

The work includes miscellaneous design and engineering services for Water Tank Facility assessments of Government potable and non-potable water tanks at various locations, worldwide. The general intention is for the contractor to provide design and engineering services that will be described and procured through appropriate task orders.

DEFINITION: A water tank facility is defined as any structure that stores water. Water tank facilities include, but are not limited to, standpipes, reservoirs, elevated tanks, or any similar structure that serves as a water supply, a reservoir for maintaining equal water pressure in a water system, or for fire protection; tanks can be manufactured from a variety of materials including wood, steel, or concrete.

The duration of the contract will be for a period of one base year, with the possibility of one option year. The guaranteed minimum amount under the contract shall be \$10,000. The total amount contracted shall not exceed \$1,000,000 for the base year and \$1,500,000 for the option year.

1.0 SCOPE

1.1 Purpose: The purpose of this Statement of Work is to outline the various services required to inspect, and maintain the US Navy's water tanks worldwide.

1.2 Project Site: The US Navy has Water Storage Tanks located worldwide.

1.3 Water Tank Standards: Many standards and guidelines govern water tank inspection, repair, and QA. Some are Federally mandated, the states and local jurisdictions mandate others, and some are commercial organization standards. Water storage tanks have to follow structural, sanitary, environmental, and hazardous and safety rules and regulations. Some pertinent standards and regulations include:

OSHA 1910.00:	Federal OSHA safety and Health Standards
NAVFAC MO-210.9	Inspection of Elevated Water Tanks
ANSI/AWWA D101-53:	AWWA Standard – Inspecting and Repairing Steel Water Tanks
ANSI/AWWA D104-91:	AWWA Standard – Inspection of Impressed Current Cathodic Protection Systems
ASTM D3359-92a:	ASTM Standard – Testing of Coating Adhesion to Metal Water Tanks
ASM/NACE RP0178-91:	National Association of Corrosion Engineers – Corrosion Inspection Standards
ACI 311.1R:	American Concrete Institute – Concrete Inspector Training
ADC Standard 11:	Association of Diving Contractors – Standards for Commercial Diving in Potable Water Facilities

2.0 STATEMENT OF WORK

2.1 General: This Statement of Work will require the contractor to provide specialized water tank engineering and technical support.

2.2 Tasking: Some tasks that the Contractor shall provide will be:

Water tank assessment includes, but is not limited to, water tank inspections in accordance with applicable standards of the American Water Works Association and NAVFAC MO-210.9; engineering analysis of existing conditions in comparison to design requirements, previous inspection reports and/or drawings of the facilities; engineering calculations for structural analysis with or without previous design calculations; documentation of findings; and recommendations with cost estimates for follow-on actions. All assessments will be performed under the auspices of registered professional engineers. The registered professional engineer (known as Engineer in Charge, EIC) shall supervise the writing of the detailed inspection report, and write at least 50% of the detailed inspection reports. The other personnel involved in the inspection may write the balance of the inspection report. US citizenship is required for access to inspection sites.

Potentially, some inspections will be performed in a full tank requiring contact with the water stored. All in-water assessments will be performed in accordance with, but not limited to, OSHA standards, NAVFAC MO-210.9, and American Water Works Association C652-92.

Additional products and services may include construction contract drawings and specifications; bid analyses; post construction award services (PCAS); Title II inspection services; engineering report review; database design, construction and population; procedures and guidelines reports; criteria and standards generation; engineering calculations; static and dynamic structural calculations and using computer modeling; three-dimensional structure modeling and rendering; seismic vulnerability assessments, including analysis of critical elements and development of retrofit schemes.

Professional qualifications and technical competence of the team proposed for this project in the type of work required. Professional qualifications include professional registrations of the design personnel assigned to the project. As well as professional qualifications for design personnel, inspection team members will be evaluated upon certifications earned that are generally accepted certifications for the water tank industry including NACE, SSPC, welding and NDT qualifications. Diving personnel include the ability to meet OSHA safety standards and dive industry standards.

Specialized experience in the type of work required. This criterion includes experience in the following areas:

- a. Design and engineering services for repairs of water tanks.
- b. Evaluation of both impressed current and sacrificial anode type cathodic protection systems.
- c. Evaluation of both interior and exterior coating systems, including lead-based and heavy metal coatings.
- d. Evaluation of the tank for compliance with existing structural, sanitary, safety standards and codes.
- e. Experience with and capability to provide engineering submittals in electronic format(s). (Submittals will include, but are not limited to: contract bid documents, multimedia inspection reports, three dimensional models and renderings.)

Condition assessment reports will be required within 45 to 90 days after completion of the field inspection, depending upon the number and size of the facilities inspected.

Quality control and safety assurance procedures for conducting both wet and dry inspections, report preparation, structural assessments and design services.

3.0 DELIVERABLES AND SCHEDULE

3.1 Inspection/Evaluation Report Format: Reports shall be clearly written and provide a comprehensive description of the work being documented. Drawings, charts, illustrations, reference citations and other material needed to clarify the presentation shall be included. Engineering calculations and computer software output, if applicable, shall be listed as appendices to the report.

A facility condition report number will be provided by the NTR and will take the form of CR-XXXX-OCN. Draft reports shall be finished products requiring only technical changes after Government review. The evaluation report shall be submitted in both paper and electronic format. Formats for electronic submittals are as follows: text documents in Microsoft Word version 7.0 or 2000, CAD drawings in AutoCAD version 14 or higher, photographs and images in JPEG format (minimum of 25 photographs required). The study shall be submitted to the Naval Technical Representative (NTR) on CD-ROM in .PDF or .DOC format.

The draft Water Tank Facility assessments report; Two (2) copies shall be submitted no later than 45 days after completion of the fieldwork.

The final Water Tank Facility assessments report; Three (3) copies of the final report shall be submitted no later than 15 days after receipt of the Government comments on the draft submittal. (Expect the draft submittal to be reviewed within 10 days of its receipt by the Government.)

3.2 Specifications Format: Specifications shall be submitted in both paper and electronic format. The specifications can be written in either Microsoft Word version 97 or higher, or SPECINTACT format and provided in electronic version on CD-ROM in .PDF or .DOC format. The specifications shall be submitted to the Naval Technical Representative (NTR).

3.3 Contract Drawing Format: Contract drawings shall be submitted in both paper and electronic format. Text version shall be on 11 x 17, B-sized paper. Electronic version shall be provided on CD-ROM in AutoCAD version 14 or later version in either .PDF or .DWG format. The drawings shall be submitted to the Naval Technical Representative (NTR).

4.0 DISTRIBUTION CODES AND ADDRESSES

A NFESC ATTN LCDR ED GALLION CODE 553
OFFICER IN CHARGE NFESC EDCET
720 KENNON STREET S.E., SUITE 333
BLDG 36, WASHINGTON NAVY YARD
WASHINGTON DC 20374-5063

B NFESC ATTN MARTIN GAFFEY CODE 551MG
NFESC EDCET
720 KENNON STREET S.E., SUITE 333
BLDG 36, WASHINGTON NAVY YARD
WASHINGTON DC 20374-5063

C NAVFACCO
ATTN: RITA PALMORE CODE 21
720 KENNON STREET S.E., SUITE 333
BLDG 36, WASHINGTON NAVY YARD
WASHINGTON DC 20374-5063

4.1 Government Points Of Contact: Government technical points of contact include a Contracting Technical Officer's Representative (COTR) and a Naval Technical Representative (NTR).

The COTR for this contract is LCDR Gallion, NFESC, Code 553, phone 202-433-5331.

The NTR for this delivery order is Mr. Martin Gaffey, NFESC Code 551MG, phone 202-433-5170. The NTR assists with matters requiring technical interface with the Contractor. Reports, specifications and contract drawings shall be submitted to the NTR.