

SPECIFICATION for a
500 KVA AC/DC Variable Power Supply

Projects #688-833

1 Jul 2016

1 **SCOPE**

This specification reflects those characteristics that are essential to the minimum needs of the government for a AC/DC Variable Power Supply. The scope of work shall include the "Turn-Key" set-up, operational testing and training of the equipment as specified herein. It is the government's intent that a single (primary) contractor be awarded this contract and be responsible for the accomplishment of all work detailed by this specification.

2 **APPLICABLE DOCUMENTS**

The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on the date of an invitation for bids or a request for proposals shall apply.

2.1 **SAFETY REQUIREMENTS**

- Safety Requirements For The Puget Sound Naval Shipyard And Intermediate Maintenance Facility (PSNS & IMF), Bangor Site

A copy of this document is attached to this specification (See Enclosure 1).

2.2 **ADDITIONAL SAFETY REQUIREMENTS** In addition to the safety requirements specified in Paragraph 2.1, the following is requisite:

2.2.1 The equipment and its component parts shall be in compliance with applicable CFR 29, Part 1910 Regulation and Standards. By definition, any equipment will be deemed acceptable and approved by PSNS&IMF if it meets specific OSHA conditions outlined in OSHA Part 1910; Subparts "O" and "S". Specifically, equipment will be "Accepted" by PSNS&IMF if it has been inspected and found by a Nationally Recognized Testing Laboratory (NRTL) to conform to specified plans or procedures of applicable codes.

2.2.2 Prior to delivery, installation, and acceptance, the contractor shall provide an OSHA compliance report (see Enclosure 1, para. b. Compliance with OSHA) documenting tests and evaluations performed. Failure to provide this report will delay acceptance of the equipment and may result in rejection for failure to comply with the terms of this contract (see Enclosure 1 for specific OSHA Compliance Report content).

2.3 **ENVIRONMENTAL COMPLIANCE REQUIREMENTS**

- Environmental Compliance Requirements For The Puget Sound Naval Shipyard And Intermediate Maintenance Facility (PSNS & IMF), Bangor Site

2.4 **GENERAL ENVIRONMENTAL REQUIREMENTS**

2.4.1 **Hazardous Material Control** shall include the following:

2.4.1.1 Estimated Contractors Hazardous Material Inventory (CHMI) Table provides quantities of each hazardous material to be used on this project. Copies of all SDS's will be submitted to the Base Environmental Office (BEO) and be kept on site where the work is being performed.

2.4.1.2 Contractor shall not use Hazardous Material (HM) composed of any of the following chemicals or substances: Leads, chromium, mercury, phenols, trichloroethylene, chlorofluorocarbons, halon, PCBs, asbestos, silica sand (for use as blasting agent), Class I ODS, radioactive materials or instruments capable of producing ionizing radiation, and chemicals listed in 40 CFR 355.50 Appendix B.

2.4.1.3 If additional HM is required for this project, an SDS shall be submitted to the BEO for approval before the HM is brought on board Naval Base Kitsap Bangor. The contractor shall not bring on board Naval Base Kitsap Bangor any HM until approved by the BEO. All containers of hazardous material shall be resealed, placed in a secure area while on base, and transported off base for reuse of material at other contractor projects. The Contractor shall not generate any contractor generated hazardous or dangerous waste on this project.

2.4.2 **Waste Control** shall include the following:

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2.4.2.1 A trained individual from the shop with a current Waste Originator certification must be present for each shift that hazardous waste is produced.

2.4.2.2 The shop shall submit completed NBK Bangor Waste Information Specification (WIS) forms for all waste, hazardous and non-hazardous, expected to be encountered during the course of this project. The BEO will provide final waste designation along with WIS instructions. If additional wastes are produced after this plan is approved, waste is encountered not identified, or changes occur to waste streams that have already been assigned a WIS number, a new or updated WIS's for each waste stream must be submitted to the BEO for designation.

2.4.2.3 A hazardous waste label must be affixed to the appropriate container upon the first addition of waste. If more than 55 gallons of Dangerous Waste (DW) or 1 quart of Extremely Hazardous Waste (EHW) is produced, the date must be filled in on the label. All containers must be under the control of the shop and located in the same area the waste is generated.

3 **REQUIREMENTS:**

3.1 **GENERAL DESCRIPTION OF SYSTEM** - This specification covers the minimum government requirements for a "Turn-Key" AC/DC Variable Power Supply.

3.2 **WORK INCLUDED** - The Contractor shall be responsible for the following:

- Design, manufacture, test and groom all equipment required to provide a complete system and in accordance with the requirements specified herein.
- All shipping, crating, and rigging costs associated with the transport and delivery of the equipment specified herein.
- Set-up in our facility of the specified equipment with the features identified in this specification. This includes connection of the equipment to required available utilities.
- Complete documentation and organization of all technical data which applies to the operation, maintenance, repair and testing of the specific equipment.
- Provide training to personnel on the proper operation and maintenance of the installed equipment and its component parts.

3.3 **WORK NOT INCLUDED** - The government/receiving activity will provide:

- Air, electrical and other utilities services (within 20 feet) as required for the proper operation of the equipment unless otherwise stated herein.

3.4 **CONDITIONS OF SERVICE AND PERFORMANCE** - The following service and operational conditions shall apply to the equipment delivered under this specification.

3.4.1 **Environmental Conditions** - The specified equipment will be operated in a salt and dust laden outdoor marine industrial environment, subject to high winds, driven rain, sleet and snow, and shall be capable of continuous operation over an extended period of time with minimal maintenance and upkeep. The unit shall be designed to operate in a non-air conditioned manufacturing building in an industrial environment.

- Temperature Range: 15 to 110 °F
- Relative Humidity: up to 100% Non-Condensing

3.4.2 **Electrical** - The proposed system shall not require more than 260 AMPS of 480 VAC, 3-phase, 60 Hz electrical power, in its fully configured and operational state.

3.5 **GENERAL EQUIPMENT REQUIREMENTS:**

3.5.1 **Standard, Off The Shelf Components** - All materials and parts comprising the system shall be new, of current design and manufacture, and shall not have been in prior service except as required for factory testing. Standard, off the shelf components with proven reliability shall be used wherever possible to increase performance reliability and reduce costs. The system components shall be one of the manufacturer's current production models which, on the day this solicitation is issued, has been designed, engineered and sold, or is being offered for sale through advertisements or manufacturer's published catalogs or brochures. System components such as a prototype

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unit, pre-production model, or experimental unit DO NOT qualify as meeting this requirement. The system shall be complete, so that when connected to the utilities identified herein, it can be used for the function for which it is designed and constructed.

3.5.2 **Painting** - All surfaces shall be painted in conformance with the manufacturer's standard practices and good workmanship. Painting shall result in a highly wear-resistant finish, which guarantees continued protection to the surfaces covered against the specified environment under all service conditions. The manufacturer's standard color shall be provided. Lead base or chromium base paints are prohibited.

3.5.3 **Caution - Warning Plates** - Corrosion resistant "Caution" or "Warning" plates shall be securely attached to system components in visible locations, with any safety precautions to be observed by the operator or maintenance personnel permanently marked on the plates.

3.5.4 **Identification Plate** - An identification plate shall be furnished with the system. A nameplate shall be affixed to each major component of the system showing the manufacturer's name, equipment model, year of manufacture, and any other pertinent information for identifying the part as a unique component of the system.

3.5.5 All **Electrical Components** including motors, starters, relays, switches, and wiring shall conform to and be located in accordance with the applicable NFPA, NEMA, and ANSI standards for the intended application. Motors (if required) shall be rated for continuous duty. Motors shall be equipped with ball bearings of the sealed and permanently lubricated type. All electrical motors shall meet NEMA-MG1 requirements.

3.5.6 **Programmable Logic Controller (if applicable)** - The unit shall be manually operated via selector switches located at the operator's work station, utilizing a Programmable Logic Controller (PLC). The system shall be designed to use push buttons and/or switches, touch screen or keyboard control is unacceptable. The PLC shall have memory retention to prevent loss of programming during power outages. A means to directly address the PLC to reassign functions to spare channels in case of a channel failure in a PLC shall be provided.

3.6 **EQUIPMENT TO BE PROVIDED - One (1) AC/DC Variable Power Supply (Phenix Technologies, Model MTS500R-400D or equal)** to include the following minimum (or equal) features:

3.6.1 High Power AC/DC Motor Test System rated at 500 kVA (with all components contained in a single enclosure)

3.6.2 Perform load and no-load tests on three phase induction motors and DC motors

3.6.3 **Input Power Supply** shall include:

3.6.3.1 Main power: 3 Phase, 480 VAC, 60 Hz, 660A

3.6.3.2 Control power: single phase, 120 VAC, 60 Hz, 20A

3.6.4 **AC Outputs** shall include:

3.6.4.1 Three phase AC supply with two voltage taps

3.6.4.2 Output voltage controlled by a column-type variable transformer

3.6.4.3 Carbon rollers for current collection

3.6.4.4 Low voltage difference between adjacent turns and shall provide high resolution on the output

3.6.4.5 Screw and gear variac drive system

3.6.4.6 Tap 1: 0-240VAC; 1200 AAC (approximate value)

3.6.4.7 Tap 2: 0-480 VAC; 601 AAC (approximate value)

3.6.5 **AC Duty Cycle** shall include:

3.6.5.1 Continuous at 100% of rated current

3.6.5.2 Two minutes at 200% of rated AC current

3.6.5.3 Armature Supply: 0-750 VDC; 533 ADC (approximate value)

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- 3.6.5.4 Field Supply: 0-350 VDC; 115 ADC (approximate value)
- 3.6.5.5 Ripple: Armature less than or equal to 5% (approximate value); Field less than or equal to 5% (approximate value)
- 3.6.5.6 Regulation: All supplies minus 10% (approximate value)
- 3.6.6 **DC Duty Cycle:** One hour at 100% of rated current
- 3.6.7 **Unit Capabilities** shall include:
 - 3.6.7.1 AC motors: Load: 500 HP; No-Load: 2500 HP (approximate values)
 - 3.6.7.2 DC motors (at 750 VDC): Load: 400 HP; No-Load: 1600 HP (approximate values)
- 3.6.8 All **Controls and Instrumentation** (to test motors) shall be mounted in the test set enclosure
- 3.6.9 **Instrumentation** shall include:
 - 3.6.9.1 Complete instrumentation for definitive measurement of electrical characteristic of motors under test including: 3-phase metering, VW, CM, Watt, VARS, KVA, and Power Factor
 - 3.6.9.2 All metering shall be displayed on the meter module and digital panel meters, and have accuracy of +/- 1.0% F.S. (approximate value)
 - 3.6.9.3 AC output: Three Voltmeters (Range: 0-480 VAC); Three Ammeters (Range: 0-199.9/1200 AAC (approximate value))
 - 3.6.9.4 DC Armature Supply: Voltmeter (Range: 0-750 VDC); Ammeter (Range: 0-600.0 ADC (approximate value))
 - 3.6.9.5 DC Field Supply: Voltmeter (Range: 0-350 VDC); Ammeter (Range: 0-150 ADC (approximate value))
- 3.6.10 **Design Features** shall include:
 - 3.6.10.1 Main power circuit breaker with indicator
 - 3.6.10.2 Control power circuit breaker with indicator
 - 3.6.10.3 User-friendly testing software
 - 3.6.10.4 Motorized screw and gear drive system for varying the output voltage on each tap from zero to 100% of full tap voltage
 - 3.6.10.5 Motor-controlled output tap selector switch
 - 3.6.10.6 Variable auto transformer with rolling brush assembly
 - 3.6.10.7 Nickel plated travel path
 - 3.6.10.8 Forklift provisions
 - 3.6.10.9 Non-contact tachometer
 - 3.6.10.10 Capable of drawing up to 200% of rated tap current for two minutes
- 3.6.11 **Output Cables:** 75 ft cables shall be provided (one each for each output)
- 3.6.12 **Calibration:** The unit shall have the capability for convenient meter calibration
- 3.6.13 **Safety and Protection Features (or equal)** shall include:
 - 3.6.13.1 Emergency Off mushroom with yellow background
 - 3.6.13.2 Zero-start interlock
 - 3.6.13.3 Five-amp ground fault detection circuit with indicator and reset button

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- 3.6.13.4 Recessed plugs for twist-lock jacks on output leads
- 3.6.13.5 Transient protection on all meters and replays including numerous build-in overload devices for complete unit and operational protection
- 3.6.13.6 Short circuit rating shown on nameplate
- 3.6.13.6 Green color Start Button
- 3.6.13.8 Green color Power on indication light
- 3.6.13.9 20 foot emergency stop pendant (with one-ended being connectorized)
- 3.6.14 Approximate size of unit: 84 inches width, 100 inches length, and 105 inches height (+/-5%)
- 3.6.15 Approximate weight of unit: 11,750 pounds (+/-10%)
- 3.6.16 **Computer and Printer Package:** The contractor shall provide a stand-alone desktop computer and printer (one computer and one printer) shall be of sufficient size and capability to allow an operator to properly operate the 500 KVA AC/DC Variable Power Supply. Provided equipment (desktop and printer) shall have the capability to be connected to the government's computer network/intranet. The computer shall "not" have a camera.
- 3.7 **NRTL (Nationally Recognized Testing Laboratory) Certification** - The equipment shall be NRTL inspected and certified (by an OSHA authorized third party). An NRTL certification report shall be provided. If the equipment type/model has already been NRTL inspected and certified, a certification report or documentation mounted on the equipment (which acknowledges it is NRTL certified) shall be provided.
- 3.8 **CONTRACTOR SET-UP SERVICES TO BE PROVIDED** - The specified equipment and all associated equipment shall be assembled, set-up and tested by the contractor in the area(s) designated as its functional work area by the Receiving Activity Point of Contact. The contractor shall provide all personnel, and supplies necessary for the complete installation and set-up of the proposed system (except as noted elsewhere in this specifications).
- 3.8.1 **Coordination** - The Contractor shall contact the Receiving Activity Point of Contact with a proposed installation schedule (at least one week before the installation starts). The installation schedule shall be subject to review and approval of the Receiving Activity Point of Contact. Approval of installation schedule shall not relieve the Contractor of any responsibility for performance in accordance with the contract. The Contractor shall coordinate the site preparation and the delivery of materials in a manner which causes minimum disruption/interference with the activity's normal business routine.
- 3.8.2 **Work Process** - The Contractor shall provide a field supervisor to direct set up and testing. The field supervisor shall have full authority to implement his field decisions in an expeditious manner. No work shall be accomplished when the field supervisor is not in the immediate work area.
- 3.8.3 **Lifting And Rigger Services** - The contractor shall provide all material handling equipment necessary to unload the specified equipment, transport it to the installation site and any other equipment (such as forklifts, man-lifts, etc.) necessary for continuous support of the removal, transportation and installation of the specified equipment, and shall provide qualified personnel to operate it by the contractor. No cranes shall be used (or forklifts used as a crane).
- 3.8.4 **Contractor Site Visit** - The contractor shall make a site visit to the facility prior to submitting a bid. This shall include viewing the existing facility, utilities, etc. The contractor shall have a complete understanding of the requirements for the demolition/installation of the specified equipment (prior to bidding on this project).
- 3.8.5 The contractor shall install appropriate sized conduit, wiring, connectors, hangers, etc. (approximately 100 liner feet) from an on-site building substation to the site. The contractor shall provide and install an appropriate sized breaker in the substation. The contractor shall prepare and submit a government provided electrical outage form, and coordinate the electrical outage with the base operating contractor (who shall secure electrical power). The contractor shall pay a minor fee to the base operating contractor for this service. The contractor shall provide and install a lockable power disconnect box (on or in the vicinity of the Variable Power Supply equipment) and connect power to the 500 KVA AC & DC Variable Power Supply. Other required minor modifications to the area shall be provided to make the 500 KVA AC & DC Variable Power Supply function properly (as designed).

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3.9 **INSTALLATION SUPPORT SERVICES PROVIDED BY THE GOVERNMENT** - The activity will provide the following in support of the installation:

3.9.1 **Receiving Activity Point Of Contact** - Upon contract award, the receiving activity (Puget Sound Naval Shipyard & Intermediate Maintenance Facility, at Bangor) shall designate a Receiving Activity Point of Contact who shall be responsible for appropriate surveillance and coordination of all services to be performed under this contract. The Receiving Activity Point of Contact shall serve as the contractor's primary contact for all interaction with Government activities.

3.9.2 **Utilities** - Reasonable amounts of water, shop air (80-90 psi) and electricity shall be made available adjacent (within 50 feet) to the assembly site at no cost to the contractor (for temporary use during the installation of the specified equipment). The Contractor shall be responsible for any costs incurred in connecting, converting and transferring the utilities to the work site.

3.9.3 **Lifting And Rigger Services** - The Receiving Activity shall provide all material handling equipment necessary to unload the specified equipment and associated support equipment (unless stated elsewhere in this specification that the contractor shall provide these services).

3.9.4 **Storage** - Lay-down area will be provided within the vicinity of installation site for storage of Contractor materials and tools. The Government does not accept responsibility for security of Contractor's materials or tools. The area must be kept clean and orderly, free of rags, paper and other debris. Failure to maintain area in a clean condition may result in the loss of the area. The Contractor shall be responsible to restore the storage area to original condition after use.

3.9.5 **Disposal Of Waste** - Puget Sound Naval Shipyard and Intermediate Maintenance Facility is the owner of all waste (hazardous or otherwise) generated within its facilities. This includes waste generated by contractor personnel while working at Puget Sound Naval Shipyard and Intermediate Maintenance Facility. All waste generated by this contract shall be turned over to the activity for disposal prior to the end of the work shift.

3.10 **ON-SITE COMMISSIONING/ PERSONNEL TRAINING SERVICES TO BE PROVIDED** - Within five (5) working days after satisfactory completion of acceptance testing of the system, the services of a qualified representative(s) shall be provided for specialized training to familiarize receiving activity personnel with the equipment and to help ensure reliable performance and maximum service life, during normal usage. All commissioning/training shall be provided by a factory authorized distributor. Training services shall be rendered at Puget Sound Naval Shipyard and Intermediate Maintenance Facility. Training shall be scheduled by mutual agreement between the Contractor and the Receiving Activity Point of Contact. Two (2) weeks prior to the start of any training, the contractor shall provide a course outline for government review and comment. Training sessions shall be provided separately for each group/type of government personnel. The contractor shall provide all training manuals and guides. The government shall provide classroom space in close proximity to the equipment/shop (if needed). The entire contractor cost of providing the training (including travel, per diem, etc.) shall be covered by this contract. The training shall apply to personnel as follows:

3.10.1 **Commissioning/Operator Personnel** - Training shall be provided for personnel for a total period of 14 hours, minimum. This training shall include preparation of equipment for operation and actual, safe operation of the equipment.

3.10.2 **Maintenance Personnel (Mechanical/Pneumatic)** - Training shall be provided for personnel at a journeyman mechanic level for a period of 1 hour minimum. This training shall include trouble-shooting and methods of correction if the equipment malfunctions, with particular emphasis on minimizing equipment down time.

3.10.3 **Maintenance Personnel (Electrical/Electronic)** - Training shall be provided for personnel at a journeyman mechanic level for a period of 1 hour minimum. This training, with respect to equipment/controls/drives/interface units and related components, shall include trouble-shooting and methods of correction should equipment malfunction, with emphasis on minimizing equipment down time

3.11 **TECHNICAL DATA TO BE PROVIDED**

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3.11.1 **Operator / Maintenance / Repair Manuals** - The equipment shall be furnished with three (3) hard copies of the manufacturer's standard Operation, Maintenance, and Repair Manual(s), bound in durable three ring binder(s). The manuals shall include all mechanical and electrical schematics showing discrete components/block diagrams/wiring diagrams with inputs and outputs identified/system electrical interface documents and drawings for the specific model of all machine equipment/drives/controls supplied. The information contained in the manual(s) shall reflect the unit and its components in the "as built" configuration. The information contained in the manual(s) shall be adequate to permit trouble shooting and repair of the equipment by journeymen level personnel. The information contained in the manual(s) shall be in the English language. The information contained in the manual(s) shall be in imperial units of measure.

3.11.2 **OSHA Compliance Report** - As outlined in paragraph 2.2.2 and Enclosure 1, Safety Requirements For The Puget Sound Naval Shipyard And Intermediate Maintenance Facility (PSNS & IMF), Bangor Site

3.11.3 **NRTL Certification Report** - As outlined in paragraph 2.2.1 and paragraph 3.8

3.11.4 **Recommended Consumable Spare Parts** - The vender shall provide a list of recommended consumable spare parts and possible sources for procurement.

3.11.5 **Programmable Logic Controller (PLC) (if applicable)** - Documentation for the PLC shall include media and instructions for restoring/replacing the stored program in the event of battery backup failure. One (1) CD backup copy of the PLC automatic program shall be included. Appropriate software shall be provided in CD/DVD format to allow Government maintenance personnel to address, maintain, and adjust the PLC as needed for investigation of equipment malfunction.

3.12 **WARRANTY** - Supplies and services furnished shall be covered by warranty from defects in design, materials and workmanship. The warranty shall be the manufacturer's standard commercial warranty, which shall conform to all the requirements of the contract. Acceptance of the manufacturer's standard commercial warranty shall not minimize the rights of the Government under clauses in the contract, and in any conflict that arises between the terms and conditions of the contract and manufacturer's warranty, the terms and conditions of the contract shall take precedence. The warranty period shall be for 1 year. The warranty period shall commence from the date of acceptance. All warranty work shall be provided by a factory authorized distributor.

4 **QUALITY ASSURANCE PROVISIONS**

4.1 **RESPONSIBILITY FOR INSPECTION** - The Contractor shall be responsible for the performance of all inspection requirements (examinations and tests) as specified herein. The Government reserves the right to perform any of the inspections set forth in this specification, where such inspections are deemed necessary to assure supplies and services conform to the prescribed requirements.

4.2 **RESPONSIBILITY FOR COMPLIANCE** - All items shall meet all requirements of this specification. The inspection(s) set forth in this specification shall become part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspections, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements; however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.3 **INSPECTION/TESTING AT ORIGIN** - Basic performance tests (prior to shipment) shall be conducted by the manufacturer on the primary equipment and all associated equipment to the extent practicable, to demonstrate functionality, to ensure contract requirements are being met. The tests may be performed by the Contractor, either by personnel of their service organization directly, or by an independent testing agency. The contractor shall contact the government two (2) weeks before the completion of the manufacturing of the specified equipment. This shall allow the government the option of sending their technical representative(s) to witness the tests, and to ensure contract requirements are being met, prior to shipment of the unit to the government.

4.4 **INSPECTION/TESTING AT DESTINATION**

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4.4.1 **Initial Test And Grooming** - The equipment delivered with the system shall be inspected by the Government for mechanical and electrical integrity as follows: All welds shall be inspected for integrity and appearance. Surfaces shall be examined for sharp edges and burrs. Fasteners shall be checked for tightness and if fixed to prevent loosening due to vibration. Paint will be checked for flaking and blistering. Electrical requirements shall be examined for compliance to the National Electrical Code, (NFPA 70/79). The fit of parts shall be observed, with particular reference to the interchangeability of those that are likely to require replacement. Faults will be duly recorded and presented to the contractor for rectification.

4.4.2 **Operational Tests** - Upon satisfactory completion of the tests above, the equipment shall be set up for an operational test and evaluation. The contractor shall demonstrate the ability of the equipment to perform as required in this specification. All equipment functions shall be exercised to the extent necessary to prove proper operation in accordance with specification requirements. The system shall function, without failure, for the duration of this test period. If a failure occurs during the test period, repairs shall be immediately affected by the Contractor, and the tests shall be restarted from the first test. Three failures without completion of the test period shall be considered cause for rejection of the system. For the purpose of this test, a "failure" is defined as any equipment malfunction, which requires remedial action to restore the system to full operation in accordance with contract specifications.

4.5 **PROVISIONS FOR REPAIR AND RETEST** - In the event of a test failure, the contractor, at their discretion, may elect to correct the failed condition and request a retest of the system (vs. shipping the equipment back to the manufacturer for repairs).

4.6 **FINAL ACCEPTANCE** - Final acceptance shall be upon satisfactory completion of installation, inspection and testing of the system (as outlined in this specification).

5 **DELIVERY**

5.1 It is required that all goods and services provided by this solicitation be delivered prior to 120 days of contract award.

5.2 The Surveillance Officer shall be notified no less than 48 hours prior to the arrival at the site of the specified equipment and/or contractor personnel.

5.3 Material transportation from the manufacturer's facility to the work site shall be the responsibility of the contractor. Limited secured storage areas at the facility will not permit the Government to store material for extended periods of time. Early shipment of materials, without the permission of the receiving activity shall be refused.

5.4 **Packing Material** - The use of shredded paper, whether newspaper, office scrap, computer sheets, or wax paper, in packing material for shipment to Navy activities, is prohibited.

5.5 It is the Government's intent that the Contractor delivers a fully operational and functional system meeting the requirements stated herein prior to acceptance by the receiving activity and final payment by the government. Delivery of this system shall occur when all deliverable items of this contract have been received, installed and made operational **and** the contractor has demonstrated and the receiving activity has confirmed that the system meets or exceeds the requirements set forth in this specification and is ready for Government use.

6 **GENERAL NOTES**

6.1 **RESPONSE TO REQUEST** - As a part of the response to this request, descriptive literature (in accordance with FAR 52.214-21) shall be furnished in sufficient detail to show that the proposed design will meet these specifications. Vendor submittals shall include brochures of the model being submitted, assembly sketches with critical dimensions, sketches (with dimensions) of all tooling provided, statements of compliance with specification, and performance statements with special attention to the key performance criteria stated herein.

6.2 **ADMITTANCE TO THE WORK SITE:**

6.2.1 Upon contract award, employees or representatives of the Contractor (including sub-contractors) who may require access to the Receiving Activity's facility and shall be admitted to the work site only after they have been issued a security pass/ID badge.

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6.2.2 Contractor personnel requiring access inside of PSNS & IMF, Bangor Site facilities shall complete and submit a "Foreign Ownership, Influence or Control (FOCI) Questionnaire". The contractor can receive a blank copy of the questionnaire from, and then submit the completed questionnaire to PSNS & IMF Security Assistant, Larry Schofield; larry.schofield@navy.mil. FOCI Questionnaires must be sent a of minimum (5) business days before arrival.

6.2.3 Contractor personnel visiting for less than five days (including one-day visits), shall contact the Receiving Activity Point of Contact to schedule a visit(s), and shall provide the following information:

- * Full Legal Name
- * US Citizen (Yes/No)
- * Company Name

6.2.4 Contractor personnel visiting for five or more days shall request security badge requests through the on-line Base Authorization and Visit Request (BAVR) computer system. Go on line to "<https://www.bavr.cnmc.navy.mil/>", and submit a request for a badge, a minimum of five business days prior to arrival. The "Command you are visiting" is: NAVIMFAC. The "Sponsor E-Mail" for an on-line badge should be: larry.schofield@navy.mil (Larry Schofield, 360-315-1187). In the "Purpose of Visit" box, please add the person and the building you are visiting. If the BAVR computer system doesn't work, all visiting personnel shall contact the Receiving Activity Point of Contact to schedule a visit(s), and shall provide the following information:

- * Full Legal Name
- * US Citizen (Yes/No)
- * Company Name

6.2.5 Securing security badges shall require visiting personnel to make daily stops at security pass/ID building (located next to the base's main gate) to pick-up a daily security/ID badge To avoid having to pick-up a security/ID pass daily, and to secure a longer term security pass/ID badge, visiting personnel would need to secure a RAPIDGate pass (for access to the perimeter gates). Information about RAPIDGate passes can be found at the following web site: <http://www.RAPIDGate.com>. There are costs associated with securing RAPIDGate passes. The RAPIDGate pass "sponsor" (and POC for security questions) for our location (NAVIMFAC, also called PSNS & IMF, Bangor Site) is Larry Schofield, larry.schofield@navy.mil, 360-315-1187. Contact information regarding RAPIDGate passes information/questions is Email: info@eidpassport.com; Phone: Toll Free 1-855-243-8343; Local:1-503-924-5300.

6.2.6 Contractor personnel requiring Pier/Waterfront Restricted Area access are required to have a BAVR Badge. A BAVR request must be submitted a minimum of five business days before arrival. Government unescorted access will be given to only those contractors with a security clearance / BAVR approval for Pier/Waterfront Restricted Area workspaces/facilities; All others will require authorized escorts. Contractor personnel may be required to hire (pay for) escorts (when visiting the Pier/Waterfront Restricted Areas). Please contact the Receiving Activity Point of Contact for information about securing authorized escort services.

6.2.7 A Security Pass/ID Badge is obtained by visiting the Security Pass/ID building (located next to the base's main gate), and showing one of the following original documents:

- * Certified Birth Certificate
- * UNEXPIRED Passport/Passport Card
- * Alien Registration Card
- * Enhanced Driver's License
- * Naturalization Papers
- * Statement of Birth Born Abroad

Note: If a document does not have a photo, state-issued photo identification (i.e. Drivers License or ID cards) must also be shown.

6.2.8 Notice: Persons who are currently on probation or parole from a felony conviction, or has a past gross misdemeanor or felony in the past ten years cannot qualify for security clearances, and will be denied access to the activity

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6.2.9 It shall be the Contractor's responsibility to collect and account for all identification passes issued to their personnel at the expiration of the contract or when access is no longer required.

6.2.10 **Foreign Nationals or Affiliations** - Foreign Nationals (non U.S. Citizens) or persons affiliated with, or employed by, a foreign, or foreign owned company will not be granted access without proper Commanding Officer's written approval.

6.2.11 **Identification.** All Contractors shall clearly identify themselves as contractor personnel.

6.3 **RESTRICTIONS:**

6.3.1 **Parking** - Vehicles and equipment required by the Contractor to complete this contract must be registered with Security. Forms for obtaining vehicle passes and permits may be obtained from the Receiving Activity Point of Contact. Parking is available at or near the work site or at other authorized areas on the station. Contractor vehicles must be marked on the outside with the company name or logo or both. Failure to comply will result in ticketing and/or loss of vehicle privileges.

6.3.2 **Regular Working Hours** - All work is to be performed during PSNS & IMF, Bangor Site's regular work hours from 6:30 a.m. to 3:00 p.m., Monday through Friday except for Federal Holidays. If the Contractor desires to work on Saturdays, Sundays, holidays, or outside the regular or specified hours/days, the Contractor shall submit a request to the Receiving Activity Point of Contact, for approval a minimum of two (2) working days prior to the anticipated work date. In no event shall a Contractor carry on work outside the hours and days specified in the contract without prior approval.

6.3.3 **Restricted Colors** - PSNS & IMF, Bangor Site uses the colors magenta and yellow to identify specially controlled materials. The Contractor is specifically prohibited from using magenta and yellow colored plastic wrapping materials or bags, tape, or other covering materials.

6.3.4 **Radio Restrictions** - Operation of privately owned citizens band or amateur radio equipment (receive and transmit) within the geographic limits of the activity is prohibited. All radio equipment installed in privately owned motor vehicles must be turned off upon entering the premises.

6.3.5 **Contractor Electronic Devices** - Use of such devices, including cell phones, and computers shall not be capable of photography or digital recording by contractor personnel at PSNS & IMF, Bangor Site is restricted. This includes personally owned Portable Electronic Devices (PEDs) that are used for storing data, including but not limited to removable storage devices (e.g. memory sticks, rewritable CDs and DVDs, Zip and floppy disks). Contractors requiring such devices in the performance of this contract shall have the equipment inspected and approved by the PSNS & IMF Information Assurance office, located in Bremerton, WA. If this equipment is needed, it must comply with the photography regulations. Please contact Aaron Young at 360-315-5112, aaron.c.young@navy.mil to make a request. Please allow 5 business days for appointments with PSNS & IMF cyber security to be made.

6.3.6 **Photography/Recording** - Contractor personnel are prohibited from having personal reproduction equipment of any kind, including but not limited to photocopying, copying, and/or recording devices. This includes photographic equipment, tape recorders, or other recording devices in their possession while inside the Operations Area (OA). Contractors requiring the use of photographic equipment in PSNS & IMF, Bangor Site spaces must request authorization through the IMF security office. Please contact Aaron Young at 360-315-5112, aaron.c.young@navy.mil to make a request.

6.3.6 **Prohibited Items** - The items listed below are prohibited (and includes any other item, which the possession of is prohibited by Federal, State or municipal law, Department of Defense or Department of Navy instruction directive or policy).

6.3.6.1 Weapons or other dangerous materials of any kind, including but not limited to firearms, ammunition, knives (blades longer than 3-inches), explosives, incendiaries, personal defense aerosols/sprays.

6.3.6.2 Alcoholic Beverages of any kind and illegal to include marijuana.

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7 **PERSONAL HEALTH AND SAFETY**

7.1 The Contractor shall provide their employees with all necessary safety equipment during the performance of work on this contract, and ensure their employees follow safe work practices. All contractor personnel shall have in their possession and shall properly wear OSHA approved personnel protective safety equipment (i.e. hard-hats, steel-toe safety shoes, safety glasses and hearing protection). The Contractor shall provide all appropriate safety barricades, signs, and signal lights required to properly isolate the area of work.

7.2 All Contractors shall clearly identify themselves as contractor personnel.

7.3 **Medical Treatment.** Government emergency vehicles and medical personnel shall only be used in emergency situations affecting contractor personnel whose life may be in danger or who are seriously injured. Government facilities may be used in these instances as the first point of treatment. Transfer to a non-Government medical treatment facility shall be made as soon as possible and as determined by attending medical authorities.

8 **WORK SITE INFORMATION**

8.1 **Regular Working Hours/Shifts.** Regular working hours is normally 8 hours (0630-1500), with a 30-minute lunch break, Monday through Friday. Working hour variations may be requested by contractor personnel, and approved by the Receiving Activity Point of Contact.

8.2 **Holidays and Shutdown Periods.** All shutdown periods, when directed by the Commanding Officer, are normally associated with holidays or inclement weather. Naval Base Kitsap policy is to continue operations during adverse weather. Severe weather may cause an electrical power outage, or snow, ice, or wind conditions may cause the base to remain closed. Other shutdown periods may be declared by Executive Order. Contact the Surveillance Officer regarding severe weather or Executive Order shutdown information. The contractor shall not be required to work during designated shutdown periods. Holidays observed by the contractor shall include all legal holidays observed by the Government. These holidays are:

New Year's Day	Labor Day
Martin Luther King Day	Columbus Day
President's Day	Veterans' Day
Memorial Day	Thanksgiving Day
Independence Day	Christmas Day

8.3 Overtime is not authorized. Overtime is defined as hours worked in excess of the employee's normal workweek. The normal workweek is defined as forty (40) hours.

8.4 Nothing contained in the specifications shall relieve the Contractor from complying with applicable Federal, state, and local laws, codes, ordinances, and regulations, including the obtaining of licenses and permits that may be required for the Contractor or Subcontractor(s) to perform a particular function, such as hazardous waste handling or disposal, for example.

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ENCLOSURE 1

**SAFETY REQUIREMENTS FOR THE PUGET SOUND NAVAL SHIPYARD AND INTERMEDIATE
MAINTENANCE FACILITY, BANGOR SITE**

SCOPE

These specifications provide safety information and procedures required for any work performed at Puget Sound Naval Shipyard and Intermediate Maintenance Facility (PSNS & IMF), Bangor Site. This does not include additional safety requirements from Naval Base Kitsap at Bangor which is the host activity at Bangor.

APPLICABLE DOCUMENTS

The following documents form a part of this specification. Unless otherwise indicated, the issue in effect on the date of a request for proposals or request for quotes shall apply.

National Fire Protection Association (NFPA)

NFPA 54	National Fuel Gas Code
NFPA 70	National Electric Code
NFPA 79	Electrical Standards for Industrial Equipment

Code Of Federal Regulations

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1915	Occupational Safety and Health Standards for Shipyard Employment
29 CFR 1926	Safety and Health Regulations for Construction

(Application for copies should be addressed to Superintendent of Documents, Government Printing Office, Washington, DC 20402)

Washington State Administration Code (WAC)

WAC 173-60	Maximum Environmental Noise Levels
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I. GENERAL REQUIREMENTS

- a. All documentation/correspondence and/or communication specified in these specifications shall be submitted to the Contracting Officer or their designated Government Representative.
- b. **Mutual Understanding Meeting. Prior to commencing work:** The Contractor shall meet in conference with the Contracting Officer, and other necessary Government personnel to discuss and develop mutual understandings regarding administration of the Safety Program, methods and schedules, security, and any other subject necessary for a smooth and successful operation.
- c. **Environmental & Safety Compliance, General Awareness Training, and Regulatory Interface**
 1. Contractors working at the PSNS & IMF are required to perform their work in compliance with all Federal, State, and local regulations pertaining to the environment at all times.
 2. The contractor is responsible for complying with the safety regulatory notices or orders, including payment of any fines attributable to the contractor's conduct, regardless of whether or not the contractor is the name recipient of the notice, order, or fine.

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3. The contractor is responsible to perform all duties and responsibilities for environmental and safety compliance set forth in this contract. The Contracting Officer can use failure to comply with the responsibilities for environmental and safety requirements as a basis for termination for default.

4. Failure to comply with or repeated violations of local, state, or Federal regulations can result in the violator(s) losing their access to PSNS & IMF or the operation being suspended until the Contractor can provide properly trained personnel. Certification of training shall be presented upon request by the Contracting Officer. The contractors (including its employees) loss of access to PSNS & IMF will not be considered by the Contracting Officer as a basis for an adjustment to the contract for additional costs incurred by the contractor.

5. The contractor shall be responsible for conducting routine inspections of the work and storage areas to maintain compliance with the cleanliness and safety requirements associated with this contract.

d. Definitions – Technical:

1. **Contractor.** The term Contractor refers to both the prime Contractor and subcontractors. The prime Contractor shall ensure that his/her subcontractors comply with the provisions of this contract

II. HEALTH AND SAFETY

a. Personal Health And Safety

Contractor work performed at PSNS & IMF is typically in an industrialized area and is subject to OSHA Standards. The contractor shall conduct all work in a safe manner and shall provide all necessary safety equipment.

The contractor shall make the maximum use of low-noise emission equipment as certified by the Environmental Protection Agency. Applicable regulatory requirements for maximum environmental noise levels are published in the Washington Administrative Code, WAC 173-60. The contractor shall provide hazardous noise signs and label equipment wherever work procedures and equipment produce sound-pressure levels greater than 84 dB(A) steady state and/or 140 dB peak sound pressure level for impact or impulse noise, regardless of the duration of the exposure.

b. Compliance With OSHA

Contractor's personnel shall perform all work in accordance with the most current OSHA rules and regulations issued by the Department of Labor, as applicable.

For all electrical equipment installation, the equipment and its component parts shall be in compliance with the applicable OSHA regulations in accordance with CFR Title 29, Chapter XVII, Part 1910 and installed in accordance with NEC/NFPA requirements. Approval shall be as specified under the "Approval" and "Acceptance" criteria in the OSHA regulations Subpart "O", Machinery and Machine Guarding paragraph 1910.212 and Subpart "S" Electrical, paragraph 1910.303 and paragraph 1910.399. After equipment delivery and installation, and prior to testing, the contractor shall provide an OSHA Compliance Report. Failure to provide this compliance report will delay acceptance of the equipment, and could result in rejection for failure to comply with the terms of the contract. This report documents the results of all tests performed, provides an assessment of the equipment performance for compliance with the contract requirements, and forms a basis for recommending a safety certification. The report, test and evaluation shall be a composite of those inspection requirements specified in the contract. The report shall be prepared in an orderly manner to clearly and accurately set forth the collected data and conclusion resulting from these inspection requirements, opinions and subjective conclusions shall be clearly identified. The report shall include, but is not limited to, the following:

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- * List of all tests performed and by whom witnessed.
- * List of data used for evaluation.
- * Tabulation of all discrepancies related to specification performance requirements.
- * Description of limitations revealed by data utilized.
- * Actions taken to mitigate each discrepancy and limitation.
- * Recommendations for subsequent actions.
- * Summary conclusions.
- * Manufacturer Certification that equipment has been manufactured and installed in compliance with OSHA CFR 1910.399 (per definition of "acceptable").

The contractor shall ensure all hazardous material (e.g. hydraulic oil, lubricants, grease, ink, paint, etc.) that is delivered with the equipment, is properly labeled and a Material Safety Data Sheet (MSDS) for each hazardous material is provided, as outlined in OSHA paragraph 1910.1200. MSDS(s) shall be delivered to the Receiving Activity Point of Contract/Surveillance Officer (who will deliver the MSDS(s) to the appropriate Hazardous Material Coordinator for addition of the material to the shop Authorized Use List, and possibly have the material labeled (by the government) with a Hazardous Material barcode).

c. PCB Certification

Provide written certification from the manufacturer that any new equipment provided by this contract contains no detectable PCBs (less than two (2) parts per million (ppm)). The certification shall be on the manufacturer's letterhead and signed by a company official who is empowered to provide same. **PCB Label Plate** – A label plate containing the PCB Certification information shall be permanently affixed to the equipment in the vicinity of the manufacturer's identification plate. The certification label shall be engraved or etched on wear and corrosion resistant material.

d. Safety Equipment

During the performance of work under this contract, all contractor personnel shall have in their possession and shall properly wear OSHA approved personnel protective safety equipment (i.e. hard-hats, steel-toe safety shoes, safety glasses and hearing protection).

The Contractor shall provide all appropriate safety barricades, signs, and signal lights.

e. Safety Inspections

The contractor's workspace may be inspected periodically for compliance with OSHA Standards.

Abatement of violations will be the responsibility of the contractor and/or the Government as determined by the Contracting Officer.

The Contractor shall provide assistance to the Safety Office escort and the federal OSHA inspector if a complaint is filed. Fines levied on the Contractor by federal OSHA offices due to safety/health violations shall be paid promptly by the Contractor.

f. Energy Control

Prior to commencement of work, the Contractor shall submit and exchange lockout/tagout program/procedures with the Government's Representative. The contractor is required to meet with the Government Representative to discuss lockout/tagout interface. The contractor will be using their lockout/tagout procedures per 29 CFR 1915.89.

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Equipment provided by the contractor shall provide energy isolating devices (e.g., safety switches, valves, etc.) to protect personnel from hazardous energy. The devices shall be designed and manufactured such that they can be locked in the user-selected position (ON/OFF) to prevent inadvertent or unauthorized change. Contractor shall ensure all energy-isolating devices installed or modified are capable of being locked. This includes both mechanical and electrical devices.

g. Audible Noise Levels

The peak audible noise emitted by the equipment being installed by the contractor shall not exceed 84 decibels at the operators work position, nor at any other point at a distance of three feet from the equipment, as measured on the "A" weighed scale of a standard sound level meter under all operating and service conditions.

h. Accident Reporting

The contractor shall submit to the Contracting Officer, using the cognizant regulatory agencies prescribed forms, exposure data and all accidents resulting in death, trauma, or occupational disease. Accident reports shall be submitted within 24 hours of their occurrence.

The contractor shall submit to the Contracting Officer a full report of damage to Government property or equipment by Contractor employees. Damage reports shall be submitted within 24 hours of the occurrence.

i. Emergency Medical Care

Only emergency medical care is available in Government facilities to contractor employees who suffer on-the-job injury or disease. Care will be rendered at the rates in effect at the time of treatment. Reimbursement shall be made by the contractor to the Naval Regional Medical Center Collection Agent upon receipt of statement.

j. Fire Protection

The contractor and his employees shall know where the fire alarms are located and how to turn them on. The contractor shall handle and store all combustible supplies, materials, waste, and trash in a manner that prevents fire or hazards to persons, facilities, and materials. Contractor employees operating critical equipment shall be trained to properly respond during a fire alarm or fire.