

Temporary Water Heater
STATEMENT OF WORK

1. **SCOPE**

1.1. Portsmouth Naval Shipyard (PNSY) is seeking to lease a propane powered water heater and associated components for use at Naval Base Point Loma in San Diego, CA. The system must include a water heater; temperature, pressure and flow monitoring capability; and safety, control and isolation valves. The system must be frame/skid mounted with fork truck pockets as well as lifting pad eyes.

2. **REFERENCES**

2.1. ASME Boiler and Pressure Vessel Code, Section IV

2.2. US Federal Standard A-A-59326: Standard for cam action couplings

3. **REQUIREMENTS**

3.1. **Component List**

3.1.1. Required components PC-01 through PC-09 are listed below.

PIECE NO.	QTY.	NAME OF PART	REF. NO.	NSN	PARA NO.
PC-01	1	Water Heater	N/A	N/A	3.2
PC-02	1	Water Heater Drain Valve	N/A	N/A	3.2.3
PC-03	1	Air Vent Valve	N/A	N/A	3.2.4
PC-04	2	Temperature Gauge	N/A	N/A	3.2.7
PC-05	1	Water Pressure Gauge	N/A	N/A	3.2.8
PC-06	1	Flow Meter	N/A	N/A	3.2.9
PC-07	2	Water Heater Isolation Valve	N/A	N/A	3.2.6
PC-08	1	Reducing Tee	N/A	N/A	3.3.1
PC-09	1	Temperature and Pressure relief Valve	N/A	N/A	3.2.10

3.2. Water Heater

- 3.2.1. The water heater shall be capable of providing a minimum output of 600,000 BTU/hr.
- 3.2.2. The Contractor shall provide sufficient propane supply to support continuous operations.
 - 3.2.2.1.1. Any external propane tank(s) shall be 200 gallons minimum.
 - 3.2.2.1.2. Tank shall have a tank level indicator.
 - 3.2.2.1.3. If fuel needs to be refilled, the shipyard will notify the Contractor two (2) days in advance of needing fuel refill.
 - 3.2.2.2. Compliant with California fuel power emissions laws.
 - 3.2.2.3. Contractor shall ensure all permits for operation in California are acquired.
- 3.2.3. The water heater shall have a bottom drain valve installed in accordance with Reference 2.1.
- 3.2.4. There shall be an air vent valve with male NPT threaded connection fitted downstream of the water outlet to allow for air venting during the filling of the tank. This vent valve shall be rated to a minimum of 150 PSI and contain a manual vent feature.
- 3.2.5. Inlet and outlet water connections shall be 2-1/2 IN and must be adapted to 2-1/2 IN diameter cam and groove quick disconnect fittings.
- 3.2.6. Inlet and outlet water connections must be fitted with 2-1/2 IN diameter isolation valves made of nonferrous/metals rated to a minimum of 150 PSI.
- 3.2.7. Must provide temperature monitoring gauges at the inlet and outlet water connections. Temperature gauges must provide a minimum resolution of 1 DEG F over a minimum operating range from 40 DEG F to 150 DEG F.
- 3.2.8. Fresh water inlet must be fitted with a water pressure gauge graded in minimum 5 PSI increments over a range from 0 PSI to 200 PSI.
- 3.2.9. Freshwater outlet must be fitted with a flowmeter rated to a minimum of 150 PSI providing a minimum accuracy of 1% of reading over a minimum range from 50 to 250 GPM and minimum resolution of 1 GPM.
- 3.2.10. The water heater shall have an ASME rated temperature and pressure relief valve installed in accordance with Reference 2.1.

3.3. Fittings

- 3.3.1. Reducing tee, 2-1/2 IN x 2-1/2 IN x 1-1/2 IN made of non-ferrous/non-galvanized metal. End connections must be adapted to accept same size cam and groove quick disconnect fittings.

4. **NOTES**

4.1. **Design and Testing**

- 4.1.1. The design and construction of the water heater shall be in accordance with Reference 2.1. The tank shall have a 150 PSI working pressure.
- 4.1.2. The water heater tank shall contain magnesium anode(s) to protect against corrosion.
- 4.1.3. The assembled water heater jacket shall have a channel iron skid base for ease of installation and lifting lug access.
- 4.1.4. The water heater tank shall be insulated with high-density non-CFC polyurethane foam to meet the minimum stand-by loss requirements of the latest edition of ASHRAE Energy Efficiency Standards.
- 4.1.5. The water heater vessel and electrical controls shall be enclosed in a sheet metal enclosure with hinged door access and key locked door.

4.2. **Contractor Identification of Itemized and Ancillary Equipment**

- 4.2.1. The Contractor shall uniquely tag and permanently mark all its ancillary and itemized equipment / hardware (e.g. manifolds, hose assemblies, pipe fittings, duct adapters, ducting, etc.) so as to differentiate from that owned by either the Shipyard or other Contractors.

5. **GOVERNMENT FURNISHED MATERIAL (GFM)**

- 5.1. The Government will provide all necessary hoses to move fresh water to and from the heater and valves except parts mentioned in 3.1.
- 5.2. The Government will make forklifts and operators available to load and unload the equipment from the Contractor's vehicles.

6. **RESPONSIBILITIES**

6.1. **Government**

- 6.1.1. Equipment Technical Evaluation: C230 Engineering
- 6.1.2. Receipt Inspection: Contracting Officer's Representative (COR) & Technical Point of Contact (TPOC)
- 6.1.3. Schedule equipment delivery & returns: COR & TPOC
- 6.1.4. Schedule equipment service, repair, and training: COR & TPOC

6.2. **Contractor**

- 6.2.1. Use Table E1 of Enclosure 1 to verify conformity with the technical requirements
- 6.2.2. All required State approved safety features (i.e. safety pressure relief valves, low water cutout, over pressure protection) installed with applicable State certification.

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- 6.2.3. The contractor shall maintain a stringent maintenance program and be responsible for all preventative maintenance, except for daily check of liquid levels.
- 6.2.4. The Contractor shall provide repair service within twelve (12) hours after notification by the COR. If the machine or a component cannot be returned to service within twenty-four (24) hours of notification, the Contractor shall deliver a replacement and restore function within forty-eight (48) hours of notification at no extra charge to the Government.
- 6.2.5. The Contractor shall be responsible for equipment failure and shall bear all costs to repair and replace the system or its components unless the Contractor demonstrates that the Government willfully or negligently damaged the system or its components.
- 6.2.6. There shall be no changes unless authorized by the COR.
- 6.2.7. The Contractor shall provide technical support to PNSY project personnel as required and requested by the COR or TPOC.

6.3. Maintenance

- 6.3.1. **Surveillance Checks** –Except for daily surveillance checks (including daily check of liquid levels), the Contractor is responsible for all equipment preventative maintenance, weekly inspections and repairs for the duration of the lease. The Contractor shall coordinate with the COR and TPOC, in writing, to schedule preventative maintenance and weekly inspections.
- 6.3.2. **Preventative Maintenance** - The Contractor shall provide Preventative Maintenance (PM schedules which are equipment specific and include a list of actions for both weekly inspections and PM. The PM shall meet all requirements determined by the Original Equipment Manufacturer (OEM). If a list of actions is not available from or recommended by the OEM, the Contractor shall develop a list of actions and perform these services in accordance with the SOW. The Contractor shall prepare and submit a technical service report that identifies what PM was performed (CDRL A004, B004, C004)
- 6.3.3. **Weekly Inspections** - In addition to providing routine preventative maintenance, the Contractor shall provide a service technician on a weekly basis for the duration of the lease to perform weekly equipment inspections. Weekly equipment inspections shall consist of checking all functional operating parameters of each individual piece of equipment. The Contractor shall prepare and submit a technical field report that identifies what inspections were performed. (CDRL A005, B005, C005)
- 6.3.4. **Repairs** - The Contractor shall provide a qualified service technician to repair all equipment deficiencies and malfunctions and return the system to an operable condition. The response time for the repair or replacement of deficient equipment shall meet the requirements defined in section 6.2.

6.4. Training

- 6.4.1. The Contractor is responsible for and shall provide training sessions to Shipyard Personnel, designated by the COR or TPOC, on the operation and setup of all equipment. The Contractor shall contact the COR to coordinate training with Shipyard Personnel. Training shall be available throughout the duration of the lease to accommodate equipment swap out and seasonal equipment operation.

6.5. **Deliverables** – In addition to all required equipment, the Contractor shall deliver the following technical information. Minimally, the documentation shall consist of:

- 6.5.1. Instructions for Lifting and Handling the equipment with its padeye(s) Certification (CDRL A001, B001, C001)
- 6.5.2. Technical Instructions (TIs) such as an Operations & Maintenance Manual, Operating Instructions, Controls Manual, and/or Mechanical/Electrical Manual with Schematics; Note, all Technical Instructions shall be affixed to each machine. (CDRL A002, B002, C002)
- 6.5.3. Equipment Data Sheet (EDS) (CDRL A002, B002, C002)
- 6.5.4. Points of contact with telephone numbers for requesting emergency repairs 24 hours 7 days a week. CDRL A003, B003, C003)
- 6.5.5. Preventative Maintenance Schedules (CDRL A004, B004, C004)
- 6.5.6. Technical Field Report (CDRL A005, B005, C005)

7. **DELIVERY/ ACCEPTANCE/ RETURN**

- 7.1. **Delivery** - The Contractor shall deliver machinery that is fully-charged/fueled, fully-assembled, ready-to-use, in a first-class-operating condition and functions as intended. The machinery with its support equipment shall be delivered to the site on or prior to the request date. The Contractor shall confirm the date and time of delivery prior to each delivery with the COR and TPOC, if appointed. The Government can provide forklift services for removing machinery from Contractor's transport during work hours. The Contractor shall provide the COR and TPOC with an itemized list of all equipment delivered at the time of delivery.
- 7.2. **Acceptance** - Upon satisfactory completion of inspection and test of the equipment, the authorized Government Representative (PNSY COR and TPOCs) will sign and forward the acceptance document(s) to Code 410 Contracting Division for completion. Unloading of equipment from Contractor's transport does not signify acceptance.
- 7.3. **Start Up** – The Contractor shall be available to: (i) start and run the equipment to verify its operability; (ii) confirm that a set of operating instructions was previously delivered; and/or (iii) instruct designated Shipyard personnel on how to properly run the equipment to include its operation, control, daily checks, & service contacts. For multiple sets of comparable equipment with essentially similar operation, the orientation given to a specific Project on a particular type and/or capacity of machine can be accomplished just once regardless of delivery.

7.4. **Security**

- 7.4.1. To be allowed onto Naval Base Point Loma, personnel must be US citizens and in possession of appropriate personal identification. Proof of US citizenship is required. Allowable documentation of US citizenship is an official government issued Certificate of Birth or Naturalization (w/ raised seal & not a photocopy) or a US passport.
- 7.4.2. Documents: a valid REAL ID compliant driver's license, passport, birth certificate or government CAC. All documents must be active. No expired documents will be accepted.

7.4.3. In order to access NAVSEA spaces a NAVSEA Standard Access Control Badge must be issued by PNSY Detachment Security Office if necessary.

7.4.4. BASE ACCESS: All contractors attempting to access Naval Base Point Loma must ensure they have a valid CAC or DBIDS issued by NBPL or a metro pass for the local area. If neither form of identification is in hand, a Standard Form 5512 for base access must be completed and submitted to Code 1120 Security Office for processing/vetting via the pass office. Once submitted to the pass office, the vetting process takes 7-10 business days. You may check the status or set an appointment for pickup of your DBIDS card by calling the pass office at 619-553-0938. Ensure you have two forms of identification when picking up your DBIDS card. The pass office hours are 6:30 am - 2:45 pm on Monday, Tuesday, Thursday, and Friday; they close at 12:00 pm on Wednesday. The pass office is ALWAYS closed on holidays.

7.4.4.1. BADGE CRITERIA:

- a) Green badges will be issued to contractors who are verified U.S. citizens, have a shipyard sponsor and a verified need to provide a service or perform work at PNSDETSD.
- b) These badges provide unescorted access to the enclave, excluding Nuclear Work Area's (NWA's), Controlled Nuclear Information Areas (CNIA's), Security Islands (SI's) and Other Sensitive Areas (OSA)
- c) The Standard Access Control Badge (SACB) is U.S. Government property, and it must be protected and returned to Darius Randolph/Simon Moffat, PNSDETSD Code 1120 Security Department upon termination of employment, completion of work, service performed, expiration of contract or no longer a need to enter NAVSEA controlled spaces.
- d) The SACB will be displayed at the chest level area of the outer clothing with the picture side visible at all times.
- e) No objects, pins or stickers can be attached to the badge. If the badge becomes faded, damaged or illegible for any reason the bearer will report to the Pass & ID office for a new badge.

7.4.5. Access TO THE ENCLAVE & BOATS Personnel must have a valid CAC or DBIDS card for access to the enclave. IAW with the contract you must also be issued a green badge during the time of services rendered. If entering the base and enclave with a company vehicle, you must have the vehicle inspected at the Commercial Vehicle Inspection Station. Documents: a valid driver's license, DBIDS or government CAC. All documents must be active. No expired documents will be accepted. If access to boats is required a visit request must be submitted to CS11. The Squadron office, or subordinate command, to be visited or having cognizance over the contract is responsible for ensuring that visitors or contractors are informed of the necessity of forwarding a visit request to CSS-11/CSPRWC (Security Management Office (SMO) code: N424745) utilizing the DISS online submission.

7.5. **Receipt Inspection Criteria** - Equipment must meet all criteria defined in this Document.

7.6. **Return** - The Government will provide a temporary storage location convenient for Contractor pick-up. The Government will notify the Contractor as well as the Contracting Office as to when the rental Item has been released and is available for pick-up. The last day of the rental period shall be the next normal workday after the Contractor has been so notified. The Contractor shall be responsible for shipping.

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The Government can provide forklift services during work hours for placing the equipment onto the Contractor's transport.

Enclosure 1

Table E1

SOW Compliance Checklist

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