

Statement of Work (SOW)

Veterans Integrated Service Network (VISN) 8 Boiler Safety Device Testing, Program Development and Training (Multi-year Contract)

1. Statement of Work (SOW)

Contractor shall provide highly qualified, licensed, experienced professional engineering personnel to perform safety device testing, document development and training support to establish a compliant Boiler Safety Program in accordance with Veterans Health Administration (VHA) Directive 1810 – Boiler and Boiler Plant Operations. The contractor shall provide all equipment, supplies, management, supervision, personnel, and transportation necessary to assure that all services are in accordance with the contract and all applicable laws and regulations. The contractor shall ensure all work meets performance standards specified in this SOW and referenced documents.

All documents developed and training provided is to be in accordance with the following:

- Federal Acquisition Regulation 52.212-4(q): Other compliance. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.
- VHA Directive 1810, “Boiler and Boiler Plant Operations”
- VHA Directive 2010-031, “Boiler Plant Safety Education”
- VHA Boiler Safety Device Testing Manual – 4th Edition

Locations of Work (8 parent sites and 2 OPCs):

- C. W. Bill Young (Bay Pines) VA Medical Center and Lee County VA Health Care Center
- Bruce W. Carter (Miami) VA Medical Center
- Malcolm Randall (Gainesville) VA Medical Center
- Lake City VA Medical Center
- Orlando, Lake Nona VA Medical Center and Orlando, Lake Baldwin VA Outpatient Clinic
- San Juan VA Medical Center
- James A. Haley (Tampa) VA Medical Center
- West Palm Beach VA Medical Center



Boiler Information by Site:

SITE	BOILER #	NAME BRAND	TYPE (Water Tube, Fire Tube, etc.?)	LOW OR HIGH PRESSURE?	CAPACITY	ALTERNATE FUEL SOURCE (Natural Gas, Propane, etc.)
Bay Pines	1	Cleaver Brooks	Fire Tube	High Pressure	500HP, 17,250 lbs/hr	#2 Fuel Oil w/ Propane Ignition
	2	Cleaver Brooks	Fire Tube	High Pressure	500HP, 17,250 lbs/hr	#2 Fuel Oil w/ Propane Ignition
	3	Cleaver Brooks	Fire Tube	High Pressure	500HP, 17,250 lbs/hr	#2 Fuel Oil w/ Propane Ignition
	4	Cleaver Brooks	Water Tube	High Pressure	200HP, 6,900 lbs/hr	None- Laundry Equipment
	5	Cleaver Brooks	Water Tube	High Pressure	200HP, 6,900 lbs/hr	None- Laundry Equipment
	6	Precision Parts	Electric-Water Heater	Low Pressure	3.0 MBTU	None - Temp Boiler B-102
Lee County	1	Laars	Gas-Water Heater	Low Pressure	2.4 MBTU	None
	2	Laars	Gas-Water Heater	Low Pressure	2.4 MBTU	None
	3	Laars	Gas-Water Heater	Low Pressure	2.4 MBTU	None
Miami	1	Hurst	Fire Tube	High Pressure	400HP, 13,800 lbs/hr	#2 Diesel w/ Propane pilot
	2	Hurst	Fire Tube	High Pressure	400HP, 13,800 lbs/hr	#2 Diesel w/ Propane pilot
Gainesville	1	Keeler	Water Tube	High Pressure	580HP, 20,000 lbs/hr	Propane Pilot, #2 Fuel Oil
	2	Keeler	Water Tube	High Pressure	580HP, 20,000 lbs/hr	Propane Pilot, #2 Fuel Oil
	3	Keeler	Water Tube	High Pressure	580HP, 20,000 lbs/hr	Propane Pilot, #2 Fuel Oil
Lake City	1	Superior	Fire Tube	High Pressure	362HP, 12,050 lbs/hr	Propane Pilot, #2 Fuel Oil
	2	Superior	Fire Tube	High Pressure	362HP, 12,050 lbs/hr	Propane Pilot, #2 Fuel Oil
	3	Superior	Fire Tube	High Pressure	362HP, 12,050 lbs/hr	Propane Pilot, #2 Fuel Oil
Orlando LN	1	Cleaver-Brooks	Fire Tube-750 HP	High Pressure	837HP, 28,875 lbs/hr	Diesel Fuel #2
	2	Cleaver-Brooks	Fire Tube-750 HP	High Pressure	837HP, 28,875 lbs/hr	Diesel Fuel #2
	3	Cleaver-Brooks	Fire Tube-750 HP	High Pressure	837HP, 28,875 lbs/hr	Diesel Fuel #2
Orlando LB	1	Cleaver-Brooks	Fire Tube-200 HP	High Pressure	200HP, 6,900 lbs/hr	Diesel Fuel #2
	2	Cleaver-Brooks	Fire Tube-200 HP	High Pressure	200HP, 6,900 lbs/hr	Diesel Fuel #2
San Juan	1	York Shipley	Fire Tube	High Pressure	250 HP, 8,625 lbs/hr	Diesel fuel only
	2	York Shipley	Fire Tube	High Pressure	250 HP, 8,625 lbs/hr	Diesel fuel only
	3	Future boiler	Fire Tube	High Pressure	???	Diesel fuel only
	4	Temporary boiler	Fire Tube	High Pressure	???	Diesel fuel only
Tampa	1	English Boiler	Water Tube	High Pressure	500HP, 17,250 lbs/hr	Propane
	2	English Boiler	Water Tube	High Pressure	500HP, 17,250 lbs/hr	Propane
	3	English Boiler	Water Tube	High Pressure	500HP, 17,250 lbs/hr	Propane
West Palm Beach	1	leaver Brooks CB 200-40	Fire Tube	High Pressure	376HP, 13,000 lbs/hr	Nat Gas Primary, #2 Oil Secondary
	2	leaver Brooks CB 200-40	Fire Tube	High Pressure	376HP, 13,000 lbs/hr	Nat Gas Primary, #2 Oil Secondary
	3	leaver Brooks CB 200-40	Fire Tube	High Pressure	376HP, 13,000 lbs/hr	Nat Gas Primary, #2 Oil Secondary

2. Specific Tasks - This requirement has four (4) different tasks as follows for the sites identified above:

A. Task #1: Develop Standard Operating Procedures (SOPs) for the testing of each Boiler Safety Device:

- 1) SOP shall be unique to each Boiler (if device varies between boilers) and shall be compliant with the VHA Boiler Plant Safety Device Testing Manual, 3rd Edition dated September 2012.
- 2) SOP shall include devices included in both Monthly and Semi-Annual test frequencies.
- 3) The test procedure developed shall be successfully vetted and tested while the vendor is physically present on-site. The testing may be performed by VA personnel or the Contractor. The Contractor shall modify the written procedure as necessary to ensure the test is functional, safe, and specific to each safety device and can be fully and successfully executed as prescribed by the written procedure. The

Contractor will train the Utility Systems Operator's (USO(s) present during the test in the proper execution of each test.

- 4) The SOP shall include any fillable forms, checklists or attachments necessary to demonstrate successful completion of each Safety Device test.
- 5) Deliverable for this task shall be complete SOPs in digital format (Microsoft Word, current version and accepted by the COR. Additional submissions are not an entitlement for an upward price adjustment.

B. Task #2: Perform Boiler Safety Device Testing and Alternate Fuel Source Testing:

- 1) Perform all safety device testing in accordance with the VA's Safety Device Testing Manual, 4th Edition.
- 2) Testing will include the firing off on Oil/ Propane or other alternate fuels, economizer and all safety devices to ensure a safe and energy efficient Boiler Plant operation.

C. Task #3: Develop Training Plans, Competency Plans, and Supervisory Guide to Managing Boiler:

- 1) Review VA's competency forms and amend/improve them as necessary for compliance with VA directives/policies and industry standards.
- 2) Develop Training Plans, Competency Plans, and Supervisory Guide to Managing Boiler Plants.
- 3) Develop an employee and new employee training requirements document including item number 2 above with sign off by Boiler Plant Supervisor and Chief Engineer/Facility Manager.
- 4) Develop a system to assist Boiler Plant Supervisor in the management of the boiler plant as required by the latest Directive.
- 5) Train each USO in how to perform the testing of each Safety Device in conjunction with the SOPs written for the testing procedure.
- 6) Document satisfactory competency of the USO performing the test. Note: All USO's may not be available to demonstrate competency, therefore the contractor shall only document competency for those USO staff present during the individual device testing.
- 1) Deliverable for this task shall be complete competency and training forms in digital format (Microsoft Word, current version) and in hardcopy with appropriate signatory for verification of competency and training conducted on-site by the contractor accepted by the COR. Additional submissions are not an entitlement for an upward price adjustment.

B. Task #4: Review and Develop Site Specific Policy and Procedure Documents:

All boiler program documents are to be compliant with VHA Directive 1810 and are to include the specific items described below.

- 1) Review all existing program documents to include but is not limited to policies, procedures, standard operating procedures, safety device preventive maintenance schedule, etc. Update and/or develop new documents as necessary to ensure program documents comply with VHA Directive 1810 and its references.
- 2) A clear statement and definition of safety as the first priority for boiler plant operations. Boiler plant safety must not be compromised to maintain steam service.
- 3) A requirement that all safety Devices installed in the boiler plant, or in fuel systems, steam distribution systems and condensation return systems, are tested as defined in the directive to ensure their proper function.
- 4) A written training program to develop, maintain, and regularly refresh operator proficiency in safe boiler plant operations to include documented formal and on the job training (OJT)
- 5) A steam conservation program that addresses items such as maintaining steam traps, condensate return pumps, and the integrity of piping systems and pipe insulation.
- 6) A steam load shedding plan that may be implemented during a boiler plant emergency that reduces steam generating capability and identifies the critical loads.
- 7) Lock-Out Tag-Out: Review, assess and develop a compliant Lock-Out Tag-Out policy and procedure and provide recommendations on lock-out tag-out supplies necessary to coincide with the written procedure.
- 8) A statement that all required policies are in place per the Directive and are kept current via annual review. (Note: This document must include a review form that can be completed annually by Engineering Management and includes signature lines).
- 7) Deliverables for this task shall be complete Policies and Procedures in digital format (Microsoft Word, current version) accepted by the COR. Additional submissions are not an entitlement for an upward price adjustment.

2. Contractor Qualifications

- A. The VA has unique requirements established for the safe operation of boiler systems that are substantially different than that of private sector healthcare facilities, state operated healthcare facilities, and other federally operated healthcare facilities. Boiler Plant Operations are critical to the Medical Center Operation and have the potential for massive personal and physical damage if not properly maintained. Due to this, contractors will be evaluated based on qualifications and experience as a first priority. This is Per VA Directive 1810, Boiler Plant Operations. The Directive states for inspection and testing services "Selections of contractors for plant services including boiler inspections, burner adjustments, testing of safety devices, calibration of instruments, and monitoring of water treatment must be based on quality as the first priority. As this contract is for training and testing, which will form the foundation of the support of this directive the contracting

method chosen, must allow contractors to be selected on the basis of qualifications and experience as a first priority.”

- B. The successful offeror shall specialize in boiler plant engineering safety, efficiency, operations, and be able to demonstrate qualifications as evidenced by licensed Mechanical Engineering staff with course work in boiler systems, experience, education, qualifications, licensures, and competence in the following areas as evidenced by publications, references, and other applicable credentials:
- 1) At least ten (10) years of teaching and training on VA boiler plant equipment and systems (boilers sized from 10,000 pounds of steam per hour and larger) to plant personnel.
 - 2) At least ten (10) years of experience with auditing and reporting on VA boiler plant equipment and safety.
 - 3) At least ten (10) years of experience troubleshooting and analyzing problems related to VA boiler plant systems with boilers sized from 10,000 pounds of steam per hour and larger.
 - 4) At least ten (10) years of experience with performing statistical analysis of VA boiler systems for individual site reports that evaluate what areas of improvement are needed.
 - 5) At least ten (10) years of experience in writing and interpreting boiler and boiler plant safety device testing procedures specific to VA boiler systems.
 - 6) At least ten (10) years of experience in safety device testing specific to the VA's Boil
 - 7) Shall have credentials as professors/instructors of engineering disciplines and tenure at a major university.
 - 8) Shall have a Bachelor's degree and a Master's Degree in Mechanical Engineering from an accredited four-year university, with course work in boiler systems.
 - 9) Shall have a Professional Engineering (P.E.) licenses.
 - 10) Shall have published material on aspects of boiler operation, safety, and efficiency.

3. Deliverables

- A. Electronic Copy: 1 CD of all deliverable documents provided in digital format (Microsoft Word, current version).
- B. Hard Copies: 3 sets of Tasks 2.A and 2.B above.
- C. An exit meeting will be conducted providing an oral report to VAMC management to discuss findings and recommendations. Completion of deliverable is based on acceptance by the VA.

4. General Information

The contract shall follow latest versions of National Fire Protection Association (NFPA) 70, 70E and 85.

When performing work on “Live” electrical equipment or systems, the following minimum Personal Protective Equipment (PPE) shall be worn:

- Long Sleeve Shirt - Natural fiber or arch rated (When Live Electrical Work)
- Pants - Natural fiber or arch rated
- Eye Protection - Goggles or Safety Glasses
- Hearing Protection -When required by 70E or noise level (db)

5. Multi-Year Contract Requirements

- A. Base Year: Perform Tasks #1, #2, #3, and #4
- B. Option Year 1: Perform Task #2 only.
- C. Option Year 2: Perform Task #2 only.
- D. Option Year 3: Perform Task #2 only.
- E. Option Year 4: Perform Task #2 and update documents for Tasks #1, #3 and #4.