

**ST PETERSBURG VA REGIONAL OFFICE  
9500 BAY PINES BLVD  
ST PETERSBURG, FL**



## **STATEMENT OF WORK (SOW)**

### ***Water Treatment and Cooling Tower Service Contract***

04 January 2018

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# Statement of Work (SOW)

## Cooling Tower Service Contract

### 1 Introduction

The St Petersburg VA Regional Office (VARO) has a requirement for maintenance and repair service for its Cooling Towers System. This SERVICE CONTRACT is to provide all materials, labor, supervision, tools, supplies, transportation, and equipment necessary to perform inspection, full preventive maintenance service and required repairs to the existing equipment listed in the schedule. Included are all inspections, adjustments, tests, and repairs to keep the equipment covered under this contract in continuous and reliable use at its established capacity and efficiency. Equipment shall be maintained in accordance with terms and conditions stated herein.

Contractor shall provide 24/7 emergency contact name(s) and telephone number(s).

The Contractor shall provide all labor, associated materials, personnel protective equipment, and any and all necessary equipment required for the maintenance and repairs of the Cooling Towers at the VARO facilities.

Contractor shall be required to provide evidence of training and certifications to perform duties as delineated in this contract. All technicians working on the cooling tower system(s) must be a Refrigeration Technician, Tower Tech Cooling Towers Service training, as well as possess at a minimum the 10 hour Occupational Safety and Health Training Course in Construction Safety & Health. Proof of training requirements shall be submitted to the COR within 10 days of contract award.

### 1.1 Scope

#### 1.1.1 – Water Treatment.

This contract encompasses the development and implementation of a water treatment program for the HVAC cooling system at the St Petersburg VA Regional Office (VARO), St Petersburg, FL as well as the development and execution of a complete service and maintenance program for the two cooling towers located at the VARO. The contractor will provide all tools, labor, certified technicians, transportation, parts and materials, chemicals, and associated equipment and supplies necessary to execute the requirements of this contract. The contractor must be able to deliver and apply all necessary chemistry; provide all of the necessary laboratory services for: Legionella testing, corrosion test strip evaluations, atomic analysis, metallographic analysis, X-Ray Powder Diffraction and X-Ray Fluorescence Spectroscopy, perform Taylor Technologies Titration Reagents (Calcium, Chloride, Hardness- High and Low Range, Nitrite, P, M and OH Alkalinity, Sulfite, Organophosphate) and check conductivity for TDS. Contractor must be able to test water for:

- Azole (UV) – BZT & TT
- Bromine, Total

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- Chlorine, Total and Free
- Copper
- Hardness - High and Low Range
- Iron
- Molybdenum – High and Low Range
- Nitrite
- Organophosphonate (UV)
- Silica

It is the contractors responsibility to ensure both cooling towers are maintained IAW manufacturers O&M manual and this SOW as well as ensuring the contractor developed water treatment protocol is administered ensuring corrosion of the cooling towers is managed optimally to include the management and prevention of the Legionella bacteria. See section 3 below for specific requirements.

## 1.1.2 Cooling Tower Maintenance

The objective of the cooling tower maintenance program is to ensure the cooling towers are maintained IAW manufactures (EVAPCO) standards to include:

- Enhancing the overall plant reliability, availability and performance of the system.
- Reducing or eliminating functional-failures of production-related equipment (fans, motors, belts, etc.).
- Reduce outage to outage Unplanned Capacity Load Factor, UCLF contributions.
- Achieve optimal Operating and Maintenance costs.
- Provide a safe working environment for both plant and personnel.
- Reduce negative effects on the environment as a result of component failure.

See section 3.3 Perform Maintenance on Cooling Towers for specifics.

## 2 General Requirements

This section describes the general requirements for this effort. The following sub-sections provide details of various considerations on this effort.

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## ***2.1 Non-Personal Services***

The Government shall neither supervise contractor employees nor control the method by which the contractor performs the required tasks. Under no circumstances shall the Government assign tasks to, or prepare work schedules for, individual contractor employees. It shall be the responsibility of the contractor to manage its employees and to guard against any actions that are of the nature of personal services, or give the perception of personal services. If the contractor believes that any actions constitute, or are perceived to constitute personal services, it shall be the contractor's responsibility to notify the Contracting Officer (CO) immediately.

## ***2.2 Business Relations***

The contractor shall successfully integrate and coordinate all activity needed to execute the requirement. The contractor shall manage the timeliness, completeness, and quality of problem identification. The contractor shall provide corrective action plans, proposal submittals, timely identification of issues, and effective management of subcontractors. The contractor shall seek to ensure customer satisfaction and professional and ethical behavior of all contractor personnel.

## ***2.3 Contract Administration and Management***

The following subsections specify requirements for contract, management, and personnel administration.

## ***2.4 Subcontract Management***

The contractor shall be responsible for any subcontract management necessary to integrate work performed on this requirement and shall be responsible and accountable for subcontractor performance on this requirement. The prime contractor will manage work distribution to ensure there are no Organizational Conflict of Interest (OCI) considerations. Contractors may add subcontractors to their team after notification to the Contracting Officer (CO) or Contracting Officer Representative (COR).

## ***2.5 Location and Hours of Work***

Accomplishment of the results contained in this SOW requires work at the St Petersburg VA Regional Office, 9500 Bay Pines Blvd. St Petersburg, FL 33708. Normal workdays will be Monday through Friday except US Federal Holidays from 7:30am until 5:00 pm. The contractor may work on Saturday and/or Sunday's with prior coordination with the Contracting Officer Representative (COR). The Period Of Performance (POP) for this contract is a base year plus 4 option years.

## **3 Performance Requirements**

The following section specifies the Performance Objectives and Performance Elements for the contract.

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## ***3.1 Establish (open and closed) water treatment system / program.***

Contractor shall provide all labor, materials, necessary equipment, transportation, supervision, engineering services, and research laboratory staff to develop, implement and maintain an efficient and precise Industrial Water Treatment Program for all hydronic systems located at the St Petersburg VARO. Level of work shall be performed on a full-service basis. The treatment program shall maintain the hydronic systems in accordance with the manufactures specified parameters. Contractor will provide the government an **on line Field Test Management Reporting System** whereby the COR can review all reports and records associated with the service of the cooling towers.

### Performance Standards

a) Standard: Compliant with federal, state, and local laws and regulations to include OSHA Technical Manual, Section III, Chapter 7 with regards to Legionella and Cooling towers.

AQL: See OSHA Technical Manual, Section III, Chapter 7, Appendix III: 7-3 Water Sampling Guidelines

b) Standard: Comprehensive - provide scale and corrosion control for cooling systems and lines using efficient and correctly formulated corrosion inhibitors, micro biocides, etc.

AQL: Contractor will prevent the buildup of adherent mineral deposits and/or microbiological growth on heat transfer surfaces of equipment being treated.

### Deliverables

A001 On Site Water Test Results

## ***3.2 Perform Bi-Monthly site visits and inspections.***

Contractor will conduct bi-monthly site visits to inspect, test, treat, report, and monitor water treatment services for both open and closed systems. During specified visits the contractor will inspect all equipment and perform all analysis required at the site necessary to determine that the water treatment program is being administered properly and that each system is operating at optimum performance. The technician shall provide on-site verbal and written instructions to the COR in the form of a service report, which shall include recommended control ranges and results of analysis by the technician at the time of each visit. A mass balance and Ryznar calculation will be performed to ensure system is being maintained properly.

### Performance Standards

a) Standard: Identifies and corrects deficiencies

AQL: Cooling towers show no sign of corrosion buildup and monthly performance report shows no delta drop greater than 5% than previous monthly performance report

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## 3.2.1 Specific Requirements.

- Contractor to provide complete tower/chiller water treatment to prevent fouling on metal services, inhibit corrosion, sanitize, clean, disinfect and control biological growths.
- Contractor shall provide all necessary supervision, personal protective equipment, labor, materials, equipment, and tools to perform the service.
- Vendor shall check chemical levels and fill as needed, and inspect on a regular basis to insure the integrity of the system.
- Vendor must be able to respond within 2 hours of emergency call.
- Chemicals other than chemicals in the day tanks located in tower yard, shall not be stored on site.

Bi-monthly the service visit shall include:

- Conduct water analysis on the cooling towers
- Inspect cooling towers for biological growth, foam, sludge, and proper system operation
- Control equipment is to be checked for calibration and proper operation, probes cleaned and adjustments made as test results dictate
- Inspect blow down solenoid valve
- Inspect and repair chemical pumps, injection points and check valves on all treated equipment
- Ensure water flow is sufficient through all lines
- Maintain polyethylene tubing, valves, and chemical pumps, provide loaner equipment in the event equipment malfunction until onsite units are repaired or replaced
- Furnish and apply all products to retard scale and corrosion in condensing water circuits.
- Check chemical storage tanks and fill as necessary
- Ensure cycles of concentration are adjusted to minimize water that is discharged to the drain.
- Visually inspect operation of equipment and make note of any conditions that interfere with proper equipment operations and report to COR.
- Furnish all test regents, test equipment, and log sheets necessary to properly maintain the treatment program.
- Supply copies of computerized reports listing findings and recommendations to the COR.



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Monthly, the service visit shall include:

- Water analysis on closed water circuits
- Furnish and apply all products to retard scale and corrosion in closed loop water circuits
- Inspect pot feeders for proper operation.
- Visually inspect operation of equipment and keep the treatment area neat, clean and orderly to include keeping the cooling tower facility free of foreign objects and debris that can be sucked into the cooling system.

Annually, the following service will include

- Present water analysis on closed water circuits
- Present yearly review of the treatment program, topics to include recommendations, effectiveness of existing program, results of equipment inspections and future considerations.
- Perform annual cooling tower cleanout to maintain tower fill, tower nozzles, and distribution decks from scale and debris accumulation.
- Flush sumps and basins to remove debris

Bi-annually the following service will include:

- Deliver water samples to a certified Legionella testing lab for analysis and report findings to the COR and Chief, SSD room 205.

## Performance Standards

a) Standard: Identifies and corrects deficiencies.

AQL: Faults are addressed and remediated within 48hrs

b) Standard: Compliant with federal, state, and local laws and regulations

AQL: Compliant with all local, state, and federal law/codes to include environmental law regarding safe operation of cooling towers.

## Deliverables

A002 Monthly performance report

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## 3.2.2 Perform Bi-annually tests for Legionella.

Legionella prevention and control is a multidisciplinary; effective prevention of HCA LD requires timely communication amongst the lab, water technician, contractor, and COR. This is especially important regarding interpretation and follow-up for positive validation results.

If the results of the environmental validation are positive for *L. pneumophila*, the COR as well as Division Chief, SSD, St Petersburg VARO must be promptly notified.

Contractor will reference VHA Directive 1061, PREVENTION OF HEALTHCARE-ASSOCIATED LEGIONELLA DISEASE AND SCALD INJURY FROM POTABLE WATER DISTRIBUTION SYSTEMS in the management and treatment of Legionella.

### Performance Standards

a) Standard: Compliant with applicable standards

AQL: Refer to

PREVENTION OF HEALTHCARE-ASSOCIATED LEGIONELLA DISEASE AND SCALD INJURY FROM POTABLE WATER DISTRIBUTION SYSTEMS , VHA Directive 1061

### Deliverables

A003 Water testing

## 3.3 Perform maintenance on cooling towers.

The contractor shall furnish certified technician(s) on the job site while in performance of Maintenance and Service of Cooling Towers. Technicians shall have NLT 5 years of experience. Contractor shall be responsible for regular, systematic execution of the work items as referenced in the manufactures O&M manual. The contractor agrees to regularly and systematically perform required maintenance of the equipment and provide callback service as conditions warrant, repair or replace all portions of the equipment included under this contract.

Equipment shall be maintained in first-class condition to meet the initial performance ability. The equipment manufacturer's recommended maintenance requirements shall be accomplished under the scope of this contract. Both Cooling Towers are less than one year old and presently working and neither have presented any difficulties before this contract. The equipment manufacturer's maintenance requirements are considered the minimum for all equipment. If specific equipment covered by this contract requires additional maintenance for safe and reliable operation the contractor shall perform the required maintenance. Any Electrical work or maintenance shall be done by a licensed electrician.

Scheduled Maintenance Program:

A scheduled maintenance program will be provided, kept and used by the Contractor to keep the cooling towers operating at optimum efficiency. The scheduled maintenance program shall be

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previously approved by the Contracting Officer Representative (COR). Service technician assures state-of-the-art performance with minimum failure rate. Contractor will provide in writing the preventive maintenance protocol (policies and procedures), including the methods and frequency of testing and verifications of performance for the equipment.

Each preventive maintenance service will be scheduled and completed in a computer-prepared service report, detailing exactly what was performed and to which equipment was done, what special tools, instrumentation, and diagnostic programs was used to maintain the system at optimum efficiency levels. At the completion of each period, a Summary Report will be provided to the VARO. Template of the report needs to be approved by VARO prior to start of this contract. Maintenance intervals are scheduled twice a year, on intervals of approximately six (6) months apart.

## Preventive Maintenance & Repair Service:

The contractor shall perform all Inspections and Preventive Maintenance (PM) and repair service to ensure that equipment listed in the schedule performs in accordance with the "Equipment manufacturer's maintenance program". The contractor shall utilize and provide procedures and checklists with worksheet originals indicating work performance and actual values obtained at the completion of the PM. Contractor shall submit their checklist of PM for government approval before preceding any type of work. The monthly scheduled work to be performed for PM shall include, but is not limited to, the following items:

## Cooling Towers:

- Removal and washing/cleaning of drift eliminators, and reinstallation
- Removal and washing/cleaning of fill media, and reinstallation
- Resealing of water distribution piping inside tower, as needed
- Inspection/Cleaning of rotary spray nozzle
- Removal and reinstallation of fan guard assembly for Inspection/washing and Cleaning.
- Removal and reinstallation of fan assembly as needed to access water collection system
- Washing/cleaning of collection system damper
- Washing the collection system vanes
- Resealing of water collection system
- Removal of inspection port cover and inspection of interior of perimeter basin wall, and replacing cover as needed.

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- Power washing fan plenum exterior walls
- Power washing fan assemblies and fan shrouds
- Reinstalling water collection system dampers
- Resealing interior wall seams and joints, as needed
- Reinstalling fan assemblies and fan guards
- Readjusting make-up water valves to recommended operating level
- Inspect fan motor-drive assembly
- Inspect fan shaft bearings (pillow blocks) and lubricate, as required
- Inspect reducing gear (OPA)

## Repair Services:

Repair services will be conducted, as required to the Cooling Tower motor, and motor-drive assembly, bearings, pillow blocks, reducing gear, belts, pulleys, fan assembly, shrouds, nozzles, make-up valves, level sensors, catch basin seals, drift eliminators, filters, and motorized valves. The successful offeror will be expected while in the performance of the contract to procure and replace major unrepairable items as mentioned above.

## Performance Standards

a) Standard: Identifies and corrects deficiencies

AQL: Cooling tower(s) will not be out of service for more than 4hrs for any service or maintenance fault within a 6mo period

## Deliverables

A004 Cooling Tower Maintenance Protocol

## 4 Special Requirements

This section describes the special requirements for this effort. The following sub-sections provide details of various considerations on this effort.

### ***4.1 Security***

During normal business hours (6am - 6pm) the Contractor is required to enter and exit the St Petersburg VARO through the front entrance. Entering or exiting the building through any other door will require VARO approval and an escort will be required. Upon entering the building the contractor and/or contractor employees will be required to show proof of identity (must have a valid photo ID) as well as pass through a security screening. Once the contractor has passed through

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security he/she will report to room 205, Support Services Division (SSD) to sign in/out and meet with the COR. Contractor is responsible for notifying the COR via e-mail or phone at least 24hrs in advance of arrive to ensure someone will be available to meet with the contractor as well as deconflict any parking issues.

## 4.2 Safety

Equipment - The Contractor shall provide all safety equipment/devices, MSDS, personal protective equipment and clothing as required for its employees. Copies of all MSDS shall be provided to the COR.

OSHA - Prior to commencing work the Contractor shall provide proof that an OSHA designated "competent person (CP)(29 CFR 1926.20(b)(2) will maintain a presence at the work site whenever the general or subcontractors are not present. The Contractor as well as the on-site supervisor will have completed no less than 30 hours of OSHA approved safety training. All other Contractor employees will have no less than 10 hours of OSHA approved safety training.

Safety Plan Contractor will provide a site specific safety plan as well as an Activity Hazards Analysis. An example of a VA approved AHA can be found at **Error! Hyperlink reference not valid.**

Compliance - The Contractor shall comply with all applicable Federal, State and local legal requirements regarding workers health and safety. The requirements include but are not limited to, those found in Federal and State Occupational Safety and Health Act (OSHA) statutes and regulations, such as applicable provisions of Title 29, Code of Federal Regulations (CFR) Parts 1910 and 1926. Contractor is solely responsible for determining the legal requirements that apply to activities, and shall ensure safe and healthful working conditions for its employees.

Contractor is responsible for providing all personal protective equipment (PPE) required to be utilized by the contractor's personnel in the performance of their duties.

Contractor will provide the COR all Material Safety Data Sheet (MSDS'S) for any chemical(s) utilized by the contractor in the performance of this contract.

As defined by OSHA, EPA, NFPA Life Safety Codes, and all other regulatory requirements any incident of a major malfunction, accident or injury, a written report shall be submitted by the Contractor to the COR within five (5) working days following the incident. The report shall state the cause, what, where and when and why the incident happened and the repairs and tests that were or are to be made to correct the cause of the incident.

### 4.2.1 Mishaps

Mishap Notification and Investigation: The contractor and its subcontractors (if applicable) shall promptly report pertinent facts regarding mishaps involving Government property damage or injury to Government personnel and to cooperate in any resulting safety investigation. The contractor shall notify (via telephone) the cognizant contracting officer, the contracting officers representative,

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and/or other applicable members within four (4) hours of all mishaps or incidents. The Government person notified by the contractor will in-turn notify the Safety office. Contractor notifications made after duty hours shall be reported to the appropriate installation Command Post.

If requested by the cognizant contracting officer, the contracting officers representative, and/or the cognizant program manager, the contractor shall immediately secure the mishap scene/damaged property and impound pertinent maintenance and training records until released by the investigating safety office. If the Government investigates the mishap, the contractor and the subcontractors shall cooperate fully and assist the Government personnel until the investigation is completed.

## ***4.3 Government Furnished Materials***

The government shall provide at no cost parking space and access to the VARO loading docks, chiller plant, and cooling towers as necessary.

## ***4.4 Environmental Requirements***

Contractor must show evidence of promoting technologies and best business practices in achieving GREEN goals and incorporating established best practices in developing a systematic Water Management Process that ensures the government can obtain a 'Green Globe' certification.

### Non-Hazardous waste disposal

Demolition - The Construction Contractor shall provide all demolition, removal and legal disposal of materials. The Construction Contractor shall ensure that facilities used for recycling, reuse and disposal shall be permitted for the intended use to the extent required by local, state, federal regulations.

Disposal vendors - The Whole Building Design Guide website **Error! Hyperlink reference not valid.** provides a Construction Waste Management Database that contains information on companies that haul, collect, and process recyclable debris from construction projects.

### Hazardous waste disposal

Abatement - In order to provide for abatement and control of all environmentally hazardous materials arising from demolition and/or construction activities, the Construction Contractor shall comply with all applicable environmentally hazardous material control and abatement and all applicable provisions of the Corps of Engineers Manual EM 385-1-1, "General Safety Requirements as well as the specific requirements stated elsewhere in the Contract Documents. EM 385-1-1 can be found at **Error! Hyperlink reference not valid..**

Manifesto - The Construction Contractor shall provide a waste manifesto for all hazardous waste disposals.

The contractor shall comply with all documents listed below as mandatory and referenced under paragraph 3.0, Performance Requirements. Compliance with documents listed as non mandatory is the contractors' option.

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Mandatory compliance

29 CFR 1926

Corps of Engineers Manual EM 385-1-1, "General Safety Requirements as well as the specific requirements stated elsewhere in the Contract Documents. EM 385-1-1 can be found at **Error! Hyperlink reference not valid..**

29 CFR 1926.20

Non Mandatory document

## ***4.5 Applicable Directives***

The contractor shall comply with all documents listed below as mandatory and referenced under paragraph 3.0, Performance Requirements. Compliance with documents listed as non-mandatory is the contractors' option.

Mandatory compliance (list)

Corps of Engineers Manual EM 385-1-1, "General Safety Requirements as well as the specific requirements stated elsewhere in the Contract Documents. EM 385-1-1 can be found at **Error! Hyperlink reference not valid..**

29 CFR 1926.20

Activity Hazards Analysis - AHA example found at **Error! Hyperlink reference not valid.**

Non-Mandatory document (list)

VHA Directive 1061 Prevention of Healthcare-Associated Legionella disease and scald injury From Potable Water Distribution Systems **Error! Hyperlink reference not valid.**

OSHA Technical Manual (OTM) Section III: Chapter 7 **Error! Hyperlink reference not valid.**

ASHRAE Guideline 12-2000, Standard Minimizing the Risk of Legionellosis Associated with Building Water Systems for Legionella (reference CDC website) **Error! Hyperlink reference not valid.**

## **4.6 Quality**

This section describes the Quality Control components for this effort. The following sub-sections provide details of various considerations on this effort.

### **4.6.1 Quality Control**

The Contractor shall develop a Quality Control Plan (QCP) and maintain an effective quality control program to ensure services are performed in accordance with this SOW. The Contractor shall develop and implement procedures to identify, prevent, and ensure non-recurrence of defective

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services. The Contractors QCP is the means by which he assures himself that his work complies with the requirement of the contract.

The finalized QCP will be accepted by the Government within 10 days from the time of the award of the Task/Delivery Order. The Contracting Officer may notify the Contractor of required modifications to the plan during the period of performance. The Contractor then shall coordinate suggested modifications and obtain acceptance of the plan by the Contracting Officer. Any modifications to the program during the period of performance shall be provided to the Contracting Officer for review no later than 10 working days prior to effective date of the change. The QCP shall be subject to the Governments review and approval. The Government may find the QCP "unacceptable" whenever the Contractors procedures do not accomplish quality control objective(s). The Contractor shall revise the QCP within 10 working days from receipt of notice that QCP is found "unacceptable."

## 4.6.2 Quality Assurance Surveillance Plan (QASP)

The Government shall monitor the Contractors performance under this Task/Delivery Order in accordance with the Governments QASP.

## 5 Deliverables

The contractor shall provide deliverables as described in subsequent task orders. Deliverables shall be specified by the government. Format and delivery schedule for deliverables shall be outlined in CDRLs and/or other means TBD.

Number	Name	Frequency	Quantity
A001	On Site Water Test Results  Contractor will conduct mass balance and Ryznar calculation in order to ensure system is being maintained properly.	Bi-Monthly	2
A002	Monthly performance report  Performance report will address areas relevant to:  * the cooling tower and associated equipment for the presence of organic material, biofilm, algae, and other visible contaminants  * the general condition of the cooling tower, basin, packing material, and drift eliminator;	monthly	1



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- \* water make-up connections and control;
- \* proper functioning of the conductivity control;
- \* proper functioning of all dosing equipment (pumps, strain gauges)

A003	Water testing	monthly	1
	In accordance with VHA Directive 1061, the laboratory processing the water samples for Legionella must be certified by the Centers for Disease Control and Prevention (CDC) Environmental Legionella Isolation Techniques Evaluation (ELITE) program as proficient at performing the culture of Legionella species from environmental samples.		
A004	Cooling Tower Maintenance Protocol	Annually	1
	Contractor will provide in writing the preventive maintenance protocol (policies and procedures), including the methods and frequency of testing and verifications of performance for the equipment.		

## 6 Related Documents

- Florida Building Codes - [http://floridabuilding.org/bc/bc\\_default.aspx](http://floridabuilding.org/bc/bc_default.aspx)

VHA Directive 2011-036, Safety and Health during Construction -

[http://www.va.gov/vhapublications/ViewPublication.asp?pub\\_ID=2448](http://www.va.gov/vhapublications/ViewPublication.asp?pub_ID=2448)

- VA Handbook 6500.6, Appendix D, Contractor Rules of Behavior - [http://www.va.gov/vapubs/viewPublication.asp?Pub\\_ID=471&FType=2](http://www.va.gov/vapubs/viewPublication.asp?Pub_ID=471&FType=2)
- OSHA Technical Manual, Section III, Chapter 7, Appendix III: 7-3 Water Sampling Guidelines

Found at: [https://www.osha.gov/dts/osta/otm/otm\\_iii/otm\\_iii\\_7.html#app\\_iii:7\\_2](https://www.osha.gov/dts/osta/otm/otm_iii/otm_iii_7.html#app_iii:7_2)

- COOLING TOWER MAINTENANCE PROGRAM AND PLAN TEMPLATE

Found at:

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[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0ahUKEwih88jric7XAhXJ4SYKHQR4CAcQFgg7MAI&url=https%3A%2F%2Fwww.health.ny.gov%2Fenvironmental%2Fwater%2Fdrinking%2Flegionella%2Fdocs%2Fcooling\\_tower\\_maintenance\\_program\\_plan\\_template.docx&usg=AOvVaw3E7hMuBsZmybR9dUqjabRb](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0ahUKEwih88jric7XAhXJ4SYKHQR4CAcQFgg7MAI&url=https%3A%2F%2Fwww.health.ny.gov%2Fenvironmental%2Fwater%2Fdrinking%2Flegionella%2Fdocs%2Fcooling_tower_maintenance_program_plan_template.docx&usg=AOvVaw3E7hMuBsZmybR9dUqjabRb)

# Performance Requirement Summary (PWS)

## Performance Requirement Summary (PRS)

Statements	Standards/AQLs	Incentive/Remedy
3.1 Establish (open and closed) water treatment system / program.	<p>a) Compliant with federal, state, and local laws and regulations to include OSHA Technical Manual, Section III, Chapter 7 with regards to Legionella and Cooling towers. AQL: See OSHA Technical Manual, Section III, Chapter 7, Appendix III:7-3 Water Sampling Guidelines</p> <p>b) Comprehensive - provide scale and corrosion control for cooling systems and lines using efficient and correctly formulated corrosion inhibitors, micro biocides, etc. AQL: Contractor will prevent the buildup of adherent mineral deposits and/or microbiological growth on heat transfer surfaces of equipment being treated.</p>	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.

Statements	Standards/AQLs	Incentive/Remedy
3.2 Perform Bi-Monthly site visits and inspections.	<p>a) Identifies and corrects deficiencies AQL: Cooling towers show no sign of corrosion buildup and monthly performance report shows no delta drop greater than 5% than previous monthly performance report</p>	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.
3.2.1 Specific Requirements.	<p>a) Identifies and corrects deficiencies AQL: Faults are addressed and remediated within 48hrs</p> <p>b) Compliant with federal, state, and local laws and regulations AQL: Compliant with all local, state, and federal law/codes to include</p>	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.

# Performance Requirement Summary (PWS)

	environmental law regarding safe operation of cooling towers.	
3.2.2 Perform Monthly tests for Legionella.	a) Compliant with applicable standards AQL: Refer to PREVENTION OF HEALTHCARE-ASSOCIATED LEGIONELLA DISEASE AND SCALD INJURY FROM POTABLE WATER DISTRIBUTION SYSTEMS , VHA Directive 1061	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.

Statements	Standards/AQLs	Incentive/Remedy
3.3 Perform maintenance on cooling towers.	a) Identifies and corrects deficiencies AQL: Cooling tower(s) will not be out of service for more than 4hrs for any service or maintenance fault within a 6mo period	Failure to correct all deficiencies within 3 work days will result in a CDR. Delays caused by a failure to performed IAW all local, state, federal, and VA building/plumbing code is not a cause for a time extension.