

**Performance Work Statement (PWS)
Operation and Maintenance
Of
Environmental Protection Agency (EPA)
Research Vessels**

August 13, 2009

I. OVERVIEW: The U.S. Environmental Protection Agency's Great Lakes National Program Office (GLNPO) operates research vessels to obtain sediment and water samples in the Great Lakes basin in support of the water quality monitoring agreements between the United States and Canada. These vessels include: 1) the Research Vessel Lake Guardian, a 180 ft monitoring vessel; 2) and the Mudpuppy, a 33 ft SeaArk marine survey vessel. The research vessels are fitted with various laboratory capabilities, depending on the vessel; winches and other equipment required for monitoring the Great Lakes. These research vessels are the means for meeting Great Lakes monitoring requirements. Other EPA research vessels may be added to this contract in accordance with the Changes clause. The Lake Guardian and Mudpuppy specifications are listed in Attachment 2 and 3 of this PWS.

The contractor is responsible for operating, updating and maintaining the Research Vessels to permit the vessels to obtain scientific data on the Great Lakes and connecting waterways. In addition, the contractor must obtain all required licenses and permits, and comply with all applicable regulations for the continuous operation of the Research Vessels. The Contractor shall operate, maintain and with EPA approval provide required upgrades and installation of equipment/systems to keep the Research Vessels fully operational. All vessel equipment and systems are to be operated and maintained in accordance with: (1) the original equipment manufacturer's technical manuals and specifications, (2) on board electronic maintenance programs, (3) United States Coast Guard (USCG) regulations, (4) American Bureau of Shipping Rules, (5) and any other applicable federal, state, and/or local regulations. All crew members operating any EPA vessels must have appropriate USCG licenses. The Government requires that the Contractor maintain the various electrical, electronic, mechanical and propulsion systems on the research vessels and advise EPA of necessary repairs, upgrades and installations. EPA will provide approvals for all necessary repairs, upgrades and/or installation prior to work being performed. The contractor must provide all management expertise, personnel, supplies, tools, equipment, and vehicles, unless specified in this contract as Government Furnished Property (see Attachment #7), necessary to operate and maintain the research vessels identified in this performance work statement.

The Contractor must plan, schedule, coordinate and assure effective completion of all services described herein. The Great Lakes National Program Office requires the following operational support:

- Vessel Operations (including crew and personnel requirements, vessel security, navigation, operation, messing, fueling, docking and undocking, pier services such as electrical power, bilge and sewage water disposal, fresh water, trash removal, etc.)
- Port Services (such as docking and undocking, pier services such as electrical power, bilge and sewage water disposal, fresh water, trash removal, etc.)
- Crew Capable Maintenance
- Industrial Assistance
- Dry Dock Requirements
- Inventory, Vessel Inspections, and Parts Management

II. REFERENCED GOVERNMENT PUBLICATIONS: Publications applicable to services under this contract are referenced throughout the contract. These publications (or the latest edition) are mandatory to the extent that a specific procedure or requirement is specified in the Performance Work Statement. Publications and forms listed will be either physically provided or a web site where the publications can be found will be provided by the Government at the start of the contract. Supplements or amendments to listed publications may be issued during the life of the contract. Changes to EPA, publications which impact on the Contractor's costs may be considered under the Changes clause of this contract. Changes to other Government, or regulatory publications referenced in this document shall not be the subject of a claim under the Changes clause. It is the Contractor's responsibility to ensure that all mandatory publications are posted and maintained up to date. Upon completion of the contract, the Contractor must return to the Government all issued publications.

III. OPERATING LIMITS:

- 1. LAKE GUARDIAN:** Services must be provided within the Great Lakes region and connecting waterways, unless otherwise directed by the Contracting Officer. The primary home port location for the Lake Guardian is Milwaukee, Wisconsin.
- 2. MUDPUPPY:** Services must be provided within the Great Lakes region and connecting waterways, unless otherwise directed by the Contracting Officer. The primary home port for the

Mudpuppy is Bay City, Michigan. The Mudpuppy shall be trailered to and from all work sites from and to the Home Port by the Contractor.

3. HOURS OF OPERATION. An estimated operational schedule is outlined below. These estimates are for evaluation and planning purposes only, they are not guaranteed and may be changed at anytime. Estimated Operation Schedule:

| Lake Guardian | | | | | |
|--------------------------------|-------------|------------|--------------------|------------|---------------------------|
| Scheduled Days | | | | | |
| Operations | 2010 | | 2011 - 2014 | | Operational Tempo |
| | Min | Max | Min | Max | |
| Full Operating Status (FOS) | 150 | 270 | 150 | 270 | 24 hour at sea operations |
| Reduced Operating Status (ROS) | 20 | 150 | 80 | 185 | 0730-1630 in port |
| Repair Availability (RAV)* | 30 | 60 | 0 | 0 | Fall 2010 |
| Lay-up Days | 15 | 30 | 15 | 30 | Security Watch |

* The Lake Guardian is scheduled for dry dock in Fall 2010 for a 30-60 day period for a total overhaul. This vessel is typically dry docked once every five years.

| Mudpuppy | | | |
|--------------------------------|------------|------------|--------------------------|
| Scheduled Days | | | |
| Operations | Min | Max | Operational Tempo |
| Full Operating Status (FOS) | 63 | 119 | 10 hours per Day |
| Reduced Operating Status (ROS) | 163 | 213 | 8 Hours per day |
| Weekend, Holiday Lay-up | 83 | 89 | Storage |

3.1 Operation Definitions - Lake Guardian

(a). Full Operating Status (FOS) - Contractor must provide a crew to maintain and operate the vessel on a 24 hour/day basis. Survey and sampling operations may occur for time periods in excess of 12 hours. The contractor is required to provide meals to all embarked personnel including government scientists and representatives. The minimum FOS crew is 11 personnel. This currently consists of a Master, 1st Mate, 2nd Mate, Chief Engineer, Assistant Engineer, Marine Electrician, Able Bodied Seamen (two), Ordinary Seaman, Cook and Steward.

(b) Reduced Operating Status (ROS) – Contractor must provide a crew to maintain and operate (and potentially move the vessel for weather emergencies) the vessel on a 9 hour/day 7 days/week basis. The vessel will primarily be in ROS during winter months (typically October through February) and during extended in port summer periods. The minimum crew level to operate the vessel is five, which at a minimum must consist of the Master. The vessel may be required to get underway for weather related movements during ROS at anytime. A minimum of one crew-member must be onboard the vessel 24 hours/day 7 days/week. All crew members necessary to safely maneuver the vessel in the event of a weather emergency must be on call and be able to return to the vessel within a (1) hour notice. Once a month, during ROS status, all ships engines must be run by the assistant engineer and brought up to operating temperatures. The main engines must not be operated under load. The Government will consider alternate crewing ratings to come to a total crew of five which will be evaluated (i.e. rationale for new crew rating should be provided) in the key personnel/manning approach of the offers.

(c) Repair Availability (RAV) - Contractor must provide two crew members, the Chief Engineer and Master during the dry-dock/overhaul scheduled for the Fall of 2010. The contractor must also maintain a 24 hour/day security watch at the gangway.

(d) Layup Day - At the discretion of the Government, the vessel may be placed into a Layup status, at which time the ship is in port and completely shut down in accordance with procedures developed and provided by the Government. During a period of lay-up, the Contractor must still provide dockage, utilities, port risk insurance, and security services for the ship. The services must include a USCG licensed assistant engineer to maintain and operate all machinery and systems during layup. The assistant engineer must be onboard the vessel 9 hours/day, 7 days/week. He/she must perform daily inspection to maintain and assure the operations of fire and flood areas, inspect sea chests, and operate a small propeller device to keep ice clear of the rudders during cold weather. One person must be onboard the vessel 24 hours/day to provide security services (i.e. assistant engineer 9 hours, security team 16 hours). Once a month, during lay up status, all ship's generators and engines must be run by the assistant engineer and brought up to operating temperatures. The main engines must be operated for 15 minutes one time per week.

3.2 MUDPUPPY

(a) Full Operating Status (FOS). Contractor must provide two crew-members (Master and Marine Technician) responsible for moving the Mudpuppy from its home port to the work site. Typically, the Mudpuppy must be operated during the April through November period and concurrently with the Lake Guardian. The Government will provide a vehicle and trailer to move the Mudpuppy to and from all work sites. Mobilization or demobilization must include, but not be limited to the following: securing boat onto trailer, parking government vehicle, putting the Mudpuppy into the water, docking at facility, securing for overnight storage. Sample

collection work involves positioning the Mudpuppy at designated locations determined by using Differential Global Positioning Systems, and mooring the vessel using a three-point anchoring system. Marine activities in support of sediment sample collection include operating the onboard GPS system unit and support equipment (winches, vibra corer, ponar dredges, Eckmann samplers, box corers), communications with appropriate Coast Guard and port authorities, and purchasing necessary sampling and safety supplies for the Mudpuppy when needed. The typical work day involves one hour preparation and one hour shut down with 8 hours of sampling. The crew members may be required to visit proposed sampling sites to evaluate the suitability of utilizing the Mudpuppy to conduct sampling efforts at the sites.

(b) Reduced Operating Status (ROS) . The Contractor is responsible for safe keeping, maintenance, and storage of the Mudpuppy during non FOS days. The Contractor must perform required maintenance for the Mudpuppy. The Contractor must provide the Mudpuppy's Master during this period to perform maintenance and material improvements on the vessel.

(c) Weekend, Holiday Lay up - On weekends and holidays, the vessel will be placed in Lay up status, at which time the work boat is securely stored in the home port storage facility.

4. GOVERNMENT REIMBURSABLES. Attachment 4 lists the typical types of items that may be required to support both the Lake Guardian and Mudpuppy. The Government will only reimburse actual costs of goods and services provided. The Government will not reimburse telephone services for the vessel. Government personnel onboard carry cellular telephones. Administrative costs such as ordering services and payment of services are the responsibility of the contractor. Administrative costs such as ordering supplies and payment of supplies are the responsibility of the contractor.

5. CONTRACTOR AVAILABILITY. The Contractor must designate a person or persons that can be contacted by the Government on a 24 hour/365 days/year basis. This function may be performed by some one carrying a cellphone or beeper. The Contractor must return the Government's call within 30 minutes.

6. CHEMICAL HYGIENE MANAGER. The Government will monitor the safety of the vessels by designating a Government Representative responsible for the safety of the scientific laboratories and other survey equipment. This Manager has the right to tell contractor employees to stop work in the event that the Chemical Hygiene Manager believes that an unsafe situation exists. For further details concerning the Chemical Hygiene Manager refer to the Great Lakes National Program Office Health, Safety, and Environmental Compliance Manual dated April 2002.

7. TIME/PLACE OF TURNOVER OF VESSEL.

7.1 General. The services furnished under this contract include operation and maintenance of the research vessels will be turned over to the contractor at each vessels home port location.

7.2 Start-up and Phase-in Period Services. The contractor will be allowed to work with government personnel to complete all training and indoctrination of personnel for approximately a one (1) week period.

7.3 The Government reserves the right to substitute, delete, and or add similar EPA vessels, workboats, and watercraft at any time during the contract's period of performance pursuant to the changes clause.

7.4 On commencement and after completion of this contract a joint survey and inventory of the vessels will be conducted by the Contractor and a Government representative.

8. VESSEL OPERATION

8.1 General Requirements. Mechanical, electronic, and other ship equipment including auxiliary boats must be operated and maintained by the ship's crew on a 24 hour/day basis or as stated in paragraph 3.1 and 3.2. Deck equipment for obtaining samples may be operated by the scientific crew and /or by the contractor's crew. Training for visiting scientific staff must be provided by the contractor's crew as needed.

8.2 General Operating Profile. The Contractor must provide sufficient staff to operate both research vessels at the same time. It is estimated that the Lake Guardian will have 150 – 270 FOS days per year when surveys and studies will be performed, and 10 to 30 days per year for public education or other activities. It is estimated that the Mudpuppy will be used 75 days per year when sediment sampling will be performed. These work tasks must be carried out primarily within the Great Lakes Basin, but missions outside of the Great Lakes may be required.

8.3 Government Furnished Schedules. The Government plans to provide the Contractor with one task order per performance period and modifications will be issued adjusting the number of days and the vessels status. The task order shall provide the type of status (i.e. FOS to ROS or vice versa) expected for the two vessels. In addition, the task order will be modified for all repair and upgrade installations which have been approved. The task order will document where the vessels will be operating or in home ported, the type of status required, and when/if additional labor requirements needed in order to fulfill the winter and summer work programs. The Contractor will be given a minimum of 14 day notice prior to changing the ship's status.

9. VESSEL ACCOMMODATIONS AND FOOD SERVICES

9.1 Meals. The contractor shall provide food service for the Lake Guardian's crew and all personnel onboard. Provisions provided to personnel must have a reasonable degree of variety, quality, nutritional value, and unlimited quantity for all meals. Special menu requests for people with food allergies, medical restrictions, and religious restrictions and for vegetarians will be made in advance by the Chief Scientist. Mealtimes must be varied or extended to accommodate Government operational considerations. Quantities of food for the above meals must be unrestricted. The cafeteria service must include napkins, ceramic dishware, glasses and metal utensils. The Chief Scientist must notify the Contractor of the number of Government personnel remaining aboard the ship during in port periods. When requested by the Chief Scientist, the Contractor must provide the personnel assigned to night watch with night lunches. Meal items at the minimum must consist of:

BREAKFAST: (0730-0830)

Eggs/Omelets (any style); Breakfast meat (one)
Fruit (fresh when available); Bread and Toast
Donuts, bagels or sweet rolls; Coffee, tea, milk, cocoa and water
Butter, jelly and syrups
Cold cereals
Fruit juice

LUNCH: (1130 - 1230)

Two entrees (one of which must be hot and one of which must consist of meat)
One sandwich type item (hamburger, tuna salad, grilled cheese, etc.)
Salad bar (containing variety of vegetables and condiments)
Choice of two vegetables; Rice/potatoes
Cold sandwich; Soup
Fruit, Desserts
Bread and butter, Ice cream
Coffee, tea, milk and water

DINNER: (1730-1830)

Two entrees (one of which must be hot and one of which must consist of meat)
Salad bar (containing variety of vegetables and condiments)
Choice of two vegetables, Rice/potatoes
Soup, Fruit, Bread and butter, Choice of desserts
Coffee, tea, milk and water, Ice cream

9.2 Vessel Accommodation Services. The contractor must provide Government personnel with clean linen at the beginning of all operations during which it is planned for them to sleep

onboard. The contractor must replace linen every seven (7) days during extended surveys if requested by personnel.

10. SURVEY OPERATIONS. The Contractor must operate the vessels in support of the survey operations in the most economical manner possible. Surveys must be conducted in accordance with the instructions of the Chief Scientist in charge of the survey, and at such speeds and/or courses as may be requested. In order to ensure the safety of the vessel, the Master has the overall responsibility to determine the ship's movements, especially during weather emergencies, operation in ice infested waters, shallow water, and other high risk situations. Surveys will be cancelled/delayed when in the Master's judgment the safety of the vessel is at risk. Weather delays or any other changes in the ship's schedule must be reported to the Project Officer as soon as possible. A written report detailing the events of the cancelled/delayed survey must be forwarded to the Project Officer within 48 hours.

11. CONTRACTOR AND SCIENTIST INTERFACE. The Chief Scientist will coordinate all ship's movements and scientific operating requirements with the Master. The Chief Scientist is in charge of the survey. The Master is responsible for the proper stowage and securing of all equipment. The Master has the overall responsibility for the safety of the vessel. Safe operation of equipment is the responsibility of the trained person operating the equipment whether contractor or Scientist. The Chief Scientist provides general supervision of all surveys and scientific activities

12. PERSONNEL ISSUES.

12.1 Key Personnel. The contractor must provide the key personnel identified within their proposal. Key personnel shall include, as a minimum, the Project Manager/Port Engineer, Master of the Lake Guardian, Chief Engineer of the Lake Guardian, and Master of the Mudpuppy. The contractor can designate up to 10 individuals as key personnel. In addition, one of the designated key bridge personnel must have a USCG first class pilot endorsement when navigating the Great Lakes between Duluth, Gary, and Buffalo; and between Port Weller and Cape Vincent.

(a) Project Manager/Port Engineer. The Project Manager/Port Engineer must have demonstrated excellent verbal and written communication skills (English only), must be capable of interacting effectively with the EPA Project Officer and other technical and management personnel, and must be able to understand and respond to their concerns in a timely manner. The Project Manager/Port Engineer, ideally, will have Bachelor of Science Degree in Engineering and eight years project engineering or project management experience or must have the equivalent of fifteen years (15) experience related to the performance requirements of this contract. The project manager/port engineer must have a minimum of three (3) years of marine experience on the US Great Lakes procuring berthing, fuel, and repairs. This position can be a collateral duty with another position. The Contractor's Project Manager/Port Engineer must have

experience in the negotiation and administration of contracts for ship construction or overhaul, experience in the inspection of ship overhaul work, and experience in the preparation of contract work specifications and cost estimates for the repair, overhaul, conversion, or construction of ships.

(b) Master of the Lake Guardian. Minimum Requirements are a USCG license of “Master of Great Lakes and inland steam or motor vessels of at least 1600 gross tons.” Master must have experience operating in the Great Lakes and experience with diesel powered vessels. It is desirable that the Master have experience operating in river systems, in shallow waters, and operating a vessel engaged in scientific surveys or oceanographic research and monitoring.

(c) Chief Engineer of the Lake Guardian.

(1) License Requirements. The minimum USCG licensing requirements for the Chief Engineer are license as a Chief Engineer of a motor vessel of at least 2500 hp with at least three years experience, while supervising all engineering, deck, fire-fighting and emergency equipment. The Chief Engineer must have an understanding and be responsible for all electrical, electronic, mechanical, pneumatic, and hydraulic equipment onboard. The experience should include 3 years minimum involvement with routine operation, preventive maintenance, corrective maintenance, and repairs of shipboard systems including, electrical systems, propulsion and electrical generator alarms. The Chief Engineer must have experience in supervising and maintaining preventive maintenance system (PMS) documentation, and history.

(2) General Duties. The Contractor must assign a Chief Engineer to coordinate all maintenance and engineering activities. Responsibilities include both preventive and routine maintenance including record keeping of all maintenance activities performed, and documenting the workings of machinery as well as the repairs carried out. The Chief Engineer must become familiar with all aspects of the preventive maintenance system requirements listed herein. The Chief Engineer must coordinate and establish/maintain an electronic log of fuel consumption and requirements, and maintenance actions accomplished by the Contractor’s personnel and government furnished parts used. Maintenance accomplished by Contractor personnel must include the following:

(a) Daily and Preventive Maintenance: The Contractor crew must perform a regular schedule of preventative maintenance including corrosion control (e.g. touch up painting, rust removal, engine overhauls, pump refurbishment, etc.) in accordance with the ship’s equipment manuals and Government provided Guidance.

(b) Corrective Maintenance: The Contractor crew must perform all maintenance required to ensure the proper operation of the vessel. Corrective maintenance includes the overhaul of the main engines, generators, pumps, electrical systems, and other shipboard systems that do not require industrial assistance. If it is determined the above essential shipboard

equipment is beyond economical repairs, the contractor must notify the Project Officer, and can be authorized by the Contracting Officer to procure and oversee the installation of the replacement equipment in accordance with Paragraph 15, Industrial Assistance of this Performance Work Statement.

(d) **Master for Mudpuppy:** The minimum USCG license requirements are a license of “Master of Great Lakes and inland steam or motor vessel of not more than 100 gross tons”. The Master must have experience in operating on the Great Lakes, rivers, tributaries, bays and harbors, and experience with large horsepower gasoline outboard motors of not less than 100 horsepower rating and demonstrated ability to trouble shoot mechanical problems involving outboard engines, generators, pumps and winches. The Master must have experience in operating in shallow water, in operating a vessel engaged in sediment sampling. The Master must have a commercial class A drivers license with Air Brake endorsement issued by the State of Michigan or equivalent. The Master is required to transport over the road, launch and retrieve a vessel weighing in excess of 10,000 lbs. The Master must have experience in operating and maintaining a Global Positioning System providing sub-meter location accuracy. The Master must have experience in ordering and maintaining a ready supply of all sampling equipment to support the sediment coring operations. The Master must have a 40-hour Hazardous Waste Operation (HAZWOPER) course, along with the required 8-hour annual HAZWOPER refresher training.

12.2 Substitution of Key Personnel. See Solicitation Addendum to FAR Clause 52-212-4, paragraph 8, Key Personnel (EPAAR 1552.237-72) (FEB 1995) DEVIATION.

12.3 No Fraternization Policy. The contractor must develop or maintain a no fraternization policy for their employee, which limits the nonprofessional interactions between the members of the crew and others aboard EPA vessels. The contractor must provide the Contracting Officer with a copy of this policy for review and approval within thirty days following contract award.

12.4 Personnel Performance, Conduct or Actions. In the event that the Government has any reason to become dissatisfied with or to question the qualifications, conduct or performance of any person employed by the contractor, the Contracting Officer will provide particulars to the contractor who must promptly investigate and take the appropriate corrective action. The contractor must provide the Contracting Officer with a written report detailing their investigation, action taken and the basis for such action. The Contractor agrees to use only experienced, responsible, and capable personnel to perform the work. The Contracting Officer may require that the Contractor remove from the vessels any employees who endanger persons or property.

12.5 Additional Personnel

(a) First and Second Mates. The First and Second Mates must each hold a USCG first class pilots license for the waters of the Great Lakes. USCG endorsements are required for the following routes: Duluth, Gary, Buffalo, Cape Vincent (including the Welland Canal). At least one of the Mates or Master must be licensed for each of these routes. Neither Mate is required to be licensed for all routes. Experience serving as a Mate on board limnological or oceanographic research or monitoring vessels is desirable. Experience with diesel powered vessels is required for both Mates. However, the Contract Project Officer upon review of documentation and resumes of potential mates has the discretion to permit the following alternate qualifications:

The First and Second Mates must each hold a valid License issued by the Coast Guard as Master or Mate of Steam or Motor Vessels of the appropriate tonnage for the vessel. The Mates shall be qualified to serve as Pilots on the routes of the Great Lakes in accordance with 46 CFR 15.812, or have a First Class Pilot Endorsement issued by the Coast Guard. Experience serving as a Mate on board limnological or oceanographic research vessels is desirable. Experience with diesel powered vessels is required for both Mates.

(b) Assistant Engineer License Requirements. The Assistant Engineer must as a minimum have a USCG license of Assistant Engineer of steam and motor vessels of limited horsepower. The general duties are to operate and maintain all installed machinery and associated electronic components, both main and auxiliary, electrical, deck equipment, and other mechanical gear aboard the vessel. The engineer must have the administrative ability to keep records and maintain inventory of parts, tools, fuel consumption, etc.

(c) Marine Electrician License Requirements. The Marine Electrician must have USCG endorsement as a QMED (Qualified Member of the Engineering Department) Electrician. A Marine Electrician must be experienced in the installation of electrical devices and wiring aboard commercial or military ships. He/she must document familiarity with USCG and American Bureau of Shipping electrical practice and qualified in the repair and maintenance of marine electrical power generating and distribution systems, voltage regulators, including but not limited to motor controllers, engine controllers, electronic components, winches, gyrocompasses, generators, alternators, intercommunication systems, switching boards, heating and air conditioning, circuit breakers, and lighting and alarm circuits. He/she must have two years work experience as a marine electrician.

(d) Able Bodied Seaman and Ordinary Seaman License Requirements. Seaman must hold USCG Merchant Mariners Document, ("Z" cards) with fire fighting and life boatman endorsement. The general duties of a "Seaman" must be capable of operating a control station involving deployment of a Rosette, and other monitoring equipment, or submersible pumping systems using "A" frames, and experience in operation of small motor boats. The seaman must also have the ability to row a rigid Inflatable (e.g. Zodiac) up to 1700 yards.

(e) **Cook Requirements.** Is responsible for the cleanliness of the galley, refrigerators, freezers, and related galley equipment and workspace; and proper storage and preparation of food. The cook is responsible for use and cleaning of equipment, safety practices, personal hygiene, and conformance with sanitation requirements to prevent food borne illness. He or she is required to be able to read and understand written food labels in English, and be knowledgeable of food characteristics. The cook plans, coordinates, and ensures the time sequence of operations required to meet serving times, plan menus, preparing wholesome and adequate meals for a few and up to as many as 50 plus diners; acquire and manage provisions for the ship when underway, control cost of provisions; maintain inventory of provisions, rotate stock items to prevent spoilage, and keep accurate records of expenditures and receipts. The cook must also be familiar with and strictly observe all regulations pertaining to pollution and waste disposal.

(f) **Steward Requirements.** Is responsible for; the preparation, cleaning and maintaining of the ship's guest quarters. The guest quarters will be utilized by various EPA personnel and other scientific guests. The steward ensures the facilities are sanitary; as well as maintaining and stocking bed linens, blankets, and towels. Cleans and maintains the laundry room. The steward vacuums the galley, mess and lounge floor, as well as cleaning the mess hall tables disposing of any trash and garbage. Clean and maintain the beverage machine and coffee machine. Clean the condiment bottles that are placed on the mess tables. Wash and put away the dishes and utensils after each meal. Re-stock napkins and paper towels in the galley. Assist the cook with cleaning the galley and its equipment. The steward assists the cook with food preparation for meals as needed, or as directed by the cook, and with handling the leftovers after each meal. When assisting the cook with food preparation, the steward must comply with the sanitary requirements for handling food practices. In addition, the steward will accompany the cook to shop for provisions, and to transport, stow and inventory the provisions as required.

12.6 General Personnel Requirements: The following requirements apply to all shipboard contractor personnel performing work on this contract.

(a) **Cardio Pulmonary Resuscitation (CPR) Training.** All personnel must have a current CPR certificate. A copy of each persons CPR certification will be provided to the Project Officer within 14 days after award. In addition, as CPR certificates expire, the new CPR certificate will be provided to the Project Officer within 14 days of the expiration.

(b) **Uniforms.** All contractor employees must wear a Contractor furnished uniform. Contractor must provide both summer and winter uniforms so as not to limit operation. The uniforms must have identification and the employee name and company name visible on the front of outer clothing. All officers must wear Khaki uniforms, and all other crew members must wear blue. Engineering Officers may wear blue coveralls during working periods. The Mudpuppy crew members are not required to wear uniforms.

(c) Identification Badges. Contractor employees shall be furnished with identification badges. The contractor shall provide these badges. The content of the badges must be pre-approved by the Project Officer. The content and design of the badges shall be provided to the Project Officer within 14 days after contract award. The Project Officer will provide written notification of approval/disapproval within 14 day of receipt of the contractor's badge design/content submission.

(d) Personnel Contingency Plan. The contractor must develop a contingency plan adequate to ensure that there is no interruption of training and vessel maintenance service due to labor disruption within the contractor's own labor force. The contractor must prepare this plan and deliver it to the Project Officer no later than 14 days following after contract award.

(e) Medical Requirements. The contractor must test all crewmembers with pre-employment drug screening in accordance with 46 CFR Part 16. The contractor must provide trained, qualified, and medically and psychologically fit personnel consistent with the vessels mission and projected area of operation. The training of the crew and the medical monitoring must be provided at contractor expense. Medical examinations must be performed at initial employment and annually thereafter for all contractor employees including shore side staff. Medical examinations must include pulmonary function test, physical, audiometry, EKG, and spirometry (with respirator certification). The Contractor must provide documentation demonstrating that personnel have been found medically fit for service aboard the research vessels within 14 days after contract award and annually thereafter. In the event of personnel turnover, the contractor is required to repeat medical examinations for replacement employees at contractor expense.

(f) Fire Fighting Training. All personnel assigned to a EPA research vessels must have successfully completed an USCG approved fire fighting school. This training is required every five years. In addition, the contractor is required at all times to have on board, at least two personnel who have been trained at a USCG approved Fire Fighting training school within the last twelve months (except the research vessel Mudpuppy). In the event of personnel turnover, the contractor is required to ensure this requirement is met at all times at the Contractors expense. The current USCG approved fire fighting school certificates will be provided to the Project Officer within 14 days of contract award. The five year renewal certificates will be provided within 14 days of certification expiration.

(g) HAZWOPER Training for the Lake Guardian Contractor's employees. The Contractor's employees who are assigned as Master, First and Second Mate, Able Bodied Seamen, and Marine Technicians must have successfully completed a 24-hour hazardous materials technician course in accordance with 29 CFR 1910.120(q)(6)(iii). This is for the purpose of offering assistance to the U. S. Coast Guard through a coordinated response to a hazardous materials release (e.g., oil, petroleum products, etc.) within the Great Lakes. In the event of turnover, the contractor is required to ensure this one-time requirement is met at all

times at the Contractor's expense. The Contractor must also assure the receipt of annual refresher training to maintain or demonstrate competencies under this requirement, which may be met through the participation in annual exercises and/or related activities aboard the vessel. The current HAZWOPER training certificates will be provided to the Project Officer within 45 days of contract award. The annual renewal certificates will be provided within 45 days of certification expiration.

(h) Citizenship and Security Clearances. All contractor personnel must be citizens of the United States of America, or have appropriate employment documentation. Security Clearances are not required; however, all contractor personnel are required to complete OMB Standard Form 85P "Questionnaire for Public Trust Positions." The SF-85P is attachment 11. An electronic fill able PDF form can be forwarded upon request. Completed SF-85P's will be provided to the Project Officer within 14 days of contract award.

(i) Other Training. The Contractor's employees are required to meet training requirements as noted in Attachment 5. The Contractor must provide documentation demonstrating that appropriate training has been successfully completed. The Contractor is responsible for all costs associated with this training. All contractor personnel must receive all required training within 45 days of contract award. Copies of completion certificates will be provided to the Project Officer.

12.7 Additional Personnel Requirements. Additional staff may be required to supplement the efforts of the Government Scientists. The Contractor is required to have a cadre of additional personnel available to meet the requirements outlined below. The Contractor will be given 14 days notice prior to the date the additional personnel are required on board the Lake Guardian or Mudpuppy.

(a) Marine Technicians General Requirements. The Marine Technicians must be proficient in (1) biological sampling methods, zooplankton nets, microscope, and fluorometer; (2) water chemistry to include, pH meters, turbidity meters, conductivity, alkalinity filtration, and dissolved oxygen sample preparation and measurements, and (3) sediment sampling using ponars, boxcorers, and vibrocorers. Marine Technicians must have a Bachelors of Science degree in Biology, Chemistry, Environmental Science, Natural Resources or a related field. Marine Technician II must have a Baccalaureate Degree in the above plus 4-5 years experience or a Masters Degree plus two years in a field-oriented position. The Marine Tech II must be able to revise Standard Operating Procedures Manuals and Quality Assurance Plans as well as performing reviews of data and analysis of that environmental data generated as a result of the LAKE GUARDIAN's activities. The information then must be input by data entry into an onboard data collection program called GLENDIA, the Great Lakes Environmental Database and /or other onboard database system.

Note: Two (2) Marine Technicians are required aboard the Lake Guardian during the summer work period (Apr-Oct), and one (1) Marine Technician is required during the winter work period. In addition, a third Marine Technician is required during the period (March - October), who will perform functions as described in paragraph (c) below, and who will also function as the main point of contact for the EPA computer network systems' administrator(s) designated as the Technical Points Of Contact (TPOC). The third Marine Technician should be willing to learn and assist as may be required in the limnology work of the other two marine technicians as described in section (12.7(b)) of this statement of work. It is desired that the third Marine Technician have at least an associate degree in computer science, or have at least five years of IT support experience with MS Windows Operating Systems and applications, Oracle and Sqlserver databases, and with computer networks. This Marine Technician will be required to work closely with the EPA TPOC to ensure network reliability, and that all telecommunications are in compliance with US EPA's network security regulations.

The requirement for the third Marine Technician will be based on an option basis as determined by the EPA.

The Mudpuppy will require the senior marine technician during most periods prior to and after FOS periods.

(b) Marine Technicians Work Requirements. The Marine Technician must work independently in the following limnology support areas:

- (1) Logistics of sample collection, preparation, and identification.
- (2) Performance of chemical tests such as reading pH, specific conductance, turbidity, alkalinity and dissolved oxygen measurements.
- (3) Operating and recording sensor data from the Rosette system, Triaxus system and other devices, i.e. Remotely Operated Vehicle (ROV), used to monitor and collect scientific data.
- (4) Filtering and preservation of samples.
- (5) Recording data from scientific equipment for the collection of data.
- (6) Maintain safety logs and perform inspection requirements.

The Marine Technician must calibrate the instrumentation for the following chemistries (pH, conductivity, alkalinity, turbidity, and dissolved oxygen), setting up and making operational the deionized water supply system and establishing the vacuum system and assembly of the filtration manifolds for suspended solids, nutrients, POC, and chlorophyll. In addition, the Marine Technician must support the Triaxus, ROV systems, and other electronic/non-electronic equipment used for monitoring and collecting data to ensure that these devices function properly. Schedule and perform maintenance of these devices in accordance with the manufacturers' specifications and recommendations.

At the start of each sampling day, the Marine Technician for the MUDPUPPY must complete calibration of the Photo Ionization Detector according to the SOP provided by EPA.

(c) Marine Technician Computer Support Requirements In conjunction with the EPA TPOC, the third Marine Technician shall provide technical assistance for the computer systems onboard. They will:

- (1) Provide support in the use of computer hardware and software, including printing, software installation, word processing, data management, electronic mail, and the Microsoft Windows operating systems;
- (2) Ensure that all onboard network computer systems are operating in an efficient, virus free, malware free, secure manner; and in accordance with EPA's information technology security requirements;
- (3) Install new computer network devices and/or modifications of existing network devices attached to the ship's network infrastructure. Installations must be approved by the TPOC to ensure network stability and conformity with the Agency's security requirements;
- (4) Create and maintain login accounts for shipboard users;
- (5) Monitor and maintain all computer systems to ensure proper operations and take corrective action when hardware/software problems are detected;
- (6) Install application software and perform minor repairs to hardware and peripheral equipment when requested by the TPOC;
- (7) Troubleshoot hardware and software errors and resolve hardware and software issues as required and notify the TPOC in the event problems persist;
- (8) Ensure that ship's Satellite internet equipment functions properly, and the internet connectivity is maintained and stable;
- (9) Assist the EPA TPOC in troubleshooting internet connectivity issues by contacting Satellite vendor technical support for assistance and resolution for any prolonged satellite network outages;
- (10) Notify the EPA TPOC by phone of any internet outages that occur longer than one hour. Inform the TPOC of the resolution once the issues are resolved
- (11) Operate and maintain the Triaxus, ROV and other data collection systems' hardware and associated sensor software applications to ensure smooth and efficient performance of the data collection activity. In this regard, it will be necessary for the third Marine Technician to stand a watch in conjunction with the other two Marine Technicians while the sensor packages are deployed;
- (12) Operate, monitor and maintain the backup operations of shipboard data to ensure that all collected data are properly backed up to tapes;
- (13) Maintain and submit the following documentation to the TPOC:
 - (a) a copy of MS Visio diagrams of the ship's current network infrastructure including the ship's network wiring with all attached devices;

(b) a database of each client computer onboard as to place of installation, date bought, installed operating system, installed software, identifying numbers such as EPA property tag number, manufacturer's serial number, manufacturer's service tag number; date warranty expires, amount of installed memory, size of hard drive, and any attached devices;

(c) a database of the assignment of routable and private IP addresses for the ship.

(d) any time that changes are made to the ship's network and computer systems, the network diagrams and databases must be updated, and the TPOC must be provided with a copy of the updated documents.

(d) The Government will reimburse the contractor for all travel expenses incurred to get additional personnel discussed in this section to/from the vessel. Two round trip tickets per year per Marine Technician requested for the Lake Guardian. The Contractor will be reimbursed for actual cost of transportation, lodging, meals, and incidentals in accordance with the Joint Travel Regulations. Reimbursement for airfare must not exceed the lowest customary standard, coach or equivalent airfare offered. The Government will reimburse travel expenses for FOS/ROS crew in the event that the Homeport is changed and the Contractor can document an increase in travel costs.

13. PUBLIC EDUCATION SUPPORT. The Contractor must support embarkations and public affairs activities at the request of the Contracting Officer or Project Officer. The Contractor must stow all gear and equipment properly and clean and prepare the ships to receive guests. The Contractor must provide meals for Government guests as approved by the Project Officer or Chief Scientist. The Contractor must provide tours for groups not to exceed 25 persons. All visitors must be briefed on safety and shipboard issues. The Contractor must make a minimum of three crew-members available for tours (Master, Seaman, & Marine Technician) ratings

14. PORT SERVICES

(a) The Contractor must use every effort to complete in-port duties of refueling, reprovisioning, sewage discharge, etc. as promptly and efficiently as possible. A schedule of all in port periods must be developed and communicated to the Chief Scientist. The Contractor is responsible for all port services and expenses.

(b) The Contractor must arrange for all port services such as electrical power, sewage, water, solid and liquid waste disposal including hazardous materials, telephone services, security, etc. at all ports used/visited by the vessel including Canadian ports. The Master or Officer in charge is responsible for arranging necessary customs clearances and observing necessary protocols. All port services costs are reimbursable including, electrical, sewage

disposal, oily waste disposal, solid waste disposal, docking and undocking fees, etc. At a minimum the following services must be provided at all docking facilities:

- (1) Electric power 110 VAC-100 amp, 208 VAC, and 480 VAC 3 phase 200 amp.
- (2) Sewage disposal
- (3) Capability to handle vehicle traffic to 10 ton capacity.
- (4) Solid Waste Removal

(c) The Lake Guardian is currently berthed at the University of Wisconsin's Milwaukee Marine Facility pier, at 600 East Greenfield Avenue, Milwaukee, WI 53204. The contractor is responsible for all business arrangements with the organization providing these facilities such as rental payment, lease negotiation of warehouse storage space, etc. The docking facilities in Milwaukee, WI have the following capabilities and services on the east dock:

- (1) Electric power 110 VAC-100 amp, 240 VAC-60 amp, and 480 VAC 3 phase 200 amp.
- (2) Sewage disposal on dock.
- (3) Capability to handle vehicle traffic to 10 ton capacity.
- (4) Storage space - 1000 square feet of secure, heated storage space for supplies and equipment in adjacent warehouse.

(d) The Mudpuppy is currently stored at a Bay City, MI warehouse. The Contractor is responsible for transporting the Mudpuppy to and from designated survey sites as directed. The Contractor is responsible for all business arrangements necessary to provide the warehouse space. All costs associated with the warehouse are reimbursable. The current contractor furnished Bay City, MI warehouse storage space is located at 1678 Marquette Ave., Bay City, MI, 48706 with over 6000 square feet of heated storage space for supplies and equipment. Contractor is responsible for all safety and business arrangements for this space.

14.1 CREW CAPABLE MAINTENANCE

(a) **General.** The contractor is responsible for all maintenance including but not limited to corrosion control (e.g. touch up painting, rust removal, etc.), troubleshooting, disassembly, repair, replacement, assembly, startup, adjustments, and other items required for successful operations. All maintenance must be performed in such a manner to minimize the downtime of the vessel during scheduled survey periods. The contractor must maintain the Lake Guardian and Mudpuppy in a high state of cleanliness, preservation, and material condition at all times. The Contractor must maintain the exterior, interior, engine room, and other machinery spaces in a clean, rust-free, and painted condition, as required. The vessels and associated equipment are to be maintained in accordance with original equipment manufacturer's specifications, applicable U.S. Coast Guard regulations, American Bureau of Shipping (ABS) Rules, and other applicable federal, state, or local laws and regulations. The Contractor must maintain the vessels in a

sanitary condition at all times in accordance with standards set forth in the Manual of Naval Preventive Medicine and US Public Health Service (USPH). The Contractor must ensure that all living spaces, recreation lounges, and work areas are free of pests and clean at all times. The Contractor must maintain the bilges, and engine room in a clean oil free condition.

(b) Materials. The Contractor will be reimbursed for all parts and materials required to perform maintenance. During emergencies the Contractor may expend up to \$5,000 on any single repair part order, and \$5,000 for group purchases without prior approval by the Contracting Officer. For any greater amount or non-emergency purchases, the Contractor must obtain the Project Officer's approval prior to the purchase. The Contractor must maintain records of all invoices for parts and materials for Government review and verification purposes.

(c) Consumable Supplies. The Contractor must furnish, at their expense, any consumables required for the performance of this contract. The Contractor is to procure all consumables from commercial sources. A representative list of consumable supplies is outlined in Attachment 4. This list is not intended to be all-inclusive, but is provided to indicate a range and types of consumable items that may be required for this contract.

(d) Laboratory Supplies. The Contractor is responsible for purchasing laboratory supplies as directed by the Project Officer. All laboratory supplies will be reimbursed by the Government.

(e) Tools and Support Equipment. The contractor must be responsible for providing basic hand tools, common support equipment, and any other tools and support equipment not provided by the Government to perform the maintenance tasks delineated in this statement of work along with necessary tool boxes and containers for their storage and safekeeping. The contractor will be reimbursed for special tools/equipment that is needed to maintain and support the daily operation of the Lake Guardian. The contractor must obtain the Project Officer's approval prior to purchasing the special tools and/or equipment. The contractor must maintain records of invoices for Government review and verification purposes. The contractor is financially responsible for damage/loss of government provided and reimbursable tools, and support/test equipment.

(f) Formal Inspections of Vessels Equipment and Systems. The Government will perform periodic formal material inspections of the vessels and equipment. These inspections verify that the vessels and equipment are being properly maintained as well as when and what Industrial Assistance must be performed, or when replacement watercraft and equipment must be obtained.

(g) Predictive Maintenance. The Contractor must perform predictive maintenance. The Contractor must continue to test lube oil and hydraulic oil from all on board equipment including all diesel engines, winches, air compressors, air conditioning units, etc. The contractor is

responsible for testing all lube oil samples and sending a monthly summary of findings to the Project Officer. The potable water must be tested at a minimum of one time per month. The results of this test must also be submitted to the Project Officer.

(h) ABS Inspections. The Contractor is responsible at the Government's expense for all ABS inspections and surveys to ensure the Lake Guardian remains in ABS class. The Contractor must arrange and coordinate all inspections and surveys with the local ABS representative. One copy of the ABS annual survey reports and other documentation must be retained on the vessel, one copy must be provided to the Contracting Officer and one copy must be sent to the Project Officer

(i) Recreational Equipment. The Contractor must perform maintenance and upkeep on all recreational equipment on board the vessel.

(j) Approvals. Prior approval is required to accomplishing any maintenance or repairs on overtime. In an emergency, the contractor must contact the Project Officer. If the Project Officer cannot be reached in a reasonable time, overtime to correct mission critical equipment is authorized to safely maintain the vessel operational. However, the Project Officer must be notified within 48 hours of the time overtime commenced detailing the overtime expended.

15 INDUSTRIAL ASSISTANCE

(a) Industrial Assistance (i.e. subcontracting). When modifications or equipment failures occur that are either beyond the capabilities of the ship's crew or it is more economical to use industrial assistance, the Contractor must develop the work specifications, solicit bids (in accordance with FAR 52.244-2, Subcontracts (Aug 1998) and 52.244-6, Subcontracts for Commercial Items (Dec 2004) for all work over \$2,500), award, manage, and ensure the quality of all work performed by a subcontractor. Whenever possible work required to be subcontracted must be consolidated into a small "work package" to reduce costs. The contractor must submit the work package and/or work specification for the Government review with an estimate of the costs. All subcontracts should be performance based and firm fixed price contracts and whenever possible to small businesses.

The Contracting Officer and Project Officer must be notified of the possible need for a subcontract. Prior to award of a subcontract, the Project Officer will review and make a recommendation to the Contracting Officer. In accordance with the provisions of Contract Clause FAR 52.244-2, the Contracting Officer's consent to a subcontract does not constitute a determination (1) of the acceptability of any subcontract terms or conditions, (2) of the allocability of any cost under this contract, or (3) to relieve the Contractor of any responsibility for performing this contract.

(b) Management of Industrial Assistance. The Contractor must manage all industrial assistance in accordance with the procedures set forth below. The management of industrial assistance by the Contractor must be included in the Contractor's daily rate and must not be a reimbursable cost item.

(1) Status Reports. For all industrial assistance, which exceed 15 calendar days, the Contractor must submit a Weekly Status Report to the Project Officer.

(2) Confer with Government. The Contractor must confer with the Project Officer to ensure that all work is accomplished in accordance with the approved work package. All Government-directed work must be performed and completed to the satisfaction of the Project Officer or on-site Government representative (when one is available).

(3) Change Orders. When a change is required in a subcontract, the Contractor must submit a request for Contracting Officer consent to include a description of the work required, the estimated cost, any additional time required to accomplish the work, reasons why the work was not included in the original work package and why it cannot be deferred until a future work package. The Contractor must notify the Contracting Officer of any change order requirements. The Contractor must be responsible and accountable for properly and accurately documenting all subcontracting actions.

(4) Final Action Report. An Industrial Assistance report must be submitted for all subcontracting actions. The report must include the following information:

- (a) Vessel's name
- (b) Identification of repair activity and brief description
- (c) Anticipated date and times of repair activity;
- (d) Activity performing repairs
- (e) Certification by the ship's Master, Chief Mate, or Chief Engineer as being

accurate

(5) All expensed Industrial Assistance maintenance must be included on the monthly invoice. The invoice must include a summary of the maintenance completed and progress to date.

16. DRY DOCK

16.1 General. The Contractor will identify required work and develop work specifications which include a detailed description of the necessary repairs, equipment affected, and a separate cost estimate.

16.2 Shipyard Administration. The Contractor is required to issue the work package and solicit bids from shipyards in the Great Lakes. The contractor is responsible for selecting the yard, administering the shipyard package, payment and all other administrative and oversight functions required during the shipyard. Previous shipyard periods have lasted approximately 60 days. All administrative costs are at the expense of the contractor including the services of the Contractor's Port Engineer for up to 60 days.

16.3 Preparation for Dry Dock.

(a) Administrative Duties. Approximately 120 days prior to the ship's scheduled overhaul, the Contracting Officer will provide a planning letter to the Contractor stating the approximate start and finish dates for the dry docking, outlining specific work items for accomplishment, and the operational status of the ship during the period. However, absent this planning letter, the Contractor must not be relieved of his/her duties to prepare for and administer the dry docking.

(b) Preparations for Dry Docking. The Contractor must develop a general plan of action and milestones (POA&M) as well as procedures for use in the preparation for and procurement of industrial assistance. The Contractor must provide a copy of the POA&M to the Project Officer for approval. The POA&M and procedures must be a part of the Contractor's Quality System and must, as a minimum, include the activities, procedures, and minimum time frames set forth below. The Contractor must adhere to the schedule and procedures as applicable for each dry docking.

(c) Pre-Dry Docking Inspection. The Contractor must schedule and conduct a pre-dry docking inspection. This inspection must be conducted by the Contractor's Project Manager/Port Engineer in accordance with an inspection plan, which must include sufficient operational tests of equipment, review of records pertaining to the material condition of the vessel, and shipchecks for known Contractor and Government-responsible work items. The inspection plan must be of sufficient detail to enable a complete work package to be developed; thereby minimizing the issuance of change orders during the dry docking performance period. The Contractor must notify the Contracting Officer and Project Officer of the planned date and location of the inspection in order that the Project Officer or Government representative may attend.

(d) Material Procurement. The Contractor must develop sufficient material procurement procedures to ensure that the start of any dry docking and the completion of all scheduled work items are not delayed.

(e) Work Package Submission. The Contractor must submit a work package to the Project Officer for the Contracting Officer's approval. The Contractor must develop procedures for work package preparation that includes sufficient time for Government and the American

Bureau of Shipping (ABS) review of each work item, and allow for revisions. The Contractor must permit a minimum of 18 calendar days for Government review and comment on the work package. The Administrative Contracting officer (ACO) will communicate the Government review comments or approve the work packages when determined to be satisfactory.

(f) Work Package Terms and Conditions. The Contractor must include contract terms and conditions in each work package. The terms and conditions must contain shipyard or repair facility contract performance enforcement language necessary to ensure the requirements of the work package are met. In addition, the terms and conditions must include provisions for liquidated damages for late delivery and the Clause for Waiver of Liens.

(g) Liquidated Damages. Daily liquidated damages, prorated for any portion of a day, will be specified in all overhaul solicitations. Applicable cost amounts will be provided to the Contractor on an annual basis. Liquidated damages assessed a subcontractor must be credited to the Government.

(h) Solicitation Procedures. The Contractor must include in the solicitation provisions at a minimum the specific date, time and place for receipt of offers.

16.4 Dry docking Report. The Contractor must include, in each work package requiring vessel dry docking, provisions for the shipyard to prepare a dry docking report upon completion of the dry docking. The Contractor must distribute this report to the Project Officer and must retain one copy aboard ship. A copy of the shipyard's docking plan (block spotting plan) must be attached to each report.

16.5 Government-Directed Work. The Contractor must prepare for and manage Government directed work as required by the Contracting Officer. Such work will generally be directed for accomplishment during a scheduled dry docking or repair period. Upon receipt of the task order the Contractor must review the work items and provide comments and cost estimates for each item within the time frame requested on the task order. The Contractor must include these work items into the work package.

16.6 Release of Work Package. Upon receipt of the Contracting Officer's approval of the work package, the Contractor must submit the work package to repair facilities within the geographic area defined in the planning letter. The solicitation of bids must be based on the time frame established in the vessel schedule and as stated in the planning letter. If after releasing the work package for bids the Contractor determines that additional or less time is required for the repair period, the Contractor must submit a request for the additional time with full justification. The Contracting Officer will review the requests with the Sponsor (Project Officer) and advise the Contractor of the final determination.

16.7 Offeror's Review and Inspection. The Contractor must provide sufficient time in the procurement schedule for adequate review of the work packages by the interested repair facilities, and for the scheduling of offeror inspections when the ship's schedule permits.

16.8 Opening of Offers and Award of Subcontract. The Contractor must open offers at the time, date and place specified in the solicitation and report the results immediately to the Contracting Officer. The results must be accompanied by the Contractor's recommendation for award of the subcontract. The Contractor's report must include the name, location, total amount offered, cost breakdown for each item, and any exceptions taken by any repair facility with regard to the work package or performance period. Based on evaluation of the opening results and Contractor's recommendation, the Contracting Officer may consent to the placement of the subcontract. In the case of regular overhauls, the Contractor must permit in his procurement schedule a minimum of three working days for Government evaluation of offers and 21 calendar days for dry docking preparation after award and prior to start of the dry docking.

16.9 Inspections and Surveys. The Contractor must include in the procurement schedule the timely notification of ABS of the upcoming inspection requirements. All costs associated with ABS inspections and surveys during the dry dock are at the Government's expense.

17. INVENTORY, VESSEL INSPECTIONS, AND PARTS MANAGEMENT

17.1 Parts Supply, Configuration Control, & Warehousing. The contractor must establish and maintain a system to control, protect, preserve, and maintain all Government Furnished Property. The property control system must be submitted within 14 days of contract award to the Project Officer for review and approval. Records for all Government property in contractor custody are to be maintained in accordance with FAR 45. Physical inventories are to be performed on an annual basis with the Project Officer.

17.2 Initial Turnover Inventory. The Project Officer and contractor will jointly conduct a physical inventory of all Government Furnished Property which will be provided in support of this contract. The joint inventory of all the Government Property shall be completed prior to the turnover of either vessel to a contractor. A projected list of Government Furnished Property is attached as Attachment 7. Upon completion of the joint physical inventory, which officially transfers the Government Furnished Property to the contractor, a modification will be completed replacing Attachment 7 with the Government property actually provided/transferred.

17.3 Vessel Inspection. Each vessel will be jointly inspected by the Project Officer and contractor before turnover to the contractor. The inspections will be videotaped by the Contractor for future reference by either the Contractor or the Government. The Contractor can expect to expend approximately 2 hours videotaping inspections. A copy of the videotape shall be provided to the Project Officer. This inspection will become the baseline for the material condition of each vessel and deficiencies that may be beyond normal wear and tear for a vessel

of that age will be determined and recorded. A plan to correct identified deficiencies will be jointly developed and agreed to by the Project Officer and the contractor.

17.4 Contract Completion Inventory & Vessel Inspection. Upon completion of the contract, a joint inspection and complete inventory of all Government Furnished Material/Equipment/Property shall be accomplished. The Project Officer shall submit a close out inventory report to the Contracting Officer, similar to the initial physical inventory and transfer of the property to the contractor. The contractor is responsible for the costs associated with the replacement of missing/damaged, equipment and inventory in excess of normal wear and tear. Upon completion of the final closeout inventory, the contractor can no longer have access nor is the contractor responsible for the operations and maintenance of the Government Furnished Property. EPA, then becomes responsible for the Government Property.

17.5 Spare and Repair Parts. The contractor shall maintain custody/security of government furnished spare and repair parts and must be responsible for maintaining the spare and repair parts in a Ready-for-Issue (RFI) condition. A part management system must be established to control the inventory of the spare and repair parts onsite to ensure needed parts are available for operational emergencies, and for the efficient use of existing parts. A joint physical (contractor & Project Officer) inventory shall be conducted at the beginning and end of each contract period to verify the identification of parts being provided, their quantities and condition. If the part is not available from the government inventory, the contractor may then purchase the part subject to the conditions for approval and reimbursement contained in this performance work statement. The contractor is responsible for the entire logistics process, including but not limited to identifying the repair part, ordering, storing, shipping, receiving and/or disposing spares and repair parts. The contractor must obtain Project Officer's approval for the purchase of any single part in excess of \$2,500 or for group purchases in excess of \$2,500.

18. CHANGES, UPGRADES AND MODIFICATIONS TO A VESSEL'S INSTALLED EQUIPMENT OR SYSTEMS

(a) Background. Any changes, upgrades and/or modifications shall be made in compliance with Government instructions. A contract modification can be issued based upon the Project Officer's approval of a contractor modification proposal or engineering change.

(b) Government Installed. The Government may accomplish changes and modifications to either of the vessels. Unless otherwise directed by the Project Officer, the contractor will still continue to be responsible for operation and maintenance of all systems/subsystems other than those undergoing change or modification. Installation normally occurs during non-operational or ROS periods.

(c) Contractor Installed. The Government may request the contractor to make changes, upgrades and other modification to either of the vessels. Unless otherwise directed by the

Project Officer, the contractor will continue to be responsible for the normal operation and maintenance of all systems/subsystems while the vessels are undergoing the modifications. Installation normally occurs during non-operational or ROS periods.

(d) Acceptance Inspections and Testing. When any changes, upgrades or modifications to the vessels, its systems or equipment are completed, pre-modification and post-modification inspections shall be conducted. A pre-modification inspection may be accomplished at the discretion of the Government prior to any changes, upgrades or modifications. Acceptance testing of any changes, upgrades or modifications may be conducted as deemed appropriate by the Government.

(e) Reliability/Maintainability Changes, Upgrades or other Modifications. Changes, upgrades or modification requests to improve either vessel's reliability or maintainability (R&M) including parts interchangeability must be submitted to the Project Officer for review and approval. No changes, affecting an increase in costs, shall be made without prior approval of the Contracting Officer. The contractor is responsible for reporting modifications utilizing the appropriate documentation systems.

19. QUALITY and SAFETY REQUIREMENTS

19.1 Corporate Quality Management Plan. The Contractor must develop and maintain a Quality System. This can be either a Quality Management Plan or equivalent documentation that meets the ANSI/ASQC E4-1994 Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs. Please see the GLNPO Quality Management Plan at <http://www.epa.gov/glnpo/qmp/index.html> for more details. The Contractor must provide and maintain a quality management system which includes an assessment of the Contractor's quality management process, process controls, inspection, test, and should be focused on preventing, controlling, and detecting defects. Project specific quality documentation must be submitted for review and approval within 90 days of contract award. (See Reference Attachment 9)

19.2 Quality Management Plan (QMP). A QMP will be submitted within 14 days of contract award. In the event of a revision, the contractor must provide a project specific quality plan to the Project Officer for review and approval not later than 30 days and must update it as changes occur. (See Reference Attachment 9) At a minimum, the plan must include:

(a) An inspection system covering all the services provided in this Performance Work Statement. It must specify the areas to be inspected on either a scheduled or unscheduled basis and how often inspections must be accomplished.

(b) Methods for identifying and preventing defects in the quality of service performed before the level of performance becomes unacceptable.

(c) On-site records of all inspections conducted by the contractor and necessary corrective actions taken. These records must be made available to the Government upon request. Guidance for the development of the plan can be found at:

<http://www.epa.gov/glnpo/qmp/index.html>

19.3 Safety Plan. The Contractor must submit a safety plan, which fulfills the requirements of the International Safety Management Code (ISM). The plan must be tailored to protect and promote occupational safety and health in the research vessel environment, considering jointly the interests of the crewmembers (Contractor furnished labor) and onboard scientists (Government personnel). The safety plan must cover the vessels used and property leased under this contract including all warehouse space. The US EPA VESSEL SAFETY MANUAL is provided in Attachment 6.

The safety plan must specifically address how the contractor must ensure the safety of crew members working alone on the Lake Guardian and Mudpuppy during Layup Status or at the Warehouse. The safety plan must also address the safety program. The safety program, at a minimum, must include physical stress control (ie. heat, cold, vibration, etc.), hearing and sight conservation, lead control, respiratory protection, electrical safety, gas free engineering, radiation protection, lock-out/tag out procedures, hazardous material control and management, mercury control, and polychlorinated biphenyls. With respect to training operations, the safety plan must address methods to identify and communicate recommendations to improve the process, highlight safety hazards, and implement procedures to prevent unsafe practices.

The safety plan must be submitted to the Project Officer within 14 days of contract award for review and recommendations. (See Reference Attachment 9) In the event of a revision, the safety plan implementing the safety program must be submitted to the Project Officer within fourteen (14) days.

Contractor personnel are required to perform, maintain and participate in daily, weekly, and monthly monitoring of ship safety requirements. The Government will routinely conduct safety inspections to monitor performance elements through informal ship visits and on site vessel audits. All deficiencies noted by the Government must be addressed immediately by the contractor or addressed in writing within 2 days of how and when the deficiency will be addressed. The Contractor must assure that all contractor personnel follow EPA safety, health, and environmental requirements, OSHA safety requirements for laboratory operations, U.S. Coast Guard safety requirements for ship operations, ABS requirements for ship machinery and hull requirements, state regulations, ISM code requirements, and STCW 95 requirements. In the event of conflict, the EPA Region 5 Safety Manager will determine which requirements must be followed.

19.4 Safety Certification. The contractor shall hold a Document of Compliance issued by the American Bureau of Shipping signifying its corporate compliance with the International Safety Management Code as promulgated by the International Maritime Organization. Within 90 days, the contractor shall obtain a Safety Management Certificate for the Lake Guardian, issued by ABS under the contractor's Document of Compliance.

20. Hazardous Materials (HAZMAT). The vessels may contain hazardous materials and substances (HAZMAT) that are considered to be regulated such by the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), the Department of Transportation (DOT), or others. The contractor is responsible for providing appropriate HAZMAT training to contractor employees in accordance with applicable OSHA, EPA, DOT or other regulations. This training is intended for employee awareness to HAZMAT handling and policies. For hazardous materials generated during operation and/or maintenance including shipyard periods, the contractor must comply with the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Clean Air Act, the Clean Water Act, OPA 90, and all other applicable statutes and regulations. Hazardous waste must be disposed of at the Government's expense. Hazardous waste must be properly packaged and/or containerized with complete identification of all contents clearly labeled on the container in accordance with all Federal, State and local regulations. The contractor is responsible for any additional expenses/fines incurred as a result of any acts of noncompliance or negligence or violation of federal, state or local laws and regulations as a result of the contractor's management of regulated waste or hazardous materials.

21. CONTRACT ADMINISTRATION

21.1 Contracting Officer's Representative. The Contracting Officer Representative (COR) is the designated Government technical representative and the single point of contact for the contractor. The Contracting Officer Representative is designated in writing by the Contracting Officer. The Contracting Officer Representative may be assisted by other technical representatives. The Project Officer is the designated Contracting Officer Representative.

21.2 Modifications/Change Orders. In no event will any understanding or agreement, modification, change order or any other matter deviating from the terms of the contract be authorized by the Contracting Officer Representative, Project Officer or any other Government personnel. **Only the Contracting Officer** can make changes or modify the terms of the contract.

21.3 Outside Scope. When in the opinion of the contractor, the Project Officer or any other Government personnel requests services outside the scope of the contract, the contractor must promptly notify the Contracting Officer. No action will be taken by the Contractor under such request unless the Contracting Officer authorizes the change.

21.4 Plans, Reports. All technical plans, reports, and other written documents required by this contract must be approved by the Project Officer. The Government has the right to require changes/modifications to all submittals. The Government will provide comments on all submitted documents. All maintenance, deck logs, inventory reports, other business documents i.e. purchase orders, invoices, overtime, records, safety minutes, etc. must be available and are subject to review at all times.

21.5 Project Management Support. The contractor must designate an individual as the Project Manager for this contract. The Project Manager is the contractor's point of contact with the Contracting Officer and the Contracting Officer Representative. The Project Manager will have the authority to commit the contractor in all matters related to this contract. The Project Manager is the contractor's single point of contact in matters concerning this contract. The Project Manager is responsible for coordinating, formulating, disseminating, and implementing all task requirements issued by the Government. The Project Manager may be a collateral duty of the Master or Chief Engineer.

21.6 Emergency Contact. The Project Manager, or designee, must be available to be contacted 24-hrs/day, 7 days a week to respond to emergency situations. This function may be performed by some one carrying a cell phone or beeper. The Contractor must return the Government's call within 30 minutes.

21.7 Master. The Master is responsible for the navigation and care of the vessel as well as the safety of personnel embarked. The Master must execute their duties in accordance with U.S. Coast Guard rules and regulations as well as other federal, state and local laws that may apply. The Master has the sole authority for safeguarding embarked personnel and the vessel assigned to their custody. The Master has the authority to abort operations when in their judgment there is a danger to the safety of embarked personnel and assigned watercraft. Under normal operating conditions the Master must not abort any training operation or other assigned evolution without consultation of the Contracting Officer Representative or Chief Scientist on board.

21.8 Reimbursable. When the Contractor purchases material or services that are reimbursable under the terms of the contract, the Government will reimburse direct costs only. No allowances for G&A, profit, or other corporate costs will be reimbursed. The Contractor must track all expenditures against each line item. The Contractor must notify the Contracting Officer in writing when 80% of the total estimated reimbursable dollars is reached.

21.9 Vessels and Equipment Non-Availability Notice. The contractor must advise the Project Officer when any vessel equipment or system failure occurs that prevents or will prevent accomplishment of scheduled operations.

21.10 Readiness. The Contractor must ensure that vessels are crewed and maintained such that they are ready to support operational requirements in accordance with contract requirements. If

the Contractor fails to provide an operational vessel for reasons including, but not limited to mechanical problems; deficiency of stores or lack of sufficient or properly trained personnel, the Government will have the following options:

(a) Off Hire. The Contractor must be deemed off-hire and the amount payable to the Contractor for the period must be decreased by 70% of the appropriate per diem rate to reflect number of days lost.

(b) Exceptions. The Contractor is not to be subjected to provisions in paragraph 21.10(a) above, if resulting from circumstances not the fault or negligence of the Contractor.

21.11 Equipment Operation. The contractor must operate all shipboard equipment and machinery in accordance with the original equipment manufacturer's technical manuals and specifications, United States Coast Guard regulations, American Bureau of Shipping rules and regulations, and any applicable federal, state, and local regulations. The contractor must comply with EPA regulations, the Clean Water Act, the Oil Pollution Act of 1990, 33 U.S.C. §§2701 et seq., (OPA 90), MARPOL Annex I (which prohibits all discharges of oil in special areas), and all applicable statutes and supporting U.S. Coast Guard regulations. Contractor-operated vessels must handle spill prevention in accordance with local regulations and OPNAV guidance. All Oil Hazardous Substance (OHS) incidents must be reported directly to the local USCG Commander and Contracting Officer Representative. The contractor must maintain and operate all shipboard equipment required for compliance with U.S. Coast Guard oil pollution regulations in accordance with the manufacturer's instructions.

When the shipboard equipment is lost or damaged, the contractor must notify the Project Officer within one hour and must provide explanations as to why the equipment is damaged or lost. The contractor must submit an incidence report within 24 hours to the Project Officer with a copy to the Contracting Officer. If it is determined that the cause of the damage or loss was due to malice or neglect on the part of the contractor's crew, the contractor will be required to reimburse the Government the cost to replace or repair the equipment.

21.12 Vessel Standards of Appearance. All watercraft must be maintained in a neat sanitary condition with all loose gear, equipment and tools stowed in a safe, secure, and orderly fashion. All bright work must be kept shined and all labels and stencils must be kept clearly legible.

(a) Hull and Weather decks. The exterior hull, weather decks and superstructure, including ladders, booms, winches, capstans, and all other deck fittings, must be maintained in a clean, rust free condition. Waterline and draft marks must be repainted with sufficient frequency to ensure a shipshape appearance. The national ensign, jack, pennants, and signal flags must be clean and not be tattered and frayed.

(b) Mooring lines, Rigging and Ground Tackle. Mooring lines, rigging, and ground tackle must be maintained in a clean and orderly fashion. Ground tackle must be regularly inspected and maintained to be rust and corrosion free. Mooring lines and rigging must be maintained in proper working order so that they can handle the safe working load limits for which they were designed.

(c) Engineering spaces. Engineering spaces must be maintained in a neat, clean, oil-free condition with bilges dry, or at a minimum practical level, and oil-free. Attention must be given to small leaks, insulation and lagging, painting and preservation, equipment stowage, and similar housekeeping items. Machinery must be maintained to original equipment manufacturer's specifications and professional marine engineering standards of material condition and readiness required for mission performance. Packing glands, guards, and other similar items must be routinely maintained IAW with OSHA requirements. Constant attention must be given to maintenance and repair actions that impact on safety. A sound painting and coating system must be maintained. Status boards posted instructions and diagrams must be neatly and accurately maintained.

(d) Interior spaces. All interior spaces must be maintained in a clean, corrosion/rust-free and properly painted condition. Decks and ladders must be kept free of tripping hazards. Deck tiles and ladder treads must be replaced as necessary to prevent slipping hazards. Ship's furniture must be maintained in good repair. All interior bright work must be regularly shined.

(e) R/V Mudpuppy and Equipment Decontamination. The Contractor shall implement the attached "Decontamination Standard Operating Procedures (SOPs)" at the completion of each sampling survey, or movement of vessel to a new water body.

21.13 Payment to Subcontractors. The Contractor must pay all subcontractors and other Government reimbursed items within 10 business days of receipt of payment from the Government.

22. DELIVERABLES. The contractor must prepare and submit the following deliverables. (Reference Attachment 9)

22.1 Property Control System. The contractor must establish and maintain an accurate property system to control, protect, preserve, and maintain all Government property. The property control system must be submitted within 14 days of contract award to the Project Officer. Records for all Government property in contractor custody are to be maintained in accordance with FAR 45 & EPAAR 1545. The property listed in Attachment 7 is the property planned to be transferred. Upon contract award, the contractor and Project Officer will conduct a physical inventory within 30 days. The contractor and the Project Officer will sign the transfer documentation letter/memo with the updated Government Furnished Property List attached. This documentation will be provided to the Contracting Officer within 45 days of contract

award. A contract modification replacing attachment 7 shall be completed by the Contract Specialist. The contractor can not take possession of the vessels until this transfer has been completed and provided to the Contracting Officer.

22.2 Severe Weather Response Plan. The contractor must provide a severe weather response and preparedness plan for the vessels in the event of severe weather conditions. The plan must describe in detail the measures that will be taken to protect the vessels and ensure the safety of the people onboard. The plan must also establish procedures for crew notifications and reporting for duty when the vessels are in port. The contractor must submit the plan to the Project officer within thirty (30) days after contract award for review.

22.3 Transition Plan. The Contractor must develop a transition plan which must incorporate turnover of personnel to maintain qualifications and minimize possible work delays. The contractor must provide the Transition Plan to the Project Officer within 14 days after contract award for approval.

22.4 Preventative Maintenance Program. The Contractor must provide to the Project Officer for approval within 30 days after the start of the contract period of performance a four-year long-term maintenance program involving, but not limited to, the overhaul of all ship engines, generators, and other shipboard systems based on the recommendations of the manufacturer's technical data and other maintenance documents available onboard for review.

22.5 Licenses and Documentation. The Contractor must provide required licenses and documentation to the Project Officer for all personnel prior to the personnel boarding the research vessels within 14 days of contract award. This information must be organized and linked to the positions being filled and updated upon any crew turnover.

23. REQUIRED REPORTS: The following reports must be prepared and forwarded to the designated addressees by the contractor in accordance with each specified requirement. Reports submitted under this contract must cite the contract number in addition to identifying the Great Lakes National Program Office and the Environmental Protection Agency (EPA) as the sponsoring program office and agency, respectively. Reports are to be submitted to the addressees identified below within five (5) days after the end of each calendar month.

| No. of Copies | Addressees |
|----------------------|-----------------------|
| 1 | Project Officer (COR) |
| 1 | Contracting Officer |

23.1 Monthly Vessel Status Report. The Contractor must furnish 1 copy of a monthly letter report, to the Project Officer, briefly stating any problems relating to: (1) operating equipment, (2) navigation, communication equipment, (3) any repairs or maintenance accomplished, (4) the fuel status (quantity on board, consumed, purchased), (5) daily noon ship position, and (6) type

of ship day (keyed to the calendar day). The report must also include a summary of daily ship operations.

23.2 Reserved.

23.3 Monthly Financial Report. The Contractor must submit one copy each of a monthly Financial Report to the Project Officer and Contracting Officer. The format of the initial report and any subsequent changes must be approved by the Project Officer. This report must contain, as a minimum, the following information:

23.3.1 Identification - Contractor's Name and Contract Number

23.3.2 Task Order Number

23.3.3 Ship Days identified by date and ship day costs, additional labor used and labor costs and other direct costs and expenditures itemized below in 23.3.6. Additional labor used during the month must be identified by date, hours worked, and location where labor was employed.

23.3.4 Each monthly report must accumulate costs by each category from the effective date of the contract base year (or option year) through the end of the reporting month. This cumulative report must provide a summary of all costs incurred during each vessel's contract year for the base year and each option year of the contract.

23.3.5 The contractor must provide a cumulative report for costs incurred for the Government's fiscal year which starts October 1, and runs through September 30.

23.3.6 Corrective Maintenance Hours expensed. Each financial invoice must clearly indicate the day being invoiced based on ship days, the additional labor costs reported must be clearly identified by date worked and location, and other direct reimbursable costs must be reported using the following categories: (1) Dry dock, (2) Reserved, (3) Surveys and Inspections, (4) Dockage and Port Services, (5) Waste Disposal, (6) Shore Power, (7) Maintenance and Repair, (8) Upgrades, (9) Messing and Berthing, (10) Reserved, (11) Laboratory Supplies, (12) Reimbursable Travel, (13) Reserved, (14) Reserved, (15) Shore Facilities, (16) Fuel, (17) Lube Oil, (18) Reserved, (19) Rental Equipment, (20) Crane Services and Trucking, (21) Miscellaneous. The Monthly Financial Report is due within five (5) days after the end of each Calendar month.

23.4 Winter and Summer Work Lists/Reports. The Contractor must furnish a winter work and a summer work list for recommended maintenance for the research vessels to the Project Officer. The winter work list must be provided by August 15th for the Lake Guardian and November 1st for the Mudpuppy. The summer work list must be provided by March 15th for the Lake Guardian and June 15th for the Mudpuppy. The work lists must contain a description of

work proposed, priority of need ranked as follows: (1) ship can not be operated without completion of work item, (2) ship repair is likely during the coming year unless task is completed, (3) work items are useful, but ship could operate without work item being completed; estimated type of labor required, duration of work in person days, supplies needed, outside assistance, and estimated cost.

23.5 Logs. The Contractor must maintain on board the Lake Guardian complete bridge logs and engineering logs of all generators and engines. A copy of each log, (bridge and engineering logs) must be submitted to the Protect Officer on a monthly basis. The Contractor must also maintain a log book (hard copy and electronic format) onboard the Mudpuppy documenting the following information: Date, time, GPS latitude/longitude, water depth, sampling technique (e.g., “ponar”, “vibracore”, etc.), and length of core recovering (if applicable) for each sampling location.

23.6 Annual Property Inventory. By the end of the base period of the Contract, and by the end of each option period thereafter, the Contractor must submit a current inventory of non-expendable property accountable under the contract to the Project Officer. The format of this report must be approved by EPA.

23.7 Maintenance Reports. The Contractor must submit monthly maintenance reports to the Project Officer. The maintenance reports must identify all maintenance completed. e.g., spare parts used, any overdue preventive maintenance with a reason and estimated date to be completed. The reports must also include updates to the winter and summer work list.

24. PERFORMANCE MEASUREMENT STANDARDS

The deductions listed in Attachment 8, entitled Performance Measurement Standards, apply to the monthly invoice in which each event occurred. Deductions are based on 100% of the contractor's monthly invoice, not including reimbursable items. The contractors' performance will be deemed acceptable when the standard is met.

| Attachment Number | Name |
|-------------------|---|
| 1 | Definition of Terms |
| 2 | Research Vessels Physical Characteristics |
| 3 | Lake Guardian Specifications |
| 4 | Consumable Supplies Representative List |
| 5 | Training Requirements |
| 6 | U.S. EPA Vessel Safety Manual |
| 7 | Government Furnished Property |
| 8 | Performance Measurement Standards |
| 9 | Table of Deliverables |
| 10 | SOP Cleaning of the Mudpuppy |
| 11 | SF-85P Questionnaire for Public Trust Positions |
| 12 | Table of Reports |