



**US Army Corps
of Engineers**

Marine Design Center

SPECIFICATIONS

to

DESIGN, CONSTRUCT, TEST AND DELIVER

TWO MANEUVER BOATS

SOLICITATION # DACW61-03-R-0033

DEPARTMENT OF THE ARMY
Corps of Engineers
Marine Design Center
Philadelphia, PA

INSTRUCTIONS

The following items are required before an award can be made to a potential bidder:

BONDING DOCUMENTS: If a bid guarantee is required, it must be included with your bid and in the proper amount (Usually 20 percent of the total bid price, including any options or additives). If your bid guarantee is in the form of a bid bond, the bond must be properly signed by both the bidder and surety (**BONDING DOCUMENTS INCLUDING POWER OF ATTORNEY SHOULD BEAR AN ORIGINAL SIGNATURE BY AN OFFICER OF THE SURETY**) and all required seals must be affixed. A bid guarantee is required when your bid exceeds \$100,000.00. A late bid guarantee is treated the same as a late bid.

CENTRAL CONTRACTOR'S REGISTRATION: All contractors are required to register in the Central Contractor's Registration (**CCR**) Database before an award can be made. Contractor's can obtain information on registration and annual confirmation requirements by calling 1-888-227-2423 or via the Internet at www.ccr.gov
See DFARS Clause 52.204-7004 "Required Central Contractor Registration" in the solicitation document.

VETS 100 REPORT – You must be in compliance with the VETS 100 reporting requirement to receive a Federal contract of \$25,000.00 or more. The Department of Labor has made available several reporting options as follows:

1. Direct entry of information on VETS 100 website at:
<http://vets100.cudenver.edu>
2. Submission of an electronic file on a diskette; and
3. Submission of the VETS 100 Report in hard copy form

U.S. Department of Labor
Veterans Employment and Training Service
VETS 100 Report Office
6101 Stevenson Avenue
Alexandria, VA 22304-3540

INFORMATION ONLY – The Health & Safety Requirement Manual (EM 385-1-1) can be downloaded from the following web site:

<http://www.hq.usace.army.mil/soh/em385/385toc.htm>

SOLICITATION, OFFER AND AWARD			1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING	PAGE OF PAGES 1 2 6 2		
2. CONTRACT NO.		3. SOLICITATION NO. DACW61-03-R-0033	4. TYPE OF SOLICITATION [] SEALED BID (IFB) [X] NEGOTIATED (RFP)	5. DATE ISSUED	6. REQUISITION/PURCHASE NO. W25PHS-3157-0487			
7. ISSUED BY US ARMY ENGINEER DISTRICT, PHILADELPHIA CONTRACTING DIVISION WANAMAKER BLDG, 100 PENN SQ EAST PHILADELPHIA PA 19107-3390 CODE DACW61 TEL: FAX:			8. ADDRESS OFFER TO See Item 7		(If other than Item 7) CODE TEL: FAX:			
NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".								
SOLICITATION								
9. Sealed offers in original and 3 copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in <u>block 7</u> until <u>4:00 p.m.</u> local time <u>7 Oct 2003</u> (Hour) (Date)								
CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.								
10. FOR INFORMATION CALL:		A. NAME WILLIAM A BAILEY		B. TELEPHONE (Include area code) (NO COLLECT CALLS) 215-656-6932		C. E-MAIL ADDRESS William.A.Bailey@usace.army.mil		
11. TABLE OF CONTENTS								
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OFFER (Must be fully completed by offeror)								
NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.								
12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.								
13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)								
14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):				AMENDMENT NO.	DATE	AMENDMENT NO.	DATE	
15A. NAME AND ADDRESS OF OFFEROR		CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)				
15B. TELEPHONE NO (Include area code)		15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. <input type="checkbox"/>		17. SIGNATURE		18. OFFER DATE		
AWARD (To be completed by Government)								
19. ACCEPTED AS TO ITEMS NUMBERED			20. AMOUNT		21. ACCOUNTING AND APPROPRIATION			
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c)() <input type="checkbox"/> 41 U.S.C. 253(c)()				23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)			ITEM	
24. ADMINISTERED BY (If other than Item 7) CODE			25. PAYMENT WILL BE MADE BY CODE					
26. NAME OF CONTRACTING OFFICER (Type or print) TEL: EMAIL:				27. UNITED STATES OF AMERICA (Signature of Contracting Officer)		28. AWARD DATE		
IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.								

Design, Construct, Test and Deliver Two MANEUVER BOATS/BARGES, in accordance with the attached specifications:

<u>ITEM NUMBER</u>	<u>ITEM</u>	<u>QTY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL PRICE</u>
0001	MANEUVER BOAT/BARGE	2	VESSEL	XXXX	XXXXXXXX
0001AA	PLANNING AND SCHEDULING (The submittals required for "Planning and Scheduling" are listed in Contract clause H02. This item is initiated by a Notice To Proceed, issued by the Contracting Officer after Award of Contract.)	1	JOB	XXXX	\$ _____
0001AB	ENGINEERING (The submittals required for "Engineering" are listed in Contract clause H02. This item is initiated by a Notice To Proceed, issued by the Contracting Officer after satisfactory completion of Item 0001AA.)	1	JOB	XXXX	\$ _____
0001AC	CONSTRUCTION, TESTING, AND DELIVERY (The submittals required for "Construction, Testing, and Delivery" are listed in Contract clause H02. This item is initiated only by a Notice To Proceed, issued by the Contracting Officer after satisfactory completion of Item 0001AB. The Contractor may not start this item until he receives a Notice To Proceed for this item.)	2	JOB	XXXX	\$ _____
TOTAL FOR ITEM 0001		2	VESSEL	XXXX	\$ _____

INSERT LOCATION OF THE FACILITY WHERE THE WORK WILL BE PERFORMED:

The Government may reject an offer as non-responsive if it is materially and mathematically unbalanced as to price for any bid item or combination of bid items. A bid is unbalanced when it is based on prices significantly less than cost for some work and prices, which are significantly overstated for other work. Refer to Section M for Evaluation and Award criteria.

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PART I - THE SCHEDULE - SECTION C
DESCRIPTION/SPECIFICATION/WORK STATEMENT
FOR TWO MANEUVER BOATS/BARGES

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PART I - THE SCHEDULE - SECTION C DESCRIPTION/SPECIFICATION/WORK STATEMENT

C000 GENERAL

The Army Corps of Engineers, Marine Design Center, (MDC), is issuing this Request For Proposals (RFP), to procure and contract all services (engineering and design, construction, testing and delivery) for the acquisition of two (2) new Maneuver Boats/Barges for the Rock Island District (CEMVR-OD-I). The vessels shall be of welded steel construction.

The Contractor assumes complete responsibility for building the Maneuver Boats/Barges according to this Specification and the documents that are called for in this procurement, to meet the requirements of this Contract. Should the Contractor determine at any time that he is unable to fulfill his Contract responsibilities, he shall notify the COR immediately of the problem experienced and his proposed manner of correction.

C001 MISSION STATEMENT

The Mission Area is the Rock Island District geographical area, which includes the Illinois River. One Maneuver Boat/Barge will be based in Peoria Lock and the other in La Grange Lock.

The primary mission of the new Maneuver Boats/Barges is to provide a floating platform to raise and lower the dam wickets (segments that form the dam), in a safe and effective manner, to regulate the river water pool elevation at the Peoria and La Grange Locks.

During the operating season, generally year round, the vessels are assigned to the respective locks, and positioned along the dam assisted by:

- a small towboat moored alongside the vessel to the side opposite the dam
- a stern winch with a cable connected to a shore point
- spuds that ride on the raised wickets on the side of the vessel adjacent to the dam.

The minimum design temperature is -20°F, the highest design temperature during the summer is 105°F, and the design wind speed is 100 mph, except where stated otherwise. The design River current is 8 mph.

C002 INFORMATION ON THE DAM

The wickets that compose the Peoria and La Grange dams can be raised and lowered to reduce or increase water flow downstream, to control the upstream pool elevation. The dimensions of the dam wickets are illustrated in the concept drawings that are a part of this specification. Each wicket is 3'-9" wide and there is a 3" gap between adjacent wickets. The dry weight of each wicket is approximately 3,000 lbs.

C003 DESIGN STANDARDS

The Maneuver Boats/Barges shall be fabricated to meet or exceed the minimum regulatory requirements set forth in the following:

- American Bureau of Shipping (ABS) "Rules for Building and Classing Steel Vessels for Service in Rivers and Intracoastal Waterways."
- American Bureau of Shipping (ABS) "Guide for Shipbuilding and Repair Quality Standards for Hull Structures During Construction."
- American Bureau of Shipping (ABS) "Rules for Building and Classing Steel Vessels":
 - Material requirements
 - Welding requirements
- 46 CFR Subchapter C - Uninspected Vessels. However, USCG inspection and certification is not required.
- 46 CFR Subchapter S - Part 170, Subpart E - Weather Criterion.
- 46 CFR Subchapter S - Part 173, Subpart B - Lifting, during lifting operations.
- 46 CFR Subchapter S - Part 174, Subpart B - Deck Cargo Barges, with the crane boom stowed.
- U.S. Army Corps of Engineers, Publication No. EM 385-1-1, "Safety and Health Requirements Manual." This publication can be downloaded from <http://www.usace.army.mil/inet/usace-docs/eng-manuals/em385-1-1/toc.htm>
- ASME/ANSI B30.8 - Floating Cranes and Floating Derricks.
- US Maritime Administration Schedule for Pipes, Joints, Valves and Fittings.
- The National Shipbuilding Research Program (NSRP 0490), January 1998, "Industrial Standards for Hull Structural Penetration Design Criteria and Details."
- 46 CFR Subchapter J - Electrical Engineering.
- Institute of Electrical and Electronic Engineers Standards, Publication No. IEEE-45 - Recommended Practice for Electrical Installation on Shipboard.
- Illuminating Engineering Society, "Recommended Practice for Marine Lighting."
- National Electric Code (NEC).
- United States Public Health Service (USPHS), Publication No. 393 "Handbook on Sanitation of Vessel Construction."
- 33CFR Subchapter E - USCG, Inland Navigation Rules.

C004 CLASSIFICATION AND CERTIFICATION

The Contractor shall be responsible for preparing necessary drawings and calculations, obtaining necessary regulatory body reviews and approvals, obtaining necessary inspections and surveys during construction and for the certification and classing of the vessel as follows:

- ABS classification for “Maltese Cross A-1 Barge, River Service, with Reinforcement A.” USACE shall be designated on the Request for Classification as the owner of the vessel. The owner’s address on the Certificates, shall read “U.S. Army Corps of Engineers, Rock Island District, Illinois Waterways Project Office, 257 Grant Street, Peoria, IL 61603-3585.”

It is USACE’s expectation that ABS inspection/surveillance shall occur at intervals of not more than 3 weeks apart. The Contractor shall bear all expenses associated with the acquisition of the required classing and certifications. The recommended ABS point of contact is Mr. Glenn Ashe, who can be reached by phone, or mail, at: (703) 518-0801, Gashe@eagle.org, or 1321 Prince Street, Suite 200, Alexandria, VA 22314.

In the event that the Contractor intends to launch, test, operate, or tow the vessel under conditions that violate the ABS class requirements of this Contract, the Contractor must specifically advise ABS and the COR of such intent. The Contractor shall incorporate any and all modifications required by ABS for such operation at no additional cost to the Government and at no additional Contract time. Any such modification which, in the opinion of the COR, affects the arrangements, operability or suitability of the vessel shall be removed from the vessel by the Contractor at no additional cost or time and the vessel returned to new condition prior to Final Acceptance.

C005 CONCEPT DESIGN

The drawings included with this specification, represent a “Concept Design” for the subject Maneuver Boats/Barges. General arrangements and systems have been engineered sufficiently to verify feasibility, and to achieve an adequate level of confidence that this concept design can be developed to meet the performance and operational requirements and the design objectives stated in this procurement. Neither the American Bureau of Shipping (ABS) nor the U.S. Coast Guard (USCG) have reviewed the concept drawings.

Based on the concept design and prior to the start of construction, the Contractor is required to complete a Detail Design of the vessel and submit that Design to the Government and the Regulatory Agencies for review and approval.

The Contractor is required to perform design and engineering, such as the development of piping and cable routings, structural plans, foundations, detailed arrangements, Detailed Design Drawings (refer to SNAME definition), complete materials lists, purchase specifications, shop drawings, construction details, regulatory body submittals, “as built” drawings, and other technical details required by the Contract or necessary to support the contractor’s administration, operation, and production practices.

Detailed submittals for review by Regulatory Agencies and ABS (for compliance with classification and certification requirements), inspection, testing, classification, and all associated costs are the responsibility of the Contractor.

C006 VESSEL IDENTIFICATION

The Maneuver Boats/Barges being acquired under this contract have been assigned the following name and MDC hull and project number:

	<u>NAME</u>	<u>HULL#</u>	<u>MDC PROJECT#</u>
Peoria Barge	MANEUVER BOAT 2001	604	2456
LaGrange Barge	MANEUVER BOAT 2002	605	2456

C010 DEFINITIONS

The following definitions are applicable to phrases and acronyms used throughout this Contract:

- CEMDC - Corps of Engineers Marine Design Center.
- COR - Contracting Officer's Representative - A member of the Contract management and quality assurance team authorized by the Contracting Officer to perform certain administrative and managerial duties.
- KO - Contracting Officer - A person with the authority to enter into, administer and/or terminate Contracts and make related determinations and findings.
- GFE - Government Furnished Equipment - Equipment, materials or components furnished by the Government to the Contractor for installation in the vessel.
- MDC - Marine Design Center.
- QC - Quality Control - Quality Control is a function of the Contractor. Quality Assurance (QA) is a function of the Government.
- USACE - United States Army Corps of Engineers.

C025 CONTRACTOR QUALITY STANDARDS

a. GENERAL

All articles, fittings, equipment, machinery, materials and supplies used in the construction and outfitting of the vessel(s) shall be new, free of defects and imperfections, and be the standard product of reputable manufacturers. All items shall be suitable for workboat application and meet the latest requirements of standard specifications published by national agencies. No salvaged materials shall be used in the works. Spare parts and service shall be readily obtainable.

The Contractor shall be responsible for the construction of a complete and functioning vessel(s). Inspection by the Marine Design Center is for the purpose of verifying the proper function of the Contractor's quality control measures and is not to be used as a substitute for control of quality by the Contractor.

b. INSTALLATION

Materials and equipment shall be installed in accordance with the approved recommendations of the manufacturer, and in compliance with the Contract documents. The installation shall be accomplished by workmen skilled for each kind of work and under competent direction.

c. WORKMANSHIP

(1) General

All frames and longitudinal members, where applicable, shall be provided with limber holes and/or snipes of adequate size to allow water in bilges to flow to the lowest point of each compartment. Limber holes shall also be provided to allow for the passage of air in tanks. Limber holes shall be located at the plate edge.

All plating shall be neatly cut, fitted and welded. All sharp or ragged edges, which may constitute a hazard to personnel or present poor appearance, shall be ground smooth.

Where work of one trade joins, passes through, or is on other work, there shall be no discrepancy or misfit when completed. In engaging one kind of work with another, marring or damaging of previously accepted construction shall be cause for rejection. All parts of the work intended to join or bear upon others shall have complete and solid surface contact and fit together neatly without excessive cold work during fabrication. All faying surfaces shall be painted and be clean and smooth before bolting up. Shims or liners shall not be used for the purpose of overcoming a bad fit.

Ends of outstanding flanges shall be cropped. Lightening holes may be punched, sawn, burned, or sheared and all edges shall have burrs removed.

All holes for machinery mounting bolts shall be drilled or punched; burning is not acceptable. Holes in a member having sharp curvature shall be avoided whenever possible.

All hull castings shall be machined, or ground, to bear solidly against the connecting structure.

(2) Welding

All welding and welding procedures shall be in accordance with the current rules of the American Bureau of Shipping and ANSI/AWS D3.5-85. All welding equipment used on the work shall be of a modern type subject to close control. The electrodes used throughout the work shall be suitable for use with the parent metal at each weld, and be approved by ABS.

Welding procedure, as to direction, length, numbers and sequence of beads, shall be carefully planned to minimize lock-up stresses. Care shall be exercised to produce smooth even beads, especially on all exposed plating and fittings. Beads shall be chipped and ground where directed by the Contracting Officer or his authorized representative.

Plating layout shall be so that hull plating seams may not fall within 3 inches of a girder or plate stiffener.

The Contractor shall employ appropriate welding procedures and grounding connections to preclude the possibility of anodic erosion of the hull after launching.

A detailed description of all welding procedures being employed in the construction shall be available for the Contracting Officer's Representative.

(3) Welders

The welding under this Contract is to be done only by welders who have successfully passed the qualification tests of the American Bureau of Shipping, or other regulatory agency acceptable to ABS. The Contractor shall bear the expense of conducting these tests and shall certify, by name to the Contracting Officer, welders who have successfully passed the prescribed tests and hold current, valid certifications.

The Contractor shall require any welder to repeat these tests when, in the opinion of the Contracting Officer's Representative, the work of the welder indicates a reasonable doubt of his proficiency. In such cases the welder shall be disqualified from any welding under the Contract until he has successfully passed the retest.

The Contractor shall maintain records of each welder's certification during the course of the Contract. The records are to be available for examination upon request of the Contracting Officer or his representative.

C040 SCOPE OF WORK

After contract award, the services to be provided by the Contractor shall be structured and will be managed by the Marine Design Center (MDC), in three phases as follows:

- Phase I Planning and Scheduling
- Phase II Engineering
- Phase III Construction, Testing and Delivery

Please refer to Section H for an outline of the deliverables required in each phase.

During the Engineering phase, the Contractor shall provide engineering and design services to develop a Detail Design for the fabrication of the Maneuver Barges, and obtain ABS approval of the design for compliance with the certification requirements. Review and approval by MDC of calculations, reports and drawings developed by the Contractor is also required in this phase to completely demonstrate and represent that the Maneuver Barges design meets or exceeds the requirements of this solicitation.

During the Construction, Testing and Delivery phase, the Contractor shall fabricate, test and deliver the Maneuver Barges. Performance by the Contractor in this phase includes:

- fabrication of the barges
- all required tests to verify that the approved plans were followed and that the standards for certification and mission performance objectives were met
- delivery

During all Phases of this Contract, including testing, the Contractor is authorized to use the services of subcontractors performing under his direction and supervision; however, the Contractor shall assume full responsibility for their work.

C042 CONCEPT DRAWINGS

The following is a list of the drawings / documents, that have been designated as Concept Drawings for this vessel. These documents along with this specification form a part of this procurement.

<u>DRAWING NO.</u>	<u>TITLE</u>	<u>FORMAT</u>
604-A105-01	Lines Plan	Drawing
604-A205-01	Profiles	Drawing
604-A215-01	General Arrangement	Drawing
604-A225-01	Operating Arrangement	Drawing
604-A550-01	Spud Geometry	Drawing

The above drawings are also available in AutoCAD release 2000, and the electronic files will be provided to the successful bidder.

C100 SCIENTIFIC

C105 PRINCIPAL CHARACTERISTICS

The principal dimensions of the Maneuver Boats/Barges are as follows:

- Total Length 80'-0"
- Beam 32'-0"
- Depth (at CL) 4'-6" (flat bottom)
- Depth (at side) 4'-6" (flat deck, no camber)
- Design Draft 2'-0"

Maximum Height Restriction: The maximum height of any component (i.e. crane stowed), on this vessel shall not exceed 28'-6" above the base line (bottom of the vessel).

The Contractor shall use the conceptual lines plan to develop the detail hull form of the vessel.

Changes may be proposed by the Contractor during the Engineering and Design Phase, to improve constructability and to best suit the contractor's production methods; however, incorporation of changes will be subject to the prior approval of the COR.

C115 WEIGHT ESTIMATE AND CONTROL

During the Engineering Phase, the Contractor shall prepare and submit to MDC a detailed weight estimate of the Maneuver Boats/Barges, using a traditional 3-D coordinate system for the estimated position of the center of gravity.

During construction, the weight report shall be revised and updated with actual measured weights. Prior to launching, the Contractor shall prepare and submit a complete, updated Weight Report. The Contractor may itemize the weights by ship modules/equipment and their 3 coordinates to define CG location, to suit his method of fabrication and simplify the weight report.

A final, complete Weight Report shall be submitted during testing and prior to delivery, to bring the estimated light ship weight and center of gravity in reasonable agreement with the stability test results.

C125 HYDROSTATICS

During the Engineering Phase, the Contractor shall calculate and submit to MDC the Hydrostatic properties of the Maneuver Boats/Barges hull form at 3" intervals. The spudwells, seachests, and the chanoine line tunnels and deck recesses must be accounted for as deductions to the hull.

The hydrostatics shall be performed using the GHS computer software (Creative Systems Inc., Port Townsend, WA 360-385-6212). The hull definition file (or *.gf file) shall be provided in electronic format (on a 3.5" disk or CD ROM) with the hydrostatics submittal.

C140 FREEBOARD

During the Engineering Phase, the Contractor shall calculate and submit to MDC a Freeboard Calculation to determine the minimum permissible freeboard allowed in transit with the crane stowed, all consumable tanks full, and maximum deadweight on board. In the event that this freeboard calculation permits a sailing draft greater than 2'-6", the maximum allowable draft for the vessel shall be established at 2'-6".

The Contractor shall perform the final analysis using the as built lightship data obtained as a result of the inclining experiment.

C150 DAMAGED STABILITY

During the Engineering Phase, the Contractor shall perform and submit to MDC a Damaged Stability Analysis to demonstrate that the internal watertight subdivision of the hull of the vessel meets One Compartment Flooded Damaged Stability, defined as follows:

After flooding any one compartment, the margin line (3" below the deck edge) shall not be submerged. The definition of compartment permeability is as contained in 46CFR Subchapter S.

The draft and trim of the vessel before damage shall be the maximum allowable 2'-6" draft, even keel, with the crane stowed.

C155 TRIM & STABILITY

During the Engineering Phase, the Trim and Stability Booklet shall be developed based on the weight estimate. This booklet is to be updated after the inclining test. The Maneuver Barge is required to meet the following criteria in 46CFR Subchapter S:

- Part 170, Subpart E - Weather criterion, with the crane stowed.
- Part 174, Subpart B – as a Deck Cargo Barge, with the crane stowed.

A conventional ballast system shall not be installed on this vessel. To correct trim to an even keel in all operating conditions, the designer shall use the position of the excavator and two trim tanks located one at each end of the vessel; see clause C660.

If the vessel has any list with the crane stowed, the Contractor shall use solid ballast to correct it to zero list. The solid ballast shall be lead bars each weighing 50 lbs or less. The lead bars shall be placed where required and in the amount required, stowed secured over non-metallic material in a manner that isolates the lead from the steel structure. The non-metallic material must not decay in time.

When operating the wickets, the excavator shall be in a forward position on the bow. Trim by the bow during operation of the wickets is undesirable. Trim by the bow must be avoided by focusing on the arrangement and allocation of weights during the early stages of design development.

In transit, the excavator can be positioned AFT on the tracks in a stowed position, as required to adjust trim. Trim by the bow while in transit, under tow, is unacceptable.

During the Tests and Trials portion of Phase III, the Contractor shall conduct at his expense the lightweight survey and the Inclining Test of one vessel (provided the two maneuver barges are “equal”). The lightweight survey and the Inclining Test shall be conducted in compliance with ASTM F1321-90, and shall determine the as-built light barge weight and the center of gravity position.

The construction of the barge at the time of the lightweight survey and Inclining Test shall be complete. All extraneous yard equipment (such as staging, tools, or other heavy items) shall be removed from the barge prior to the Inclining Test. Bilges and decks shall be dry and clean.

The Contractor shall prepare and submit to ABS and MDC the Inclining Test procedure for review and approval prior to performing the test. The lightweight survey and the Inclining Test shall be witnessed by a Government representative and ABS. The test report shall be submitted to MDC, stamped approved by ABS.

The Contractor shall submit the final Trim and Stability Booklet analysis using the as-built lightship data as determined by the Inclining Test. The Contractor shall also provide a plot of allowable KG versus draft for the full range of heeling moments properly incremented. The final analysis must include which stability criteria is limiting the KG of the vessel.

C180 NOISE AND VIBRATION CONTROL & ABATEMENT

There shall be an effective integrated noise control and vibration transmission abatement program to minimize noise and vibration on the vessel for all modes of operation.

Guidelines for establishing acceptable exposure to noise levels are given by Occupational Safety and Health Administration (OSHA) 29CFR1910.95 and USACE EM385-1-1.

With the excavator not operating and with the crane engine and the barge generator engine at full power, the following noise levels shall not be exceeded within the designated areas:

- Main Deck outside the deckhouse = 75 dbA
- Around the Generator inside the deckhouse = 80 dbA

Compliance with these limits shall be based on the average of the broadband sound pressure levels taken at various representative locations of the area considered. Values shall be measured using the A-weighted scale with the meter set for slow response.

The Contractor shall provide a sound attenuation enclosure around the engine(s) to obtain the required noise levels.

Some additional control measures that shall be considered to meet the above criteria are as follows:

- Resilient mounting of vibrating machinery.
- Isolating exhaust noise and use of high attenuation muffler.
- Resilient mounting of exhaust and ventilation system.
- Use of silencers on air intakes and exhausts.
- Effective noise barrier (insulation) around high noise spaces to prevent noise transmission to adjacent spaces.
- Use of sound absorbing material around high noise spaces to reduce contribution of reverberant noise within the space.
- Ensuring that the natural frequencies of the foundations are at least 30% greater than the disturbing frequencies generated by the equipment.
- Ensuring that the local stiffness of foundations supporting resilient mounts are at least 10 times the stiffness of the isolator mount it supports.

C200 ARRANGEMENTS

The Contractor shall develop the concept drawings provided in this RFP into a Detail Design. The framing system used in the concept is intended for dimensional reference only. The Contractor can use the frame spacing most suitable for his method of production.

Clear headroom inside the deckhouse shall not be less than 7'-6". A minimum 2 ft clearance shall be maintained between any moving equipment and all fixed equipment or structure in order to avoid pinch points. The minimum clearance between two moving pieces of equipment shall be 3 ft.

All spud-wells are located in the concept drawings within easy reach of the crane such that the spuds can be lifted by the crane, and shall be maintained in the final design.

Any enclosed space shall be provided with a minimum of two distinct means of access/egress for personnel, located as far apart as practical, which can be of any of the following types: (door, hatch, manhole, or a combination).

Every item of equipment shall be positioned to avoid interference, and to provide easy and adequate access from all sides for inspection maintenance and repair. Furthermore, every item of equipment (e.g., diesel generator set), shall be provided with an easy path for removal out of the vessel, through doors or hatches or through removable bolted structure if necessary, to allow repair work to be conducted at an external repair shop.

To facilitate removal for repair, every item of equipment shall be mounted on a foundation by means of fasteners. An adequate number of pad-eyes shall be provided overhead to facilitate lifting and handling of equipment with a chain-fall and shall be designed with a minimum safety factor of 2.5.

Equipment connected to piping systems shall be provided with a means to readily disconnect the equipment from the piping system, (i.e., unions or flanges), located as close as possible to the equipment.

During the Engineering Phase, the Contractor shall develop a rigging plan for handling major items of equipment (>500 lbs) for removal from the vessel. The rigging plan shall include the access for removal and installation, and establish the number and location of the pad-eyes required. The Contractor shall submit the rigging plan to MDC for review and approval.

C205 OUTBOARD PROFILE

During the Engineering Phase, the Contractor shall develop the Outboard Profile drawing of the Maneuver Barge(s) (with the crane stowed) based on the conceptual drawings of this solicitation. All principal dimensions shall be indicated.

C215 GENERAL ARRANGEMENT

During the Engineering Phase, the Contractor shall develop the General Arrangement drawing of the Maneuver Barge(s) based on the conceptual drawings of this solicitation. The General Arrangement drawing shall include plan views at all levels. Sections and elevations shall be included to the extent required to define the location of components. All principal dimensions shall be indicated, and major components shall be listed and identified in the drawing.

C235 STORAGE ARRANGEMENT

Storage space shall be provided in the deckhouse for rigging fittings and general storage. During the Engineering Phase, the Contractor shall develop the Storage Space Arrangement drawing based on the conceptual drawings of this solicitation. Sections and elevations shall be included to the extent required to define the location of components. All principal dimensions shall be indicated, and major components shall be listed and identified in the drawing.

Aluminum shelves shall be provided in two places as shown in the concept drawings. The shelves shall be 24" deep and spaced vertically 2' apart. The design load for the shelves shall be 30 pounds per square foot.

The overhead of the Storage Space shall have suspended brackets appropriate to provide stowage for the poles used to assist in the operation of positioning the dam wickets. Each pole is approximately 25' long and 2" in diameter. Storage for 10 poles shall be provided.

Two steel deck lockers shall be provided built integral with the deckhouse structure. These lockers shall be located under the stairs from the main deck to the housetop, port and starboard, and provided with weathertight doors.

C240 WORKSHOP ARRANGEMENT

During the Engineering Phase, the Contractor shall develop the Workshop Arrangement drawing based on the conceptual drawings of this solicitation. Sections and elevations shall be included to the extent required to define the location of components. All principal dimensions shall be indicated, and major components shall be listed and identified in the drawing.

C245 MACHINERY ARRANGEMENT

During the Engineering Phase, the Contractor shall develop a drawing representing the arrangement of the machinery. The drawing must include a list of materials and equipment indicating the manufacturer and model, and depict in detail the location for the equipment installation. Sections and elevations shall be included to the extent required to define the location of components. All principal dimensions shall be indicated, and components shall be listed and identified in the drawing.

Any large piping (>2") and ducting (>6") shall be shown on the arrangement. Machinery and equipment shall be shown in actual outline form. Rectangular boxes representing components are unacceptable.

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C300 STRUCTURE

C305 SCANTLING PLANS

The Maneuver Boats/Barges shall be fabricated of welded steel construction, to meet the requirements of ABS certification for “Maltese Cross A-1 Barge, River Service, with Reinforcement A.” The hull shall be fabricated of ABS Grade A steel.

The framing system used in the concept drawings is intended for dimensional reference only. The Contractor can use the frame spacing most suitable for his design and method of production.

The scantlings for the structure shall comply with ABS requirements. The Contractor shall develop the structural and scantling drawings for the barge, with particular attention given to the attachment of the crane mount to the barge.

The Contractor shall create a computer FEA model of the structure of the barge and crane mount, and perform structural analysis to demonstrate the adequacy of the structural interface when the crane mount is subject to the maximum design loads during crane operation.

The main deck areas outside of the deckhouse shall be of suitable design to provide a minimum strength of 1000 psf. Elsewhere, on the main deck, 750 psf is required.

Excavator crawler path loadings shall be determined from the Caterpillar Hydraulic Excavator model 312CL.

The crawler path loading shall be reviewed and accepted by MDC prior to the structural design of the crawler path local structure.

The materials and welding shall be in accordance with ABS requirements. The deckhouse exterior bulkhead plating to the main deck and house top plating shall be welded double continuous.

C315 DECKHOUSE

A boom support shall be located on top of the deckhouse aft. The boom support will be used to stow and secure the crane boom when the crane is not in operation and while in transit, and shall incorporate a suitable attachment to stow the hook (i.e., “D”-ring).

The Contractor shall design, fabricate and install the boom support on top of the deckhouse, and provide adequate structural strength. Elsewhere, the deckhouse top shall be designed for a load of 250 psf.

Two inclined stairways, one on each side, shall provide access to the housetop and include deck lockers as shown on the concept drawings. A centerline structural bulkhead shall be provided forward of the crane pedestal.

C317 EXCAVATOR ROLL-ON/ROLL-OFF RAMPS

The Contractor shall design and fabricate two aluminum ramps to be used to roll-on and roll-off the excavator to and from the barge from a beach area on the riverbanks. These ramps shall be designed for minimum weight, capable to be handled by the crane (verify crane capacity and reach), and shall be stowed on the deckhouse top.

Each ramp must be at least 36" wide and of suitable strength to support the excavator traveling over the ramps. The length of the ramps shall be 10'. The Contractor shall design and fabricate the securing method for installation of these roll-on/roll-off ramps on the bow of the barge, where the ramps can be locked in a secured position for the safe roll-on/roll-off operation of the excavator.

The connection between the ramps and the bow of the barge shall include a hinge about a horizontal axis, to permit the shore end of the ramps to move up and down as a function of the load waterline, the trim attitude of the barge, and the slope of the river banks. The ramps, when installed on the bow, shall be capable to hinge from the horizontal down to a 20-degree angle with the horizontal.

Handling of these ramps from the stored position to the deployed position and back shall be by the hydraulic crane provided on the deckhouse top.

C320 TANKS

A fuel oil tank with 1,000-gallon minimum capacity shall be provided. The fuel oil tank shall be designed and fabricated with the stiffeners located inside the tank. This will optimize access around the tank and facilitate painting inside the hull and cleanup.

Two steel trim tanks shall be provided, one at each end of the barge to correct trim to an even keel, see clause C660.

Tank details such as manhole(s), piping connections, vents and drains, sounding tubes, fill and discharge connections shall be developed by the Contractor.

C330 FOUNDATIONS

Suitable foundations shall be provided under all machinery. Necessary foundation stiffness shall be provided to prevent vibration. The natural frequencies of the foundations shall be at least 30% greater than the disturbing frequencies generated by the equipment supported, and the local stiffness of foundations supporting resilient mounts shall be at least 10 times the stiffness of the isolator mount it supports. All corners shall be ground smooth.

The Contractor shall provide local adequate hull structural reinforcement to resist the loads resulting from the after deck winch, capstan and spud winches, and to transmit and distribute the loads effectively into the hull structure. The spud winch foundations shall be designed for a line pull of 25,000 lbs. The stern winch and capstan foundations shall be designed for a line pull of 100,000 lbs.

C370 DOCKING PLAN

During the Engineering and Design Phase, the Contractor shall develop the Docking Plan for docking the Maneuver Barge. The bottom structure and the structure in general shall be of adequate strength to dock the vessel on the support blocks as indicated in the docking plan.

An alternative support block location for docking the vessel shall be indicated in the drawing to be able to paint all bottom areas in two consecutive dockings.

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C400 OUTFIT

C401 GENERAL

Due to the nature of the operation, the vessel is unmanned and unattended for extended periods of time. To the maximum extent possible, all materials, equipment and outfit shall be vandal or tamper proof and theft-proof.

All deck fittings and deck equipment shall be properly mounted on dedicated foundations or plate inserts welded continuously to the deck, with local support stiffeners backing up the regular structure as required.

C404 CORROSION PREVENTION

The choice of materials, the fabrication procedures and the coating system to be used in the fabrication of the Maneuver Barge(s), shall evidence that careful consideration was given by the Contractor to improve corrosion resistance and life expectancy.

As an example, the structure shall be designed and fabricated to avoid corrosion, by effectively:

- insulating the contact surfaces between two dissimilar metals against galvanic corrosion.
- preventing the entrapment of water, (facilitate drainage and avoid pockets where water can accumulate)
- facilitating the application of paint coatings, (i.e., DO NOT use intermittent welding inside the hull)

C406 COATING SYSTEM

A. SURFACE PREPARATION

Surface preparation for all structural steel shall be in accordance with Steel Structures Painting Council Standards, SSPC-SP10-85 (Near White Metal Blast) throughout. Profile after blasting shall be 1-1/2 to 2-1/2 mils in depth and jagged. All mill scale, weld spatter, dirt, oil, and grease shall be removed.

Prior to painting, surface preparation shall be in accordance with the paint manufacturer recommendation.

All temporary pad-eyes, D-rings, welding dogs, construction scars, etc., shall be removed and ground smooth prior to cleaning the surface in preparation for painting.

Before blast cleaning, visible deposits of oil or grease shall be removed by solvent cleaning according to the (Steel Structures Painting Council standard) SSPC-SP1.

Immediately upon completion of surface preparation, all steel shall be coated with the coating system described in the following.

Contractor may limit initial coating to base coat only. In this case, or where pre-construction primer is used prior to application of subsequent coats, all surfaces shall be prepared in accordance with the paint manufacturer's requirements, and any damaged areas repaired prior to application of the remainder of the system. All areas needing repair shall be cleaned to bare metal, spot blasted to restore profile, and re-coated with the base coat.

All heat affected areas, or damaged areas, shall be cleaned to bare metal and re-coated with the entire system schedule.

B. PAINT REQUIREMENTS

Paint shall be delivered in sealed containers with labels to indicate manufacturer, contents, and any special instructions. Paints and painting materials shall be stored under cover and protected from extreme temperatures.

Paints shall not be used if they have exceeded the closed shelf life or pot life recommended by the manufacturer. Additionally, paints shall not be applied in weather or humidity conditions not recommended by the manufacturer.

C. APPLICATION OF COATINGS

Surface preparation and paint application shall be in strict compliance with the coating manufacturer's recommendations. The Contractor shall take particular care to insure that coating system requirements are met in all areas, especially those difficult to coat, such as flange undersides. All painting on both the interior and exterior surfaces below the main deck shall be accomplished prior to launching of the vessel.

The following shall not be painted:

- Brass, rubber seals and gaskets
- Stainless steel
- Electrical cables
- Varnished Wood

D. COATING SYSTEM

The system is composed of the following coating types:

- self priming epoxy base coat
- abrasion resistant epoxy barrier coat
- fade resistant urethane top coat

A Paint Schedule shall be developed and submitted to MDC during the Engineering Phase of the contract.

E. APPROVED COATINGS

The following coating systems from Ameron, BLP Mobile, and International Paint have been reviewed and are considered to meet the coating requirements of this section. The Contractor may select any of these systems at his discretion. However, selection of any other coating system will require the review of the proposed coating manufacturer's data and concurrence of the Marine Design Center prior to any application of the system. Systems may not be "mixed" (i.e., mixing an "a" with a "b," as identified below, is not acceptable). The specific coating designations to be used are as follows:

Surface Tolerant Base Coat

- a. Ameron Amercoat 370
- b. Amercoat 235 (formerly Devoe Bar Rust 235)
- c. BLP Mobile MOPOXY-PLUS
- d. International INTERTUF 262 (use INTERGARD 403 for Ballast Tanks)

Abrasion Resistant Epoxy Barrier Coat

- a. Ameron Amerlock 400GF
- b. Amercoat 238 (formerly Devoe Devguard 238)
- c. BLP Mobile MOPOXY-PLUS FG
- d. International INTERSHIELD 350

Fade Resistant Urethane Top Coat

- a. Ameron Amercoat 450 HS
- b. Amercoat 369 (formerly Devoe Devthane 369)
- c. BLP Mobile MOTHANE HS-900
- d. International paint system requires:
 - (1) INTERGARD 267 (for exterior Hull below the Waterline)

(2) INTERTHANE 990 (for exterior Hull surfaces, other than those below the Waterline)

F. NUMBER OF COATS

The number of coats is not specified. The Contractor is required to provide the number of coats necessary to attain the DFT thicknesses required in the schedule below. Thickness applied per coat may not exceed the manufacturer's recommended maximum thickness. Each coat shall be listed in the Paint Schedule.

G. COATING "TYPE" AND DFT SCHEDULE

All areas of the each vessel shall be coated in accordance with the following schedule:

1. Hull Exterior (below the main deck)

All steel surfaces shall be coated with base coat at 8 mils DFT minimum.

All surfaces shall be overcoated (over the base coat) with barrier coat at 12 mils DFT minimum (not including base coat).

Exterior surfaces of rudders and the interior of each sea chest shall be coated in the same manner as the hull exterior.

Lettering and numerals on the hull exterior shall be overcoated (over the barrier coat) with top coat at 2 mils DFT minimum.

The base coat and the barrier coat shall both be the same color.

2. Main Deck

All steel surfaces shall be coated with a base coat at 8 mils DFT minimum.

All surfaces shall be overcoated (over the base coat) with barrier coat at 12 mils DFT minimum (not including the base coat).

Non-skid garnet additive shall be added to the barrier coat.

Deck area shall be overcoated (over the barrier coat and non-skid garnet) with top coat at 4 mils DFT minimum.

3. Deck Fittings

All deck fittings shall receive a base coat at 5 mils DFT minimum and be overcoated (over the base coat) with a barrier coat at 5 mils DFT minimum. A top coat at 2 mils DFT minimum shall overcoat the barrier coat.

4. Hull Interior

Steel surfaces within the hull include the ballast tanks, voids. The interior of the spill containments and exterior of sea chests shall also be considered hull interior for coating purposes.

All steel surfaces within the hull, with the exception of the interior of fuel tanks, shall be coated with base coat at 8 mils DFT minimum.

5. Fuel Oil Tanks

The interior surfaces of these tanks shall be maintained with a coat of mineral oil applied immediately following the surface preparation.

The exterior surface of these tanks shall be coated the same as the hull interior except those tank exteriors which are the interior of others of these tanks.

6. Hydraulic Oil Tank

The interior surface of the hydraulic oil tank shall be maintained with a coat of hydraulic oil applied immediately following surface preparation.

The exterior surface of the tank shall be coated the same at the hull interior.

7. Potable Water Tanks

None required.

8. Exterior Decks (Above the Main Deck)

All steel surfaces shall be coated with base coat at 12 mils DFT minimum.

Non-skid garnet additive shall be added to the last base coat.

Deck areas shall be overcoated (over the base coat and non-skid garnet) with top coat at 4 mils DFT minimum.

9. Exterior Deckhouse, and Railings

The deckhouse and the hand railings shall be coated with a base coat at 8 mils DFT minimum.

All steel surfaces shall be overcoated (over the base coat) with a top coat at 4 mils DFT minimum.

10. Interior Deckhouse

All steel deckhouse interior shall be coated with a base coat at 8 mils DFT minimum.

11. Interior Decks

Interior decks not receiving a deck covering (Clause C430) shall be coated with a base coat at 8 mils DFT minimum.

These decks shall be overcoated (over the base coat) with a top coat at 2 mils DFT minimum.

H. COATING COLOR SCHEDULE

Colors shall conform to Federal Standard 595a(3) Colors Identification Numbers. Color chips (3" x 5") may be produced from the General Services Administration/Specifications Section as follows:

GSA/FSS/Specification Section
470 L'Enfant Plaza East SW, Suite 8100
Washington, DC 20407

Phone: (202) 619-8925
FAX: (202) 619-8978

The coloring schedule shall be as follows:

AREA	COLOR/FS595 NUMBER
Hull Exterior	Black/17038

Hull Markings	White/27880
Exterior Decks	Lite Gray/36492 or Red/11105
Exterior Deck Coaming	Striping Red/11350
Deck Fittings	Yellow/13655
Deckhouse Exterior	Old Ivory/17855 w/ Red/11105 Stripe
Deckhouse Markings	Black/17038
Spudwells Exterior	Black/17038
Hand Rails & Stair Rails	Red/11105
Hull Compartments	Gray/16473
Deckhouse Interiors	White/17925
Tanks	Gray/16473
Insignia Base Plate	Striping Red/11350
Name Board Letters	Gold/23594
Name Board Background	Blue/25102

On deck areas, both under coat (barrier coat for hull and base coat for deck other than hull) and topcoat shall be the same color.

On exterior hull areas, both the base coat and the barrier coat shall be the same color.

All top coating shall be thick enough to provide complete opaque color coverage. Thickness increased over the DFT minimums required above shall be provided if required for opaque color coverage.

The painted surfaces shall present uniform color without patches of different color tone. The paint shall not present any film failure, loss of adhesion, blistering, rusting, pin holing, cracks, runs or sags.

All items of machinery and equipment shall be painted with the individual manufacturer's standard colors. Painted surfaces damaged in handling and installing the equipment shall be repainted.

All unpainted machinery items having black cast or carbon steel surfaces shall be given a prime coat and finish coat of gray machinery enamel.

I. FINAL INSPECTION OF PAINTING

The Contractor is responsible for delivering the vessels with all painted surfaces in sound condition, and in accordance with this specification.

Prior to launching of the vessels, all interior and exterior painting shall be thoroughly inspected. Notice shall be given to the COR, 7 days in advance of the scheduled launching for this purpose. If there are any defects or damage in the coating of

either vessel, the Contractor shall, as necessary, repair the coating to restore the integrity of the paint system, and to meet the requirements of this specification. All damage shall be cleaned to bare metal, spot blasted to restore profile, and re-coated with the entire system schedule. When rework needs to be done, all heat affected areas, as well as any areas in which the paint has deteriorated, shall be prepared as stated herewith and re-painted.

Each vessel shall not be launched until:

- The painting warranty and documentation as required in paragraph I above has been provided to MDC. The warranty and documentation must show compliance with this specification in all areas, and all readings taken.
- The painting has been inspected by an MDC representative. Contractor must provide warranty and documentation prior to MDC inspection.

If outfitting is required after launching, all interior and exterior painting shall be re-inspected prior to Provisional Acceptance, and any damaged areas of the coating shall be repaired by the Contractor as necessary to restore the integrity of the paint system.

Any additional painting required as a result of the Final Inspection shall be done as required to meet this specification at no additional cost to the Government.

J. DOCUMENTATION AND WARRANTY

1. Documentation

For each vessel, the Contractor shall provide a written signed statement from the paint manufacturer certifying that all coating application and surface preparation are in accordance with the coating system manufacturer's requirements, and that the coating application meet all requirements in this specification.

The Contractor shall provide documentation logs for each coating applied. The logs shall include the following parameters:

- a. Coating (per specification) type.
- b. Coating manufacturer's requirements for preparation, environmental conditions and application.

- c. Date and time of preparation and application.
- d. Extent and location of area coated.
- e. Surface: preparation, condition at time of coating, temperature at time of coating, dew point at time of coating.
- f. DFT measurements for each applied coating type. Measurements shall be taken as follows:
 - all flat surfaces, one reading per every 200 square feet, uniformly distributed.
 - undersides of all flanges, one reading per every 50 linear feet of flange, uniformly distributed.
 - all free standing structural members, i.e. stanchions, truss diagonals, etc., one reading per 50 linear feet of length each surface, but a minimum of two readings per surface.

Wet film measurements may be taken and converted to DFT as an alternative to direct DFT. In areas where multiple coating types are required, the above DFT requirements are applied to each coating type.

- g. Services provided by paint manufacturer's representative (i.e. DFT readings, dew point, etc.), if present during application.
- h. Signature of paint manufacturer's representative on site, if present.

2. Paint Warranty

For each vessel, the Contractor shall warranty the coating system for five calendar years, commencing at final acceptance. The Contractor shall repair any coating failures during this time period at his cost.

K. SAFETY AND HEALTH STANDARDS

The U.S. Occupational Safety and Health Administration Regulations(OSHA) for shipyard employees engaged in surface preparation and coatings application shall be in accordance with the OSHA regulations stated in 29 CFR, subpart C.

These regulations require the Contractor to have access to a “competent person” to test compartment atmosphere quality. The “competent person” shall be in accordance with OSHA regulations, stated in 29 CFR, subpart A, 1915.7.

The regulations also require that frequent testing of the atmosphere shall be made in compartments being coated or preserved (or prepared for coating or preservation) by paints and coatings dissolved in highly volatile, toxic and flammable solvents (29 CFR, subpart C, 1915.35(b)), to ensure the atmosphere is not hazardous.

Each compartment inspection and test shall be logged on OSHA Form 74, with instructions on how to maintain a safe atmosphere in these spaces until the completion of the contract.

On 24-hours notice of any Government inspection, and before any representative of the U.S. Government boards the vessel for inspection, each enclosed or confined space to be inspected shall be labeled “Safe for Workers” in accordance with the OSHA regulations stated in 29 CFR 1915.31-36. The initial certificate shall be issued by a National Fire Protection Association (NFPA) certified Marine Chemist. A competent person may re-certify daily provided that the conditions have been maintained.

This means that in all spaces so designated:

- The oxygen content of the atmosphere is at least 19.5 percent and below 22 percent by volume;
- The concentration of flammable vapors is below 10 percent of the lower explosive limit (LEL);
- Any toxic materials in the atmosphere are within permissible concentrations;
- Any residues or materials associated with any work in the space will not produce uncontrolled release of toxic materials under existing atmospheric conditions while maintained as directed.

The Contractor shall notify the Government when this certificate has been issued for each compartment and tank. The vessel will not be inspected and accepted by the Government without a NFPA Marine Chemist certificate for each compartment designated “Safe for Workers.”

A primer paint coating must be applied to all metal surfaces on the same day as blasting. Any surface that rusts before the application of a primer coating shall be cleaned again.

L. PAINT WARRANTY DECLARATION

The Contractor shall provide a **Paint Warranty Declaration** document written and signed by the paint manufacturer representative, clearly stating that the surface preparation, environmental conditions, coating application procedure and thickness for each coat meets the manufacturer's requirements for the paint system used, and that under normal service conditions, the coating system will maintain its integrity for a minimum period of 5 years from date of final acceptance, and will provide good chemical resistance against cleaning agents, good abrasion resistance and good impact resistance against foot traffic. If any exceptions are noted, the contractor shall resolve them so that the vessel is delivered with a fully warranted paint system throughout. The contractor shall bare all expenses to repair any coating failures during warranted time period.

C407 CRANE AND EXCAVATOR PAINT SYSTEM

The telescopic boom crane and the government furnished excavator shall be delivered to the Contractor fully painted in yellow.

- The Contractor is responsible for the integrity of the paint system on the telescopic boom crane, and on the excavator, and must restore defective areas due to damage in transportation, handling, installation, assembly, or testing.

C410 HULL OUTFIT AND FITTINGS

Steel Fenders (rub-rails), shall be provided on the hull sides and around the headlog as shown on the conceptual drawings of this solicitation. The fenders shall consist of 10"x1" plate, with the outer corners sniped 1/2" at 45 degrees, continuously welded to the hull plating with a 3/8" weld.

The upper rub-rail shall be centered on the 3' draft mark numerals.

C415 DOORS, WINDOWS, HATCHES & MANHOLES

a. DOORS

All doors shall be 36" wide and provide a 6'-6" headroom. Double doors shall be 2x36" wide.

Double doors shall be provided for access to the Workshop/Storage area port and starboard. The double doors shall have a fixed interior and exterior ramp suitable for rolling equipment on a cart on deck through the door and over the doorsill. The highest point on the ramp shall be located 4" inside the deckhouse so that water will drain out.

All exterior doors shall be flush with the bulkhead outside, weathertight, gasketed, insulated, and fitted with a large fixed "window" with tinted safety glass. The deck locker doors do not require a window.

The interior door to the toilet area shall be double panel hollow stainless steel 316, flush mounted, without windows.

For all doors, door construction shall render it impossible for water to penetrate into the door itself between the two door panels.

b. MANHOLES

Watertight manholes, 20-inch diameter, flush type, single-bolt, shall be provided two for each hull space, as shown in the concept drawings. Manhole covers shall be quick opening type similar to Nabrico, Freeman Marine, or Baird.

The fuel oil tank and the trim tanks shall each be fitted with one 18"x24" (clear opening), watertight manhole cover.

C416 LOCKS AND KEYS

All exterior and interior doors, and all exterior control stations shall be fitted with suitable keyed locks. The control stations shall consist of a watertight box with a hinged cover and a lock. All door locks shall be lever type and suitable for marine service.

All keyed locks throughout the vessel shall be opened or locked with the same key. The keyed lock system shall be similar to Best Lock Corporation interchangeable core.

10 keys shall be delivered in a box with glass door, with 5 hooks (two keys for each hook), mounted inside the deckhouse near the AFT starboard side access door.

C420 DECK FITTINGS

Deck fittings shall be provided by the Contractor, approximately located as shown in the conceptual arrangement drawings. The following shall be provided:

- Eight (8) kevels similar to Nabrico model DF-484, 48" kevel.
- Three (3) kevels similar to Nabrico model DF-488, 30" kevel.

The strength of the kevels, installed, shall exceed 50,000 lbs applied statically from any direction. The deck structure shall be locally reinforced as necessary.

- Two (2) button chocks, 8" size, as shown in the concept drawings near the bow.
- One (1) four way roller chock, mounted on the edge of the main deck after for the stern winch 1" line, similar to Smith Berger model FR4-8, with stainless steel 316 roller axles.
- One (1) self-aligning balanced deck mounted fairleader on the main deck recess forward for the 3/4" chanoine line, similar to Smith Berger model 610, with the balanced head mounted on tapered roller bearings.
- Two (2) four way roller chocks mounted port and starboard on the chanoine line tunnel at side for the 3/4" chanoine line, similar to Smith Berger model FR4-6, with stainless steel 316 roller axles.

The chanoine line shall run recessed below the main deck level from the winch forward through the horizontal revolving shank of the balanced fairleader, turning 90 degrees to the port side or to the starboard side (as the operation may require) from the recess to one of the rollers on the hull at side.

All fittings must be installed to allow easy access for maintenance, and disassembly of the parts (e.g., rollers, axles, bearings, etc.).

C425 RAILINGS

Fixed rails shall be provided on the top of the deckhouse. The fixed guardrails shall consist of pipe stanchions and a three-course pipe rail system, all built of one and one half inch schedule-80 pipe. The pipe shall be hot dip galvanized. The height of the top course shall be 42", and the lower course 9", with the intermediate course at equal distance from top and lower course.

A removable rail system shall be provided around the perimeter of the main deck level, installed 6" inboard from the sides and 6" inboard from the stern. This removable rail system shall consist of one and one half inch schedule-80 pipe stanchions welded to the deck every 7' or less apart, with chain and snap hooks installed between the pipe stanchions at 42" and 25" above the deck.

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C427 LADDERS

Steel vertical ladders, 18" wide, shall be provided under all manholes; a 7" toe clearance is required, and rung spacing shall not exceed 12". The ladders shall be fabricated of 3"x3/8" bar with 3/4" square rungs (corner on top). The ladders shall be removable, and installed with stainless steel bolts.

Inclined stairways, 24" wide, shall be installed from the main deck to the house top, port and starboard as shown on the concept drawings. Tread shall be 24"x7" (or >7"), and the tread spacing shall not exceed 10" vertically. The inclined stairways shall be fabricated of aluminum, and the slope shall not exceed 50 degrees from the horizontal. The inclined stairways shall be removable, and installed with stainless steel fasteners. An aluminum pipe railing (1 1/2" diameter) shall be provided 36" above the tread nosing on the outer side, with an intermediate course 18" above the nosing.

Non-skid landings shall be provided at the top and bottom of all ladders and inclined stairways.

C430 DECK COVERINGS

The main deck outside the deckhouse and the housetop shall be painted with non-skid.

The inside of the deckhouse shall have a watertight fire resistant sub-floor covering to level the steel deck surface. The sub-floor shall be top finished with a non-skid seamless material, to provide a floor covering that is watertight, fire resistant, easy to clean and maintain, and provides excellent impact resistance, compression resistance and wear resistance.

The main deck above the strainer and pumps shall be built with removable aluminum cover plate(s) fastened along the four edges to the supporting structure, with gasket, and mounted flush with the top of the floor covering. All fasteners shall be installed flush with the surface. The plate(s) shall not weigh more than 75 lbs to be easily removed by one person. The plate(s) shall be isolated from the supporting structure with rubber gasket to reduce noise, vibration and galvanic corrosion.

C436 INSULATION AND BULKHEAD COVERINGS

Use of asbestos material is not permitted. The insulation shall be applied to the structure over the complete paint system. Use of glue to secure the insulation material to the structure is not permitted, and the mounting studs must be in place prior to the application of the paint system to prevent paint burning.

Approval of the paint system by a Government Representative is required prior to the installation of any insulation.

Thermal insulation shall be applied to the bulkheads and the overhead of the deckhouse. The minimum required thickness of the thermal insulation shall be 3" on the inside of any exterior plating (bulkheads and overhead), and 2" in interior bulkheads. In the interior surfaces, the 2" thermal insulation is required on the stiffener side only.

Acoustic insulation shall cover the bulkheads and overhead inside the deckhouse, to meet the noise abatement requirements of C180 of this specification. Acoustic insulation in addition to the minimum required thermal insulation may be necessary to obtain the noise reduction specified.

SOLIMIDE – Polyimide Foam" (Faced), from the CLAREMONT Company, or equivalent, shall be used for thermal and acoustic insulation.

To be equivalent, the insulation material must:

- have excellent thermal and acoustic insulation properties
- be very durable and not deteriorate in time
- be fire resistant, mildew resistant and vermin proof
- emit virtually no smoke or incapacitating toxic byproducts in the event of fire
- be flexible, easy to cut and fit
- not require protective clothing for workers
- not "itch" when in contact with the skin (no fiberglass)

All insulation (all bulkheads and overheads) shall be covered with 24-gauge perforated aluminum sheathing.

The exhaust pipe from the diesel generator, and any pipe that may present a temperature hazard shall be insulated.

Piping, if running overhead in the deckhouse, shall be insulated to prevent condensation.

C437 FURNITURE & FURNISHINGS

The following furniture and furnishings shall be provided and installed by the Contractor in the Workshop:

- One notice board 2'x4' minimum size with a 1/4" thick cork surface and a hinged Plexiglas cover.
- One wall cabinet with two first aid kits.

- One compressor, heavy duty, 2-stage operation, 7 HP, 80-gallon reservoir.
- One 72"x36" heavy-duty steel workbench properly secured to the deck structure.
- One vise, combination pipe swivel base with 6" jaw width, 10" jaw opening, 7-1/8" throat depth, and 1/8" - 6" pipe capacity shall be installed on the workbench top. The vise shall be Armstrong Tools Product Number 79-152, or equivalent.
- One battery charger/engine starter, hi-low amp adjustable, UL listed and outdoors approved. Charge rate selector having low-medium-high adjustment for 6V, 12V and 24V maintenance-free and conventional lead acid batteries. The maximum charging rate shall be UL rated 70-amps. Cranking power shall be at least 270-amps. Automatic alternator protector shall eliminate sparking at battery and shall prevent reverse charging. Dead-battery activator shall enable start charging on dead batteries. Thermal overload protector shall guard battery and charger. The 120-minute electric timer shall have a hold position for slow charging. Ammeter shall have a 0-100 amp scale; voltmeter shall have a 0-32V scale. The charger shall be mounted on two wheels with a push handle. The 9-ft power cord shall have a 3-prong plug. Charging leads shall be 8-ft long and shall have insulated 500-amp color-coded battery clamps. The unit shall be similar to Dayton Model 3Z633C.
- One DC-400 arc-welding machine with SCR controlled three phase DC power source and single range potentiometer control. The model shall be constant voltage and constant voltage/variable voltage by Lincoln, "Idealarc" DC-400 or equivalent.
- One front end loading hydraulic wire rope cutter, with hand operated hydraulic pump with sufficient hose to ensure complete mobility and sufficient power for a 45 second cutting time of 1" diameter wire rope.
- One pedestal mounted 7" grinder by Rockwell/Delta (Product No. 23-902) or equivalent, with Twin-Lite safety shield accessory, shall be provided and installed in the Workshop.
- Hot water pressure washer, minimum 4000 psi, 16 HP.

C445 LIFESAVING, FIRE AND SAFETY

Lifesaving, Fire & Safety equipment shall be provided in compliance with 46 CFR requirements.

The following are minimum requirements:

- Life Preservers: storage for 6 USCG approved life preservers shall be provided on the main deck in a steel bench deck locker (lift-up top) built integral with the starboard side of the deckhouse. The bench locker shall be 36"Lx18"Wx18"H and marked "LIFE-JACKETS."
- Ring Life Buoys: 4 USCG approved ring life buoys shall be provided, each including 90' of 3/8" double braid polypropylene rope. Two life buoys shall be

mounted on each side of the house and one on the after side of the house. The fourth life buoy shall be mounted on the forward side of the house, and shall have a light in addition to the 90' of 3/8" double braid polypropylene rope.

- Portable Fire Extinguishers: 6 USCG approved portable fire extinguishers type ABC, 10 lbs, shall be provided bracket mounted on the bulkheads. 4 shall be mounted inside the deckhouse, and 2 on the stern bulkhead outside.
- Two fire axes shall be provided, mounted in brackets, one on each end of the deckhouse.

C455 HOISTS

One monorail trolley with chain hoist to assist in moving heavy loads shall be installed in the overhead inside the deckhouse, with track routed to serve both double doors and to serve as much of the workshop space as possible. The chain hoist capacity shall be 1 sTon.

A generous number of pad-eyes shall be provided on the overhead inside the deckhouse, to facilitate the removal of equipment components with the use of chain falls.

C456 WINCHES AND CAPSTANS

a. STERN WINCH

An electric winch shall be provided at the stern to position the vessel along the dam by means of a 7/8" IWRC extra improved plow steel wire rope cable connected from the winch to a shore point. The winch shall be capable of a 15,900 lb running pull on the first layer at 27 ft/min, and hold a static pull of 36,000 lbs. The winch shall have infinite speed control capability from 0 to 27 ft/min pay in or pay out, and free spool out capability.

The winch drum storage capacity shall be 500 ft of 7/8" wire with nominal strength 39.8 tons or higher, with level wind capability. The winch shall be a Schoellhorn Albrecht model CP15000-25, or equivalent. (Note that the wire shall pass through a four-roller fairleader mounted on the main deck aft on centerline).

The stern winch controls shall be local to the winch in a watertight enclosure, and also remote in two locations inside the deckhouse aft. The two locations inside the after bulkhead near the port and starboard corners of the deckhouse shall be arranged to provide good visibility through the windows. From these two control locations, the operator shall be able to walk out to the side of the vessel in the immediate vicinity of the after bulkhead doors port and starboard, and operate the stern winch with a wired mobile winch control.

b. CHANOINE LINE WINCH

A “chanoine line” electric winch shall be provided forward, to assist with the operation of raising the wickets (dam segments) by means of a 3/4” IWRC extra improved plow steel wire rope. The winch shall be capable of a 12,500 lb running pull on the first layer at 29 ft/min, and hold a static pull of 28,000 lbs. The winch shall have infinite speed control capability from 0 to 29 ft/min pay in or pay out.

The winch drum storage capacity shall be 75 ft of 3/4” wire with nominal strength 29 tons or higher. The winch shall be a Schoellhorn Albrecht model CP10000-30, or equivalent.

The winch shall be mounted in a well recess on the main deck forward of the deckhouse. The installation shall provide for a wired winch control in a watertight box near the winch, and a mobile wired winch control, with the wire length suitable for the control to be used from the operator seat of the Caterpillar 312 excavator.

The chanoine line from the winch shall run under the main deck on centerline, leading to the deck mounted, self-aligning, balanced fairleader, on the main deck recess forward. The fairleader shall be completely recessed under the main deck. The winch shall be recessed as well for the wire rope to run under the main deck. The recesses shall be provided with a pipe drain (3” diameter), straight down to weld flush with the bottom of the hull.

After passing through the horizontal revolving shank of the balanced fairleader, the chanoine line shall be able to turn 90 degrees to the port or to the starboard, side running under the main deck to a 4 roller fairleader on the hull at side.

c. CAPSTAN

One capstan shall be provided in the location generally depicted in the conceptual arrangement drawings on the stern deck. The capstan shall have local watertight controls only (i.e., pushbuttons for start, stop, forward and reverse in a watertight enclosure).

The capstan shall be electric-motor-driven, through-the-deck mounted, watertight, similar to Schoelhorn-Albrecht type 22300, model 21063, 14x12 double barrel. The capstan shall be equipped with 460 V, 3 Phase, 60 Hz electric motor and two-speed reversible drive.

The two speed capstan reversible drive shall be rated for 10 hp at either speed and be capable of a running line pull of approximately 6,000 lbs at 48 ft/min line speed, and running line pull of approximately 12,000 lbs at 24 ft/min line speed, with starting line pull of approximately 30,000 lbs, and bollard pull 100,000 lb.

The gears shall operate in a continuous oil bath, and the bushings shall be bronze with pressure grease fittings. The units shall have a disc brake; spring applied and electrically released.

A sufficient length of electrical cable shall be installed to permit the capstan to be unbolted from the deck and removed from the void before requiring disconnection from its electrical power source and controls. The power/control connection shall be provided inside the void and be easily accessible.

C460 NAMEPLATES, NOTICES & MARKINGS

The Contractor shall fabricate and install nameplates, notices and markings as required. In addition to those required by the standards, the following shall be provided:

a. NAMEBOARDS:

The vessel's name board shall be located as shown on the concept drawings, properly secured to the railing on top of the deckhouse port and starboard.

Each nameboard shall consist of a single stainless steel 316 background plate 3/8" thick and 24" high and length to suit the vessel's name. The name of the vessel shall consist of 12" high letters, cut from 3/8" stainless steel 316 plate as well, spelling the name MANEUVER BOAT 2001 for the Peoria barge and MANEUVER BOAT 2002 for the LaGrange barge.

The letters shall be mounted to the background plate by means of stainless steel 316 studs, drilled through and welded on to the letters and to the background plate (to fill with stainless steel weld the drilled hole from the front of the letter and the back of the plate and ground flush).

The background plate shall be painted with the topcoat of the paint system of clause C405, after the letters are installed and approved by the COR to verify the correct positioning of the name and the welded studs. The topcoat color on the plate shall be blue. The letters shall be painted with the topcoat of the paint system of clause C405. The topcoat color on the letters shall be gold.

b. NOTICES AND MARKINGS:

Weather exposed notices and markings shall be brass and shall be attached with stainless steel screws.

Interior notices and markings shall be engraved on brass, or plastic plates, and shall be attached with stainless steel screws, or approved adhesives.

As a minimum, the following shall be provided:

- Four signs reading “DANGER NO TRESPASSING U.S. GOVERNMENT PROPERTY” shall be installed on the sides of the deckhouse.
- “NO SMOKING” notices shall be placed at the fuel oil fill and transfer station.
- “CONFINED SPACE – DANGER - PERMIT REQUIRED” shall be located at each entry to the hull void compartments.
- Manholes, vents, fills, and sounding tubes shall be marked with tank number and intended service with brass tags.
- Machinery, valve, and electrical equipment labels shall be as specified and as required by the standards.
- Hearing conservation warning signs shall be as required by the standards.
- Eye protection and hardhat area signs shall be provided on the inside of all door exits leading to the main deck.

c. DRAFT MARKS:

Draft marks of raised Arabic type numerals, 6-inches in height and cut from 3/8 inch steel plate, shall be continuously welded to the shell plating. The draft numbers shall be located approximately as shown on the concept drawings, with a 6 inch space between numbers.

The draft marks shall be measured from the underside of the bottom plating projected to the bottom of the numerals. The rubbing strip on the side shall be centered on the 3' mark, and provide a radiused cut out to accommodate the draft mark welded directly to the side shell, (recessed in the rubbing strips).

The draft marks shall be painted white.

d. DECKHOUSE MARKINGS:

The Contractor shall provide and install the Corps of Engineers “COMMUNICATIONS MARK AND SIGNATURE,” port and starboard on each side of the deck house in the approximate location shown on the concept drawings.

The base plate for the Communications Mark shall be approximately 2'-6"x3'-0", and cut from 3/8" thick stainless steel plate 316. The Base Plate background for the Communications Mark shall be painted with the paint system, and the topcoat color shall be red.

The Castle and Border of the Communications mark shall be made of 316 Stainless Steel plate, 3/8 inch thick and shall not be painted. The castle and border shall be attached to the base plate with stainless steel 316 studs, using a procedure similar to that described for the vessel nameplate.

The baseplate shall be welded to the side of the house directly, using 1/8" continuous weld. All edges shall be ground smooth.

The letters for the words "CORPS OF ENGINEERS" and "U.S. ARMY" shall be cut from 3/8 inch stainless steel plate 316, and welded directly to the side of the house with 1/8" inch continuous weld.

The letters shall be 7 inches high and 10 inches high respectively, and the vertical spacing between the two words shall be 5 inches, with "U.S. ARMY" centered under "CORPS OF ENGINEERS."

C470 COMMUNICATION AND NAVIGATION

Navigation lights and shapes shall be provided, per the USCG Navigation Rules on a small, hinged mast located on the housetop. Day shapes for operation with divers shall be included.

A loud hailer and horn shall be provided with two operating station, one located on the main deck forward and the other on the main deck aft, to sound on the exterior, from 4 outdoor speakers (all weather rated) located on the top of the deckhouse on all four sides. The horn shall be actuated from the excavator as well.

Two-way communication shall be provided between the excavator cab and the after loud hailer station, to be heard through the speakers on the top of the deckhouse on all four sides. The aft loud hailer station shall be as close as possible to the stern winch controls, to be manned by the stern winch operator. This two-way communication system must be highly reliable and free of static noise interference.

C500 SPECIAL FEATURES

C540 CRANE

A telescopic boom hydraulic crane shall be provided on top of the deckhouse on the general location depicted in the concept drawings. In the stowed position, the crane boom shall be oriented after, and a boom rest shall be fabricated and installed by the Contractor to the satisfaction of the crane manufacturer and the COR.

The height of the crane installation above the top of the house shall be minimized to keep the center of gravity as low as possible to improve stability.

The crane pedestal shall be provided with a bolting flange for mounting of the crane to a matching flange foundation, located approximately 1 ft above the top of the deckhouse, which shall be part of the structure of the barge. The crane pedestal foundation shall continue structurally through the housetop as a tubular stanchion to be carried down to the main deck of the barge.

The crane shall have the following performance characteristics:

- Capacity to lift 20,000 lbs at 10 ft. reach
- Capacity to lift 3,400 lbs at 50 ft. reach
- Swing speed 1 rpm.
- Hoist speed 1 ft/sec

The crane pins and the hydraulic cylinder rods, shall be stainless steel 316, or better, to resist corrosion. The nuts and bolts for mounting the crane pedestal flange to the flange foundation on the barge shall be stainless steel 316, or better, to resist corrosion.

The crane shall be provided with a dual swing drive system. All sheaves on the crane shall be dual tapered roller bearing sheaves.

The hoist winch shall be adequate for the performance capacity indicated above with single part reaving. The winch drum storage capacity shall be a minimum of 150 ft IWRC extra improved plow steel wire, attached to a 10 ton overhaul ball assembly, McKissick UB500 model MB10T150, or equivalent.

The crane shall be provided with local and remote controls. The local controls shall be arranged inside the crane mounted weather-tight cabin. The cabin shall have a door with a keyed lock, a padded chair for the operator of the crane, and the two side windows shall be push-out-to-open type to provide cross ventilation with minimum entrance of rainwater.

The cabin shall be provided with electric heat and air conditioning, controlled by the operator, and load moment indicator programmed with the appropriate load charts.

The crane control functions shall also be provided from 4 hard wired remote control stations, located 2 on the forward deckhouse bulkhead and 2 on the after deckhouse bulkhead near the corners. These control stations shall consist of watertight plug connections for a hand held wired remote control (length of the wire to reach the operator of the excavator).

The crane power pack (HPU) shall be electro hydraulic, remotely located inside the deckhouse to keep the center of gravity as low as possible and improve stability. The HPU shall be driven from the 480 VAC system.

All applicable safety features shall be provided, to include anti two-blocking, list and trim angle indicators, limit switches, etc.

C545 EXCAVATOR

The Government will provide a Caterpillar excavator model 312CL to the Contractor. The excavator will be used for handling the wickets (dam segments). The excavator is outfitted with a 9'-10" stick, and the following dimensions will apply:

- | | |
|--|-----------|
| • crawler track overall length | 12'-4" |
| • crawler track length between center to center of rollers | 10'-0" |
| • crawler track width | 30" |
| • width center to center of crawler tracks | 6'-6" |
| • width of crawler tracks overall | 9'-1" |
| • excavator tail swing | 7'-0" |
| • excavator weight | 28,970 lb |

The maximum load imposed on the excavator during wicket handling along the dam is 7,000 lbs. The excavator will be operating over the side with a hook instead of a bucket, and this load will be applied at a reach not to exceed 16ft measured from the centerline of the vessel and a height not to exceed 19ft measured from the main deck down.

The barge main deck forward shall be fabricated with two parallel tracks 36" wide (6'-6" center to center), to accommodate the 30" wide excavator crawler tracks. The arrangement shall be symmetric with respect to the centerline of the vessel. The tracks shall be aligned fore and after, and the length of each track shall be 25'-0".

The Contractor shall design and fabricate the barge tracks to include removable 4"x12" oak timbers with the timber length dimension staggered in the longitudinal direction to build a uniform 25' long wooden track. The gap between "timbers" shall be less than

1/8". Securing the timbers with angle bar at one end of the tracks and rods through the 36" track width to bolt through the wood on to the flat bars on each side of each track is desirable (or the Contractor may propose a better method to secure the timbers for evaluation). The rods through the wood, the nuts, and the washers shall be 316 stainless.

The top of the angle bar at the end of the tracks shall be flush with the top of the timbers (timbers need to be notched to accommodate the thickness and width of the angle at the end).

The position of the excavator along the tracks shall be used to assist with the control of the in transit trim of the vessel. Three sets, of 4 pad-eyes per set, shall be provided between the tracks to tie down the excavator in 3 positions along the tracks (the two extreme end positions and one intermediate position). In the forward end position, the center of rotation of the excavator shall be in line with the chanoine line so that the boom deployed over the side will be in line with the center of a wicket.

The tie downs shall consist of turnbuckles with jaw end fittings to properly engage the pad-eyes located on the deck with those that shall be provided on the excavator. Each pad eye and tie down turnbuckle shall be rated for a 10,000 lb working load, and designed to include fittings with 50,000 lb breaking strength.

C550 SPUDS

During wicket handling operation, only the side adjacent to the dam will be fitted with spuds.

Four steel spuds total shall be provided for each barge. Three spuds shall be 22' long, and one spud shall be 18' long. The 18' spud is intended for the spud well located closest to the side of the vessel (second from the bow).

All spuds are to be fabricated from HP14x117 steel shape. The design of the spuds shall be developed to include all the geometric (shape) detail shown in the concept drawings. The shoe on the tip of the spud is intended to ride on the wooden wickets along the dam.

The weight of each spud is approximately 2,600 lbs maximum, and suitable for lifting with the hydraulic crane. Each spud shall be provided with a lifting pick up point for handling the spud (i.e., raising, lowering, removing, and installing in the spud wells) by the barge crane.

The design of the 22' long spuds, to be used in the after spud wells, shall incorporate a pin connection for hoisting the spud with a winch system. The pin must be suitably located in such position that the lower end of the spud can be brought up above the bottom of the barge when the spud is raised and stowed. The Contractor shall develop

detailed design for the two “after” spuds with due consideration for easy access for inspection, maintainability and ease of replacement of the pin and wire rope of the spud handling system.

To stow all spuds in the raised position, (tip of the spud at the bottom of the barge), a bar/rod stop through the spud shall be designed to hold 150% of the total dry weight of the spud. In order to facilitate engagement of the bar to lock the spud in the raised position, a fluorescent yellow stripe shall be painted on all 4 spuds, to indicate when the spud has been raised high enough for engaging the bar.

Four other fixed positions shall be provided in each spud 2 ft apart, for the same bars to hold each spud at correspondingly lower positions.

The spud shall incorporate a physical stop to prevent the spud from exiting the spud well (i.e. if the water depth exceeds the length of the spud). This physical stop shall actuate when the 18’ long spud tip is 16’ below the bottom of the barge, and when the 22’ long spud tip is 20’ below the bottom of the barge.

C552 SPUD WELLS

Four top entry spud wells shall be provided on each side of the barge, in the exact position indicated in the concept drawings. These spud positions need to be kept to match the location of the wickets against which the spuds will ride to provide adequate support for the barge.

The main deck in way of the spud wells shall be provided with a cover plate to be mounted over the opening left when the spuds are removed. The top of this plate shall be flush with the top of the deck plating. The plate shall be secured with chain to a pad-eye inside the spudwell that does not interfere with the operation of the spud.

C554 SPUD HANDLING SYSTEM

This system shall consist of two electric winches, to raise and lower the two after spuds. The spud winches shall be capable of a 7,800 lb running pull on the first layer at 20 ft/min, and hold a static pull of 17,000 lbs. The top layer line pull must be greater than the dry weight of the spud. The winch shall have infinite speed control capability from 0 to 20 ft/min pay in or pay out.

The winch shall be fitted with a barrel drum diameter 7” or higher. The winch drum wire rope storage capacity shall be adequate to lower the spud point to a depth of 18’ below the bottom of the vessel. The wire rope shall be 5/8” diameter IWRC extra improved plow steel, with nominal strength of 16 tons or higher. The spud winches shall be

Schoellhorn Albrecht model CP6000-20 or equivalent, provided with free spooling clutch to allow for free fall of the spuds.

The design of the spud handling system shall permit easy inspection and replacement of the sheave(s), pins and wire rope. Keepers shall be provided to prevent the wire rope from jumping off the sheave(s) due to slackness of the wire.

The winches shall be equipped with spring-set brakes of rated holding force equal to two times the spud dry weight. The brakes shall automatically set when:

- there is any failure in the system powering the winch and
- the spring centered, operating handle control is in the center position.

Unless moved by the operator, the winch control handle shall always be in the center position.

All sheaves in the spud handling system shall be anti-friction sealed dual tapered roller bearing type sheaves.

Each spud winch shall have a local control station located to provide unrestricted visibility to the spud they operate. These local controls shall be installed inside a watertight box. The control console shall include electric start and stop buttons for each winch with green “on” and red “off” indicator lights, with rubber button-covers.

An electro-mechanical interlock shall be provided to disengage the power from the spud winch when the spud reaches the upper limit of travel for stowing.

The Contractor shall provide effective guards around exposed wire rope for personnel safety.

C580 WIRE ROPE CERTIFICATION

The Contractor shall provide the COR with a “Certificate of Examination and Test of Wire Rope Before Being Taken Into Use” for each wire rope installed on the crane and all winches. The certification shall be performed to the requirements of 29 CFR, part 1919 and be in accordance with the requirements of 29 CFR 1918.11(a).

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C600 MACHINERY

C601 GENERAL REQUIREMENTS

The vessel shall be designed to be self-sufficient in all aspects, to the extent specified for various machinery systems. The systems design, materials and equipment, shall be suitable for the environmental conditions specified. All equipment shall be new, of current manufacture, and rated for marine duty service. The machinery systems shall include the:

- electrical power plant - diesel generator set
- fuel oil system storage and supply
- engine cooling system
- raw water / firemain system
- engine exhaust system
- hydraulic system
- ballast system
- sanitary and sewage system
- vents sounds and overflows
- drainage system
- heating, ventilation and air conditioning (HVAC) system
- compressed air system
- alarm, control and monitoring system

Piping systems shall be made up by welding or by bolting flanges.

All fluid fill and transfer points shall be located in areas that are easily accessible. These areas and any other maintenance areas that may be the source of eventual fluid spills shall be provided with containment coamings that are easy to clean, and do not collect rain water.

Sufficient pipe drains shall be provided at the lowest pipe runs to permit draining of all lines with the vessel in a zero trim and zero heel condition. The location of the drains shall be readily accessible. Screwed plugs shall be brass, or stainless steel where brass is prohibited.

All piping carrying freezable fluids through unheated spaces shall be insulated and heat traced.

Machinery guards shall be provided over all rotating and hazardous machinery.

Manufacturers' recommendations, concerning fabrication and installation, shall be followed in addition to these specifications.

Suitably located flanges shall be installed in all pipelines to permit dismantling of the lines and equipment. Any piece of equipment in a piping system shall be isolated by valves. All gauges shall be fitted with gauge isolation valves. All pressure gauges shall give readings in psig and all pressure gauges shall be selected so the operating point is in the middle of the gauge range. Pressure gauges shall be provided on the discharge of all pumps, and pressure/vacuum gauges shall be provided on the suction of all positive displacement pumps.

All temperature gauges shall give readings in degrees Fahrenheit. Temperature gauges shall be provided on all piping where a fluid may run with a temperature higher than ambient temperature.

All piping is to be seamless ASTM A53 schedule-40 unless otherwise specified. Heat sensitive materials shall not be used in piping systems that penetrate watertight subdivisions where such materials would, in the event of a fire, impair the watertight integrity of such bulkheads. Copper tubing that penetrates watertight bulkheads and decks shall use a suitable stuffing tube. Spool pieces with flanges shall be provided for all galvanized pipe penetrations to prevent the destruction of galvanizing due to welding.

All piping between the side shell and the first inboard valve shall be schedule-80. Fastenings for valves at the hull connections and sea chests shall be stainless steel 316. All tank penetrations shall be schedule-80 welded couplings unless specified otherwise.

No cast iron valves or wafer valves shall be used at shell connections.

Remotely operated valves shall also be locally operable. All valves must be OS&Y and rising stem type or fitted with open/close indicators. They shall be clock-wise closing.

Check valves shall be of a type best suited for the service condition, especially the flow velocity to ensure that the valve will fully open. A check valve shall be installed where a reversal of flow is possible and would be detrimental to proper functioning of the system concerned, or may be injurious to equipment.

Gate valves shall not be installed for flow control.

All lines leading to overboard discharges shall have a downward slope of 45 degrees toward the waterline.

Piping shall not be run over, or in the vicinity of, switchboards or other electrical equipment unless unavoidable, in which case flanged joints, valves, etc. shall not be installed in those areas.

Piping conveying flammable materials shall be routed to avoid being located adjacent to, or over, hot surfaces, unless adequately shielded.

Rigid pipe hangers shall be provided in accordance with ASTM F 708 – 81. The hangers shall safely support the weight of the piping, plus the operating, or test, fluid (whichever is heavier), and the weight of insulation and lagging (where installed).

The number of supports installed, the type selected and their location shall prevent excessive vibration of piping under all system operating conditions, but they shall not constrain the piping to such an extent as to cause excessive transfer of load from support to piping or from support to support. The location and type of support selected shall prevent excessive stress from being transmitted by the piping to machinery, equipment, or barge structure.

Hangers for copper pipe or tubing shall be lined with plastic. Non-ferrous metal pipes shall be insulated from direct contact with any steel structure, to prevent galvanic corrosion.

All piping, piping appurtenances and applicable equipment shall be thoroughly cleaned after fabrication and prior to installation in the vessel. After complete installation, each system shall be thoroughly cleaned and flushed of all foreign matter with the applicable system's medium, or an approved substitute.

System flushing shall be conducted at the applicable system's maximum operating pressure and temperature, and above normal line velocity. However, prior to flushing operations, units having in-line equipment capable of trapping or being affected by the carryover of foreign matter, shall either be removed or blanked-off and bypassed.

All piping shall be marked and color-coded in accordance with the following:

Fuel Oil	Yellow
Washdown/fire fighting	Red
Compressed Air	Tan
Hydraulic Oil	Orange
Ballast	Light green

The size of the labeling letters and the length of the color field shall be as follows:

<u>OUTSIDE DIAMETER OF PIPE OR COVERING LETTERS IN INCHES</u>	<u>MINIMUM LENGTH OF COLOR FIELD IN INCHES</u>	<u>THE SIZE OF LEGEND IN INCHES</u>
3/4 to 1-1/4	8	1/2
1-1/2 to 2	8	3/4
2-1/2 to 6	12	1-1/4
8 to 10	24	2-1/2
over 10	32	3-1/2

Labels shall be applied close to valves and adjacent to changes in direction, branches, where pipes pass through bulkheads or decks and as frequently as needed along straight runs to provide clear and positive identification.

Piping shall be sized in accordance with the velocity criteria specified in the following table:

TABLE C601-1

DESIGN FLUID VELOCITIES FOR PIPING

<u>SERVICE</u>	<u>FLUID VELOCITY, fps</u>	
	<u>NOMINAL</u>	<u>MAXIMUM</u>
Diesel Oil Suction	2 x SQRT (D)	7
Diesel Oil Discharge	5 x SQRT (D)	12
Dirty Oil Suction	1 x SQRT (D)	4
Dirty Oil Discharge	2 x SQRT (D)	6
Hydraulic Oil, Pump Suction	1.5 x SQRT (D)	4
Hydraulic Oil, Pump Discharge	8 x SQRT (D)	20
Hydraulic Oil, Return Lines		13

(D) = Inside Diameter of pipe in inches

Items of piping not covered in these specifications, but necessary for proper installation and operation of equipment and systems, shall be furnished and installed.

C630 FUEL OIL SYSTEM

The fuel tank capacity as shown on the arrangement drawings in this solicitation is slightly over 1000 gallons. This capacity may not be reduced. The fuel oil tank shall be electrically bonded to the common ground. No fuel oil heating system is required for the cold weather condition.

The fuel oil system shall be designed and fabricated to include transfer of fuel oil from the barge tank to an off barge user.

In addition to the engine-mounted fuel oil filter(s), the fuel oil supply lines to the generator diesel engine shall be equipped with USCG approved flexible connections and standard filters and water separators or moisture trap (similar to Racor), (this in addition to the engine-mounted fuel oil filter(s)). Ball type shutoff valves shall be provided at the inlet and outlet of each filter in the supply lines.

The fuel tank shall be provided with a valved stripping connection complete with cap or plug and spill containment coaming. The tank shall be complete with necessary fill, supply, (return line if required by the engine), drain, vent, gauge connections, and inspection openings.

The fuel tank shall be equipped with ABS approved level gauge (read-out above the main deck) and sounding tube. A remote tank level indicator shall be provided at the deck fill station. A sound alarm shall be provided with capability to be set to sound at high and low tank levels and also capable of being adjusted to any value between zero and 100% of the tank capacity.

One fuel oil fill and transfer station shall be provided at main deck level, located in a protected area on the after side of the deckhouse. The system shall be capable of receiving fuel from a tank truck or shore facility using either gravity or pressurized fill methods. The filling connections shall consist of 3" male quick-connect fittings and gate valves.

The fill and vent pipes shall be provided with stainless steel flame arrest screen of at least 30 x 30 mesh and cap. The filler cap shall be self-closing. The fuel oil tank vent shall terminate located approximately 7' above the main deck.

Spill containment coamings, having a minimum capacity of 21 gallons, shall be provided surrounding the deck fill connection and the F.O. tank vent. Drip pans shall be provided under all fuel consumers and wherever fuel oil drip can be expected.

All supply pipes and pipes subjected to static head from the tank shall have positive closing valves near the tank. These valves shall be remotely operable (closed) from a

safe and readily accessible location outside the deckhouse. All valves must have local controls in addition to the remote operators. The remote operators shall be installed in flush mounted boxes. Filling (and return) lines shall enter the tank at the top of the tank.

C640 ENGINE COOLING SYSTEM

The generator engine shall be cooled by an engine-mounted radiator, with cooling air supply drawn from outside through the space. The radiator cooling air shall be exhausted through louvers to the after deck. To prevent entraining rain water, care must be taken to ensure that the supply vent (shown on the conceptual drawings as a mushroom vent on the deckhouse top) is properly sized to ensure that the inlet air velocity does not exceed 1000 fpm.

The engine-driven water pump shall circulate the cooling water, mixed with an environment friendly anti-freeze and rust inhibitor, in a closed loop from the engine to the radiator and back.

C645 RAW WATER / FIREMAIN SYSTEM

The Contractor shall design, provide, and install all the system components, equipment, valves and piping necessary to form a complete raw water (deck-wash) system that shall also be used as a fire fighting system.

The system shall consist of:

- Two (2) sea chests
- One (1) duplex strainer
- One (1) pump
- Two (2) deck-wash/fire stations

The sea chests shall be vertical trunks integral with the hull structure, located port and starboard approximately as shown on the concept drawings. These vertical trunks shall extend from deck to bottom, with a minimum cross-section of 12"x12", and the bottom of the trunks shall be completely open without a perforated plate or strainer grating. A perforated plate or strainer grating shall be provided on one of the vertical side bhds of the trunks, to prevent any items larger than 1/2" from passing through, while at the same time providing an equivalent clear inlet area equal to at least three times the inlet of the pump (between the 1 ft waterline and the bottom).

The water shall pass through the perforated plate or strainer grating into an adjacent vertical trunk also approximately 12"x12" cross-section. The bottom of this adjacent trunk is the bottom structure/bottom plating, and shall be accessible from the deck

through a bolted watertight aluminum cover plate with gasket, mounted flush with the deck over the two trunks. The perforated plate or strainer grating shall be made of marine grade aluminum, and removable from the deck for servicing, sliding between two vertical bar guides.

Inboard of the two seachests described above, the piping shall branch together into one pipe to lead to one single duplex strainer. From the two seachests to the strainer, these sections of piping shall permit unclogging with a rod, and draining with compressed air to prevent water from freezing inside the pipe.

The duplex strainer shall be sized to meet the system performance characteristics indicated in this scope of work. The size of the basket perforations in the duplex strainer shall be appropriate to operate the 5/8" fog/stream combination nozzles without clogging. An aluminum cover with gasket shall be provided over the strainer, mounted flush with the deck.

The system pump shall be installed fixed inside the hull on vibration isolators, inboard of the duplex strainer. An aluminum cover with gasket shall be provided over the pump, mounted flush with the deck. The pump size shall be adequate to provide 50 psig at the 5/8" nozzles with the two fire stations operating simultaneously. The pump HP shall be 10 HP minimum, and the pump specification shall comply with the following:

- the pump housing shall be made of a corrosion resistant metal.
- the pump mechanical seals shall be made of silicon carbide.
- the pump impeller shall be made of stainless steel, hardened and heat-treated.
- the rotor shaft shall be stainless steel 316, or better.
- the motor shall be protected by thermal overload switches and a circuit breaker, to guard against short circuits, locked rotor or over-current conditions.

The pump controls shall be local on a bhd near the pump, and remote (for "start" only) near the hose stations on the forward side bhd of the deckhouse.

Two deck-wash/fire stations shall be provided on the main deck forward, mounted on the front side bhd of the deckhouse port and starboard. Each deck-wash/fire stations shall have a hose rack with a 1 1/2" x 50 ft hose stowed with a 5/8" fog/stream type combination nozzle attached. The hose rack shall make provisions for easy pay-out of the fire hose. A spanner wrench shall also be provided at the stations. Hoses and hydrant connects shall be furnished with rocker lugs and National Hose Threads.

In general the piping system shall run under the main deck and branch into the two fire/deck-wash stations. The system shall be of "freeze proof" design and the piping runs shall be located and arranged to facilitate complete draining to provide a dry system when not in use, and to facilitate complete draining.

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C650 ENGINE EXHAUST SYSTEM

A diesel engine dry exhaust system shall be provided, consisting of piping, fittings, and high attenuation residential type spark-arresting muffler. All components of the system shall be 321 or 347 stainless steel.

The exhaust system shall be sized, designed, and installed (including number and location of expansion joints/flexible connections and supports) in accordance with the engine manufacturer's recommendations. The exhaust system shall not exceed the engine manufacturer's maximum allowed backpressure.

A pipe tap, 1/4 inch, shall be provided near the engine outlet to check system backpressure. Stainless Steel plugs shall be provided for the tap. The Contractor is required to provide the equipment necessary and to test system backpressure during trials.

The stainless steel exhaust outlet shall be located at least 6'-6" above the deckhouse top, and shall be protected from rain intrusion (i.e., provided with a stainless steel counterweighted rain flap cover that closes automatically when not in use). The fumes outside shall be directed away from the crane boom when stowed, and shall be in the flow path of the cooling air outlet on top of the deckhouse for further dispersing into the atmosphere.

Stainless steel expansion joints shall be provided, and shall be sized and located (as close to the engine exhaust outlet as possible and elsewhere as needed). The expansion joints shall minimize transmission of engine vibration to the exhaust line, and prevent overstressing of the engine connecting flanges, anchor points, and piping due to exhaust pipe weight, thermal expansion and relative movement of engine and exhaust components. The stainless steel expansion joints shall use multi-ply bellows construction.

A condensate collector with drain cock or plug shall be installed in the exhaust pipe near the engine. A weathertight slip joint connection shall be provided where the exhaust piping penetrates the top of the deckhouse.

The exhaust pipe shall be insulated in the run inside the enclosure and inside the deckhouse to reduce heat dissipation. The external portion of the exhaust system on the deckhouse top shall be insulated as well for the safety of personnel. Use of asbestos material is not permitted. The insulation thickness shall be such that the outside surface temperature of the insulation does not exceed 125 degrees F.

C655 HYDRAULIC SYSTEM

Each item of machinery with hydraulic power shall be provided with a self contained and self-sufficient hydraulic system. The hydraulic system(s) shall be designed and equipped to operate on biodegradable synthetic fluid, (Chevron Clarity or similar).

The Contractor shall provide a steel reservoir for each hydraulic power unit (HPU), complete with oil level and temperature gauges, bolted plate clean outs, vented fill cap, drain, drip pan, (and electric oil heater sized for the ambient temperature conditions if necessary). The gauges on the hydraulic reservoir(s) shall conform to the requirements of the ABS Rules.

The design, fabrication and installation of all hydraulic system components shall ensure an aligned, tight, and dirt-free installation. All piping, components, and fittings shall be designed to withstand hydraulic shock.

Convenience of maintenance and repair shall be considered in the arrangement of the components and fittings. All maintenance components (e.g., filters) shall be readily accessible and removable without disconnecting the attached piping or dismounting the filter housing.

The breather opening into the reservoir shall have 10-micron filtration as well as a replaceable cartridge type desiccant air dryer to minimize condensation within the reservoir.

C660 BALLAST SYSTEM

The self-contained ballast system in this vessel is used to correct trim. The system shall consist of two tanks, each built in the ends of the vessel (bow and stern) as shown on the concept drawings. The forward tank shall be approximately 2,150 gallons capacity, and the after tank shall be approximately 2,650 gallons capacity.

This trim tank system shall be filled with approximately 2,500 gallons of an environment friendly anti freeze and anticorrosive mixture. A 3" schedule-40 alloy piping system shall connect the two tanks to move the fluid mixture from one tank to the other (back and forth), using an electric transfer pump rated 300 gal/min minimum. Stainless steel (or bronze) valves shall be installed in the pipe on each side of the pump.

This system shall not be provided with vents, and after filling with the required amount of fluid, it shall be sealed weathertight to prevent the release of anti freeze vapors, intrusion of foreign matter, and condensation. The return air when the fluid is moved from one tank to the other shall take place through another 3" schedule-40 piping system that shall

connect the top of the two tanks as close to centerline as possible, and run under the main deck.

C667 SANITARY AND SEWAGE SYSTEM

There is no sanitary and sewage system. An Incinolet type toilet shall be provided as shown on the concept drawings.

C670 VENTS SOUNDS AND OVERFLOWS

Vents sounds and overflows as required by ABS shall be incorporated in the design, fabricated and installed by the Contractor.

C672 DRAINAGE SYSTEM

The well recesses on main deck shall be provided with drains. These drains shall consist of 3" diameter steel pipes, running vertical straight to the bottom of the vessel.

The drain fittings shall be similar to WAGER Model 134-BW or MEMARCO (HAYWARD) Type DDBW. The strainers shall have removable bronze strainer plates.

C685 HEATING, VENTILATION AND AIR CONDITIONING

Electric heat (H), air-conditioning (AC) and mechanical ventilation (V), HVAC, is required inside the deckhouse.

The HVAC system shall be thermostatically controlled, and sized to meet regulatory requirements and to be able to maintain 75°F inside the deckhouse when the outside temperature is 91°F (Dry Bulb) and 75°F (Wet Bulb). The AC unit shall be mounted on the deckhouse top, without interfering with the operation of the crane.

Electric resistance blower type space heaters with built-in thermostats shall be bhd-mounted inside the deckhouse, properly sized to be able to maintain 60°F inside the deckhouse when the outside temperature is -5°F. The bhd mounted electric unit heaters shall be complete with louver diffuser, disconnect switch, built-in adjustable thermostat, and fan speed control.

The heating and cooling loads shall be based on criteria from SNAME Technical and Research Bulletin Nos. 4-7 and 4-16 and from ASHRAE GRP 158. HVAC heating,

cooling, and duct size calculations are to be performed by the Contractor and submitted to MDC for review and approval.

All ducting shall be of galvanized sheet metal with a coating classification of 1.25 commercial (SMACNA G90). The ducting shall be externally insulated.

The ventilation ducting intake openings shall be sized not to exceed 1000 feet per minute air velocity, and the openings shall be supplied with a:

- removable, washable insect screen.
- removable, washable bird screen over the insect screen.
- exterior means for closure in case of a fire.
- Filter (for air conditioning system only).

All air volume dampers shall be manual.

Any component of the HVAC system that may produce condensation shall be provided with a condensate drip pan and drain line. The drain line shall be easy to clean to prevent clogging, and shall gravity drain into a drainage system pipe.

Ventilation inside the deckhouse shall be provided when no air conditioning or heating is required. A minimum of one complete air change every 5 minutes shall be provided when the system is operating.

Sufficient vents shall be provided to distribute supply air throughout the deckhouse interior. The Supply fan shall be complete with companion flanges, TEFC motor and motor/drive guard, manual ON-OFF switches and 2-speed controls.

C690 COMPRESSED AIR SYSTEM

The compressed air system shall consist of a commercial type electrically driven air compressor provided in the Workshop, and compressed air distribution lines. This system shall be designed, fabricated and installed to be suitable for air tool operation.

The minimum compressor rating shall be 5HP, to deliver 20CFM @ 150psi. The compressor shall be furnished with an inlet air filter, and be powered by a drip proof motor, installed on top of a vertical reservoir (air receiver) with 80gal minimum capacity.

The air reservoir shall be an ASME and ABS approved and stamped certified unit, equipped with a relief valve, pressure gage, automatic moisture trap, drain valve and discharge shut-off valve with downstream union to connect to system piping.

A low-pressure sensor switch shall start the compressor automatically, and the supply line from the reservoir shall have a pressure gage with a pressure regulator.

The compressor and reservoir shall be installed in the barge, mounted on vibration isolators with a design transmissibility of 20% or less.

The air distribution line from the reservoir shall be routed to two air tool stations, one inside the workshop, and the other on the deckhouse bulkhead forward. Each tool station shall consist of filter/lubricator/regulator, and a lockable, rapid action hose reel mounted on a bracket. Each hose reel shall have 50 feet of 3/8-inch air hose rated for 250 psi.

C692 ALARM, CONTROL AND MONITORING

Necessary instrumentation and controls shall be incorporated to monitor and regulate various shipboard systems, for safe operation and for performance in compliance with the standards.

C700 ELECTRICAL

C701 GENERAL REQUIREMENTS FOR ELECTRICAL SYSTEMS

An electrical power system shall be provided and installed to provide power for the vessel's electrical equipment. The system consists of an AC section and a DC section.

The design, construction and installation of all system components shall be suitable in all respects for marine service and the intended application. All system components shall be furnished new and unused.

The design ambient temperature for all electrical equipment in machinery spaces shall be 50 degrees C and all current carrying conductors shall be copper. The design ambient temperature for motors is defined in contract Clause C750.

Equipment shall be located and oriented as conveniently as practicable for operation and maintenance. All equipment shall be accessible for removal, servicing and adjustment without dismounting or removal of other equipment.

Unless otherwise specified, all machinery, equipment, materials and installation shall be in accordance with all applicable rules, regulations and recommendations contained in the current issue of the publications listed in Clause C003, including any revisions that have been published in the Federal Register prior to the date of this contract.

All the equipment furnished shall bear the approval of the Underwriters Laboratories, where applicable. Contract references to specific sections of codes, rules and standards in these specifications are intended to emphasize specific salient items. All equipment and design shall be furnished in compliance with all applicable sections of the codes, rules, and standards cited in Clause C003 and Clause C004.

C702 ELECTRICAL EQUIPMENT & CABLING MARKING

A. **DESIGNATION SYSTEM**

All designation of circuits, panelboards, nameplates, etc shall be in accordance with Annex B of IEEE Standard 45 – 1998 edition.

B. **EQUIPMENT MARKING REQUIREMENTS**

All electrical equipment shall be provided with standard label plates indicating manufacturer, model number, and electrical characteristics (operating voltage, phase,

amperage, etc.). The nameplates, serial number plates, identification tags, etc. that are installed on the equipment shall remain in place on the equipment as furnished by suppliers. The Contractor shall use caution during construction to not damage or paint over nameplates or tags. Damaged nameplates or tags shall be replaced prior to Final Acceptance.

The Contractor shall install identification labels for all equipment. All nameplates and notices shall be stamped or engraved on brass or plastic plates. All weather exposed nameplates, notices, and markings shall be of brass.

All distribution panels shall be labeled with designation plates. All breakers in the distribution panels shall be numbered and the panel identification cards filled out to identify the breaker's service. See USCG, 46 CFR, subchapter J, paragraph 111.40-11.

All other controls, gauges, switches, etc., shall be labeled with phenolic label plates to permit operation of the vessel. This includes pilothouse equipment as well.

C. CABLE MARKING

All interconnecting cables and wiring shall be marked at each termination and at each watertight bulkhead or deck with circuit or system identification. Power distribution wiring shall be marked to indicate phase and polarity. All cables shall be suitably identified throughout their length with cable tags identifying the circuit designation.

The tags are to be fabricated from strip aluminum or bronze with raised lettering and shall be securely fastened to the cable by banding.

Cable identification shall be in accordance with the electrical cable schedule developed per contract Clause C725.

D. IDENTIFICATION OF MOTOR CONTROLLERS

Each motor controller and motor control center shall be marked in accordance with USCG, 46 CFR, subchapter J, paragraph 111.70-3(d).

E. SHORE POWER & OFF-VESSEL IDENTIFICATION

The Contractor shall install an identification plate for the shore power receptacle in accordance with the ABS River Rules (Part 4, Section 4, paragraph 4/4A4.7.5).

C705 AC ELECTRICAL SYSTEMS

A. PRIMARY POWER SYSTEM

The primary power system shall be rated 480-volt AC, 3-phase, 3-wire, 60 Hz. Power to this system shall be supplied by either the diesel generator set or shore power.

B. SECONDARY POWER SYSTEM

The secondary power for the vessel shall be supplied through a 480-208Y/120 volt transformer. The transformer shall be fed from the main bus in the switchboard. The secondary of the transformer shall feed the Main Distribution Panel. Transformers shall be of the dry type, natural air-cooled and with NEMA 12 enclosure. All transformers shall be sized to handle 125% of the system maximum rated load as calculated in the load analysis. See Section C755 for information on required transformer protection.

The primary and the secondary system shall be provided to power pumps, lighting, and assorted onboard equipment. The system shall be complete with power distribution hardware including switchboard, transformer, control panel, gauges, and protective devices.

All lighting circuits on the vessel shall be capable to receive electric power from shore power.

C706 DC ELECTRICAL SYSTEMS

A. DESCRIPTION OF WORK

The DC system shall be provided and used for all DC loads including but not limited to generator starting, warning lights/beacons, and alarm systems.

B. BATTERIES & BATTERY CHARGERS

Self-regulating battery chargers with ammeters similar to NEWMAR HDM 50 shall be provided for charging the DC battery bank from the 208Y/120 VAC distribution system. Chargers shall be adjusted to ensure that trickle charge amperage reduces to zero at full battery potential. Charging of each 24 VDC battery bank shall also be accomplished by its respective 24-VDC generator alternator.

Each battery bank shall be located in the deckhouse in a high-density Polyethylene box with a lockable hinged door vented to the outside. All batteries provided shall be suitable for marine use and shall be rated for a minimum of 200 ampere-hours.

If any battery charger is connected to a higher equipment voltage (>13.5VDC for a 12VDC system and >27VDC for a 24VDC system), the voltage to the charger shall be reduced by using the battery charger dividers to prevent damage to the batteries.

Overload and reverse current protection for the battery conductors shall be in accordance with 46 CFR 111.15-25.

C. DC SYSTEM PANELBOARD

A DC distribution panel shall be provided and installed similar to those manufactured by Paneltronics. The DC panel shall include, but not be limited to the following basic components and features:

- Power available light with dimmer switch
- Line voltage meter
- Load current meter

C710 LOAD ANALYSIS

The Contractor shall develop complete AC and DC load analyses based on the actual equipment selected for installation. The load analyses shall be provided to the COR for review and acceptance.

C715 FAULT CURRENT ANALYSIS

The Contractor shall develop and provide a fault current analysis and breaker coordination study to the COR for review and acceptance.

C720 ONE LINE DIAGRAM

The Contractor shall develop a complete AC and DC one line diagram based on the actual equipment selected for installation. The one line diagram(s) shall be provided to the COR for review and acceptance.

C725 CABLING

All current carrying conductors shall be copper and continuous from end to end; splices will not be permitted. Cables less than 12 AWG are unacceptable and will not be permitted, except for instrumentation wiring.

The cables shall be similar to L.F. GAUBERT, TNIA or TXIA Series, rated 90 degrees C, armored, USCG & ABS approved. All cables used shall be basket weave aluminum armor type in accordance with IEEE-45 or equivalent (as classified by UL as IEEE-45 equivalent).

All cabling shall be provided with a grounding conductor to provide a path for all equipment grounds through its respective distribution path back to the switchboard.

Cables which may be liable to damage by operation of any machinery or by the handling of cargo, rope lines, stores, or other objects, shall be protected inside pipes, or other approved means.

All cables shall be suitably identified throughout their length with cable tags identifying the circuit designation. The tags are to be fabricated from strip aluminum or brass with raised lettering and shall be securely fastened to the cable by banding.

Cable penetrations throughout non-watertight bulkheads shall have ample bearing surfaces. Cable penetrations through watertight decks or bulkheads shall use multi-cable transits. Watertight and gas/fire tight bulkhead penetrations shall be similar to Heavy-Duty/Nelson MCT Fire Stop multi-transit frames and blocks, (sized to the cable). 25% spare capacity shall be provided at multi-transits.

Fixed power and lighting cables shall be installed on galvanized steel cable hangers of approved design and shall comply with IEEE-45. Horizontal cable hangers shall be spaced every two feet. Cables in sets may be clamped with approved steel bands. Plastic wire ties are unacceptable. Vertical cables must be supported every two feet with approved individual cable clamps and bar hangers or cable hangers. Cable entrances into switchgear, light fixtures, junction boxes, etc. shall be made using brass stuffing tubes.

The Contractor shall provide a voltage drop analysis and cable schedule for review and approval by the Marine Design Center. The schedule shall show the cable size, length, load, and % voltage drop (5% max allowed from the switchboard to the connected load) for each circuit.

Cable trays shall not be filled more than 75% to allow for future loads. Additional penetrations (25%) at watertight bulkheads and decks shall be provided to allow for this future growth.

C730 LIGHTING AND RECEPTACLES

A. GENERAL REQUIREMENTS

The Contractor shall provide and install complete lighting systems in order to adequately light each vessel. The lighting systems shall consist of:

- Interior Lighting
- Exterior Lighting

- Emergency Lighting
- Floodlighting

The Contractor shall provide and install convenience receptacles throughout the vessel interior and exterior.

B. INTERIOR & EXTERIOR LIGHTING

The barge shall be adequately lighted to meet the requirements of the design standards and regulatory agencies. The light fixtures shall meet the requirements of Underwriters Laboratories for marine duty, and shall be installed in the number, sizes and arrangement required to provide the value of illumination required by the Illuminating Engineering Society of North America for Marine Lighting.

Lighting switches shall be marine type, watertight where required by location, and shall be mounted for convenient operation.

Interior lighting fixtures shall be fluorescent, ceiling mounted, controlled by a switch at each entrance. Fluorescent type lamps shall be high output, rapid start and cool white.

Exterior deck lighting shall consist of watertight incandescent type fixtures, installed along the sides of the deckhouse and the housetop railing, as represented on the arrangement drawing and profile. Lighting switches shall be provided on the exterior deckhouse bhds below each fixture, incorporating dimmer control for controlled operation at night. The switches for the housetop rail mounted lights shall be located on the house side bulkheads, on the access stairways to the house top P/S.

The Contractor shall provide three DC warning light/beacons at the top of the deckhouse: one to be white for power out, one red for fire alarm.

C. FLOODLIGHTS

A system of 4 floodlights shall be mounted on top of the deckhouse fixed railing, one at each corner. Each light shall be 250-W, high-pressure sodium, directed downward to illuminate the main deck. Lighting switches shall be provided on the exterior deckhouse bhds below each fixture. The electrical feeders to the floodlights shall be provided with waterproof connectors.

D. EMERGENCY LIGHTING

Emergency lights shall provide light to illuminate all exits from inside the deckhouse in the event of an emergency and loss of power. The emergency lights shall be self contained, watertight, automatically recharged, battery powered, with three-hour capacity.

The emergency lighting is configured to allow for automatic operation upon failure of the AC lighting system or for manual (all-the-time) operation. One emergency main circuit shall be provided for all emergency lights and shall be designed to prevent the batteries from draining when the barge is left unattended. The circuit shall include overload protection, short-circuit and ground-fault protection, a disconnect fusible switch, and an automatic transfer switch. The disconnect switch shall be located inside the starboard aft exterior door.

E. RECEPTACLES

Duplex receptacles shall be installed every 5 ft along the perimeter of the interior of the deckhouse. Exterior, waterproof, GFCI receptacles shall be installed on the exterior of the deckhouse two duplexes per side. The receptacles may be grouped on circuits with other receptacles serving the same space.

1. Interior Convenience Receptacles

All interior convenience receptacles shall be rated for 2 pole, 3 wire, 15 amp or 20 amp, 125 volt AC service. All receptacles, including GFCI receptacles, shall be hospital and/or industrial/institutional grade receptacles similar to those manufactured by Hubbell.

2. Exterior & Waterproof Receptacles

All exterior and waterproof receptacles supplied shall be rated for 2 pole, 3 wire, 20 amp, 125 volt AC service. All receptacles supplied shall be similar to Pauluhn, model #2584B-125.

C733 ELECTRICAL POWER PLANT

One diesel generator set shall be provided inside the deckhouse. The diesel generator shall be surrounded by a sound attenuation enclosure, capable to meet or exceed the noise level requirements of clause C180 with the engine at full power. The diesel generator shall be battery started, built to ABS class, and shall be supplied with ABS certificates.

The engine and dedicated sound enclosure shall be mounted by the engine manufacturer to a skid sub-base, as a self contained unit to be bolted to the foundation on the main deck.

The shipboard installation shall provide for easy removal of the genset from the barge, by disconnecting electrical wiring, unbolting from the foundation, and off-loading from the barge with the assistance of a crane. Pick-up points for lifting shall be provided on the top of the genset (if the enclosure unit can be easily disassembled on board), or on top of the enclosure if both enclosure and genset need to be removed as a single unit.

The elastomer mounts to isolate vibration between the genset and the skid mount, and the stiffness of the skid mount, shall be designed and fabricated for a maximum 20% transmissibility.

The genset shall be rated for continuous operation at 480 VAC, 60 hertz, 3 phase, 0.8 power factor, and shall be sized to provide power for all electrically operated equipment and lighting onboard the vessel in compliance with the performance requirements plus a 25% margin. The generator set shall be sized based on a load analysis, but shall not be rated less than 100 KW at a 0.8 pf.

The generator shall have a NEMA 2 enclosure and be self-ventilated. The generator shall be static regulated and brush-less excited, designed to match the performance of the diesel engine that drives it.

The generator along with its regulation and excitation system shall be capable of supporting overload conditions as well as maintaining short circuit currents of such magnitude and duration as required to properly actuate selective tripping of downstream protective devices.

The generator shall be capable of operating with a 10% overload for two hours out of every twenty-four hours. The voltage dip on the generator shall not exceed 25 percent of 0.5 hp/kW, Code G, motor starting across the line. Transient reactance shall not exceed 25%.

The following characteristics are required for the diesel generator set:

- maximum 1800 RPM.
- positive shut off of the air intake to control runaway.
- air intake complete with dry type air cleaner and service indicator.
- battery starting 24 VDC, (batteries shall be provided in battery box with heaters to prevent the freezing of the batteries).
- local controls Start/Stop, Emergency Stop, Cool down timer.
- throttle control governor, cranking cycle with adjustable 1-60 sec. crank/rest periods.

- local gauges: Fuel Oil Pressure, Lube Oil Pressure, Water Temperature, Tachometer, Engine Run Hour Meter, battery voltmeter.
- local alarm and shutdown due to:
 - low Lube Oil Pressure
 - low Lube Oil level
 - high Cooling Water Temperature
 - overspeed Trip
 - overcrank.

The generator shall have a dedicated voltage regulator mounted in the switchboard. The voltage regulator shall be a solid-state volts-per-hertz voltage regulator, capable of maintaining steady state regulation within 1 percent of rated voltage from no load condition to 110% rated load condition. The voltage regulator shall include a voltage-adjusting rheostat with a plus and minus 10% adjustment range.

The generator diesel shall be a 4 stroke cycle self contained marine duty engine, suitable for No. 2 diesel fuel oil, radiator cooled, dry exhaust, manufactured by Caterpillar to provide some spare parts commonality with the diesel engine on the excavator.

The diesel engine crankcase vent shall be similar to Nelson Ecovent Recirculator with manometer and drain back to the engine sump. The engine crankcase shall include a weather-tight, oil-tight, lube oil electric heater for maintaining the sump temperature between 40 degrees F and 60 degrees F during cold weather when the engine is not running. The engine oil sump shall be fitted with a ball valve and quick disconnect fitting so that oil can be added to or drawn from the sump.

The engine shall be cooled by an engine-mounted radiator, with outside cooling air supply drawn in through an automatic louver. The louvered opening shall be located in the after bhd of the deckhouse, and shall be sized to provide sufficient cooling air supply to the diesel engine radiator.

The cooling air blown across the diesel engine radiator shall be directed to the housetop through the top of the enclosure, and then away from the crane boom when stowed, to port and to starboard. The system shall include a manually operated damper to close off the cooling air exhaust trunk in the event of a fire. This damper shall be operable from the outside of the house port and stbd.

The cooling fluid in the radiator shall be an environment friendly rust inhibitor, conditioner and anti-freeze mix. The engine driven jacket water pump shall circulate the cooling fluid in a closed loop. The cooling system shall have a Model NF 2088 Need Release coolant treatment system manufactured by Penray, to introduce and maintain supplemental coolant additive when the engine needs it.

The engine shall be equipped with a watertight jacket water electric heater and thermostat, for maintaining engine coolant temperature between 60 degrees F and 80 degrees F during cold weather when the engine is not running.

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C740 SWITCHBOARD

The switchboard shall be located inside the deckhouse, and is to be of commercial marine grade construction suitable for the intended use.

The switchboard shall be free standing, front accessible only, and fully serviceable from the front, and adequately supported to resist vibration.

The switchboard shall include sections for monitoring and control of the generator. The interrupting rating of each circuit breaker shall be suitable for the maximum short circuit current available at the point of application as determined by short circuit analysis. The circuit breakers provided shall have a minimum interrupting rating of 10,000A RMS symmetrical at their respective voltage level, and shall be capable of interrupting without damage, the maximum fault current at the breaker.

The switchboard shall include the following:

- Space heater switch with indicating light for the generator
- Ground detection lights and test switch (480 V system)
- Ground detection ammeter and test switch (208Y/120 V system)
- Voltmeter and selector switch
- Ammeter and selector switch
- Frequency meter
- Wattmeter
- Generator power available indicating light
- Voltage regulator control rheostat
- “START” and “STOP” pushbuttons

For shore power, the switchboard shall contain:

- Voltmeter
- Ammeter
- Shore power available indicating light

The generator space heaters shall be energized from the ship’s service 208/120 V AC system. These space heaters shall be controlled by an “ON” – “OFF” – “AUTO” switch located on the generator section of the switchboard. When in the “AUTO” position the space heater shall be energized whenever the associated generator breaker is open.

Single-phase loads shall be distributed as evenly as possible among the three-phases of the power system, to achieve optimum phase current balance.

The generator breakers shall be provided with an adjustable long time delay trip, set at not more than 115% of the full load rating of the generator, and a short time delay trip that is set to provide maximum selective coordination with downstream circuit breakers.

The switchboard shall have the necessary control, detection, protection, instrumentation, inputs/outputs, and all other functions required by the system and regulatory bodies.

The shore power breaker shall be provided with adjustable time delay, under voltage trip, and trip characteristics to provide maximum selective coordination with downstream circuit breakers.

The generator breaker and shore power circuit breaker shall be a marine type molded case and equipped with a plug-in or draw-out type feature.

Generator and shore power circuit breakers shall be interlocked to prevent paralleling of non-synchronous sources.

The switchboard shall be of size suitable to accommodate 25% spare circuit breakers (6 minimum), for future addition of circuits. Six spare branch circuit breakers shall be provided with trip ratings representative of the trip ratings for other loads. Any remaining "spaces" for circuit breakers shall be fitted with plug-in assemblies of appropriate frame size and blank cover plates.

C745 POWER DISTRIBUTION PANELS

A. AC PANELBOARDS

The power distribution panel will distribute power for general lighting, receptacles, and all other systems that operate on 208/120 volt. The number and ratings of the panelboards shall be selected based on the present total load requirements. Panelboards shall be located so that they are readily accessible. The panelboards shall be bulkhead mounted, dead front circuit breaker type, NEMA 12 enclosures, equipped with molded case plug-in circuit breakers, and main feed circuit breaker to disconnect the entire panel with one motion.

The 208Y/120V distribution bus circuit breakers shall be manually operated and provided with inverse time, ambient temperature compensated, thermal magnetic trips. The thermal trips shall be interchangeable, and the magnetic trips shall be adjustable.

The interrupting rating of each circuit breaker shall be suitable for the maximum short circuit current available at the point of application as determined by short circuit analysis. The circuit breakers provided shall have a minimum interrupting rating of 10,000A RMS

symmetrical at their respective voltage level, and shall be capable of interrupting without damage the maximum fault current at the breaker.

The circuit breakers in the panelboards shall have quick-make, quick-break, trip-free mechanisms. As a minimum, six spare breakers shall be provided for each distribution panel. The spare breakers shall have trip ratings representative of the trip ratings furnished for other loads. Any remaining "spaces" for circuit breakers shall be fitted with plug-in assemblies of appropriate frame size and blank cover plates.

B. DC PANELBOARDS

The DC distribution panelboard shall include, but not be limited to the following:

- Power available light for the system.
- Line voltage meter.
- Load current meter.
- Power available light for each load.
- Main circuit breaker.

C750 MOTORS AND CONTROLLERS

A. MOTORS

All motors shall be drip-proof protected, except those exposed to the weather, which shall be waterproof construction. All motors shall be NEMA type, and shall be sized and designed for continuous operation of the driven auxiliary at rated capacity.

All motors shall be designed for an ambient temperature of 50 degrees C.

All motors shall be equipped with anti-friction bearings. All motors using grease-lubricated bearings shall be provided with grease fittings and shall have positive means for preventing grease from being forced out upon the motor windings.

B. CONTROLLERS

All controllers shall have manually reset thermal overload protection, line disconnect device, and integral start/stop push-button set. Controllers arranged for automatic or remote operation shall also be provided with Hand-Auto or Local-Remote selector switch. Exterior mounted controllers shall be mounted in watertight enclosures.

Controllers for the small HP motors shall be full-voltage magnetically operated type. In cases where starting motors across the line can produce 25% voltage dip on the system with the bus at 30% capacity, reduced voltage starters shall be used.

All motor controllers shall be provided protection against an under-voltage condition.

C. MOTOR CONTROLLER – BREAKER COORDINATION CIRCUITS

Switchboard breakers and panelboard breakers for motors and motor controllers shall sized and installed in accordance with the following:

- Motor feeder circuit breakers installed in a switchboard section or motor panel shall be rated as near to, and not more than, 250% of the motor FLA.
- The motor control circuits shall be in accordance with MDC Sketch #750A.
- All motor controllers shall have short circuit and ground fault protection by circuit breaker rated at $AT = 125\% FLA$ and $IT = 10 \times FLA$ of the motor.
- See MDC Sketch #750B for the motor circuit logic.

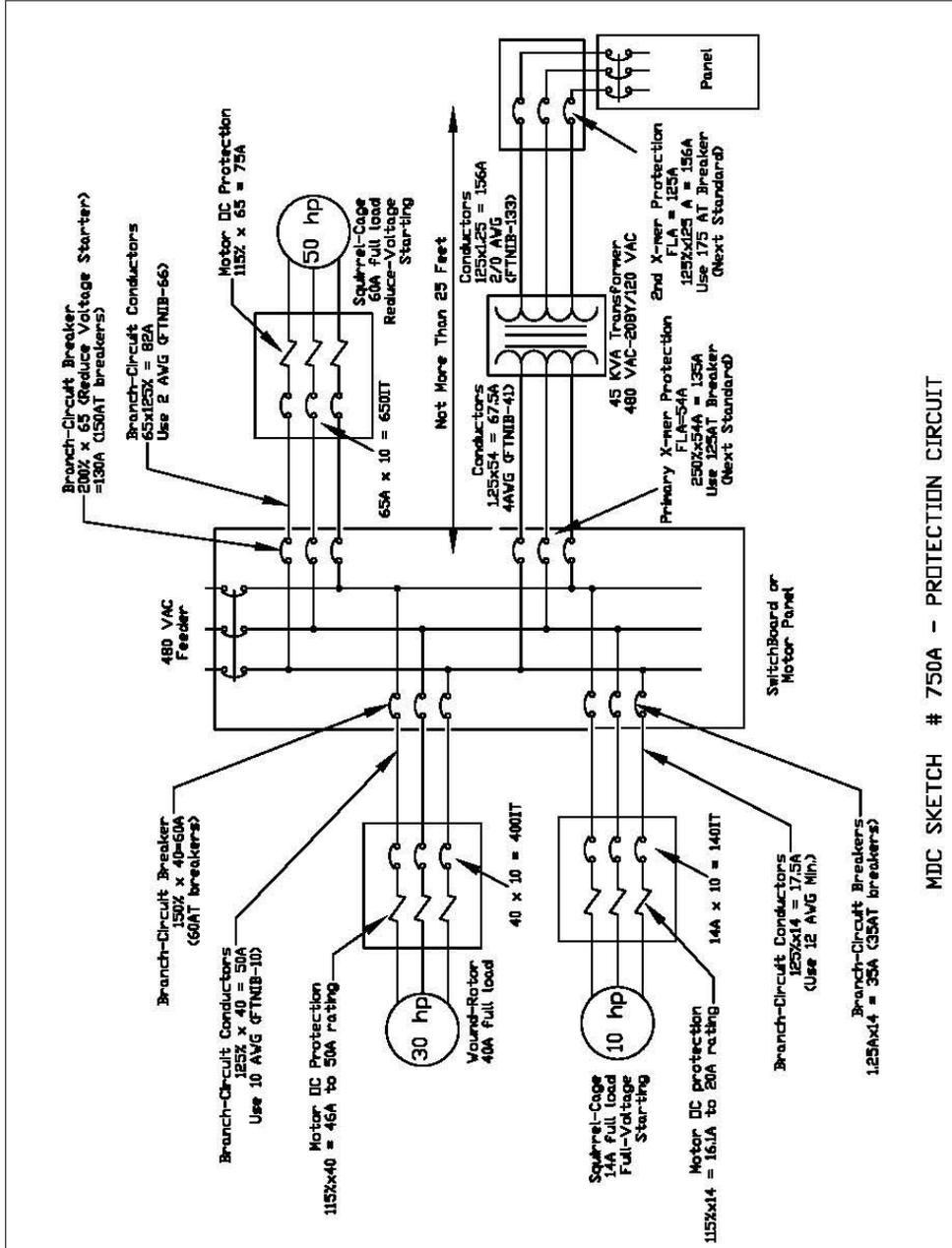
D. MOTOR UNDER-VOLTAGE PROTECTION

All motor controllers shall be provided protection against an under-voltage condition. Protection against under-voltage shall be either low-voltage protection (LVP) or low-voltage release (LVR).

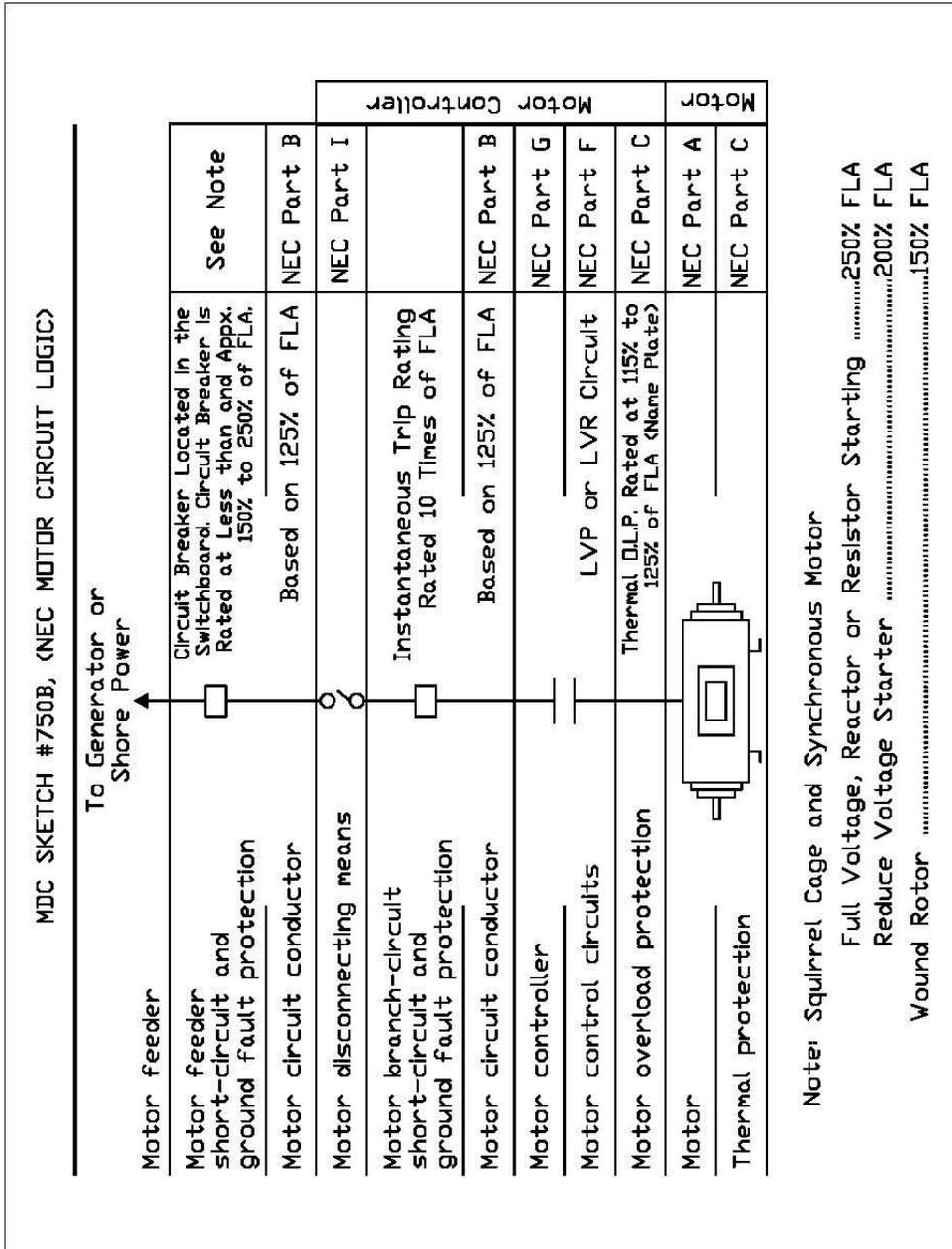
The motor controllers for the following systems shall be provided and installed with low-voltage release (LVR):

- Bilge pump

All motor controllers not having LVR shall be provided and installed with low-voltage protection (LVP) unless the motor is less than 2 hp.



MDC SKETCH # 750A - PROTECTION CIRCUIT



C755 TRANSFORMERS

a. TRANSFORMER SIZING REQUIREMENTS

The Contractor shall provide and install one transformer to connect the 480 volt AC, three phase, 3-wire, 60 Hz system to the 208Y/120 volt AC, three phase, 4 wire, 60 Hz system. The transformer shall be sized based on the results of the AC Load Analysis and the development of the AC One-Line Diagram.

b. TRANSFORMER CIRCUIT BREAKERS

The transformer feeder circuit breaker shall be sized to be as near to, and not more than, 250% of the primary current. The secondary transformer circuit breaker shall be rated or sized at 125% or the next standard size of circuit breaker. See MDC Sketch #750A.

C760 SHORE POWER

One 100-amp 3-phase shore power station shall be provided, installed on the after side of the deckhouse.

The shore power station shall be integrated with the electric power distribution system, and shall be provided with cable, junction box, and mating plug to match the existing receptacle on the shore. The shore power circuit breaker shall be interlocked to prevent paralleling of non-synchronous sources. Undervoltage trip devices shall not be installed on the shore power circuit.

The Contractor shall provide 100 feet of shore power cable sized 125% of 100-amp service. One end of the cable shall be connected through the junction box to the shore power circuit breaker in the switchboard. The second end of the cable shall be set up for use on the shore side and shall be fitted with a Government furnished connector to match the shore side service. A rack shall be provided on the aft exterior house bulkhead for hanging the coiled cable when not connected to shore.

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C800 SPARES

C801 LIST OF SPARE PARTS AND TOOLS

Each vessel system's drawing shall include a material and PARTS LIST. The PARTS LIST shall identify and describe all system equipment components, indicating the equipment manufacturer, and the designation (model, series etc).

During the Engineering Phase, the Contractor shall provide a LIST OF SPARE PARTS to include critical spare parts, start-up spare parts, and maintenance spare parts to enable the vessel to operate for 2 years at 25% utilization rate without lost time waiting for parts, (i.e. 4,380 hours).

The list of spare parts shall be developed, organized by system and by system equipment component, taking into consideration the spare parts recommended by the equipment manufacturers, and shall include a complete priced parts list.

At delivery, the Contractor shall deliver as well the parts listed in the LIST OF SPARE PARTS, to enable the vessel to operate for 2 years at 25% utilization rate without lost time waiting for parts, (i.e. 4,380 hours). In addition the following spare parts shall be provided:

- a. LIGHTS: Based on two replacement bulbs for each light fixture on board, provide vendor boxes for each type of bulb, complete, containing bulbs in the required quantity.
- b. FILTERS AND DRYERS (ALL SYSTEMS and EQUIPMENT): For each type and size of filter element or cartridge, provide 10 elements or 1 case whichever quantity is greater.
- c. SPECIAL TOOLS AND EQUIPMENT: For each equipment type, make and model, the Contractor shall provide one complete set of the manufacturer's special tools, maintenance tools, and special adjustment tools and monitoring equipment.

The tools and "equipment" shall be stored in maintenance tool chests labeled with the equipment name on the outside, and a list of contents on the inside cover.

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PART I - THE SCHEDULE - SECTION D PACKAGING AND MARKING

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D01 PACKAGING

All spare parts, materials, and tool chests shall be packaged by the Contractor in weatherproof containers.

Parts that require preservation shall be preserved with a paint or other preservative coating acceptable to the manufacturer and the COR. All threaded parts shall be coated or filled with preservative and protected with plastic pipe caps or plugs as appropriate.

Spare parts, materials, and tool chests shall be packaged in Contractor furnished pallets or fixtures to raise them off the ground during storage, and to provide a lifting rig for moving them by crane, forklift, and truck.

D02 MARKING

All spare parts will be marked or labeled by the Contractor, with the following information:

NAME OF PART & PART NUMBER
NAME OF EQUIPMENT OF WHICH ITEM IS A PART
DRAWING REFERENCE
MANUFACTURER
YEAR OF MANUFACTURE
OTHER IDENTIFYING INFORMATION

This information shall be engraved on a plastic tag or metal plate and securely attached to each spare part with the exception of consumables.

In addition, where individual spare parts are packaged in crates or other containers, the crate or container shall be labeled with a stencil, in paint of a contrasting color, on at least three sides. The stenciled labels shall provide the same information as the part identification tag.

Where multiple spare parts are packaged in a crate or container, the requirement for stenciling the crate as stated in the previous paragraph shall apply, but, in addition, the crate shall contain an inventory card affixed to the inside cover of the container. The inventory card shall list each item in the container, including all information on the individual item tags.

**PART I - THE SCHEDULE - SECTION E
INSPECTION AND ACCEPTANCE
FOR MANEUVER BARGES**

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PART I - THE SCHEDULE - SECTION E INSPECTION AND ACCEPTANCE

E01 INSPECTION

The contract will be managed by the Marine Design Center (MDC) of the U.S. Army Corps of Engineers (USACE) and is subject to inspection by its appointed representatives to insure strict compliance with the terms of the contract. No MDC representative, except the Contracting Officer, is authorized to change any provision of the specifications, nor shall the presence or absence of a MDC representative relieve the Contractor from any requirements of the contract.

The Contractor shall provide gas-free and oxygen level certificates for all compartments prior to permitting entrance for work or inspection. This procedure shall be reflected in the Contractor's Quality Control Plan and in the Inspection and Test Memoranda when applicable.

Any inspections or tests can be conducted concurrently with the inspections or tests required by ABS.

E02 LAUNCHING

The Contractor shall be responsible for the successful launching operation of the vessel(s) at the times selected and mutually agreed upon by the Contractor and the COR.

The Contractor shall provide a written notice to the Contracting Officer 10 calendar days prior to the launching. The Contractor shall carry out the necessary calculations required for a safe launching of the vessel(s).

Prior to launching the vessel, the hull interior and exterior surfaces shall be thoroughly inspected to verify compliance with the requirements of the paint specification. The vessel shall not be launched until the hull painting has been completed, inspected and approved by MDC.

E03 QUALITY CONTROL AND INSPECTION

During Phase II, the Contractor shall obtain ABS and COR approval for all calculations, reports and drawings required to completely represent and demonstrate that the vessel design meets or exceeds the requirements of this solicitation, and those for ABS certification.

During Phase II, the Contractor shall also develop and submit to the COR, the INSPECTION AND TEST MEMORANDA, and the TEST AGENDA (or schedule), for the work required during Phase III of this Contract.

The INSPECTION AND TEST MEMORANDA shall consist of inspection and test procedures, with blank spaces to be filled in at the time when the inspection or test takes place, to become the INSPECTION AND TEST REPORTS.

The Procedures shall indicate the Contractor Representatives who are authorized to witness or perform, and sign for each inspection or test.

The following is an example of typical data to be recorded for each inspection or test:

- Type of inspection or test (e.g., visual, mechanical, liquid penetrant, radiographic), accept / reject criteria, and a statement as to whether the inspection was satisfactory or unsatisfactory.
- Number and type of deficiencies of material or workmanship found in the product or subproduct inspected and corrective action taken to correct the deficiencies and, for repetitive deficiencies, to preclude recurrence.
- Date and signature of the Authorized Contractor Representative who performed the test or inspection, and date and signature of the Authorized ABS and MDC representative who witnessed the test or inspection (if applicable).

Work sub-Contracted and performed away from the Contractor's plant shall be covered by this inspection and test system as well. The Contractor cannot delegate the authority to witness, perform, and sign for inspections and tests conducted away from his plant, without approval of the COR.

When any workmanship, material, equipment or system fails to pass any test or inspection, it shall be fully retested only after all known faults have been eliminated. Where directed by the COR, such failed material or equipment shall be completely removed from the work and renewed. Any defects shall be remedied by the Contractor at no additional cost to the Government, except where work was performed on material or equipment furnished by the Government.

Contractor certified inspection is an integral part of all work, therefore, the COR will consider the entire Contract incomplete if Contractor documentation and records signed by the MDC representative are not complete.

The TEST AGENDA shall be a complete, detailed schedule of all inspections and tests. The Agenda shall be arranged by day (i.e. day one, day two, etc.), not date, and shall list the specific inspections and tests, and the sequence in which these will be performed.

The Contractor shall coordinate with ABS to assure that all tests required for class are witnessed by ABS, in order to obtain the required ABS certification.

E04 FACILITIES FOR PERSONNEL

While it is not intended that the Marine Design Center will have a Resident Engineer's Office, the Contractor shall provide office space at the construction site for use by a Marine Design Center staff of three people.

The office space shall be convenient to the work site. The space shall be air conditioned, heated, ventilated, well maintained and well secured, and have toilet and shower facilities nearby. The space and facilities shall be suitable for both male and female staff.

The Contractor shall furnish two parking spaces within the construction site, in safe locations and near the assigned office space.

The office space shall be furnished, as a minimum, with 2 desks, 4 chairs, two commercial telephone lines, one commercial telephone with speakerphone capability, access to both the Contractor's internal and external telephone service, and one drawing table suitable for layout of drawings. The second phone line shall be independent, so that a government owned laptop PC can communicate over the Internet simultaneously.

The MDC representatives inspecting the construction may bring with them cameras, and various items of communication and test equipment. The Contractor shall permit unencumbered ingress and egress to and from the shipyard and the vessel for the MDC representatives and their equipment.

Upon request, the MDC Representatives shall have the unrestricted use of the following office equipment at the Contractor's construction site:

- FAX machine with a dedicated outside telephone line.
- Photocopier with reduction/enlargement and sorting capability. The Contractor shall provide the photocopier with paper, fluids, toner and service.

E05 INSPECTIONS, TESTS AND TRIALS**A. GENERAL**

During Phase III, the Contractor shall perform INSPECTIONS AND TESTING at his construction yard, according to the approved INSPECTION AND TEST MEMORANDA. The Contractor must obtain approval from ABS and the COR for inspections and tests that shall be conducted to verify that the approved plans were followed, and to warrant compliance with quality assurance requirements during fabrications, and installation of equipment and systems.

The following 4 levels of inspection and testing shall be considered:

- LEVEL 1 - INSTALLATION AND ASSEMBLY INSPECTIONS AND TESTS
- LEVEL 2 - BUILDER'S DOCK TRIALS
- LEVEL 3 - DOCK TRIALS
- LEVEL 4 - FINAL ACCEPTANCE DEMONSTRATIONS

For all inspections and tests, the Contractor shall provide all labor, services, tools, materials, equipment, fuels, fluids, lubricants, testing media, and perform tests on all equipment, machinery, and systems, to verify that they perform in accordance with the intent described and specified in Section C, "DESCRIPTION/SPECIFICATIONS/WORK STATEMENTS."

For the 4 levels of inspection and testing, the Contractor shall rectify any deficiencies revealed during any level of testing; all retesting shall be completed satisfactorily prior to the commencement of the next level of testing.

The successful completion of all inspections, tests and trials, and the existence of any deficiencies, shall be determined by the COR. The Contractor shall remedy all deficiencies.

During all Phases of this Contract, including testing, the Contractor is authorized to use sub-Contractors performing under his direction and supervision; however, the Contractor shall assume full responsibility for their work.

B. TEST REPORTING

For all levels of inspection and testing, 1 through 4, the Contractor shall prepare the INSPECTION AND TEST REPORTS. The Test Reports shall consist of the approved Inspection and Test Memoranda that was submitted to the COR for review and approval during Phase II, with the blanks filled in with data taken during the inspection or test, and comments remarks and other content called for in the approved Memoranda.

The Contractor shall prepare an Inspection or Test Memorandum for each Inspection or Test respectively. The Memorandum shall be typed on 8-1/2 inch by 11-inch sheets of paper, single sided. Ultimately, they shall be assembled in three ring binders, with dividers for each equipment and for each system, to constitute the complete Inspection and Test Memoranda.

The TEST MEMORANDA / TEST REPORT shall be arranged by system and LEVEL of testing according to the same outline, LEVEL 1 through LEVEL 4.

Each Test Memorandum shall describe the test procedure, and data taken. The procedure shall be in accordance with the "start-up" procedure for the equipment, as delineated in the operating manual of the equipment manufacturer, and shall reference the Operator's Manual used to format the test procedure. Data recorded in time intervals shall be tabular so that data trends can be easily recognized.

Each Test Memorandum shall describe instrumentation and equipment required for each test, and shall include space for relevant nameplate data, ambient conditions, tested parameter values for each time interval, comparative pass/fail values, comments, Contractor Representative witness and Government and ABS Representative witness signatures and date.

For each test, the acceptance criteria must be explicitly spelled out in the Test Memorandum, and concurrently, shall reference the applicable source standard.

The Contractor shall incorporate demonstrations of all controls, instruments, and alarms, into each test, and repeat them in the Final Acceptance Demonstrations, LEVEL 4 for the crew.

Within 3 days of the completion of any test on any level, a copy of the documentation of that test shall be provided to the COR for review.

Within 10 calendar days following the successful completion of the LEVEL 4 Final Acceptance Demonstrations, and prior to Final Payment, the final version of the INSPECTION AND TEST REPORT, including the test data and the results of all levels of inspections and tests, shall be bound in three ring binders, and submitted in triplicate to MDC.

Final Payment will not be made until the INSPECTION AND TEST REPORT has been completely approved by the Contractor and by the COR, all ABS required tests have been performed satisfactorily, and all ABS Certificates have been obtained.

C INSTALLATION AND ASSEMBLY INSPECTIONS AND TESTS (LEVEL 1)

The installation and assembly of the crane on the barge, shall be carried out by the Contractor. Validation of the Crane Installation and Assembly will be verified during the INSTALLATION AND ASSEMBLY INSPECTIONS, AND TESTS, (LEVEL 2). These tests shall be conducted by the Contractor against procedures written by the Contractor and approved by the COR / the crane manufacturer (and ABS if applicable). The procedures shall be developed based on the crane manufacturer installation and assembly procedures.

During the crane installation and assembly, the Contractor shall have a crane manufacturer representative on site at the Contractor's yard, to ensure that the installation and assembly is executed properly, and according to the approved procedures.

It is the responsibility of the Contractor to obtain approval of the Crane Installation and Assembly from the manufacturer, to provide a full one-year warranty for the operation of the crane from the date of final acceptance.

The LEVEL 2 tests shall be of sufficient scope and duration to assure that all machinery and equipment is properly installed and all systems are complete. The intent of this testing is to provide both the Contractor and the COR, reasonable assurance that installation of equipment and assembly of systems, have been executed satisfactorily, and that the vessel is ready for formal Dock Trials (LEVEL 3).

The COR shall be notified, in writing, at least 5 working days prior to the scheduled commencement date of any LEVEL 2 tests.

As a minimum, the following LEVEL 2 Inspections and Tests shall be performed to the satisfaction of the ABS Surveyor (when applicable), and MDC representative:

1. HULL

All tanks and watertight bulkheads shall be tested in accordance with ABS Rules.

2. DECKHOUSE

All weathertight exterior bulkheads shall be hose tested for tightness prior to coating. All weathertight doors, windows, manholes, and hatches, shall be hose tested for tightness.

3. SPUD SHOP TESTS

Air test each spud to verify water tightness and load test to demonstrate structural integrity at the weldments. With the spud supported at the two ends, subject each side to a calculated test load at mid-span to stress the material to 75% of the yield point. Measure and record the midspan deflection, and ensure that no permanent deformation has occurred after the load is removed.

The as-built dimensions of the spud(s), as well as the Spud Depth Markings, shall be verified by the COR prior to installation of any spuds on the vessel. At a minimum, perform the following:

- The design spud length overall (LOA) shall be verified and recorded.
- Check the accuracy of the spud markings and the locking pin/dog locations with respect to the spud tip and the stowage position.
- Check the sheave for freewheeling rotation motion.
- Check the wire rope keeper clearance with the spud rim to ensure that the rope cannot jump from the groove.

These shall be coordinated to permit the government representative to witness the tests.

4. DOORS AND WINDOWS

Test the doors and windows using a water hose. Water shall not be able to pass through gaskets. Should the door prove defective, the Contractor shall replace the door with another one that will pass the test.

5. CRANE HEIGHT - VERIFICATION

Verification that the height of the crane does not exceed 24'-0" above the deck of the barge in the stowed configuration.

6. PIPING SYSTEMS TESTS

All piping systems shall be flushed with their proper system fluids, to demonstrate system cleanliness and integrity.

During flushing of the fuel oil system, the engines shall be bypassed with a jumper line. After flushing, the jumper line will be removed, strainer(s) will be cleaned, and filter element(s) replaced.

After thorough flushing, hydrostatically test all piping systems for leaks at 1-1/2 times working pressure for a duration of no less than 10 minutes per test. Each system shall be inspected for leaks at the welds, fittings, hoses, etc.

7. COMPRESSED AIR

Upon completion of installation, the piping of each compressed air system shall be tested in accordance with the ASME code. The system shall be inspected for leaks at the welds, fittings, etc. Upon completion of the test, the entire system shall be blown dry with air.

8. HYDRAULIC SYSTEMS

Upon completion of the installation, the systems piping and fittings shall be flushed with hydraulic fluid. Jumpers shall be provided as necessary. Flushing shall be accomplished using a Contractor furnished pump to circulate the hydraulic fluid, and the Contractor furnished filters to collect all contaminants. Upon completion, reservoirs shall be emptied and wiped out completely clean, and refilled with filtered oil

9. HVAC

Blow out with compressed air all installed ductwork. Operationally test each supply and exhaust fan, along with it's ducting to ensure absence of leaks, adequate support, and acceptable vibration levels. Operationally test the air conditioning system to ensure proper operation and absence of leaks.

10. EXHAUST SYSTEMS

Blank off and test the flanges, welds, and gaskets of each exhaust system using compressed air and soap solution.

11. ELECTRICAL CABLING

Insulation resistance readings of all installed power and lighting cable shall be taken using a 500 volt megger, and shall be in accordance with IEEE Standard 45, Section 46. The measured cable insulation resistance must meet or exceed the minimum values outlined in the referenced IEEE publication. A complete record of all readings shall be kept to assure that all circuits and equipments have been checked and for possible assistance in troubleshooting any discrepancies detected during subsequent testing.

D. BUILDER'S DOCK TRIALS (LEVEL 2)

Builder's Dock Trials are a preliminary "run-through" of all required Dock Tests (Level 3) by the Contractor. The intent of this testing is to provide both the Contractor and the COR reasonable assurance that all equipment and systems have been thoroughly prepared and are ready for formal testing and that the Contractor has made adequate provisions for Dock Trials (Level 3).

Builder's Dock Trials shall be conducted at the Contractor's facility listed in Section B of the contract. The COR shall be notified, in writing, at least 2 working days prior to the scheduled commencement date of Builder's Trials. The Test Report must be current prior to commencing Builder's Dock Trials.

The trials shall be of sufficient scope and duration to assure that all equipment and systems are complete and capable of performing as required during Dock Trials.

E. DOCK TRIALS (LEVEL 3)

Dock Trials are the operability tests the Contractor must perform in the presence of the MDC representative(s) to demonstrate the proper installation, operation, control, and performance of all equipment, machinery, and systems installed as part of this Contract.

Each test or demonstration shall include control, instrumentation and alarm operation as applicable. Dock Trials shall be conducted at the Contractor's facility, and shall be of sufficient scope and duration for the intended objective.

Prior to the start of Dock Trials, all construction and installations must be complete, except for final cleaning and touch-up painting, and all Level 1 and Level 2 testing must be successfully completed and documented. The Test Report must be current through the two levels of testing and approved by the COR before Level 3 testing can proceed.

All testing and trials shall be conducted in the presence of a MDC representative and any vendor representatives required by the Contract. The tests shall be conducted in accordance with the TEST AGENDA.

The COR shall be notified, in writing, at least 5 working days prior to the scheduled commencement date of Dock Trials. The COR shall be notified immediately of any condition which would delay the conduct of Dock Trials.

The Contractor shall indicate in the test memoranda which tests will be performed using the diesel generators and which tests will be performed using the shore power.

The following are the minimum DOCK TRIALS required:

1. INCLINING TEST

The crane barge shall be inclined after the crane is installed and prior to the crane tests. The inclining experiment shall accurately determine the As-Built lightship weight and the coordinates of the center of gravity for the completed vessel.

The inclining experiment shall be conducted in accordance with ASTM F 1321-90. The Contractor shall provide an inclining test report, which gives the “as inclined” and “lightship” load condition displacements and CG (Center of Gravity) locations.

After the inclining test, several (no load) crane movements shall be performed (crane operated by the Contractor), as follows:

- With the boom fully extended and no load on the hook, the crane shall swing to 90 degrees (starboard side), and next to 270 degrees, (port side). The boom angle (crane rigging radius) shall not change. Pendulum readings shall be taken after each movement, as well as the vessel draft readings at the four corners of the barge. This will be used to assess the heeling moment due to the crane own weight and CG. The change in LCG shall be ignored during the experiment.
- With the boom fully extended and the crane at 90 degrees over the starboard side, and next with the crane at 270 degrees over the port side, the crane boom angle shall be changed from the lowest to the highest boom angle position. Pendulum and draft readings shall be taken at each extreme boom angle position. The initial and final boom angle shall be recorded. The change in the rigging radius shall be calculated. The heeling moment divided by the change in the rigging radius shall equal the boom point dead load by experiment. The change in VCG shall be ignored during the experiment.

2. DIESEL GENERATOR SET

In the presence of an authorized diesel engine manufacturer representative, validate the installation and operation of the diesel generator engines as follows:

For the diesel generator set, demonstrate:

- Cold starting.
- Stability of operation
- Starting and stopping.
- Emergency push button stopping
- All engine controls, and instrumentation
- Alarms at the local panel. Ensure the proper operation of all alarm test circuits.
- Automatic shutdown for engine overspeed.
- Operation of the generator heater(s).

3. LOAD BANK TESTING

The diesel generator set shall be load bank tested. Operate each generator set at 1/4, 1/2, 3/4 and full loads in 15-minute intervals and then at 100% rated load (with the use of a load bank) for a minimum of 2 hours, (until the cooling water and exhaust temperature stabilize). All engine and generator parameters shall be recorded at 5-minute intervals for the partial and full load periods, and at 15 minute intervals for the 100% load period.

4. ENGINE COOLING SYSTEM

Demonstrate proper cooling of the diesel generator. Inspect the system for leaks.

5. ENGINE EXHAUST SYSTEM

Demonstrate the operation of the diesel generator exhaust system. Inspect the system for leaks and verify the backpressure on the system.

6. FUEL OIL SYSTEM

Ensure proper fuel oil flow to the diesel generator during operation. Demonstrate the ability of the diesel generator to take suction from the fuel oil tank. Demonstrate the operation of all remote operated shut-off valves.

The Contractor is responsible for maintaining the fuel tank filled and for delivering the vessel with the fuel oil tank full.

7. BALLAST SYSTEM

Demonstrate the operation of the ballast system using the ballast pump to transfer fluid from one trim tank to the other and back. Record the time required and calculate the average pump flow rate, based on the known size of the tank.

8. SANITARY & SEWAGE SYSTEM

Operate the Incinolet type toilet several times to demonstrate the operability of the system.

9. DRAINAGE SYSTEM

Demonstrate the capability to drain water from the drains on the well recesses on main deck.

10. RAW WATER/FIREMAIN SYSTEM

Demonstrate operation of the raw water and firemain system. Starting the pump, demonstrate the ability of the pump to provide two streams of water simultaneously from the hoses at the two deck stations. Record the pump discharge pressure and measure motor amps

Demonstrate removal and placement of the strainer basket(s).

11. HVAC

Demonstrate the satisfactory operation of the air conditioning and ventilation system to cool, and to draw outside ventilation air to the air-conditioned and ventilated spaces.

Demonstrate the operation of each electric resistance space heater in each space. Measure and record the temperature of the heater air discharged from the in-line space heaters.

Demonstrate the operation of the temperature controls. Ensure that the smoke sensors/heat sensors activate the system's controls to shutdown the system in case of fire.

Demonstrate the operation of each manually adjustable damper at each duct outlet. Manually adjust the outside air damper for summer and winter operating conditions.

Demonstrate the two-speed operation of the supply and exhaust fans. Record the air velocities at each fan and duct discharge, and calculate the cfm flow rate. Demonstrate the operation of the ventilation fan in the toilet.

A representative of the air conditioning system manufacturer shall be present during the tests and trials of the system.

12. COMPRESSED AIR SYSTEM

Demonstrate the charging of the air receiver from atmospheric pressure up to the system design pressure. Record the amount of time to charge the receiver.

Demonstrate:

- That the compressor will cut-in at ____ psig and will cutout at ____ psig, approximately.
- Air flow to the air tool stations.
- The operability of all relief valves and receiver drain valves.
- Air pressure and flow rate at each tool station.

13. CAPSTAN

Demonstrate the free running operation of the capstan in forward, reverse and stop. Perform pull test to demonstrate rated load capability. (The pull test can be performed at the manufacturer's facility).

14. SPUD WINCHES

Demonstrate the operation of the spud handling system by performing the following operations:

- Power-down and power-up operation to demonstrate various speed operation/control.
- Stopping, braking and holding.
- Free fall operation. Lower the spud using the free fall feature of the spud control system. Engage the clutch and withdraw the spud from the river bottom by power-up operation.
- Raise the spud to the stowage position and secure with the locking pin engaged.

15. AC ELECTRICAL SYSTEM

In order to demonstrate the operation of the electrical system, the Contractor shall perform approximately 1/2 of the Level 3 machinery tests using the diesel generator, and the remaining 1/2 of the Level 3 machinery tests shall be performed using shore power supplied through the vessel's shore power receptacle. It is the Contractor's option as to which tests shall be powered from shore power and which tests shall be powered by the diesel generator; however, they shall be indicated in the test memoranda.

Demonstrate the operation of all circuit breakers and all controls in the main switchboard and distribution panel boards. Demonstrate proper functioning of voltmeters, ammeters and switches, power available indicator lights, space heaters, ground detection lights and test switches, and ground ammeter and test switch. Demonstrate voltage drop of longest circuit while under load.

16. LIGHTING

Demonstrate operation of all:

- Interior lights, exterior lights, and floodlights. Demonstrate the operation of all lighting switches.

17. RECEPTACLES

Demonstrate the operation of:

- All convenience receptacles by using 80% load for each receptacle. Check the receptacles for polarity. For GFCI types, demonstrate their ability to reset.
- The shore power receptacle to supply power to the vessel.

18. NOISE SURVEY

A noise survey shall be conducted on the vessel by the Contractor. The survey shall consist on the taking of sufficient noise measurements in each space to determine noise levels. A report shall be prepared containing the survey results.

The Contractor shall identify the proposed sub-Contractor scheduled to complete this task and provide detailed qualifications for review and approval by the COR. The survey shall not be performed until the sub-Contractor is approved.

In order to perform this survey, the following conditions must be met:

- The vessel must be structurally, electrically and mechanically complete with all systems operational.
- The noise surveyor must be able to request the shipyard (at any time) to operate any or all machinery to include the excavator. Sufficient support must be available from the shipyard to accomplish this. Note this includes operating for extended periods of time.
- No activity, which may interfere with the survey, shall be conducted in or near the vessel.

The noise survey shall test and report airborne noise levels for all compartments and spaces on the vessel except those compartments designated as tanks and voids. For each outside area and interior space, measurements of the octave-band and overall A-weighted sound pressure levels shall be taken and recorded at a sufficient number of points to provide an accurate record of the noise characteristics of the entire space.

The test shall be conducted with machinery in operation as if at a work site. Measurements shall also be taken inside the crane cab while operating the excavator, the generator, the compressor, the crane with all ventilation equipment and systems in full operation as well.

The noise survey will be performed in general agreement with the recommendations of the Department of Transportation, U.S. Coast Guard, "Navigation and Vessel Inspection Circular Number 12-82 where applicable and as outlined here:

- The sound level meter will meet the Type II requirements of the ANSI Specification for Sound Level Meters, S1.4-1971 (R1976).
- The noise measurement equipment shall be calibrated initially, at subsequent intervals of approximately four hours, at the end of tests and at any other time when tests are interrupted due to battery replacement, etc.
- The noise measurements shall be taken in decibels with the meter set on slow response using an A-weighting filter. Noise measurements will be reported only to the nearest decibel. A measuring time of at least five seconds will be allowed. If the meter fluctuates within a range of five dB maximum to minimum, an estimate of the level will be made by visual averaging the travel of the needle.
- A wind screen shall be used over the microphone in locations where air motion is noticeable.

- Care shall be taken to note the existence of intermittent or cyclical characteristics of the noise environment and to take appropriate measures to account for this.

The noise survey report shall include the following information:

- A narrative description of the survey procedure, the findings, and conclusions or observations. The significance of Preferred Speech Interference Levels recorded shall also be included.
- A tabulation of the actual raw data taken in the survey for noise.
- Reduced data in the form of A-weighted sound pressure levels for each operating condition indicated in the approximate location of the reading, on plan view drawings or sketches of each space.
- Separate sheets shall have a plot of the average sound pressure recorded at each octave band center frequency, for each space and for each operating condition.

The Contractor is responsible for all costs incurred with bringing the vessel within the noise levels required by Contract clause C180.

F. CRANE DOCK TRIALS (LEVEL 3)

Crane Dock Trials will be performed with the crane operated by the Contractor, with the crane barge in the water. The Contractor shall provide at his own expense, all that is required to test the crane (i.e., to include the certified test weights and the required rigging and instrumentation).

The following test weights are required:

- 20,000 lbs
- 3,400 lbs

The crane test rigging shall be designed by the Contractor and submitted to the Marine Design Center for review and approval with the test memoranda.

Prior to the start of Crane Dock Trials, all construction and installations on the crane and on the barge must be complete (except for final cleaning and touch-up painting), and all LEVEL 1 and LEVEL 2 testing must be successfully completed and documented by the Contractor.

During crane testing, the Contractor shall demonstrate the proper installation and operation of all equipment and systems installed in the crane, and demonstrate controls, instrumentation and alarm operation as applicable.

The Contractor shall tie the crane barge in a quiet and sheltered area. The arrangement of the mooring lines and the depth of the water under the hull shall not restrain flotation during load handling testing. The location and mooring arrangement shall be acceptable to the COR, and to ABS if applicable.

The Contractor shall provide the vessel barge in ready condition for the crane tests as follows:

- The barge shall be complete in all respects prior to testing.
- The boom shall be stowed on the boom rest, and the rigging and test weights shall be ready.
- Sufficient liquid ballast shall be in the trim tanks to evaluate their use to correct trim during testing as applicable.
- The spuds shall be placed in their upper stowed position.
- The Contractor shall have conducted a weight survey and sound all tanks.
- The Contractor shall read and record draft readings at the “four corners” of the barge for each crane test as required for in the test memoranda.

The following Crane Operation Tests and Maneuvers will be performed:

- Unloaded Operation
- Backwards Stability Maneuver
- Rigging Radius Maneuver
- ABS Maneuver
- Main Hoist Proof Load Test
- Booming Maneuver
- Swing Maneuver
- Crane List Strength Maneuver
- Auxiliary Hoist Proof Load Test

Unloaded Operation:

Demonstrate the operation of the crane raising the boom from the boom rest. Extend and raise and lower the boom, and verify the boom angle position limits with no load on the hook.

Rotate the crane and hoist and lower the load block.

Verify that the crane operates on its own power, and the slewing, booming and hoisting drives operate independently. Verify that the crane is capable to slew, boom and hoist at the same time.

Demonstrate all safety devices (i.e. anti two-block and upper and lower boom kick-out).

Demonstrate the operation of all brakes and fail safe devices under simulated loss of power conditions.

Verify that the slewing speed is 1 revolution per minute.

Verify sufficient hoist spooling to 20 feet below the barge deck with the boom point at the highest elevation. Five (5) wraps of wire rope shall remain in the drums.

Backward Stability Maneuver:

Demonstrate maximum barge inclination with no load on the hook.

The boom shall be raised to the stops associated with the minimum operating radius.

The crane shall be rotated 90-degrees off centerline to PORT and to STBD.

Steady the system in each position, to permit the barge Contractor to measure and record the barge draft readings at 90 and 270 degrees boom azimuth, (starboard and port respectively).

Rigging Radius Maneuver:

This is the verification of proper calibration of the radius indicator, which shall be conducted with the boom on centerline forward, and the barge on an even keel (no trim, no list).

The crane operator shall boom out or in, until the radius indicator in the cab reads the correct radius marked on deck, (main load block freely suspended near the deck).

The radius indicator reading shall be adjusted to the mark on the deck if required.

ABS Maneuver:

The 3,400 lbs test weight shall be lifted over the stern and the crane shall be rotated 90 degrees off centerline to port and 90 degrees off centerline to starboard. Draft readings shall be measured and recorded by the barge Contractor to assess barge stability. Eventually an attempt shall be made to increase the radius reach to the required 50 ft, both over the stern and port and starboard.

The operator shall swing the 3,400 lbs test load at the 50' reach, 360 degree in one direction and then 360 degrees in the other direction. Slewing will stop on centerline forward, to obtain draft readings. In anticipation of the maneuver, position the boom and hoist the load high enough to clear all obstructions.

Main Hoist Proof Load Test:

The proof load test shall be a fair weather demonstration of adequate crane strength. Once the level platform rigging radius has been set prior to lifting, the geometry of the crane upper rotating works (on centerline over the stern), and boom, shall remain unchanged.

Test the crane main hoist with the 20,000 lbs test weight suspended at the required 10' radius reach.

Verify that the main hoist speed with the 20,000 lbs weight suspended is 60 feet per minute.

Demonstrate power down capability.

Raise and lower the 20,000 lbs test weight, and smoothly stop and start hoist movement at least two times to demonstrate satisfactory operation of the hoisting system.

Booming Maneuver:

With the 20,000 lbs test weight suspended on centerline over the stern, the operator shall boom in to the maximum permissible boom angle, (minimum radius).

During this maneuver, the operator shall smoothly stop and hold the boom at least two times.

Swing Maneuver:

To demonstrate the ability of the swing drive to work against a maximum of 3 degrees crane list, uphill and downhill.

The maneuver shall be accomplished by swinging the 20,000 lbs test weight, from centerline over the stern towards one side, until causing barge heel and maximum list (not to exceed 3 degrees on the crane). Approaching the limit barge list position, the crane shall be capable to slow down and stop, hold the position, and return to centerline over the stern. Repeat the test to the other side.

Crane List Strength Maneuver:

To demonstrate the capability of the boom to endure side loading at a maximum 3 degree crane list. This maneuver can be combined with the SWING MANEUVER.

NOTE: ALL CRANE TEST LOADS SHALL BE CERTIFIED TO THE SATISFACTION OF THE CRANE MANUFACTURER AND THE MDC REPRESENTATIVE.

G. EXCAVATOR TESTS

Excavator Characteristics, Off-Barge Operation:

Verify the make, model and serial number of the excavator.

Inspect the excavator for required dimensions of the crawler tracks.

Operate the excavator and assess proper functioning of the engine and all systems and gages.

Excavator Load-on and Load-off Maneuver:

Load the excavator to demonstrate adequacy of the barge ramps, by rolling the excavator from the shore to the deck of the barge. Assess the soil conditions on the shore, that is, use a compact soil for the first trial. Repeat the operation in sand or gravel.

Excavator Tie Downs:

With the excavator on deck, demonstrate adequacy of the excavator tie downs to secure the excavator in the three positions required along the tracks.

Excavator Operation:

To assess the barge stability with the excavator operating. Position the excavator over the side with a load of 7,000 lbs secured to the tip of the excavator boom. Extend the excavator boom to the maximum radius reach and measure barge draft at the four corners.

Repeat the operation with the crane simultaneously deployed over the same side, with a load of 20,000 lbs at 10'. Measure the barge draft at the four corners.

Use the trim tanks if required to minimize barge trim.

H. FINAL ACCEPTANCE DEMONSTRATIONS (LEVEL 4)

Final Acceptance Trials are operability tests the Contractor must perform for the USACE operators following delivery of the vessels. The intent of Level 4 testing is to demonstrate the capabilities and features of the vessel to the operators, and to verify that the delivered product is in peak operating condition.

The Contractor shall operate all equipment and all systems on the barge, to demonstrate features, characteristics, and capabilities. The duration and complexity of each procedure shall be sufficient to fully demonstrate the operating condition of the vessel to the operators.

The following shall also be demonstrated during this test phase:

- Demonstrations of Excavator operation
- Demonstrations of Crane Operation

E06 FINAL INSPECTION

When all work and testing has been satisfactorily completed, the Contractor and MDC Representative(s), shall make a complete physical inspection and inventory of the vessel against all Contract requirements.

A “punch list” of deficiencies (if any), will be developed and presented to the Contractor for corrective action.

All corrective action necessary to eliminate the “punch list” shall be completed by the Contractor. The Contractor shall give the COR, 3 working days notice prior to the desired date of re-inspection.

E07 PROVISIONAL ACCEPTANCE

Prior to Provisional Acceptance, the barge, the crane and all equipment shall be thoroughly cleaned and all painting and finishes put in first class condition.

Following satisfactory completion of all tests and trials, correction of all “punch list” deficiencies, and receipt of all Contract deliverables, the crane barge will be Provisionally Accepted.

Delivery of the Crane Barge may not be started until Provisional Acceptance has been made.

E08 FINAL ACCEPTANCE

The vessel will be subject to a complete re-inspection at the time and place of delivery.

Final Acceptance will be made upon delivery of the Crane Barge, afloat and “Ready for Service” at the delivery point designated, and following successful completion of Final Acceptance Demonstrations.

“Ready for Service” is defined as:

- Clean inside and out.
- All trash, dunnage, lashings, and delivery related material disposed of.
- Loose items of outfit in place.
- All electrical and mechanical systems operational.
- Equipment properly adjusted.
- Instruments and electronics calibrated or aligned.
- Tanks filled.
- Paint damaged during transportation touched up.

The Contractor shall provide the necessary personnel, equipment and materials to make the vessel "Ready for Service."

E09 COMMERCIAL WARRANTY OF SUPPLIES

The Contractor shall assign, in writing, all commercial warranties for equipment provided under this Contract to the Government.

The effective date of all commercial warranties shall be the date of final acceptance for each vessel.

E10 RESPONSIBILITY FOR SUPPLIES

FAR 52.246-16 RESPONSIBILITY FOR SUPPLIES (APR 1984)

(a) Title to supplies furnished under this contract shall pass to the Government upon formal acceptance, regardless of when or where the Government takes physical possession, unless the contract specifically provides for earlier passage of title.

(b) Unless the contract specifically provides otherwise, risk of loss of or damage to supplies shall remain with the Contractor until, and shall pass to the Government upon--

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Acceptance by the Government or delivery of the supplies to the Government at the destination specified in the contract, whichever is later, if transportation is f.o.b. destination.

(c) Paragraph (b) of this section shall not apply to supplies that so fail to conform to contract requirements as to give a right of rejection. The risk of loss of or damage to such nonconforming supplies remains with the Contractor until cure or acceptance. After cure or acceptance, paragraph (b) of this section shall apply.

(d) Under paragraph (b) of this section, the Contractor shall not be liable for loss of or damage to supplies caused by the negligence of officers, agents, or employees of the Government acting within the scope of their employment.

PART I - THE SCHEDULE - SECTION F

DELIVERY OR PERFORMANCE

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F01 FAR 52.211-8 TIME OF DELIVERY (JUN 97)

(a) The Government requires completion of all work and delivery to be made in accordance to the following schedule:

REQUIRED DELIVERY SCHEDULE

ITEM NUMBER	DESCRIPTION	QUANTITY	WITHIN DAYS AFTER DATE OF NOTICE TO PROCEED
0001AA	Planning and Scheduling	1 job	60 calendar days
0001AB	Engineering	1 job	210 calendar days
0001AC	Construction, Testing, and Delivery	1 job	365 calendar days

The Government will evaluate equally, as regards time of delivery, offers that propose delivery of each quantity within the applicable delivery period specified above. Offers that propose delivery that will not clearly fall within the applicable required delivery period specified above, will be considered non-responsive and rejected. The Government reserves the right to award under either the required delivery schedule or the proposed delivery schedule, when an earlier delivery schedule than required above. If the offeror proposes no other delivery schedule, the required delivery schedule above will apply.

OFFEROR'S PROPOSED DELIVERY SCHEDULE

ITEM NUMBER	DESCRIPTION	QUANTITY	WITHIN DAYS AFTER DATE OF NOTICE TO PROCEED
0001AA	Planning and Scheduling	1 job	___ calendar days
0001AB	Engineering	1 job	___ calendar days
0001AC	Construction, Testing, and Delivery	1 job	___ calendar days

(b) Attention is directed to the Contract Award provision of the solicitation that provides that a written award or acceptance of offer mailed, or otherwise furnished to the successful offeror, results in a binding contract. The Government will mail or otherwise furnish to the offeror an award or notice of award not later than one day after the award is dated. Therefore, the offeror should compute the time available for performance beginning with the actual date of Notice to Proceed rather than the date the written notice is received from the Contracting Officer through the ordinary mails. However, the Government will evaluate an offer that proposes delivery based on the Contractor's date of receipt of the contract or notice of award by adding five days for delivery of the award through the ordinary mails. If, as so computed, the offered delivery date is later than the required date, the offer will be considered non-responsive and rejected.

(End of Clause)

For the purpose of estimating the phase completion and contract completion dates, the Contractor should take into account the time required to review the Contractor's submittals and the time between phases required to issue a Notice To Proceed. Refer to Clause H01 for additional explanation.

F02 PLACE OF DELIVERY - FOB DESTINATION REQUIRED

The Contractor shall deliver the vessels afloat and ready for service at the following locations:

The first vessel is to be delivered to:

U.S Army Corps of Engineers
Rock Island District
LaGrange Lock
Illinois River Mile 80.2

The second vessel is to be delivered to:

U.S Army Corps of Engineers
Rock Island District
Peoria Lock
Illinois River Mile 157.7

F03 52.247-34 F.O.B. DESTINATION (NOV 1991)

(a) The term "f.o.b. destination," as used in this clause, means--

(1) Free of expense to the Government, on board the carrier's conveyance, at a specified delivery point where the consignee's facility (plant, warehouse, store, lot, or other location to which shipment can be made) is located; and

(2) Supplies shall be delivered to the destination consignee's wharf (if destination is a port city and supplies are for export), warehouse unloading platform, or receiving dock, at the expense of the Contractor. The Government shall not be liable for any delivery, storage, demurrage, accessorial, or other charges involved before the actual delivery (or "constructive placement" as defined in carrier tariffs) of the supplies to the destination, unless such charges are caused by an act or order of the Government acting in its contractual capacity. If rail carrier is used, supplies shall be delivered to the specified unloading platform of the consignee. If motor carrier (including "piggyback") is used, supplies shall be delivered to truck tailgate at the unloading platform of the consignee, except when the supplies delivered meet the requirements of Item 568 of the National Motor Freight Classification for "heavy or bulky freight." When supplies meeting the requirements of the referenced Item 568 are delivered, unloading (including movement to the tailgate) shall be performed by the consignee, with assistance from the truck driver, if requested. If the contractor uses rail carrier or freight forwarded for less than carload shipments, the contractor shall ensure that the carrier will furnish tailgate delivery, when required, if transfer to truck is required to complete delivery to consignee.

(b) The Contractor shall--

(1)(i) Pack and mark the shipment to comply with contract specifications; or

(ii) In the absence of specifications, prepare the shipment in conformance with carrier requirements;

(2) Prepare and distribute commercial bills of lading;

(3) Deliver the shipment in good order and condition to the point of delivery specified in the contract;

(4) Be responsible for any loss of and/or damage to the goods occurring before receipt of the shipment by the consignee at the delivery point specified in the contract;

(5) Furnish a delivery schedule and designate the mode of delivering carrier; and

(6) Pay and bear all charges to the specified point of delivery.

F04 FAR 52.211-11 LIQUIDATED DAMAGES

(a) If the Contractor fails to deliver the supplies or perform the services within the time specified in this Contract or any extension, the Contractor shall, in place of actual damages, pay to the Government as fixed, agreed and liquidated damages, for each calendar day of delay the sum of:

For Line Item 0001AA:	\$ 200.00
For Line Item 0001AB:	\$ 510.00
For Line Item 0001AC:	\$ 1050.00

(b) Alternatively, if delivery or performance is so delayed, the Government may terminate this Contract in whole or in part under the Termination for Default - Fixed Price, Supply and Services clause in this Contract and in that event, the Contractor shall be liable for fixed, agreed, and liquidated damages accruing until the time the Government may reasonably obtain delivery or performance of similar supplies or services. The liquidated damages shall be in addition to excess costs under the Termination clause.

(c) The Contractor shall not be charged with liquidated damages when the delay in delivery or performance arises out of causes beyond the control and without the fault or negligence of the Contractor as defined in the Termination for Default - Fixed Price, Supply and Services clause of this contract.

F05 FAR 52.242-17 GOVERNMENT DELAY OF WORK (APR 84)

(a) If the performance of all or any part of the work of this contract is delayed or interrupted (1) by an act of the Contracting Officer in the administration of this contract that is not expressly or impliedly authorized by this contract, or (2) by a failure of the Contracting Officer to act within the time specified in this contract, or within a reasonable time if not specified, an adjustment (excluding profit) shall be made for any increase in the cost of performance of this contract caused by the delay or interruption and the contract shall be modified in writing accordingly. Adjustment shall also be made in the delivery or performance dates and any other contractual term or condition affected by the delay or interruption. However, no adjustment shall be made under this clause for any delay or interruption to the extent that performance would have been delayed or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an adjustment is provided or excluded under any other term or condition of this contract.

(b) A claim under this clause shall not be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Contracting Officer in writing of the act or failure to act involved, and (2) unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the delay or interruption, but not later than the day of final payment under the contract.

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PART I - THE SCHEDULE - SECTION G

CONTRACT ADMINISTRATION DATA

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G01 ACCOUNTING AND APPROPRIATION DATA

WORK ITEM CODE A02220

G02 CONTRACT MANAGEMENT

Marine Design Center
U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Room 630 South
Philadelphia, Pennsylvania 19107-3391

NOTE: The Marine Design Center is the “Designated Billing Office” as defined by Part II -
Contract Clauses - Section I, “Prompt Payments”

G03 PAYMENT OFFICE

U.S. Army Corps of Engineers
5722 Integrity Drive
Millington, TN 38054-5005

G04 CONTRACT ADMINISTRATION

U.S. Army Corps of Engineers District, Philadelphia
ATTN: CENAP-CT-S
Wanamaker Building
100 Penn Square East
Room 643
Philadelphia, Pennsylvania 19107-3390

G05 252.242-7000 POST-AWARD CONFERENCE (DEC 1991)

The Contractor agrees to attend any post-award conference convened by the contracting activity or contract administration office in accordance with Federal Acquisition Regulation subpart 42.5.

PART I - THE SCHEDULE - SECTION H
SPECIAL CONTRACT REQUIREMENTS
FOR MANEUVER BARGES

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PART I - THE SCHEDULE - SECTION H **SPECIAL CONTRACT REQUIREMENTS**

H01 CONTRACT ORGANIZATION

The Contract is divided into three basic phases:

- Phase I: Planning and Scheduling
- Phase II: Engineering
- Phase III: Construction, Testing and Delivery

A. PLANNING

The Contractor, following receipt of the Notice of Contract Award (Award) and the Notice To Proceed (NTP) with “PLANNING AND SCHEDULING,” shall carry out planning. In this first Contract phase, the Contractor must present planning information and develop the Contract and schedule to demonstrate a logical, orderly and workable approach to the Contract. The documents submitted must be acceptable to the Contracting Officer’s Representative (COR).

The Notice To Proceed with “ENGINEERING” shall not be issued until the planning and scheduling documents are complete and accepted.

B. ENGINEERING

Engineering commences only after receipt by the Contractor of the Notice To Proceed with “ENGINEERING.”

In this second phase of the Contract, the Contractor shall be required to perform design and engineering. The Contractor is not authorized to begin physical construction until the Notice To Proceed to Construct, Test and Deliver is issued.

If the Contractor commences any layout, burning, welding, erection or other construction work prior to receipt of the Notice To Proceed with CONSTRUCTION, TESTING AND DELIVERY, he shall be responsible for all rework resulting from the design review and drawing acceptance process accomplished as part of ENGINEERING.

C. CONSTRUCTION, TESTING AND DELIVERY

CONSTRUCTION, TESTING, AND DELIVERY are the final phase of the Contract and shall be started only after issuance of the Notice To Proceed.

During this phase of the Contract, necessary records and documents shall be completed, and the vessel shall be constructed, tested and delivered.

D. PHASE SEQUENCING

It is intended that the three phases outlined above for this vessel shall be performed sequentially.

The time allotted for each phase however, spans an interactive process involving both the Contractor and the Government. This process includes preparation, review and acceptance of the phase submittals, Contract administration, mailing and preparation and issue of the Notices To Proceed.

In order for the Contractor to plan the work and for the Government to properly apply Liquidated Damages and Termination Clauses, a graphic identifying the sequence milestones and the performance period allotted to each milestone has been developed and is shown on the following page.

The graphic shows the three basic Contract phases. Each Contract phase is further subdivided into the milestones that must be completed within each phase and the amount of time allowed accomplishing each.

The milestones and periods of performance identified in the graphic are Contract requirements.

The Contractor must be aware that the quality, completeness and detail of the submittals have a direct bearing on the acceptance process. Extended review iterations shall extend the time necessary to receive acceptance of the submittals and shall subject the Contractor to assessment of Liquidated Damages or Termination for Default.

Refer to Clause H05 for information concerning the submittal review process.

LOCK & DAM MANEUVER BARGES

Construction, Testing, and Delivery

H02 CONTRACTOR SUBMITTALS

A. PLANNING AND SCHEDULING PHASE SUBMITTALS:

The following is a summary of the items that the Contractor must submit during the Planning and Scheduling Phase. All items must be received, reviewed and accepted by the COR (Contracting Officer Representative), before the Notice To Proceed (NTP) shall be issued for the Engineering phase of the Contract:

<u>SUBMITTAL ITEM</u>	<u>CONTRACT CLAUSE</u>
Authorized Contractor Representative List	E03
Construction Plan	H06
Procurement Plan	H08
Sub-Contracting Plan	H09
Engineering Qualifications	H09
Submittal Schedule	H11
Drawing Index	H12

B. ENGINEERING PHASE SUBMITTALS:

The following is a summary of items that the Contractor must submit after the Notice To Proceed with the Engineering Phase of the Contract is issued. All items must be received, reviewed and accepted by the COR before the Notice To Proceed with Construction, Testing and Delivery Phase of the Contract shall be issued. The following items are required:

<u>SUBMITTAL ITEM</u>	<u>CONTRACT CLAUSE</u>
Test Memoranda (Data Sheets)	E05
Material and Equipment Schedule	H10
Engineering & Drawings	C040, H12 & H13
Standard Details	H13
Substitutions List	H15
Quality Control Program for Phase III	E03
ABS approval of the design	C040

C. CONSTRUCTION, TESTING, AND DELIVERY PHASE SUBMITTALS:

The following is a summary of items that the Contractor must submit after the Notice To Proceed with the Construction, Testing and Delivery Phase of the Contract is issued. All items must be received, reviewed and accepted by the COR before Provisional Acceptance (Clause E07) shall be made. The following items are required:

<u>SUBMITTAL ITEM</u>	<u>CONTRACT CLAUSE</u>
American Bureau of Shipping (ABS) Certificate	C004
Paint Manufacturer's Warranty Certificate	C405
Test Report	E05
Inclining Test Report	C155 & E05
Final Trim & Stability Booklet	C155
Final Load Handling Stability Analysis	C160
Final Safe Working Load (SWL) Charts	C160
Noise Survey Report	E05
Commercial Warranties	E09
As-Built Drawings	H14
Manufacturer's or Sub-Contractor's Drawings and Manuals	H16
Operator's Manual	H17
Record Photographs	H18
ABS Reviewed and Stamped Drawings and Documents	C004 & H13

H03 CONCEPT DESIGN

The drawings for the maneuver barges, which are included within this Contract, represent a "Concept Design" for the subject vessel. The COR will provide CADD files of these drawings to the Contractor, upon written request.

During development of the Detail Design, the Contractor may discover circumstances that dictate a need to change some of the equipment or materials specifically required by the Contract. Examples of this situation might be that the item is no longer available, or the lead-time is too long to meet the vessel delivery. Such circumstances shall be immediately identified to the COR by letter with a proposed resolution. Adjustments to the Contract required as a result of such circumstances, shall be made under the "CHANGES" Clause.

Also during the Engineering Phase, the Contractor may propose substitutions for equipment and materials specifically required by the Contract. There must exist some compelling reason for making the substitution request. In the absence of compelling reasons for making the substitution, the request may be denied.

The Contractor's proposal for substitutions must clearly demonstrate with drawings, calculations, and technical data that the proposed substitution has equal form, fit, function, characteristics, capabilities and features as the equipment or materials specified. If the Contractor's proposal for substitution is accepted, the Contractor must carry out all engineering and design required to incorporate his proposal into the design at no increase in Contract cost and no extension of Contract completion. Such incorporation must be to the same level of detail and depth of engineering as other systems or features of comparable complexity. The Contractor shall become responsible for ultimate satisfactory performance of all systems impacted or affected by the substitution and any affect of the substitution on the performance and operation of the completed vessel. Refer to clause H15.

H04 (NOT USED)

H05 REVIEW OF CONTRACTOR SUBMITTALS

The Marine Design Center (MDC) (the Government) shall review the drawings, data and other material submitted by the Contractor in the various Contract phases.

Submittals from the Contractor must be clear as to what the submittal represents and the action the Contractor requires performed.

The Government's review is intended to be limited to the functional aspects of the submittals with limited technical review of a general cursory nature only.

The Contractor shall comply with the requirements of the design embodied in the Contract. Where review, approval, classification or certification by ABS, USCG, USPHS or other regulatory agency is a provision of the Contract, Government review of Contractor submittals may not address the requirements of those agencies. It is implicit that Government acceptance of submittals shall be contingent upon satisfactory fulfillment of those requirements.

Submittals found to be completely acceptable to the Contracting Officer's Representative without comment shall be marked "ACCEPTED - RESUBMITTAL NOT REQUIRED."

Submittals found to be generally acceptable to the Contracting Officer's Representative with qualifying comments shall be marked "ACCEPTED" but may or may not require resubmission depending on the COR's assessment of the criticality of the comments.

ACCEPTED submittals being resubmitted shall be reviewed only to ensure that the previous comments have been adequately incorporated. Resubmission requirements shall be clearly marked on the return.

Submittals unacceptable to the Contracting Officer's Representative shall be marked "NOT ACCEPTED." Submittals not accepted shall always require full and complete re-submittal. Such re-submittal shall result in a full and complete review as though it was a first submittal.

Submittals furnished for information only or for which the Contractor has not indicated the required review action shall be marked "Examined."

The Contractor shall insure that all review comments are incorporated in corrected submittal documents or are rebutted in separate correspondence. The Contractor is encouraged to completely discuss all submittal comments with the MDC author in order to insure complete and effective communication.

The Contractor shall not use the drawing review or submittal process for Contract deviations. Changes in equipment, materials, construction techniques or details must be the subject of separate, specific correspondence. Any such request made by the Contractor must be specific and clear as to what is Contractually required, the proposed change, location and/or extent, benefits resulting from the change and effect on Contract cost and delivery. Refer to clause H15.

Submittals for review by the Government shall be return mailed in accordance with the Phase Sequencing Graphic, Refer to Clause H01. The Contractor shall plan the submittals schedule so that the review process shall not affect his Contract performance.

H06 CONSTRUCTION PLAN

After receipt of the Notice To Proceed with Planning and Scheduling, the Contractor shall develop and submit to the Contracting Officer's Representative the Contractor's proposed plan for the construction of the vessel.

The plan shall be prepared on USACE standard ENG Form 2454 (Construction Progress Chart) furnished by the Government. The plan shall be a summary level view of the Contract. The plan shall show the Contractor's proposed starting date, duration in weeks, ending date, and percentage completion (both as planned and as achieved) for all of the major activities of the Contract. The plan shall also show the amount of the total bid price (percent and actual dollars) associated with each activity. The plan shall also have the progress "S" curve plotted (both as planned and as achieved).

The activities shown on the chart shall be developed by the Contractor and shall include, as a minimum, the following:

- Engineering
- Direct Construction Labor, separated into principal vessel areas
- Material Purchases separated into principal vessel areas
- Material Deliveries separated into principal vessel areas
- Construction of modules
- Test and Trials
- Delivery
- Overhead and Profit

In addition, the following milestone events, as a minimum, shall be marked on the chart time-line:

- Award of Contract
- Notice To Proceed with "PLANNING AND SCHEDULING"
- Notice to Proceed with "ENGINEERING"
- Notice To Proceed with "CONSTRUCTION, TESTING AND DELIVERY"
- Final Inspection
- Tests and Trials
- Provisional Acceptance
- Delivery
- Final Acceptance

After review, revision as necessary and acceptance by the COR, the plan shall be updated and submitted monthly.

H07 (NOT USED)

H08 PROCUREMENT PLAN

After Notice To Proceed with Planning and Scheduling, the Contractor shall submit a Procurement Plan for the vessel.

The Procurement Plan shall identify the major schedule controlling systems components and equipment in the vessel, estimated delivery time for each item, the selected vendor and planned date of ordering.

The Procurement Plan shall be in "spread sheet" format and shall later be developed into the Material and Equipment Schedule of clause H10.

Major components and equipment for the purpose of this clause shall, as a minimum, consist of the following:

- Steel Plate and Shapes
- Diesel Generator Set
- Pedestal Crane
- Switchboard
- Winches and Capstans
- Pumps and Compressors

Upon written acceptance of the Procurement Plan by the Contracting Officer's Representative (COR), the Contractor may commence procurement of any or all of those items on the plan.

Progress payments shall be made in accordance with H21, PROGRESS PAYMENT BASED ON PERCENTAGE OR STAGE OF COMPLETION.

H09 SUBCONTRACTING PLAN

After Notice To Proceed with Planning and Scheduling, the Contractor shall submit a Sub-Contracting Plan for the Contract. This should not be confused with the SUB-CONTRACTING PLAN required of Large Business as a part of their affirmative action responsibilities.

The Sub-Contracting Plan shall identify the areas or features of the Contract or vessel which shall be performed, all or in part by sub-Contractors. The plan shall identify the scope of work, sub-Contractor firm's name and reference to the sub-Contractor's proposal or letter of intent.

The Contractor shall provide copies of all pre and post Contract correspondence between themselves and their representatives and all potential sub-Contractors when requested by the Contracting Officer's Representative.

The Sub-Contracting Plan shall specifically address the Contractor's plan for design and engineering.

If any part of the Contractor's design and engineering is to be sub-Contracted, the Contractor shall also submit the sub-Contractor's qualifications, the scope of work and the Contract, purchase order or letter of intent.

If the design and engineering is to be performed by the Contractor's hired labor, the plan shall make that specifically clear. The Contractor shall provide a statement of qualification for any "in house" engineering activities.

All persons employed as naval architects or marine engineers either by the Contractor or by any sub-Contractor shall be professionally competent by virtue of education, training, experience or licensing.

The Sub-Contracting Plan shall be in "spread sheet" format and shall be incorporated into the Material and Equipment Schedule of Clause H10.

Upon written acceptance of the Sub-Contracting Plan by the Authorized Representative of the Contracting Officer, the Contractor is authorized to proceed and to put the subcontracts in place.

H10 MATERIAL AND EQUIPMENT SCHEDULE

After Notice To Proceed with “ENGINEERING,” the Contractor shall develop a schedule of all items, including major stock materials (excluding nuts, bolts, gaskets, consumables, etc.), to be used in the construction of the vessel. The schedule shall be prepared in “spread sheet” format and contain the following information:

- Component/equipment
- Quantity
- Vendor name and address
- Make, model and options
- Drawing references (if appropriate)
- Purchase Order or Contract Number
- Scheduled order date
- Actual order date
- Scheduled (promised) receipt at shipyard
- Actual receipt at shipyard

After submittal, review, revision and acceptance by the COR, the schedule shall be updated and submitted to the Government (MDC) monthly. Final submission to MDC shall include priced copies of all purchase orders, purchase specifications and receipts.

Upon written acceptance of the schedule by the Contracting Officer’s Representative, the Contractor is authorized to proceed with procurement of all items and materials in the schedule.

At any time during the Contract, the COR may request and the Contractor shall furnish, correspondence, telephone conversation records, priced copies of purchase orders, purchase specifications and material receipts or other records between the Contractor and the various sub-Contractors.

H11 SUBMITTAL SCHEDULE

After receipt of Notice To Proceed with Planning and Scheduling, the Contractor shall develop a submittal schedule for all Contractor submittals required by the Contract (Refer to Clause H02).

The schedule shall be in “spread sheet” format and contain the following minimum information:

- Drawing number (if any)
- Name or title of submittal
- Scheduled submittal date(s)
- Actual submittal date(s)
- Submittal letter number
- Reply letter number
- Reply letter date

For drawings or items with repetitive submittals (monthly, etc.) the schedule must allow the time required for drawing review iterations or repetitive submissions.

After review, subsequent revision and acceptance by the COR, the schedule shall be updated and submitted with the monthly Progress Payment Request for the life of the Contract.

H12 DRAWING INDEX

After Notice To Proceed with Planning and Scheduling, the Contractor shall prepare an index of all drawings to be prepared by the Contractor as part of this Contract. The list shall be subdivided into two parts.

The first part shall list all the drawings the Contractor intends or expects to prepare during the Phase 2 Engineering and Scheduling portion of the Contract.

As a minimum, the Engineering and Scheduling phase design effort shall include preparation of drawings and reports that completely address the topics listed on the following guidance index:

<u>DWG. NUMBER</u>	<u>DRAWING TITLE</u>	<u>DELIVERABLE</u>
• 605-C000-01	TITLE SHEET & DRAWING INDEX	DRAWING
• 605-C105-01	LINES PLAN	DRAWING
• 605-C105-02	TABLE OF OFFSETS	REPORT
• 605-C115-01	WEIGHT ESTIMATE	REPORT
• 605-C115-02	CRANE WEIGHT ESTIMATE	REPORT
• 605-C125-02	HYDROSTATIC PROPERTIES	REPORT
• 605-C130-01	TANK CAPACITY TABLES	BOOKLET
• 605-C140-01	FREEBOARD	CALCULATION
• 605-C150-01	DAMAGED STABILITY	REPORT
• 605-C155-01	INTACT STABILITY	REPORT
• 605-C155-02	TRIM & STABILITY	BOOKLET
• 605-C160-01	LOAD HANDLING STABILITY	REPORT
• 605-C160-02	SAFE WORKING LOAD CHARTS	REPORT

- 605-C170-01 DRYDOCKING PLAN DRAWING
- 605-C180-01 NOISE AND VIBRATION CONTROL REPORT
- 605-C185-01 INCLINING EXPERIMENT REPORT

- 605-C205-01 PROFILES DRAWING
- 605-C215-01 GENERAL ARRANGEMENT DRAWING
- 605-C245-01 MACHINERY ARRANGEMENT DRAWING

- 605-C306-01 STANDARD STRUCTURAL DETAILS BOOKLET
- 605-C307-01 SHELL STRUCTURE DRAWING
- 605-C308-01 DECK STRUCTURE DRAWING
- 605-C309-01 TRANSVERSE STRUCTURE DRAWING
- 605-C311-01 LONGITUDINAL STRUCTURE DRAWING
- 605-C315-01 DECKHOUSE STRUCTURE DRAWING
- 605-C317-01 MASTS & SERVICE STRUCTURES DRAWING
- 605-C320-01 TANK STRUCTURE DRAWING
- 605-C325-01 SEA CHEST STRUCTURE DRAWING
- 605-C330-01 FOUNDATION STRUCTURE DRAWING
- 605-C399-01 STRUCTURAL CALCULATIONS DRAWING

- 605-C405-01 COATING SYSTEM BOOKLET
- 605-C415-01 DOORS, WINDOWS, HATCHES & MANHOLES DRAWING
- 605-C420-01 DECK FITTINGS DRAWING
- 605-C425-01 WALKWAYS, RAILINGS & GRATINGS DRAWING
- 605-C427-01 VERTICAL AND INCLINED LADDERS DRAWING
- 605-C430-01 DECK COVERINGS DRAWING
- 605-C435-01 INSULATION, WALL COVERINGS DRAWING
- 605-C445-01 LIFESAVING AND SAFETY EQUIPMENT DRAWING
- 605-C460-01 HULL MARKINGS DRAWING
- 605-C550-01 SPUDS DRAWING
- 605-C552-01 SPUDWELLS DRAWING
- 605-C554-01 SPUD HANDLING SYSTEM DRAWING

- 605-C630-01 FUEL OIL SYSTEM DRAWING
- 605-C637-01 LUBE OIL AND WASTE OIL SYSTEM DRAWING
- 605-C645-01 RAW WATER/FIREMAIN SYSTEM DRAWING
- 605-C660-01 BILGE & BALLAST SYSTEM DRAWING
- 605-C665-01 POTABLE WATER SYSTEM DRAWING
- 605-C667-01 SANITARY & SEWAGE SYSTEM DRAWING
- 605-C670-01 VENTS, SOUNDS & OVERFLOWS DRAWING
- 605-C672-01 DRAINAGE SYSTEM DRAWING
- 605-C677-01 FIRE DETECTION AND EXTINGUISHING SYSTEM DRAWING
- 605-C685-01 HVAC SYSTEM DRAWING
- 605-C690-01 COMPRESSED AIR SYSTEM DRAWING
- 605-C692-02 ALARM, CONTROL & MONITORING SYSTEMS DRAWING

- 605-C710-01 ELECTRICAL LOAD ANALYSIS DRAWING
- 605-C715-01 FAULT CURRENT ANALYSIS DRAWING
- 605-C720-01 ONE LINE DIAGRAM (AC) DRAWING

- 605-C725-01 CABLING DIAGRAM DRAWING
- 605-C725-02 CABLE SCHEDULE & VOLTAGE DROP ANALYSIS DRAWING
- 605-C730-01 LIGHTING ARRANGEMENT & DETAILS DRAWING
- 605-C740-01 SWITCHBOARD ARRANGEMENT & DETAILS DRAWING
- 605-C745-01 POWER DISTRIBUTION PANELS DRAWING
- 605-C760-01 SHORE POWER DETAILS DRAWING

The second part shall contain all the As-Built drawings. The As-Built drawings shall consist of updated and corrected originals of all the drawings prepared by the Contractor (listed in the first part of this index) plus any standard drawings or details created by the Contractor during construction, or required by the regulatory agencies.

Both parts of this index shall be complete with drawing title, MDC Drawing Number, the Contractor's drawing number (if any) and scheduled submittal date.

After review, revision, assignment of MDC drawing numbers and acceptance by the COR, the index shall be updated and submitted monthly to the Contracting Officer's Representative.

The Government shall be the sole owner and have "Unlimited Rights" to all drawings listed on the drawing index.

System drawings shall consist of a simple system schematic on the first sheet with a Bill of Materials and a complete, detailed arrangement with sections and elevations as required on subsequent sheets. The Arrangements shall be to scale with equipment shown in actual outline form. The Contractor shall use three lines (centerline and two outside diameter boundaries) to depict large piping (3 inches or greater). Details of vents, sounds, and fills shall be included with their respective piping system drawing. Design calculations and catalog cut sheets created and gathered during system development shall be submitted with the drawing to expedite the review process. The calculations and cut sheets shall also be collated into the Final Design and Construction Compendium after construction.

H13 ENGINEERING AND DRAWINGS

A. ENGINEERING AND DESIGN

The Contractor shall perform and provide engineering services in order to:

- Develop the Final Design for the vessel.
- Obtain regulatory body approval.
- Develop detailed piping and cable routings.
- Develop shop drawings.
- Develop construction details.
- Prepare complete bills of materials.
- Obtain COR acceptance for NTP with Construction.

All drawings and documents prepared by the Contractor or substantively modified by the Contractor shall be forwarded to the Marine Design Center (MDC) for review, comment and acceptance.

Three copies of each drawing/document shall be furnished. One copy shall be returned to the Contractor showing the Government review action.

It is the responsibility of the Contractor to schedule submission of the listed drawings/documents to allow time for review by MDC, without adversely affecting the construction schedule or submittals to ABS (refer to Clause H02).

All drawings shall be prepared in CADD form and shall conform to the American National Standards Institute (ANSI) Standard Y14. Drawings shall be in flat size, format A (horizontal or vertical) B, C, D or F as required by ANSI Y14.1. In no case shall drawings in any other size or format be accepted. Title blocks shall conform to ANSI dimensions and shall be submitted to the Marine Design Center for acceptance.

The Government shall be the sole owner of the design and shall have "Unlimited Rights" in the duplication, use, re-procurement and disclosure of all drawings used in the development of the design and construction of this vessel.

The Contractor shall provide to the Contracting Officer's Representative copies of all pre and post Contract correspondence between the Contractor and ABS, including all correspondence from ABS to the Contractor.

The Contractor shall also provide to the Contracting Officer's Representative, accepted and stamped copies of all drawings and documents reviewed by ABS, with all comments resolved (if applicable).

B. STANDARD DETAILS

It is not the intention of the Government to unnecessarily restrict the normal manufacturing and construction practices of the Contractor.

Prior to issuance of a NTP with Construction, Testing, and Delivery, the Contractor may provide to the COR, for acceptance, a list of the standard details (brackets, gussets, fittings etc.) that the

Contractor proposes to incorporate into the design. Such list shall be accompanied by the Contractor's standard detail drawings.

If accepted, the Contractor's Standard Details can be integrated into the Final Design drawings by reference and need not be resubmitted for review.

After issuance of a NTP for Construction, Testing and Delivery, requests for incorporation of standard details shall only be considered in cases where Contract performance or design features shall be improved.

C. DESIGN HISTORY

The Contractor shall develop and maintain a Design History of his involvement in the project. This history shall be referred to as the Design Compendium.

The Design Compendium is intended to record and document the design and construction process.

The Design Compendium is organized by Project Phase and Work breakdown Structure (WBS) Task Numbers. The Compendium contains a section for each task.

Design data and calculations are to be clearly presented and easy to follow, with stated introduction, purpose, assumptions, references, method of calculation, discussion of results, summary of results and conclusions.

The design process is presented in a clear path indicating the selected design data as well as the rejected or voided data, and the engineering analysis which lead to each selection/rejection. All background engineering, catalog cut sheets, and vendor material validation sheets are included in the Compendium.

Catalog cut sheets must be representative of the equipment selected by the Contractor which meets the system requirements. Vendor material validation sheets shall be prepared for each piece of equipment selected or tentatively selected. The validation sheet shall, as a minimum, consist of a telephone record to each vendor for each item verifying that the specified component is currently in production.

A "hard" copy of the Design Compendium shall be bound in clearly indexed three-ring binders, similar to 20th CENTURY PLASTICS D-Ring Binder, stock #D120SL.

The Design Compendium shall contain a table of contents. Each section, task number (WBS) shall contain:

- Applicable rules and regulations
- Correspondence
- Calculations
- Design Sketches
- Equipment Selection
- Catalog Cut Sheets
- Validation Sheet, Quotations & Spare Parts

H14 “AS-BUILT” DRAWINGS, CALCULATIONS & REPORTS

In order to provide a record of each “As-Built” vessel the Contractor shall update the FINAL DESIGN drawings, calculations, reports, and documents to clearly show the construction, details and systems of each vessel at the time of its delivery.

All of the drawings, reports and documents shown on the Submittal Schedule required by Clause H11 and the Drawing Index required by Clause H12 will be updated and corrected to form an “As-Built” record of each vessel.

The “As-Built” materials for each vessel shall be delivered as follows:

1. Prior to TRIALS TESTS AND DEMONSTRATIONS (see Section E-05), the Contractor shall submit one set of prints of the “As-Built” drawings for review and approval. The INSPECTION AND TEST MEMORANDA, (Test Procedures for each system), shall include a step and MDC witness signature block to verify that the system is complete and installed according to the As-Built drawings.
2. Prior to PROVISIONAL ACCEPTANCE, the Contractor shall provide the following:
 - a. Two sets of black or blue line prints of all “As-Built” drawings.
 - b. One set of high quality (original) Mylar reproducibles of all “As-Built” drawings.
 - c. Four sets of electronic “As-Built” drawings. Two sets of files shall be provided on DVD-ROM. The other two sets of files shall be provided on 4 ¾” 650 MB 74 min digital compact disk (CD). All files shall be provided in Raster Image. Each drawing sheet shall be a separate electronic file with a filename, which conforms to the file naming convention below, and shall be provided in Tagged Image File Format (“*.tif” or “*.tiff” file format). Compression utilities such as PKZIP® may not be used.
 - d. Four sets of electronic files of all calculations and reports. Two sets of files shall be provided on DVD-ROM. The other two sets of files shall be provided on 4 ¾” 650 MB 74 min digital compact disk (CD). All files shall be provided in Adobe Acrobat “*.pdf” file format. Each set of calculations or complete report shall be a separate electronic file with a filename, which conforms to the file naming convention below. Compression utilities such as PKZIP® may not be used.
 - e. Four sets of electronic files of all CADD prepared drawings. Two sets of files shall be provided on DVD-ROM. The other two sets of files shall be provided on 4 ¾” 650 MB 74 min digital compact disk (CD). All files shall be provided in AutoCAD 2000 “*.dwg” file format, or higher. Each drawing sheet shall be a separate electronic file with a filename, which conforms to the file naming convention below. Compression utilities such as PKZIP® may not be used.

3. Files furnished on CD and DVD-ROM shall be encased in standard plastic jewel boxes. Slim line jewel cases are not acceptable. Each box shall be labeled on the cover and an index, in numerical order by filename, shall be furnished inside the protective cover.
4. Each CD and DVD-ROM shall be labeled with the contract title, contract number, and general content of the disk.

FILE NAMING CONVENTION:

Files, drawings, calculations and reports shall be named based on the hull number, design phase (A=Concept, B=Preliminary, C=Detailed, D=As-Built, E through Z=Post delivery engineering efforts), WBS number, task number (a discrete system or component within a single WBS), sheet number, revision, and file extension for electronic files (".tif" ".tiff" ".pdf" ".dwg"), as applicable. The following example will illustrate the naming convention:

For the third sheet and third revision of a multi-sheet electrical one-line diagram (for the purposes of this example this is for the DC system and is identified as the 2nd task of the electrical system one-line diagrams) concept drawing for hull number 557, the document name would be:

Hull Number	557
Design Phase	A
WBS Number	720
Task Number	02
Sheet Number	03
Revision	C
File extension	.dwg

Drawing Number: 557-A720-02-sheet 3 Revision C
AutoCAD Filename: 557-A720-02-03C.dwg
Raster Image Filename: 557-A720-02-03C.tif

The Government shall have unlimited use of the drawings listed on the drawing index.

H15 SUBSTITUTIONS

“Substitution” as used in this clause, is an administrative action, not resulting in a Contract change of cost or time.

Prior to issuance of a NTP with “Construction, Testing and Delivery,” the Contractor shall prepare and submit a comprehensive list and analysis of any Contractor proposed substitutions of the equipment and materials required in the Contract.

Each proposed substitution shall be accompanied with a detailed analysis and comparison of the equipment or materials specified and the equipment or materials proposed, including features, dimensions, performance characteristics, benefit to the Government, and the compelling reason why the substitution should be made. In the absence of compelling reasons for making the substitution, the Contractor’s proposal may be denied.

Should the substitution be accepted, the Contractor shall be responsible for integrating the substitution into the design at no increase in Contract cost or no extension of Contract completion. Such modifications to the design must be completed, submitted for acceptance, revised as necessary and accepted by the COR prior to issuing a NTP with Construction, Testing and Delivery.

The Contractor bears ultimate responsibility for satisfactory performance of all systems impacted or affected by an accepted substitution as well as the operation of the completed vessel, as affected by the substitution.

Once a NTP with Construction, Testing and Delivery, has been issued, substitutions shall not be considered.

H16 MANUFACTURER OR SUBCONTRACTOR DRAWINGS AND MANUALS

The Contractor shall provide four complete sets of drawings and manuals for each piece of machinery and equipment provided by the Contractor; that clearly describe the operation, construction, maintenance, repair, adjustment, lubrication, parts lists and “trouble shooting” of every item of machinery and equipment. This shall include Detailed Fabrication Drawings where they exist.

Manuals shall be in the English language with all dimensions in the foot-pound-second systems of units. Manuals shall be no larger than 8 ½ inches x 11 inches, and bound in hard covers of durable materials.

Manufacturer’s or Sub-Contractor’s drawings may be included in the manual but must be folded to page size.

Drawings not suitable for inclusion in the manuals must be considered as engineering and design drawings and shall be prepared and submitted in accordance with the requirements of clause H13, ENGINEERING AND DRAWINGS.

At least 30 days prior to FINAL INSPECTION, one set of the manuals shall be submitted to the Contracting Officer’s Representative for review, comment and/or acceptance. This set of manuals shall be returned to the Contractor with acceptance or comments.

Final submittal of the manuals shall consist of four sets of the manuals and must be completed prior to PROVISIONAL ACCEPTANCE.

If photocopies (Xerox or similar) of parts lists, text, diagrams, etc., are furnished, one of the sets shall be a “Master” and must be made up of all “original” sheets and be clearly identified as the “Master” copy. Photocopies shall be clear with high black/white contrast, sharp lines, full sheet reproduction, and no background shadow or clutter.

Where catalog “cut-sheets” are provided, all information not pertinent to the equipment or machinery provided shall be obliterated.

The Contractor and his sub-Contractors shall grant “Unlimited Rights” to the Government for all the information and materials contained in the Manuals.

H17 OPERATORS MANUAL

The Contractor shall prepare and furnish an Operator's Manual that is intended to be a guide to the operation, maintenance, and utilization of the various systems on the vessel and the vessel itself.

The manual shall be arranged by MDC TASK NUMBER Work Breakdown Structure (WBS) and be such that an operator can get a quick overview and understanding of a system and its operation, with specific steps and guidelines to clearly affect system actuation, control and shutdown.

The manual shall also include specific maintenance instructions for each system, and item of equipment.

The manual shall be bound in hard cover binders of a durable material, and shall contain simplified and reduced size arrangement and schematic and/or diagrammatic-on-arrangement drawings of each vessel system.

Four copies of the manual shall be provided prior to Final Acceptance. One copy shall be the "Master" copy and shall contain the original typed or reproducible version of the manual.

The Government shall be the sole owner and shall have "Unlimited Rights" in the use of the Operator's Manual and its component parts.

H18 RECORD PHOTOGRAPHS

A. CONSTRUCTION PROGRESS PHOTOGRAPHS

Twice monthly, the Contractor shall provide digital photographs to document the progress of the construction, the launching and tests and trials of the vessel.

Each set of photographs shall consist of a minimum of 10 to 20 shots, depending on the stage of the construction.

B. RECORD PHOTOGRAPHS

The Contractor shall furnish the services of a professional photographer to take digital color photographs upon completion of the vessel, as described below:

Exterior shots (not less than 20 shots of the vessel shall be taken) shall include:

- Each side
- Each end
- Port and Starboard 3/4 views (end-on)
- Elevated 3/4 views
- Action shots of the launching

Interior shots shall include views of each interior space from various angles (4 minimum per space), so as to display principal equipment and features.

The Contractor shall provide the digital files for each shot and four sets of prints.

Two selected shots of the vessel shall be custom printed in 11 x 14 size by Cibachrome process, mounted, double matted and framed under clear glass in suitable wooden frame. Four sets of these pictures shall be furnished to the Contracting Officer's Representative (Total of eight matted & framed color photographs).

H19 (NOT USED)

H20 GOVERNMENT PROPERTY

All Government-Furnished equipment and equipment for which the Government has made payment or partial payment shall be considered Government Property.

The Contractor shall accept all risk for Government property in his possession.

The Contractor shall maintain an inventory of all Government Property, update and submit the inventory monthly.

The Contractor shall mark all Government property with the following information:

CEMVR
U.S. Army Corps of Engineers
Contract DACW61-03-C-XXXX (To be determined after award)

Markings shall be in 3-inch letters in paint of a contrasting color. The markings shall be placed on at least 3 sides of each piece of Government Property.

All Government Property shall be stored in enclosed, weather tight secure, warehouse buildings. Security shall consist of restricted access, locked and fenced storage. Warehouse buildings shall be heated above freezing and ventilated to prevent condensation or sweating.

H21 PROGRESS PAYMENT BASED ON PERCENTAGE OF COMPLETION

The Government shall pay the Contractor the Contract price as provided in this Contract.

The Government shall make progress payments monthly as the work proceeds, or at more frequent intervals as determined by the Contracting Officer, on estimates of work accomplished which meets standards of quality established under the Contract, as accepted by the Contracting Officer.

If requested by the Contracting Officer, the Contractor shall furnish a breakdown of the total Contract price showing the amount included therein for each principal category of work, in such detail as requested, to provide a basis for determining progress payments. In the preparation of estimates, the Contracting Officer may authorize material delivered on the site and the Contractor at locations other than the site may also be taken into consideration if:

- Consideration is specifically authorized by this Contract; and
- The Contractor furnishes satisfactory evidence that it has acquired title to such material and that the material shall be used to perform this Contract.

If the Contracting Officer finds that satisfactory progress was achieved during any period for which progress payment is to be made, the Contracting Officer shall authorize payment to be made in full. However, if satisfactory progress has not been made, the Contracting Officer may retain a maximum of fifteen percent (15%) of the amount of the payment until satisfactory progress is achieved. When the work is substantially complete, the Contracting Officer may

retain from previously withheld funds and future progress payments that amount the Contracting Officer considers adequate for protection of the Government and shall release to the Contractor all remaining withheld funds.

All material and work covered by progress payments made shall, at the time of payment, become the sole property of the Government, but this shall not be considered as:

- Relieving the Contractor from the sole responsibility for all material and work upon which payments have been made or the restoration of any damaged work; or
- Waiving the right of the Government to require the fulfillment of all of the terms of the Contract.

In making these progress payments, the Government shall, upon request, reimburse the Contractor for the amount of premiums paid for performance and payment bonds (including co-insurance and reinsurance agreements, when applicable) after the Contractor has furnished evidence of full payment to the surety. The preceding retainer provision shall not apply to that portion of progress payments attributed to bond premiums.

The Government shall pay the amount due the Contractor under this Contract after:

- Completion and acceptance of all work; and
- Presentation of a properly executed voucher.

Notwithstanding any other provision of this Contract, progress payments shall not exceed eighty percent (80%) on work accomplished on undefinitized Contract actions. A "Contract action" is any action resulting in a Contract as defined in FAR Subpart 2.1., including Contract modifications for additional supplies or services, but not including Contract modifications that are within the scope and under the terms of the Contract, such as Contract modifications issued pursuant to the Changes Clause, or funding and other administrative changes.

Section I - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.202-1 DEFINITIONS (DEC 2001)

(a) Agency head or head of the agency means the Secretary (Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, unless otherwise indicated, including any deputy or assistant chief official of the executive agency.

(b) Commercial component means any component that is a commercial item.

(c) Commercial item means--

(1) Any item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and that--

(i) Has been sold, leased, or licensed to the general public; or

(ii) Has been offered for sale, lease, or license to the general public;

(2) Any item that evolved from an item described in paragraph (c)(1) of this clause through advances in technology or performance and that is not yet available in the commercial marketplace, but will be available in the commercial marketplace in time to satisfy the delivery requirements under a Government solicitation;

(3) Any item that would satisfy a criterion expressed in paragraphs (c)(1) or (c)(2) of this clause, but for--

(i) Modifications of a type customarily available in the commercial marketplace; or

(ii) Minor modifications of a type not customarily available in the commercial marketplace made to meet Federal Government requirements. "Minor" modifications means modifications that do not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of a process. Factors to be considered in determining whether a modification is minor include the value and size of the modification and the comparative value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor;

(4) Any combination of items meeting the requirements of paragraphs (c)(1), (2), (3), or (5) of this clause that are of a type customarily combined and sold in combination to the general public;

(5) Installation services, maintenance services, repair services, training services, and other services if--

(i) Such services are procured for support of an item referred to in paragraph (c)(1), (2), (3), or (4) of this definition, regardless of whether such services are provided by the same source or at the same time as the item; and

(ii) The source of such services provides similar services contemporaneously to the general public under terms and conditions similar to those offered to the Federal Government;

(6) Services of a type offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed under standard commercial terms and conditions. This does not include services that are sold based on hourly rates without an established catalog or market price for a specific service performed. For purposes of these services--

(i) Catalog price means a price included in a catalog, price list, schedule, or other form that is regularly maintained by the manufacturer or vendor, is either published or otherwise available for inspection by customers, and states prices at which sales are currently, or were last, made to a significant number of buyers constituting the general public; and

(ii) Market prices means current prices that are established in the course of ordinary trade between buyers and sellers free to bargain and that can be substantiated through competition or from sources independent of the offerors.

(7) Any item, combination of items, or service referred to in subparagraphs (c)(1) through (c)(6), notwithstanding the fact that the item, combination of items, or service is transferred between or among separate divisions, subsidiaries, or affiliates of a Contractor; or

(8) A nondevelopmental item, if the procuring agency determines the item was developed exclusively at private expense and sold in substantial quantities, on a competitive basis, to multiple State and local Governments.

(d) Component means any item supplied to the Government as part of an end item or of another component, except that for use in 52.225-9, and 52.225-11 see the definitions in 52.225-9(a) and 52.225-11(a).

(e) Contracting Officer means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(f) Nondevelopmental item means--

(1) Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;

(2) Any item described in paragraph (f)(1) of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or

(3) Any item of supply being produced that does not meet the requirements of paragraph (f)(1) or (f)(2) solely because the item is not yet in use.

(g) "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(h) Except as otherwise provided in this contract, the term "subcontracts" includes, but is not limited to, purchase orders and changes and modifications to purchase orders under this contract.

52.203-3 GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative--

(1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and

(2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) of this clause, the Government is entitled--

(1) To pursue the same remedies as in a breach of the contract; and

(2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the

Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (JUL 1995)

(a) Except as provided in (b) of this clause, the Contractor shall not enter into any agreement with an actual or prospective subcontractor, nor otherwise act in any manner, which has or may have the effect of restricting sales by such subcontractors directly to the Government of any item or process (including computer software) made or furnished by the subcontractor under this contract or under any follow-on production contract.

(b) The prohibition in (a) of this clause does not preclude the Contractor from asserting rights that are otherwise authorized by law or regulation.

(c) The Contractor agrees to incorporate the substance of this clause, including this paragraph (c), in all subcontracts under this contract which exceed \$100,000.

52.203-7 ANTI-KICKBACK PROCEDURES. (JUL 1995)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person

from -

- (1) Providing or attempting to provide or offering to provide any kickback;
 - (2) Soliciting, accepting, or attempting to accept any kickback; or
 - (3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.
- (c)(1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.
- (2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.
- (3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.
- (4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold, from sums owed a subcontractor under the prime contract, the amount of any kickback. The Contracting Officer may order the monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.
- (5) The Contractor agrees to incorporate the substance of this clause, including this subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed \$100,000.

52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

- (a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27 (a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.

(b) The price or fee reduction referred to in paragraph (a) of this clause shall be--

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;

(3) For cost-plus-award-fee contracts--

(i) The base fee established in the contract at the time of contract award;

(ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.

(4) For fixed-price-incentive contracts, the Government may--

(i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or

(ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

(5) For firm-fixed-price contracts, by 10 percent of the initial contract price or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award.

(c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JUN 1997)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

- (1) The awarding of any Federal contract.
- (2) The making of any Federal grant.
- (3) The making of any Federal loan.
- (4) The entering into of any cooperative agreement.
- (5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before 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 any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

- (1) An individual who is appointed to a position in the Government under Title 5, United States Code, including a position under a temporary appointment.
- (2) A member of the uniformed services, as defined in subsection 101(3), Title 37, United States Code.

(3) A special Government employee, as defined in section 202, Title 18, United States Code.

(4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, Title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of Title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person 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 any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person 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 Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since

the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure.

(1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.

(2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes--

(i) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

(iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the

disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.

(d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.

(e) Penalties.

(1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)

(a) Definitions. As used in this clause--

“Postconsumer material” means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of “recovered material.” For paper and paper products, postconsumer material means “postconsumer fiber” defined by the U.S. Environmental Protection Agency (EPA) as--

(1) Paper, paperboard, and fibrous materials from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item, including: used corrugated boxes; old newspapers; old magazines; mixed waste paper; tabulating cards; and used cordage; or

(2) All paper, paperboard, and fibrous materials that enter and are collected from municipal solid waste; but not

(3) Fiber derived from printers' over-runs, converters' scrap, and over-issue publications.

“Printed or copied double-sided” means printing or reproducing a document so that information is on both sides of a sheet of paper.

“Recovered material,” for paper and paper products, is defined by EPA in its Comprehensive Procurement Guideline as “recovered fiber” and means the following materials:

(1) Postconsumer fiber; and

(2) Manufacturing wastes such as--

(i) Dry paper and paperboard waste generated after completion of the papermaking process (that is, those manufacturing operations up to and including the cutting and trimming of the paper machine reel into smaller rolls or rough sheets) including: envelope cuttings, bindery trimmings, and other paper and paperboard waste resulting from printing, cutting, forming, and other converting operations; bag, box, and carton manufacturing wastes; and butt rolls, mill wrappers, and rejected unused stock; and

(ii) Repulped finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.

(b) In accordance with Section 101 of Executive Order 13101 of September 14, 1998, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, the Contractor is encouraged to submit paper documents, such as offers, letters, or reports, that are printed or copied double-sided on recycled paper that meet minimum content standards specified in Section 505 of Executive Order 13101, when not using electronic commerce methods to submit information or data to the Government.

(c) If the Contractor cannot purchase high-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white wove envelopes, writing and office paper, book paper, cotton fiber paper, and cover stock meeting the 30 percent postconsumer material standard for use in submitting paper documents to the Government, it should use paper containing no less than 20 percent postconsumer material. This lesser standard should be used only when paper meeting the 30 percent postconsumer material standard is not obtainable at a reasonable price or does not meet reasonable performance standards.

52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUL 1995)

(a) The Government suspends or debar Contractors to protect the Government's interests. The Contractor shall not enter into any subcontract in excess of the \$25,000

with a Contractor that is debarred, suspended, or proposed for debarment unless there is a compelling reason to do so.

(b) The Contractor shall require each proposed first-tier subcontractor, whose subcontract will exceed \$25,000, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principles, is or is not debarred, suspended, or proposed for debarment by the Federal Government.

(c) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs). The notice must include the following:

(1) The name of the subcontractor.

(2) The Contractor's knowledge of the reasons for the subcontractor being on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

(4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

52.211-5 MATERIAL REQUIREMENTS (AUG 2000)

(a) Definitions.

As used in this clause--

New means composed of previously unused components, whether manufactured from virgin material, recovered material in the form of raw material, or materials and by-products generated from, and reused within, an original manufacturing process; provided that the supplies meet contract requirements, including but not limited to, performance, reliability, and life expectancy.

Reconditioned means restored to the original normal operating condition by readjustments and material replacement.

Recovered material means waste materials and by-products recovered or diverted from solid waste, but the term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.

Remanufactured means factory rebuilt to original specifications.

Virgin material means--

(1) Previously unused raw material, including previously unused copper, aluminum, lead, zinc, iron, other metal or metal ore; or

(2) Any undeveloped resource that is, or with new technology will become, a source of raw materials.

(b) Unless this contract otherwise requires virgin material or supplies composed of or manufactured from virgin material, the Contractor shall provide supplies that are new, reconditioned, or remanufactured, as defined in this clause.

(c) A proposal to provide unused former Government surplus property shall include a complete description of the material, the quantity, the name of the Government agency from which acquired, and the date of acquisition.

(d) A proposal to provide used, reconditioned, or remanufactured supplies shall include a detailed description of such supplies and shall be submitted to the Contracting Officer for approval.

(e) Used, reconditioned, or remanufactured supplies, or unused former Government surplus property, may be used in contract performance if the Contractor has proposed the use of such supplies, and the Contracting Officer has authorized their use.

52.215-2 AUDIT AND RECORDS--NEGOTIATION (JUN 1999)

(a) As used in this clause, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.

(b) Examination of costs. If this is a cost-reimbursement, incentive, time-and-materials, labor-hour, or price redeterminable contract, or any combination of these, the Contractor shall maintain and the Contracting Officer, or an authorized representative of the Contracting Officer, shall have the right to examine and audit all records and other evidence sufficient to reflect properly all costs claimed to have been incurred or anticipated to be incurred directly or indirectly in performance of this contract. This right of examination shall include inspection at all reasonable times of the Contractor's plants, or parts of them, engaged in performing the contract.

(c) Cost or pricing data. If the Contractor has been required to submit cost or pricing data in connection with any pricing action relating to this contract, the Contracting Officer, or an authorized representative of the Contracting Officer, in order to evaluate the accuracy,

completeness, and currency of the cost or pricing data, shall have the right to examine and audit all of the Contractor's records, including computations and projections, related to--

- (1) The proposal for the contract, subcontract, or modification;
- (2) The discussions conducted on the proposal(s), including those related to negotiating;
- (3) Pricing of the contract, subcontract, or modification; or
- (4) Performance of the contract, subcontract or modification.

(d) Comptroller General--(1) The Comptroller General of the United States, or an authorized representative, shall have access to and the right to examine any of the Contractor's directly pertinent records involving transactions related to this contract or a subcontract hereunder.

(2) This paragraph may not be construed to require the Contractor or subcontractor to create or maintain any record that the Contractor or subcontractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) Reports. If the Contractor is required to furnish cost, funding, or performance reports, the Contracting Officer or an authorized representative of the Contracting Officer shall have the right to examine and audit the supporting records and materials, for the purpose of evaluating (1) the effectiveness of the Contractor's policies and procedures to produce data compatible with the objectives of these reports and (2) the data reported.

(f) Availability. The Contractor shall make available at its office at all reasonable times the records, materials, and other evidence described in paragraphs (a), (b), (c), (d), and (e) of this clause, for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in Subpart 4.7, Contractor Records Retention, of the Federal Acquisition Regulation (FAR), or for any longer period required by statute or by other clauses of this contract. In addition--

(1) If this contract is completely or partially terminated, the Contractor shall make available the records relating to the work terminated until 3 years after any resulting final termination settlement; and

(2) The Contractor shall make available records relating to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to this contract until such appeals, litigation, or claims are finally resolved.

(g) The Contractor shall insert a clause containing all the terms of this clause, including this paragraph (g), in all subcontracts under this contract that exceed the simplified acquisition threshold, and--

- (1) That are cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable type or any combination of these;
- (2) For which cost or pricing data are required; or
- (3) That require the subcontractor to furnish reports as discussed in paragraph (e) of this clause.

The clause may be altered only as necessary to identify properly the contracting parties and the Contracting Officer under the Government prime contract.

52.215-8 ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT (OCT 1997)

Any inconsistency in this solicitation or contract shall be resolved by giving precedence in the following order:

- (a) The Schedule (excluding the specifications).
- (b) Representations and other instructions.
- (c) Contract clauses.
- (d) Other documents, exhibits, and attachments.
- (e) The specifications.

52.215-11 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) This clause shall become operative only for any modification to this contract involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, except that this clause does not apply to any modification if an exception under FAR 15.403-1 applies.

(b) If any price, including profit or fee, negotiated in connection with any modification under this clause, or any cost reimbursable under this contract, was increased by any significant amount because (1) the Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data, (2) a subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data, or (3) any of these parties furnished data of any description that were not accurate, the price or cost shall be reduced accordingly and the contract shall be modified to reflect the reduction. This right to a

price reduction is limited to that resulting from defects in data relating to modifications for which this clause becomes operative under paragraph (a) of this clause.

(c) Any reduction in the contract price under paragraph (b) of this clause due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which--

(1) The actual subcontract; or

(2) The actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.

(d)(1) If the Contracting Officer determines under paragraph (b) of this clause that a price or cost reduction should be made, the Contractor agrees not to raise the following matters as a defense:

(i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted.

(ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer.

(iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract.

(iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.

(2)(i) Except as prohibited by subdivision (d)(2)(ii) of this clause, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if--

(A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and

(B) The Contractor proves that the cost or pricing data were available before the "as of" date specified on its Certificate of Current Cost or Pricing Data, and that the data were not submitted before such date.

(ii) An offset shall not be allowed if--

(A) The understated data were known by the Contractor to be understated before the "as of" date specified on its Certificate of Current Cost or Pricing Data; or

(B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the “as of” date specified on its Certificate of Current Cost or Pricing Data.

(e) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid--

(1) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and

A penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted cost or pricing data that were incomplete, inaccurate, or noncurrent.

52.215-13 SUBCONTRACTOR COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) The requirements of paragraphs (b) and (c) of this clause shall--

(1) Become operative only for any modification to this contract involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4; and

(2) Be limited to such modifications.

(b) Before awarding any subcontract expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, on the date of agreement on price or the date of award, whichever is later; or before pricing any subcontract modification involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless an exception under FAR 15.403-1 applies.

(c) The Contractor shall require the subcontractor to certify in substantially the form prescribed in FAR 15.406-2 that, to the best of its knowledge and belief, the data submitted under paragraph (b) of this clause were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

The Contractor shall insert the substance of this clause, including this paragraph (d), in each subcontract that exceeds the threshold for submission of cost or pricing data at FAR

15.403-4 on the date of agreement on price or the date of award, whichever is later.

52.215-14 INTEGRITY OF UNIT PRICES (OCT 1997)

(a) Any proposal submitted for the negotiation of prices for items of supplies shall distribute costs within contracts on a basis that ensures that unit prices are in proportion to the items' base cost (e.g., manufacturing or acquisition costs). Any method of distributing costs to line items that distorts unit prices shall not be used. For example, distributing costs equally among line items is not acceptable except when there is little or no variation in base cost. Nothing in this paragraph requires submission of cost or pricing data not otherwise required by law or regulation.

(b) When requested by the Contracting Officer, the Offeror/Contractor shall also identify those supplies that it will not manufacture or to which it will not contribute significant value.

The Contractor shall insert the substance of this clause, less paragraph (b), in all subcontracts for other than: acquisitions at or below the simplified acquisition threshold in FAR Part 2; construction or architect-engineer services under FAR Part 36; utility services under FAR Part 41; services where supplies are not required; commercial items; and petroleum products.

52.215-15 PENSION ADJUSTMENTS AND ASSET REVERSIONS (DEC 1998)

(a) The Contractor shall promptly notify the Contracting Officer in writing when it determines that it will terminate a defined-benefit pension plan or otherwise recapture such pension fund assets.

(b) For segment closings, pension plan terminations, or curtailment of benefits, the adjustment amount shall be the amount measured, assigned, and allocated in accordance with 48 CFR 9904.413-50(c)(12) for contracts and subcontracts that are subject to Cost Accounting Standards (CAS) Board rules and regulations (48 CFR Chapter 99). For contracts and subcontracts that are not subject to CAS, the adjustment amount shall be the amount measured, assigned, and allocated in accordance with 48 CFR 9904.413-50(c)(12), except the numerator of the fraction at 48 CFR 9904.413-50(c)(12)(vi) shall be the sum of the pension plan costs allocated to all non-CAS-covered contracts and subcontracts that are subject to Federal Acquisition Regulation (FAR) Subpart 31.2 or for which cost or pricing data were submitted.

(c) For all other situations where assets revert to the Contractor, or such assets are constructively received by it for any reason, the Contractor shall, at the Government's option, make a refund or give a credit to the Government for its equitable share of the gross amount withdrawn. The Government's equitable share shall reflect the

Government's participation in pension costs through those contracts for which cost or pricing data were submitted or that are subject to FAR Subpart 31.2.

(d) The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(g).

52.215-18 REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS (OCT 1997)

The Contractor shall promptly notify the Contracting Officer in writing when it determines that it will terminate or reduce a PRB plan. If PRB fund assets revert, or inure, to the Contractor or are constructively received by it under a plan termination or otherwise, the Contractor shall make a refund or give a credit to the Government for its equitable share as required by FAR 31.205-6(o)(6). The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirements of FAR 15.408(j).

52.215-19 NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)

(a) The Contractor shall make the following notifications in writing:

(1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.

(2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.

(b) The Contractor shall--

(1) Maintain current, accurate, and complete inventory records of assets and their costs;

(2) Provide the ACO or designated representative ready access to the records upon request;

(3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership changes; and

(4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.

The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

52.215-21 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS (OCT 1997)

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.403-4 on the date of the agreement on price or the date of the award, whichever is later, the Contractor may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable--

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Information on modifications of contracts or subcontracts for commercial items. (A) If--

(1) The original contract or subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition or prices set by law or regulation, or was a contract or subcontract for the acquisition of a commercial item; and

(2) The modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor shall provide, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price of the modification. Such information may include--

(1) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price

and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(2) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(3) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The Contractor grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this clause, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the Contractor's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the Contractor is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The Contractor shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

As soon as practicable after agreement on price, but before award (except for unpriced actions), the Contractor shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

52.219-6 NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE (JUL 1996)

(a) Definition.

"Small business concern," as used in this clause, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the size standards in this solicitation.

(b) General. (1) Offers are solicited only from small business concerns. Offers received from concerns that are not small business concerns shall be considered nonresponsive and will be rejected.

(2) Any award resulting from this solicitation will be made to a small business concern.

(c) Agreement. A small business concern submitting an offer in its own name agrees to furnish, in performing the contract, only end items manufactured or produced by small

business concerns in the United States. The term “United States” includes its territories and possessions, the Commonwealth of Puerto Rico, the Trust Territory of the Pacific Islands, and the District of Columbia. If this procurement is processed under simplified acquisition procedures and the total amount of this contract does not exceed \$25,000, a small business concern may furnish the product of any domestic firm. This paragraph does not apply in connection with construction or service contracts.

52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (OCT 2000)

(a) It is the policy of the United States that small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, veteran-owned small business concerns, service-disabled veteran-owned small business concerns, HUBZone small business concerns, small disadvantaged business concerns, and women-owned small business concerns.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

Definitions. As used in this contract--

HUBZone small business concern means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

Small business concern means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto.

Small disadvantaged business concern means a small business concern that represents, as part of its offer that--

(1) It has received certification as a small disadvantaged business concern consistent with 13 CFR part 124, subpart B;

(2) No material change in disadvantaged ownership and control has occurred since its certification;

(3) Where the concern is owned by one or more individuals, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

(4) It is identified, on the date of its representation, as a certified small disadvantaged business in the database maintained by the Small Business Administration (PRO-Net).

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

Women-owned small business concern means a small business concern--

(1) That is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a veteran-owned small business concern, a service-disabled veteran-owned small business concern, a HUBZone small business concern, a small disadvantaged business concern, or a women-owned small business concern.

52.219-14 LIMITATIONS ON SUBCONTRACTING (DEC 1996)

- (a) This clause does not apply to the unrestricted portion of a partial set-aside.
- (b) By submission of an offer and execution of a contract, the Offeror/Contractor agrees that in performance of the contract in the case of a contract for--
 - (1) Services (except construction). At least 50 percent of the cost of contract performance incurred for personnel shall be expended for employees of the concern.
 - (2) Supplies (other than procurement from a nonmanufacturer of such supplies). The concern shall perform work for at least 50 percent of the cost of manufacturing the supplies, not including the cost of materials.
 - (3) General construction. The concern will perform at least 15 percent of the cost of the contract, not including the cost of materials, with its own employees.
 - (4) Construction by special trade contractors. The concern will perform at least 25 percent of the cost of the contract, not including the cost of materials, with its own employees.

52.222-1 NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)

If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice, including all relevant information, to the Contracting Officer.

52.222-20 WALSH-HEALEY PUBLIC CONTRACTS ACT (DEC 1996)

If this contract is for the manufacture or furnishing of materials, supplies, articles or equipment in an amount that exceeds or may exceed \$10,000, and is subject to the Walsh-Healey Public Contracts Act, as amended (41 U.S.C. 35-45), the following terms and conditions apply:

- (a) All stipulations required by the Act and regulations issued by the Secretary of Labor (41 CFR Chapter 50) are incorporated by reference. These stipulations are subject to all applicable rulings and interpretations of the Secretary of Labor that are now, or may hereafter, be in effect.
- (b) All employees whose work relates to this contract shall be paid not less than the minimum wage prescribed by regulations issued by the Secretary of Labor (41 CFR 50-202.2). Learners, student learners, apprentices, and handicapped workers may be employed at less than the prescribed minimum wage (see 41 CFR 50-202.3) to the same

extent that such employment is permitted under Section 14 of the Fair Labor Standards Act (41 U.S.C. 40).

52.222-21 PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)

(a) Segregated facilities, as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(b) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

52.222-26 EQUAL OPPORTUNITY (APR 2002)

(a) Definition. United States, as used in this clause, means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with paragraphs (b)(1) through (b)(11) of this clause, except for work performed outside the United States by employees who were not recruited within the United States. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed,

and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the OFCCP for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended; in the rules,

regulations, and orders of the Secretary of Labor; or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraphs (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

52.222-35 AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (APR 1998)

(a)) Definitions. As used in this clause--

All employment openings includes all positions except executive and top management, those positions that will be filled from within the contractor's organization, and positions lasting 3 days or less. This term includes full-time employment, temporary employment of more than 3 days' duration, and part-time employment.

Appropriate office of the State employment service system means the local office of the Federal-State national system of public employment offices with assigned responsibility to serve the area where the employment opening is to be filled, including the District of Columbia, Guam, the Commonwealth of Puerto Rico, and the Virgin Islands.

Positions that will be filled from within the Contractor's organization means employment openings for which no consideration will be given to persons outside the Contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings that the Contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of its organization.

Veteran of the Vietnam era means a person who--

(1) Served on active duty for a period of more than 180 days, any part of which occurred between August 5, 1964, and May 7, 1975, and was discharged or released therefrom with other than a dishonorable discharge; or

(2) Was discharged or released from active duty for a service-connected disability if any part of such active duty was performed between August 5, 1964, and May 7, 1975.

(b) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against the individual because the individual is a disabled veteran or a veteran of the Vietnam era. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veterans' status in all employment practices such as--

- (i) Employment;
- (ii) Upgrading;
- (iii) Demotion or transfer;
- (iv) Recruitment;
- (v) Advertising;
- (vi) Layoff or termination;
- (vii) Rates of pay or other forms of compensation; and
- (viii) Selection for training, including apprenticeship.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended.

(c) Listing openings. (1) The Contractor agrees to list all employment openings existing at contract award or occurring during contract performance, at an appropriate office of the State employment service system in the locality where the opening occurs. These openings include those occurring at any Contractor facility, including one not connected with performing this contract. An independent corporate affiliate is exempt from this requirement.

(2) State and local government agencies holding Federal contracts of \$10,000 or more shall also list all their employment openings with the appropriate office of the State employment service.

(3) The listing of employment openings with the State employment service system is required at least concurrently with using any other recruitment source or effort and involves the obligations of placing a bona fide job order, including accepting referrals of

veterans and nonveterans. This listing does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(4) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State employment service system, in each State where it has establishments, of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State system, it need not advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by this contract clause.

(d) Applicability. This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, and the Virgin Islands.

(e) Postings. (1) The Contractor agrees to post employment notices stating (i) the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era, and (ii) the rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. They shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, Department of Labor (Deputy Assistant Secretary), and provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Act, and is committed to take affirmative action to employ, and advance in employment, qualified disabled veterans and veterans of the Vietnam Era.

(f) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(g) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)

(a) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental disability. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified individuals with disabilities without discrimination based upon their physical or mental disability in all employment practices such as--

- (i) Recruitment, advertising, and job application procedures;
- (ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;
- (iii) Rates of pay or any other form of compensation and changes in compensation;
- (iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
- (v) Leaves of absence, sick leave, or any other leave;
- (vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;
- (vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
- (viii) Activities sponsored by the Contractor, including social or recreational programs; and
- (ix) Any other term, condition, or privilege of employment.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings. (1) The Contractor agrees to post employment notices stating--

- (i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified individuals with disabilities; and
- (ii) The rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. The Contractor shall ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled individual, or may lower the posted notice

so that it might be read by a person in a wheelchair). The notices shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance of the U.S. Department of Labor (Deputy Assistant Secretary) and shall be provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified individuals with physical or mental disabilities.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of \$10,000 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

52.222-37 EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (JAN 1999)

(a) Unless the Contractor is a State or local government agency, the Contractor shall report at least annually, as required by the Secretary of Labor, on--

(1) The number of disabled veterans and the number of veterans of the Vietnam era in the workforce of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than September 30 of each year beginning September 30, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1st of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity

Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 4212 to identify themselves to the Contractor. The invitation shall state that the information is voluntarily provided; that the information will be kept confidential; that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

52.223-11 OZONE-DEPLETING SUBSTANCES (MAY 2001)

(a) Definition. Ozone-depleting substance, as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR part 82 as--

(1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or

(2) Class II, including, but not limited to, hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

“WARNING: Contains (or manufactured with, if applicable), a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.”----

The Contractor shall insert the name of the substance(s).

52.223-14 TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

(a) Unless otherwise exempt, the Contractor, as owner or operator of a facility used in the performance of this contract, shall file by July 1 for the prior calendar year an annual Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023(a) and (g)), and section 6607 of the Pollution Prevention Act of 1990

(PPA) (42 U.S.C. 13106). The Contractor shall file, for each facility subject to the Form R filing and reporting requirements, the annual Form R throughout the life of the contract.

(b) A Contractor owned or operated facility used in the performance of this contract is exempt from the requirement to file an annual Form R if--

(1) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

(2) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

(3) The facility does not meet the reporting thresholds of toxic chemicals established under of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

(4) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

(5) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

(c) If the Contractor has certified to an exemption in accordance with one or more of the criteria in paragraph (b) of this clause, and after award of the contract circumstances change so that any of its owned or operated facilities used in the performance of this contract is no longer exempt--

(1) The Contractor shall notify the Contracting Officer; and

(2) The Contractor, as owner or operator of a facility used in the performance of this contract that is no longer exempt, shall (i) submit a Toxic Chemical Release Inventory Form (Form R) on or before July 1 for the prior calendar year during which the facility becomes eligible; and (ii) continue to file the annual Form R for the life of the contract for such facility.

(d) The Contracting Officer may terminate this contract or take other action as appropriate, if the Contractor fails to comply accurately and fully with the EPCRA and PPA toxic chemical release filing and reporting requirements.

(e) Except for acquisitions of commercial items, as defined in FAR Part 2, the Contractor shall--

(1) For competitive subcontracts expected to exceed \$100,000 (including all options), include a solicitation provision substantially the same as the provision at FAR 52.223-13, Certification of Toxic Chemical Release Reporting; and

(2) Include in any resultant subcontract exceeding \$100,000 (including all options), the substance of this clause, except this paragraph (e).

52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUL 2000)

(a) The Contractor shall not acquire, for use in the performance of this contract, any supplies or services originating from sources within, or that were located in or transported from or through, countries whose products are banned from importation into the United States under regulations of the Office of Foreign Assets Control, Department of the Treasury. Those countries are Cuba, Iran, Iraq, Libya, North Korea, Sudan, the territory of Afghanistan controlled by the Taliban, and Serbia (excluding the territory of Kosovo).

(b) The Contractor shall not acquire for use in the performance of this contract any supplies or services from entities controlled by the government of Iraq.

(c) The Contractor shall insert this clause, including this paragraph (c), in all subcontracts.

52.226-1 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES (JUN 2000)

(a) Definitions. As used in this clause:

"Indian" means any person who is a member of any Indian tribe, band, group, pueblo or community that is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any "Native" as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

"Indian organization" means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C., chapter 17.

"Indian-owned economic enterprise" means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership constitute a not less than 51 percent of the enterprise.

"Indian tribe" means any Indian tribe, band, group, pueblo or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, that is

recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1542(c).

"Interested party" means a prime contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

(b) The Contractor shall use its best efforts to give Indian organizations and Indian-owned economic enterprises (25 U.S.C. 1544) the maximum practicable opportunity to participate in the subcontracts it awards to the fullest extent consistent with efficient performance of its contract.

(1) The Contracting Officer and the Contractor, acting in good faith, may rely on the representation of an Indian organization or Indian-owned economic enterprise as to its eligibility, unless an interested party challenges its status or the Contracting Officer has independent reason to question that status. In the event of a challenge to the representation of a subcontractor, the Contracting Officer will refer the matter to the U.S. Department of the Interior, Bureau of Indian Affairs (BIA), Attn: Chief, Division of Contracting and Grants Administration, 1849 C Street, NW., MS 2626-MIB, Washington, DC 20240-4000.

The BIA will determine the eligibility and notify the Contracting Officer. No incentive payment will be made within 50 working days of subcontract award or while a challenge is pending. If a subcontractor is determined to be an ineligible participant, no incentive payment will be made under the Indian Incentive Program.

(2) The Contractor may request an adjustment under the Indian Incentive Program to the following:

- (i) The estimated cost of a cost-type contract.
- (ii) The target cost of a cost-plus-incentive-fee prime contract.
- (iii) The target cost and ceiling price of a fixed-price incentive prime contract.
- (iv) The price of a firm-fixed-price prime contract.

(3) The amount of the adjustment to the prime contract is 5 percent of the estimated cost, target cost, or firm-fixed-price included in the subcontract initially awarded to the Indian organization or Indian-owned economic enterprise.

(4) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.

(c) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, will authorize an incentive payment of 5 percent of the amount paid to the subcontractor. The Contracting Officer will seek funding in accordance with agency procedures.

52.227-1 AUTHORIZATION AND CONSENT (JUL 1995)

(a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.

(b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold (however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.)

52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)

(a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.

(b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.

(c) The Contractor agrees to include, and require inclusion of, this clause in all

subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at (FAR) 2.101 to exceed the dollar amount set forth in 13.000 of the Federal Acquisition Regulation (FAR).

52.229-3 FEDERAL, STATE, AND LOCAL TAXES (JAN 1991)

(a) "Contract date," as used in this clause, means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"All applicable Federal, State, and local taxes and duties," as used in this clause, means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax," as used in this clause, means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

"After-relieved Federal tax," as used in this clause, means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

(b) The contract price includes all applicable Federal, State, and local taxes and duties.

(c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.

(d) The contract price shall be decreased by the amount of any after-relieved Federal tax.

(e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.

(f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds \$250.

(g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or duty that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs.

(h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

52.232-1 PAYMENTS (APR 1984)

The Government shall pay the Contractor, upon the submission of proper invoices or vouchers, the prices stipulated in this contract for supplies delivered and accepted or services rendered and accepted, less any deductions provided in this contract. Unless otherwise specified in this contract, payment shall be made on partial deliveries accepted by the Government if--

(a) The amount due on the deliveries warrants it; or

(b) The Contractor requests it and the amount due on the deliveries is at least \$1,000 or 50 percent of the total contract price.

52.232-8 DISCOUNTS FOR PROMPT PAYMENT (FEB 2002)

(a) Discounts for prompt payment will not be considered in the evaluation of offers. However, any offered discount will form a part of the award, and will be taken if payment is made within the discount period indicated in the offer by the offeror. As an alternative to offering a discount for prompt payment in conjunction with the offer, offerors awarded contracts may include discounts for prompt payment on individual invoices.

(b) In connection with any discount offered for prompt payment, time shall be computed from the date of the invoice. If the Contractor has not placed a date on the invoice, the due date shall be calculated from the date the designated billing office receives a proper invoice, provided the agency annotates such invoice with the date of receipt at the time of receipt. For the purpose of computing the discount earned, payment shall be considered to have been made on the date that appears on the payment check or, for an electronic funds transfer, the specified payment date. When the discount date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day.

52.232-9 LIMITATION ON WITHHOLDING OF PAYMENTS (APR 1984)

If more than one clause or Schedule term of this contract authorizes the temporary withholding of amounts otherwise payable to the Contractor for supplies delivered or services performed, the total of the amounts withheld at any one time shall not exceed the greatest amount that may be withheld under any one clause or Schedule term at that time; provided, that this limitation shall not apply to--

- (a) Withholdings pursuant to any clause relating to wages or hours of employees;
- (b) Withholdings not specifically provided for by this contract;
- (c) The recovery of overpayments; and
- (d) Any other withholding for which the Contracting Officer determines that this limitation is inappropriate.

52.232-11 EXTRAS (APR 1984)

Except as otherwise provided in this contract, no payment for extras shall be made unless such extras and the price therefore have been authorized in writing by the Contracting Officer.

52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986) - ALTERNATE I (APR 1984)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence. Unless otherwise stated in this contract, payments to an assignee of any amounts due or to become due under this contract shall not, to the extent specified in the Act, be subject to reduction or setoff.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

52.232-25 PROMPT PAYMENT (FEB 2002)

Notwithstanding any other payment clause in this contract, the Government will make invoice payments under the terms and conditions specified in this clause. The Government considers payment as being made on the day a check is dated or the date of an electronic funds transfer (EFT). Definitions of pertinent terms are set forth in sections 2.101, 32.001, and 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see paragraph (a)(4) of this clause concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments--(1) Due date. (i) Except as indicated in paragraphs (a)(2) and (c) of this clause, the due date for making invoice payments by the designated payment office is the later of the following two events:

(A) The 30th day after the designated billing office receives a proper invoice from the Contractor (except as provided in paragraph (a)(1)(ii) of this clause).

(B) The 30th day after Government acceptance of supplies delivered or services performed. For a final invoice, when the payment amount is subject to contract settlement actions, acceptance is deemed to occur on the effective date of the contract settlement.

(ii) If the designated billing office fails to annotate the invoice with the actual date of receipt at the time of receipt, the invoice payment due date is the 30th day after the date of the Contractor's invoice, provided the designated billing office receives a proper invoice and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) Certain food products and other payments. (i) Due dates on Contractor invoices for meat, meat food products, or fish; perishable agricultural commodities; and dairy products, edible fats or oils, and food products prepared from edible fats or oils are--

(A) For meat or meat food products, as defined in section 2(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)), and as further defined in Pub. L. 98-181, including any edible fresh or frozen poultry meat, any perishable poultry meat food product, fresh eggs, and any perishable egg product, as close as possible to, but not later than, the 7th day after product delivery.

(B) For fresh or frozen fish, as defined in section 204(3) of the Fish and Seafood Promotion Act of 1986 (16 U.S.C. 4003(3)), as close as possible to, but not later than, the 7th day after product delivery.

(C) For perishable agricultural commodities, as defined in section 1(4) of the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. 499a(4)), as close as possible to, but not later than, the 10th day after product delivery, unless another date is specified in the contract.

(D) For dairy products, as defined in section 111(e) of the Dairy Production Stabilization Act of 1983 (7 U.S.C. 4502(e)), edible fats or oils, and food products prepared from edible fats or oils, as close as possible to, but not later than, the 10th day after the date on which a proper invoice has been received. Liquid milk, cheese, certain processed cheese products, butter, yogurt, ice cream, mayonnaise, salad dressings, and other similar products, fall within this classification. Nothing in the Act limits this classification to refrigerated products. When questions arise regarding the proper classification of a specific product, prevailing industry practices will be followed in specifying a contract payment due date. The burden of proof that a classification of a specific product is, in fact, prevailing industry practice is upon the Contractor making the representation.

(ii) If the contract does not require submission of an invoice for payment (e.g., periodic lease payments), the due date will be as specified in the contract.

(3) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(3)(i) through (a)(3)(x) of this clause. If the invoice does not comply with these requirements, the designated billing office will return it within 7 days after receipt (3 days for meat, meat food products, or fish; 5 days for perishable agricultural commodities, dairy products, edible fats or oils, and food products prepared from edible fats or oils), with the reasons why it is not a proper invoice. The Government will take into account untimely notification when computing any interest penalty owed the Contractor.

(i) Name and address of the Contractor.

(ii) Invoice date and invoice number. (The Contractor should date invoices as close as possible to the date of the mailing or transmission.)

(iii) Contract number or other authorization for supplies delivered or services performed (including order number and contract line item number).

(iv) Description, quantity, unit of measure, unit price, and extended price of supplies delivered or services performed.

(v) Shipping and payment terms (e.g., shipment number and date of shipment, discount for prompt payment terms). Bill of lading number and weight of shipment will be shown for shipments on Government bills of lading.

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).

(vii) Name (where practicable), title, phone number, and mailing address of person to notify in the event of a defective invoice.

(viii) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(ix) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision (e.g., 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(x) Any other information or documentation required by the contract (e.g., evidence of shipment).

(4) Interest penalty. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(4)(i) through (a)(4)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday, the designated payment office may make payment on the following working day without incurring a late payment interest penalty.

(i) The designated billing office received a proper invoice.

(ii) The Government processed a receiving report or other Government documentation authorizing payment, and there was no disagreement over quantity, quality, or Contractor compliance with any contract term or condition.

(iii) In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.

(5) Computing penalty amount. The Government will compute the interest penalty in accordance with the Office of Management and Budget prompt payment regulations at 5 CFR part 1315.

(i) For the sole purpose of computing an interest penalty that might be due the Contractor, Government acceptance is deemed to occur constructively on the 7th day (unless otherwise specified in this contract) after the Contractor delivers the supplies or performs

the services in accordance with the terms and conditions of the contract, unless there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. If actual acceptance occurs within the constructive acceptance period, the Government will base the determination of an interest penalty on the actual date of acceptance. The constructive acceptance requirement does not, however, compel Government officials to accept supplies or services, perform contract administration functions, or make payment prior to fulfilling their responsibilities.

(ii) The prompt payment regulations at 5 CFR 1315.10(c) do not require the Government to pay interest penalties if payment delays are due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. The Government and the Contractor shall resolve claims involving disputes and any interest that may be payable in accordance with the clause at FAR 52.233-1, Disputes.

(6) Discounts for prompt payment. The designated payment office will pay an interest penalty automatically, without request from the Contractor, if the Government takes a discount for prompt payment improperly. The Government will calculate the interest penalty in accordance with the prompt payment regulations at 5 CFR part 1315.

(7) Additional interest penalty. (i) The designated payment office will pay a penalty amount, calculated in accordance with the prompt payment regulations at 5 CFR part 1315 in addition to the interest penalty amount only if--

(A) The Government owes an interest penalty of \$1 or more;

(B) The designated payment office does not pay the interest penalty within 10 days after the date the invoice amount is paid; and

(C) The Contractor makes a written demand to the designated payment office for additional penalty payment, in accordance with paragraph (a)(7)(ii) of this clause, postmarked not later than 40 days after the invoice amount is paid.

(ii)(A) The Contractor shall support written demands for additional penalty payments with the following data. The Government will not request any additional data. The Contractor shall--

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest is due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) If there is no postmark or the postmark is illegible--

(1) The designated payment office that receives the demand will annotate it with the date of receipt, provided the demand is received on or before the 40th day after payment was made; or

(2) If the designated payment office fails to make the required annotation, the Government will determine the demand's validity based on the date the Contractor has placed on the demand, provided such date is no later than the 40th day after payment was made.

(iii) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

(b) Contract financing payment. If this contract provides for contract financing, the Government will make contract financing payments in accordance with the applicable contract financing clause.

(c) Fast payment procedure due dates. If this contract contains the clause at 52.213-1, Fast Payment Procedure, payments will be made within 15 days after the date of receipt of the invoice.

(d) Overpayments. If the Contractor becomes aware of a duplicate payment or that the Government has otherwise overpaid on an invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER—CENTRAL CONTRACTOR REGISTRATION (MAY 1999)

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT), except as provided in paragraph (a)(2) of this clause. As used in this clause, the term "EFT" refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either--

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend the payment due date until such time as the Government can make payment by EFT (but see paragraph (d) of this clause).

(b) Contractor's EFT information. The Government shall make payment to the Contractor using the EFT information contained in the Central Contractor Registration (CCR)

database. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the CCR database.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) Suspension of payment. If the Contractor's EFT information in the CCR database is incorrect, then the Government need not make payment to the Contractor under this contract until correct EFT information is entered into the CCR database; and any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(e) Contractor EFT arrangements. If the Contractor has identified multiple payment receiving points (i.e., more than one remittance address and/or EFT information set) in the CCR database, and the Contractor has not notified the Government of the payment receiving point applicable to this contract, the Government shall make payment to the first payment receiving point (EFT information set or remittance address as applicable) listed in the CCR database.

(f) Liability for uncompleted or erroneous transfers. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for--

- (i) Making a correct payment;
- (ii) Paying any prompt payment penalty due; and
- (iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

- (i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or
- (ii) If the funds remain under the control of the payment office, the Government shall not make payment, and the provisions of paragraph (d) of this clause shall apply.

(g) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date

specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(h) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall register in the CCR database and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(i) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information made by the Contractor's financial agent.

(j) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address contained in the CCR database.

52.233-1 DISPUTES. (JUL 2002)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) Claim, as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to

a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

(2)(i) The contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim -

(A) Exceeding \$100,000; or

(B) Regardless of the amount claimed, when using -

(1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or

(2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).

(ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.

(iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor.

(3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.

(e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative dispute resolution (ADR). If the Contractor refuses an offer for ADR, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in (FAR) 48 CFR 33.201, interest shall be paid from the date that the Contracting Officer initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

52.233-3 PROTEST AFTER AWARD (AUG. 1996)

(a) Upon receipt of a notice of protest (as defined in FAR 33.101) or a determination that a protest is likely (see FAR 33.102(d)), the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either--

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if--

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated

for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.

(f) If, as the result of the Contractor's intentional or negligent misstatement, misrepresentation, or miscertification, a protest related to this contract is sustained, and the Government pays costs, as provided in FAR 33.102(b)(2) or 33.104(h)(1), the Government may require the Contractor to reimburse the Government the amount of such costs. In addition to any other remedy available, and pursuant to the requirements of Subpart 32.6, the Government may collect this debt by offsetting the amount against any payment due the Contractor under any contract between the Contractor and the Government.

52.242-13 BANKRUPTCY (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

52.243-1 CHANGES--FIXED-PRICE (APR 1984)

(a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:

(1) Drawings, designs, or specifications when the supplies to be furnished are to be specially manufactured for the Government in accordance with the drawings, designs, or specifications.

(2) Method of shipment or packing.

(3) Place of delivery.

(b) If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment in the contract price, the delivery schedule, or both, and shall modify the contract.

(c) The Contractor must assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.

(d) If the Contractor's proposal includes the cost of property made obsolete or excess by the change, the Contracting Officer shall have the right to prescribe the manner of the disposition of the property.

(e) Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (MAY 2002)

(a) Definitions. As used this clause--

"Commercial item", has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract", includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)(1) The Contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (OCT 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (APR 2002) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212(a)).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793).

(v) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (JUN 2000) (46 U.S.C. Appx 1241) (flowdown not required for subcontracts awarded beginning May 1, 1996).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

52.246-18 WARRANTY OF SUPPLIES OF A COMPLEX NATURE (MAY 2001)

(d) Definitions.

"Acceptance," as used in this clause, means the act of an authorized representative of the Government by which the Government assumes for itself, or as an agent of another, ownership of existing and identified supplies, or approves specific services rendered, as partial or complete performance of the contract.

"Correction," as used in this clause, means the elimination of a defect.

"Supplies," as used in this clause, means the end items furnished by the Contractor and related services required under this contract. The word does not include "data."

(b) Contractor's obligations. (1) The Contractor warrants that for 365 calendar days after final acceptance all supplies furnished under this contract will be free from defects in material and workmanship and will conform with all requirements of this contract; provided, however, that with respect to Government-furnished property, the Contractor's warranty shall extend only to its proper installation, unless the Contractor performs some modification or other work on the property, in which case the Contractor's warranty shall extend to the modification or other work.

(2) Any supplies or parts thereof corrected or furnished in replacement shall be subject to the conditions of this clause to the same extent as supplies initially delivered. This warranty shall be equal in duration to that set forth in paragraph (b)(1) of this clause and shall run from the date of delivery of the corrected or replaced supplies.

(3) The Contractor shall not be obligated to correct or replace supplies if the facilities,

tooling, drawings, or other equipment or supplies necessary to accomplish the correction or replacement have been made unavailable to the Contractor by action of the Government. In the event that correction or replacement has been directed, the Contractor shall promptly notify the Contracting Officer, in writing, of the nonavailability.

(4) The Contractor shall also prepare and furnish to the Government data and reports applicable to any correction required (including revision and updating of all affected data called for under this contract) at no increase in the contract price.

(5) When supplies are returned to the Contractor, the Contractor shall bear the transportation costs from the place of delivery specified in the contract (irrespective of the f.o.b. point or the point of acceptance) to the Contractor's plant and return.

(6) All implied warranties of merchantability and "fitness for a particular purpose" are excluded from any obligation contained in this contract.

(c) Remedies available to the Government. (1) In the event of a breach of the Contractor's warranty in paragraph (b)(1) of this clause, the Government may, at no increase in contract price--

(i) Require the Contractor, at the place of delivery specified in the contract (irrespective of the f.o.b. point or the point of acceptance) or at the Contractor's plant, to repair or replace, at the Contractor's election, defective or nonconforming supplies; or

(ii) Require the Contractor to furnish at the Contractor's plant the materials or parts and installation instructions required to successfully accomplish the correction.

(2) If the Contracting Officer does not require correction or replacement of defective or nonconforming supplies or the Contractor is not obligated to correct or replace under paragraph (b)(3) of this clause, the Government shall be entitled to an equitable reduction in the contract price.

(3) The Contracting Officer shall notify the Contractor in writing of any breach of the warranty in paragraph (b) of this clause within 30 days of notice of the breach. The Contractor shall submit to the Contracting Officer a written recommendation within 15 calendar days as to the corrective action required to remedy the breach. After the notice of breach, but not later than 15 calendar days after receipt of the Contractor's recommendation for corrective action, the Contracting Officer may, in writing, direct correction or replacement as in paragraph (c)(1) of this clause, and the Contractor shall, notwithstanding any disagreement regarding the existence of a breach of warranty, comply with this direction. If it is later determined that the Contractor did not breach the warranty in paragraph (b)(1) of this clause, the contract price will be equitably adjusted.

(4) If supplies are corrected or replaced, the period for notification of a breach of the Contractor's warranty in paragraph (c)(3) of this clause shall be 365 calendar days from the furnishing or return by the Contractor to the Government of the corrected or replaced

supplies or parts thereof, or, if correction or replacement is effected by the Contractor at a Government or other activity, for 365 calendar days thereafter.

(5) The rights and remedies of the Government provided in this clause are in addition to and do not limit any rights afforded to the Government by any other clause of the contract.

52.248-1 VALUE ENGINEERING (FEB 2000)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any net acquisition savings realized from accepted VECP's, in accordance with the incentive sharing rates in paragraph (f) below.

(b) Definitions. "Acquisition savings," as used in this clause, means savings resulting from the application of a VECP to contracts awarded by the same contracting office or its successor for essentially the same unit. Acquisition savings include--

(1) Instant contract savings, which are the net cost reductions on this, the instant contract, and which are equal to the instant unit cost reduction multiplied by the number of instant contract units affected by the VECP, less the Contractor's allowable development and implementation costs;

(2) Concurrent contract savings, which are net reductions in the prices of other contracts that are definitized and ongoing at the time the VECP is accepted; and

(3) Future contract savings, which are the product of the future unit cost reduction multiplied by the number of future contract units in the sharing base. On an instant contract, future contract savings include savings on increases in quantities after VECP acceptance that are due to contract modifications, exercise of options, additional orders, and funding of subsequent year requirements on a multiyear contract.

"Collateral costs," as used in this clause, means agency cost of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contracting office" includes any contracting office that the acquisition is transferred to, such as another branch of the agency or another agency's office that is performing a joint acquisition action.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Future unit cost reduction," as used in this clause, means the instant unit cost reduction adjusted as the Contracting Officer considers necessary for projected learning or changes in quantity during the sharing period. It is calculated at the time the VECP is accepted and applies either (1) throughout the sharing period, unless the Contracting Officer decides that recalculation is necessary because conditions are significantly different from

those previously anticipated or (2) to the calculation of a lump-sum payment, which cannot later be revised.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistics support. The term does not include the normal administrative costs of processing the VECP or any increase in this contract's cost or price resulting from negative instant contract savings.

"Instant contract," as used in this clause, means this contract, under which the VECP is submitted. It does not include increases in quantities after acceptance of the VECP that are due to contract modifications, exercise of options, or additional orders. If this is a multiyear contract, the term does not include quantities funded after VECP acceptance. If this contract is a fixed-price contract with prospective price redetermination, the term refers to the period for which firm prices have been established.

"Instant unit cost reduction" means the amount of the decrease in unit cost of performance (without deducting any Contractor's development or implementation costs) resulting from using the VECP on this, the instant contract. If this is a service contract, the instant unit cost reduction is normally equal to the number of hours per line-item task saved by using the VECP on this contract, multiplied by the appropriate contract labor rate.

"Negative instant contract savings" means the increase in the cost or price of this contract when the acceptance of a VECP results in an excess of the Contractor's allowable development and implementation costs over the product of the instant unit cost reduction multiplied by the number of instant contract units affected.

"Net acquisition savings" means total acquisition savings, including instant, concurrent, and future contract savings, less Government costs.

"Sharing base," as used in this clause, means the number of affected end items on contracts of the contracting office accepting the VECP.

Sharing period, as used in this clause, means the period beginning with acceptance of the first unit incorporating the VECP and ending at a calendar date or event determined by the contracting officer for each VECP.

"Unit," as used in this clause, means the item or task to which the Contracting Officer and the Contractor agree the VECP applies.

"Value engineering change proposal (VECP)" means a proposal that--

(1) Requires a change to this, the instant contract, to implement; and

(2) Results in reducing the overall projected cost to the agency without impairing essential functions or characteristics; provided, that it does not involve a change--

(i) In deliverable end item quantities only;

(ii) In research and development (R&D) end items or R&D test quantities that is due solely to results of previous testing under this contract; or

(iii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (8) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and the proposed requirement, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, the effect of the change on the end item's performance, and any pertinent objective test data.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) Identification of the unit to which the VECP applies.

(4) A separate, detailed cost estimate for (i) the affected portions of the existing contract requirement and (ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under the Subcontracts paragraph of this clause, below.

(5) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(6) A prediction of any effects the proposed change would have on collateral costs to the agency.

(7) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(8) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Contracting Officer, unless this contract states otherwise. If this contract is administered by other than the contracting office, the Contractor shall submit a copy of the VECP simultaneously to the Contracting Officer and to the Administrative Contracting Officer.

(e) Government action. (1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

(2) If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

(3) Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause and made either before or within a reasonable time after contract performance is completed. Until such a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing rates. If a VECP is accepted, the Contractor shall share in net acquisition savings according to the percentages shown in the table below. The percentage paid the Contractor depends upon (1) this contract's type (fixed-price, incentive, or cost-reimbursement), (2) the sharing arrangement specified in paragraph (a) above (incentive, program requirement, or a combination as delineated in the Schedule), and (3) the source of the savings (the instant contract, or concurrent and future contracts), as follows:

CONTRACTOR'S SHARE OF NET ACQUISITION SAVINGS

(Figures in percent)

Contract Type	Incentive (Voluntary)		Program Requirement (Mandatory)	
	Instant Contract Rate	Concurrent and Future Contract Rate	Instant Contract Rate	Concurrent and Future Contract Rate
Fixed-price (includes fixed-price-award-fee; excludes other fixed-	(1) 50	(1) 50	(1) 25	25

price incentive contracts)				
Incentive (fixed-price or cost) (other than award fee)	(2)	(1) 50	(1) 50	25
Cost-reimbursement (includes cost-plus-award-fee; excludes other cost-type incentive Contracts)	(3) 25	(3)	15	15

- (1) The Contracting Officer may increase the Contractor's sharing rate to as high as 75 percent for each VECP.
- (2) Same sharing arrangement as the contract's profit or fee adjustment formula.
- (3) The Contracting Officer may increase the Contractor's sharing rate to as high as 50 percent for each VECP.

(g) Calculating net acquisition savings.

(1) Acquisition savings are realized when (i) the cost or price is reduced on the instant contract, (ii) reductions are negotiated in concurrent contracts, (iii) future contracts are awarded, or (iv) agreement is reached on a lump-sum payment for future contract savings (see subparagraph (i)(4) below). Net acquisition savings are first realized, and the Contractor shall be paid a share, when Government costs and any negative instant contract savings have been fully offset against acquisition savings.

(2) Except in incentive contracts, Government costs and any price or cost increases resulting from negative instant contract savings shall be offset against acquisition savings each time such savings are realized until they are fully offset. Then, the Contractor's share is calculated by multiplying net acquisition savings by the appropriate Contractor's percentage sharing rate (see paragraph (f) above). Additional Contractor shares of net acquisition savings shall be paid to the Contractor at the time realized.

(3) If this is an incentive contract, recovery of Government costs on the instant contract shall be deferred and offset against concurrent and future contract savings. The Contractor shall share through the contract incentive structure in savings on the instant contract items affected. Any negative instant contract savings shall be added to the target cost or to the target price and ceiling price, and the amount shall be offset against concurrent and future contract savings.

(4) If the Government does not receive and accept all items on which it paid the Contractor's share, the Contractor shall reimburse the Government for the proportionate share of these payments.

(h) Contract adjustment. The modification accepting the VECP (or a subsequent modification issued as soon as possible after any negotiations are completed) shall--

(1) Reduce the contract price or estimated cost by the amount of instant contract savings, unless this is an incentive contract;

(2) When the amount of instant contract savings is negative, increase the contract price, target price and ceiling price, target cost, or estimated cost by that amount;

(3) Specify the Contractor's dollar share per unit on future contracts, or provide the lump-sum payment;

(4) Specify the amount of any Government costs or negative instant contract savings to be offset in determining net acquisition savings realized from concurrent or future contract savings; and

(5) Provide the Contractor's share of any net acquisition savings under the instant contract in accordance with the following:

(i) Fixed-price contracts--add to contract price.

(ii) Cost-reimbursement contracts--add to contract fee.

(i) Concurrent and future contract savings.

(1) Payments of the Contractor's share of concurrent and future contract savings shall be made by a modification to the instant contract in accordance with subparagraph (h)(5) above. For incentive contracts, shares shall be added as a separate firm-fixed-price line item on the instant contract. The Contractor shall maintain records adequate to identify the first delivered unit for 3 years after final payment under this contract.

(2) The Contracting Officer shall calculate the Contractor's share of concurrent contract savings by (i) subtracting from the reduction in price negotiated on the concurrent contract any Government costs or negative instant contract savings not yet offset and (ii) multiplying the result by the Contractor's sharing rate.

(3) The Contracting Officer shall calculate the Contractor's share of future contract savings by (i) multiplying the future unit cost reduction by the number of future contract units scheduled for delivery during the sharing period, (ii) subtracting any Government costs or negative instant contract savings not yet offset, and (iii) multiplying the result by the Contractor's sharing rate.

(4) When the Government wishes and the Contractor agrees, the Contractor's share of future contract savings may be paid in a single lump sum rather than in a series of payments over time as future contracts are awarded. Under this alternate procedure, the future contract savings may be calculated when the VECP is accepted, on the basis of the Contracting Officer's forecast of the number of units that will be delivered during the sharing period. The Contractor's share shall be included in a modification to this contract (see subparagraph (h)(3) above) and shall not be subject to subsequent adjustment.

(5) Alternate no-cost settlement method. When, in accordance with subsection 48.104-4 of the Federal Acquisition Regulation, the Government and the Contractor mutually agree to use the no-cost settlement method, the following applies:

(i) The Contractor will keep all the savings on the instant contract and on its concurrent contracts only.

(ii) The Government will keep all the savings resulting from concurrent contracts placed on other sources, savings from all future contracts, and all collateral savings.

(j) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount, as specified in paragraph (h)(5) of this clause, by a rate from 20 to 100 percent, as determined by the Contracting Officer, of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the contract's firm-fixed-price, target price, target cost, or estimated cost, at the time the VECP is accepted, or \$100,000, whichever is greater. The Contracting Officer will be the sole determiner of the amount of collateral savings.

(k) Relationship to other incentives. Only those benefits of an accepted VECP not rewardable under performance, design-to-cost (production unit cost, operating and support costs, reliability and maintainability), or similar incentives shall be rewarded under this clause. However, the targets of such incentives affected by the VECP shall not be adjusted because of VECP acceptance. If this contract specifies targets but provides no incentive to surpass them, the value engineering sharing shall apply only to the amount of achievement better than target.

(l) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$100,000 or more and may include one in subcontracts of lesser value. In calculating any adjustment in this contract's price for instant contract savings (or negative instant contract savings), the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs, and any value engineering incentive payments to a subcontractor, clearly resulting from a VECP accepted by the Government under this contract. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that the payments shall not reduce the Government's share of concurrent or future contract savings or collateral savings.

(m) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering clause of contract , shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations."

If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (SEP 1996)

(a) The Government may terminate performance of work under this contract in whole or, from time to time, in part if the Contracting Officer determines that a termination is in the Government's interest. The Contracting Officer shall terminate by delivering to the Contractor a Notice of Termination specifying the extent of termination and the effective date.

(b) After receipt of a Notice of Termination, and except as directed by the Contracting Officer, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due under this clause:

(1) Stop work as specified in the notice.

(2) Place no further subcontracts or orders (referred to as subcontracts in this clause) for materials, services, or facilities, except as necessary to complete the continued portion of the contract.

(3) Terminate all subcontracts to the extent they relate to the work terminated.

(4) Assign to the Government, as directed by the Contracting Officer, all right, title, and interest of the Contractor under the subcontracts terminated, in which case the Government shall have the right to settle or to pay any termination settlement proposal arising out of those terminations.

(5) With approval or ratification to the extent required by the Contracting Officer, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts; the approval or ratification will be final for purposes of this clause.

(6) As directed by the Contracting Officer, transfer title and deliver to the Government (i) the fabricated or unfabricated parts, work in process, completed work, supplies, and other material produced or acquired for the work terminated, and (ii) the completed or partially completed plans, drawings, information, and other property that, if the contract had been completed, would be required to be furnished to the Government.

(7) Complete performance of the work not terminated.

(8) Take any action that may be necessary, or that the Contracting Officer may direct, for the protection and preservation of the property related to this contract that is in the possession of the Contractor and in which the Government has or may acquire an interest.

(9) Use its best efforts to sell, as directed or authorized by the Contracting Officer, any property of the types referred to in subparagraph (b)(6) of this clause; provided, however, that the Contractor (i) is not required to extend credit to any purchaser and (ii) may acquire the property under the conditions prescribed by, and at prices approved by, the Contracting Officer. The proceeds of any transfer or disposition will be applied to reduce any payments to be made by the Government under this contract, credited to the price or cost of the work, or paid in any other manner directed by the Contracting Officer.

(c) The Contractor shall submit complete termination inventory schedules no later than 120 days from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 120-day period.

(d) After expiration of the plant clearance period as defined in Subpart 45.6 of the Federal Acquisition Regulation, the Contractor may submit to the Contracting Officer a list, certified as to quantity and quality, of termination inventory not previously disposed of, excluding items authorized for disposition by the Contracting Officer. The Contractor may request the Government to remove those items or enter into an agreement for their storage. Within 15 days, the Government will accept title to those items and remove them or enter into a storage agreement. The Contracting Officer may verify the list upon removal of the items, or if stored, within 45 days from submission of the list, and shall correct the list, as necessary, before final settlement.

(e) After termination, the Contractor shall submit a final termination settlement proposal to the Contracting Officer in the form and with the certification prescribed by the Contracting Officer. The Contractor shall submit the proposal promptly, but no later than 1 year from the effective date of termination, unless extended in writing by the Contracting Officer upon written request of the Contractor within this 1-year period. However, if the Contracting Officer determines that the facts justify it, a termination settlement proposal may be received and acted on after 1 year or any extension. If the

Contractor fails to submit the proposal within the time allowed, the Contracting Officer may determine, on the basis of information available, the amount, if any, due the Contractor because of the termination and shall pay the amount determined.

(f) Subject to paragraph (e) of this clause, the Contractor and the Contracting Officer may agree upon the whole or any part of the amount to be paid or remaining to be paid because of the termination. The amount may include a reasonable allowance for profit on work done. However, the agreed amount, whether under this paragraph (g) or paragraph (g) of this clause, exclusive of costs shown in subparagraph (g)(3) of this clause, may not exceed the total contract price as reduced by (1) the amount of payments previously made and (2) the contract price of work not terminated. The contract shall be modified, and the Contractor paid the agreed amount. Paragraph (g) of this clause shall not limit, restrict, or affect the amount that may be agreed upon to be paid under this paragraph.

(g) If the Contractor and the Contracting Officer fail to agree on the whole amount to be paid because of the termination of work, the Contracting Officer shall pay the Contractor the amounts determined by the Contracting Officer as follows, but without duplication of any amounts agreed on under paragraph (f) of this clause:

(1) The contract price for completed supplies or services accepted by the Government (or sold or acquired under subparagraph (b)(9) of this clause) not previously paid for, adjusted for any saving of freight and other charges.

(2) The total of--

(i) The costs incurred in the performance of the work terminated, including initial costs and preparatory expense allocable thereto, but excluding any costs attributable to supplies or services paid or to be paid under subparagraph (f)(1) of this clause;

(ii) The cost of settling and paying termination settlement proposals under terminated subcontracts that are properly chargeable to the terminated portion of the contract if not included in subdivision (g)(2)(i) of this clause; and

(iii) A sum, as profit on subdivision (g)(2)(i) of this clause, determined by the Contracting Officer under 49.202 of the Federal Acquisition Regulation, in effect on the date of this contract, to be fair and reasonable; however, if it appears that the Contractor would have sustained a loss on the entire contract had it been completed, the Contracting Officer shall allow no profit under this subdivision (iii) and shall reduce the settlement to reflect the indicated rate of loss.

(3) The reasonable costs of settlement of the work terminated, including--

(i) Accounting, legal, clerical, and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

- (ii) The termination and settlement of subcontracts (excluding the amounts of such settlements); and
- (iii) Storage, transportation, and other costs incurred, reasonably necessary for the preservation, protection, or disposition of the termination inventory.
- (h) Except for normal spoilage, and except to the extent that the Government expressly assumed the risk of loss, the Contracting Officer shall exclude from the amounts payable to the Contractor under paragraph (g) of this clause, the fair value, as determined by the Contracting Officer, of property that is destroyed, lost, stolen, or damaged so as to become undeliverable to the Government or to a buyer.
- (i) The cost principles and procedures of Part 31 of the Federal Acquisition Regulation, in effect on the date of this contract, shall govern all costs claimed, agreed to, or determined under this clause.
- (j) The Contractor shall have the right of appeal, under the Disputes clause, from any determination made by the Contracting Officer under paragraph (e), (g), or (l) of this clause, except that if the Contractor failed to submit the termination settlement proposal or request for equitable adjustment within the time provided in paragraph (e) or (l), respectively, and failed to request a time extension, there is no right of appeal.
- (k) In arriving at the amount due the Contractor under this clause, there shall be deducted--
- (1) All unliquidated advance or other payments to the Contractor under the terminated portion of this contract;
 - (2) Any claim which the Government has against the Contractor under this contract; and
 - (3) The agreed price for, or the proceeds of sale of, materials, supplies, or other things acquired by the Contractor or sold under the provisions of this clause and not recovered by or credited to the Government.
- (l) If the termination is partial, the Contractor may file a proposal with the Contracting Officer for an equitable adjustment of the price(s) of the continued portion of the contract. The Contracting Officer shall make any equitable adjustment agreed upon. Any proposal by the Contractor for an equitable adjustment under this clause shall be requested within 90 days from the effective date of termination unless extended in writing by the Contracting Officer.
- (m)(1) The Government may, under the terms and conditions it prescribes, make partial payments and payments against costs incurred by the Contractor for the terminated portion of the contract, if the Contracting Officer believes the total of these payments will not exceed the amount to which the Contractor will be entitled.

(2) If the total payments exceed the amount finally determined to be due, the Contractor shall repay the excess to the Government upon demand, together with interest computed at the rate established by the Secretary of the Treasury under 50 U.S.C. App. 1215(b)(2). Interest shall be computed for the period from the date the excess payment is received by the Contractor to the date the excess is repaid. Interest shall not be charged on any excess payment due to a reduction in the Contractor's termination settlement proposal because of retention or other disposition of termination inventory until 10 days after the date of the retention or disposition, or a later date determined by the Contracting Officer because of the circumstances.

(n) Unless otherwise provided in this contract or by statute, the Contractor shall maintain all records and documents relating to the terminated portion of this contract for 3 years after final settlement. This includes all books and other evidence bearing on the Contractor's costs and expenses under this contract. The Contractor shall make these records and documents available to the Government, at the Contractor's office, at all reasonable times, without any direct charge. If approved by the Contracting Officer, photographs, microphotographs, or other authentic reproductions may be maintained instead of original records and documents.

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://farsite.hill.af.mil>

52.253-1 COMPUTER GENERATED FORMS (JAN 1991)

(a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form carries the Standard or Optional Form number and edition date.

(b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.

(e) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

252.201-7000 CONTRACTING OFFICER'S REPRESENTATIVE (DEC 1991)

(a) "Definition. Contracting officer's representative" means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

252.203-7001 PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT-RELATED FELONIES (MAR 1999)

(a) Definitions. As used in this clause—

(1) "Arising out of a contract with the DoD" means any act in connection with—

(i) Attempting to obtain;

(ii) Obtaining, or

(iii) Performing a contract or first-tier subcontract of any agency, department, or component of the Department of Defense (DoD).

(2) "Conviction of fraud or any other felony" means any conviction for fraud or a felony in violation of state or Federal criminal statutes, whether entered on a verdict or plea, including a plea of *nolo contendere*, for which sentence has been imposed.

(3) "Date of conviction" means the date judgment was entered against the individual.

(b) Any individual who is convicted after September 29, 1988, of fraud or any other felony arising out of a contract with the DoD is prohibited from serving--

(1) In a management or supervisory capacity on any DoD contract or first-tier subcontract;

(2) On the board of directors of any DoD contractor or first-tier subcontractor;

(3) As a consultant, agent, or representative for any DoD contractor or first-tier subcontractor; or

(4) In any other capacity with the authority to influence, advise, or control the decisions of any DoD contractor or subcontractor with regard to any DoD contract or first-tier subcontract.

(c) Unless waived, the prohibition in paragraph (b) of this clause applies for not less than 5 years from the date of conviction.

(d) 10 U.S.C. 2408 provides that a defense contractor or first-tier subcontractor shall be subject to a criminal penalty of not more than \$500,000 if convicted of knowingly—

(1) Employing a person under a prohibition specified in paragraph (b) of this clause; or

(2) Allowing such a person to serve on the board of directors of the contractor or first-tier subcontractor.

(e) In addition to the criminal penalties contained in 10 U.S.C. 2408, the Government may consider other available remedies, such as—

(1) Suspension or debarment;

(2) Cancellation of the contract at no cost to the Government; or

(3) Termination of the contract for default.

(f) The Contractor may submit written requests for waiver of the prohibition in paragraph (b) of this clause to the Contracting Officer. Requests shall clearly identify—

(1) The person involved;

(2) The nature of the conviction and resultant sentence or punishment imposed;

(3) The reasons for the requested waiver; and

(4) An explanation of why a waiver is in the interest of national security.

(g) The Contractor agrees to include the substance of this clause, appropriately modified to reflect the identity and relationship of the parties, in all first-tier subcontracts exceeding the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation, except those for commercial items or components.

(h) Pursuant to 10 U.S.C. 2408(c), defense contractors and subcontractors may obtain information as to whether a particular person has been convicted of fraud or any other felony arising out of a contract with the DoD by contacting The Office of Justice Programs, The Denial of Federal Benefits Office, U.S. Department of Justice, telephone (202) 616-3507.

252.204-7003 CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT
(APR 1992)

The Contractor's procedures for protecting against unauthorized disclosure of information shall not require Department of Defense employees or members of the Armed Forces to relinquish control of their work products, whether classified or not, to the contractor.

252.204-7004 REQUIRED CENTRAL CONTRACTOR REGISTRATION (NOV 2001)

(a) Definitions.

As used in this clause--

(1) Central Contractor Registration (CCR) database means the primary DoD repository for contractor information required for the conduct of business with DoD.

(2) Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.

(3) Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.

(4) Registered in the CCR database means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in the CCR database prior to award, during performance, and through final payment of any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

(d) Offerors and contractors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at <http://www.ccr.gov>.

252.205-7000 PROVISION OF INFORMATION TO COOPERATIVE AGREEMENT HOLDERS (DEC 1991)

(a) Definition.

"Cooperative agreement holder" means a State or local government; a private, nonprofit organization; a tribal organization (as defined in section 4(c) of the Indian Self-Determination and Education Assistance Act (Pub. L. 93-268; 25 U.S.C. 450 (c))); or an economic enterprise (as defined in section 3(e) of the Indian Financing Act of 1974 (Pub. L. 93-362; 25 U.S.C. 1452(e))) whether such economic enterprise is organized for profit or nonprofit purposes; which has an agreement with the Defense Logistics Agency to furnish procurement technical assistance to business entities.

(b) The Contractor shall provide cooperative agreement holders, upon their request, with a list of those appropriate employees or offices responsible for entering into subcontracts under defense contracts. The list shall include the business address, telephone number, and area of responsibility of each employee or office.

(c) The Contractor need not provide the listing to a particular cooperative agreement holder more frequently than once a year.

252.209-7004 SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) Unless the Government determines that there is a compelling reason to do so, the Contractor shall not enter into any subcontract in excess of \$25,000 with a firm, or subsidiary of a firm, that is identified, on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country.

(b) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is identified, on the

List of Parties Excluded from Federal Procurement and Nonprocurement Programs, as being ineligible for the award of Defense contracts or subcontracts because it is owned or controlled by the government of a terrorist country. The notice must include the name of the proposed subcontractor notwithstanding its inclusion on the List of Parties Excluded From Federal Procurement and Nonprocurement Programs.

252.215-7000 PRICING ADJUSTMENTS (DEC 1991)

The term "pricing adjustment," as used in paragraph (a) of the clauses entitled "Price Reduction for Defective Cost or Pricing Data - Modifications," "Subcontractor Cost or Pricing Data," and "Subcontractor Cost or Pricing Data - Modifications," means the aggregate increases and/or decreases in cost plus applicable profits.

252.223-7004 DRUG-FREE WORK FORCE (SEP 1988)

(a) Definitions.

(1) "Employee in a sensitive position," as used in this clause, means an employee who has been granted access to classified information; or employees in other positions that the Contractor determines involve national security; health or safety, or functions other than the foregoing requiring a high degree of trust and confidence.

(2) "Illegal drugs," as used in this clause, means controlled substances included in Schedules I and II, as defined by section 802(6) of title 21 of the United States Code, the possession of which is unlawful under chapter 13 of that Title. The term "illegal drugs" does not mean the use of a controlled substance pursuant to a valid prescription or other uses authorized by law.

(b) The Contractor agrees to institute and maintain a program for achieving the objective of a drug-free work force. While this clause defines criteria for such a program, contractors are encouraged to implement alternative approaches comparable to the criteria in paragraph (c) that are designed to achieve the objectives of this clause.

(c) Contractor programs shall include the following, or appropriate alternatives:

(1) Employee assistance programs emphasizing high level direction, education, counseling, rehabilitation, and coordination with available community resources;

(2) Supervisory training to assist in identifying and addressing illegal drug use by Contractor employees;

(3) Provision for self-referrals as well as supervisory referrals to treatment with maximum respect for individual confidentiality consistent with safety and security issues;

(4) Provision for identifying illegal drug users, including testing on a controlled and carefully monitored basis. Employee drug testing programs shall be established taking account of the following:

(i) The Contractor shall establish a program that provides for testing for the use of illegal drugs by employees in sensitive positions. The extent of and criteria for such testing shall be determined by the Contractor based on considerations that include the nature of the work being performed under the contract, the employee's duties, and efficient use of Contractor resources, and the risks to health, safety, or national security that could result from the failure of an employee adequately to discharge his or her position.

(ii) In addition, the Contractor may establish a program for employee drug testing--

(A) When there is a reasonable suspicion that an employee uses illegal drugs; or

(B) When an employees has been involved in an accident or unsafe practice;

(C) As part of or as a follow-up to counseling or rehabilitation for illegal drug use;

(D) As part of a voluntary employee drug testing program.

(iii) The Contractor may establish a program to test applicants for employment for illegal drug use.

(iv) For the purpose of administering this clause, testing for illegal drugs may be limited to those substances for which testing is prescribed by section 2.1 of subpart B of the "Mandatory Guidelines for Federal Workplace Drug Testing Programs" (53 FR 11980 (April 11, 1988), issued by the Department of Health and Human Services.

(d) Contractors shall adopt appropriate personnel procedures to deal with employees who are found to be using drugs illegally. Contractors shall not allow any employee to remain on duty or perform in a sensitive position who is found to use illegal drugs until such times as the Contractor, in accordance with procedures established by the Contractor, determines that the employee may perform in such a position.

(e) The provisions of this clause pertaining to drug testing program shall not apply to the extent that are inconsistent with state or local law, or with an existing collective bargaining agreement; provided that with respect to the latter, the Contractor agrees those issues that are in conflict will be a subject of negotiation at the next collective bargaining session.

252.225-7012 PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES (APR 2002)

(a) Definitions. As used in this clause--

(1) Component means any item supplied to the Government as part of an end product or of another component.

(2) End product means supplies delivered under a line item of this contract.

(b) The Contractor shall deliver under this contract only such of the following items, either as end products or components, that have been grown, reprocessed, reused, or produced in the United States, its possessions, or Puerto Rico:

(1) Food.

(2) Clothing.

(3) Tents, tarpaulins, or covers.

(4) Cotton and other natural fiber products.

(5) Woven silk or woven silk blends.

(6) Spun silk yarn for cartridge cloth.

(7) Synthetic fabric, and coated synthetic fabric, including all textile fibers and yarns that are for use in such fabrics.

(8) Canvas products.

(9) Wool (whether in the form of fiber or yarn or contained in fabrics, materials, or manufactured articles).

(10) Any item of individual equipment (Federal Supply Class 8465) manufactured from or containing fibers, yarns, fabrics, or materials listed in this paragraph (b).

(c) This clause does not apply--

(1) To items listed in section 25.104(a) of the Federal Acquisition Regulation (FAR), or other items for which the Government has determined that a satisfactory quality and sufficient quantity cannot be acquired as and when needed at U.S. market prices;

(2) To end products incidentally incorporating cotton, other natural fibers, or wool, for which the estimated value of the cotton, other natural fibers, or wool--

(i) Is not more than 10 percent of the total price of the end product; and (ii) Does not exceed the simplified acquisition threshold in FAR part 2;

(3) To foods that have been manufactured or processed in the United States, its possessions, or Puerto Rico, regardless of where the foods (and any component if applicable) were grown or produced;

(4) To chemical warfare protective clothing produced in the countries listed in subsection 225.872-1 of the Defense FAR Supplement; or

(5) To fibers and yarns that are for use in synthetic fabric or coated synthetic fabric (but does apply to the synthetic or coated synthetic fabric itself), if--

(i) The fabric is to be used as a component of an end product that is not a textile product. Examples of textile products, made in whole or in part of fabric, include--

(A) Draperies, floor coverings, furnishings, and bedding (Federal Supply Group 72, Household and Commercial Furnishings and Appliances);

(B) Items made in whole or in part of fabric in Federal Supply Group 83, Textile/leather/furs/apparel/findings/ tents/flags, or Federal Supply Group 84, Clothing, Individual Equipment and Insignia;

(C) Upholstered seats (whether for household, office, or other use); and

(D) Parachutes (Federal Supply Class 1670); or

(ii) The fibers and yarns are para-aramid fibers and yarns manufactured in the Netherlands.

252.227-7033 RIGHTS IN SHOP DRAWINGS (APR 1966)

(a) Shop drawings for construction means drawings, submitted to the Government by the Construction Contractor, subcontractor or any lower-tier subcontractor pursuant to a construction contract, showing in detail (i) the proposed fabrication and assembly of structural elements and (ii) the installation (i.e., form, fit, and attachment details) of materials or equipment. The Government may duplicate, use, and disclose in any manner and for any purpose shop drawings delivered under this contract.

(b) This clause, including this paragraph (b), shall be included in all subcontracts hereunder at any tier.

252.243-7001 PRICING OF CONTRACT MODIFICATIONS (DEC 1991)

When costs are a factor in any price adjustment under this contract, the contract cost principles and procedures in FAR part 31 and DFARS part 231, in effect on the date of this contract, apply.

252.243-7002 REQUESTS FOR EQUITABLE ADJUSTMENT (MAR 1998)

(a) The amount of any request for equitable adjustment to contract terms shall accurately reflect the contract adjustment for which the Contractor believes the Government is liable. The request shall include only costs for performing the change, and shall not include any costs that already have been reimbursed or that have been separately claimed. All indirect costs included in the request shall be properly allocable to the change in accordance with applicable acquisition regulations.

(b) In accordance with 10 U.S.C. 2410(a), any request for equitable adjustment to contract terms that exceeds the simplified acquisition threshold shall bear, at the time of submission, the following certificate executed by an individual authorized to certify the request on behalf of the Contractor:

I certify that the request is made in good faith, and that the supporting data are accurate and complete to the best of my knowledge and belief.

(Official's Name)

(Title)

(c) The certification in paragraph (b) of this clause requires full disclosure of all relevant facts, including--

(1) Cost or pricing data if required in accordance with subsection 15.403-4 of the Federal Acquisition Regulation (FAR); and

(2) Information other than cost or pricing data, in accordance with subsection 15.403-3 of the FAR, including actual cost data and data to support any estimated costs, even if cost or pricing data are not required.

(d) The certification requirement in paragraph (b) of this clause does not apply to----

(1) Requests for routine contract payments; for example, requests for payment for accepted supplies and services, routine vouchers under a cost-reimbursement type contract, or progress payment invoices; or

(2) Final adjustment under an incentive provision of the contract.

252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA (MAY 2002)

(a) Definitions. As used in this clause --

(1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) "Department of Defense" (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) "Foreign flag vessel" means any vessel that is not a U.S.-flag vessel.

(4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract.

(6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) "Supplies" includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if--

(i) This contract is a construction contract; or

(ii) The supplies being transported are--

(A) Noncommercial items; or

(B) Commercial items that--

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it contracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that --

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum --

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Maritime Administration, Office of Cargo Preference, U.S. Department of Transportation, 400 Seventh Street SW., Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information:

- (1) Prime contract number;
- (2) Name of vessel;
- (3) Vessel flag of registry;
- (4) Date of loading;
- (5) Port of loading;
- (6) Port of final discharge;
- (7) Description of commodity;
- (8) Gross weight in pounds and cubic feet if available;
- (9) Total ocean freight in U.S. dollars; and
- (10) Name of the steamship company.

(f) The Contractor shall provide with its final invoice under this contract a representation that to the best of its knowledge and belief--

- (1) No ocean transportation was used in the performance of this contract;
- (2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;
- (3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or
- (4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

ITEM DESCRIPTION	CONTRACT LINE ITEMS	QUANTITY
<hr/>		
TOTAL	<hr/>	

(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(h) In the award of subcontracts for the types of supplies described in paragraph (b)(2) of this clause, the Contractor shall flow down the requirements of this clause as follows:

(1) The Contractor shall insert the substance of this clause, including this paragraph (h), in subcontracts that exceed the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(2) The Contractor shall insert the substance of paragraphs (a) through (e) of this clause, and this paragraph (h), in subcontracts that are at or below the simplified acquisition threshold in part 2 of the Federal Acquisition Regulation.

(f) TRANSPORTATION OF SUPPLIES BY SEA (MAY 2002)
ALTERNATE III (MAY 2002)

(a) Definitions. As used in this clause --

(1) "Components" means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) "Department of Defense" (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) "Foreign flag vessel" means any vessel that is not a U.S.-flag vessel.

(4) "Ocean transportation" means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) "Subcontractor" means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract.

(6) "Supplies" means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) "Supplies" includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) "U.S.-flag vessel" means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if--

(i) This contract is a construction contract; or

(ii) The supplies being transported are--

(A) Noncommercial items; or

(B) Commercial items that--

(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it contracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that --

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum --

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Maritime Administration, Office of Cargo Preference, U.S. Department of Transportation, 400 Seventh Street SW., Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information:

(1) Prime contract number;

(2) Name of vessel;

(3) Vessel flag of registry;

(4) Date of loading;

(5) Port of loading;

(6) Port of final discharge;

- (7) Description of commodity;
- (8) Gross weight in pounds and cubic feet if available;
- (9) Total ocean freight in U.S. dollars; and
- (10) Name of the steamship company.

(f) The Contractor shall insert the substance of this clause, including this paragraph (f), in subcontracts that are for a type of supplies described in paragraph (b)(2) of this clause.

252.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA
(MAR 2000)

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If, however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor --

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause; including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties--

(1) In all subcontracts under this contract, if this contract is a construction contract; or

(2) If this contract is not a construction contract, in all subcontracts under this contract that are for--

(i) Noncommercial items; or

(ii) Commercial items that--

(A) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(B) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(C) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

**PART III - SECTION J
LIST OF ATTACHMENTS
FOR MANEUVER BOATS/BARGES**

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PART III - SECTION J

LIST OF ATTACHMENTS

J01 CONCEPT DESIGN DRAWINGS

The drawings and specifications provided with this procurement represent a “Concept” Design for the subject Maneuver Barges barge.

Arrangements have been developed sufficiently to arrive at an adequate level of confidence that the vessel is feasible, and that the design can be developed to meet the performance, the operational requirements and the design objectives of the U.S. Army Corps of Engineers (USACE), as stated in this procurement.

It is expected that the builder will be able to bid on this Contract, develop the detail design and to construct, test and deliver the vessel.

J02 DRAWINGS

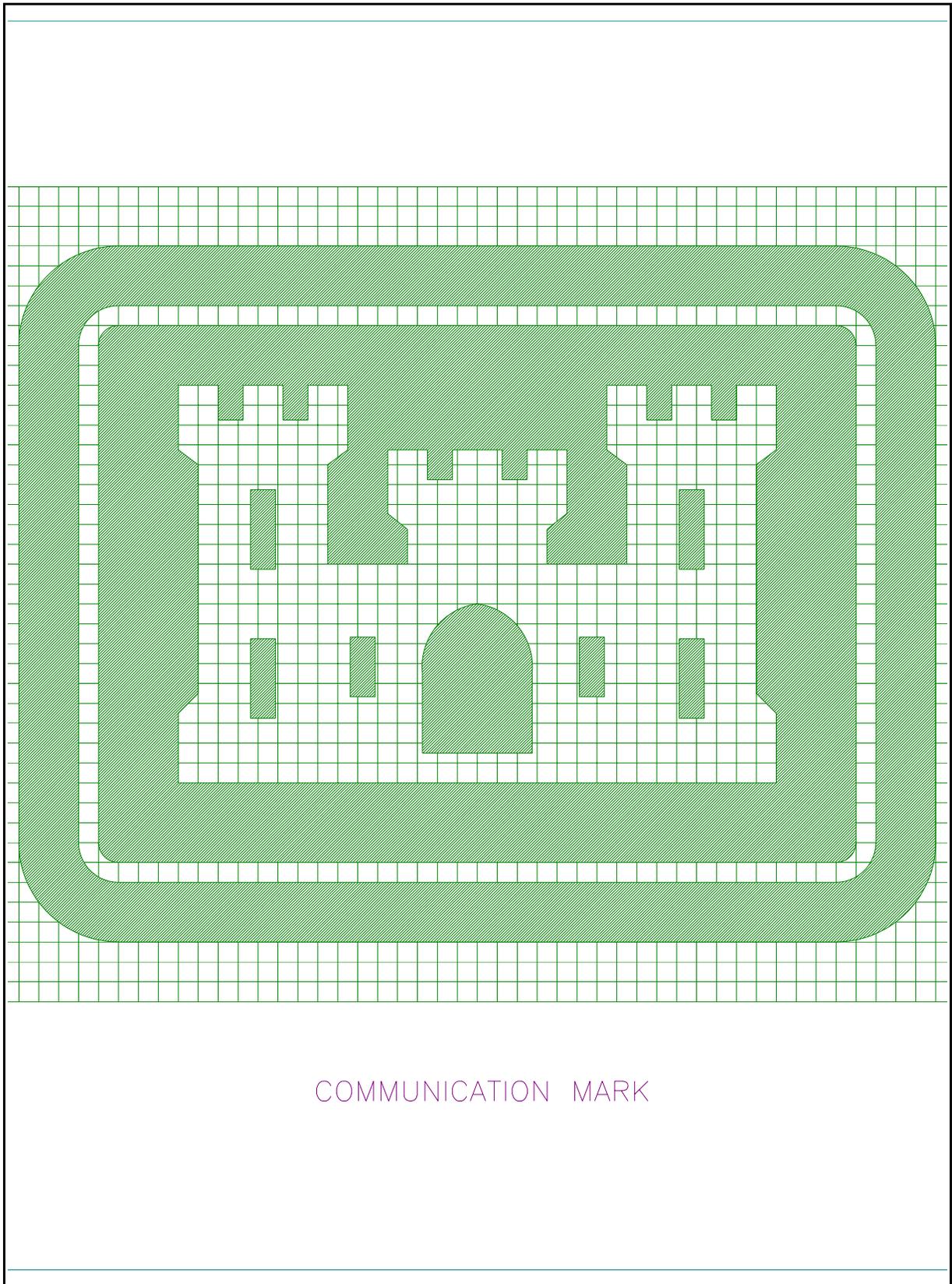
The following drawings form a part of this solicitation and describe the Concept Design of the Maneuver barges for the Rock Island District, USACE.

The Concept Design drawings listed below shall be a basis for the Contractor’s development of the Final Design during the Engineering and Design Phase of the Contract. Please note that all drawings listed herein will also be provided to the successful bidder in AUTOCAD electronic file format.

<u>Drawing Title</u>	<u>Document Number</u>	<u>Form</u>
Lines Plan	604-A105-01	Drawing
Profiles	604-A205-01	Drawing
General Arrangement	604-A215-01	Drawing
Operating Arrangement	604-A225-01	Drawing
Spud Geometry	604-A550-01	Drawing

J03 COMMUNICATIONS MARK

The Contractor shall utilize the template provided on the following page when fabricating the Corps Communication Mark as required in Clause C460 - NAMEPLATES, NOTICES AND MARKINGS.



J04 PERFORMANCE EVALUATION FOR SERVICE & SUPPLY CONTRACTS

In accordance with Federal Acquisition Regulations 42.15 and Engineer Regulation 7151-1 dated July 5, 1996, this contract action is subject to the requirement for contractor performance evaluation in the elements listed in the form enclosed at the end of this Section.

At a minimum, the performance evaluation shall be completed within 45 days of completion of each year of performance. Addition (interim) evaluations may be prepared if any element listed is being performed unsatisfactorily.

The period of evaluation will begin on the date of acknowledgment of receipt of the Notice to Proceed and will run concurrent with the performance period of the resulting contract.

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Section K - Representations, Certifications and Other Statements of Offerors

CLAUSES INCORPORATED BY REFERENCE

52.203-11	Certification And Disclosure Regarding Payments To Influence Certain Federal Transactions	APR 1991
52.222-38	Compliance With Veterans' Employment Reporting Requirements	DEC 2001
252.209-7001	Disclosure of Ownership or Control by the Government of a Terrorist Country	MAR 1998
252.225-7031	Secondary Arab Boycott Of Israel	JUN 1992

CLAUSES INCORPORATED BY FULL TEXT

52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

- (a) The offeror certifies that --
- (c) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to –
 - (a) Those prices,
 - (ii) The intention to submit an offer, or
 - (iii) The methods of factors used to calculate the prices offered:
- (2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
- (3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.
- (b) Each signature on the offer is considered to be a certification by the signatory that the signatory --
 - (1) Is the person in the offeror's organization responsible for determining the prices offered in this bid or proposal, and that the signatory has not participated and will not

participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision;
or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision

_____ (insert full name of person(s) in the offeror’s organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror’s organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(b) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.

(c) ©If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(d) PLACE OF PERFORMANCE (OCT 1997)

(e) The offeror or respondent, in the performance of any contract resulting from this solicitation, () intends, () does not intend (check applicable block) to use one or more plants or facilities located at a different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.

(f) If the offeror or respondent checks “intends” in paragraph (a) of this provision, it shall insert in the following spaces the required information:

Place of Performance(Street Address, City, State, County, Zip Code)	Name and Address of Owner and Operator of the Plant or Facility if Other Than Offeror or Respondent

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (APR 2002) - ALTERNATE I (APR 2002)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 3366111.

(2) The small business size standard is 1000 employees.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it () is, () is not a small business concern.

(2) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, that it () is, () is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it () is, () is not a women-owned small business concern.

(4) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it () is, () is not a veteran-owned small business concern.

(5) (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.) The offeror represents as part of its offer that it () is, () is not a service-disabled veteran-owned small business concern.

(6) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.] The offeror represents, as part of its offer, that--

(i) It () is, () is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It () is, () is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. (The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: _____.) Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(7) (Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.) The offeror shall check the category in which its ownership falls:

_____ Black American.

_____ Hispanic American.

_____ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

_____ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

_____ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

_____ Individual/concern, other than one of the preceding.

(c) Definitions. As used in this provision--

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern," means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern," means a small business concern --

(1) That is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; or

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that --

(a) () It has, () has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;

(b) () It has, () has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING
(OCT 2000)

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (Check each block that is applicable.)

(i) The facility does not manufacture, process or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

(ii) The facility does not have 10 or more full-time employees as specified in section 313.(b)(1)(A) of EPCRA 42 U.S.C. 11023(b)(1)(A);

(iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

(iv) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

(v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

252.247-7022 REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA
(AUG 1992)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term supplies is defined in the Transportation of Supplies by Sea clause of

this solicitation.

(b) Representation. The Offeror represents that it:

____ (1) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

____ (2) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

SECTION L

Instructions, Conditions and Notices to Bidders

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L-1 CLAUSES INCORPORATED BY FULL TEXT

The following clauses, with original paragraph numbering, are extracted from the Federal Acquisition Rules (FAR).

52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (JUN 99)

(a) Contractor identification is essential for complying with statutory contract reporting requirements. Therefore, the offeror is requested to enter, in the block with its name and address on the Standard Form 33 or similar document, the annotation "DUNS" followed by the DUNS number which identifies the offeror's name and address exactly as stated in the offer.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. A DUNS number will be provided immediately by telephone at no charge to the offeror. For information on obtaining a DUNS number, the offeror, if located within the United States, should call Dun and Bradstreet at 1-800-333-0505. The offeror should be prepared to provide the following information:

- (1) Company name.
- (2) Company address.
- (3) Company telephone number.
- (4) Line of business.
- (5) Chief executive officer/key manager.
- (6) Date the company was started.
- (7) Number of people employed by the company.
- (8) Company affiliation.

(c) Offerors located outside the United States may obtain the location and phone number of the local Dun and Bradstreet Information Services office from the Internet Home Page at <http://www.customerservice@dnb.com/>. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at globalinfo@dnb.com.

52.215-1 INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION (MAY 2001)

(a) Definitions. As used in this provision--

“Discussions” are negotiations that occur after establishment of the competitive range that may, at the Contracting Officer’s discretion, result in the offeror being allowed to revise its proposal.

In writing, writing, or written means any worded or numbered expression that can be read, reproduced, and later communicated, and includes electronically transmitted and stored information.

“Proposal modification” is a change made to a proposal before the solicitation’s closing date and time, or made in response to an amendment, or made to correct a mistake at any time before award.

“Proposal revision” is a change to a proposal made after the solicitation closing date, at the request of or as allowed by a Contracting Officer as the result of negotiations.

“Time”, if stated as a number of days, is calculated using calendar days, unless otherwise specified, and will include Saturdays, Sundays, and legal holidays. However, if the last day falls on a Saturday, Sunday, or legal holiday, then the period shall include the next working day.

(b) Amendments to solicitations. If this solicitation is amended, all terms and conditions that are not amended remain unchanged. Offerors shall acknowledge receipt of any amendment to this solicitation by the date and time specified in the amendment(s).

(c) Submission, modification, revision, and withdrawal of proposals.

(1) Unless other methods (e.g., electronic commerce or facsimile) are permitted in the solicitation, proposals and modifications to proposals shall be submitted in paper media in sealed envelopes or packages

(i) Addressed to the office specified in the solicitation, and

(ii) Showing the time and date specified for receipt, the solicitation number, and the name and address of the offeror. Offerors using commercial carriers should ensure that the proposal is marked on the outermost wrapper with the information in paragraphs (c)(1)(i) and (c)(1)(ii) of this provision.

(2) The first page of the proposal must show--

(i) The solicitation number;

(ii) The name, address, and telephone and facsimile numbers of the offeror (and electronic address if available);

- (iii) A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item;
 - (iv) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the offeror's behalf with the Government in connection with this solicitation; and
 - (v) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office.
- (3) Submission, modification, or revision, of proposals.
- (i) Offerors are responsible for submitting proposals, and any modifications, or revisions, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that proposal or revision is due.
 - (ii) (A) Any proposal, modification, or revision received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--
 - (1) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of proposals; or
 - (2) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or
 - (3) It is the only proposal received.
 - (B) However, a late modification of an otherwise successful proposal that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.
 - (iii) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the proposal

wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(iv) If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at the office designated for receipt of proposals by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(v) Proposals may be withdrawn by written notice received at any time before award. Oral proposals in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile proposals, proposals may be withdrawn via facsimile received at any time before award, subject to the conditions specified in the provision at 52.215-5, Facsimile Proposals. Proposals may be withdrawn in person by an offeror or an authorized representative, if the identity of the person requesting withdrawal is established and the person signs a receipt for the proposal before award.

(4) Unless otherwise specified in the solicitation, the offeror may propose to provide any item or combination of items.

(5) Offerors shall submit proposals in response to this solicitation in English, unless otherwise permitted by the solicitation, and in U.S. dollars, unless the provision at FAR 52.225-17, Evaluation of Foreign Currency Offers, is included in the solicitation.

(6) Offerors may submit modifications to their proposals at any time before the solicitation closing date and time, and may submit modifications in response to an amendment, or to correct a mistake at any time before award.

(7) Offerors may submit revised proposals only if requested or allowed by the Contracting Officer.

(8) Proposals may be withdrawn at any time before award. Withdrawals are effective upon receipt of notice by the Contracting Officer.

(d) Offer expiration date. Proposals in response to this solicitation will be valid for the number of days specified on the solicitation cover sheet (unless a different period is proposed by the offeror).

(e) Restriction on disclosure and use of data. Offerors that include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall--

(1) Mark the title page with the following legend: This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed--in whole or in part--for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of--or in connection with--the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets]; and

(2) Mark each sheet of data it wishes to restrict with the following legend: Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal.

(f) Contract award.

(1) The Government intends to award a contract, or contracts, resulting from this solicitation to the responsible offeror(s) whose proposal(s) represent the best value after evaluation in accordance with the factors and subfactors in the solicitation.

(2) The Government may reject any or all proposals if such action is in the Government's interest.

(3) The Government may waive informalities and minor irregularities in proposals received.

(4) The Government intends to evaluate proposals and award a contract without discussions with offerors (except clarifications as described in FAR 15.306(a)). Therefore, the offeror's initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. If the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

(5) The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit cost or prices offered, unless the offeror specifies otherwise in the proposal.

- (6) The Government reserves the right to make multiple awards if, after considering the additional administrative costs, it is in the Government's best interest to do so.
- (7) Exchanges with offerors after receipt of a proposal do not constitute a rejection or counteroffer by the Government.
- (8) The Government may determine that a proposal is unacceptable if the prices proposed are materially unbalanced between line items or sub-line items. Unbalanced pricing exists when, despite an acceptable total evaluated price, the price of one or more contract line items is significantly overstated or understated as indicated by the application of cost or price analysis techniques. A proposal may be rejected if the Contracting Officer determines that the lack of balance poses an unacceptable risk to the Government.
- (9) If a cost realism analysis is performed, cost realism may be considered by the source selection authority in evaluating performance or schedule risk.
- (10) A written award or acceptance of proposal mailed or otherwise furnished to the successful offeror within the time specified in the proposal shall result in a binding contract without further action by either party.
- (11) The Government may disclose the following information in post award debriefings to other offerors:
- (i) The overall evaluated cost or price and technical rating of the successful offeror;
 - (ii) The overall ranking of all offerors, when any ranking was developed by the agency during source selection;
 - (iii) A summary of the rationale for award; and
 - (iv) For acquisitions of commercial items, the make and model of the item to be delivered by the successful offeror.

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a firm, fixed price contract resulting from this solicitation.

52.233-2 SERVICE OF PROTEST (AUG 1996)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from:

Robert Sharamatew, Contracting Officer
US Army Engineer District, Philadelphia
100 Penn Square East, Rm 643
Wanamaker Building
Philadelphia, PA 19107-3390

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

L-2 PROPOSAL REQUIREMENTS AND EVALUATION CRITERIA

A. GENERAL REQUIREMENTS

Offerors shall submit three copies of the entire Proposal for evaluation. The Proposal shall include an index of the complete Proposal to identify the content, and to assist in locating the specific elements or topics required to be addressed by the offerors as outlined in this Section. Page separators or tabs can be used.

Page B-1 of the Solicitation must be filled in and included with the Proposal to reflect the offered price. This page is the Price Proposal, and must be separate or separable from the rest. Price information shall only be displayed on page B-1 and shall not be included anywhere else within the Proposal, to allow for the review by the Government representatives to take place without the influence of price.

The offerors are advised that each Proposal submitted must be complete, and shall be organized to address the specific elements or topics required, in the sequence outlined in this Section. This is necessary to facilitate and expedite an effective review.

Offerors that submit Proposals that are not complete, may or may not be given the opportunity to submit any additional material, and may be considered non-responsive. As a minimum, the information required in this Section shall be included in each Proposal submitted. Additional data, which would serve to clarify the Proposal, should also be submitted. Any other information deemed necessary by the Contracting Officer for a clear understanding of the Proposal shall be furnished if requested.

Proposals shall not include alternative features offered as options within the Proposal. Each Proposal must be clear as to the services and features to be offered without contingency. This will facilitate a fair and equitable review and evaluation. The same offeror, however, may send in more than one complete Proposal, to propose alternative features and price.

The Proposals will be reviewed for completeness and evaluated on their merit against the evaluation factors listed below.

Technical Factors:

Past Performance and Experience,
Management
Product

Price Factor:

Price Reasonableness
Price Realism

The technical factors as a whole are more important than price. However, price remains a significant factor in determining "Best Value." The technical sub-factors are listed in descending order. The price sub-factors are of equal weighting.

B. PAST PERFORMANCE AND EXPERIENCE EVALUATION CRITERIA

Past Performance means:

- The offeror's rating in formalized Government or customer surveys, including the Government's assessment of performance in any previous contracts if applicable.
- Contracts terminated by convenience of the Government in the past three years, and/or Contracts terminated for default in the past 5 years shall be reported if applicable.
- Demonstrated experience during the past five years in construction of vessels of similar type and equivalent level of complexity will be evaluated.

The Government may at its discretion contact representatives of customers to obtain input pertaining to past performance.

C. REQUIRED PAST PERFORMANCE AND EXPERIENCE SUBMITTALS

The offeror shall provide a discussion of the organization's Past Performance, making reference to ratings in formalized Government or customer surveys as applicable. If applicable, list any Contract that was terminated for the convenience of the Government within the past three years and any Contract that was terminated for default in the last 5 years. Explain the circumstances. If none, please so indicate.

The offeror shall also provide a discussion of the organization's experience on similar types of work over the past five years, describing the work done (vessel type), the principal dimensions of the vessels built, and the list of customers. The information presented shall include; customer name / organization, points of contact with phone numbers, contract number, and approximate contract value.

D. MANAGEMENT EVALUATION CRITERIA

The Management Evaluation Criteria for Award shall be the capability demonstrated by the offeror to successfully perform and respond to the requirements of this project.

The offeror shall demonstrate in the Proposal that the organization has the proper resources available, and has proposed sufficient resources to successfully perform the work required.

The Government may elect to visit offerors facilities to verify proposal information.

E. REQUIRED MANAGEMENT PROPOSAL SUBMITTALS

The following topics must be addressed in narrative form. Drawings or pictures to convey the information are encouraged. Each topic shall be addressed to the degree necessary to provide the reviewers with a clear understanding. As a minimum the information requested below shall be included in each Proposal submitted:

E1. Organization

The offeror shall provide clear and complete information on the organization as follows:

- Name and type of company.
- Brief history of company.
- Principal ownership, subsidiaries, and corporate affiliations.
- Source of engineering design support.

E2. Human Resources for this Project

The offeror shall furnish resumes of the key personnel that will be involved in this project, indicating:

- Academic/Professional qualifications.
- Experience in related type of work.
- Functional position and job description as it will apply to this project, for each key individual.
- Engineering experience and certification of those providing engineering design services.

E3. Facilities and Equipment

The offeror shall furnish a description of the facilities and major equipment available and planned to be used on this project. Shop facilities/equipment shall be briefly described and clearly identified in layout drawings or pictures included in the Proposal.

E4. Project Sub-Contracting Plan

If applicable, the offeror shall describe the extent of sub-Contracting contemplated on this project, and the specific areas to be sub-Contracted.

If any part of Phase II – Engineering & Scheduling, is to be sub-Contracted, the offeror shall identify the sub-Contractor, and submit the resumes of the key personnel involved.

E5. Project Quality Control Plan

The offeror shall make a brief description of the organization's Quality Control/Quality Assurance Organization, and how it will be applied to this project. Copy of ISO certification shall be provided if applicable.

E6. Project Planning / Schedule

The offeror shall submit with the Proposal, a Plan of Action and Project Schedule, including duration in calendar days for performance during:

- Phase I – Planning and Scheduling
- Phase II - Engineering
- Phase II - Construction, Testing and Delivery

The planning and scheduling information, shall demonstrate a logical, orderly and workable approach to the Project and the Contract.

Phase durations, as identified in the accepted Proposal, will be inserted into the Contract Phase Sequencing included in Section H, clause H01. Offered durations must be submitted in calendar day format, and shall not exceed those indicated in page H-4.

The Government will give Notice to Proceed with Phase II, within 15 days of completion of Phase I – Planning & Scheduling, and will give Notice to Proceed with Phase III, within 15 days of completion of Phase II – Engineering.

After Contract Award, the Contractor is required to perform according to their proposed Project Schedule. Actual performance after Contract Award shall be compared against the proposed schedule, and shall be reported monthly to the COR with the Progress Payment request for approval.

Offerors proposing a total project duration that is shorter than the baseline project duration shown on page H-4 will NOT be rated better for this criteria than offerors not proposing a reduced schedule duration. Offerors should refer to the Contract Phase Sequencing graphic for important information regarding Government review durations and required resubmittal durations that must be included in the total project duration proposed by the offeror.

E7. Financial Condition

Describe why the Government should be confident that this project will be successfully completed from a financial standpoint. Report briefly on the offeror's financial resources and cash flow.

F. PRODUCT EVALUATION CRITERIA

The criteria for Product Evaluation of the Proposals is based on the assessment of the offered deliverables, equipment and features to provide quality, safety, performance and reliability in the proposed vessels.

G REQUIRED PRODUCT PROPOSAL SUBMITTALS**G1. List of Proposed Deliverables**

The purpose of this submittal is for the Government to evaluate the completeness and extent of the engineering drawings and data that will be furnished prior to during the engineering phase of the contract and prior to construction. The Offeror shall furnish a list of the drawings and engineering data that will be developed and provided to the government after contract award, during the Engineering Phase of the contract. See Clause H-13 for guidance.

G2. Major Equipment

The Offeror shall provide a brief description (including make, model, and optional features) of the generator, crane, winches, capstan, coating system, HVAC system, insulation and silencers, that may clarify the Proposal, and demonstrate quality, enhanced safety, improved performance and reliability of the proposed vessels.

G3. Preliminary Drawings

The offeror shall provide a refinement of the Governments RFP for the Maneuver Barge drawings at larger scale based upon preliminary engineering and specific equipment offered. Major equipment selected by the contractor shall be shown to scale and as it will be located by outline of assembly. The following preliminary drawings shall be provided:

- **604-A105-01 Lines Plan**
- **604-A205-01 Profiles.**
- **604-A215-01 General Arrangement**
- **604-A225-01 Operating Arrangement**
- **604-A550-01 Spud Geometry**

The intent is for offerors to refine the Governments RFP contract drawings based on their proposal preliminary engineering and specific selections of equipment, options and other features. The CAD files of the drawings, are posted as zip files on the Philadelphia District electronic bid sets web site <https://ebs.nap.usace.army.mil> and are accessible for downloading from issue date to due date of the RFP.

G4. Preliminary Calculations

It is anticipated that the offeror will perform some initial engineering and calculations in developing their price proposal. One likely example would be basic scantling calculations to check preliminary strength and stability of the vessel.

The offeror may furnish any background information pertaining to the Maneuver Barges that may further identify specifics of the vessel that will be provided. The Government in its determination of best value will use such information, where more technical definition generally equates to less risk.

H. PRICE EVALUATION CRITERIA

The Price Evaluation Criteria for Award is "Price Reasonableness." The competitiveness of the Offeror's Price Proposal, (page B-1) will be evaluated taking into consideration the most probable price of doing business with the Offeror, based on the merits of "Past Performance and Experience," "Product" and "Management."

Price Realism will be evaluated to preclude financially front loading the contract and to assure that a mathematical imbalance between the price of the three phases does not exist. An award will not be made to an Offeror with an unbalanced offer.

I. REQUIRED PRICE SUBMITTALS

II. Price Proposal

A price for the work outlined in this RFP for the two phases and for the entire job shall be provided with the Proposal by filling in page B-1 of this Solicitation. Note that page B-1 must be returned with the Proposal in separate, or be separable from the rest of the Proposal.

PART IV - REPRESENTATIONS AND INSTRUCTIONS

SECTION M

EVALUATION FACTORS FOR AWARD

The Government intends to award a contract on the basis of "Best Value." The Government will award a contract resulting from this solicitation to the responsible Offeror whose proposal, conforming to the solicitation, will be most advantageous to the Government.

The proposals will be reviewed for completeness against the content requirements outlined in Section L, and evaluated against the evaluation factors listed below:

Technical Factors:

Management
Similar Design and Construction Experience
Past Performance
Product

Price Factor:

Price Reasonableness

The technical factors as a whole are more important than price, however, price remains a significant factor in determining "Best Value."

Further discussion of these factors, format and specific topics to be addressed in the proposal, are listed and described in Section L, "Instructions, Conditions, and Notices to Offerors," which contains the specific proposal submittal requirements pursuant to this Solicitation. Offerors are advised that each proposal submitted shall be complete and in the format required, with information organized as specified in Section L.

Furthermore, each Proposal shall be compatible with Section C - Description / Specification.

All Proposals will be reviewed initially for Proposal submittal compliance and for compliance with the requirements of the technical specifications in Section "C."

The Government may award a contract on the basis of initial proposals received without discussions; therefore, each initial proposal should contain the Offeror's best terms.

The Government reserves the right to award the contract to the Offeror whose proposal is not the lowest in price.

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