

SPECIFICATIONS FOR LIQUID ALUMINUM SULFATE

The company submitting this bid agrees to deliver to the Coddle Creek Water Treatment Plant, 6935 Davidson Hwy., Concord, North Carolina, approximately 1,500,000 lbs. or 750 dry tons total of Liquid Alum, as ordered, for twelve (12) months beginning July 1, 2018. Each order will be placed, as needed approximately 1 tanker 4,500 gals. at 1 to 2 week intervals.

The product must conform to AWWA standards for drinking water and be listed with the National Sanitation Foundation. It will be the responsibility of the bidder to establish the quality of the product offered by providing an affidavit to demonstrate conformance with the specifications upon request.

Technical service required within 72 hours after request is placed.

All prices must be based FOB delivered to the Coddle Creek Water Treatment Plant within 15 days of the effective date of this contract, and that all future orders can be delivered within 5 days of the placement of the order. All deliveries are to be made Monday through Friday between 6 A.M. and 4 P.M. Delivery personnel will be required to follow all OSHA PPE requirements. Any spills or leaks are to be cleaned up by the vendor and there will be no onsite disposal. **The supplier and or transporter must fax a copy of the driver license of the delivery driver, the manufacturer seal number of the product and the trailer identification number to the plant before deliveries will be accepted.**

The supplier must submit with his bid, a certificate of insurance carried as liability in the transport and sale of Liquid Alum.

The City of Concord reserves the right to modify quantities purchased under this contract to meet its needs. Upon mutual written agreement between the vendor and the City, the contract may be extended for additional periods.

Bid unit price per dry ton of product \$ Base bid
(Bid unit price per dry ton x tons approximate annual need) \$

This contract will be awarded to the lowest responsible bidder whose bid complies with all of the provisions of this document. The City reserves the right to reject any or all bids, waive technicalities, and be the sole judge of suitability of the merchandise for the use by the City for intended purposes.

SPECIFICATIONS FOR POWDERED ACTIVATED CARBON

The company submitting this bid agrees to deliver to the Coddle Creek Water Treatment Plant, 6935 Davidson Hwy., Concord, North Carolina, approximately 240,000 lbs. of Powdered Activated Carbon, as ordered, for twelve (12) months beginning July 1, 2018. Each order will be placed, as needed approximately one tanker 30,000 to 40,000 lbs. at 1 to 3 month intervals.

This product must meet the physical and performance requirements of ANSI/AWWA B 600-05 Carbon Standard for powdered activated carbon. This product should be certified to NSF/ANSI Standard 61 with a maximum use level of 250 mg/l.

This product shall be a premium activated lignite based or wood based carbon and will be primarily used for the removal of tastes, odors and other organics from potable water supplies. It should be the most effective water treatment carbon available for the removal of tannins and humic acids. These are precursors of Total Trihalomethanes and Haloacetic Acids and are major contributors to color and taste. This product should be effective for removing the extremely odorous compounds geosmin and methylisoborneol from raw surface waters.

Product Specifications

Tannin value, mg/l	175-250
Iodine number, mg/l	800 min.
Moisture, % as packed	8 max.
Surface area, m ² /g	1200-1600
Mesh Size:	
Less than 100 mesh (100 µm)	99 min.
Less than 200 mesh (75 µm)	95 min.
Less than 325 mesh (45 µm)	90 min.

Technical service required within 72 hours after request is placed.

All prices must be based FOB delivered to the Coddle Creek Plant within 15 days of the effective date of the contract, and that all future orders can be delivered within 7 days of the date of the placement of the order. All deliveries are to be made Monday through Friday between 6 A.M. and 4 P.M. Delivery personnel will be required to follow all OSHA PPE requirements. Any spills or leaks are to be cleaned up by the vendor and there will be no onsite disposal. **The supplier and or transporter must fax a copy of the driver license of the delivery driver, the manufacturer seal number of the product and the trailer identification number to the plant before deliveries will be accepted.**

The supplier must submit with the bid, a certificate of insurance carried as liability in the transport and sale of Powdered Activated Carbon.

The City of Concord reserves the right to modify quantities purchased under this contract to meet its needs. Upon mutual written agreement between the vendor and the City, the contract may be extended for additional periods.

Bid unit price per pound of product \$ Base bid
(Bid unit price per pound x lbs. approximate annual need) \$

This contract will be awarded to the lowest responsible bidder whose bid complies with all of the provisions of this document. The City reserves the right to reject any or all bids, waive technicalities, and will be the sole judge of suitability of the merchandise for the use by the City for intended purposes.

SPECIFICATIONS FOR SODIUM HYDROXIDE SOLUTION 50% (CAUSTIC SODA)

The company submitting this bid agrees to deliver to the Coddle Creek Water Treatment Plant, 6935 Davidson Hwy., Concord, North Carolina, approximately 150 dry tons total of Sodium Hydroxide Solution 50%, as ordered, for twelve (12) months beginning July 1, 2018. Each order will be placed, as needed approximately 1 tanker at 1 to 2 month intervals.

The product must conform to AWWA standards for drinking water and be listed with the National Sanitation Foundation. It will be the responsibility of the bidder to establish the quality of the product offered by providing an affidavit to demonstrate conformance with the specifications upon request.

Technical service required within 72 hours after request is placed.

All prices must be based FOB delivered to the Coddle Creek Water Treatment Plant within 15 days of the effective date of this contract, and that all future orders can be delivered within 5 days of the placement of the order. All deliveries are to be made Monday through Friday between 6 A.M. and 4 P.M. Delivery personnel will be required to follow all OSHA PPE requirements. Any spills or leaks are to be cleaned up by the vendor and there will be no onsite disposal. **The supplier and or transporter must fax a copy of the driver license of the delivery driver, the manufacturer seal number of the product and the trailer identification number to the plant before deliveries will be accepted.**

The supplier must submit with his bid, a certificate of insurance carried as liability in the transport and sale of Sodium Hydroxide.

The City of Concord reserves the right to modify quantities purchased under this contract to meet its needs. Upon mutual written agreement between the vendor and the City, the contract may be extended for additional periods.

Bid unit price per dry ton of product \$ Base bid
(Bid unit price per dry ton x tons approximate annual need) \$

This contract will be awarded to the lowest responsible bidder whose bid complies with all of the provisions of this document. The City reserves the right to reject any or all bids, waive technicalities, and be the sole judge of suitability of the merchandise for the use by the City for intended purposes.

SPECIFICATIONS FOR HYDROFLUOSILICIC ACID

The company submitting this bid agrees to deliver to the Coddle Creek Water Treatment Plant, 6935 Davidson Hwy., Concord, North Carolina, approximately 99,000 lbs. or 180 – 55 gal. drums total of Hydrofluosilicic Acid, as ordered, for twelve (12) months beginning July 1, 2018. Each order will be placed, as needed approximately 11,000 lbs. or 20 drums plus or minus at 1 to 2 month intervals.

Any bid that requires a drum deposit will not be considered.

The product must conform to AWWA standards for drinking water. It will be the responsibility of the bidder to establish the quality of the product offered by providing an affidavit to demonstrate conformance with the specifications upon request.

Technical service required within 72 hours after request is placed.

All prices must be based FOB delivered to the Coddle Creek Water Treatment Plant within 15 days of the effective date of this contract, and that all future orders can be delivered within 5 days of the placement of the order. All deliveries are to be made Monday through Friday between 6 A.M. and 4 P.M. Delivery personnel will be required to follow all OSHA PPE requirements. All spills or leaks are to be cleaned up by the vendor and there will be no onsite disposal. Used pallets and empty drums will be collected by the driver and returned to the vendor. **The supplier and or transporter must fax a copy of the driver license of the delivery driver, the manufacturer seal number of the product and the trailer identification number to the plant before deliveries will be accepted.**

The supplier must submit with his bid, a certificate of insurance carried as liability in the transport and sale of Hydrofluosilicic Acid.

The City of Concord reserves the right to modify quantities purchased under this contract to meet its needs. Upon mutual written agreement between the vendor and the City, the contract may be extended for additional periods.

Bid unit price per pound of product \$ Base bid
(Bid unit price per pound x lbs. approximate annual need) \$

This contract will be awarded to the lowest responsible bidder whose bid complies with all of the provisions of this document. The City reserves the right to reject any and all bids, waive technicalities, and will be the sole judge of suitability of the merchandise for the use by the City for intended purposes.

SPECIFICATIONS FOR POTASSIUM PERMANGANATE

The company submitting this bid agrees to deliver to the Coddle Creek Water Treatment Plant, 6935 Davidson Hwy., Concord, North Carolina, approximately 48,000 lbs. total of Potassium Permanganate, as ordered, for twelve (12) months beginning July 1, 2018. Each order will be placed, as needed approximately 4,000 lbs. at 1 month intervals.

The product offered shall be Cairox Free-Flowing grade as manufactured by Carus Chemical Company, or other approved domestic product. Bids for non-domestic product will not be considered. The product must conform to AWWA standard B630-83 with a guaranteed 95% assay and be in granular crystalline form packaged in 55.13 lb. plastic containers. It will be the responsibility of the bidder to establish the quality of the product offered by providing an affidavit to demonstrate conformance upon request.

Technical service required within 72 hours after request is placed.

All prices must be based FOB delivered to Coddle Creek Water Treatment Plant within 15 days of the effective date of this contract, and that all future orders can be delivered within 5 days of the placement of the order. All deliveries are to be made Monday through Friday between 6 A.M. and 4 P.M. Delivery personnel will be required to follow all OSHA PPE requirements. Any spills or leaks are to be cleaned up by the vendor and there will be no onsite disposal. Empty pallets will be collected by the driver and returned to the vendor. **The supplier and or transporter must fax a copy of the driver license of the delivery driver, the manufacturer seal number of the product and the trailer identification number to the plant before deliveries will be accepted.**

The supplier must submit with his bid, a certificate of insurance carried as liability in the transport and sale of Potassium Permanganate.

The City of Concord reserves the right to modify quantities purchased under this contract to meet its needs. Upon mutual written agreement between the vendor and the City, the contract may be extended for additional periods.

Bid unit price per pound of product \$ Base bid
(Bid unit price per pound x lbs. approximate annual need) \$

This contract will be awarded to the lowest responsible bidder whose bid complies with all of the provisions of this document. The City reserves the right to reject any and all bids, waive technicalities, and will be the sole judge of suitability of the merchandise for the use by the City for intended purposes.

SPECIFICATIONS FOR LIQUID POLYPHOSPHATE

The company submitting this bid agrees to deliver to the Coddle Creek Water Treatment Plant, 6935 Davidson Hwy., Concord, North Carolina, approximately 84,000 lbs. or 140 – 55 gal. drums of Liquid Polyphosphate, as ordered, for twelve (12) months beginning July 1, 2018. Each order will be placed, as needed approximately 12,000 lbs. or 20 drums plus or minus at 2-3 month intervals.

The product must conform to AWWA standards for drinking water and be listed with the National Sanitation Foundation. It will be the responsibility of the bidder to establish the quality of the product offered by providing an affidavit to demonstrate conformance with the specifications listed below upon request.

1. Product must be able to function as a coagulation aid in the treatment process.
2. Product must sequester iron and manganese over a temperature range from five (5) degrees to one hundred (100) degrees Centigrade, and have a shelf life in excess of two (2) years.
3. Product must function as a corrosion inhibitor without the presence of zinc.
4. Product must be able to remove existing deposits without causing any major cosmetic / quality problems to the end user (City water customers).
5. Product must not increase bacteria colony counts in the distribution system and also not increase system chlorine demand on maintenance dosage.
6. Product must be a liquid and not precipitate out during handling and storage.
7. Product must have a pH range between 4 and 5 and not have harmful effect on water plant personnel due to application or end user due to consumption.
8. Successful bidder must provide application instructions and provide quarterly water analysis to monitor and verify performance of product upon request.**
9. Product and supplier must have a successful history of use in municipalities of similar size for a period of at least five (5) years.

Form: Liquid

Grade: Food Grade

Specific Gravity: Minimum 1.36

Weight: Minimum 11.4 lbs. per gal.

Odor: None

Appearance: Clear Liquid

pH: 4 to 5 +/- 0.3

Solubility: Must be 100%

Boiling Point: Above 99 degrees Centigrade

Shelf Life: In excess of two (2) years

Freeze/Thaw Recovery: Complete

*Phosphate Content (as PO 4): 18%

*Orthophosphate Content (as PO 4): 18%

**Methods by which these values are obtained must be stated herein on a separate sheet and submitted with the bid. Should verification become necessary, samples will be sent to an independent laboratory and all costs incurred will be borne by the bidder. This analysis must include, but not limited to pH, total hardness, total iron, total manganese, orthophosphate and total phosphate.

Analytical procedures for determining these values must be methods as approved by the U.S. EPA and are found in Standard Methods for the Examination of Water and Wastewater. Any other test procedures are not acceptable and submittal of such will be cause for rejection of bid.

All prices must be FOB delivered to the Coddle Creek Water Treatment Plant within 15 days of the effective date of this contract, and that all future orders can be delivered within 5 days of the placement of the order. All deliveries are to be made Monday through Friday between 6 A.M. and 4 P.M. Delivery personnel will be required to follow all OSHA PPE requirements. Any spills or leaks are to be cleaned up by the vendor and there will be no onsite disposal. Used pallets and empty drums will be collected by the driver and returned to the vendor. **The supplier and or transporter must fax a copy of the driver license of the delivery driver, the manufacturer seal number of the product and the trailer identification number to the plant before deliveries will be accepted.**

The supplier must submit with his bid, a certificate of insurance carried as liability in the transport and sale of Liquid Polyphosphate.

The City of Concord reserves the right to modify quantities purchased under this contract to meet its needs. Upon mutual written agreement between the vendor and the City the contract may be extended for additional periods.

Bid unit price per pound of product \$ Base bid
(Bid unit price per pound x lbs. approximate annual need) \$

This contract will be awarded to the lowest responsible bidder whose bid complies with all of the provisions of this document. The City reserves the right to reject any and all bids, waive technicalities, and will be the sole judge of suitability of the merchandise for the use by the City for intended purposes.

SPECIFICATIONS FOR LIQUID SODIUM HYPOCHLORITE

The company submitting this bid agrees to deliver to the Coddle Creek Water Treatment Plant, 6935 Davidson Hwy., Concord, North Carolina, approximately 135,000 gals. of Liquid Sodium Hypochlorite, as ordered, for twelve (12) months beginning July 1, 2018. Each order will be placed, as needed approximately 4,500 gals. at 1 to 2 week intervals.

The product must be 15-16% minimum chlorine by volume.

The product must conform to AWWA standards for drinking water and be listed with the National Sanitation Foundation. It will be the responsibility of the bidder to establish the quality of the product offered by providing an affidavit to demonstrate conformance with the specifications upon request.

The maximum metals content shall not exceed:

*Mercury 1.0 mg/L

*Copper 0.050 mg/L

*Nickel 0.050 mg/L

*Iron 0.100 mg/L

The maximum calcium content shall be no greater than 1.0 mg/L and the maximum magnesium content shall be no greater than 3.0 mg/L.

Technical service required within 72 hours after request is placed.

All prices must be based FOB delivered to Coddle Creek Water Treatment Plant within 15 days of the effective date of this contract, and that all future orders can be delivered within 5 days of the placement of the order. All deliveries are to be made Monday through Friday between 6 A.M. and 4 P.M. Delivery personnel will be required to follow all OSHA PPE requirements. Any spills or leaks are to be cleaned up by the vendor and there will be no onsite disposal. **The supplier and or transporter must fax a copy of the driver license of the delivery driver, the manufacturer seal number of the product and the trailer identification number to the plant before deliveries will be accepted.**

The supplier must submit with his bid a certificate of insurance carried as liability in the transport and sale of Liquid Sodium Hypochlorite.

The City of Concord reserves the right to modify quantities purchased under this contract to meet its needs. Upon mutual written agreement between the vendor and the City, the contract may be extended for additional periods.

Bid unit price per gallon of product \$ _____ Base bid
(Bid unit price per gallon x _____ gals. approximate annual need) \$ _____

This contract will be awarded to the lowest responsible bidder whose bid complies with all of the provisions of this document. The City reserves the right to reject any or all bids, waive technicalities, and will be the sole judge of suitability of the merchandise for the use by the City for intended purposes.