

STATEMENT OF WORK

FOR

AIR FORCE BOILER AND UNFIRED
PRESSURE VESSEL INSPECTION
CONTRACT

HQ AFCESA/CESM
TYNDALL AFB, FL

JANUARY 2000

ATTACHMENT 1

STATEMENT OF WORK

AIR FORCE BOILER AND UNFIRED PRESSURE VESSEL INSPECTION CONTRACT

1.0 DEFINITIONS. Definitions shall be as found in the following publications:

- (1) The Constitution and Bylaws of the National Board Inspection Code
- (2) The latest edition of the National Board Inspection Code and all addenda.

(3) American Society of Mechanical Engineers (ASME) Codes, 1998, Boiler and Pressure Vessel Code, Section VIII, Rules for Construction of Pressure Vessels, Division I.

1.1 BOILERS

1.1.1 Steam Boiler. A pressure vessel in which steam is generated by application of heat resulting from the combustion of fuel (solid, liquid, or gaseous).

1.1.2 Power Boiler. A boiler in which steam or other vapor is generated at a pressure greater than 15 psig for use external to itself.

1.1.3 High Temperature Hot Water Boiler. A pressure vessel intended to heat water to temperatures in excess of 250 F at pressures in excess of 160 psig. The heat is applied as a result of combustion.

1.1.4 Electric Boiler. A power boiler or a high temperature hot water boiler in which the source of heat is electricity.

1.1.5 Portable Boiler. A power boiler or a high temperature hot water boiler which is primarily intended for temporary location and the construction and usage of which is obviously portable.

1.2 UNFIRED PRESSURE VESSELS.

1.2.1 Pressure vessels. Container for the containment of pressure, either internal or external. The pressure may be obtained from an external source, or by the application of heat from a direct or indirect source, or any combination thereof.

2.0 BOILER INSPECTIONS

2.1 DESCRIPTION OF INSPECTION TYPES.

Type A: Internal and external inspection.

Type B: Internal and external inspection, followed or preceded by external inspection while boiler is under hydrostatic test.

Type C: External inspection while boiler is operational and under pressure.

Type D: External inspection while under hydrostatic test.

Type E: Internal and external inspection of expansion tanks used with high temperature hot water boilers.

2.2 EXCLUSIONS. The following items are excluded from inspection.

(1) Steam boilers with safety valves set at 15 psig or less and hot water boilers with safety valves set at less than 160 psig.

(2) Pressure vessels of less than one boiler horsepower which are especially constructed for laboratory purposes.

2.3 BOILER INSPECTION REQUIREMENTS.

2.3.1 The list of boiler inspection requirements, to be provided to the contractor at the beginning of each year, shall include the following information:

2.3.1.1 The name and location of the Air Force installation;

2.3.1.2 The building number where the boiler is located;

2.3.1.3 The National Board number for each boiler;

2.3.1.4 The month the inspection is desired;

2.3.1.5 The type of inspections desired;

2.3.2 Pressure vessel inspection.

2.4 AIR FORCE INSTALLATIONS WITHIN THE CONTINENTAL UNITED STATES (CONUS).

2.4.1 SCHEDULED AND UNSCHEDULED INSPECTIONS.

SCHEDULED INSPECTIONS. The contractor shall supply to the Government the necessary services, reports, supplies, and equipment to perform inspection of high pressure steam boilers (above 15 psig), high temperature hot water boilers (above 160 psig and/or 250 degrees F), and associated expansion tanks at Air Force installations in the continental United States (excluding Alaska and Hawaii). Present estimated quantities include approximately 1000 boiler inspections annually at approximately 74 locations. These quantities may vary. A list of scheduled inspections will be provided by the Government annually.

UNSCHEDULED INSPECTIONS. Inspections other than those listed on the Government provided schedule are considered to be unscheduled. These unscheduled inspections may be required at Air Force locations for, but are not limited to, newly installed boilers, boilers in questionable condition, used boilers having been reinstalled, boilers to which major repairs have been made, etc., and will be ordered by the Air Force on an as required basis. Present estimated quantity is approximately 60 unscheduled inspections annually. The quantity may vary. The requesting base will provide the MAJCOM, the Air Force inspection manager, and the contractor with a Request for Boiler Inspection Form (AF Form 288; See Attachment 1) by mail or FAX in advance of scheduling the inspection. The Contractor shall receive approval from the Air Force inspection manager prior to performing the inspection. When an additional inspection is ordered after a major repair requiring welding, a Form R-1, Report of Welded Repair or Alteration, shall be signed by a National Board Commissioned Inspector as defined by the National Board Inspection Code.

2.5 AIR FORCE INSTALLATIONS OUTSIDE CONTINENTAL UNITED STATES. The Contractor shall furnish and supply the Government the necessary services, reports, supplies and equipment to perform boiler inspections at approximately 9 Air Force locations outside the continental United States. Present estimated annual quantities include approximately 94 inspections at 7 locations in Alaska, 14 inspections at Thule, Greenland and 12 inspections at Lajes Field, Azores. These quantities may vary. A list of scheduled inspections will be provided by the Government annually.

3.0 UNFIRED PRESSURE VESSELS

3.1 DESCRIPTION OF INSPECTION TYPES

Type VA: Internal and external inspection.

Type VB: Internal and external inspection, followed or preceded by external inspection during which the pressure vessel is under hydrostatic test.

Type VC: External inspection while under operating conditions and pressure.

Type VD: External inspection while under hydrostatic test.

Type VE: Internal and external inspection with an ultrasonic thickness test of the pressure vessel shell.

3.2 UNFIRED PRESSURE VESSEL INSPECTION REQUIREMENTS.

3.2.1 The list of pressure vessel inspection requirements, to be provided to the contractor at the beginning of each year, shall include the following information:

3.2.1.1 The name and location of the Air Force installation;

3.2.1.2 The building number where the pressure vessel is located;

3.2.1.3 The Serial number or National Board number for each pressure vessel;

3.2.1.4 The month the inspection is desired;

3.2.1.5 The type of inspections desired;

3.3 AIR FORCE INSTALLATIONS WITHIN THE CONTINENTAL UNITED STATES.

3.3.1 SCHEDULED AND UNSCHEDULED INSPECTIONS.

SCHEDULED INSPECTIONS. The contractor shall supply to the Government the necessary services, reports, supplies, and equipment to perform inspection of unfired pressure vessels (above 15 psig) and jacketed steam kettles at Air Force installations in the continental United States (excluding Alaska and Hawaii). Present estimated quantities include approximately 500 pressure vessel inspections at approximately 74 locations. These quantities may vary. A list of scheduled inspections will be provided by the Government annually.

UNSCHEDULED INSPECTIONS. Inspections other than those listed on the Government provided schedule are considered to be unscheduled. These unscheduled inspections may be required for, but are not limited to, newly installed pressure vessels, vessels in questionable condition, used vessels having been reinstalled, vessels to which major repairs have been made, etc., and will be ordered by the Air Force on an as required basis. Present estimated quantity is approximately 10 unscheduled inspections annually. The quantity may vary. The requesting base will provide the MAJCOM, the Air Force inspection manager, and the contractor with a Request for Boiler Inspection Form (AF Form 288; See Attachment 1) by mail or FAX in advance of scheduling the inspection. The Contractor shall receive approval from the Air Force inspection manager prior to performing the inspection.

3.3.2 SPECIAL REQUIREMENTS. A type VE inspection with an ultrasonic thickness test will be performed when, at the discretion of the inspector, an unfired pressure vessel is in a deteriorated condition and the shell thickness has thinned to a potentially unsafe level. A type VE inspection will also be performed at the request of the Government. Shell thickness measurements shall include, but not be limited to, any suspect areas, areas of weld joints, and a minimum of half of the shell. Exact locations and quantity of thickness measurements will be at the discretion of the inspector. Hydrostatic tests shall be performed on air receiver tanks when inspections and/or calculations indicate a condition which is questionable for the safety valve setting. Hydrostatic tests shall also be performed after a repair has been made to any pressure vessel which could affect its safety.

3.4 AIR FORCE INSTALLATIONS OUTSIDE CONTINENTAL UNITED STATES. The contractor shall supply to the Government the necessary services, reports, supplies, and equipment to perform inspection of unfired pressure vessels (above 15 psig) and jacketed steam kettles at Air Force installations outside the continental United States. Present estimated quantities include approximately 25 pressure vessel inspections at approximately 21 locations. These quantities may vary. A list of scheduled inspections will be provided by the Government annually.

4.0 INSPECTION CRITERIA AND QUALIFICATIONS

4.1 INSPECTION CRITERIA. In the United States and at selected overseas locations, inspections of boilers and unfired pressure vessels shall be accomplished in accordance with the rules for inspections in the latest edition of the National Board Inspection Code and addenda published by the National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Avenue, Columbus OH 43229.

4.2 QUALIFICATIONS OF INSPECTORS. The qualification of inspectors shall be as outlined in the Constitution and Bylaws of the National Board of Boiler and Pressure Vessel Inspectors and the National Board Inspection Code. The Contractor shall provide National Board Commissioned Inspectors who hold a valid National Board Commission, and who have qualified by written examination under the laws, rules and regulations of a jurisdiction of a state of the United States and are regularly employed as an inspector by an Authorized Inspection Agency as defined in the references listed above. A National Board Commission shall be effective only when the holder is regularly employed as an inspector of boilers and pressure vessels by a Jurisdictional Authority of the United States or as an inspector regularly employed by an Authorized Inspection Agency meeting the requirements of the Constitution and Bylaws referenced above. In accordance with the Bylaws referenced above, a holder of a National Board Commission who is not regularly employed as stipulated by those Bylaws or a person who carries out inspections on a fee basis, shall not be considered regularly employed as an inspector. The Contractor shall provide the Contracting Officer with evidence of compliance with the above requirements.

5.0 INSPECTION REQUESTS AND SITE PREPARATION

5.1 INSPECTION REQUESTS. The Government, through the Contracting Officer, will provide the Contractor a list of scheduled boiler and unfired pressure vessel inspections annually. For scheduled inspections the Air Force installation will request by telephone, FAX, or letter to the local branch office of the Contractor the accomplishment of inspections. The Contractor shall make every effort to accomplish requested inspections on dates requested by the Air Force installation. If inspection on the requested dates is not possible, a mutually agreeable date shall be set. In the case of unscheduled inspections of boilers or pressure Vessels within the scope of, this contract, the requesting base will provide the MAJCOM, the Air Force inspection manager, and the contractor with a written request for inspection by mail or FAX in advance of scheduling the inspection. The request must be received by the office designated by the Contractor at least ten (10) days in advance of the date inspection service is desired. The Contractor shall receive approval from the Air Force inspection manager prior to performing the inspection. In emergency or accident situations, inspections may be requested by telephone or FAX, to any branch office of the Contractor and the Contractor shall make every effort to immediately comply with such request without prior approval from the Air Force inspection manager.

5.2 DEFERRED INSPECTIONS. If, due to circumstances beyond control, the Contractor is unable to provide inspection on a date for which it has been arranged, the Government officer-in-

charge who has requested the inspection will be notified by the contractor a minimum of thirty-six (36) hours in advance of the date inspections were to be accomplished. The Contractor and Government Officer-in-charge shall agree upon a proposed new date for the inspection, which will be confirmed in writing (FAX is acceptable) by the Contractor. The Government, likewise, may cancel or defer any authorization for inspection provided proper notice is given by the Government Officer-in-charge to the office of the Contractor's chief inspector, later confirmed in writing by letter or FAX. Confirmation must be received by the Contractor at least thirty-six (36) hours in advance of the date set for inspection.

5.3 SITE PREPARATION. The necessary preparation for equipment inspections shall be at the sole expense and responsibility of the Government. In the event that a site is not prepared for inspection in compliance with the National Board Inspection Code criteria, it shall be considered to be Government caused delay. If preparation of the site can be achieved within the close of that workday, no contract price adjustment will be made. If preparation cannot be achieved by the close of that workday, the Contractor shall complete an inspection report documenting conditions constituting incomplete preparation and submit the report with the Contractor invoice. In all cases, the Contractor shall immediately notify the Contracting Officer or his authorized representative whenever a Government caused delay occurs. The Contractor will be paid in accordance with the payment schedule for Government caused delay beyond the primary workday.

5.4 WITNESS TO INSPECTION. The Boiler Plant Foreman, Maintenance Foreman, Mechanical Superintendent, Maintenance Engineer,

Mechanical Engineer responsible for boilers, Deputy Base Civil Engineer, or Base Civil Engineer shall accompany the inspector to the inspection site. This Government representative shall sign the inspection report certifying that the work has been accomplished. Therefore, the inspection report will serve as a receiving document. I

6.0 DELIVERIES AND PERFORMANCE.

6.1 REPORTS.

6.1.1 The Contractor's Authorized Inspector shall prepare an AF Form 1222, **Report of Inspection** for each boiler inspected and an AMC Form 144 for each unfired pressure vessel inspected in accordance with the report format outlined in Attachment 1. Each report shall describe the physical condition of the boiler or pressure vessel inspected. The inspector shall list any deficiencies and necessary repairs or changes required in order that the safety and dependability of the boiler or pressure vessel meet the requirements of good engineering practice. The inspection report shall be typed or printed legibly in ink. Each report shall be signed by the Inspector who actually performed the inspection and signed by the Government representative witnessing the inspection. Each report shall include the inspector's National Board Certification Number.

6.1.2 Before leaving each Air Force installation following inspections, the Inspector shall provide one (1) copy of each completed and signed AF Form 1222 and for each boiler inspection

and one (1) copy of each completed and signed AMC Form 144 for each unfired pressure vessel inspected to the Government representative. Three (3) additional copies shall be delivered to the Government within thirty (30) days after the date of each inspection. One (1) copy of the report shall be mailed to the designated Command office for Air Force installation inspected. The original and one (1) copy of the report shall be mailed with the associated itemized invoice.

7.0 MILEAGE, EXPENSES, AND TRAVEL TIME FOR INSPECTOR.

7.1 CONUS. Travel cost for inspections within CONUS shall be included in the inspection unit costs.

7.2 OCONUS. The Air Force shall be invoiced for expenses and travel time for travel to and from overseas sites. Travel to and from some Alaskan sites and from continental United States to overseas bases, between overseas bases, and return to continental United States shall be by military and/or commercial aircraft at no cost to the contractor. Upon Contractor notification of scheduled inspection visits, the requesting base will furnish to the Contractor the necessary travel orders and documents for military and/or commercial air travel to and from inspection locations. If commercial airfare is involved, the Government will not pay for more than "tourist" accommodations. The contractor shall use Government furnished travel orders to obtain transportation, quarters and meals at these inspection sites. If military air travel is not available, commercial air travel shall be approved by the Administrative Contracting Officer (ACO), unless the inspection is precipitated by Government declared emergency conditions. In emergency conditions the Contractor may assume prior ACO approval. The *contractor hourly travel rate* shall apply only for inspector travel time enroute from the travel point of origin to arrival at an Air Force site, time enroute between Air Force sites, and time between departure from the final Air Force site to return to the point of origin. Actual travel times shall be documented on a voucher and be included with the invoice for payment. The Contractor shall submit evidence of all expenses with the invoice.

7.3 When a Government caused delay occurs, the Air Force shall be invoiced for the delay charge as set forth in the payment schedule.

7.4 No charge shall be made for days, or portions of days, not worked do to no fault of the Government.

8.0 WORKLOAD DATA. Attachment 2 provides a list of projected inspection locations, estimated number of boilers/pressure vessels and anticipated inspection types. The amounts represent the Government's best estimate based on historical data. Work under this contract shall not be limited to these sites.