Water Treatment Proposal Request for Quotation #GSD126772

Department of Administration-Owned Facilities, General Services Division Charleston, WV



**GE Proposal #71780531** May 22, 2012

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## Confidentiality

The observations, determinations, formulation information of GE Water & Process Technologies products, and recommendations presented in this proposal are the work product of GE and its affiliates (collectively referred to hereinafter as "Confidential Information"), and are provided solely with the understanding and Customer agreement that the information contained in this document is submitted for evaluation by Customer only. Customer agrees not to reveal its contents except to those in Customer's organization necessary for evaluation. Copies of this document may not be made without the prior written consent of GE. If the preceding is not acceptable to Customer, this document shall be returned to Contractor.

## Additional Proposal Details

This proposal is offered by:

GE Betz, Inc. 4636 Somerton Road Trevose, PA 19053

Pricing will be valid for 30 days.

It is the policy of GE Betz, Inc, doing business as GE Water and Process Technologies; to negotiate the terms and conditions of a customer agreement after the business has been awarded. Based on our prior experience, GE Betz, Inc is confident that we can negotiate mutually beneficial terms in a short period of time. Standard GE Betz, Inc. terms and conditions are provided for reference.

## Section 1 - Executive Summary

GE Water & Process Technologies is pleased to present this Water Treatment proposal to The West Virginia Department of Administration. With the most experienced field staff, state of the art production facilities and a world-class laboratory, GE is uniquely positioned to provide the chemicals, equipment, and expert services you require.

This document provides all commercial and technical details for the total solution proposed by GE Water & Process Technologies for the water treatment program requirements as per your bid request. Specific to this offer, several essential needs are addressed. These include selecting a vendor who can:

- 1. Control Corrosion of, deposition onto the metal portions of the cooling systems, and Biological growth in the cooling water systems.
- 2. Reduce total costs associated with closed systems, and boiler operations.
- 3. Provide accurate Legionella testing services for critical systems.
- 4. Provide leading and innovative technology to help day-to-day operations.

GE has designed a solution based on your unique technical requirements and general business objectives. The proposed GE design will allow you to meet your objectives by:

- Maintaining asset protection
- Reduce total cost of water
- Increase performance of the water systems
- Maintain Environmental compliance

Details on these items can be found throughout this proposal. Additionally, this document will discuss the Qualifications that uniquely position GE to deliver the complete water treatment program that allows ease of use, ease of maintenance, and consistent control.

## Section 2 - Commercial Offer

## **Pricing Summary**

Location	Monthly Cost	Yearly Cost
Bld.1 Main Capitol Bld.	\$120.75	\$1,449.00
Bld. 2 DMV Bld.	\$120.75	\$1,449.00
Bld. 4 112 California Ave.	\$120.75	\$1,449.00
Bld. 5 Highways	\$1,493.50	\$17,922.00
Bld. 6 Education	\$120.75	\$1,449.00
Bld. 8 Governor's Mansion	\$120.75	\$1,449.00
Bld. 11 Chilled Water Plant	\$120.75	\$1,449.00
Bld. 17 Finance (2101 Wash. St.)	\$120.75	\$1,449.00
Bld. 22 Tax & Revenue	\$120.75	\$1,449.00
Bld. 23 Beckley (407 Nevill St.)	\$120.75	\$1,449.00
Bld. 25 Parkersburg (5 <sup>th</sup> & Avery)	\$120.75	\$1,449.00
Bld. 36 One Davis Square	\$120.75	\$1,449.00
Bld. 37 DEP (Kanawha City)	\$2,645.00	\$31,740.00
Bld. 86 Greenbrooke (Smith St.)	\$298.25	\$3,579.00
Rehab Center (Institute, WV)	\$420.50	\$5,046.00
Total Annual Standard		\$74,296.00

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Legionella Testing ( Based on price per test per facility)						
# of Test \$/Test \$/Quarter \$/Y						
1	\$320.24	\$320.24	\$1,280.96			
1	\$320.24	\$320.24	\$1,280.96			
1	\$320.24	\$320.24	\$1,280.96			
6	\$320.24	\$1,921.44	\$7,685.76			
2	\$320.24	\$640.48	\$2,561.92			
2	\$320.24	\$640.48	\$2,561.92			
1	\$320.24	\$320.24	\$1,280.96			
2	\$320.24	\$640.48	\$2,561.92			
3	\$320.24	\$960.72	\$3,842.88			
3	\$320.24	\$960.72	\$3,842.88			
1	\$320.24	\$320.24	\$1,280.96			
4	\$320.24	\$1,280.96	\$5,123.84			
			\$34,585.92			
			\$108,811.92			
	# of Test  1 1 1 6 2 2 1 2 3 3 1	# of Test \$/Test  1 \$320.24  1 \$320.24  1 \$320.24  6 \$320.24  2 \$320.24  2 \$320.24  1 \$320.24  2 \$320.24  3 \$320.24  3 \$320.24  3 \$320.24  1 \$320.24  3 \$320.24  1 \$320.24	# of Test			

## Section 3 - Pricing Summary

Total Bid above covers the maximum number of Legionella tests. Some systems are down and out of service during the winter months. Based on our first years' experience, the Legionella testing cost will be closer to \$20,000.

The increased price is due to the higher amount of chemicals and equipment that is required to provide acceptable results. When we transitioned the account to our treatment programs, we found the majority of the systems had less than fifty percent of the target chemical concentrations. This would lead to corrosion and deposits in the water treatment systems. Long term this would result in equipment failures and loss of heat transfer shutting down the water systems. We also corrected conductivity issues on all of the cooling towers. This has prevented further scale from occurring on the cooling towers.

A significant increase was for the treatment of Building 37 (DEP) facility. We are providing all the service and equipment for their water systems. We have replaced mixed bed resin, RO Pumps, Filters, and performed the service to maintain this critical water system. Another cost we had to add was for the salt to regenerate the softeners. We were not aware of this requirement during the initial bid. We are providing pallets of salt to regenerate the units.

## Section 4 - Service Highlights

GE Water & Process Technologies is uniquely qualified to meet your needs. No other supplier can address all your comprehensive water treatment requirements in a strong combined offering. Through on site engineering and technical service representatives, we bring this level of expertise to you by offering a program that can include these services as part of our offering:

- Professional Service Professional service reviewing key aspects of the water management program and delivering return on your investment with us
- Woodlands Laboratory Access Use of the most advanced water laboratory in North America
- Value Generation Plan Review of your Critical to Quality (CTQ) issues and assurance these are met
- Field Force Mobile Computing Immediate access to water treatment knowledge and resources
- Insight Monitoring Program 24/7 monitoring and control capability
- Customer Portal Web based service site allowing you immediate access to critical data
- Improved System Results Delivery of Proof, Not promises that our solution will improve system results and offer the best total return.
- Legionella Testing This is a service that we offer on a requested basis utilizing an independent certified laboratory.

## GE Water & Process Technologies Cooling Service Description

Proper program monitoring is an essential part of any comprehensive cooling water system treatment program. Monitoring provides the feedback on program performance. It allows the performance of the program to be judged by methods other than the presence or absence of system component failures and/or reduced production.

It is essential that the good comprehensive on-site monitoring program in place is to evaluate program results and be as pro-active as possible in identifying and responding to any issues. A good monitoring program addresses the three critical parameters in a cooling system (corrosion, deposition, and microbiological (MB) activity), as well as, system /thermal performance. The typical on-site monitoring program for each parameter is described below and is customized to meet each customer's needs.

#### Corrosion

The standard corrosion-monitoring program uses test strips (coupons) of each alloy in the actual system. These are pre-weighed and installed in a by-pass rack off the hot return header. They are normally exposed for a pre-determined period of time and then re-weighed and a corrosion rate calculated from weight loss. They can be inspected frequently during the exposure period so that corrosion problems can be identified more quickly. Corrosion coupons can also be installed locally at critical exchangers if the proper valving is available.

Routine water analyses also reveal potential corrosion problems. This may be exhibited somewhat directly, such as measurements of high iron or copper levels in the water; or it may be inferred from data such as pH, calcium and phosphate levels.

#### Deposition

Corrosion coupons may also give some indications of deposit problems and again water chemistry may provide an indirect warning of potential system problems by looking at parameters such as delta phosphate (unfiltered – filtered), pH and saturation indices such as LSI (calcium carbonate), magnesium silicate and calcium-magnesium-silicate. However, the ultimate proof of system performance comes from actual exchanger monitoring. At your site we will work with you to identify the critical heat exchangers and implement a monitoring program for each.

These exchangers will be agreed upon with GE and customer personnel due to their critical nature and/or strenuous duty (importance to operation, economic impact, high heat load, low velocity, etc.). GE will monitor approach temperatures on the non-condensing exchangers and Cleanliness Factors on the condensing heat exchangers that have been identified as critical. GE will routinely track and report this data.

#### **Cooling System Microbiological Activity**

Suspected MB activity is often first noticed by visual observations of the coupons or the process structure itself. However, this is merely a qualitative judgment. Quantitative data is needed for proper evaluation of the problem and a proper response.

Traditionally, microbial monitoring has been by sampling the bulk water (planktonic organisms) and then counting the population as colony forming units per milliliter. Several standard counting methods exist and simplifications of the methods have developed. The drawbacks to these methods are that they require an incubation period of between 48 and 72 hours; and they don't count all the bacterial species that may be present. This delays results and lengthens the time in which an appropriate response can be taken. GE Water & Process Technologies has had great results using a method that measure cellular ATP levels. By measuring ATP, we get a better picture

of the entire population and we get that result virtually instantaneously (within minutes). This greatly improves response time.

Still, measuring only planktonic organism is dangerous since it is actually the populations living on surfaces within the system (sessile organisms) that present the real problem. This population can be measured by cultivating MB on a stainless steel coupon in the corrosion by-pass rack and then counting the population using the ATP method. Samples from individual suspect exchangers may also be available by back flushing.

After all this, a potential problem can exist. Sulfate reducing bacteria are so dangerous, even at low populations, that methods specific to identifying those organisms must be used in addition to general counting or ATP methods.

#### **Water Testing**

During service visits, our representative will obtain a routine collection of all system water as a quality control measure. Analyses will be performed and results reviewed with your operations team. Discrepancies with our established control parameters will be reviewed and corrective actions implemented and/or recommended.

#### Sampling Program

On a regular basis, a complete set of water samples will be obtained and a report will be prepared for each system with results compared to historical trends.

#### Service Report/Review

We agree that communication is key. At the conclusion of normal service or inspections, a report will be prepared detailing the testing and special projects conducted during the visit.

#### **Laboratory Services**

GE total laboratory capabilities represent a multi-million dollar investment in equipment and personnel. These capabilities include water, inorganic/organic deposit, microbiological, metallurgical and resin analyses, and are all-available to support all GE treatment programs.

#### **Metallurgical Services**

Our corporate metallurgical laboratory, located in our Woodlands Research Laboratory (Houston, TX), is capable of complete metallurgical evaluations of both boiler and cooling systems. In addition, we use the metallurgical laboratory as the principal method for chemical analyses of corrosion coupons and deposits on heat exchanger tubes which involves the use of a scanning electron microscope coupled to an energy dispersive x-ray analysis device (SEM-EDXA).

## Section 5 - GE Qualifications

### Company Overview

GE Water & Process Technologies is a leading global solutions provider of water, wastewater, desalination and process systems. GE delivers customer value by improving performance and product quality, by reducing operating costs and by extending equipment life. A broad range of products and services are used to optimize total water/process system performance, safeguard customer assets from corrosion, fouling and scaling, and protect the environment through water and energy conservation. With over 2500 field engineers bringing onsite expertise, we are able to deliver value by solving our customers' most challenging problems and improving the bottom line.



Headquartered in Trevose, Pennsylvania, GE Water & Process Technologies employs over 6500 people worldwide. Global Centers Of Excellence conduct leading edge research in our fields of expertise. Sites include Minnetonka, Minnesota, Watertown, Massachusetts, Norfolk, Virginia, The Woodlands, Texas, Guelph, Ontario, Mississauga, Ontario, Edmonton, Alberta, Heverlee, Belgium, San Paulo, Brazil and the GE Global Research Centers in Niskayuna, New York, Bangalore, India and Shanghai, China.



#### Fields of Expertise

GE is unique in the industry, bringing a full array of products and service offerings to our customers. Our core competencies include:

- Water treatment chemicals and application engineering for raw and wastewater clarification, process water and industrial boiler and cooling water
- Process chemicals and additives for improved performance in refining, pulp & paper and metals processing applications
- Reverse Osmosis, Nanofiltration, Ultrafiltration and Microfiltration membrane systems for removing suspended and dissolved solids from fresh water, waste water and sea water
- Electrodeionization (EDI) for producing ultrapure water without chemical regenerants
- Mobile water treatment solutions for short-term and emergency use including deionization, filtration, Reverse Osmosis and EDI trailers in the industry's largest fleet
- Service agreements to Design, Build, Own, Operate and Maintain water treatment systems, allowing customers to focus their resources on their key operations





We don't just promise value. We Prove it.

With GE, you know precisely how our water and process technologies help your bottom line. A Value Generation Plan quantifies how we enhance your key business results. To create a Value Generation Plan, we discuss your strategic objectives and suggest projects that can help you meet them. Then we monitor and manage all projects and report in detail how each one helped to:



- Improve productivity
- Optimize critical equipment life and performance
- · Increase process uptime
- Drive out costs
- Reduce waste
- Improve regulatory compliance
- Ensure performance through continuous monitoring and preventative diagnostics
- Preserve your capital and protect your cash flow with flexible financing



#### Global Leadership

A comprehensive portfolio, innovative technology, application expertise and personal service are what made GE Water & Process Technologies a leader in water and process treatment. A passion for solving the world's most challenging water and process problems, being environmentally responsible and most importantly, *helping our customers win* guides our roadmap for the future.

Part of that future is ecomagination, an aggressive, long-term initiative from GE to bring to market new technologies that address the world's biggest environmental challenges. As part of ecomagination, GE pledges to double its investment in cleaner technologies, introduce more products that provide significant environmental performance advantages to customers, and offer more products and services that help customers meet their pure water and wastewater demands, reduce greenhouse gas emissions and improve efficiency. For more information on ecomagination, please visit our website:





http://ge.ecomagination.com/

Accepted Date: \_\_\_\_\_

## Section 6 - Contract Page

This Water Treatment Proposal, subject to enclosed terms and conditions, is between State of West Virginia's spending unit hereafter referred to as "Customer", and GE Power & Water, Water & Process Technologies, the marketing name of GE Betz, Inc. and its affiliates, hereafter referred to as "GE" or "Contractor".

We, the Customer, acknowledge and accepattached proposal.	ot the content and terms as outlined in the
GE will bill Customer in monthly installments f multi-year agreements shall be subject to the	or a period of twelve months. Please note that following escalation clause:
of: (i) 2%; or (ii) a combination of two BLS shall be adjusted by an amount equal Chemicals and Allied Products (WPU06) adjusted by an amount equal to the peroduction of Production of	cart date, price shall be adjusted by the greater indices in which 50% of the payment amount to the percentage increase of the Index for and 50% of the payment amount shall be centage increase of the Index for Total Private tion — Workers Not Seasonally Adjusted the ted by the US Dept. Labor Statistics - monthly
increase our pricing based on increase chemicals listed in this Quotation, where is due to increased global demand, li allocation of supply, or other such similar	sting agreement, GEWPT reserves the right to es in the price of base components for the the increase in price of such base components mited supply, temporary product shortages, inflationary pressures. Such price changes may es change. Upon request, GEWPT will provide creases.
Customer purchase order number:	Betz, Inc., 4636 Somerton Road, Trevose, PA
State of West Virginia	GE Betz, Inc.
Name:	Name:
Signature:	Signature:
Title:	Title:

## Section 7 - Terms and Conditions

1. Exclusive Terms and Conditions. Together with any other terms the Parties agree to in writing, these Terms and Conditions of Sale form the exclusive terms ("Agreement") whereby Buyer agrees to purchase, and Seller agrees to sell Goods and provide advice, instruction and other services in connection with the sale of those Goods ("Services"). Notwithstanding any provisions communicated in any way by Buyer to Seller prior to this Agreement including any terms contained in any request for quote by Buyer, Buyer agrees that this Agreement will control the relationship by accepting Goods and Services from Seller, even if Buyer sends to Seller other terms and conditions to which Seller may not respond.
2. Buyer Obligations. Seller will not control the actual operation of either Buyer's systems or Goods at the site, and unless otherwise specifically agreed in writing, installation of Goods shall be the responsibility of Buyer. Goods and Services provided hereunder are based upon the information Buyer makes available to Seller, and Seller reserves the right to utilize the most command and fessible design compactifies and to make changes in delta's af design.

hereunder are based upon the information Buyer makes available to Seller, and Seller reserves the right to utilize the most compact and feasible design compatible with sound engineering procises, and to make changes in detals of design, construction and arrangement of Goods unless precluded by limitations (including, but not limited to actual space and feedwater/substance quality specifications) specified by Buyer in writing at the time on order is placed. If no such limitations are specified, Seller shall not be held responsible for incompatibility of the Goods and Services due to changes in feedwater/substance quality specifications or site conditions or for incompatibility with actual space or design limitations, which were not initially desicosed by Buyer and become apparent at a later date. For Services to be accurate and Goods to work as intended, Buyer must fulfill the following obligations ("Obligations") (a) provide Seller complete and accurate information and data relevant to the scope of work to be provided, such as information related to Buyer's size conditions, systems, related equipment and processes, feedwater or other substances to be treated or measured with the Goods, including any hidden, unapparent, or changing conditions that may affect the effectiveness of the Goods, (b) operate all related systems and the Goods within the agreed to control parameters or, if ones, within industry customs operating conditions, (c) systems and the Goods within the agreed to control parameters or, if none, within industry customary operating conditions, icl maintain all related systems and Goods in good operating condition and repair, and fall maintain and handle Goods in a proper and safe manner. If Buyer falls to fulfill the foregoing Obligations, Selier shall be relieved of any obligations with respect to warrante or any other commitments made to Buyer in writing, and Seller shall have no hability for any loss, damage or injury which Buyer may sustain or for which Buyer may be lable. Buyer is solely responsible for the operation of Buyer's systems, including ensuring that the systems are operated and maintained properly and comply with all laws, rules, regulations, it cense conditions and orders. Seller will not operate, inspect or maintain Buyer's systems or act as a focused operator as defined by conditions and orders. Selet will not operate, inspect to mointain Buyer's systems or act as a Received operator as defined by local regulatory authorities. Buyer shall not sell or permit the use of the Goods in connection with any nuclear installation or activity without the prior written consent of the Seller. Seller shall have no liability whatsoever for any nuclear or other damage, injury or contamination arising in connection with any such sale or use. Buyer shall be responsible for using or disposing of all Goods, including the empty packaging in which Goods were contained once detered to Buyer and where applicable such disposal should be pursuant to Section 8 herein. Buyer shall maintain all risk property and boiler and machinery breakdown insurance covering the full replacement value of Buyer's site, systems and related equipment, together with business interruption coverage, which includes a volvier of subrogation in forour of Seler and its offliates. Prior to commencement of any work under this Agreement, and not less than annually thereafter during the Term of this Agreement, buyer shall deliver to Seler or certificatels of insurance and copy of waiver of subrogation endorsent evidencing that the foregoing insurance is in full force and effect. Seller shall maintain types and amounts of insurance against loss or damage and such other risks as customarily insured against by bus rensesses whose operations are comparable to those of the Seller shall maintain types and amounts of insurance against loss or damage and such other risks as customarily insured against by bus rensesses whose operations are comparable to those of the Seller.

Seller shall not be obliged to add Buyer or any other third party as an additional insured under Seller's insurance policies.

Delivery. All delivery designations are INCOTERMS 2010. Title and risk of loss or damage to Goods as well as containers and tanks in which Goods are contained, except as provided by Seller show only general style, arrangement and approximate dimens

dimensions and weight.

dimensions and weight.

4. Payment and Prices. Unless otherwise specified in writing, payment is due net thirty [30] days from the date of Seller's invoice. If Seller shall have any doubt at any time as to Buyer's ability to pay, Seller, without any liability and without being subject to any penalties that may be applicable as negatated with Buyer, may decline to make deliveries of Goods or provide Services except on receipt of satisfactory security. The prices quoted herein do not include taxes. Buyer shall be directly responsible, and reimburse Seller, for the gross amount of any present or future sales, use, excise, value-added, or other similar tax applicable to the price, sale of delivery of any products or services furnished hereunder. Buyer shall furnish Seller with evidence of exemption occeptable to the taxing authorities if applicable. For multi-year agreements, pricing stated shall remain furn for twelve [12] months, after which Seller shall be entitled to adjust pricing upward on an annual basis according to the designated formula used by Seller in Buyer's country and which shall be notified to Buyer. Buyer agrees to reimburse Seller in Buyer's country and which shall be notified to Buyer. Buyer agrees to reimburse Seller. the designated formula used by Seler in Buyer's country and which stand be notined to Buyer. Unless otherwise specine, a prices are incoterns 2010 EXIV Seler's premises as of where Goods will be shipped to Buyer. Buyer agrees to reimburse Seler for collection costs, including two percent (2%) interest per month, not to exceed the maximum amount permitted by applicable buy, should Buyer foil to timely pay. Buyer shall have no rights to any setfols of any nature relating to any payments due under the Agreement. Notwithstanding the terms set forth herein or of any agreement or acceptance of Seller's quotation. Seller reserves the right at any time and from time to time by notice in writing to the Buyer to fol increase prices for impose temporary price adjustments based on increases in the cost of base components for the Goods or Services provided, where the increase is due to increased global demand, limited supply, temporary product shortages, allocation of supply, or such other similar inflationary pressures and this impose a such starte great to any increase in the cost of Goods or Services as a other similar inflationary pressures, and lb] impose a surcharge equal to any increase in the cost of the Goods or Services as a result of a modification of exchange rates, taxes or other levies imposed by public authorities.

Payment for Excessive Usage; Lost and Damaged Goods. If payment for Goods is based on some factor other than

the actual amount of Goods delivered (e.g., payment is for a fixed amount, or based on usage or production), then Buyer agrees to pay for all Goods (a) consumed as a result of Buyer's failure to comply with Obligations as set forth in Section 2, or (b) lost or damaged after delivery to Buyer. Buyer shall provide Seller all information necessary to calculate amounts due and

enable Seller to gudit those records

6. Consigned Goods, Buyer's holl bear all risk of loss and damage to all consigned Goods in Buyer's possession or control, notwithstanding Buyer's exercise of reasonable core. Seller shall have the right to enter Buyer's premises at all reasonable times to inspect such Goods and related records. Upon request, Buyer agrees to return such Goods to Seller pursuant to Seller's shipping instructions.
7. Limited Warrantles, Seller warrants that the Goods shall conform to published specifications and shall be free from

defects in material and workmarship when at all times operated in accordance with Seler's written instructions, and that the Services will be performed with the degree of skill which can reasonably be expected from a seller engaged in a comparable business and providing comparable services under comparable circumstances. Under no circumstances do Services include the operation, inspection or maintenance of Buyer's systems or acting as a licensed operator as defined by local regulatory

authorites. Unless otherwise provided in any Warranty Schedule that may be attached hereto, the foregoing warranties are valid (a) for Chemicals, the earlier of, the shelf-life of the product, or six (6) months from their date of delivery or the provision of Services; (b) for Consumables, including Filters and Membranes, twelve (12) months from their date of delivery. (c) for Goods other than Chemicals and Consumables, the earlier of, fifteen (15) months from their date of delivery. (c) for Goods other than the doctory of the consumer o Seler's option. (a) replacement of non-conforming Goods or refund of purchase price of the non-conforming Goods, and (b) re-performance of the Services at issue, or a refund of the amount paid for the Services at issue. No allowance will be made for repairs or alterations made by Buyer without Seller's written consent or approval. Goods may not be returned to Seller without Seller's written permission. Seller will provide Buyer with a "Return Material Order" number to use for returned goods. Buyer, as the original purchaser, is not entitled to extend or transfer this warranty to any other party. The foregoing warranties are in

Feu of and exclude all other warranties, statutory, express or implied, including any warranty of merchantability or

ss for a particular purpose.

Use of Equipment, Tanks, and Containers. Semi-bulk containers (SBCs) owned by Seller shall be used only for the storage of Goods approved by Seller and Buyer shall return to Seller all SBCs owned by the Seller in an "empty" condition, as defined by appropriate transport or environmental regulations. Title to, and risk and ownership of, all equipment, product containers leg., pails, drums, recyclable intermediate bulk containers "BC"), and tanks supplied to Buyer shall pass to Buyer as provided for in Section 3 of this Agreement, except that

1. Compliance with Laws; Permits, Buyer is responsible for compliance with all laws and regulations opplicable to the operation of its systems and to the storage, use, handling, installation, maintenance, removal, opplicable to the operation of its systems and to the storage, use, handing, installation, maintenance, removal, registration and labeling of all Goods from and after Buyer's receipt of the Goods, as well as for the proper management and disposal of all wastes and residues associated with the Goods (including) but not limited to containers, excess or off-spec product, testing wastes leg., spent or expired lab reagents and test kits) and signing manifests for waste transport and disposal. Buyer agrees to ensure that all Goods and Services provided to Buyer for export are exported only in compliance with applicable export control laws and regulations. Permits and Iccenses which are required to operate opporatous or equipment or to use the Goods, shall be procured by Buyer as Buyer's sole expense. Buyer shall be responsible for and procure all permits, because, exemptions, authorizations and approvals necessary to the operation of its systems, including but not Imited to permits related to liquid and solid waste handling and discharge, air and waster emissions, sound, sofely, etc. Selfer shall not be belief and you have made and Buyer shall not be releved thereby of its obligations to pay Selfer in accordance with this Agreement. The sale of Goods and Services is subject to compliance with all applicable laws, including trade control lows. This requirement survives the expiry or termination of this Agreement. Buyer agrees that any export, e-export, diversion, or trans-shipment of the Goods including software and technical data) to any entity or destination other than provided for in this Agreement will be in accordance with all applicable laws.

have occurred) if uncontrollable events make it impracticable or commercially unreasonable for either party to perform under the terms of this Agreement, provided no force majeure shall apply to Buyer's obligation to pay in a timely manner for Goods and Services. Scheduled delivery dates are subject to extension when a force majeure

Confidentiality and Intellectual Property, Both parties agree to keep confidential the other party's proprietary non-public information, if any, which may be acquired in cornection with this Agreement. Buyer will not, without Seller's advance written consent, subject Goods to testing, analysis, or any type of reverse engineering. not, windout select a business where to resent, subject doods to testing, uniques, or any type of reverse engineering. Seller retains all intellectual property rights including copyright which it has in all drawings and data or other deliverables supplied or developed under this Agreement, subject to Buyer's right to use such drawings and data for its own use without additional cost. Buyer acknowledges that Seller is in the business of selling the Goods subject to this Agreement and agrees that it will not file patent applications on the Goods, or processes and methods of using the Goods, without Sellers express written permission. Buyer further agrees that in any event any such patents will not be asserted against Seller or its customers based upon purchase and use of such Goods. Buyer shall be fully lable for any infringement of patent rights of third parties arising out of the products supplied become developed to the product supplied. hereunder where the construction, and other characteristics of such products including modification of the Goods and Services, is prescribed to the Seller, or completed independently, by the Buyer or agentist. Buyer shall fully defend and indemnify the Seller in case of such claim(s). Any software Seller owns and provides pursuant to this Agreement shall remain Seller's property. Seller provides to Buyer a limited, non exclusive and terminable license to use the object code of such software for the term of this Agreement. Buyer agrees not to export, copy (except that Buyer may make one copy for backup purposes), sub-license, translate, transfer, reverse engineer, or decode the software. Single user versions of software may be used on one CPU. LANAVANI versions may be used on a single server with only the number of concurrent users as agreed to by the parties. Unless otherwise expressly agreed by Seller, this license shall terminate and the software shall be returned to Seller upon termination of this Agreement, or the material breach of the terms in this section. Buyer shall defend and indemnify Seller in respect of any claim. or lability suffered by Seller in connection with infringement of any third party rights based on design, specifications or requirements prescribed by Buyer or its agent.

12. Limitation on Liability. Except where expressly communicated to Seller, Seller shall have no liability for

incompatibility of Goods with Buyer's actual space or design limitations. To the extent permitted by low, the fotal lability of the Selfer for all claims arising out of or relating to the performance or breach of this Agreement rus of any Goods or Services shall not exceed the annual contract value of this Agreement. Selfer shall not be lable for any advice, instruction, assistance or any services that are not required under this Agreement or for which Selfer does not charge Buyer. In no event will either party be hable to the other for lost profits or revenues, cost of coptial or replacement or increased operating costs, lost or decreased production, claims of Buyer's customers for such damages or any similar or comprable damages, or for any incidental, special, consequential or indirect damages of any similar or similar or whether arising from actual or adleged breach of warranty, indemnification, product flability or strict lability, or any other legal theory. If Buyer is supplying, or otherwise making available, Seler's Goods or Services to a third party, Buyer agrees to protect, defend, indemnify and hold Selfer, its corporate subsidiaries and affisiates, and their respective officers, directors, employees and agents, free and hormless from and against any and all losses, expenses, habilities, claims, demands, causes of action, suits or other higation, arising out of or related to Selfer's Goods or Services provided by the Buyer to a third party, including but not limited to products or services that may be related to Selfer's Goods or Services according to third party, including but not limited the applicable warranty period, provided that Buyer may continue to enforce a claim for which it has given incompatibility of Goods with Buyer's actual space or design limitations. To the extent permitted by law, the total

to products or services that may be related to Seler's Goods of Services. Seler's lability shall end upon expiration of the applicable warranty period, provided that Buyer may continue to enforce a claim for which it has given notice prior to that date by commercing an action or arbitration, as applicable under this Agreement, before expiration of any statute of limitations or other legal time limitation but in no event later than five IS) months after expiration of such warranty period. For purposes of this section "Seller" shall include Seller, its affixiates, subcontractors and suppliers of any tier, and their respective agents and employees, individually or collectively... Indemnification. Seller shall indemnify and hold harmless Buyer from claims for physical damage to third party property or injury to persons, including death, to the extent caused by the negligence of Seller or its officers, agents, employees, and/or assigns while engaged in activities under this Agreement. Buyer shall likewise indemnify and hold harmless Seller from claims for physical damage to third party property or injury to persons, including death, to the extent caused by the negligence of Buyer, its officers, agents, employees, and/or assigns. In the event such damage or injury is caused by the piant or concurrent regligence of Seller and Buyer has shall be barne by each Party in proportion to its negligence. For the purpose of this Article. () "Third party" shall not include Buyer or any subsequent owner of the Goods or Services, their subsidances, porents, affliates, opents, affliates, opents, or assigns including any operation or maintenance contractor, or their insurer, and [0] no portion of the successors or assigns including any operation or maintenance contractor, or their insurer, and (i) no portion of the Goods is "third party property".

Buyer expressly acknowledges that the limited or excluded warranties or labilities stipulated herein and waivers of

octons against Seler deriving from the same, are also stipulated in favor of Seller's insurers.

14. Conflicts; Survival, Assignment, No Third Party Beneficiary Rights: If there is any conflict between this Agreement and any written proposal or quotation provided by Seller, then the terms and conditions set forth in the proposal or quotation shall prevail. If any term or condition of this Agreement or any accompanying terms and conditions are held invalid or illegal, then such terms and conditions shall be reformed to be made legal or valid, or deleted, but the remoning terms and conditions shall be reformed to be made legal or valid, or deleted, but the remoning terms and conditions shall be reformed to be made legal or valid, or deleted, but the remoning terms and conditions shall be reformed to be made legal or valid, or deleted, but the remoning terms and conditions shall be reformed to be made legal or valid, or deleted, but the remoning terms and conditions shall be reformed to the made of the paths of the path may assign its rights or delegate its obligations under this Agreement without the written consent of the other

porty hereto. Except as specifically set forth above in Section 12 entitled "Limitations on Liability", if this Agreement and all of the provisions hereal shall be binding upon and inure only to the benefit of the parties hereto and their respective successors and permitted assigns, and no other party, including any employee or creditor of any party hereto or any affiliate thereof, shall

and permitted assigns, and no other party, including any employee or creditor of any party hareto or any attitude thereof, shall have any rights or obligations hereunder.

15. Emergencies. If the safety of Seller's personnel is threatened or likely to be threatened by circumstances outside the reasonable control of Seller, including but not limited to war, armed conflict, civil unrest, riots, terrorism, kidnapping, presence of or exposure to hazardous moterials, unsafe working conditions, or by the threat of such circumstances or a lack of adequate protections against such circumstances, Seller shall, with no lability as per the terms of the Agreement, be entitled to take all necessary steps to ensure the security and softly of its personnel including the evacuation of personnel until such circumstances no longer apply and suspension of its obligations under the Agreement until said circumstances, at Seller's sole points have reased.

opinion, have ceased.

16. Termination and Cancellation. This Agreement and any performance pursuant to it may be terminated or suspended by either party if the other party lal is the subject of bankruptcy or insolvency proceedings, or (b) defaults in its material obligations under this Agreement, and such default is not cured within thirty (30) days. Upon the termination of this Agreement. by einer party in the duter party that are sugget or outside, to more purely the control of the processing of the defaults in a decided to the prices of the process of the

of the U.S. Government and/or is funded in whole or in part by any agency of the U.S. Government. Buyer agrees that all Goods and Services provided by Seller meet the definition of "commercial-off-the-shelf" ("COTS") or "commercial-item" os those terms are defined in Federal Acquisition Regulation ("FAR") 2.101. To the extent the Buy American Act, Trade Agreements Act, or other are defined in Federal Acquisition Regulation (FAR\*) 2.101. To the extent the Buy American Act, Trade Agreements Act, or other domestic preference requirements are applicable to this Agreement, the country of origin of Goods is unknown unless otherwise specifically stated by Seler in this Agreement. Buyer agrees that any Services offered by Seler are exempt from the Service Contract Act of 1965 IFAR 52.222-411 Buyer represents and agrees that this Agreement is not funded in whole or in part by American Recovery Reinvestment Act funds unless otherwise specifically stated in the Agreement. The version of any applicable FAR clause listed in this Section 18 shall be the one in effect on the effective date of this Agreement. The version of any agency of the U.S. Government, then as permitted by FAR 12.302, Buyer agrees that all paragraphs of FAR 52.212-4 lexcept those listed in 12.302/bit are replaced with these Terms and Conditions. Buyer further agrees the supportagness of FAR 52.212-5 apply only to the extent applicable for sale of COTS and/or commercial items and as appropriate for the prices under this Agreement. If Buyer is procuring the Goods or Services as a contractor, or subcontractor at any tier, on behalf of any agency of the U.S. Government, then Buyer agrees that FAR 52.212-5(e) or 52.244-6 Inhichever is applicable) applies only to the extent applicable for sale of COTS and/or commercial items and as appropriate for the prices under this Agreement. If Buyer is no modification, amendment, revision, waiter, or other change shall be binding on either Party. Each Party agrees that it has not relied on, or been induced by, any representations of the other Party. Each Party agrees that it has not relied on, or been induced by, any representations of the other Party. Each Party agrees that it has not relied on, or been induced by, any representations of the other Party.

induced by, any representations of the other Party not contained in this Agreement.

## **Appendices**

#### Experience and Expertise:

Project #1: Water and Energy Savings

- Customer is general manufacturing, aluminum industry
- Contact information: Novelis Corporation, William Davis 304-367-5161
- GE Power and Water treats their cooling water similar in size and treatment to our proposed package.
  - Project was involved with increasing cooling tower cycles of concentration utilizing new chemical technology exclusive to GE and saving the customer over \$44,000.

#### Project #2: Water Savings

- Customer is similar in size and treatment program to the proposed package
- Contact information: Air Products, Jesse Park 724-226-4427
- Manufacture air separation
  - o Project was involved with increasing cooling tower cycles of concentration and eliminating acid feed for a safer working environment which led to savings of \$16,500 in water and acid costs.

#### Project #3: Evaporation Credits

- Customer is a hospital similar in size to WV Dept. of Administration Facilities
- Contact information: Meadville Medical Center, Tom Darcangelo 814-333-5116.
  - o Project was to help achieve evaporation credits to reduce water usage costs.

#### Legionella Testing Agreement

GSD126772 - Attachement A - Bid Form

#### **Purchasing Affidavit**

#### Attachment 1:

• All MSDS and Product Fact Sheets have been provided previously

## **Legionella Testing Agreement**

GE BETZ INC. 4636 Somerton Road Trevose, PA 19053 P.O.#		
BUYER:	EFFECTIVE DATE:	
TYPE OF CONTRACT:		
Annual Contract (for scheduled Open Contract (for Tests as o		e next section.) e next line, then skip next section.)
PRICE PER TEST: NUMBER OF Buyer may submit orders	F TESTS: OPEN CONTRACT AM for additional Tests under this Agre	
(	COMPLETE FOR ANNUAL CONTRACT	'S
ANNUAL CONTRACT AMOUNT:		
	er 1 year from the Effective Date thi new	s Agreement shall automatically- erminate []
SYSTEM	# OF TESTS PER VISIT	APPROXIMATE TEST DATES OR FREQUENCY
ATTACHMENTS/OTHER: Attachment I: Description	and Scope of Services	
<b>GROUP OF COMPANIES) AGREES TO</b>		WATER & PROCESS TECHNOLOGIES
TESTS UPON ONLY THE TERMS AND	O DELIVER AND BUYER AGREES TO A CONDITIONS OF THIS AGREEMENT.	CCEPT THE DESCRIBED LEGIONELLA
	CONDITIONS OF THIS AGREEMENT.  GEBETZ, INC.  By: Joe	Gellic
BUYER By: Anthony Racs Name:	CONDITIONS OF THIS AGREEMENT.  GEBETZ, INC. By: Joe Nome:	Collie
BUYER By: Anthony Raes Name: Date: 8/5/11	CONDITIONS OF THIS AGREEMENT.  GEBETZ, INC. By: Joe Nome: Date: 8	

# GE Infrastructure Water & Process Technologies

## **GE Global Legionella Testing Policy**

## GE Infrastructure Water & Process Technologies *Legionella* Testing Position Statement

GE Infrastructure Water & ProcessTechnologies ("GE W&PT") has created a contract, referred to as the *Legionella* Testing Agreement, to provide legal protections to GE when GE W&PT representatives perform or coordinate *Legionella* testing at customer facilities. Therefore, GE W&PT's customers must sign the *Legionella* Testing Agreement before any *Legionella* testing begins.

Attachment I (Description and Scope of Services) to the *Legionella* Testing Agreement contains important information about the limitations of *Legionella* testing, sampling locations and frequencies, possible responses to a positive test result, and suggested remedial actions. The Attachment does not have to be signed by the customer, but it must be provided to the customer along with the *Legionella* Testing Agreement because the Attachment is part of the Agreement.

#### Background Information for GE W&PT Representatives On Legionella Testing

Some limited testing for *Legionella* may be prudent in order to demonstrate reasonable diligence in addressing the health risk associated with these organisms. In the event of an outbreak, testing for *Legionella* is required by US OSHA (A) and some other regulatory agencies elsewhere in the world to identify the source as well as to document that disinfection procedures were effective. Alternatively, some countries require *Legionella* testing.

#### Legionella Detection Methods

The US CDC and other experts in this area consider bacterial culture as the only reliable method for detecting live *Legionella* in water. Properly performed culturing allows for the quantitation, speciation and serotyping of important *Legionella* species. This is generally recognized as being the most sensitive method of analysis with some methods being reliable at very low levels (i.e., 10 cfu/L (0.01 cfu/ml)).

Non-culture methods for detection of *Legionella* in cooling water include the EQUATE TM WATER Test by Binax (Portland, ME). The EQUATE kit uses an ELISA (Enzyme-Linked ImmunoSorbent Assay) to detect a carbohydrate antigen "specifically" found on the surface of *Legionella pneumophila* serogroup 1 (Lp1). The test can be done on-site and requires the filtration of 500ml to one liter of water. After sample filtration, the test takes approximately one hour to complete. The lowest detection level is approximately 200 *Legionella* per ml.

## GE Infrastructure

## Water & Process Technologies

Important issues with the Binax test include:

#### **False Negatives**

- Detects only Legionella pneumophila, serogroup 1; other potentially pathogenic
- Legionella species are not detected; Legionella pneumophila, serogroup 1 at levels <200 per ml will not be detected.

#### **False Positives**

- Pseudomonas fluorescens, a common cooling water contaminant, can cause a false positive result;
- Non-viable (dead) Legionella pneumophila, serogroup 1, give a positive result.

Additionally, the Binax EQUATE test is not quantitative. Therefore, a positive result indicates that the tested water is contaminated at a level greater than the 200 CFU/ml test cut-off but no information on the level of infestation is provided.

If the Binax EQUATE test is used, GE W&PT recommends that results be confirmed with culture testing, regardless of the result.

NOTE: THE BINDX EQUATE FIELD TEST KIT HAS BEEN WITHDRAWN FROM THE MARKET BY THE SUPPLIER.

#### Sampling for Legionella

For various reasons, owners and operators of cooling systems may elect to test for the presence of *Legionella* bacteria. Prior to engaging in a *Legionella* testing program, responsible individuals must have realistic expectations about the significance of the test results. Additionally these individuals should have a standardized sampling scheme, a framework for interpreting test data and an agreed upon response scheme to the test data, including the identification of persons responsible for timely reporting of results to government authorities if such reporting is required.

Attachment I to the *Legionella* Testing Agreement provide information on potential sample locations and sampling frequencies.

#### Frequency of sampling

Attachment I contains information about sampling frequencies. US OSHA recommends that *Legionella* counts should be <10 CFU/ml after a successful disinfection. A return to quarterly testing may be warranted once the system is within appropriate operating standards. If positive culture results are reported, more frequent sampling may be advisable. The continuous adherence to good system maintenance and biocide application guidelines is the best overall approach to *Legionella* control.

## GE Infrastructure

## Water & Process Technologies

#### Legionella Laboratories and Sample Shipping Instructions

Some countries require samples to be analyzed using a laboratory that has been certified or approved by the government. These government-approved laboratories must be used to analyze samples taken in such countries.

For samples taken in countries without a requirement to use government-approved laboratories, only a GE W&PT-approved laboratory may be used. Currently, GE W&PT has approved and recommends the use of the Special Pathogens Laboratory at the VA Medical Center in Pittsburgh, PA.

Samples should be collected using the GE Betz Lab Supply *Legionella* Sample Test Kit. Appropriate paperwork should be filled out completely. Incomplete information may delay receipt of results. It is important that each sample bottle is labeled so that the sample site and date are easily identifiable. The information on the bottle will correspond to the information you supply on the *"Legionella* Testing Requisition Form."

#### References:

A. OSHA Technical Manual, Section III: Chapter 7. "Legionnaires' Disease" Legionella Home Page

## **Legionella Testing Agreement**

GE BETZ INC. 4636 Somerton Road Trevose, PA 19053 P. O. #		
BUYER:	EFFECTIVE DATE:	
TYPE OF CONTRACT:		
Annual Contract (for scheduled Open Contract (for Tests as o		e next section.) e next line, then skip next section.)
PRICE PER TEST: NUMBER OF Buyer may submit orders f	TESTS: OPEN CONTRACT AM or additional Tests under this Agre	
, C	OMPLETE FOR ANNUAL CONTRACT	S
ANNUAL CONTRACT AMOUNT:		
RENEWAL/EXPIRATION  If an Annual contract, after Rene	r 1 year from the Effective Date this ew □ T	s Agreement shall automatically- erminate [
TESTS and SCHEDULE:		
SYSTEM	# OF TESTS PER VISIT	APPROXIMATE TEST DATES OR FREQUENCY
Please see the Legionella Testing	table in Section 2 of proposal 7178	0531, dated May 22, 2012.
ATTACHMENTS/OTHER: Attachment I: Description	and Scope of Services	
	DELIVER AND BUYER AGREES TO A	Water & Process Technologies CCEPT the Described Legionella
BUYER By:	GE BETZ, INC. By:	
Name:	Name: Branden	Garrett - Commercial Operations
Date:	Date: May 21, 2	012

- Exclusive Terms and Conditions These Terms and Conditions, together with any proposals of GE Betz Inc. on behalf of itself and its affiliates within the Water & Process Technologies group of companies ("GE Betz"), are the exclusive contract terms between Buyer and GE Betz ("Agreement") with respect to legionella tests and related services, advice and instructions ("Tests") to be delivered or provided by GE Betz. Any alteration of or addition to this Agreement, whether oral or written, and whether contained in a purchase order or otherwise, or whether by course of performance or usage of trade shall be void and of no force and effect, unless specifically agreed to in and writing signed by the parties. There are no additional or collateral agreements, representations, or warranties between the parties relating to the transaction contemplated hereby. In the case of any conflict between these Terms and Conditions and any written proposal of GE Betz, the terms of the proposal shall prevail.
- Scheduling of Tests All dates for the scheduling of Tests shall be estimates only and GE Betz shall have the right to schedule and reschedule Tests in its sole discretion. GE Betz shall not have any liability arising from its scheduling or rescheduling of Tests.
- 3. Term If this is an Annual Contract the Term shall be for a period of 1 calendar year from the Effective Date. If this is an Open Contract, Buyer may order Tests and GE Betz may in its discretion accept or reject the order. All orders accepted shall be subject exclusively to the terms and conditions of this Agreement.
- Renewal If "renew" is marked on the reverse side, then this Agreement shall renew for a similar term ("Automatic Renewal")
  without further action by either party until either party gives notice to terminate no less than 30 days before the Expiration
  Date.
- 5. Price Increases In the event of Automatic Renewal GE Betz may increase prices no more often than once every 12 months after the initial Term. Buyer may terminate this Agreement by giving notice within 30 days of receiving a notice of a price increase. In the case of Open Contracts, prices shall be GE Betz's standard per Test price in effect at the time of receipt of an order.
- 6. Taxes Buyer shall pay all sales, use, property or gross receipts taxes imposed on the Tests.
- Payment For Annual Contracts GE Betz will invoice Buyer at the start of this Agreement and every renewal. For both Annual Contracts and Open Contracts, terms of payment are net 30 days within receipt of an invoice.
- 8. Additional Tests Buyer agrees to pay for any additional tests requested by it at GE Betz's standard list price per test.
- 9. Warranties GE Betz warrants to Buyer, for a period of 12 months from the date of the performance of the Tests that the Tests shall be performed in accordance with the specifications attached, or, if none, shall conform to GE Betz's published specifications. GE Betz shall have no liability whatsoever arising from circumstances and conditions not disclosed to GE Betz.

A claim for breach of the foregoing warranties must be received by GE Betz within 12 months of the Buyer's receipt of the Test report or the daim shall not be valid. GE Betz's liability and Buyer's exclusive remedy for any breach of these warranties is limited to re-performing the Tests or payment in an amount not to exceed the Contract Amount.

THE FOREGOING WARRANTIES ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTIBILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND IN NO EVENT WILL GE BETZ BE LIABLE FOR LOST PROFITS, LOST PRODUCTION, LOSS OF USE, LOSS OF VALUE, OR ANY INCIDENTAL SPECIAL OR CONSEQUENTIAL DAMAGES.

- 10. Waiver A waiver by of strict conformance with this Agreement shall not waive any subsequent failure to conform.
- 11. **Force Majeure** GE Betz shall not be liable for any failure or delay in performance due, in whole or in part, to fire, explosion, natural disaster, labor disputes, raw material shortages, act of governmental authorities, or to any cause of any nature beyond GE Betz's control.
- 12. Indemnification GE Betz does not agree to indemnify Buyer for any third party claims or liabilities, expenses or defense fees or costs ("Costs") relating to the Tests. Buyer agrees to indemnify defend and hold GE Betz harmless from any and all Costs relating to the Tests. Buyer's indemnification shall not apply, and GE Betz shall refund any amounts paid by Buyer if and when the claim or liability is finally judicially determined to have been caused by the sole negligence of GE Betz.
- 13. **Testimony** In the event GE Betz is required to provide testimony regarding the Tests in any proceeding, whether, civil, criminal, administrative or otherwise, Buyer shall reimburse Sell time and expenses to the extent permitted by law.
- 14. **Termination** This Agreement and any order for Test may be terminated or suspended by either party on 30 days prior notice. Buyer shall not be entitled to any refund or rebate of any Contract Amount in the event of the termination of this Agreement before the end of its Term, unless the termination is by GE Betz or by Buyer due to material default GE Betz in which case Buyer shall receive a refund for a pro rata amount for any Tests not performed.
- 15. **Notices** Notices shall be in writing and sent to the parties at the addresses first stated in Agreement or to any other address specified by a party from time to time by written notice and shall be effective upon receipt.

A return to quarterly testing may be warranted once the system is within appropriate operating standards.

The following sites are of primary interest in sampling an open recirculating cooling system. These are suggested areas (A) and it is left to the individual operator or owner to decide on the number of samples and sites appropriate for their system.

- 1. Incoming water supply to the cooling tower (make-up)
- 2. The cooling tower basin at a location distant from both the make-up water and hot water return (cold well, pump forebay)
- 3. Water that has passed through the tower fill but has not yet reached the basin
- 4. Storage tanks or reservoirs
- 5. Standing water in condensate trays or from cooling coils
- 6. Hot water return (return headers, open tower deck)

It is not recommended to sample biofilm or sediment. The concentration of heterotrophic bacteria in these films may hide the growth of *Legionella*, even in properly treated environmental samples.

#### Legionella Culture Results

The laboratory will provide the following information regarding a positive culture:

- Species of Legionella
- Serogroup of the isolated Legionella species
- Concentration of isolated Legionella in colony forming units/milliliter (CFU/mL)

#### Potential Response to A Positive Culture Report

There are no guidelines that establish a relationship between numbers of *Legionella* isolated in a culture and the risk of infection. It is also important to note that in many countries there are no current government regulations concerning permissible numbers of *Legionella* in water systems. However, there has been enough consensus amongst experts to suggest a plan for remedial action in case of *Legionella* being isolated from a water system. The guidelines in Tables 1 and 2 are from: Reducing Risks Associated with *Legionella* Bacteria in Building Water Systems, by B.G. Shelton, G.K. Morris and G.W. Borman, in "*Legionella*, Current Status and Emerging Perspectives," ASM Press, 1993. If the water system is located in a country/province/state that has regulations or guidance regarding the permissible numbers of *Legionella* or requirements relating to the type of corrective action that must be performed, then such requirements must be followed.

Table 1: Suggested Remedial Action Criteria for Legionella

#### Remedial Actiona if Detected in:

Legionellae/mL	Evaporative Condensers		Humidifier/Fogger		
Detectable, but <1	1	2	3		
1 to 9	2	3	4		
10 to 99	3	4	5		
100 to 999	4	5	5		
> 1,000	5	5	5		

 $<sup>^{\</sup>rm o}$  Suggested remedial action, see Table 2.

**Table 2: Remedial Actions** 

Hazard Level	Actions
1	Review routine maintenance program recommended by the manufacturer of the
	equipment to ensure that the recommended program is being followed. The presence of barely detectable numbers of <i>Legionellae</i> represents a low level of concern.
2	Implement Action 1. Conduct the follow up analysis after a few weeks for evidence of further <i>Legionella</i> amplification. This level of <i>Legionellae</i> represents little concern, but the number of organisms detected indicates that the system is a potential amplifier for <i>Legionellae</i> .
3	Implement Action 2. Conduct review of premises for direct and indirect bioaerosol contact with occupants and health risk status of people who may come in contact with the bioaerosols. Depending on the results of the review of the premises, action related to cleaning and/or biocide treatment of the equipment may be indicated. This level of <i>Legionellae</i> represents a low but increased level of [concern].
4	Implement Action 3. Cleaning and/or biocide treatment of the equipment is indicated. This level of <i>Legionellae</i> represents a moderately high level of concern, since it is approaching levels that may cause outbreaks. It is uncommon for samples to contain numbers of <i>Legionellae</i> that fall in this category.
5	Immediate cleaning and/or biocide treatment of the equipment is definitely indicated. Conduct post-treatment analysis to ensure effectiveness of the corrective action. The level of Legionellae represents a high level of concern since it poses the potential for causing an outbreak. It is very uncommon for samples to contain numbers of <i>Legionellae</i> that fall in this category.

#### References:

A. OSHA Technical Manual, Section III: Chapter 7. "Legionnaires' Disease"

## **GSD126772-Attachment A-Bid Form**

#### **Standard Testing and Treatment**

Bldg. 25 Parkersburg (5th & Avery)

Bldg. 36 One Davis Square

Standard Testing and Treatment					
LOCATION			Monthly Cost	Qty	Yearly Cost
Capitol Complex Campus					
Bldg. 1 Main Capitol Bldg			\$ 120.75	12	\$ 1,449.00
Bldg. 2 DMV Bldg			\$ 120.75	12	\$ 1,449.00
Bldg 4 112 California Avenue			\$ 120.75	12	\$ 1,449.00
Bldg. 5 Highways			\$ 1,493.50	12	\$ 17,992.00
Bldg. 6 Education			\$ 120.75	12	\$ 1,449.00
Bldg. 8 Governor's Mansion			\$ 120.75	12	\$ 1,449.00
Bldg. 11 Chilled Water Plant			\$ 120.75	12	\$ 1,449.00
Bldg. 17 Finance(2101 Wash St.)			\$ 120.75	12	\$ 1,449.00
Off Campus Bldg. 22 Tax & Revenue Bldg. 23 Beckley (407 Nevill St) Bldg. 25 Parkersburg (5th & Avery) Bldg. 36 One Davis Square Bldg. 37 DEP (Kanawha City) Bldg. 86 Greenbrooke (Smith St)  TOTAL ANNUAL STANDARD  Legionella Testing			\$ 120.75 \$ 120.75 \$ 120.75 \$ 120.75 \$ 2,645.00 \$ 298.25	12 12 12 12 12 12	\$ 1,449.00 \$ 1,449.00 \$ 1,449.00 \$ 1,449.00 \$ 31,740.00 \$ 3,579.00 \$ 69,250.00 (A)
LOCATION	# of Tests	Price per Test	<b>Quarterly Cost</b>	Qty.	Yearly Cost
		Per Facility			
Capitol Complex Campus					
Bldg. 4 (112 California Avenue)	1	\$ 320.24	\$ 320.24	4	\$ 1,280.96
Bldg. 5 Highways	1	\$ 320.24	\$ 320.24	4	\$ 1,280.96
Bldg. 6 Education	1	\$ 320.24	\$ 320.24	4	\$ 1,280.96
Bldg. 11 Chilled Water Plant	6	\$ 320.24	\$ 1,921.44	4	\$ 7,685.76
Bldg. 17 Finance(2101 Wash St.)	2	\$ 320.24	\$ 640.48	4	\$ 2,561.92
Off Campus			2		
Bldg. 22 Tax & Revenue	2	\$ 320.24	\$ 640.48	4	\$ 2,561.92
Bldg. 23 Beckley (407 Nevill St)	1	\$ 320.24	\$ 320.24	4	\$ 1,280.96
Bldg. 25 Beckley (407 Nevill St)	2	¢ 220.24	¢ (40.49	. ,	¢ 2.561.02

#### \$ 3,842.88 \$ 320.24 \$ 960.72 Bldg. 37 DEP (Kanawha City) 3 \$ 1,280.96 \$ 320.24 \$ 320.24 Bldg. 86 Greenbrooke (Smith St) 1 \$ 29,462.08 (B) **TOTAL ANNUAL LEGIONELLA** \$ 98,712.08 TOTAL BID (A + B) = C(C)

\$ 320.24

\$ 320.24

2

3

\$ 640.48

\$ 960.72

2,561.92

3,842.88

4

## GSD126772-Attachment A-Bid Form

## Page 2

4

#### Unit Pricing:

Statewide Buildings may be added to this list during the life of the Contract only by mutual agreement of both the Agency and the Contractor, through formal change order. For the purposes of processing any change orders to this contract at a later date, please provide the following Unit Prices:

Item 1 - Cold Water Loop: Unit Price is based on standard testing and treating per motion.		
Cost of standard testing per month for cold water loop:	\$_	96.20
Item 2- Hot Water Loop: Unit Price is based on standard testing and treating per month.		
Cost of standard testing per month for cold water loop:	\$_	96.20
Item 3- Cooling Tower. Unit Price is based on standard testing and treating per month.		
Item 5- Cooling Tower. Offit Frice is based off standard testing and treating per month.		.200.00
Cost of standard testing per month for cooling tower:	\$_	390.00
		#la
Item 4- Condensate line supply. Unit Price is based on standard testing and treating per r	non	tfi.
Cost of standard testing per month for condensate line supply:	\$_	96.20
Item 5- Condensate line return: Unit Price is based on standard testing and treating per n	ionf	h.
Cost of standard testing per month for condensate line supply:	\$_	96.20
Item 6- Legionella testing: Unit Price is based on a single legionella test.		
Cost of legionella test:	\$_	320.24

It is expressly understood that the Unit Prices are for the purposes of change orders only, and that their value does not need to correlate to, nor will it be factored into, calculation or evaluation of the Total Contract Bid.

	GSD1267727
RFQ No.	

STATE	OF	WES	T	VIRGI	NIA
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## **PURCHASING AFFIDAVIT**

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

#### **DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (West Virginia Code §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

#### WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: GE Belz IM. Sha GE	water a Proce	ess Technologies
Authorized Signature: De leave M. Sine	ex luny	Date: May da. 2012
state of Pennsylvania		
County of BUCKS, to-wit:	1	
Taken, subscribed, and sworn to before me this $\frac{\partial \partial^{n} \partial}{\partial a}$	y of May	. 20/2.
My Commission expires NOV. 12 2015	, 20_15.	. /
AFFIX SEAL HERE	NOTARY PUBLIC	Hattleen A Feldcomp.
	COMMONWEALTH OF PENNSYLVANIA	

Notarial Seal
Kathleen A. Feldcamp, Notary Public
Bensalem Twp., Bucks County
My Commission Expires Nov. 12, 2015
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES
Purchasing Affidavit (Revised 12/15/09) Notorial Seal