

**DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK AND REQUIREMENTS**

1. **BACKGROUND:** The VA Loma Linda Healthcare System, Facility Management Service (FMS) have a requirement to upgrade from liquid to solid water treatment chemistry because of the significant environmental, handling and storage advantages. Water treatment chemicals shall be in solid form to contribute to carbon footprint reduction; significantly reduce space and weight for shipping, handling and storing; mitigate risk of injury compared to handling 120- to 500-pound drums of liquid; eliminate the risk of spills and leaks posed by hazardous liquids; eliminate the need for any containment; and save water and labor by eliminating the EPA requirement to triple-rinse empty liquid chemical drums.
2. **SCOPE OF WORK:** The Contractor shall furnish all qualified personnel, labor, supplies, parts, tools, equipment, transportation, supervision and other non-personal services necessary to provide professional water treatment services that include: inspection, chemical analysis, testing, treatment, and the use of solid blend technologies providing "green" solid water treatment chemicals and test kits, associated with scale, corrosion, fouling and microbiological growth. This also includes all work associated with new dissolver dispensing systems, controls and chemical pumps needed in accordance with the manufactures flow rate, along with any and all maintenance and related services for the systems, controls and pumps that will remain under the ownership of the contractor. A factory representative from APtech or Endursolv needs to verify in writing that the selected water treatment contractor has installed the dispensing systems, controls and pumps in accordance with the industry standard and are appropriate to the product being dispensed.

The contractor must provide knowledgeable service personnel, monitor program results, make appropriate recommendations with quantifiable justifications, train technical personnel on the implementation & control of the program, and provide a written Haz-Com Plan applicable to the new OSHA standard that aligned with the Globally Harmonized System of Classification (GHS).

3. **PERIOD OF PERFORMANCE:** October 15, 2017 – October 14, 2018 with four (4) one-year options.
4. **PLACE OF PERFORMANCE:** VA Loma Linda Healthcare System, 11201 Benton Street, Loma Linda, CA 92354.
5. **LIST OF GOVERNMENT-OWNED EQUIPMENT:**

Equipment	Model Number	Serial No.
York Chiller# 1	YKM2MRH9-CWGS	5DDM-537130
York Chiller# 2	YKM2MRH9-CWGS	SNDM-700130
York Chiller# 3	YKM2MRH9-CWG5	5DDM-537130
York Chiller# 4	YKKPK4H9-CX6	5MWM-782220
Cleaver Brooks Steam Boiler# 1	CBLE-200-400-200ST	T2194-1-2
Cleaver Brooks Steam Boiler# 2	CBLE-200-400-200ST	T2194-1-3

6. **CONTRACTOR REQUIREMENTS:** This section shall set forth specific requirements and responsibilities to be performed by the contractor.

**6.1** Monthly service visits for chemical treatment inspection.

- 6.2** Must have service vehicles specifically for water treatment service and shall be stocked with parts needed for the dissolvers, controllers and pumps to repair and replace equipment as needed.
- 6.3** Must be available 24/7 and must be onsite within 24 hours after the initial call from the VA Physical Plant Operator.
- 6.4** Perform chemical testing and control for corrosion scaling and foul.
- 6.5** Inspect and verify that existing chemical pumps are sized to provide a minimum delivery rate of two (2) gallons per hour or as recommended by the solid chemical manufacturer.
- 6.6** On a semi-annual basis the contractor shall clean the cooling tower consisting of removal of dirt and organic growths (algae and slime) by physical and chemical means. The use of adequate detergents and disinfectants should be applied to the cooling tower and circulated for approximately 24 hours before being drained, flushed and refilled then tested.
- 6.7** Perform chemical pump maintenance and calibration of conductivity controller.
- 6.8** Provide required test kits for facility HVAC technicians to perform their bi-weekly biological testing and solid water treatment chemical amounts to properly dose cooling towers', boilers' and closed loop systems' water for corrosion, scaling and biological fouling.
- 6.9** Conduct corrosion control and monitoring of hot water, HW Loops Boiler Systems and cooling tower condenser water loop systems at all facilities, during the heat/cooling season; corrosion shall be maintained at less than 2 millimeter mil/yr. for steel, 3 mil/yr., zinc and 0.2 mil/yr., for yellow metals.
- 6.10** All cooling water systems shall be equipped with corrosion coupons and these coupons shall be sent in for analysis on a regular quarterly basis. Most coupon racks allow for exposure of coupons representing the different alloys in the system. After a prescribed period of exposure, coupons are removed and fresh coupons inserted in their place. A regular rotation of coupons produces a continuous record of the system condition.
- 6.11** Conduct annual testing for Legionella Bacteria for each cooling tower condenser water loop system. Testing must be performed by a certified Center for Disease Control "CDC Elite" laboratory. In the event of a positive report of > 100 colony forming unit (CFU)/milliliter (ml) legionella bacteria, the contractor shall clean system(s) using protocol established by American Society of Heating, Refrigeration and Air Conditioning Engineers, (ASHRAE) Guideline 12 and Association of Water Technologies (AWT) "Legionella, 2003) and re-test until a negative report is obtained. In the event of a positive report of > 1,000 CFU/ml legionella, contractor shall follow protocol established by ASHRAE Guideline 12 and AWT "Legionella, 2003), and re-test until a negative report is obtained.

**6.12 Cooling Tower**

- 6.12.1** Provide onsite training for relevant Physical Plant personnel to explain and demonstrate application processes. Training must include review of the Safety Data Sheet SDS for each chemical used; safe use of equipment to be used with each chemical and the mixing and handling of chemicals.
- 6.12.2** Readiness for quick response on emergency situations.

- 6.12.3** Must provide all appropriate chemicals to be used in all closed and open loop systems to maintain proper levels. Solid form water treatment chemicals shall be APtech Group, Inc. EnduroSolv brand or approved equal brand.

### **6.13 Compliance Requirements**

- 6.13.1** Biocides must be registered with the Federal & State agencies responsible for their regulation. Biocides will have the appropriate drum labels indicating that they are registered for intended use. Should the biocide or other solid treatment fail to dissolve in the prescribed manner, it is the sole responsibility of the contractor and supplier to rectify, after consultation with FMS Management and Engineers on best alternatives.
- 6.13.2** Labels must show approved label dosages for the registered use. All chemicals must have proper DOT shipping and identification on each of them.
- 6.13.3** Chemicals used in the steam boiler system must be registered with NSF. **The use of hydrazine, chromate and sodium hypo-chloride are prohibited.**
- 6.13.4** Must maintain an appropriate inventory of solid water treatment at each location; as well as delivering, handling and dispersing of chemical products.
- 6.13.5** All chemicals shall be delivered via commercial cartage. The contractor shall retain ownership and recycling of empty canisters in accordance with the applicable guideline. Contractor shall supply and maintain onsite all Personal Protective Equipment, PPE required in accordance with Occupational, Safety and Health Administration (OSHA) regulations.
- 6.13.6** Contractor is responsible to ensure OSHA compliant storage practices at all chemical treatment sites.

### **6.14 Reporting and Scheduling:**

- 6.14.1** SDS sheets must be provided to Plant Operators for each chemical used, at each location.
- 6.14.2** Submit a written monthly report on its activities to the Contracting Officer Representative (COR), FMS Management, Engineer or Assigned Representative. Reports shall be submitted in electronic format via email no more than three (3) days after the service is performed.
- 6.14.3** Reports should include operator chemical control sheet for each system.
- 6.14.4** Unless it is an urgent situation, the contractor must schedule the PM with the appropriate Facility Manager or his representative.
- 6.14.5** Must maintain an updated on-site log to reflect the current water chemistry condition to be used by both the contractor and onsite personnel for recording test results and conditions.
- 6.14.6** Water treatment standards must be in compliance with the National Fire Protection Association (NFPA) 214, Center for Disease Control (CDC), ASHRAE Guideline 12-2000,

National Association of Corrosion Engineers (NACE), and any other applicable guidelines or regulatory agencies.

#### **6.15 Qualifications and Competency**

- 6.15.1** The contractor must have a minimum three (3) years of experience utilizing the solid water treatment technology and have a Certified Water Technologist (CWT) on staff. In addition, the contractor must be a member in good standing with the Association of Water Technologists.

#### **7. CHANGES:**

The Contractor is advised that only the Contracting Officer, acting within the scope of the contract has the authority to make changes which may affect the contract terms and conditions, quality, quantity, price, and/or delivery. Contractor must contact the Contracting Officer for approval in the event there are changes prior to proceeding. No other individual has the authority to make this binding changes and/or commitments. In the event that the Contractor commits to such changes at the direction of any person other than the Contracting Officer, the changes shall be considered to have been made without proper authority and no adjustment shall be made in contract price to cover any increase in costs incurred as a result thereof.