

**Statement of Work  
Potable Water Analytics  
VA Palo Alto Health Care System**

**Section 1: General Information**

1.1 General: This is a non-personal services contract to provide and install water monitoring systems for the VA Palo Alto Health Care System (VAPAHCS). The Government shall not exercise any supervision or control over the contract service providers performing the services herein. Such contract service providers shall be accountable solely to the Contractor who, in turn is responsible to the Government.

1.2 Overall Objective: The execution of continuous monitoring of Engineering Controls in Potable Water compliant with Department of Veterans Affairs VHA Directive 1061 dated August 13, 2014.

A. Continuous Water Quality Monitoring–

1. Potable water entering each building subject to this Directive shall be continuously monitored for incoming water pressure and the following characteristics: temperature, pH, dissolved solids, and oxidant residual.
2. Minimum locations: incoming water supply to the building, and hot water discharge at the hot water source equipment

B. Continuous Temperature Monitoring

1. Hot and cold potable water distribution systems need to be monitored
2. Minimum locations: incoming water supply to the building, water storage tanks, hot water discharge at the hot water source equipment, hot water return proximal to the hot water source equipment and water at the return of circulation loops

1.3 Period of Performance: Base year plus four option years for ongoing monthly maintenance.

1.4 Place of Performance:

Palo Alto Main Campus Building 100 3801 Miranda Ave Palo Alto, CA 94304	Menlo Park Campus Building 347 795 Willow Road Menlo Park, CA 94025	Livermore Campus Building 90 4951 Arroyo Road Livermore, CA 94550
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1.5 Hours of Operation: Normal working hours are between the hours of 6:00 am to 6:00 PM Monday through Friday, except Federal Holidays.

1.6 Type of Contract: The government will award a Firm Fixed Price contract.

1.7 Invoicing: All invoices from the contractor shall be submitted electronically in accordance with VAAR Clause 852.232-72 Electronic Submission of Payment Requests.

VA's Electronic Invoice Presentment and Payment System – The FSC uses a third-party contractor, Tungsten, to transition vendors from paper to electronic invoice submission. Please go to this website: <http://www.tungsten-network.com/US/en/veterans-affairs/> to begin submitting electronic invoices, free of charge.

More information on the VA Financial Services Center is available at <http://www.fsc.va.gov/einvoice.asp>.

#### Vendor e-Invoice Set-Up Information:

Please contact Tungsten at the phone number or email address listed below to begin submitting your electronic invoices to the VA Financial Services Center for payment processing, free of charge. If you have question about the e-invoicing program or Tungsten, please contact the FSC at the phone number or email address listed below:

- Tungsten e-Invoice Setup Information: 1-877-489-6135
- Tungsten e-Invoice email: [VA.Registration@Tungsten-Network.com](mailto:VA.Registration@Tungsten-Network.com)
- FSC e-Invoice Contact Information: 1-877-353-9791
- FSC e-invoice email: [vafscchd@va.gov](mailto:vafscchd@va.gov)

## Section 2: Definitions & Acronyms

### 2.1 Definitions:

*Contractor.* A supplier or vendor awarded a contract to provide specific supplies or service to the government. The term used in this contract refers to the prime.

*Subcontractor.* One that enters into a contract with a prime contractor. The Government does not have privity of contract with the subcontractor.

*Work Day.* The number of hours per day the Contractor provides services in accordance with the contract.

*Work Week.* Monday through Friday, unless specified otherwise.

### 2.2 Acronyms:

CFR	Code of Federal Regulations
COR	Contracting Officer Representative
DPD	N,N-diethyl-p-phenylenediamine
EPA	Environmental Protection Agency
FRO	Free Residual Oxidant
HCS	Health Care System
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NSF	National Sanitation Foundation

OSHA	Occupational Safety and Health Administration
PWA	Potable Water Analytics
QC	Quality Control
QCP	Quality Control Program
SaaS	Software-as-a-Service
SOW	Statement of Work
TRO	Total Residual Oxidant
VA	Veterans Affairs
VAPAHCS	Veterans Affairs Palo Alto Health Care System
WAN	Wide Area Network

### **Section 3: Government Furnished Property, Equipment, and Services**

The Government will provide the following in support of the work in this Statement of Work (SOW):

- A. One water tap to provide a sample point off of the incoming cold water supply line.
- B. One water drain for the sample line
- C. One 110V electrical outlet

### **Section 4: Contractor Furnished Items and Services**

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.

### **Section 5: Specific Tasks**

5.1 Contractor shall provide three Potable Water Analytics (PWA) Advanced Monitoring Systems that meet the requirements listed in this statement of work.

5.2 The contractor will be responsible for installing the equipment and connecting it to the building's plumbing and electrical systems.

5.3 The installation of the monitoring systems must be completed within **60 calendar days** of the contract award.

5.4 The contractor shall provide a five year full parts and labor warranty on all project performance in addition to any manufacturer warranty. See warranty clause 52.246-19 Warranty of Systems and Equipment under Performance Specifications or Design Criteria.

5.5 The contractor shall provide technical support during installation and startup the equipment.

5.6 The contractor shall provide monthly maintenance for the PWA Advanced Monitoring Systems. The maintenance services will be performed at a fixed monthly rate and will consist of the following:

- A. Proper calibration and maintenance to ensure accurate and reliable performance
- B. Training
- C. Monthly calibration and supply of calibration solution for ORP probe
- D. Monthly refreshment of test reagents for the chlorine analyzer
- E. Labor, travel and expenses must be built into the fixed rate and will not be paid separately
- F. All consumable parts for system components
- G. Chlorine Analyzer – reagents, tubing/cuvette kits, replacement cuvettes, check valve sets and check valve flushing kits
- H. Replacement probes for ORP

5.7 PWA system must be a panel mounted system for automatic monitoring of free or total chlorine residuals, pH, temperature, pressure, and dissolved solids. The system must continuously monitor these sensors and make the data available securely using any Internet connected device.

5.8 The total system must be prewired and pre-plumbed on a rugged single skid to ensure high quality and a simple installation.

5.9 Installation must require only one tap from the main water line to provide a continuous sample stream of water to the monitoring system.

5.10 The system must be fully powered by a single 110V power supply.

5.11 The equipment installer must have the necessary training and licensing in order to place the Potable Water Analytics sample point and begin system operation.

5.12 The equipment must be shipped to each building as specified in section 1.3. Building 100, building 347, and building 90.

5.13 The **chlorine monitor** must meet the following minimum requirements:

- A. Measure free residual oxidant (FRO) or total residual oxidant (TRO) in potable water systems using the EPA accepted DPD colorimetric test method for measuring chlorine.
- B. Measure chlorine residuals at configurable frequencies as short as 110 seconds.
- C. Support water sample temperatures up to 131°F without using a sample cooler, and up to 150°F using a sample cooler.
- D. Measurement accuracy of 5% or less for readings of 06 mg/L as FRO or TRO
- E. Comply with US EPA regulation 40 CFR 140.74, Standard Method 4500CLG, and US EPA Method 334.0 “Determination of Residual Chlorine in Drinking Water Using an Online Chlorine Analyzer.
- F. Support a Modbus interface.
- G. NEMA 4X rating or equivalent.

5.14 The **water temperature sensors** must meet the following minimum requirements:

- A. Compact and Programmable temperature sensor with built-in transmitter
- B. Must be programmable by a computer

- C. 4 to 20 mA signal output
- D. 13 and 24 mm probe length
- E. The body must be stainless steel AISI 316L
- F. Temperature range of 58 to 248 0 F
- G. Provide cables for hard wiring to PWA system
- H. Sensor accuracy class A in accordance to IEC751
- I. Configuration kit required for programming is M12TXCONFIG

5.15 The **data logging device** must meet the following minimum criteria:

- A. Automatically collect and log data at user selected intervals.
- B. Log device data date/time stamps and store in nonvolatile memory.
- C. Store interval data locally until the next scheduled upload.
- D. Support a Modbus interface plus fifteen additional analog or pulse input signals.
- E. Capable of receiving data from up to 32 additional sensor systems which support Modbus.
- F. Capable of transporting data securely to servers owned and operated by the equipment supplier over cellular and Ethernet Wide Area Networks (WANs).
- G. Capable of providing secure data access and analysis using any Internet connected device.
- H. NEMA 4X rating.

5.16 The **software platform** must meet the following minimum criteria:

- A. Software-as-a-Service (SaaS) enterprise-class platform specialized for building water systems.
- B. Capable of monitoring all sensor data from the potable water quality monitoring system.
- C. Tables and graphs that can be plotted based on user selected time intervals and system parameters
- D. Supports manual data entry via computer and mobile devices, automatic uploading of all water and microbiological test results, documentation of water management plans and activities, and automated sensor monitoring, as specified in VA directive 1061
- E. Administrative functionality to control user access rights, and automated alert notifications
- F. Data storage for a minimum of five years.
- G. Exportable data to excel and other formats

5.17 The contractor shall be responsible for verifying all site conditions, ensuring staff and subcontractors perform in a professional manner, and conducting business safely and fully prepared to site conditions.

5.18 The contractor shall provide operation and maintenance instructions, and manufacturer documentation at the completion of the project. Manufacturer documentation and maintenance schedule to be provided in close out documents.

5.19 The contractor shall provide all personal protective equipment, site specific safety equipment, and other necessary equipment/materials to complete this project as deemed by COR, industry standards, this Statement of Work (SOW), all related specifications, applicable code requirements, and site policy.

5.20 The contractor shall provide daily cleanup and securing of work site, including securing tools and equipment. Disposal of all waste and debris is at the contractor's own expense in contractor supplied disposal receptacles.

5.21 This project shall be coordinated with the appointed COR to insure minimal impact to the facilities normal operations. Scheduling of work shall be at the convenience of the VAPAHCS and commence only once approved by the COR.

5.22 **Security:** The contractor and their personnel shall be subject to the same Federal laws, regulations, standards, and VA policies as VA personnel regarding information and information system security, accessing VA facilities, and working on VA property.

- A. The Contractor shall wear and display temporary ID badges to be provided by the VA Police while working on VAPAHCS property.
- B. The Contractor shall safeguard government equipment, information and property provided for Contractor's use. The Contractor shall secure job site facilities, equipment and materials at the end of each work period
- C. The contractor shall restrict access only to the work area and designated lay down areas. If a staging area is need, the contractor request approval for an area from the COR.
- D. The contractor shall submit personnel lists prior to performance and provided updated personnel lists/rosters whenever staffing changes. All personnel submitted for work site access shall have OSHA 10/30 documentation submitted as applicable to job site conditions. All Contractor employees will be approved by the COR prior to start of work. If, at any time from date of award to the end of the contract, a non-key Contractor personnel is no longer available, the contractor will notify the COR of the changes in personnel.

5.23 **Codes and Standards:** The Contractor shall follow all current applicable codes and standards to this type of work including but not limited to Health Care System Memorandums (HCSM), OSHA Guidelines, Lock-out-Tag-out, Rules of Station, NFPA, and etcetera. In the event that any code/standard is found to be contradictory; the contractor should request for a clarification from the COR.

**5.24 Technical Competence (submitted with the quote)**

- A. The contractor shall submit a narrative statement, describing your experience in performing the type of work identified in the SOW. Include the number of years your company has been in this type of business.
- B. The contractor shall submit a written system design showing how they intend to meet the specific requirements of the contract in accordance with the SOW.
- C. The contractor shall provide the resume of a site manager for this project who shall possess a Bachelor's degree or higher in science or engineering and who shall be a certified National Sanitation Foundation (NSF) Hazard Analysis Critical Control Point (HACCP) for Building Water Systems Manager.
- D. The contractor shall provide an example Water Safety Plan they have developed they have developed as a prime contractor that addresses *Legionella* .
- E. **Safety Plan:** The Contractor shall outline the safety procedures that comply with applicable federal, state and local laws, the Occupational, Safety and Health Act (OSHA) (Public Law 91-

596) and the resulting standards, OSHA Standards 29 CFR 1910 and 1926, as applicable, and the protection of their employees and subcontracted companies/employees.

- F. The Contractor shall submit **project submittals** per Section 01 03 23 Shop Drawings, Product Data, and Samples for COR review and approval.

#### **5.25 Past Performance:**

In order to be considered for award, the offeror should provide information regarding a minimum of three past performance references where your company was the prime contractor and performed 51% of the relevant work. Offeror's examples of previous efforts should be of similar size and scope. Information should include agency name, location, description, and point of contact with phone number, contract or delivery order number, a brief scope of contract, and contract value.

#### **5.26 Submittals (due after award)**

- A. Accident Prevention Plan
- B. Personnel list and certifications (OSHA, trades, etc.)

#### **Section 6: Attachments**

Attachment #1 VHA Directive 1061

Attachment #2 Section 01 00 00 General Requirements

Attachment #3 Section 01 35 26 Safety Requirements

Attachment #4 Section 01 42 19 Reference Standards

Attachment #5 Section 01 91 00 General Commissioning Requirements

Attachment #6 Section 13 05 41 Seismic Restraint Requirements for Non-Structural Components

Attachment #7 Section 22 05 11 Common Work Results for Plumbing