



COVER PAGE

Bid Proposal #2274

Chlorination & Dechlorination Equipment

Sealed bids and electronic submitted bids for the above will be received until **10:00 AM CDT, Tuesday, March 17, 2020**, and publicly opened in the City of Alexandria Council Chambers or Council Committee Room.

Please file bid by one of the following means:

Hand-Delivered or Express Delivery:

Attention: Donna Jones, City Clerk
City of Alexandria - City Hall
915 Third Street, First Floor
Alexandria, LA 71301
Phone: 318-449-5090

Mailed via USPS:

Attention: Donna Jones, City Clerk
City of Alexandria - City Hall
PO Box 71
Alexandria, LA 71309-0071

Electronic Bid Submission: Central Bidding

Pursuant to Louisiana R.S. 38:2212 B.(6)(a) through E. (1-7) and R.S. 38:2212.1 B.(4)(a), vendors/contractors have the option to submit their bids and bid bonds electronically. Bids and bonds to be filed electronically shall be posted with **Central Bidding** at www.centralauctionhouse.com (phone 1-225-810-4814). Registration will need to be completed prior to posting of bid.

Complete bid specifications are available for viewing and downloading at the City of Alexandria's website www.cityofalexandriala.com ; on the left hand side of the opening page, go to the heading "*Business*" then drop down to "*RFP/RFQ/Bids*"; the current bids will be listed for your convenience.

City of Alexandria Buyer Name:	<u>Christine Sims, Senior Buyer</u>
Phone Number:	<u>(318) 441-6183</u>
Fax Number:	<u>(318) 619-3414</u>
E-Mail Address:	<u>christine.sims@cityofalex.com</u>



Wilma Kelly
Interim Purchasing Manager

City of Alexandria
Purchasing Department
P.O. Box 71
Alexandria, Louisiana
71309-0071



Office: (318) 441-6180
Fax: (318) 441-6185

Sealed bids will be received until **10:00 AM CDT, Tuesday, March 17, 2020**, and publicly opened in the Council Chambers or Council Committee Room.

City of Alexandria Bid Proposal #2264
Page: 1 of 22
Date Specifications Prepared: January 22, 2020

Bid Bond Requirements: A bid bond or check for N/A% of the total amount of bid.

Performance Bond Requirements: In the event bid is accepted, a performance bond shall be required in the amount of N/A%.

Please file bid with the following:
Donna Jones, City Clerk
City of Alexandria - City Hall
915 Third Street
P.O. Box 71
Alexandria, LA 71309-0071
Phone: 318-449-5090

INTRODUCTION

CHLORINATION & DECHLORINATION EQUIPMENT

It is the intent of the City of Alexandria to secure pricing on CHLORINATION & DECHLORINATION EQUIPMENT, which includes a vacuum regulator with meter assembly, gas detectors, water quality monitors/residual analyzer instrument, actuator and refrigerated sampler for use by the City of Alexandria Water and Wastewater Department.

All products shall be new and un-used. Bid price shall be for a complete unit ready for use. Each unit shall be equipped with the manufacturer's equipment and accessories which are included as "standard" in the advertised and published literature for the unit. No such item of equipment shall be removed or omitted for the reason that it was not specified in the bid documents.

All bid prices shall include any and all freight charges. All products are to be shipped F.O.B., freight pre-paid, to the City of Alexandria Water or Wastewater Department, to the attention of James Graham, 1212 Hudson Blvd, Alexandria, LA 71302, phone 318-441-6241.

Bid prices shall remain in effect for a period of at least twelve (12) months from bid award date. Orders shall be for individual items on an "as needed" basis only. No quantities are given or guaranteed.

Completed bid packet should be returned as issued by the City of Alexandria with ALL PAGES intact and all specification response columns filled in. Incomplete columns or missing pages, to include addendum pages, may result in the bidder's entire bid being rejected.

Questions and/or clarifications of bid specifications are to be in written form only, either mailed, faxed, or e-mailed to the attention of Christine Sims, City of Alexandria - Purchasing Department, P.O. Box 71, Alexandria, LA 71309-0071; Fax #318-619-3414; e-mail Christine.sims@cityofalex.com; and must be received by 5:00 PM CDT, Wednesday, March 04, 2020.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

GENERAL CONDITIONS FOR BIDDERS - PLEASE READ CAREFULLY

1. Pursuant to LA R.S 38:2212.1. C.(1)(2), any manufacturer's preference in this proposal is descriptive, but non-restrictive, and is used only to indicate minimum requirement for type, grade and quality unless otherwise specified.
2. Pursuant to LA R.S. 38:2212 B.(1), the provisions and requirement of this bid shall not be considered as informalities and shall not be waived by the City of Alexandria. Therefore, conditions and specifications on this bid form shall be strictly enforced and any and all alterations, deviations, and non-compliance to said conditions and specifications, either on the bid form or by separate attachment, shall be grounds for immediate disqualification.
3. Preference shall be given to bidders quoting F.O.B. Destination (the City of Alexandria using department), FREIGHT PREPAID, unless otherwise requested.
4. Each bidder shall submit his proposal on the proposal form furnished by the City of Alexandria Purchasing Department. The complete bid package must be returned as issued by the City with all pages intact and all specification response columns filled in. Incomplete columns or missing pages, to include addendum pages, shall result in the vendor's entire bid package being rejected.
5. Literature, brochures, and other related paperwork attached to the bid should be identified with the name of the bidder and bid item number.
6. In case of a mathematical discrepancy between unit price and extensions, the unit price shall prevail.
7. Pursuant to LA R.S. 38:2212 F., the bid specifications may contemplate a fixed escalation or de-escalation in accordance with the United States Bureau of Labor Statistic's Consumer Price Index or the Producer Price Index. Bids based on specifications which are subject to a recognized escalation index shall be legal and valid for any item of a public work, at the discretion of the City.
8. Pursuant to LA R.S. 38:2212.1. F., any public procurement unit may participate in a cooperative purchasing agreement with the City of Alexandria to acquire quantities of the above listed items under a contract with the City of Alexandria for items awarded by public bid, pursuant to the cooperative purchasing provisions of Part VII of Chapter 17 of Subtitle III of Title 39 of the Louisiana Revised Statutes of 1950, R.S. 39:1701 et seq.
9. The City of Alexandria reserves the right to award by item or by total bid, unless otherwise specified in the bid specifications. (Price(s) should be itemized.)
10. All erasures or corrections on the bid form must be initialed and the City of Alexandria may rely on the apparent authority represented by the initials.
11. The City of Alexandria reserves the right to reject for cause any and all bids or parts of bids, or accept bids most beneficial to the City.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

General Conditions for Bidders - Please Read Carefully (Continued)

12. Any bid submitted which contains additions, conditional or alternate bids, or irregularities which may make the proposal incomplete, indefinite, or ambiguous as to its meaning, thus requiring clarification after the specified date and time of bid opening shall be rejected.
13. Bids shall be opened publicly in the City Council Chambers or Council Committee Room.
14. Cash discounts may be accepted, but SHALL NOT be considered in making award.
15. Regarding a bid for purchase of materials, supplies or services, not to include construction of any public works, a written notice of acceptance mailed or otherwise furnished to the successful bidder shall result in a binding contract without further action by either party.
16. When any bid is accepted for the construction or doing of any public works, a written contract shall be executed by and between the City of Alexandria and the Contractor. No contract shall be binding upon the City until it has been executed by the City and delivered to the successful bidder. Should the bidder to whom the contract is awarded fail to execute the contract, the award shall then be made to the next lowest responsible bidder, or re-advertised for public bid, said decision to be in the sole judgment of the City of Alexandria. This action may result in the loss of bidding privileges for a period of one (1) year.
17. The City of Alexandria shall schedule for payment the invoices for articles or services purchased under this bid within thirty (30) days after due and proper delivery accompanied by invoice.
18. The City of Alexandria is exempt from all sales taxes. A sales tax exempt form shall be furnished by the City of Alexandria Purchasing Department, if requested.
19. Bidder(s) awarded item(s) by the City of Alexandria shall be responsible for supplying all products at the awarded price(s). Failure may result in the City's cancellation of the remaining items awarded.
20. Regarding Service Contracts and Procurement Contracts, the terms of the contract shall be binding upon any and all parties involved until goods and supplies are delivered, services have been rendered, and/or work has been completed and accepted by the Mayor on behalf of the City of Alexandria and all payments required to be made to the Contractor have been made. However, a contract may be terminated under any and all of the following conditions:
 - (a) By mutual agreement and consent of either party upon thirty (30) days written notice to the other party;
 - (b) By the Mayor, on behalf of the City of Alexandria, as a consequence of the failure of the Contractor to comply with the terms and conditions of the contract or the progress or quality of work to be performed in a satisfactory manner, proper allowance being made for circumstances beyond the control of the Contractor; or
 - (c) By satisfactory completion of all services and obligations described in the contract.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

General Conditions for Bidders - Please Read Carefully (Continued)

If the contract is terminated for any of the terms and conditions authorized in sub-paragraph (b) above, Contractor shall be formally notified in writing by the City of Alexandria Purchasing Department by means of certified mail informing him of cancellation of the contract, giving specific reasons for said cancellation. Contractor shall have the right to appeal to the City Council within ten (10) days from the date that said notification is placed in the U.S. Mail. Contractor's appeal shall be accomplished by means of a letter addressed to the City Council and delivered to the City Clerk, stating that an appeal to the decision of cancellation is desired. The City Council shall thereafter hold a hearing on the appeal, giving all parties the opportunity to present any and all evidence concerning the decision of cancellation. After hearing the appeal, the city Council may, by a majority vote, sustain, modify, or reverse the findings for said decision and shall provide, if requested by Contractor, a written determination of its findings.

21. Contractors submitting bids for Public Works construction projects in excess of \$1.00 must show his Contractor's License Number on the front of the bid envelope, except for certain projects for which a Contractor's License Number is not required by the State Contractor's Licensing Board. Failure to comply with this directive shall result in automatic bid rejection, furthermore, any Contractor who submits a bid for a type of construction for which he is not properly licensed shall be acting in violation of LA R.S. 37:2163, and shall be subject to all provisions for violation and penalties thereof. Contractors who are owned by, and are submitting a bid as a subsidiary of a parent company, whose name is listed in the State of Louisiana's Roster of Licensed Contractors, may do so by including a letter of proof of ownership from the parent company with the submitted bid package. The letter must be signed as per LA R.S. 38:2212 B.(5)(a)(b)(c) (see Item #22 below).

22. All bids submitted via USPS (registered or certified), overnight courier or hand delivered, shall be signed by hand and in ink by an authorized company representative per LA R.S. 38:2212 B.(5)(a)(b)(c), which states:

(c)(i) Evidence of agency, corporate, or partnership authority shall be required for submission of a bid to the division of administration or the State of Louisiana. The authority of the signature of the person submitting the bid shall be deemed sufficient and acceptable if any of the following conditions are met:

(aa) The signature on the bid is that of any corporate officer listed on the most current annual report on file with the Secretary of State, or the signature on the bid is that of any member of a partnership or partnership in commendam listed in the most current partnership records on file with the Secretary of State.

(bb) The signature on the bid is that of an authorized representative of the corporation, partnership, or other legal entity and the bid is accompanied by a corporate resolution, certification as to the corporate principle, or other documents indicating authority which are acceptable to the public entity.

(cc) The corporation, partnership, or other legal entity has filed in the appropriate records of the Secretary of State in which the public entity is located, an affidavit, resolution, or other acknowledged or authentic document indicating the names of all parties authorized to submit bids for public contracts. Such document on file with the Secretary of State shall remain in effect and shall be binding upon the principal until specifically rescinded and canceled from the records of the office.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

General Conditions for Bidders - Please Read Carefully (Continued)

23. In-State preferences shall not apply to procurements involving federal funds.
24. Pursuant to LA R.S. 38:2212 O.(2)(a)(b), any modifications of plans and specifications will be made through an addendum. No addendum shall be issued within seventy-two (72) hours of the bid opening, excluding weekends and legal holidays, without the extension of the bid opening date. An extension of at least seven (7) but no more than thirty (30) working days is required but, re-advertising is not required. The addendum shall be transmitted by any one of the following methods: (1) facsimile transmission; (2) e-mail; (3) by hand; or (4) posted on the City of Alexandria's website (www.cityofalexandria.com) and posted on Central Bidding's website (www.centralauctionhouse.com) if applicable.
25. All Federal Transit Administration (FTA) funded procurements, including operating assistance funding contracts, are to follow the Master Agreement, to include all applicable federal clauses.
- a. Any bidder that is found listed on the Federal Government's *System for Award Management* (SAM) website, at www.sam.gov/portal/sam, under the advanced search feature for *Excluded Parties List System* (EPLS), shall automatically be rejected for the award of this bid, by Category and/or in its entirety. This applies to any portion of the bid that is a procurement funded by FTA.
26. Under the City's *AFEAT (Alexandria Fairness, Equality, Accessibility, and Teamwork Program)*, participation by minority and/or disadvantaged business enterprise firms is encouraged. Inquiries about the *AFEAT* Program should be directed to the Division of Finance. As a part of its RFP response, each Bidder ***shall*** submit documentation of its bona fide effort to secure subcontractors that meet the City's *AFEAT* goals. Each bidder ***shall*** also submit proof of engagement of any subcontractor selected because of its solicitations. The Bidder's bona fide efforts and engagement(s) are a consideration in bid review and rating.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Alexandria Fairness, Equality, Accessibility and Teamwork Program (AFEAT)

Dear Vendor:

Under the City's *AFEAT (Alexandria Fairness, Equality, Accessibility, and Teamwork Program)*, participation by minority and/or disadvantaged business enterprise firms is encouraged. The AFEAT Program should be inquired about through the Division of Finance. The goals for qualifying disadvantaged, minority and female owned business in the use of professional service agreements with prime contractors will help effectuate the goals of increasing: the competitive viability of small business, minority, and women business enterprise by providing contract, technical, educational, and management assistance; business ownership by small business persons, minority persons, and women (including professional service opportunities); and the procurement by the City of professional services, articles, equipment, supplies, and materials from business concerns owned by small business concerns, minority persons, and women.

Prime contractors offering subcontracting should take specific action to ensure that a bona fide effort is made to achieve maximum results towards meeting the established goals. Primes shall document efforts and shall implement steps at least as extensive as the following in a good faith effort to reach or exceed the established goals:

- A. *Establish and maintain a current list of minority and female owned businesses in Alexandria, in Rapides Parish, and in the State of Louisiana.*
- B. *Document and maintain a record of all solicitations of offers for subcontracts from minority or female construction contractor and suppliers in Alexandria, in Rapides Parish, and in the State of Louisiana.*
- C. *Secure listing of minority and women owned businesses from the City of Alexandria Purchasing Department, the Central Louisiana Business Incubator, and the State of Louisiana Department of Minority Affairs.*
- D. *Participate in associations which assist in promoting minority and women owned businesses such as the Central Louisiana Business League, the Central Louisiana Business Incubator, and the Entrepreneurial League System.*
- E. *Designate a responsible official to monitor all activity made in the effort to achieve or exceed the established goals; record contacts made, subcontracts entered into with dollar amounts, and other relevant information.*

For more information on AFEAT and the City of Alexandria's Diversity in Action Initiative, and to explore a local and statewide directory of minority businesses, please visit www.diversityinaction.org . Should you have any questions or comments, please do not hesitate to contact our Finance Department at 318-449-5091 or our Purchasing Department at 318-441-6180.

As a part of its RFP response, each Bidder ***shall*** submit documentation of its bona fide effort to secure subcontractors that meet the City's AFEAT goals. Each bidder ***shall*** also submit proof of engagement of any subcontractor selected because of its solicitations. The Bidder's bona fide efforts and engagement(s) are a consideration in bid review and rating.

Sincerely,

City of Alexandria

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

BID SPECIFICATIONS

SCOPE: The following bid specifications are to be used as minimum and maximum standards for **Chlorination & Dechlorination Equipment**, for use by The City of Alexandria Water and Wastewater Department.. All quoted products shall either meet or exceed the following specifications.

Unless otherwise stated, the use of manufacturer's name and product numbers are for descriptive purposes and to establish general quality levels only, they are not intended to be restrictive.

Prospective bidders are required to state exactly what they intend to furnish, otherwise, it is fully understood that they shall furnish all items as stated. Bidder should indicate in the space provided below, under "*Bidder's Response*:", the necessary information to indicate he/she is conforming with the bid specifications for each item as written. If Bidder is in complete compliance with each bid specification item as written, please write "Comply" in the space provided; if not, please indicate in this space, the necessary information on the product you are proposing. Each specification response is necessary to ensure the proper evaluation and tabulation of this bid. If each "*Bidder's Response*" section is not filled in or completed, your bid may be rejected.

=====

Bidder's Response:

1.0 General:

1.1 No bid may be withdrawn for at least thirty (30) days after the scheduled closing time for the receipt of bids. Quoted prices shall remain firm until product(s) have been accepted by the City of Alexandria as delivered.

1.2 Products shall be new and unused, and of current model year manufacture.

1.3 Where applicable, quotes for "optional" equipment shall be listed in the appropriate spaces provided on the bid specifications "Price Page". Option quotes shall not be a basis for bid award and shall not be included in the total bid price.

1.4 One copy of the Parts Manual, Service Manual, and Operator's Manual for all products listed in these bid specifications, shall be furnished by the successful bidder at the time of delivery. CD versions of manual(s) are acceptable.

1.5 **All products shall be delivered F.O.B., freight pre-paid,**
City of Alexandria Water or Wastewater Department,
Attention: James Graham, 1212 Hudson Blvd,
Alexandria, LA 71302.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

1.0 General: (Continued)

Bidder's Response:

1.6 Each bidder is requested to furnish, attached to the bid, complete descriptive literature on product(s) being bid. Any item(s) appearing in the manufacturer's regularly published specifications as "standard" equipment are assumed to be included in the bidder's proposal.

1.7 Each respective bidder shall be responsible for insuring that his/her product meets or exceeds specifications as described herein.

2.0 Product Warranty:

2.1 Successful bidder should furnish complete warranty information for product(s) being bid, to include all sub-contracted components installed by vendor as well as vendor warranted components.

2.2 Warranty should be for a period of one (1) year, minimum.

3.0 Dechlorination Equipment:

3.1 Vacuum Regulator w/Meter Assembly Gas Feed System for a 1 Ton cylinder - Shall be DeNora Series NXT3000 or equal.

3.1.1 Vacuum Regulators w/Meter assembly Gas Feed Systems shall be provided.

3.1.2 The gas feed system shall be a vacuum-operated, solution feed type or equal with a feed range of up to 500 lb/d of SO₂ gas or CL₂.

3.1.3 The vacuum regulator shall be suitable for ton container mounting.

3.1.4 Unit shall include an integrally mounted manifold trap with built in electric heater with a minimum of ten (10) foot cord.

3.1.5 Unit shall be powered by 120 VAC, 60 Hz.

3.1.6 Manifold shall have a five (5) square inch, removable filter with a minimum of 90 micron pore size or equal design.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

3.1.7 Unit shall have a positive tight shut-off valve with Hastelloy® C Body for corrosion resistance to isolate gas under pressure in case of loss of vacuum or equal design.

3.1.8 There shall be a removable fiberglass filter upstream of the inlet valve.

3.1.9 A spring loaded pressure relief valve shall be provided to prevent build up of pressure within the control system.

3.1.10 Unit shall have an excess vacuum shut off valve as part of the vacuum system to isolate regulator from meter and ejector on loss of gas supply pressure or equal design.

3.1.11 Unit shall have automatic changeover within the vacuum regulator without an external valve or equal design.

3.1.12 Unit shall have a visual indicator when the chlorine gas supply is interrupted or exhausted; minimum.

3.1.13 Unit shall have a meter assembly with a 20.1 range to indicate gas feed rate, minimum.

3.1.14 Meter shall have direct reading in English and metric units and be calibrated for the gas being fed.

3.1.15 Meter shall be able for wall mounting and/or mounting on the vacuum regulator.

3.1.16 Meter shall have a protective plastic shield.

3.1.17 Unit shall have a manual rate valve for manual control.

3.1.18 Unit shall be manufactured in a certified facility to meet ISO9001 International Standards.

3.1.19 The vacuum regulator shall have connections for 5/8 inch tubing and adaptor kits for use of reduced tubing size as needed.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

3.1.20 The following accessories shall be included: 1- bottle for solution, 1-spare filter pad, 1-spare lead gasket, 1-universal wrench, 1-insect screen, instruction manual, 1-meter assembly mounting accessories, and parts list, minimum.

3.1.21 To be mounted on a 1 ton cylinder.

3.2 Vacuum Regulator w/Meter Assembly Gas Feed System for a 150 pound cylinder - Shall be DeNora Series NXT3000 or equal.

3.2.1 Vacuum Regulators w/Meter assembly Gas Feed Systems shall be provided.

3.2.2 The gas feed system shall be a vacuum-operated, solution feed type or equal with a feed range of up to 500 lb/d of SO₂ gas or CL₂.

3.2.3 The vacuum regulator shall be suitable for ton container mounting.

3.2.4 Unit shall include an integrally mounted manifold trap with built in electric heater with a minimum of ten (10) foot cord.

3.2.5 Unit shall be powered by 120 VAC, 60 Hz.

3.2.6 Manifold shall have a five (5) square inch, removable filter with a minimum of 90 micron pore size or equal design.

3.2.7 Unit shall have a positive tight shut-off valve with Hastelloy® C Body for corrosion resistance to isolate gas under pressure in case of loss of vacuum or equal design.

3.2.8 There shall be a removable fiberglass filter upstream of the inlet valve.

3.2.9 A spring loaded pressure relief valve shall be provided to prevent build up of pressure within the control system.

3.2.10 Unit shall have an excess vacuum shut off valve as part of the vacuum system to isolate regulator from meter and ejector on loss of gas supply pressure or equal design.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

3.2.11 Unit shall have automatic changeover within the vacuum regulator without an external valve or equal design.

3.2.12 Unit shall have a visual indicator when the chlorine gas supply is interrupted or exhausted; minimum.

3.2.13 Unit shall have a meter assembly with a 20.1 range to indicate gas feed rate, minimum.

3.2.14 Meter shall have direct reading in English and metric units and be calibrated for the gas being fed.

3.2.15 Meter shall be able for wall mounting and/or mounting on the vacuum regulator.

3.2.16 Meter shall have a protective plastic shield.

3.2.17 Unit shall have a manual rate valve for manual control.

3.2.18 Unit shall be manufactured in a certified facility to meet ISO9001 International Standards.

3.2.19 The vacuum regulator shall have connections for 5/8 inch tubing and adaptor kits for use of reduced tubing size as needed.

3.2.20 The following accessories shall be included: 1- bottle for solution, 1-spare filter pad, 1-spare lead gasket, 1-universal wrench, 1-insect screen, instruction manual, 1-meter assembly mounting accessories, and parts list, minimum.

3.2.21 To be mounted on a 150 pound cylinder.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

3.3 Gas Detectors – Shall be DeNora Model 1620B or equal.

3.3.1 Gas detector shall consist of a wall mounted receiver and one to eight remote sensors, minimum.

3.3.2 Unit shall have a range for chlorine and sulfur dioxide of 0-10 parts per million (ppm).

3.3.3 The receiver shall have a LED bar graph display with color coded sensor status, gas concentration and alarm set point. Additional LEDs shall provide for indication of set point alarm, power on and sensor ready and sensor malfunction. The receiver shall be housed in a NEMA 4X enclosure.

3.3.4 The sensor shall be an electrochemical type requiring no chemical addition with a response time of 30 seconds maximum for 80% of full range at 20 degrees C.

3.3.5 The sensor shall be wall mountable and housed in a NEMA 4X enclosure.

3.3.6 The alarm and malfunction contacts shall be SPDT rated at 10 amps at 240 Vac or 28 Vdc maximum resistive or inductive load. The alarm and malfunction contacts shall be field configurable for manual reset or automatic reset, minimum.

3.3.7 The gas detector shall operate from a 120 Vac, 60 Hz, 1 phase power supply.

3.3.8 The receiver and sensor electronics shall have protection against radio frequency/electromagnetic interference.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

3.4 Gas Feeders/Wall Panel with vacuum switches – Shall be DeNora Model 3000WP or equal.

3.4.1 The gas feeder shall automatically regulate chlorine gas feed rates in response to flow and/or residual input signals. The panel shall contain an automatic gas control valve with integral controller, gas flowmeter, vacuum gauge and optional high and low vacuum switches. The wall panel shall have a maximum capacity of chlorine gas feed rates in response to flow and residual input signals. The wall panel shall have a maximum capacity of 3000 lb/day/60 kg/h and operate under sonic flow or equal.

3.4.2 The flowmeter shall indicate the gas flow and shall have a maximum indicated capacity of 1000 lb/day. The entire panel shall operate under vacuum from the gas inlet connection to the gas outlet connection or equal.

3.4.3 The gas flow control valve shall be stepping motor operated with the motor and electronic components mounted in a NEMA 4X enclosure. The valve shall be integrated with a microprocessor based controller to control chemical feed or equal.

3.4.4 The compound loop control feature shall have the capability of automatic variable lag time adjustment, minimum.

3.4.5 The unit shall feature: built in multiplier, automatic transfer, bumpless transfer between manual and automatic, digital vacuum display, alarm indicator, control switch inputs and 4-20 mAdc flow transmitter output signal, minimum.

3.4.6 The unit shall have a valve that insures a true gas flow retransmission signal to remove monitoring instruments such as a recorder or SCADA system without the need for limited range auxiliary differential pressure metering devices.

3.4.7 The valve shall accept three (3) inputs. Inputs shall be field selectable.

3.4.8 The valve display shall display operational parameters as well as alarm conditions.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

3.4.9 The valve shall be powered by 100-250 Vac, 47-66 Hz and be auto ranging.

3.4.10 The valve shall be equipped with a manual control knob in case of power failure.

3.4.11 The valve shall be able to feed chlorine, sulfur dioxide, ammonia or carbon dioxide gases.

3.4.12 The vacuum switches shall be wired to the automatic control valve and have auxiliary contacts available for remote status indication.

3.4.13 The vacuum switches shall monitor the vacuum levels from the vacuum source and the vacuum level between the panel and the vacuum regulator.

3.4.14 All components shall be pre-wired and pre-piped using materials suitable for gas service.

3.4.15 The vacuum inlet and vacuum outlet shall be 5/8 inch tubing for 500 lb/day and below, and 1 inch NPT for above 500 lb/day.

3.5 Water Quality Monitors, Residual Analyzer Instrument – Shall Be DeNora MicroChem 3 870 or equal.

3.5.1 Quantity of two (2) Water Quality Monitors, Residual Analyzer Instruments shall be provided.

3.5.2 The Instrument shall be capable of accepting signals from up to three (3) separate sensors or measure cells representing a wide variety of measurements. The instrument shall be software configurable as either a transmitter to analyze and retransmit measurements or as a controller to measure and provide PID signal to control a process or equal design.

3.5.3 Each sensor channel card shall have two (2) software assignable signal outputs to retransmit measured value, sample temperature or provide a control output signal, minimum.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

3.5.4 The instrument shall be color, with touch screen and LED backlighting. Backlight shall be software configurable. User controls shall be provided through the touch screen display or equal design.

3.5.5 Instrument should have an internal data logger with the capability to store data for 28 days, minimum.

3.5.6 Instrument shall have a USB memory media interface allowing down load for data logger files and upload of software updates.

3.5.7 The instrument shall have the capability to down load and upload instrument user configurations to external USB memory media.

3.5.8 The instrument shall be capable of RS232/RS422/RS485 Serial communication interconnection for Modbus protocol with a full modem RS232 interface.

3.5.9 Instrument shall have the capability of being powered by AC or DC power sources.

3.5.10 The instrument shall have up to eight (8) alarm relay outlets rated at 8A, 230 Vac and be available, and up to eight (8) digital inputs and be available. Both outlets can be individually set as NO or NC via software.

3.5.11 The instrument shall operate in temperatures from -10°C to 60°C (14°F to 140°F), minimum.

3.5.12 The instrument enclosure shall be rated at IP65 and NEMA 4X.

3.5.13 The alarm alert indication shall be available on the main display and describes alarm type for ease of monitoring.

3.5.14 The instrument shall have alarm set points and configurations that can be freely changed via software or equal design.

3.5.15 The instrument shall have on screen diagnostic capabilities.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

3.6 Water Quality Monitors, Residual Analyzer Measure Cell- Shall be DeNora MicroChem 3 -870 or equal.

3.6.1 Quantity of two (2) Water Quality Monitors, Residual Analyzer Measure Cell shall be provided.

3.6.2 The measure cell shall continuously analyze a sample using the amperometric method and produce a current proportional to the chlorine residual in the sample. The cell shall measure over the range 0-20 mg/l of free or total chlorine in water dependent on the reagents utilized with an accuracy of $\pm 1\%$ of range.

3.6.3 The measure cell electrodes shall be self cleaning.

3.6.4 The reagents shall be gravity fed into the cell without the need for an external reagent pump.

3.6.5 The measure cell shall incorporate a motor driven agitator to both mix the sample and provide cleaning action to the electrodes or equal design.

3.6.5 Sample flow should be minimum of 9 liters/hour.

3.6.6 A pressure regulator shall be supplied on the measure panel allowing connection to sample supplies up to 150 psi.

3.6.7 The measure cell shall be provided with a minimum of 15 feet of sample tubing at 1/4" O.D. and 10 feet of drain tubing at 1/2" I.D.

3.6.8 The measure cell shall include the following accessories:
1. Carbon filter for calibration.
2. Sample flow switch to detect loss of sample flow.
3. Flushing "Y" strainer to screen out debris.
4. A five (5) week supply of pre-mixed acetic acid buffer solution.
5. A four (4) week supply of Potassium Iodide.
6. Preventative maintenance kit.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

3.8 Fiberglass Refrigerated Sampler – Shall be Teledyne Isco 6712FR Part # 68-6710-072 or equal.

3.8.1 Sampler shall be of the enclosed, refrigerated type containing a pump, controller, polyethylene container, and associated tubing and wiring. A corrosion-resistant fiberglass body and temperature control system shall allow the refrigerated sampler to be used outdoors without an enclosure in ambient temperatures from -20°F to 120°F. Provide calibrated control to select a storage temperature of 32°F to 46°F. Provide forced air condensing coil and front ventilation.

3.8.2 The refrigerated sampler shall be equally suited for sequential and composite sampling applications. In sequential applications, the sampler shall be capable of collecting discrete samples in 24-, 8-, or 2-sample bottles. The 8- or 24-bottle versions shall hold the bottles in a nylon-coated slide-in rack. For composite applications, the sampler shall be capable of being converted to use a single 2-1/2-gallon glass or polyethylene container. Glass sample bottles shall have Teflon-lined screw caps. Plastic sample bottles shall have polyethylene lined screw caps.

3.8.3 The refrigerator shall include electronic sensing devices for measuring ambient air temperature, evaporator plate temperature, and interior air temperature. Built-in temperature control circuitry shall utilize these sensors to control the operation of the compressor and built-in heaters. The built-in heaters shall prevent the sample from freezing if the ambient air temperature drops below freezing. The unit shall be self-defrosting and shall use a forced-air condensing coil with filtered frontal ventilation. Provide a compressor with a minimum rating of 1/6 hp. The refrigerator shall have a five-minute (maximum) recovery time to return to 39°F after the door has been opened for one minute with the unit operating at 39°F (4°C).

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

3.8.4 The exterior and base of the refrigerator of FRP shall have a UV-resistant gel coat. The interior of the refrigerator shall be food grade ABS plastic. Provide copper refrigeration lines protected with polyester tubing and phenolic resin. Coat the condenser coil with UV resistant polyurethane. The refrigerator evaporator plate shall be aluminum and coated with a food grade epoxy. The refrigerator shall include 1 1/2 inches of rigid foamed-in-place insulation on the sides. The top insulation shall consist of 3 inches of rigid insulation. Insulation shall not sustain bacterial growth or retain odors. The refrigerator shall have a hinged reinforced fiberglass controller cover, which is capable of being locked.

3.8.5 The temperature control knob shall be located under the controller cover. The refrigerator's door shall also have hasps capable of accepting a padlock. Provide a magnetic gasket to seal the refrigerator door. The refrigerator power supply and solid-state thermostat shall be contained in a sealed, NEMA 4, aluminum or stainless steel enclosure inside the refrigerator base. All other exposed metal components shall be anodized aluminum, stainless steel, or galvanized steel.

3.8.6 For multiple bottle sampling, the sample distribution system shall use a mechanism to lock the distributor arm above each bottle position. The distributor arm shall be made of polypropylene. The distribution drive assembly shall be included in a sealed NEMA 4X controller to prevent exposure of the electromechanical components.

3.8.7 Samples shall be collected using a peristaltic pump. The body of the peristaltic pump shall be made of plastic. The pump shall be capable of producing 26 feet of lift. A resettable indicator shall count and indicate the pump revolutions. Before and after each sample is collected, the pump shall air purge the suction line. Prepurges and postpurges shall be automatically controlled, and no precalibration adjustments shall be required. The sample stream shall not pass through any valves or metering chambers or through any distribution tubing unless under pumped flow.

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

- 3.8.8 The sampler shall utilize a nonwetted, nonconductive detector to sense the presence of the liquid at the inlet to the pump. The sensor shall not be dependent on or affected by any compositional, chemical, or physical property of the liquid, including high or low conductivity of the sample. The liquid detector shall require no routine maintenance or cleaning to allow the detector or sampler to operate. The liquid detector shall eliminate entering the head height in programming and shall minimize the effects of changing head, intermittent flow in the suction line, or variable battery conditions on sample volume. Once the liquid has been detected at the pump inlet, the sampler shall deliver repeatable and accurate sample volumes regardless of battery condition by counting the revolutions of the peristaltic pump.
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- 3.8.9 The sampling program shall be established using a sealed keypad and a liquid crystal display. The display shall continuously communicate the sampler's status. The sampler shall have software capable of storing up to three sampling routines identified by number. The sampler shall contain an internal battery, which provides the sampler with continuous memory. The battery shall have a minimum life of five years and shall maintain the sampler's program settings and any stored programs when the sampler is turned off or in the event of a power interruption.
-
- 3.8.10 The system shall allow the user to program the sampler to collect either sequential or composite samples at user definable time intervals (time pacing) or at equal flow volume intervals based on flow pulse inputs from an external flowmeter (flow pacing). The flow intervals shall be selectable from 1 to 9,999 flow pulses. The sampler shall use an internal real-time clock to provide both time and date information. It shall also offer two types of time pacing: uniform and Non-uniform. Uniform time paced samples shall be collected at regular time intervals from 1 minute to 99 hours and 59 minutes. Non-uniform time intervals from 1 to 999 minutes between samples or, based on real-time settings, shall be capable of being programmed. Non-uniform time shall be common to both sequential and composite sampling routines. A delay to first sample shall be programmable in minutes from 0 to 9,999 or by the real-time clock. The sampler shall

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

Bid Specifications (Continued)

Bidder's Response:

3.0 Dechlorination Equipment: continued

have the ability to be programmed for up to 24 real-time sampling stop/resume times to allow unattended sampling of shift related discharges. A software program lock shall be provided to prevent unauthorized tampering or accidental changing of the sampler control settings.

3.8.11 The sampler program shall allow the user to select from three types of multiplexing: samples per bottle, bottles per sample, and multiple bottle compositing (a combination of samples per bottle and bottles per sample). Multiple bottle compositing shall allow the user to place many samples in a single bottle while simultaneously creating a duplicate bottle or set of bottles. The sampler shall switch bottles after a period of time has elapsed or a predetermined number of samples have been collected. The controller shall be programmable for up to three sample collection retries if liquid is not detected due to suction line plugging or absence of liquid. Up to three suction line rinse cycles shall be programmable to precondition the suction line before each sample to prevent contamination from the previous sample.

3.8.12 The sampler shall be capable of collecting samples proportional to flow. Flow signal shall be a 4- to 20-mA d-c current signal from an external source. Provide interface device, if necessary, for each sampler to convert this signal to the signal used by the sampler. Interface enclosure shall be NEMA 4. Power source for the interface device shall be the associated sampler.

3.8.13 Power supply shall be 120-volt ac, 60 hertz.

3.8.14 Two (2) 2.0-gallon polyethylene bottles shall be provided with the sampler.

3.8.15 One (1) weighted polypropylene strainer with a debris deflector to prevent clogging shall be provided with sampler.

3.8.16 The sampler shall require a suction line that is made of 3/8- inch I.D. vinyl with a length of 10 feet, minimum.

END OF BID SPECIFICATIONS

**CITY OF ALEXANDRIA BID SPECIFICATIONS FOR:
CHLORINATION & DECHLORINATION EQUIPMENT**

PRICE PAGE

Bid price for **Chlorination & Dechlorination Equipment**, new and unused, complete unit ready for use, to include: vacuum regulator with meter assembly, gas detectors, water quality monitors, actuator and refrigerated sampler; delivered F.O.B., freight pre-paid, as per these bid specifications:

1. **Vacuum Regulator with Meter Assembly for a 1 Ton Cylinder:**
 Price per each \$ _____
 Manufacturer's Brand Name: _____ Model No.: _____

2. **Vacuum Regulator with Meter Assembly for a 150 pound Cylinder:**
 Price per each \$ _____
 Manufacturer's Brand Name: _____ Model No.: _____

3. **Gas Detectors :** Price per each \$ _____
 Manufacturer's Brand Name: _____ Model No.: _____

4. **Water Quality Monitors :** Price per each \$ _____
 Manufacturer's Brand Name: _____ Model No.: _____

5. **Remote Close Actuator , Remote Pushbutton and Control Panel :**
 Price per each \$ _____
 Manufacturer's Brand Name: _____ Model No.: _____

6. **Refrigerated Sampler :** Price per each \$ _____
 Manufacturer's Brand Name: _____ Model No.: _____

Estimated time of delivery after receipt of purchase order: _____

=====

Bidder Information:

Company Name: _____

Address: _____

City/State/Zip: _____

Telephone #: (_____) _____ Fax #: (_____) _____

Email: _____

Authorized Printed Name and Title: _____

Authorized Signature: _____