

NOVEMBER 9, 2007
ADDENDA NUMBER: 1
BID NUMBER: RFB2008-064-TC
TITLE: FERROUS CHLORIDE AND FERRIC CHLORIDE
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THIS ADDENDUM IS TO UPDATE THE SPECIFICATIONS. (SEE PAGES 2 THROUGH 9) THE
OPENING DATE OF THIS BID REMAINS DECEMBER 12, 2007.

YOU MUST RETURN VERIFICATION OF RECEIPT OF THIS ADDENDUM WITH YOUR BID
RESPONSE VIA LETTER OR A SIGNED COPY OF THIS FORM. FAILURE TO DO SO MAY CAUSE
YOUR BID TO BE CONSIDERED NON-RESPONSIVE.

ACKNOWLEDGED AND RETURNED: WITH BID: _____ BY LETTER: : _____

SIGNATURE

PRINTED NAME

TITLE

COMPANY

TECHNICAL SPECIFICATIONS
FERROUS CHLORIDE
AND
FERRIC CHLORIDE

The following specifications are for the purchase and delivery of Ferrous Chloride and Ferric Chloride.

- Ferrous Chloride will be invoiced to the Water Reclamation Division (WRD) of the Albuquerque Bernalillo County Water Utility Authority (ABCWUA). The chemical is to be delivered as specified.
- The Ferric Chloride will be invoiced to the Water Utility Division (WUD) of the Albuquerque Bernalillo County Water Utility Authority (ABCWUA). The chemical is to be delivered as specified.

The awarded contractor must ensure that each chemical is delivered separately to the specified location(s) as requested at the time of order. The awarded contractor must ensure that the delivery transportation container(s) are identified properly with clearly readable, secure placards. The corresponding Bill of Laden is to be clear and precise to the corresponding delivered chemical. The corresponding Bill of laden and invoicing must have the requesting division's information, including the Release number, as specified per chemical. The ABCWUA has the right to add delivery locations to the resultant contract.

FERROUS CHLORIDE

GENERAL

It is estimated that the Water Reclamation Division of the Albuquerque Bernalillo County Water Utility Authority may purchase a total of approximately 2,170,040 gallons of 30-36% Ferrous Chloride solutions per year. It is estimated that purchase of Ferrous Chloride via Truck delivery may be 1,130,040 gallons per year, and purchase of Ferrous Chloride via Rail Car is estimated to be 1,040,000 gallons per year. The quantities are estimated based on historical usage and demand. The amounts are estimated and may increase or decrease over the term of the resultant contract.

PRODUCTS

The Ferrous Chloride solution must meet the following chemical analysis criteria:

<u>Property</u>	<u>Typical Range</u>
Ferrous Chloride (%)	27-36
Ferrous Ion (%)	11.89 to 15.85
Free Acid as HCl (%)	0.1 to 0.5
Arsenic (mg/l)	<0.5
Barium (mg/l)	<2.0
Cadmium (mg/l)	<0.3
Chromium (mg/l)	25
Copper (mg/l)	25
Lead (mg/l)	1
Manganese (mg/l)	1,200

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Mercury (mg/l)	<0.02
Selenium (mg/l)	<3
Silver (mg/l)	<1
Total Organic Carbon (mg/l)	150-250

A certificate of chemical analysis for each shipment must be supplied upon delivery along with the Bill of Laden. The WRD reserves the right to test each load at ABCWUA expense. Repeated violations of the chemical analysis criteria are grounds for termination of the contract.

It is required that Bidders, for this Request For Bid, must submit a copy of the chemical analysis for the Ferrous Chloride solution that is bid as part of the bid package. The awarded contractor must re-submit a chemical analysis report annually, to the WRD, during the term of the resulting contract.

TRUCK DELIVERY

The supplier will make all shipping arrangements with the ABCWUA contact person, and provide means for unloading the Ferrous Chloride chemical into the WRD owned Ferrous Chloride tanks at the following four sites:

Tank Stations-Albuquerque, NM

Southside Water Reclamation Plant (SWRP)
4201 Second Street SW

Lift Station #24
4300 Bank NW

Chemical Station #50
1125 Goff Road SW

Deliveries for the above locations are to be made between 7:00 a.m. and 3:00 p.m., Monday through Friday; unless a 48 hour advance notice is given to the WRD. The WRD reserves the right to add or delete delivery locations.

RAIL CAR DELIVERY

Rail Car Station-Albuquerque, NM

Chemical Transfer Station #70
500 El Pueblo
Albuquerque, NM

The supplier must have all deliveries, truck and rail car, weighed at a certified scale at the point of origin. The supplier must provide the ABCWUA with a weigh ticket at the time of delivery. At the expense of the ABCWUA additional weighing of the rail cars can be requested to confirm delivered quantities.

The WRD will place orders with the supplier for quantities of approximately 17,000 gallons, per rail tank car. The City will place orders a minimum of fourteen calendar days in advance of the requested delivery

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day. Liquidated damages of \$250 per each day of delay will be applied to each order, if deliveries are not started within two (2) calendar days after the requested delivery date with continuous deliveries until the order quantity is completed. For this contract a day is considered to be from 12:00 midnight to 11:59 p.m. Repeated delays in deliveries will be grounds for contract termination. Orders placed that do not have the fourteen calendar days in advance of the requested delivery date will not have any liquidation damages applied to that order.

PAYMENT

The invoice price is to be based on the awarded bid price and on the actual amount of the Ferrous Chloride furnished in dry tons.

(Net Wt. of tanker (Railcar) in pounds x %FeCl₂ by weight) / 2000 = Dry Tons of Ferrous Chloride

CONTACT

The awarded contractor will be notified of the ABCWUA contact/order representative after the award of the resultant contract.

For questions about the WRD delivery facilities please contact Robert Sekiya, WRD Odor Control, at (505) 873-7023.

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FERRIC CHLORIDE

GENERAL

It is estimated that the Water Utility Division (WUD) of the Albuquerque Bernalillo County Water Utility Authority (ABCWUA) may purchase approximately 1,600,000 gallons of Ferric Chloride per year. The Ferric Chloride may be ordered to be delivered via Truck delivery or via Rail Car to the specified location(s). The quantity is estimated based on projected usage and demand. The amounts are estimated and may increase or decrease over the term of the resultant contract.

PRODUCTS

The ferric chloride solution shall meet the following requirements:

<u>Property</u>	<u>Range</u>
Fe (III)	13.1 – 14.5%
FeCL3 (AWWA Equivalent)	37 – 42%
Fe (II)	<0.25%
Free HCl	<0.25%
Sulfur as Sulfate	3 – 5 %
Water-Insoluble Matter	<0.1%
Specific Gravity	1.3 – 1.5, 1.4 Avg.
Barium	< 1 mg/kg
Cadmium	< 1 mg/kg
Chromium	<50 mg/kg
Copper	<50 mg/kg
Lead	< 5 mg/kg
Nickel	<40 mg/kg
Silver	< 1 mg/kg
Zinc	<100 mg/kg
Magnesium	<100 mg/kg
Molybdenum	<2 mg/kg
Titanium	<50 mg/kg
Antimony	< 10 mg/kg
Selenium	< 10 mg/kg
Mercury	< 10 mg/kg

General

The Ferric Chloride product shall conform to the American Water Works Association's (AWWA) standard for Liquid Ferric Chloride, B406-06 except as supplemented in this specification. Failure to meet any aspect of this specification may result in refusal of individual deliveries and/or termination of Ferric Chloride, independently, from the resultant contract.

Quality

Certification -The Ferric Chloride product shall be certified as suitable for contact with or treatment of drinking water by an accredited certification organization in accordance with the most current American National Standards Institute National Science Foundation Standard 60 (ANSI/NSF-60) (Drinking Water

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Treatment Chemicals -Health Effects). A copy of the ANSI/NSF-60 acceptance Letter is required to be supplied with the submitted bid package.

Performance Requirements

- Ferric Chloride shall not crystallize in storage.
- The Ferric Chloride product shall not cause any adverse effect on the condition of the filter media or chemical delivery systems that ill adversely affect performance.
- The Ferric Chloride product shall be resistant to and free from biological contamination.
- The Ferric Chloride product supplied according to this specification shall contain no substances in quantities capable of producing deleterious or injurious effects to the health of those consuming water that has been treated with Ferric Chloride product in accordance with supplier's recommendation and within the maximum allowed dosage.

Other Physical and Chemical Properties

- Appearance: Orange-brown, acidic, corrosive aqueous solution
- Specific Gravity (25C): 1.3 -1.5, 1.4 average
- FeCl₃ percent (AWWA Equivalent) 37-42%
- FeCl₂ weight percent: 0.5
- Total iron weight percent: 13.1 -14.5
- Percent free acid (as HCl): less than 0.25
- Insoluble matter percent <0.1
- Sulfur as Sulfate Percent 3 - 5
- Biological contamination -none.

Testing and Verification

Testing methods shall be according to the current Ferric Chloride (AWWA) standard.

Delivery Requirements

Deliveries shall only be scheduled by the WUA and are determined by the amount of water processed through the facility. The WUA reserves the right to test each shipment and reject the shipment if the chemical does not meet these specifications.

The successful bidder shall submit a certificate of analysis (COA), with these specifications, with the bid and with each delivery of Ferric Chloride.

The certificate of analysis should contain:

Weight Percent FeCl₃
Specific gravity
Percent weight of FeCl₂.
Percent total iron
Free Acid as HCl
Metals content (provide quarterly analysis testing).

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DELIVERY CONDITIONS

RAIL CAR DELIVERY

The contractor will deliver Ferric Chloride by rail car to the following address:

Rail Car Station-Albuquerque, NM

Chemical Transfer Station #70
500 El Pueblo
Albuquerque, NM

Deliveries for this location are to be made between 8:00 a.m. and 3:00 p.m. Monday through Thursday. The supplier must have all deliveries, truck and rail car, weighed at a certified scale at the point of origin. The supplier must provide the ABCWUA with a weigh ticket at the time of delivery. At the expense of the ABCWUA additional weighing of the rail cars can be requested to confirm delivered quantities.

TRUCK DELIVERY

The supplier will make all shipping arrangements with the ABCWUA contact person, and provide means for unloading the Ferric Chloride chemical into the WUD owned Ferric Chloride tank at the following site:

Arsenic Treatment Facility
8901 Desert Rain, N.W.
Albuquerque, NM 87120

PAYMENT

The supplier shall furnish a certified analysis of each delivery with the invoice.

Weight Percent FeCl₃
Specific gravity
Percent weight of FeCl₂.
Percent total iron
Free Acid as HCl

The invoice price shall be based on the actual amount of Ferric Chloride delivered on \$/dry ton basis, and the awarded bid price.

(Net Wt. of tanker (Railcar) x %FeCl₃)(AWWA Equivalent)/ 2000 = Dry Tons of Ferric Chloride

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CONTACT

The awarded contractor will be notified of the ABCWUA contact/order representative after the award of the resultant contract. For questions about the WUD delivery facilities please contact Scott Schnepfer, WUD Water Quality, at (505) 235-8831.

TERMS OF CONTRACT AND RENEWAL CONDITIONS
FOR FERROUS CHLORIDE AND FERRIC CHLORIDE

Bid pricing is to be at a fixed unit price for twelve months from the date of the awarded purchase order. The unit price must include all handling, shipping, delivery, and unloading costs. The bid award will be based on an "All or None" award (**multiple vendors are not acceptable.**) A contract resultant of this bid will be for an initial two-year term with possible extensions for up to two additional twelve month periods or any part of a twelve month period by mutual agreement between the contractor and the ABCWUA.

Continued purchase/use of the awarded Ferrous Chloride and/or Ferric Chloride, as specified, is contingent upon continued product quality in compliance with the minimum specification requirements outlined in these specifications. If, for any reason, the quality of either chemical degrades then the ABCWUA reserves the right to cancel the related chemical independently from the contract, and if both chemicals are affected then the ABCWUA reserves the right to cancel the entire contract. The contractor will receive notification prior to contract cancellation, and the ABCWUA will give the contractor the opportunity to correct the problem.

RAIL STATION DELIVERY SCHEDULE

Purpose: The ABCWUA rail station 70 holds storage tanks for Ferrous Chloride and Ferric Chloride. This rail station holds only two rail cars at one time. Ferrous Chloride and Ferric Chloride will be ordered separately.

The ABCWUA's goal is to prevent rail car pile up at station 70 and at holding areas, to prevent accidental discharge of chemical into an incorrect tank(s), to minimize demurrage charge if any, and to ensure that the ABCWUA continually receives each chemical as needed.

The WRD will order the Ferrous Chloride with individual WRD Release numbers; whereas the WUD will order the Ferric Chloride with individual WUD Release numbers. Each chemical order is to be invoiced per Release number, per order with the delivery location, and the division and requestor's name indicated on the invoice. It is mandatory that Ferrous Chloride and Ferric Chloride not be invoiced together.

The ABCWUA requests that the bidder complies with the following schedule requirements. The bidder must agree to the following schedule or submit a similar proposed schedule with the bid package. A recommendation of award will not be made until proposed schedules, if any, are reviewed by the ABCWUA. The ABCWUA has the right to accept or deny or negotiate proposed schedules prior to award of a contract.

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Overview of Requirements

It is necessary to develop an agreed upon schedule in order to meet the ABCWUA's specified goal. The following is an overview of what is required throughout the term of the contract:

- The WUA will place orders a minimum of fourteen (14) days in advance of the specified delivery date.
- The Supplier will deliver the ordered chemical on the specified delivery date.
- The WUA will transfer the product from the rail car(s) into the holding tank(s).
- The Supplier will remove the empty rail car(s) on a specified removal date.
- The Supplier will make the subsequent delivery on the next specified delivery date.

Delivery Requirements

Under normal circumstances as many as a total of four rail cars of Ferrous Chloride and/or Ferric

Chloride may be required each week. Typically, twice a week two cars of the same product may be received at Station 70. The WUA has the right to accelerate schedules as may be required. Also, lesser orders may be made, i.e., one or zero cars may be ordered for a specified date. The typical schedule is anticipated to be as follows:

- Product is ordered. Dates are specified for delivery and removal of railroad cars.
- Friday-Monday: Supplier delivers one or two railroad cars of either Ferrous Chloride or Ferric Chloride, per the order.
- Tuesday: WUA transfers product.
- Wednesday: Supplier removes empty railroad cars. Supplier delivers one or two railroad cars of either Ferrous Chloride or Ferric Chloride, per the order.
- Thursday: WUA transfers product.
- Friday-Monday: Supplier removes empty railroad cars. Supplier delivers one or two railroad cars of either Ferrous Chloride or Ferric Chloride, per the order.

In the event that an accelerated schedule is required, the Supplier may negotiate a new schedule with the ABCWUA or will modify the above typical schedule as follows to provide three deliveries and pickups per week:

- Friday: Supplier delivers one or two railroad cars of either Ferrous Chloride or Ferric Chloride, per the order.
- Saturday: WUA transfers product.
- Monday: Supplier delivers one or two railroad cars of either Ferrous Chloride or Ferric Chloride, per the order.
- Tuesday: WUA transfers product.
- Wednesday: Supplier removes empty railroad cars. Supplier delivers one or two railroad cars of either Ferrous Chloride or Ferric Chloride, per the order.
- Thursday: WUA transfers product.