

**CITY OF BARTLESVILLE, OKLAHOMA
BID SPECIFICATIONS FOR
WATER TREATMENT CHEMICALS
BID # 2024-2025-002**

I. GENERAL

A. Contract

1. The price quoted shall be good from the date of award of the bid through **July 1, 2025**. Exceptions for this price certain period are below.
 - Sodium Hydroxide – pricing will be for 90 days from the date of award, with an option for a 90-day renewal upon mutual agreement of both the City and vendor. This option shall be available for up to 3 renewals.
 - Chlorine Gas – pricing will be for 180 days from the date of award, with an option for a 180-day renewal upon mutual agreement of both the City and vendor.
2. The City reserves the right to accept or reject any or all bids or portions thereof.
3. If any products and/or product containers delivered have special tracking, manifesting, monitoring, or disposal requirements, a statement listing the requirements will be included with the bid in addition to Safety Data Sheets (SDS) for the materials. All containers so delivered will be returnable. The supplier will complete all tracking and disposal of such vessels.
4. Documentation of such work shall be provided to the City when requested.
5. Technical bulletins, typical sample analysis and other applicable information shall be submitted for the product bid to allow evaluation.

B. Delivery

1. The quantities listed on the bid form are annual estimates. **The actual quantities purchased may vary.**
2. Delivery will be as needed upon request and as specified. Unless otherwise specified, delivery will be within five (5) working days of order. Confirmation of a delivery date must be provided within 24 hours of order.
3. **The price bid will be F.O.B. Bartlesville, Oklahoma**, at the location specified. The bid price shown will be the full charge, including all applicable taxes, **surcharges**, and other incidental fees.
4. Bills of lading will have a weight ticket attached with each shipment.
5. Delivery will be to the Water Treatment Plant with the exception of **Potassium Permanganate, which will be delivered by box truck with lift gate to the**

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Hudson Lake Raw Water Chemical Feed Station during the hours of **7:00 a.m. until 2:00 p.m. Monday through Friday**, excluding holidays, unless otherwise approved. No charges will be allowed for wait time.

6. All manifests, safety signs, and other documentation will be the full responsibility of the supplier during shipment, loading, and unloading.
 7. Any spills and required cleanup activities during delivery and unloading will be the responsibility of the supplier.
- C. **Safety Data Sheets** Safety Data Sheets (SDS) will be furnished on all chemicals with the bid and with delivery.
- D. **Quality Assurance**
1. The material bid will conform to the applicable standards established by the AWWA, FDA, NSF, UL, and EPA for use in potable water.
 2. The Oklahoma Department of Environmental Quality (ODEQ) will authorize all material for use in potable water.
 3. Maximum allowable impurity levels will meet those permitted by NSF; Standard No. 60 for regulated and unregulated materials.
 4. The supplier, when requested by the owner, will provide one complete set of independent test data to verify each product fully complies with all specifications and a certification of conformance.

II. MATERIALS

A. **Chlorine Gas**

1. Chlorine gas will be delivered in one-ton cylinders as shown on the bid form. Each delivery will be approximately 4 tons. **THE TYPE OF TRUCK FOR THE CYLINDER DELIVERY SHALL BE A CONSIDERATION IN THE AWARD OF THE BID AND IS REQUIRED ON THE BID FORM.**
2. The product will conform to AWWA Spec. B-301.
3. The bid will state cylinder deposit amount, demurrage charges, and conditions for return, if any.
4. Supplier will provide all fittings, washers, and accessories required to connect cylinders to existing piping.

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B. Hydrofluorosilicic Acid

1. Material will be liquid, clean and free of visible suspended matter; it shall be water white to straw yellow, contain between 20 and 30 percent fluorosilicic acid and conform to AWWA Spec. B-703.
2. The fluorosilicic acid supplied shall contain no mineral or organic substances in quantities capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with fluorosilicic acid.
3. Delivery:
 - a. Material will be delivered in Bulk Shipments.
 - b. Delivery will be made as requested by the City. The size of a shipment will be approximately 4,000 gal.
 - c. Certified Material Analysis will be supplied when requested by the Owner, and a Manufacturer's Affidavit will be provided with each shipment.

C. Potassium Permanganate

1. Material must be of the free-flowing grade of dry Potassium Permanganate of US origin and is to be shipped in full-open-head drums.
2. Material supplied has a bulk density of 90-100 lb/ft.³, with a KMNO₄ content of no less than 97 percent.
3. Delivery:
 - a. **Orders are anticipated to be approximately 4,000 lbs. Delivery will be in 55 lb. pails and delivered to the Hudson Lake Raw Water Station. Truck must have lift gate and be small enough to maneuver within the delivery area. This area will not accommodate a Tractor-Trailer truck.**
 - b. **The City reserves the right to increase or decrease delivery rates in order to conform to changes in treatment requirements.**
4. Material must conform to AWWA specification B-603, with purity sufficient for use in potable water treatment; no more than 7 percent by weight of the material shall pass through a US Standard Sieve Series No. 75 sieve, and no more than 20 percent by weight may be retained on a US Standard Sieve Series No. 425 sieve. Provide documentation of compliance with AWWA and NSF listing with bid.
5. Acceptable Manufacturers: Carus or Owner Approved Equal of US origin.

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D. Coagulation

1. General

Material will be liquid, clean and free of visible foreign matter and sediment, color shall be clear to slightly hazy, contain a typical analysis of 23 % Al₂O₃ and a basicity of 83 % and conform to AWWA Spec. B-400.

- a. Delivery will be in bulk, full truck loads, approximately 4,000 gallons and will be delivered within 2 to 5 calendar days after order has been placed.
- b. Each delivery will include a certified quality analysis which includes the percentage of active aluminum and the specific gravity.
- c. Manufacturer of product shall be listed on bid.
- d. After evaluation, bids shall be ranked from most efficient, least expensive to least efficient, most expensive. Information generated during jar tests will be used to determine the effectiveness of the product bid. **The ranking shall be utilized when ordering coagulation chemicals to meet the changing needs of the City of Bartlesville. If the highest ranked product becomes ineffective, the City will proceed to the next highest ranked product.**

2. Coagulant Aid

- a. The product is a medium molecular weight; 20% polyacrylamide based flocculent which exhibits a low degree of anionic charge. It is a very pure product which has been specifically designed to meet the American Standard ANSI/NSF 60 and has been certified by NSF International for use in the treatment of potable water at a maximum recommended concentration of 1 mg/L.
- b. The material shall be off-white, free-flowing powder and once hydrated in water, reacts readily to provide superior floc formation and performance in a variety of solids/liquid separation processes. The solution pH of the product shall be in the range of 6.0-8.0.
- c. Delivery: Material will be delivered in 1,000 lb. super sacks.
- d. Delivery will be made as requested by the City. The size of a shipment will be approximately 2,000 lbs.

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- e. Certified Material Analysis will be supplied when requested by the Owner, and a Manufacturer's Affidavit will be provided with each shipment.
- f. Acceptable products are Magnafloc LT25, as manufactured by Ciba Chemical, or owner approved equal.

E. Drying Bed Polymer

- 1. Material will be liquid, clean and free of visible foreign matter and sediment.
- 2. Manufacturer of product shall be listed on bid.
- 3. Acceptable products are Praestol K110L TR flocculants or owner approved equal.
- 4. Delivery: Material will be delivered in 250 – 375 Gallon Totes.
- 5. Delivery will be made as requested by the City. The size of a shipment will be approximately 1,800 lbs. Supplier/vendor shall also pick up empty drums. City shall notify vendor when ordering of the number of empty drums that are needed for pick up.

F. Polyphosphates

- 1. The product will be a high-density liquid linear long chain type polyphosphate (minimum of eight phosphorus atoms per molecule), and food grade.
- 2. The product shall be formulated to limit pipe corrosion in iron and copper lines, prevent leaching of lead from lines and fixtures, and stabilize metals in water. The product must sequester iron and manganese.
- 3. The product must not increase distribution system chlorine demand and maintenance dosage levels. The product must not increase colony counts of bacteria in the distribution system. Documentation to substantiate this claim must be supplied upon request.
- 4. The product will be formulated to be effective in water with a pH of 7.3 to 8.3 at
- 5. A temperature between three (3) and 60-degree C. The material will be readily soluble at any temperature in the range of 50-100 degree F when mixed in a ratio of one part to four parts distilled water. The pH of a (1) one percent by weight solution of the product shall be in the range of 5.8-7.3.

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6. The product will be a blend of ortho and polyphosphate being a clear, colorless and odorless liquid. The product will be freeze/thaw stable and will remain in neat form for a minimum of two (2) years at temperature range of 30 to 100-degree F without disinfection.
7. Orthophosphate content of the product will be a minimum 18% by weight. Polyphosphate content of the product should be a maximum of 18% by weight. Phosphate content of the product should be a minimum of 36% by weight. **The product will not contain any sulfite, arsenic, zinc or other heavy metal stabilizers.**
8. **The product will be NFS certified Standard 60. Proof of such listing will be supplied with the submitted bid. The product must meet all standards for use in water supplies as per EPA, AWWA, and ODEQ regulations.**
9. The product must function as a corrosion inhibitor and not require reaction with calcium in low alkalinity water.
10. **Bidders will provide the following with the bid:**
 - a. NSF Standard 60 certification
 - b. Technical product bulletin
 - c. SDS sheet for product
 - d. List of three (3) references of customers using the product, with contact names.

**Failure to include the required documentation with the bid will disqualify
The bid submitted.**

11. Service and technical support will be provided to the City through the following measures:
 - a. The supplier will provide coupons and once a month send coupons for analysis and **provide results prior to the fifth day of the following month.**

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- b. Once per month during the first six (6) months, the supplier will provide containers and analyze eight (8) first drawn samples for lead and copper levels following the latest methods approved in Standard methods. Results of the analyzed samples will be provided to the City. When product use is initiated, after 30 days of use and at each 30-day intervals thereafter testing for conductivity, dissolved solids, pH, silica, Fe, Mn, Al, Ca, orthophosphate and total phosphate will be conducted by the supplier. Samples for this analysis will be taken at (8) eight remote locations.
 - c. Based on the above test results, observations of distribution system pipe coating, the quantity of customer complaints, and hydrant flushing results, the supplier will recommend any required adjustments to the corrosion control program in writing every 60 days.
12. The delivery of the product will be by manufacturer's truck or a certified food product carrier. Trucks delivering a bulk product will have the ability to pump the liquid to storage tanks through a two inch quick disconnect. **Each delivery shall be no more than 2,000 gallons maximum** or as mutually agreed upon between the supplier and owner.

F. Sodium Hydroxide

- 1. The delivery of the product will be in truckloads of liquid Sodium Hydroxide. **The bid shall be in liquid ton.**
- 2. Shipments shall contain 50-51% NaOH solution. A certified analysis shall accompany each shipment or the shipment will be rejected.
- 3. The product shall comply with all AWWA standard B501 specifications.
- 4. A copy of NSF certification is required with the submitted bid
- 5. Delivery shall be approximately 4000 gallons. Trucks delivering bulk product will have the ability to pump the liquid to storage tanks through a 2" quick disconnect.

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G. Aqueous Ammonia

1. The bid shall be in liquid ton.
2. Shipments shall contain 19% chemical ammonia. A certified analysis shall accompany each shipment or the shipment will be rejected.
3. The product shall conform to ANSI/CGA G-2.1.
4. Delivery shall be approximately 4000 gallons. Trucks delivering bulk product will have the ability to pump liquid to storage tank through a 2” quick disconnect.

H. Powdered Activated Carbon

| | |
|---|-------------------------------|
| Apparent Density, g/c3 | .45 |
| Iodine Number mg/g avg. | 500 |
| Phenol Number (g/ml max.) | 2.0-2.5 |
| pH | 6-8 |
| Ash, wt. % max. | 8 |
| Moisture (as packed), wt. % max. | 5 |
| Particle Size Distribution | 99%-100 95%-200 90%-325 |
| Conforms to AWWA standard B600-96 | |
| UL Approved-Certificate #062097-MH25593 | |

Delivery shall be in 50 lb. bags with a minimum of 5 ton per order.

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| ITEM # | DESCRIPTION | ESTIMATED QTY | UNIT COST | TOTAL COST |
|---------------|--|--------------------------|----------------------|-----------------------|
| 1. | Chlorine Gas Ton Cylinders | 60 ton | \$ _____ | \$ _____ |
| | Cylinder deposit required? Y or N | | | |
| | Type of truck delivering cylinders _____ (example: semi-tractor with modified flatbed trailer, box truck, etc.) | | | |
| 2. | Hydrofluorosilicic Acid | 15,000 gal | \$ _____ | \$ _____ |
| 3. | Potassium Permanganate Specify brand or manufacturer _____ | 50,000 lbs | \$ _____ | \$ _____ |
| 4. | Coagulation | | | |
| | A. Primary Coagulant | 720 ton | \$ _____ | \$ _____ |
| | Material name _____ | | | |
| | Manufacturer of product _____ | | | |
| | % Al 203 Content _____ | | | |
| | Unit cost per pound \$ _____ | | | |
| | B. Estimated cost to treat 1,000,000 gallons | | \$ _____ | \$ _____ |
| 5. | ACH (23% Al2O3 and Basicity of 83%) 12 Totes | | \$ _____ | \$ _____ |
| 6. | Coagulation Aid | 6,000 lbs | \$ _____ | \$ _____ |
| 7. | Drying Bed Polymer | 15,000 lbs | \$ _____ | \$ _____ |
| 8. | Polyphosphate | 30,000 lbs | \$ _____ | \$ _____ |
| | Recommended dosage _____ ppm | | | |
| | Specify brand or manufacturer _____ | | | |
| 9. | Sodium Hydroxide | 450,000 lbs | \$ _____ | \$ _____ |
| 10. | Aqueous Ammonia | 60 ton | \$ _____ | \$ _____ |
| 11. | Powdered Activated Carbon | 46,000 lbs | \$ _____ | \$ _____ |

PROVIDE SDS AND PRODUCT DATA SHEETS ON ALL MATERIALS BID.

Company Name: _____
 Address _____
 City _____ State _____ Zip _____
 Contact Person _____ Telephone No. _____
 Fax No. _____ Email: _____

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Mail this bid form with the completed Non-Collusion Affidavit enclosed to:

City of Bartlesville
City Clerk
401 S. Johnstone
Bartlesville, OK 74003

All individual bids are F.O.B. Bartlesville, Oklahoma.

BIDS MUST BE RECEIVED BY 2:00 P.M. MONDAY, JUNE 17, 2024.

Include the following:

1. Bid Return Sheets – Must be submitted on forms provided
2. Non-collusion Affidavit
3. Any official printed literature which more fully describes the proposed bid item.

THE PRICE BID SHALL BE HELD FIRM FOR A PERIOD OF ONE YEAR FROM AWARD DATE UNLESS OTHERWISE NOTED.

Return this bid in a SEALED ENVELOPE no later than 2:00 P.M. CST, on Bid Opening Date.

On the outside of the envelope state "BID NUMBER". If you send your bid via express or overnight service, please place your bid envelope inside the express pouch.

If you wish to receive a copy of the tabulated bids include with your bid a letter requesting a copy of the bid results that contains an email address where we may forward an electronic copy of the results.

If you have any questions regarding these specifications, please contact Larry Thompson, Water Treatment Plant Superintendent at (918) 440-4543 or email ldthompson@cityofbartlesville.org.

ANY VARIANCE OF THIS BID MUST BE NOTED.

THE CITY OF BARTLESVILLE RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS OR PORTIONS THEREOF.

