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ADDENDUM

June 22, 2017

ADDENDUM # 1

Bid 17M3, Water Testing/Treatment – HVAC Systems

DUE DATE: FCPS Main Lobby, Tuesday, July 11, 2017, prior to and time stamped no later than 2:00 P.M.

This addendum is being issued to provide additions, corrections, clarifications and answers to certain questions raised referencing the original bid packages and any resultant contracts for the above bid.

1. Question: Scope of work, page 32 states “FCPS is requiring in this bid a DFA analysis of systems for Legionnaires Disease along with a unit price for labor above what is listed in this bid”, and Test and Analysis, page 34 states “D. The following samples and tests are required on each monthly visit; k. DFA Analysis”. Is FCPS requiring a legionella culture using DFA analysis to be performed on every cooling tower, every month that tower is in operation?
Answer: Yes, Monthly testing is required during the months that the cooling towers are in operation. In addition, we are requesting pricing proposals for separate individual test(s) in the event we have to perform additional testing beyond the one time per month, per cooling tower location.
2. Question: To properly calculate the cost of Legionella culturing, what are the number of months each cooling tower is in operation? **Answer: Typically, the towers are in operation for 7 months of the year (April – October).**
3. Question: Please clarify the pricing statement “FCPS is requiring in this bid a DFA analysis of systems for Legionnaires Disease along with a unit price for labor above what is listed in this bid “. Is the Legionella culturing price to be included as part of each location’s water treatment testing/treatment line item price on the current form of proposal, or will a new form or proposal be provided to list pricing for Legionella culturing separately?
Answer: Yes, pricing is requested for each location that is to include the one-time per month testing for the months that the cooling towers are in operation. We are also requesting separate pricing proposals for Unit Price for Labor, for any additional work that may be needed for work such as, but not limited to, installation of or repairs to equipment, etc. which may be required or requested beyond the normal scope of this contract.
4. Question: Under Qualifications of Water Treatment Provider, on page 32, item F - does that pertain to this contract? **Answer: Yes.**
5. For clarification purposes on the terms used on page 36 - please state meanings of HWS, CWS, TWS, DTS, HPS, and GLY:
HWS: Hot Water System
CWS: Condenser Water System
TWS: Tower Water System
DTS: Dual Temperature System
HPS: Heat Pump System
GLY: Glycol

6. Schedule for Site Visits:

Meeting Date: June 28, 2017
Meet Time: 6:00 a.m.
Initial Meeting Location: Woodsboro Elementary School
101 Liberty Road
Woodsboro, MD 21798

If needed, site visits can continue on June 29, 2017.

7. This Addendum includes the following attachments:
- a. Revised Scope of Work (6 Pages)
 - b. Pre-Bid Attendance Roster (1 Page)

Thank you for your interest in bidding with Frederick County Public Schools and we apologize for any inconvenience this may have caused.

Sincerely,

Bill Meekins

Bill Meekins CPPB, CSBO, CPCP
Purchasing Agent

BM/ab

cc: Randy Connatser, Maintenance Project Manager
Bid File

FREDERICK COUNTY PUBLIC SCHOOLS
BID 17M3
WATER TESTING/TREATMENT – HVAC SYSTEMS

REVISED SCOPE OF WORK

SCOPE:

Frederick County Public Schools (FCPS) is soliciting bids for the heating and cooling water treatment systems within the system.

The scope includes testing of all water systems involved in the heating and cooling of Frederick County Public School buildings. An attached listing of schools is included. FCPS is requiring that this service be performed once a month at all facilities. To ensure an accurate bid total, it is suggested that all sites be visited by bidders prior to preparing bid. The facilities are available to visit Monday through Thursday, but please contact Randy Connatser prior to visiting any facility or facilities.

FCPS is requiring appropriate testing for Legionella Disease, in accordance with all applicable State and Federal guidelines and requirements. FCPS is also requesting a quote on this bid for Glycol. FCPS understands that this is a fluctuating price and is not bound to purchase Glycol from lowest bidder if it can be purchased elsewhere at a reduced rate.

QUALIFICATIONS OF WATER TREATMENT PROVIDER:

- A. **CONTRACTOR** - shall furnish all labor, material, chemicals supervision and services necessary to survey, design and apply the chemical water treatment program.
- B. **CONTRACTOR** - has been actively engaged in and satisfactorily performed the analysis and chemical treatment water systems as used for heating, cooling, water softening condenser, water cooling towers, boilers for both supply and return loops for a period of at least five (5) years immediately prior to the bid date. The personnel responsible for this contract will have at least five (5) years experience in water treatment.
- C. **CONTRACTOR** or contractor's subs - shall be able to show that they have available under its direct employment and supervision, the necessary organization and facilities to properly fulfill all the services and conditions required by these specifications.
- D. **CONTRACTOR** - has access to complete laboratory facilities capable of providing the requirements of the contract within 48 hours. The laboratory shall be equipped to analyze water in accordance with the latest edition of "Standard Methods for Examination of Water and Waste Water" published by APHA. In addition, the laboratory shall be capable of performing the following:
 1. X-Ray Diffraction and Atomic Absorption for deposit analysis
 2. Corrosion test strip evaluations
 3. Fireside deposit analysis
 4. X-Ray fluorescence analysis
 5. Complete microbiological examination
 6. Infrared analysis
 7. Metallurgical and Mass Spectrometric Analysis relative to tube failures
 8. Photo-microscopy relative to cooling tower conditions
 9. Atomic absorption analysis
- E. The laboratory shall be staffed by at least one (1) employee who shall be an Analytic Chemist Engineer who holds a college or university degree in Chemical Engineering or Corrosion Engineering.
- F. Personnel who will perform service work on this contract shall hold a Maryland State Board of Waste Systems Engineers Class Two Water and Waste Water Plant Operators License. A copy of the license of any individual assigned to this contract must accompany the bid. Failure to provide a copy could be reason to decline bid.

DOCUMENTATION AND WORK ORDER SYSTEM

- A. FCPS uses a Computerized Maintenance Management System (CMMS) software program named "SchoolDude" for all maintenance work performed. "SchoolDude" is a web based computer software program. All work under this Bid would be submitted to the Contractor(s) as a Work Order assigned to the Contractor for execution.

- B. The awarded Contractor will be responsible throughout the duration of this contract to utilize and support FCPS's web based CMMS. Any modifications/upgrades to the CMMS program will be adopted and utilized by the Contractor. The Contractor must have the following to utilize the CMMS software:
 - 1. Contractor must have access to the internet using current versions of: Internet Explorer, Chrome, and or Firefox web browser.
 - 2. The Contractor must have an Administrator that is a single point of contact for all Work Orders to be assigned to by FCPS. The Administrator is responsible for the following:
 - a. **Beginning of work:** Assign Work Order to their mechanics
 - b. **During work:** Posting all transactions (labor and materials) to the Work Order.
 - c. **Follow up:** Completing the Work Orders and attaching a copy of the Invoice. Emailing the CMMS Administrator or designee, the Work Order number and a copy of the Invoice for the work that has been completed.
- C. Contractor must supply the following information:
 - 1. Name, and email address of the Administrator
 - 2. Name, email address, and labor type for all employees that work would be assigned to.
- D. FCPS CMMS Office will provide the following:
 - 1. Establish Individual user accounts in the CMMS software.
 - 2. Account support with the use of the CMMS software.

CUSTOMER INVESTIGATIONS

Frederick County Public Schools may make investigations, as it deems necessary to determine the ability of contractors to perform work. This investigation will be performed by an independent laboratory and costs incurred will be covered by Frederick County Public Schools. Should the County find discrepancies, Successful Bidder shall be required to re-test the water and reconcile the differences to the County's satisfaction at no additional cost.

TEST AND RECORDS FOR WATER TREATMENT

All tests and records maintained shall include the following as a minimum:

- 1. Total chemicals consumed
- 2. PH value of condenser water
- 3. PH value of closed loop water
- 4. Chemical concentration of all cooling water, expressed in PPM
- 5. Chemical concentrations of all heating water, expressed in PPM
- 6. PH shall be maintained between (7.0) and (9.0) range in open loop system
- 7. PH shall be maintained between (8.5) and (11.0) range in closed loop system
- 8. Total dissolved solids expressed in PPM
- 9. Langelier Saturation Index in the range of (+2) to (-2) shall be maintained

RANGES

	TDS	Organo Phosphonate	Nitrite	Sulfite	PH	Hardness	MOo4	Alkalinity
Tower	800-1200	10-15	N/A	N/A	7.5 - 9.5	N/A	7-12	N/A
Boiler	1800-2400	5-12	N/A	30-60	>10.5	N/A	N/A	P-250-400
Heat Loop	<2500	N/A	400-1500	40-120	8.0 -10.5	N/A	100-150	N/A
Chill Loop	<2500	N/A	200-1000	30-60	8.0-10.0	N/A	50-100	N/A

ADDITIONAL SERVICES FOR WATER TREATMENT

- A. At least quarterly, the central laboratory shall be used to verify field analysis.
- B. Analysis performed at the central laboratory shall include analysis of internal boiler scale and fireside deposits, if any.
- C. Contractor shall be present each time equipment is open for inspection and provide a written report on observed condition indicating the effectiveness of the treatment program.
- D. Contractor shall provide necessary service to treating systems and equipment when being initially placed in service.
- E. Contractor shall provide telephone consultation, when necessary by the facility personnel between the hours of 8:00 A.M. and 3:30 A.M. Monday through Friday, except holidays.

- F. Contractor shall be required to obtain samples of treated water, deposits, or raw water for analysis at the facility (in addition to any on-site equipment) as requested by FCPS for effective control of water treatment programs in addition to normal monthly service.
- G. All equipment is in place at sites. Sites with system types and quantity are attached to this bid.
- H. Equipment currently in place is property of Frederick County Public Schools and will remain property of Frederick County Public schools at duration of project.
- I. Successful Bidder shall re-charge the system on a time and material basis should the system need to be re-charged due to a documented minimum 75% loss of water from equipment failure. Re-charging the system when the documented water loss is less than seventy-five (75%) percent from equipment failure shall be at no additional cost to the County.
- J. Repairs to equipment of less than \$100.00 per site will be the responsibility of the contractor. Repairs over \$100.00 will be the responsibility of Frederick County Public Schools.
- K. New equipment requested by Frederick County Public Schools shall be provided on a time and material basis.

TEST AND ANALYSIS

- A. Contractor shall perform the following tests and analysis where applicable, each monthly visit:
 - 1. Hot water boilers and closed hot/chilled systems.
 - a. Boiler Water - appropriate tests depending on chemicals used
 - b. Chilled Water Loop - appropriate tests depending on chemicals used
 - c. Cooling Towers - appropriate tests depending on chemicals used.
- B. In addition to appropriate test on cooling towers, FCPS is requiring appropriate testing for Legionella Disease, in accordance with all applicable State and Federal guidelines and requirements, to identify all species known to be harmful to humans and is required every month that cooling tower is in operation. FCPS will require these results be provided monthly on site reports.
- C. Each boiler treatment program shall be such that scale formation is prevented, corrosion of feed water piping and boiler metal is minimized and any sludge formed in the boiler dispersed.
- D. The following samples and tests are required on each monthly visit:
 - a. PH value
 - b. Total Alkalinity
 - c. Phenol Alkalinity
 - d. Chloride
 - f. Sulfite
 - g. Conductivity
 - h. Silica
 - i. Total Dissolved solids
 - j. Total Hardness and Iron
 - k. Legionella analysis
 - l. Glycol Protection
- E. Contractor shall provide a detailed separate report for each facility. Each report shall include appropriate data and test results plus a section indicating:
 - a. Chemical introduction
 - b. Chemical dosages
 - c. Recommended limits to be maintained
 - d. Recommendations
 - e. Comments

CHEMICALS AND CHEMICAL PROGRAMS

- A. All chemicals used shall have been awarded an EPA registration number, an NSF registration number and each shall be registered with the local Health Department and the Department of Health and Mental Hygiene.
- B. The program to set up shall consist of the latest state of the art materials and methods to produce the very best results possible.

MISCELLANEOUS

- A. Bidders are requested to visit sites and inspect existing conditions. Site visits shall be scheduled twenty-four (24) hours prior with Randy Connatser, 301-644-5171. Failure to visit sites will not relieve the Successful Bidder from properly estimating the cost or complexity of the Contract and performing the Contract in accordance with the strict intent and meaning of the Specifications without additional cost to the County. No excuse will be acceptable for not knowing the existing conditions, extent, or location of the components the Bidder is proposing to inspect, test, and maintain.
- B. Prices quoted shall include all labor costs, insurance, overhead, profit, travel time and mileage, shipping, and handling, company-owned equipment usage, and be exclusive of all taxes. Labor charges shall be for on-site

only, excluding mealtime. No travel time shall be charged including travel time for pickup of parts. Monthly cost shall include servicing of equipment, and all appropriate testing as needed, including monthly site visit, and providing all necessary chemicals. Any additional repairs not covered by and requested by the County will be done on a time and materials basis. No overtime will be approved for this contract.

- C. Successful Bidder shall have an adequate supply of parts/materials on all trucks and stocked at a shop. Successful Bidder's service technicians shall respond to the job site in a well-equipped, well stocked service truck. The stock shall include, but not be limited to, power hand tools, ladders, testing equipment, chemicals, etc. The County shall not be charged for any time service technicians depart the facility to pick up tools or supplies to complete a job.
- D. Successful Bidder accepts the liability of any damages to County buildings and related equipment due to poor workmanship, neglect or the lack of training, or knowledge of their technicians. Any evidence indicating lack of knowledge or training of service technicians after Contract award may be cause for termination of Contract. Non-performance, non-response to repairs, emergencies, etc. may result in termination of Contract. The decision for Contract termination shall be at the sole discretion of the Purchasing Agent.
- E. Successful Bidder shall immediately notify the appropriate Area Supervisor or Area Maintenance Manager, regarding any and all deficiencies that may prevent proper performance of the system, and provide an estimate for repair and/or replacement. County personnel shall determine what shall be in the best interest of the County. The Successful Bidder's recommendation shall include both the cost of the labor and the price of the defective part(s) and include subsequent visits. Any non-emergency deficiencies found shall be reported to the appropriate Area Supervisor within three (3) days. All emergency deficiencies shall be reported immediately to the Area Supervisor. If any part(s) does not meet the original equipment manufacturers (OEM) specification the appropriate Area Supervisor shall approve the replacement. A written estimate shall be provided for all repairs/replacements. If Legionella is detected, the Area Supervisor shall be notified immediately and the development of a written plan of corrective action shall begin immediately.
- F. Successful Bidder shall cleanup all debris in area used in repair, testing, inspection, and maintaining these systems. Successful Bidder shall dispose of all debris, off site at no additional cost to the County.
- G. Successful Bidder shall be responsible for making adjustments, repairs, and maintaining all chemical controllers and chemical feed and bleed systems that are below the \$100.00. Cost shall be included in the monthly fee on the Bid Response Form.
- H. If Cooling Tower water level control devices are inoperable, notification shall be given immediately to the appropriate Area Supervisor. Successful Bidder shall be responsible for the condition of the water treatment equipment upon Contract acceptance.
- I. Successful Bidder shall visit each site at intervals of no longer than thirty-one (31) days and no sooner than twenty (20) days between visits for normal monthly service and chemical replenishment. Successful Bidder shall be required to notify FCPS five (5) business days in advance of site visits. Successful Bidder shall be required to have treatment system fully operational within two (2) weeks after notice by FCPS when a tower is put on-line in the Spring/Summer.
- J. After each visit, Successful Bidder shall send to FCPS a report on the water quality at each site. If water quality indicators exceed control ranges, Successful Bidder shall describe corrective measures taken.
- K. In addition to monthly site visits, FCPS can require Successful Bidder to respond within two (2) business days to equipment failure or lack of chemicals at no additional charge to the FCPS.
- L. Successful Bidder shall notify the FCPS promptly of any equipment problems, overflow, etc. unrelated to the Successful Bidder's system that is adversely affecting the water treatment program.
- M. Failure on the part of the Successful Bidder to comply with these Specifications may lead to termination of the Contract.
- N. FCPS will cover any associated cost for remediation of Legionella, in accordance with a written plan of corrective action approved by FCPS.

REPORTS

- A. Three copies of reports are to be prepared as follows:
 1. One copy for each individual facility shall be left with a representative of the Area Maintenance Department.
 2. One copy shall be attached to the Monthly Preventive Maintenance Work Order for each individual facility.
 3. One summarized Monthly Report for all facilities shall be forwarded each month to the Contract Administrator.

**FREDERICK COUNTY PUBLIC SCHOOLS
 BID 17M3
 WATER TESTING/TREATMENT - HVAC SYSTEMS BY FACILITY**

FACILITY	STEAM	HWS	CWS	TWS	DTS	HPS	GLYCOL
AREA 1							
CATOCTIN HIGH SCHOOL		X		X		X	X
EMMITSBURG ELEMENTARY SCHOOL		X*					
LEWISTOWN ELEMENTARY SCHOOL	X						
NEW MIDWAY ELEMENTARY SCHOOL		X					
SABILLASVILLE ELEMENTARY SCHOOL	X						
THURMONT ELEMENTARY SCHOOL	X	X*					
THURMONT MIDDLE SCHOOL		X*					X
THURMONT PRIMARY SCHOOL		X	X				
WOLFSVILLE ELEMENTARY SCHOOL		X					
WOODSBORO ELEMENTARY SCHOOL		X					
AREA 2							
BRUNSWICK ELEMENTARY SCHOOL		X					
BRUNSWICH HIGH SCHOOL		X*	X	X	X		
BRUNSWICK MIDDLE SCHOOL		X					
MIDDLETOWN ELEMENTARY SCHOOL		X	X	X			
MIDDLETOWN HIGH SCHOOL		X	X	X			
MIDDLETOWN MIDDLE SCHOOL		X	X	X			
MIDDLETOWN PRIMARY SCHOOL		X	X				X
MYERSVILLE ELEMENTARY SCHOOL		X		X	X		X
AREA 3							
BUTTERFLY RIDGE ELEMENTARY SCHOOL (Future New Bldg. - start date to be determined)							
CENTRAL OFFICE BUILDING - 191 S. EAST STREET		X	X	X			
CRESTWOOD MIDDLE SCHOOL		X	X				X
FREDERICK HIGH SCHOOL (New Bldg. - start date to be determined)							
HILLCREST ELEMENTARY SCHOOL		X					
PARKWAY ELEMENTARY SCHOOL		X	X				
ROCK CREEK CENTER				X	X		
WAVERLEY ELEMENTARY SCHOOL				X	X		
WEST FREDERICK MIDDLE SCHOOL		X	X				X
AREA 4							
CAREER AND TECHNOLOGY CENTER		X	X				X
GOV. THOMAS JOHNSON HIGH SCHOOL		X*	X	X			
HEATHER RIDGE SCHOOL		X	X				X
MONOCACY ELEMENTARY SCHOOL		X					
MONOCACY MIDDLE SCHOOL		X					

NORTH FREDERICK ELEMENTARY SCHOOL					X	X	X
WHITTIER ELEMENTARY SCHOOL					X		
YELLOW SPRINGS ELEMENTARY SCHOOL	X*						
AREA 5							
GLADE ELEMENTARY SCHOOL		X	X	X			X
GOV. THOMAS JOHNSON MIDDLE SCHOOL		X	X				
LIBERTY ELEMENTARY SCHOOL		X	X				
LINGANORE HIGH SCHOOL		X	X	X			
STAFF DEVELOPMENT CENTER		X					
WALKERSVILLE ELEMENTARY SCHOOL		X	X	X			X
WALKERSVILLE HIGH SCHOOL		X	X	X			
WALKERSVILLE MIDDLE SCHOOL		X	X				
AREA 6							
BALLENGER CREEK ELEMENTARY SCHOOL		X					
BALLENGER CREEK MIDDLE SCHOOL		X					
CARROLL MANOR ELEMENTARY SCHOOL		X	X				X
EARTH SPACE SCIENCE LABORATORY (ESSL BLDG.)						X	X
LINCOLN ELEMENTARY SCHOOL						X	X
ORCHARD GROVE ELEMENTARY SCHOOL		X	X				X
TUSCARORA ELEMENTARY SCHOOL		X	X				X
TUSCARORA HIGH SCHOOL		X	X	X			
VALLEY ELEMENTARY SCHOOL				X	X		
AREA 7							
CENTERVILLE ELEMENTARY SCHOOL		X	X				X
GREEN VALLEY ELEMENTARY SCHOOL		X		X	X		
KEMPTOWN ELEMENTARY SCHOOL		X			X		X
SUGARLOAF ELEMENTARY SCHOOL (Future New Bldg. - start date to be determined)							
URBANA ELEMENTARY SCHOOL (Bldg. Scheduled To Be Replaced in FY19)		X	X				X
URBANA HIGH SCHOOL		X	X	X			
URBANA MIDDLE SCHOOL		X	X				
WINDSOR KNOLLS MIDDLE SCHOOL		X	X				X
AREA 8							
DEER CROSSING ELEMENTARY SCHOOL					X		
NEW MARKET ELEMENTARY SCHOOL		X*	X*	X	X		
NEW MARKET MIDDLE SCHOOL		X	X				
OAKDALE ELEMENTARY SCHOOL		X	X				
OAKDALE HIGH SCHOOL		X	X	X			
OAKDALE MIDDLE SCHOOL		X	X				X
SPRING RIDGE ELEMENTARY SCHOOL		X					
TWIN RIDGE ELEMENTARY SCHOOL		X	X				

* Two Systems at this Facility

Frederick County Public Schools
Purchasing Department
PRE-BID MEETING ATTENDANCE ROSTER

BID 17M3, WATER TESTING/TREATMENT - HVAC SYSTEMS

MEETING DATE/TIME: June 21, 2017, 2:00 p.m., local time {Conf. Rm. 2B}

NAME (PLEASE PRINT)	FIRM REPRESENTED (PLEASE PRINT)	PHONE NUMBER	FAX NUMBER	E-MAIL ADDRESS
JUDE BONTUYAN	Co. Name: NuChem Corp. Address: 747 N. Fenwick St. Allentown, PA 18109	443-889-7442		jbontuyan@nuchemcorp.com
TROY STEWART	Co. Name: ChemTreat Inc Address: 5640 Cox Rd. Glen Allen VA	443-682-1715		troys@chemtreat.com
CHRIS HILL	Co. Name: Chem Aqua Address: 826 S. CLINTON ST BALT, MD 21224	410-419-9167		CHRIS.HILL@CHEMAQUA.COM
Randy Connatser	Co. Name: FCPS Address:	3016445171	3016445175	randall.connatser@fcps.org
MICHAEL MADRAKE	Co. Name: FCPS Address: FCPS	301644 4138		MICHAEL.MADRAGE@FCPS.ORG
Randy Connatser	Co. Name: Address: FCPS			
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JUN 21 2:01 02



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