



# CITY OF DAYTONA BEACH

## REQUEST FOR WRITTEN QUOTE

Issued: >issuedate

### **HVAC CHEMICAL WATER TREATMENT 9917-0120**

***QUOTES ARE DUE ON OR BEFORE 5:00 pm LOCAL TIME ON JANUARY 12, 2017***

#### **SECTION 1: OVERVIEW**

**SCOPE OF SERVICE:** The City of Daytona Beach is seeking quotes to provide monthly chemical water treatment to HVAC systems at 3 locations.

Quotes may be e-mailed to [PURCHASING@CODB.US](mailto:PURCHASING@CODB.US), faxed to 386-671-3962, or delivered to the Purchasing Department, 301 S. Ridgewood Ave., Room 146, Daytona Beach, FL 32114.

**DEPARTMENT INFO:** This quote is primarily for the Public Works Department, but may be utilized by any department within The City of Daytona Beach.

**TERM:** All pricing specified on the quote form will be good for one (1) year. City shall have the option to extend this agreement for four (4) additional one year term(s) at the same terms and conditions, upon 60 days written notice by The City.

**QUESTIONS FOR INTERPRETATION.** Questions will be accepted in writing only to by fax 386-671-3962 or email [purchasing@codb.us](mailto:purchasing@codb.us). The deadline for questions will be 3 business days prior to the due date.

#### **SECTION 2: GENERAL CONDITIONS:**

**ORAL STATEMENTS:** No oral statement of any person shall modify or otherwise affect the terms, conditions or specifications stated in this contract. All modifications to the contract must be made in writing by The City of Daytona Beach.

**AWARD:** If awarded, the award will be made by The City to the lowest responsive and responsible Vendor, which shall be determined in accordance with applicable rules and regulations governing purchases or contracts adopted and established by The City.

**DOCUMENT DEEMED AS A CONTRACT:** Contract award will be effected by issuance of a City of Daytona Beach Purchase Order, incorporating the terms and conditions of this Request for Quotes.

**ERRORS:** When an error is made in extending total prices the unit price will govern. Carelessness in quoting prices or otherwise will not relieve the Vendor of its responsibility.

**FEDERAL TAXES:** All offers shall be exclusive of federal taxes. If the Vendor believes that certain other taxes are properly payable by The City, he/she may list such taxes separately in each case directly below the respective item offer price. Tax exemption certificates will be furnished upon request.

**FISCAL NON-FUNDING CLAUSE:** In the event sufficient funds are not budgeted for a new fiscal period, The City will notify the Vendor of such occurrence and the contract shall terminate on the last day of the current fiscal year without penalty or expense to The City.

**PERFORMANCE:** During the performance of the contract, the Vendor agrees as follows:

- a. The Vendor will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin.
- b. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

**PERMITS, ETC:** All offers submitted shall exclude in the price the cost of any business or professional license, permits or fees required by The City or other agency having jurisdiction. Vendors are responsible for acquiring any permits but shall be reimbursed at the actual cost of such unless otherwise specified in the solicitation documents. Business or professional licenses costs are not reimbursable.

**REJECTION OF OFFERS:** The City reserves the right to accept or reject any or all quotations in whole or in part and to award by items, parts of items, or by any aggregate group of items specified. The City reserves also the right to waive technical defects when in its judgment the best interest of The City thereby will be served.

**RULES AND REGULATIONS:** All work performed shall be in strict compliance with Local, State and Federal laws, rules and regulations. Vendor shall assume all liability for fines and penalties assessed by the authorities for any infractions.

**UNIT PRICING AND QUANTITIES.** If this solicitation requests submission of unit prices: (i) the successful Vendor will hold all unit prices bid firm for the duration of the Contract, including any extension thereof, unless specifically authorized by the Contract Documents; and (ii) quantities stated are an estimate only and no guarantee is given or implied as to quantities that will actually be required during the Contract period. (iii) The City makes no guarantee of volume.

**RESTRICTIONS:** Time, dollar, or quantity restrictions are not permissible. Quotes offered which include such restrictions will be rejected. Any variations from this specification shall be indicated on the quote sheet and shall be explained in detail on a separate attachment.

**PRICE INCLUSIVE OF ALL COSTS:** Quoted Price is inclusive of all of the Vendor's direct and indirect costs of performing the Work, including any surcharges, fuel charges, delivery charges,

disposal charges, treatment chemicals, or other unspecified additional fees. The City will not pay for any fee not specified on the quote schedule.

**NON-LIABILITY:** The Vendor will not be liable in damages for delay in shipment or failure to deliver services when such delay or failure is the result of fire, flood, strike, the transporting carrier, act of God, act of Government, act of an alien enemy or by any other circumstance which, in the Purchasing Agent's opinion, is beyond the control of the awarded Vendor. Under such circumstances, however, the Purchasing Agent may, at her discretion, cancel the contract.

**OTHER CONSIDERATIONS:** Quantities involved, time of delivery, purpose for which required, competency of Vendor, his ability to render satisfactory service and past performance will be considered in determining responsibility.

**CANCELLATION:** The City may, by written notice to Vendor, terminate this Contract, in whole or in part, at any time, either for The City's convenience or because of the failure of the Vendor to fulfill its contractual obligations. 1) Before terminating for convenience, City must provide Vendor at least 30 day's advance notice of termination. This Contract will terminate automatically and without need for further notice upon the expiration of the notice period. 2) Before terminating due to Vendor's material breach of its contractual obligations, City must provide Vendor prior written notice, specifying the breach and demanding Vendor remedy the breach within 10 days of the notice, or within such longer period as may be reasonably required if the nature of the breach is that it cannot be remedied within 10 days of notice. This Contract will terminate automatically and without need for further notice if Vendor fails to remedy the material breach within the period described in The City's notice of breach.

**SPECIFICATIONS/DESCRIPTION OF EQUIPMENT:** If any proprietary, trade, brand or manufacturers' name or part number is used herein in describing the required equipment, it shall be understood to indicate the minimum standard of composition and quality desired, and shall not be construed to exclude equipment that equals or exceeds the functional capability and quality of the named equipment. If offers are based on such equivalent equipment, indicate the manufacturers name, model, and number for the equipment and include any literature or other explanation of the equipment's quality or performance. In cases where it becomes necessary to determine whether or not a product offered is equal or equivalent to the product specified, The City of Daytona Beach, at its sole discretion, will make such determination.

**SERVICE FAILURES:** Failure of a Vendor to provide services within the time specified, or within a reasonable time as interpreted by the Purchasing Agent, or failure to make replacements of rejected articles as directed by the Purchasing Agent, shall permit the Purchasing Agent to purchase on the open market services of comparable quality to take the place of those rejected or not delivered. On all such purchases the Vendor will reimburse The City within a reasonable time specified by the Purchasing Agent, for any expenses incurred in excess of the defaulted prices.

**SERVICE WARRANTY:** The following service warranty shall be included as a part of the service contract. "In the event that it is determined that repairs/replacements are required as a result of negligence in performance of the maintenance service inspections, it will be the responsibility of the awarded Vendor to make necessary repairs with no obligation to The City of Daytona Beach."

### **SECTION 3: INSURANCE:**

Vendor will provide and maintain at Vendor's sole expense, insurance of the kinds of coverage and in the amounts set forth in this Article, primary and non-contributory with The City's own insurance, in form and from companies satisfactory to The City.

(a) Coverage and Amounts. Subject to paragraph (b), below, required coverages and amounts are as follows:

1. Workers Compensation Insurance – As required by Florida Statutes, Chapter 440, Workers' Compensation Insurance, for all employees of the Vendor, employed at the site of the work or in any way connected with the work, which is the subject of this service

The insurance required by this provision shall comply fully with the Florida Workers' Compensation Law and include Employers' Liability Insurance with limits of not less than \$500,000 per occurrence. Any associated or subsidiary company involved in the service must be named in the Workers' Compensation coverage.

2. Commercial General Liability Insurance, including coverage for operations, independent Vendors, products-completed operations, broad form property damage, and personal injury on an "occurrence" basis insuring the Vendor and any other interests, including but not limited to any associated or subsidiary companies involved in the services being provided under this Contract.

3. Automobile Liability Insurance which shall insure claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle used by the VENDOR at the site of the project or in any way connected with the services being provided under this Contract.

The limit of liability under the Commercial general liability and automobile liability policies will be a combined single limit for bodily injury and property damage of no less than \$1,000,000 per occurrence, project specific. If insurance is provided with a general aggregate, then the aggregate shall be in an amount of no less than \$2,000,000, project specific. The Risk Manager for The City may authorize lower liability limits for the automobile policy only, at the Risk Manager's sole discretion.

THE COMMERCIAL GENERAL LIABILITY INSURANCE POLICY SHALL NAME THE CITY AS AN ADDITIONAL INSURED. Contractor's Commercial General Liability insurance policy shall provide coverage to Contractor, and City when required to be named as an additional insured either by endorsement or pursuant to a blanket additional insured endorsement, for those sources of liability which would be covered by the latest edition of the standard Commercial General Liability Coverage Form (ISO Form CG 00 01) without the attachment of any endorsements excluding or limiting coverage for Products/Completed Operations, Independent Contractors, Property of County in Contractor's Care, Custody or Control or Property of County on which contracted operations are being performed, Explosion, Collapse or Underground hazards (XCU Coverage, Contractual Liability or Separation of Insureds. When City is added as additional insured by endorsement, ISO Endorsements CG 20 10 and CG 20 37 or their equivalent shall be used to provide such Additional Insured status.

Unless specifically waived hereafter in writing by the Risk Manager, Vendor agrees that the insurer shall waive its rights of subrogation, if any, against The City on each of the foregoing types of required insurance coverage.

Loss Deductible Clause: The City shall be exempt from, and in no way liable for, any sums of money that may represent a deductible in any insurance policy. The payment of such deductible shall be the sole responsibility of the Vendor or sub-Vendor providing such insurance.

(b) Required Changes in Coverage and Amounts of Coverage. The City may at any time require Vendor to increase the amount of coverage, change the terms of coverage, and provide additional or different types of coverage, as The City may deem necessary; provided that the changes or increase in coverage are consistent with such requirements for similar operations and businesses then operating within the Central Florida area or are reasonable in light of prior claims made against Vendor's policies. Vendor must comply with such requirements within 30 days after The City's demand.

(c) Reasonable Deductible. Any insurance policy required by or pursuant to this Section may contain a reasonable deductible provision provided advance notice of said deductible provision is given by the Vendor to The City and approval from the Risk Manager for The City is given, which approval shall not be unreasonably withheld or delayed.

(d) Proof of Insurance. Vendor will furnish proof of the required forms and coverages referenced above to the Risk Manager for The City prior to or at the time of execution of this Contract. Vendor will not commence work until all proof of such insurance has been filed with and approved by the Risk Manager. Vendor will furnish proof of any new or amended coverages to the Risk Manager promptly upon being directed to do so. The City may require Vendor to halt operations until Vendor has provided such insurance.

(e) Form of Evidence of Coverage. Vendor will furnish evidence of all required insurance in the form of certificate of insurance which will clearly outline all hazards covered as itemized above, the amounts of insurance applicable to each hazard, the expiration dates.

If requested by Risk Manager, Vendor will furnish copies of the insurance contracts to support the certificates of insurance and the copies of said insurance must be acceptable to the Risk Manager.

Anything to the contrary notwithstanding, the liabilities of the Vendor under this Agreement shall survive and not be terminated, reduced or otherwise limited by any expiration or termination of insurance coverage. Neither approval nor failure to disapprove insurance furnished by the Vendor shall relieve the Vendor or its sub-Vendors from responsibility to provide insurance as required by the contract.

(f) Replacement Required. Vendor will file replacement certificates 30 days prior to expiration or termination of the required insurance occurring prior to the acceptance of the work by The City. If such insurance will lapse, The City expressly reserves the right to renew the insurance at Vendor's expense.

(g) Termination of Insurance. Vendor may not cancel the insurance required by this Contract until all services are completed, accepted by The City, and Vendor has received written

notification from the Risk Management Division of The City that Vendor may cancel the insurance required by this Contract and the date upon which the insurance may be cancelled.

## **SECTION 4: SCOPE OF WORK**

### **SCOPE OF WORK HVAC CHEMICAL WATER TREATMENT**

#### **I. BACKGROUND**

- A. INTRODUCTION:** The City of Daytona Beach, Florida requires qualified HVAC Chemical Water Treatment Maintenance Service Providers to provide monthly service according to HVAC Chemical Water treatment Scope of Work at 3 locations. The contract term will be one (1) year, with options to renew for 4 terms of one year each, at The City's option, upon 30 days' notice to the Service Provider.
- B. USER:** The City of Daytona Beach Public Works/Facilities Management will be the point of contact for the selected Service Provider.
- C. CURRENT STATUS:**
1. Monthly HVAC Chemical Water Treatment service is currently being provided chemical water treatment maintenance at two of the locations, Police Department and Peabody Auditorium.
  2. Annual budget is \$10,000
- D. INTENT:** The City's intent is to provide clean, healthy indoor air quality.

#### **II. BASIC REQUIREMENTS**

- A. MINIMUM REQUIREMENTS:** Service Provider must meet the following minimum qualifications and will provide documentation with their proposal:
1. Service Provider will have a minimum of five (5) years' local experience with chemical water treatment of similar type HVAC systems, capable of analyzing water qualities, installing water-treatment equipment, and applying water treatment as specified in Attachment A.
  2. Service Provider will provide technicians with type 4 certification meeting the requirements of Section 608 of the EPA Clean Air Act.
- B. SUBMITTAL REQUIREMENTS**
1. **Experience:** Provide a summary of the Service Provider's experience in providing similar HVAC Chemical Water Treatment Maintenance Services that demonstrates a proven track record of

providing successful chemical water treatment maintenance for HVAC Systems.

Provide a list employees' of credentials.

2. **References:** Service Provider will provide a minimum of three (3) present customers/references with up-to-date contact information for person(s) familiar with Firm's experience.
3. **Quality Improvement Process:** Service Provider will submit a one-page summary of its Quality Improvement Process Service, and an outline of the Quality Education that its employees have received and the number of staff who have received it. Service Provider may supply supporting literature.
4. **Program Administration:** The Service Provider will provide a summary of how the firm administers and manages a water treatment program, and will include a sample administration notebook and its contents.
5. **Price:** Service Providers will complete the Price Proposal Form, B, listing the monthly service cost for each location. All chemicals will be included in the monthly service price.

### **C. WEIGHTED SELECTION CRITERIA**

1. EXPERIENCE weight=30
2. REFERENCES weight = 10
3. QUALITY IMPROVEMENT PROCESS weight =20
4. PROGRAM ADMINISTRATION weight = 25
5. PRICE weight = 15

### **III. SCOPE OF WORK**

The Service Provider will provide monthly service to each HVAC system in accordance with the HVAC Chemical Water Treatment Scope of Work. Attachment A. The systems to be serviced are:



- Daytona Beach Police Department  
129 Valor Blvd.  
Daytona Beach, FL 32114
  - 350 ton chilled water, closed loop system
  
- Peabody Auditorium  
600 Auditorium Blvd.  
Daytona Beach, FL 32114
  - 180 ton chilled water, open loop system
  - Approx. 200 ton chilled water, closed loop system
  
- Schnebley Community Center
  - 35 Ton chilled water, closed loop system

Service Provider will supply all required chemicals required to maintain chiller water chemistry.

Service Provider will respond to all emergency notifications by City with a certified technician onsite within two (2) hours.

Service Provider will maintain an Administration Notebook which will include, at a minimum, an outline of the program, all control proposed test procedures, log sheets, product bulletins, material safety data sheets, feed and control equipment specifications maintenance inspection and service reports and quantities and names of chemicals utilized during each monthly service. Service Provider will provide good resolution time/date stamped photographs of the key system component that are inspected and serviced during each monthly service and will list the items inspected and serviced on each site visit.

## ATTACHMENT A

### HVAC CHEMICAL WATER TREATMENT WORK SPECIFICATION

#### PART 1 - GENERAL

##### 1.1 SUMMARY

A. This Section includes the following HVAC water-treatment systems:

1. Open Loop Chemical Treatment Systems.
2. Closed Loop Chemical Treatment Systems.
3. Chemical treatment test equipment.
4. HVAC water-treatment chemicals.

##### 1.2 PERFORMANCE REQUIREMENTS

A. Water quality for HVAC systems shall minimize corrosion, scale buildup, and biological growth for optimum efficiency of HVAC equipment without creating a hazard to operating personnel or the environment.

B. Base HVAC water treatment on quality of water available at Project site, HVAC system equipment material characteristics and functional performance characteristics, operating personnel capabilities, and requirements and guidelines of authorities having jurisdiction.

C. Closed hydronic systems, including **hot-water heating and chilled water system water** shall have the following water qualities:

1. pH: Maintain a value within 9.0 to 10.5.
2. "P" Alkalinity: Maintain a value within 100 to 500 ppm.
3. Boron: Maintain a value within 100 to 200 ppm.
4. Chemical Oxygen Demand: Maintain a maximum value of 100 ppm.
5. Soluble Copper: Maintain a maximum value of 0.20 ppm.
6. TDS: Maintain a maximum value of 10 ppm.
7. Ammonia: Maintain a maximum value of 20 ppm.
8. Free Caustic Alkalinity: Maintain a maximum value of 20 ppm.
9. Microbiological Limits:
  - a. Total Aerobic Plate Count: Maintain a maximum value of 1000 organisms/ml.
  - b. Total Anaerobic Plate Count: Maintain a maximum value of 100 organisms/ml.
  - c. Nitrate Reducers: Maintain a maximum value of 100 organisms/ml.
  - d. Sulfate Reducers: Maintain a maximum value of 0 organisms/ml.

- e. Iron Bacteria: Maintain a maximum value of 0 organisms/ml.
- D. Open hydronic systems, including **condenser** water, shall have the following water qualities:
- 1. pH: Maintain a value within 8.4 to 9.0.
  - 2. "P" Alkalinity: Maintain a maximum value of 100 ppm.
  - 3. Chemical Oxygen Demand: Maintain a maximum value of 100 ppm.
  - 4. Soluble Copper: Maintain a maximum value of 0.20 ppm.
  - 5. TDS: Maintain a maximum value of 10 ppm.
  - 6. Ammonia: Maintain a maximum value of 20 ppm.
  - 7. Free "OH" Alkalinity: Maintain a maximum value of 0 ppm.
  - 8. Microbiological Limits:
    - a. Total Aerobic Plate Count: Maintain a maximum value of 10,000 organisms/ml.
    - b. Total Anaerobic Plate Count: Maintain a maximum value of 1000 organisms/ml.
    - c. Nitrate Reducers: Maintain a maximum value of 100 organisms/ml.
    - d. Iron Bacteria: Maintain a maximum value of 0 organisms/ml.

### 1.3 SUBMITTALS

- A. Product Data: Include plan describing methods and chemicals proposed for use in system(s) cleaning and treatment. Include treatment system schematics showing connection locations to loop systems, testing procedures, manufacturer's literature for controllers, chemical feed pumps and chemicals. Include Material Safety Data Sheets for all proposed chemicals.
- B. Field quality-control test reports.
- C. Operation and maintenance data.

### 1.4 QUALITY ASSURANCE

- A. Chemicals: Treatment chemicals used in systems that are "bled" to sewer on a regular basis shall comply with all applicable waste control standards. All biocides must be EPA registered in the name of the Water Treatment Firm for application into the HVAC water system(s). All products shall have all ingredients listed on the storage container label and Material Safety Data Sheets.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

## 1.5 WARRANTY

- A. Special Guarantee: Provide a guarantee that the treated systems will remain scale and algae free for a period of one year when the provided chemicals are used as directed. If scaling or fouling occurs when the provided chemicals are used as directed the Service Provider will clean the system(s) at no cost to the Owner.
- B. Provide all parts and labor required to maintain the chemical treatment systems in good working order during the warranty period.

## PART 2 - PRODUCTS

### 2.1 OPEN LOOP (COOLING TOWER) SYSTEMS

- A. Chemical Controller: Bleed-and-feed type conductivity controller complete with watertight enclosure, 2 electrode, 0-5,000  $\mu$ S conductivity sensor, plumbing, dry contact for flow switch, power cord and relays for chemical feed pumps and bleed valve. Controller shall be 120 VAC.
  - 1. Products: Subject to compliance with requirements, provide the following:
    - a. Lakewood Model 101.
    - b. Approved Equal.
- B. Chemical Controller: Microprocessor based pH and conductivity controller with watertight enclosure, 4-electrode 0-5,000  $\mu$ S conductivity sensor with fouling compensation and alarm, differential 0-14 pH sensor with diagnostics, plumbing, flow switch, power cord and relays for control of bleed valve and chemical feed pumps, LCD display, interface for pH and conductivity monitoring by building control system. Controller shall be 120 VAC.
  - 1. Products: Subject to compliance with requirements, provide the following:
    - a. Lakewood Model 2412.
    - b. Approved equal.
- C. Chemical Solution Tanks:
  - 1. Chemical-resistant reservoirs fabricated from high-density opaque polyethylene with minimum 110 percent containment vessel.
  - 2. Molded cover with recess for mounting pump.
  - 3. Capacity: 50 gal.

D. Chemical Solution Injection Pumps:

1. Products: Subject to compliance with requirements provide one of the following:
  - a. IWAKI EZ series.
  - b. LMI Model 151.
  - c. Pulsafeeder Model C Plus.
2. Electronic metering pump.
3. Self-priming, positive-displacement; rated for intended chemical with minimum 25 percent safety factor for design pressure and temperature.
4. Minimum Capacity: 0.5 gallons per hour.
5. Adjustable flow rate.
6. Metal and thermoplastic construction.
7. Built-in relief valve.
8. Fully enclosed, continuous-duty, single-phase motor.

E. Chemical Solution Tubing: Polyethylene tubing with compression fittings and joints.

F. Injection Assembly:

1. Quill: Minimum NPS 1/2 with insertion length sufficient to discharge into at least 25 percent of pipe diameter.
2. Ball Valve: Two-piece, stainless steel; selected to fit quill.
3. Packing Gland: Mechanical seal on quill of sufficient length to allow quill removal during system operation.
4. Assembly Pressure/Temperature Rating: Minimum 600 psig at 200 deg F.

G. Test Kit: Manufacturer-recommended equipment and chemicals in a wall-mounting cabinet for testing pH, TDS, inhibitor, chloride, alkalinity, hardness; and oxidizing biocide test.

1. Provide TDS meter with 0-5,000  $\mu$ S range.
2. Provide monthly test log sheets with recommended ranges for use by plant personnel.

H. Corrosion Test-Coupon Assembly: Constructed of corrosive-resistant material, complete with piping, valves, 2 pre-weighed C1010 mild steel coupons and 2 pre-weighed CDA 110 copper coupons. Locate copper coupon downstream from mild steel coupon in the test-coupon assembly.

- I. Chemicals shall be as recommended by water-treatment system manufacturer that are compatible with piping system components and connected equipment, and that can attain water quality specified in Part 1 "Performance Requirements" Article.
  - 1. Scale Inhibitor: Liquid organo-phosphate maintained between 8 and 10 ppm concentration in open loop system.
  - 2. Biocide: EPA registered, non-chlorine type, maintained at sufficient concentrations to prevent formation of slime and growth of algae.
  - 3. Acid: Sulfuric acid to maintain tower water pH between 8.4 and 9.0.
- J. Bleed Valve: Solenoid controlled, tower water bleed valve with built-in flow control. Provide one valve per controller.

## 2.2 CLOSED LOOP SYSTEMS

- A. Test Kit: Manufacturer-recommended equipment and chemicals in a wall mounted cabinet for testing inhibitor concentrations.
- B. Corrosion Test-Coupon Assembly: Constructed of corrosive-resistant material, complete with piping, valves, 1 pre-weighed C1010 mild steel coupon, and 1 pre-weighed CDA 110 copper coupon.
- C. Chemicals:
  - 1. Cleaner: Alkaline based cleaner designed for the removal of oil, corrosion and other contaminants from closed loop piping systems and equipment.
  - 2. Corrosion Inhibitor: Boron-nitrate type, designed to prevent corrosion in closed loop piping.

## PART 3 - EXECUTION

### 3.1 WATER ANALYSIS

Perform an analysis of supply water to determine quality of water available at Project site.

### 3.2 CLEANING

- A. Provide cleaner as required to maintain the manufacturer's recommended concentration for cleaning of the closed loop systems.
- B. Circulate the cleaning solution for a minimum of 48 hours.
- C. Drain and flush the system until all cleaning chemicals and suspended materials have been flushed from the system.

### 3.3 CHEMICAL ADDITION

- A. Open Loop Systems:
  - 1. Add the required amount of scale inhibitor to reach an initial concentration of 8-10 ppm.
  - 2. Add the required amount of biocide to reach the manufacturer's recommended concentration to prevent the formation of slime and the growth of algae.
  - 3. Add the required amount of acid to set the pH between 8.4 and 9.0.
  - 4. Install the corrosion coupons in the coupon rack after the initial chemical addition.
  
- B. Closed Loop Systems:
  - 1. Immediately after system testing, cleaning and flushing, add the required amount of corrosion inhibitor to reach the manufacturer's recommended concentration.
  - 2. Install the corrosion coupons in the coupon rack after the initial chemical addition.

### 3.4 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
  
- B. Tests and Inspections:
  - 1. Inspect field-assembled components and equipment installation, including piping and electrical connections.
  - 2. Inspect piping and equipment to determine that systems and equipment have been cleaned, flushed, and filled with water, and are fully operational before introducing chemicals for water-treatment system.
  - 3. Do not enclose, cover, or put piping into operation until it is tested and satisfactory test results are achieved.
  - 4. Test for leaks and defects. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.
  - 5. Leave uncovered and unconcealed new, altered, extended, and replaced water piping until it has been tested and approved. Expose work that has been covered or concealed before it has been tested and approved.
  - 6. Cap and subject piping to static water pressure of 50 psig above operating pressure, without exceeding pressure rating of piping system materials. Isolate test source and allow test pressure to stand for four hours. Leaks and loss in test pressure constitute defects.

7. Repair leaks and defects with new materials and retest piping until no leaks exist.
- C. Advise Owner of changes necessary to adhere to the NADCA Position Paper on Chemical Product Applications in HVAC Systems Article.
  - D. Comply with ASTM D 3370 and with the following standards:
    1. Silica: ASTM D 859.
    2. Acidity and Alkalinity: ASTM D 1067.
    3. Iron: ASTM D 1068.
    4. Water Hardness: ASTM D 1126. G. Corrosion Coupons:

### 3.5 TRAINING

- A. Train the Owner's representative(s) in the proper methods for testing the system(s)' water, chemical handling, adding chemicals to the system(s), adjustment, and use and maintenance of the controller(s) and chemical feed pumps. Training may be done during each of the regularly required visits.

### 3.6 SUPPLIES

Provide all chemicals, testing supplies, log sheets, laboratory analysis, and other consumables required to maintain the proper chemical balance in the system(s) during the warranty period.

END OF SECTION



**SECTION A: FEE SCHEDULE** *(This form must be completed, no substitute forms allowed)*

Quantities stated are an estimate only and no guarantee is given or implied as to quantities that will actually be required during the Contract period:

<b>Description</b>	<b>Estimated Annual Quantity</b>	<b>Unit of Measure</b>	<b>Unit Price</b>	<b>Extended Price</b>
Chemical Treatment of systems at Police Department	12	month	\$ _____	\$ _____
Chemical Treatment of systems at Peabody Auditorium	12	month	\$ _____	\$ _____
Chemical Treatment of systems at Schnebley Community Center	12	month	\$ _____	\$ _____
<b>GRAND TOTAL</b>				\$ _____

**SECTION B: SUBMISSION INFORMATION**

Submit pages with section A, B, C, D, and current W-9 form.

Awarded Vendor will be asked to submit certificate of insurance with minimum standards stated herein prior to commencing work.

Deliver to: City of Daytona Beach Purchasing Division  
301 S. Ridgewood Avenue; Daytona Beach, FL 32115-2451

Email to: [purchasing@codb.us](mailto:purchasing@codb.us)

Fax to: (386) 671-3962

Questions to: Joanne Flick, Purchasing Agent  
[purchasing@codb.us](mailto:purchasing@codb.us)

**SECTION C: VENDOR / RESPONDENT INFORMATION**

- By signing below I agree that I am an authorized representative of the company.
- I have read and fully understand the scope, terms, and conditions described herein.
- I understand this is only an offer and not a guarantee that the company listed below will be selected.
- If selected, I agree to bind the company listed below to the terms and conditions set forth in this quote.

Company Name:	Representative Signature:
Full Address:	Printed Name & Title:
Telephone:	Email:
Fax:	FEI/EIN Number:

**SECTION D: REFERENCES** *(This form must be completed, no substitute forms allowed)*

List references for whom similar work has been performed. List people whom you worked directly with, not Presidents or CEO’s that may not have knowledge of your work.

Name \_\_\_\_\_ Contact Person \_\_\_\_\_

Address \_\_\_\_\_ Telephone Number \_\_\_\_\_

Name \_\_\_\_\_ Contact Person \_\_\_\_\_

Address \_\_\_\_\_ Telephone Number \_\_\_\_\_

Name \_\_\_\_\_ Contact Person \_\_\_\_\_

Address \_\_\_\_\_ Telephone Number \_\_\_\_\_