2 **Barge Ullage Chart and Dimensions**. The contractor will supply the COR with the barge ullage table which lists the bin volume as a function of depth, and the barge draft displacement table, listing the barge displacement as a function draft. These tables must be certified by a licensed marine surveyor or architect. Curves of form that provide this information may also be used subject to approval by the COR. All curves of form shall also be certified by a licensed marine surveyor or architect. The ullage and draft information must provide information (AB,C,D and E constants) fitting the following polynomial equations for volume and weight:

$$\text{Volume} = A + BX + CX^2 + DX^3 + EX^4$$

Where X is Bin level in Feet measured positive upward from the bin bottom and Volume is in Cubic Yards

$$\text{Weight} = A + BX + CX^2 + DX^3 + EX^4$$

Where X is Draft in Feet

And Weight is in pounds

The contractor will also provide the COR with dimensioned drawings of the barge bin. These drawings shall include the bin length, depth, and width. A bin cross section should be included with dimensions. The overall barge dimensions will also be provided, showing the location of the fore and aft bubbler ports (or equivalent draft measurement system). A copy of the users manual for the sensors will be provided to the COP, along with a detailed description of the data acquisition system that is being used. All dimensions are to be certified by a licensed marine surveyor or architect.

3.4.3 **Barge Water Tests Requirements**. Once the barge DDLS is installed and calibrated, the COR will direct the contractor in performing 3 water tests. Each water test will consist of 1) pumping the bin out to its lowest level and then 2) filling the bin to capacity with water. At each of the stages of the test (empty and full state), a time duration of at least 2 minutes will pass before going to the next stage. Data will be logged in the DDLS and reviewed and stored by the COR. After the first three water tests, the COR will evaluate the DDLS for accuracy. If the COR' s review of the data indicates an unsatisfactory calibration, a re-calibration of the acoustic sensors and review of contractor-supplied draft and load information may be necessary before completing the final three water tests. During dredging operations, up to 2 water tests will be conducted per week at the time and discretion of the COR. The COR will review the water tests data to insure that the system is operating within acceptable accuracy, directing the contractor to re-calibrate or repair the DDLS input components as necessary.

3.4.4 **Scow Parameters** The scow barge shall include the following parameters separated by commas:

Time and Julian Date,Vessel Horizontal Positioning,Draft Fore,Aft,Dump ID

3.4.5 **DDLS Sample Data for Scow Barges.** Typical data line for each recording interval shall be written to file in the format as shown below:

16 01 30,031, 2389000,312220,38.962845,79.873645,15,15,00001

3.5 Cutterhead Dredge Requirements

3.5.1 **Cutterhead Dredge Dimensions**. Additional information provided for each cutterhead dredge will include a schematic of the dredge showing:

a. Scaled vessel dimensions including hull and decks.

b. Suction ladder length(s) in straight segments with any angled sections shown labeled in degrees.

c. Cutter basket dimensions.

This information will be used to transfer DGPS position to the cutterhead. Also to be provided with the cutterhead dredge dimensions is the inside discharge pipe diameter along the locations of the slurry velocity and slurry density metering devices. Cutterhead Dredge dimensions are to be certified by a licensed marine architect.

3.5.2 **Cutterhead Dredge DGPS Antenna Location**. The DGPS antenna shall be located directly over the pivot point of the suction ladder. The elevation from the centerline of the suction ladder pivot point to the DGPS antenna shall also be measured to the nearest 0.1 foot and provided to the COR.

3.5.3 **Cutterhead Parameters** The cutterhead type dredge shall include the following parameters separated by commas:

Time,Julian Date,Cutterhead Horizontal Positioning E,N,Lat,Long,Cutterhead Depth, Main Pump Drive RPM,Ladder Pump Drive RPM, Main Pump Discharge Pressure,Main Pump Vacuum

3.5.4 **DDLS Sample Data for Cutterhead Dredges.** Typical data line for each recording interval shall be written to file in the format as shown below:

16 01 30,031,2389000,312220,32.624568,79.365645,45.1,140,150,12,05

3.6 Other Excavating ,Pumping or Transporting Equipment

Should the contractor use equipment or plant not identified in the sections 3.1 through 3.5 a similar data record shall be required to include the appropriate parameters listed in section 2.