

## Item #1

### SULFURIC ACID, 93% SPECIFICATIONS

Sulfuric acid, 93% shall be priced per wet pound as product, delivered in liquid form in a bulk tank truck, f.o.b. to the Fargo Water Treatment Plant, 435 14<sup>th</sup> Avenue South, Fargo, North Dakota, 58103.

Sulfuric acid, 93% will be used to adjust raw water pH to facilitate coagulation process in Fargo Integrated Dual-membrane (Ultrafiltration membrane and reverse osmosis membrane) Water Treatment Plant.

The supplier's truck must be equipped to safely handle and unload bulk liquid sulfuric acid, 93%.

The Fargo Water Treatment Plant owns one 10,000 gallon bulk storage tank. The storage tank will be filled from an exterior fill station through a 2" fill line with a quick disconnect type coupling.

The truck shall be equipped with a pump or air compressor to unload the tanker.

A (COA) Certificate of Analysis must accompany each delivery.

A (SDS) Safety Data Sheet must accompany order if chemical has changed or there have been revisions to (SDS) since bid submittal.

**2018 consumption is estimated to be 250 Tons.**

Documentation of ANSI/NSF Standard 60 certification must accompany the bid. A product will be considered as meeting these standards if so certified by an organization accredited by the American National Standards Institute to test and certify such products.

A maximum application dosage in potable water treatment must accompany the bid.

A (SDS) Safety Data Sheet must accompany the bid.

All fuel surcharges must be included as part of the bid submitted.

The City Commission reserves the right to reject any and all bids and waive any informality.

## Item #2

### SULFURIC ACID, 40% SPECIFICATIONS

Sulfuric acid, 40% shall be priced per wet pound as product, delivered in liquid form in 55 gallon drums, f.o.b. to the Fargo Water Treatment Plant, 435 14<sup>th</sup> Avenue South, Fargo, North Dakota, 58103.

Sulfuric acid, 40% will be used in Ultrafiltration Membrane cleaning-in-place (CIP) and shall not contain impurities that may foul membranes.

A (COA) Certificate of Analysis must accompany each delivery.

A (SDS) Safety Data Sheet must accompany order if chemical has changed or there have been revisions to (SDS) since bid submittal.

**2018 consumption is estimated to be 1200 pounds**

Documentation of ANSI/NSF Standard 60 certification must accompany the bid. A product will be considered as meeting these standards if so certified by an organization accredited by the American National Standards Institute to test and certify such products.

A maximum application dosage in potable water treatment must accompany the bid.

A (SDS) Safety Data Sheet must accompany the bid.

All fuel surcharges must be included as part of the bid submitted.

The City Commission reserves the right to reject any and all bids and waive any informality.

### Item #3

#### LIQUID POLYALUMINUM CHLORIDE SPECIFICATIONS

Polyaluminum chloride shall be priced per wet pound as product, delivered in liquid form in a bulk tank truck, f.o.b. to the Fargo Water Treatment Plant, 435 14<sup>th</sup> Avenue South, Fargo, North Dakota, 58103.

The supplier's truck must be equipped to safely handle and unload bulk liquid polyaluminum chloride.

The Fargo Water Treatment Plant owns two 13,000 gallon bulk storage tanks. The storage tank will be filled from an exterior fill station through a 2" fill line with a quick disconnect type coupling.

The truck shall be equipped with a pump or air compressor to unload the tanker.

Liquid polyaluminum chloride shall conform to the American Water Works Specification Standard B408-10.

Liquid polyaluminum chloride shall have a basicity of 82-85% and shall not contain polymeric or inorganic additives that may interfere with the operation of ultrafiltration membrane and reverse osmosis membrane.

A (COA) Certificate of Analysis must accompany each delivery.

A (SDS) Safety Data Sheet must accompany order if chemical has changed or there have been revisions to (SDS) since bid submittal.

**If Liquid Polyaluminum Chloride is chosen as presedimentation coagulant,  
2018 consumption is estimated to be 300 Tons.**

Documentation of ANSI/NSF Standard 60 certification must accompany the bid. A product will be considered as meeting these standards if so certified by an organization accredited by the American National Standards Institute to test and certify such products.

A maximum application dosage in potable water treatment must accompany the bid.

A (SDS) Safety Data Sheet must accompany the bid.

All fuel surcharges must be included as part of the bid submitted.

The City Commission reserves the right to reject any and all bids and waive any informality.

## **Item #4**

### **LIQUID FERRIC CHLORIDE SPECIFICATIONS**

Ferric Chloride, 35%, shall be priced per wet pound as product, delivered in liquid form in a bulk tank truck, f.o.b. to the Fargo Water Treatment Plant, 435 14<sup>th</sup> Avenue South, Fargo, North Dakota, 58103.

The supplier's truck must be equipped to safely handle and unload bulk liquid ferric chloride.

The Fargo Water Treatment Plant owns two 13,000 gallon bulk storage tanks. The storage tank will be filled from an exterior fill station through a 2" fill line with a quick disconnect type coupling.

The truck shall be equipped with a pump or air compressor to unload the tanker.

Liquid ferric chloride shall conform to the American Water Works Specification Standard B407-12.

Ferric chloride, 35%, will be used in the coagulation process to remove turbidity and organics and shall not contain metals that may interfere the operation of ultrafiltration membrane and reverse osmosis membrane.

A (COA) Certificate of Analysis must accompany each delivery.

A (SDS) Safety Data Sheet must accompany order if chemical has changed or there have been revisions to (SDS) since bid submittal.

**If Liquid Ferric Chloride is chosen as presedimentation coagulant,**

**2018 consumption is estimated to be 800 Tons.**

Documentation of ANSI/NSF Standard 60 certification must accompany the bid. A product will be considered as meeting these standards if so certified by an organization accredited by the American National Standards Institute to test and certify such products.

A maximum application dosage in potable water treatment must accompany the bid.

A (SDS) Safety Data Sheet must accompany the bid.

All fuel surcharges must be included as part of the bid submitted.

The City Commission reserves the right to reject any and all bids and waive any informality.

## **Item #5**

### **CITRIC ACID, 50% SPECIFICATIONS**

Citric acid, 50% shall be priced per wet pound as product, delivered in liquid form in 250 to 330 gallon totes, f.o.b. to the Fargo Water Treatment Plant, 435 14<sup>th</sup> Avenue South, Fargo, North Dakota, 58103.

Citric acid, 50%, will be used in membrane cleaning-in-place (CIP) process for both Ultrafiltration membranes and reverse osmosis membrane. Citric acid shall not contain impurities that may foul membranes.

A (COA) Certificate of Analysis must accompany each delivery.

A (SDS) Safety Data Sheet must accompany order if chemical has changed or there have been revisions to (SDS) since bid submittal.

**2018 consumption is estimated to be 3500 pounds**

Documentation of ANSI/NSF Standard 60 certification must accompany the bid. A product will be considered as meeting these standards if so certified by an organization accredited by the American National Standards Institute to test and certify such products.

A maximum application dosage in potable water treatment must accompany the bid.

A (SDS) Safety Data Sheet must accompany the bid.

All fuel surcharges must be included as part of the bid submitted.

The City Commission reserves the right to reject any and all bids and waive any informality.

## **Item #6**

### **HYDROGEN PEROXIDE, 34% SPECIFICATIONS**

Hydrogen Peroxide, 34% shall be priced per wet pound as product, delivered in liquid form in 250 to 330 gallon totes, f.o.b. to the Fargo Water Treatment Plant, 435 14<sup>th</sup> Avenue South, Fargo, North Dakota, 58103.

A (COA) Certificate of Analysis must accompany each delivery.

A (SDS) Safety Data Sheet must accompany order if chemical has changed or there have been revisions to (SDS) since bid submittal.

**2018 consumption is estimated to be 6200 pounds**

Documentation of ANSI/NSF Standard 60 certification must accompany the bid. A product will be considered as meeting these standards if so certified by an organization accredited by the American National Standards Institute to test and certify such products.

A maximum application dosage in potable water treatment must accompany the bid.

A (SDS) Safety Data Sheet must accompany the bid.

All fuel surcharges must be included as part of the bid submitted.

The City Commission reserves the right to reject any and all bids and waive any informality.

## **Item #7**

### **SODIUM BISULFITE, 38% SPECIFICATIONS**

Sodium bisulfite, 38% shall be priced per wet pound as product, delivered in liquid form in 250 to 330 gallon totes, f.o.b. to the Fargo Water Treatment Plant, 435 14<sup>th</sup> Avenue South, Fargo, North Dakota, 58103.

Sodium bisulfite, 38%, will be used to quench oxidant to prevent damage of reverse osmosis membranes and shall not contain impurities that may interfere the operation of reverse osmosis membranes.

A (COA) Certificate of Analysis must accompany each delivery.

A (SDS) Safety Data Sheet must accompany order if chemical has changed or there have been revisions to (SDS) since bid submittal.

**2018 consumption is estimated to be 15000 pounds**

Documentation of ANSI/NSF Standard 60 certification must accompany the bid. A product will be considered as meeting these standards if so certified by an organization accredited by the American National Standards Institute to test and certify such products.

A maximum application dosage in potable water treatment must accompany the bid.

A (SDS) Safety Data Sheet must accompany the bid.

All fuel surcharges must be included as part of the bid submitted.

The City Commission reserves the right to reject any and all bids and waive any informality.

## **Item #8**

### **SODIUM HYDROXIDE 50% SPECIFICATIONS**

Sodium Hydroxide 50% shall be priced per wet pound as product, delivered in liquid form in a bulk tank truck, f.o.b. to the Fargo Water Treatment Plant, 435 14<sup>th</sup> Avenue South, Fargo, North Dakota, 58103.

Sodium Hydroxide, 50%, will be used to adjust pH in Fargo Integrated Dual-membrane (Ultrafiltration membrane and reverse osmosis membrane) Water Treatment Plant.

The supplier's truck must be equipped to safely handle and unload bulk sodium hydroxide.

The Fargo Water Treatment Plant owns two 7,000 gallon bulk storage tanks. The storage tank will be filled from an exterior fill station through a 2" fill line with a quick disconnect type coupling.

The truck shall be equipped with a pump or air compressor to unload the tanker.

Sodium Hydroxide shall conform to the American Water Works Specification Standard B501-13.

A (COA) Certificate of Analysis must accompany each delivery.

A (SDS) Safety Data Sheet must accompany order if chemical has changed or there have been revisions to (SDS) since bid submittal.

**2018 consumption is estimated to be 140 Tons.**

**Documentation of ANSI/NSF Standard 60 certification must accompany the bid. A product will be considered as meeting these standards if so certified by an organization accredited by the American National Standards Institute to test and certify such products.**

**A maximum application dosage in potable water treatment must accompany the bid.**

**A (SDS) Safety Data Sheet must accompany the bid.**

**All fuel surcharges must be included as part of the bid submitted.**

**The City Commission reserves the right to reject any and all bids and waive any informality.**



## **Item #9**

### **SODIUM HYPOCHLORITE, 12.5% SPECIFICATIONS**

Sodium hypochlorite, 12.5% shall be priced per wet pound as product, delivered in liquid form in 250 to 330 gallon totes, f.o.b. to the Fargo Water Treatment Plant, 435 14<sup>th</sup> Avenue South, Fargo, North Dakota, 58103.

Sodium hypochlorite, 12.5%, will be used in membrane cleaning-in-place (CIP) process for Ultrafiltration membranes and shall not contain impurities that may foul membranes.

A (COA) Certificate of Analysis must accompany each delivery.

A (SDS) Safety Data Sheet must accompany order if chemical has changed or there have been revisions to (SDS) since bid submittal.

**2018 consumption is estimated to be 3300 pounds**

Documentation of ANSI/NSF Standard 60 certification must accompany the bid. A product will be considered as meeting these standards if so certified by an organization accredited by the American National Standards Institute to test and certify such products.

A maximum application dosage in potable water treatment must accompany the bid.

A (SDS) Safety Data Sheet must accompany the bid.

All fuel surcharges must be included as part of the bid submitted.

The City Commission reserves the right to reject any and all bids and waive any informality.

## **Item #10**

### **LIQUID ALUMINUM SULFATE SPECIFICATIONS**

Aluminum Sulfate shall be priced per wet pound as product, delivered in liquid form in 250 to 330 gallon totes, f.o.b. to the Fargo Water Treatment Plant, 435 14<sup>th</sup> Avenue South, Fargo, North Dakota, 58103.

Liquid aluminum sulfate shall conform to the American Water Works Specification Standard B403-09.

A (COA) Certificate of Analysis must accompany each delivery.

A (SDS) Safety Data Sheet must accompany order if chemical has changed or there have been revisions to (SDS) since bid submittal.

**2018 consumption is estimated to be 30 Tons**

Documentation of ANSI/NSF Standard 60 certification must accompany the bid. A product will be considered as meeting these standards if so certified by an organization accredited by the American National Standards Institute to test and certify such products.

A maximum application dosage in potable water treatment must accompany the bid.

A (SDS) Safety Data Sheet must accompany the bid.

All fuel surcharges must be included as part of the bid submitted.

The City Commission reserves the right to reject any and all bids and waive any informality.

## **Item #11**

### **LIQUID ALUMINUM SULFATE SPECIFICATIONS**

Aluminum Sulfate shall be priced per wet pound as product, delivered in liquid form in a bulk tank truck, f.o.b. to the Fargo Water Treatment Plant, 435 14<sup>th</sup> Avenue South, Fargo, North Dakota, 58103.

The supplier's truck must be equipped to safely handle and unload bulk liquid aluminum sulfate.

The Fargo Water Treatment Plant owns one 8,500 gallon bulk storage tank. The storage tank will be filled from an exterior fill station through a 2" fill line with a quick disconnect type coupling.

The truck shall be equipped with a pump or air compressor to unload the tanker.

Liquid aluminum sulfate shall conform to the American Water Works Specification Standard B403-09.

A (COA) Certificate of Analysis must accompany each delivery.

A (SDS) Safety Data Sheet must accompany order if chemical has changed or there have been revisions to (SDS) since bid submittal.

**2018 consumption is estimated to be 30 Tons.**

Documentation of ANSI/NSF Standard 60 certification must accompany the bid. A product will be considered as meeting these standards if so certified by an organization accredited by the American National Standards Institute to test and certify such products.

A maximum application dosage in potable water treatment must accompany the bid.

A (SDS) Safety Data Sheet must accompany the bid.

All fuel surcharges must be included as part of the bid submitted.

The City Commission reserves the right to reject any and all bids and waive any informality.