



STATE OF DELAWARE  
EXECUTIVE DEPARTMENT  
OFFICE OF MANAGEMENT AND BUDGET

March 1, 2013

TO: ALL STATE AGENCIES, SCHOOL DISTRICTS, MUNICIPALITIES, VOLUNTEER  
FIRE COMPANIES AND POLITICAL SUBDIVISIONS

FROM: KIMBERLY JONES  
STATE CONTRACT PROCUREMENT OFFICER I  
302-857-4584

SUBJECT: **AWARD NOTICE – ADDENDUM #4 – EFFECTIVE APRIL 1, 2017**  
**CONTRACT NO. GSS13235-WATER\_TREAT**  
**Water Treatment**

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KEY CONTRACT INFORMATION

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**GOVERNMENT SUPPORT SERVICES – CONTRACTING**  
100 ENTERPRISE PLACE – SUITE 4 – DOVER, DE 19904-8202  
PHONE: (302) 857-4550 – FAX: (302) 739-3779 – GSS.OMB.DELAWARE.GOV

## **KEY CONTRACT INFORMATION**

### **1. MANDATORY USE CONTRACT**

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**REF: Title 29, Chapter 6911(d) Delaware Code.** Every state department and agency within the Executive Branch and Judicial Branch of the state government shall procure all material, equipment and nonprofessional services through the statewide contracts administered by Government Support Services, Office of Management and Budget. Delaware State University, Delaware Technical and Community College, the operations funded by Public School Districts, Delaware Transit Corporation, the Legislative Branch and the Board of Pension Trustees and their consultants are specifically exempted from the requirements of this subsection.

### **2. CONTRACT PERIOD**

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Each Vendor's contract shall be valid for a one (1) year period from April 1, 2013 through March 31, 2014. Each contract may be renewed for three (3) one (1) year periods through negotiation between the Vendor and Office of Management and Budget, Government Support Services. Negotiation may be initiated no later than ninety (90) days prior to the termination of the current agreement.

This contract has been extended one year through March 31, 2015.

This contract has been extended one year through March 31, 2016.

This contract has been extended one year through March 31, 2017.

**This contract has been extended one month through April 30, 2017.**

The State reserves the right to extend this contract on a month-to-month basis for a period of up to three months after the term of the full contract has been completed.

### **3. VENDORS**

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<del>Klenzoid, Inc.</del> <b>GSS13235-WATER_TREATV01</b> <del>912 Spring Mill Ave.</del> <del>Conshohocken, PA 19428</del> <del>POC: Jeffrey Rudolph</del> <del>PH: 443-299-8084</del> <del>EM: <a href="mailto:Rob_Maxson@klenzoidinc.com">Rob_Maxson@klenzoidinc.com</a></del> <del>FSF: 0000018142</del>	Limbach Company LLC <b>GSS13235-WATER_TREATV02</b> 175 Titus Ave., Suite 100 Warrington, PA 18976 POC: Jung K. Kang PH: 215-488-9638 EM: <a href="mailto:jung.kang@limbachinc.com">jung.kang@limbachinc.com</a> FSF: 0000004179
<del>Syntec Corporation</del> <b>GSS13235-WATER_TREATV03</b> <del>109 Rogers Road, Suite E</del> <del>Wilmington, DE 19801</del> <del>POC: Theresa Kisielewski</del> <del>PH: 302-421-8393</del> <del>EM: <a href="mailto:theresa@syntec.com">theresa@syntec.com</a></del> <del>FSF: 0000046073</del>	

### **4. SHIPPING TERMS**

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F.O.B. destination; freight pre-paid.

## **5. PRICING**

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Prices will remain firm for the term of the contract year. See associated Pricing Spreadsheet for contract rates.

## **ADDITIONAL TERMS AND CONDITIONS**

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## **6. BILLING**

The successful vendor is required to **"Bill as Shipped" to the respective ordering agency(s).** Ordering agencies shall provide at a minimum the contract number, ship to and bill to address, contract name and phone number.

## **7. PAYMENT**

The agencies or school districts involved will authorize and process for payment each invoice within thirty (30) days after the date of receipt. The contractor or vendor must accept full payment by procurement (credit) card and/or conventional check and/or other electronic means at the State's option, without imposing any additional fees, costs or conditions.

## **8. PRODUCT SUBSTITUTION**

All items delivered during the life of the contract shall be of the same type and manufacture as specified unless specific approval is given by Government Support Services to do otherwise. Substitutions may require the submission of written specifications and product evaluation prior to any approvals being granted.

## **9. ORDERING PROCEDURE**

Successful contractors are required to have either a local telephone number within the (302) area code, a toll free (800) number, or agree to accept collect calls. Each agency is responsible for placing their orders and may be accomplished by written purchase order, telephone, fax or computer on-line systems. The contractor or vendor must accept full payment by procurement (credit) card and/or conventional check and/or other electronic means at the State's option, without imposing any additional fees, costs or conditions.

## **10. PURCHASE ORDERS**

Agencies that are part of the First State Financial (FSF) system are required to identify the contract number GSS13235-WATER\_TREAT on all Purchase Orders (P.O.) and shall complete the same when entering P.O. information in the state's financial reporting system.

## **11. HOLD HARMLESS**

The contractor agrees that it shall indemnify and hold the State of Delaware and all its agencies harmless from and against any and all claims for injury, loss of life, or damage to or loss of use of property caused or alleged to be caused, by acts or omissions of the contractor, its employees, and invitees on or about the premises and which arise out of the contractor's performance, or failure to perform as specified in the Agreement.

## **12. NON-PERFORMANCE**

In the event the contractor does not fulfill its obligations under the terms and conditions of this contract, the ordering agency may purchase equivalent product on the open market. Any difference in cost between the contract prices herein and the price of open market product shall be the responsibility of the contractor. Under no circumstances shall monies be due the contractor in the event open market products can be obtained below contract cost. Any monies charged to the contractor may be deducted from an open invoice.

## **13. FORCE MAJEURE**

Neither the contractor nor the ordering agency shall be held liable for non-performance under the terms and conditions of this contract due, but not limited to, government restriction, strike, flood, fire, or unforeseen catastrophe beyond either party's control. Each party shall notify the other in writing of any situation that may prevent performance under the terms and conditions of this contract.

## **14. AGENCY'S RESPONSIBILITIES**

The Agency shall:

- a. Examine and review in detail all letters, reports, drawings and other documents presented by the Contractor to the Agency and render to the Contractor in writing, findings and decisions pertaining thereto within a reasonable time so as not to delay the services of Contractor.
- b. Give prompt written notice to the Contractor whenever the Agency observes or otherwise becomes aware of any development that affects the scope or timing of the Contractor's services.
- c. When an ordering agency first experiences a relatively minor problem or difficulty with a vendor, the agency will contact the vendor directly and attempt to informally resolve the problem. This includes failure to perform by the date specified and any unacceptable difference(s) between the purchase order and the merchandise received. Ordering agencies should stress to vendors that they should expedite correction of the differences because failure to reply may result in an unfavorable rating in the execution of the awarded contract.
- d. The state has several remedies available to resolve non-performance issues with the contractor. The Agency should refer to the Contract Terms and Conditions to view these remedies. When a default occurs, the Agency should first review the contract to confirm that the issue is a part of the contract. If the issue is not covered by the contract, the state cannot expect the contractor to perform outside the agreement. If the issue is a part of the contract, the Agency or GSS - Contracting must then contact the contractor, discuss the reasons surrounding the default and establish a date when the contractor will resolve the non-performance issue.
- e. If there is a performance deficiency, a Corrective Action Report (CAR) may be used. Complete this form to report concerns with vendors or commodities. Be sure to furnish as much detail as possible. <http://gss.omb.delaware.gov/divisionwide/forms.shtml>.

## 15. VENDOR RESPONSIBILITY - DFM

It is the responsibility of the vendor to consider the variations in temperature, water quality, and minor problems which normally occur during the application of treatment programs. The State of Delaware, Division of Facilities Management realizes, however, there are situations that occur which are beyond the control of the vendor. These include situations such as large losses of water from systems and drastic changes in raw water quality (as in a drought). Under these circumstances the vendor may charge for the cost of specific chemicals required. The cost of chemicals must not exceed that of the cost quoted in the Bid Quotation Section.

The following are minimal services required. However, the vendor is not limited to these services only.

## 16. STANDARD SERVICES – DFM

### a. WATER ANALYSIS

	Total Hardness	Calcium Hardness	M Alkalinity	Conductivity	pH	SiO2	Inhibitor	SO3	PO4	Cl2	Freeze Point	Other
City	X	X	X	X		X						
Tower				X	X		X			X		
Closed				X	X		X					
Softener	X			X								
Feedwater	X			X								
Boiler			X	X				X	X			
Condensate				X	X							
Glycol					X		X				X	

Raw water analysis should be run monthly on each different water source (three in Kent and one each in New Castle and Sussex). Each of the operating Open systems should be tested every visit. Closed systems should be tested quarterly. If there is a problem with a closed system, it should be tested each visit until the readings are correct. Boilers should be tested each month during operation. Service visits shall be twice a month from May through October and monthly the rest of the year.

### b. CORROSION STUDIES

Vendor will perform corrosion studies, which will permit a valid evaluation of system performance. Corrosion coupon bypass assemblies will be provided and installed on one of the open systems and on one open and closed system in New Castle County and Sussex County and on two (2) systems each in Kent County. The locations will be selected at a later date. Coupons of carbon steel and copper will be used on each system. The cooling tower and chiller water coupons will be inserted in June and the hot water system coupon in November. Dual temperature systems will be tested in June and December. In the event the coupons are above the specified limits the test will be repeated immediately.

### c. BIOLOGICAL STUDIES

All open systems must be tested each month for biological control. Closed systems will be tested as deemed necessary. A liquid bromine will be the primary biocide. A non oxidizing biocide will be the secondary biocide. It may be fed with a pump and timer or slug fed by hand each service visit.

**d. FEED EQUIPMENT**

A pump to feed inhibitor, a conductivity controller and solenoid and two pumps to feed biocide are required for all cooling tower systems. The conductivity controller must be capable of feed based on time, makeup, and bleed. It shall contain timers for the feed of two biocides. Vendor will own and maintain the systems. The vendor will supply containment for all chemicals. Finally, dilution tanks are required for all chemicals at each cooling tower.

**e. CHEMICAL DELIVERY**

Chemicals should be delivered to a single site in each county. Thirty gallon drums are to be sent to Kent and New Castle Counties and five gallon pails to Sussex County. Deliveries for Kent and New Castle Counties will be via hydraulic lift gate truck. The vendor will transfer chemicals to each site. It is the responsibility of the vendor to keep a three month supply at each site. Vendor is responsible for using chemicals presently onsite or removal of the chemicals.

**f. COOLING TOWERS/BOILERS**

Testing for conductivity of cooling towers and boilers and adjustments to bleed off or blow down will be made weekly by Facilities Management personnel. A record of the monthly service visit will be left with the designated supervisor. Facilities Management personnel will also immediately inform the vendor of any problems.

**g. RESPONSE TIME**

Vendor must respond within twenty-four (24) hours after request.

**h. TEST EQUIPMENT**

One Myron L conductivity meter and one chlorine test kit (with reagents) must be provided by the vendor for each of the three (3) counties.

**i. GUARANTEE**

The vendor warrants that the equipment will open up in a scale free condition if the water treatment limits specified by the vendor are followed. If the equipment is not scale free when opened, the vendor will clean the equipment at no charge.

**j. PENALTY**

A penalty of 10% of the yearly contract price will be assessed in any month were service is missed or there is insufficient chemical on site.

**k. TRAINING**

Training for management and operating personnel is required. Training should include both classroom and field training. Training should encompass theory, testing and control and safety. A manual explaining the function of the chemicals, the required levels in the various systems, product data sheets and MSD sheets should be available at each county. Training must be provided within thirty (30) days after the contract begins.

## I. REPORTING

A written report should be discussed with the building engineers and appropriate supervisory personnel at the end of each visit. The report should contain the test data, a discussion of conditions at the time, and any recommendations to improve the program. Also, logs provided by the State must be filled in each month. Copies of these reports must be sent to the State consultant each month. In addition, a formal review of the program should be presented thirty (30) days prior to the expiration of the contract.

## m. COMPLIANCE

The vendor will comply with all regulations pertaining to the sale and application of chemicals. These include EPA, NIOSH, etc. In addition, MSD's will be provided for each location where chemicals contained as well as an office copy for each site.

Bldg. #	Bldg. Name	Tons	Volume (Gal.)	Op Days	Chill	Hot	Dual Temp.	Boiler	Clycol
<b>New Castle County</b>									
RM96	900 King St.	175	500	365		1	1		
RM92	Carvel Bldg.	500	1500	365		1		1	
		500	1500	365					
		500	1500	365					
RM58	State Training Center	183	550	365					
		183	550	365					
RM97	NCC Inspection Lanes					1			
RM39	Absalom Jones School	135	550			1			
RM84	New Castle County Courthouse				1				
RM77	Greater Wilmington Motor Vehicle Lanes						1		
RM95	Surplus					1			
RM58	Fire Marshall					1			
RM89	Fire Marshall Training Center					1			
RM90	New Castle Amoco					1	1		
RM29	Troop 2				1	1			
<b>NEW CASTLE COUNTY TOTAL</b>		2351	7150						

Award Notice – Addendum #4  
Contract No. GSS13235-WATER\_TREAT

Bldg. #	Bldg. Name	Tons	Volume (Gal.)	Op Days	Chill	Hot	Dual Temp.	Boiler	Clycol
<b>Kent County</b>									
RM13	Archives	300	1500	365	1	2			
RM79	Agriculture	150	500	180	1	1			
RM57	Nutrient Mgmt. Ag. Lab				1	1			
RM05	Capitol Police				1			1	
RM02	Cooper	125	375	365			1		
RM59	DEMA	70	250	365			1		
		70	250	365					
		70	250	365					
RM36	TMC								1
RM30	Fire Marshall	50	150	365			1		
RM50	Highway Admin #1	500	2500	365	1	1			
RM01	Legislative Hall	165	500	365	1	1	1		
		225	2200	180					
RM19	Public Safety	125	300	180			1		
RM86	Richardson Robbins Complex	600	3500	365	1	1			1
RM03	Townsend	250	750	365	1	1			
RM08	Tatnall	125	375	365			1		
RM75	Thomas Collins	100	200	365			1		
RM78	Williams Service	140	800	180	1	1			
RM82	William Penn	75	200	365	1	1	1		
		75	200	365					
RM83	Firing Range				1	1			
RM42	Kent Family Court					1			
RM20	State Police Headquarters					1			1
RM16	Armory				1	1			1
<b>KENT COUNTY TOTAL</b>		3215	14800						

Bldg. #	Bldg. Name	Tons	Volume (Gal.)	Op Days	Chill	Hot	Dual Temp.	Boiler	Clycol
<b>Sussex County</b>									
RM61	Sussex County Family Court	75	225	365			1		
RM64	Sussex County E	60	600	180	2	2			
	Sussex County W	145	750	180					
RM33	Chancery Bldg.					1			
RM66	Fire School					1			
RM63	Sussex County Inspection Lane				1	1			
RM34	Troop 5					1			1
<b>SUSSEX COUNTY TOTAL</b>		280	1575						



## **17. STANDARD SERVICES – DOC**

### **a. SPECIAL PROVISIONS**

Vendor shall be responsible for the following:

- Obtaining any work permit or license for work performed in any City having jurisdiction.
- Meeting all codes and regulations for work performed in the City having jurisdiction.
- Travel time and expenses are to be included as an integral part of the service and not billed separately.
- No subcontracting is permitted under the terms of this contract.
- Any equipment is outside the scope of this contract.

### **b. MINIMUM MONTHLY REQUIREMENTS**

On site testing for conductivity, pH, hardness total, calcium hardness, magnesium hardness, p, m and o alkalinity, silica, total iron, total halogen, sulfite, phosphate, dissolved oxygen and contamination source detection.

A written report containing all test results, explanations of any trends, and a recommendation plan of action including any needed mixing recipes. One copy of the report will be filed at the facility and one copy will be sent with the invoice to the Administration Office.

### **c. MINIMUM PROGRAM REQUIREMENTS**

Contractor shall supply, freight prepaid to each facility, all chemicals required for the water treatment of the boilers, condensate, feed water, supply water, softeners, closed loop systems and open recirculating loops listed in the Equipment List for Water Treatment (see attached).

Contractor is responsible for calibration of all water management control systems as required to maintain proper operation.

An operations manual for each facility including MSDS (printed), program outline, chemical descriptions and applications, emergency contact information and a trouble shooting guide for maintaining proper chemistry.

Technical representatives shall be available for calls on specific problems should they occur, twenty four (24) hours a day, and under emergency conditions be able to visit a facility within four (4) hours of notification.

Contractor shall supply all chemicals, reagents, glassware, testing equipment and software required for system testing.

Contractor shall assure that all water treatment programs comply with local, state and federal laws on environmental protection, and shall have an in-house regulatory affairs group.

Contractor is responsible for complete on-site training for water testing, chemical handling and chemical systems operations.

Contractor is responsible for chemical feed pump troubleshooting and service.

**d. CONTRACTOR REQUIREMENTS**

The contractor shall have a fully staffed technical support group available for consultation during normal business hours.

The contractor shall own and operate, or have available, a complete laboratory facility capable of providing the results of the testing requirement within forty-eight (48) hours. The laboratory shall be equipped to analyze water in accordance with the latest version of “Standard Methods for the Examination of Water and Wastewater” published by the American Public Health Association.

The contractor shall provide a primary technical representative to visit each facility at least monthly to handle all testing, training and supplies. A secondary technical representative will also be required to have a working knowledge of all functions as they relate to water treatment. The technical representative shall have at least a four (4) year college degree in chemistry (or applicable discipline) or ten (10) years experience servicing facilities of similar size.

The contractor must submit updated MSDS's that meet OSHA hazardous communications standards, and operate a 24-hour, 7-day per week emergency response group who can be called for emergency information regarding chemical spills or accidents involving their products.

The contractor must be available for all condenser tube inspections when given advance notification.

The contractor will supply a list of all chemicals, where each chemical is to be used, and the purpose of each chemical.

The contractor must maintain:

- Microbiological Activity less than 10,000 CFU's
- Corrosion Rates less than 5 MPY for Mild Steel
- Corrosion Rates less than 3 MPY for Admiralty Brass
- No scale formation based on Photographic and Water Chemistry reports

**18. STANDARD SERVICE – DHSS**

**a. WATER ANALYSIS**

	Total Hardness	Calcium Hardness	M Alkalinity	Conductivity	pH	SiO2	Inhibitor	SO3	PO4	Cl2	Freeze Point	Other
City	X	X	X	X		X						
Tower				X	X		X			X		
Closed				X	X		X					
Softener	X			X								
Feedwater	X			X								
Boiler			X	X				X	X			
Condensate				X	X							
Legionella												X

Raw water analysis should be run monthly on each different water source. Each of the operating Open systems should be tested every visit. Closed systems should be tested quarterly. If there is a problem with a closed system, it should be tested each visit until the readings are correct. Boilers should be tested each month during operation. Service visits shall be twice a month from May through October and monthly the rest of the year.

**b. CORROSION STUDIES**

Vendor will perform corrosion studies, which will permit a valid evaluation of system performance. Corrosion coupon bypass assemblies will be provided and installed at each location. Coupons of carbon steel and copper will be used on each system. The cooling tower and chiller water coupons will be inserted in June and the hot water system coupon in November. Dual temperature systems will be tested in June and December. In the event the coupons are above the specified limits the test will be repeated immediately.

**c. BIOLOGICAL STUDIES**

All open systems must be tested each month for biological control. Closed systems will be tested as deemed necessary. A liquid bromine will be the primary biocide. A non oxidizing biocide will be the secondary biocide. It may be fed with a pump and timer or slug fed by hand each service visit. Vendor shall be responsible for applying necessary chemicals to correct any positive test results and additional testing to rectify the water issues.

**d. FEED EQUIPMENT**

A pump to feed inhibitor, a conductivity controller and solenoid and two pumps to feed biocide are required for all cooling tower systems. The conductivity controller must be capable of feed based on time, makeup, and bleed. It shall contain timers for the feed of two biocides. Vendor will own and maintain the systems. The vendor will supply containment for all chemicals. Finally, dilution tanks are required for all chemicals at each cooling tower.

**e. CHEMICAL DELIVERY**

It is the responsibility of the vendor to keep a three month supply at each site. Vendor is responsible for using chemicals presently onsite or removal of the chemicals.

**f. COOLING TOWERS/BOILERS**

Testing for conductivity of cooling towers and boilers and adjustments to bleed off or blow down will be made weekly by site supervisor or designee. A record of the monthly service visit will be left with the designated supervisor. Site supervisor or designee will also immediately inform the vendor of any problems.

**g. RESPONSE TIME**

Vendor must respond within twenty-four (24) hours after request.

**h. TEST EQUIPMENT**

One Myron L conductivity meter and one chlorine test kit (with reagents) must be provided by the vendor for each of the three (3) counties.

**i. GUARANTEE**

The vendor warrants that the equipment will open up in a scale free condition if the water treatment limits specified by the vendor are followed. If the equipment is not scale free when opened, the vendor will clean the equipment at no charge.

**j. PENALTY**

A penalty of 10% of the yearly contract price will be assessed in any month were service is missed or there is insufficient chemical on site.

**k. TRAINING**

Training for management and operating personnel is required. Training should include both classroom and field training. Training should encompass theory, testing and control and safety. A manual explaining the function of the chemicals, the required levels in the various systems, product data sheets and MSD sheets should be available at each county. Training must be provided within thirty (30) days after the contract begins.

**l. REPORTING**

A written report should be discussed with the building engineers and appropriate supervisory personnel at the end of each visit. The report should contain the test data, a discussion of conditions at the time, and any recommendations to improve the program. Also, logs provided by the State must be filled in each month. Copies of these reports must be sent to the State consultant each month. In addition, a formal review of the program should be presented thirty (30) days prior to the expiration of the contract.

**m. COMPLIANCE**

The vendor will comply with all regulations pertaining to the sale and application of chemicals. These include EPA, NIOSH, etc. In addition, MSD's will be provided for each location where chemicals contained as well as an office copy for each site.

**19. STANDARD SERVICE – DSCYF**

**a. WATER ANALYSIS**

	Total Hardness	Calcium Hardness	M Alkalinity	Conductivity	pH	SiO2	Inhibitor	SO3	PO4	Cl2	Freeze Point	Other
City	X	X	X	X		X						
Tower				X	X		X			X		
Closed				X	X		X					
Softener	X			X								
Feedwater	X			X								
Boiler			X	X				X	X			
Condensate				X	X							
Glycol					X		X				X	

Each of the operating Open systems should be tested every visit. Closed systems should be tested quarterly. If there is a problem with a closed system, it should be tested each visit until the readings are correct. Boilers should be tested each month during operation. Service visits shall be twice a month from May through October and monthly the rest of the year.

**b. BIOLOGICAL STUDIES**

All open systems must be tested each month for biological control. Closed systems will be tested as deemed necessary. A liquid bromine will be the primary biocide. A non oxidizing biocide will be the secondary biocide. It may be fed with a pump and timer or slug fed by hand each service visit.

**c. FEED EQUIPMENT**

A pump to feed inhibitor, a conductivity controller and solenoid and two pumps to feed biocide are required for all cooling tower systems. The conductivity controller must be capable of feed based on time, makeup, and bleed. It shall contain timers for the feed of two biocides. Vendor will own and maintain the systems. The vendor will supply containment for all chemicals. Finally, dilution tanks are required for all chemicals at each cooling tower.

**d. COOLING TOWERS/BOILERS**

A record of the monthly service visit will be left with the designated supervisor. Maintenance personnel will also immediately inform the vendor of any problems.

**e. RESPONSE TIME**

Vendor must respond within twenty-four (24) hours after request.

**f. GUARANTEE**

The vendor warrants that the equipment will open up in a scale free condition if the water treatment limits specified by the vendor are followed. If the equipment is not scale free when opened, the vendor will clean the equipment at no charge.

**g. PENALTY**

A penalty of 10% of the yearly contract price will be assessed in any month were service is missed or there is insufficient chemical on site.

**h. TRAINING**

Training for management and operating personnel is required. Training should include both classroom and field training. Training should encompass theory, testing and control and safety. A manual explaining the function of the chemicals, the required levels in the various systems, product data sheets and MSD sheets should be available at each county. Training must be provided within thirty (30) days after the contract begins.

**i. REPORTING**

A written report should be discussed with the building engineers and appropriate supervisory personnel at the end of each visit. The report should contain the test data, a discussion of conditions at the time, and any recommendations to improve the program. Also, logs provided by the State must be filled in each month. Copies of these reports must be sent to the State consultant each month. In addition, a formal review of the program should be presented thirty (30) days prior to the expiration of the contract.

**j. COMPLIANCE**

The vendor will comply with all regulations pertaining to the sale and application of chemicals. These include EPA, NIOSH, etc. In addition, MSD's will be provided for each location where chemicals contained as well as an office copy for each site.

**k. SPECIAL PROVISIONS**

Vendor shall be responsible for the following:

- Obtaining any work permit or license for work performed in any City having jurisdiction.
- Meeting all codes and regulations for work performed in the City having jurisdiction.
- Travel time and expenses are to be included as an integral part of the service and not billed separately.
- No subcontracting is permitted under the terms of this contract.
- Any equipment is outside the scope of this contract.

**l. MINIMUM MONTHLY REQUIREMENTS**

On site testing for conductivity, pH, hardness total, calcium hardness, magnesium hardness, p, m and o alkalinity, silica, total iron, total halogen, sulfite, phosphate, dissolved oxygen and contamination source detection.

A written report containing all test results, explanations of any trends, and a recommendation plan of action including any needed mixing recipes. One copy of the report will be filed at the facility and one copy will be sent with the invoice to the Administration Office.

**m. MINIMUM PROGRAM REQUIREMENTS**

Contractor shall supply, freight prepaid to each facility, all chemicals required for the water treatment of the boilers, condensate, feed water, supply water, softeners, closed loop systems and open recirculating loops listed in the Equipment List for Water Treatment (see attached).

Contractor is responsible for calibration of all water management control systems as required to maintain proper operation.

An operations manual for each facility including MSDS (printed), program outline, chemical descriptions and applications, emergency contact information and a trouble shooting guide for maintaining proper chemistry.

Technical representatives shall be available for calls on specific problems should they occur, twenty four (24) hours a day, and under emergency conditions be able to visit a facility within four (4) hours of notification.

Contractor shall supply all chemicals, reagents, glassware, testing equipment and software required for system testing.

Contractor shall assure that all water treatment programs comply with local, state and federal laws on environmental protection, and shall have an in-house regulatory affairs group.

Contractor is responsible for complete on-site training for water testing, chemical handling and chemical systems operations.

Contractor is responsible for chemical feed pump troubleshooting and service.

**n. CONTRACTOR REQUIREMENTS**

The contractor shall have a fully staffed technical support group available for consultation during normal business hours.

The contractor shall own and operate, or have available, a complete laboratory facility capable of providing the results of the testing requirement within forty-eight (48) hours. The laboratory shall be equipped to analyze water in accordance with the latest version of "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association.

The contractor shall provide a primary technical representative to visit each facility at least monthly to handle all testing, training and supplies. A secondary technical representative will also be required to have a working knowledge of all functions as they relate to water treatment. The technical representative shall have at least a four (4) year college degree in chemistry (or applicable discipline) or ten (10) years experience servicing facilities of similar size.

The contractor must submit updated MSDS's that meet OSHA hazardous communications standards, and operate a 24-hour, 7-day per week emergency response group who can be called for emergency information regarding chemical spills or accidents involving their products.

The contractor must be available for all condenser tube inspections when given advance notification.

The contractor will supply a list of all chemicals, where each chemical is to be used, and the purpose of each chemical.

The contractor must maintain:

- Microbiological Activity less than 10,000 CFU's
- Corrosion Rates less than 5 MPY for Mild Steel
- Corrosion Rates less than 3 MPY for Admiralty Brass
- No scale formation based on Photographic and Water Chemistry reports

## 20. **STANDARD SERVICES – DOS**

### a. **WATER ANALYSIS**

	Total Hardness	Calcium Hardness	M Alkalinity	Conductivity	pH	SiO2	Inhibitor	SO3	PO4	Cl2	Freeze Point	Other
City	X	X	X	X		X						
Tower				X	X		X			X		
Closed				X	X		X					
Softener	X			X								
Feedwater	X			X								
Boiler			X	X				X	X			
Condensate				X	X							
Glycol					X		X				X	

Raw water analysis should be run monthly on each different water source. Open systems should be tested every visit. Closed systems should be tested quarterly. If there is a problem with a closed system, it should be tested each visit until the readings are correct. Boilers should be tested each month during operation. Service visits shall be twice a month from May through October and monthly the rest of the year.

### b. **CORROSION STUDIES**

Vendor will perform corrosion studies, which will permit a valid evaluation of system performance. Corrosion coupon bypass assemblies will be provided and installed on one the system at the Veterans Home. Coupons of carbon steel and copper will be used on each system. The cooling tower and chiller water coupons will be inserted in June and the hot water system coupon in November. Dual temperature systems will be tested in June and December. In the event the coupons are above the specified limits the test will be repeated immediately.

### c. **BIOLOGICAL STUDIES**

All open systems must be tested each month for biological control. Closed systems will be tested as deemed necessary. A liquid bromine will be the primary biocide. A non oxidizing biocide will be the secondary biocide. It may be fed with a pump and timer or slug fed by hand each service visit.

### d. **FEED EQUIPMENT**

A pump to feed inhibitor, a conductivity controller and solenoid and two pumps to feed biocide are required for all cooling tower systems. The conductivity controller must be capable of feed based on time, makeup, and bleed. It shall contain timers for the feed of two biocides. Vendor will own and maintain the systems. The vendor will supply containment for all chemicals. Finally, dilution tanks are required for all chemicals at each cooling tower.

### e. **CHEMICAL DELIVERY**

It is the responsibility of the vendor to keep a three month supply at each site. Vendor is responsible for using chemicals presently onsite or removal of the chemicals.



**f. COOLING TOWERS/BOILERS**

Testing for conductivity of cooling towers and boilers and adjustments to bleed off or blow down will be made weekly by site supervisor or designee. A record of the monthly service visit will be left with the designated supervisor. Site supervisor or designee will also immediately inform the vendor of any problems.

**g. RESPONSE TIME**

Vendor must respond within twenty-four (24) hours after request.

**h. GUARANTEE**

The vendor warrants that the equipment will open up in a scale free condition if the water treatment limits specified by the vendor are followed. If the equipment is not scale free when opened, the vendor will clean the equipment at no charge.

**i. PENALTY**

A penalty of 10% of the yearly contract price will be assessed in any month were service is missed or there is insufficient chemical on site.

**j. TRAINING**

Training for management and operating personnel is required. Training should include both classroom and field training. Training should encompass theory, testing and control and safety. A manual explaining the function of the chemicals, the required levels in the various systems, product data sheets and MSD sheets should be available at each county. Training must be provided within thirty (30) days after the contract begins.

**k. REPORTING**

A written report should be discussed with the building engineers and appropriate supervisory personnel at the end of each visit. The report should contain the test data, a discussion of conditions at the time, and any recommendations to improve the program. Also, logs provided by the State must be filled in each month. Copies of these reports must be sent to the State consultant each month. In addition, a formal review of the program should be presented thirty (30) days prior to the expiration of the contract.

**l. COMPLIANCE**

The vendor will comply with all regulations pertaining to the sale and application of chemicals. These include EPA, NIOSH, etc. In addition, MSD's will be provided for each location where chemicals contained as well as an office copy for each site.

**m. SPECIAL PROVISIONS**

Vendor shall be responsible for the following:

- Obtaining any work permit or license for work performed in any City having jurisdiction.
- Meeting all codes and regulations for work performed in the City having jurisdiction.
- Travel time and expenses are to be included as an integral part of the service and not billed separately.
- No subcontracting is permitted under the terms of this contract.
- Any equipment is outside the scope of this contract.

**n. MINIMUM MONTHLY REQUIREMENTS**

On site testing for conductivity, pH, hardness total, calcium hardness, magnesium hardness, p, m and o alkalinity, silica, total iron, total halogen, sulfite, phosphate, dissolved oxygen and contamination source detection.

A written report containing all test results, explanations of any trends, and a recommendation plan of action including any needed mixing recipes. One copy of the report will be filed at the facility and one copy will be sent with the invoice to the Administration Office.

**o. MINIMUM PROGRAM REQUIREMENTS**

Contractor shall supply, freight prepaid to each facility, all chemicals required for the water treatment of the boilers, condensate, feed water, supply water, softeners, closed loop systems and open recirculating loops listed in the Equipment List for Water Treatment (see attached).

Contractor is responsible for calibration of all water management control systems as required to maintain proper operation.

An operations manual for each facility including MSDS (printed), program outline, chemical descriptions and applications, emergency contact information and a trouble shooting guide for maintaining proper chemistry.

Technical representatives shall be available for calls on specific problems should they occur, twenty four (24) hours a day, and under emergency conditions be able to visit a facility within four (4) hours of notification.

Contractor shall supply all chemicals, reagents, glassware, testing equipment and software required for system testing.

Contractor shall assure that all water treatment programs comply with local, state and federal laws on environmental protection, and shall have an in-house regulatory affairs group.

Contractor is responsible for complete on-site training for water testing, chemical handling and chemical systems operations.

Contractor is responsible for chemical feed pump troubleshooting and service.

**p. CONTRACTOR REQUIREMENTS**

The contractor shall have a fully staffed technical support group available for consultation during normal business hours.

The contractor shall own and operate, or have available, a complete laboratory facility capable of providing the results of the testing requirement within forty-eight (48) hours. The laboratory shall be equipped to analyze water in accordance with the latest version of "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association.

The contractor shall provide a primary technical representative to visit each facility at least monthly to handle all testing, training and supplies. A secondary technical representative will also be required to have a working knowledge of all functions as they relate to water treatment. The technical representative shall have at least a four (4) year college degree in chemistry (or applicable discipline) or ten (10) years experience servicing facilities of similar size.

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