

INVITATION FOR SEALED BID

TAC #579

**Description: Chlorine Dioxide
Department: PUBLIC WORKS**

NIGP Commodity Code(s): 885-00-00-00-000-0

Total pages including this page is 19

NOTE: FAXING OF BID WILL NOT BE ACCEPTED

Important Instruction – Read Carefully:

**If you have obtained these bid specifications from either of:
City of Tulsa's Fax-on-Demand (918-596-1171) or
City of Tulsa's Web-site : www.cityoftulsapurchasing.org**

**you must notify the buyer Darlene Donica of your intent to bid by
e-mail ddonica@ci.tulsa.ok.us in order to receive addenda. The buyer
will always acknowledge your e-mail for your records. All addenda
will be posted on fax-on-demand and the web-site.**

TABLE OF CONTENTS

Pay special attention to those pages with a reference to the following notes:

Note #1: Signature of authorized agent required

Note #2: Signature of an authorized agent and notarized required

Table of Contents		2
Invitation for Sealed Bid	(Note #1)	3
General Terms and Conditions		4
Interest Affidavit	(Note #2)	5
Bidder Affidavit	(Note #2)	6
Contractor Information Sheet		7
Summary Price Sheet		8
Specifications		9-19

Your bid response should follow the same format listed above plus any additional format requested in the body of the bid invitation.

**INVITATION FOR SEALED BIDS
TO
City of Tulsa**

200 CIVIC CENTER, ROOM 109, TULSA, OKLAHOMA 74103

Bid number and date of bid opening must appear on the lower
left outside corner of bid envelopes and all related containers.

DATE OF OPENING: **APRIL 26, 2001**

BID NUMBER: **TAC 579**

BID MUST BE IN THE CITY CLERK'S OFFICE AT THE ABOVE ADDRESS BY 5:00 P.M. THE DAY PRECEDING THE "DATE OF OPENING" SHOWN ABOVE.

BIDS WILL BE OPENED AT 8:30 A.M. IN THE CITY COUNCIL ROOM ON THE DAY SPECIFIED UNDER "DATE OF OPENING."

PUBLISHED IN THE TULSA DAILY COMMERCE AND LEGAL NEWS: **APRIL 16, 17, 18, 19, 20, 2001**

Bid must be accompanied by bidder's bond, cashier's check or certified check in the amount of: **NONE**

PLEASE READ TERMS AND CONDITIONS ON THE NEXT PAGE BEFORE COMPLETING BID DOCUMENTS

DARLENE DONICA 918-596-7558

THE FOLLOWING SECTION MUST BE COMPLETED BY BIDDER

Delivery will be made in not more than _____ days after receipt of order.

Payment terms _____ % _____ days.

City of Tulsa may increase quantity of order at the unit price bid for _____ days. (Bidder to Specify Days) I have examined the terms and specifications and the instructions to bidders herein and agree, provided I am awarded a contract, to provide the above described items for the sum shown in accordance with the terms and specifications stated herein. All deviations are in writing and attached hereto.

Enclosed is a [] BID BOND ; [] CASHIER'S CHECK; [] Certified Check in the amount of \$ _____, which I agree the City of Tulsa may retain as liquidated damages in the event of my failure to comply with the terms of this bid.

MUST BE SIGNED BY AUTHORIZED AGENT TO BE VALID

FIRM NAME _____ by _____
(Signature)

STREET _____ TITLE _____

CITY STATE _____ ZIP CODE _____ PHONE NUMBER _____ DATE _____

GENERAL TERMS AND CONDITIONS OF BIDS

THESE ITEMS APPLY TO AND BECOME A PART OF THE BID.

NO EXCEPTIONS TO THESE TERMS & CONDITIONS WILL BE CONSIDERED.

1. **BIDS MUST BE SUBMITTED ON THIS FORM ONLY INCLUDING A SIGNATURE OF AN AUTHORIZED AGENT.** Each bid shall be placed in a separate envelope. Be sure envelope is completely and properly identified and sealed, showing the bid number and date in the lower left hand corner. Bids must be time stamped in the office of the City Clerk by 5:00 P.M. on the day before date of opening.
2. No bidder may withdraw his proposal for a period of thirty (30) days after the date and hour set for the opening of bids.
3. All prices shall be quoted F.O.B. Tulsa, Oklahoma, and delivery to City of Tulsa location shall be without additional charge.
4. The bidder shall attach the manufacturer's name of the equipment or material to be furnished, type, model numbers, manufacturer's descriptive bulletins and specifications. All guarantees and warranties should be clearly stated. This data shall be in sufficient detail to describe accurately the equipment or material to be furnished. Manufacturer's specifications, in respect to the successful bidder, shall be considered as part of his contract with the City of Tulsa.
5. The bidder shall show in the proposal both the unit prices and total amount, where required, of each item listed. In the event of error or discrepancy in the mathematics, the unit prices shall prevail.
6. Any exceptions or deviations from written specifications shall be shown in writing and attached to the bid form.
7. Each bidder agrees to comply with the terms of Title 5, Chapter 1, of Tulsa, Oklahoma Charter and revised ordinances relating to equal employment opportunity.
8. **THE ENCLOSED FORMS REGARDING NON-COLLUSION AND FINANCIAL INTEREST MUST BE SIGNED, NOTARIZED, AND RETURNED WITH THE BID.**
9. The City of Tulsa reserves the right to reject any and all bids, to waive any technicalities in the bidding, and to award each item to different bidders or all items to a single bidder.
10. All bids must be accompanied by bidders bond, cash, certified or cashier's check in the amount shown on the face of the bid form. This amount shall be retained by the City of Tulsa as liquidated damages in the event the successful bidder (or bidders) fails to execute a contract, if required. The bidder agrees that said amount is presumed to be the damages sustained by the City due to the impracticability and extreme difficulty in fixing the actual damages. The office of the City Clerk will return the bid deposits to the unsuccessful bidders, after a contract has been awarded or all bids have been rejected.
11. In the event cash discounts are offered by the bidder, the discount date shall begin with the date of invoice, the date of receipt of all material covered by the purchase order, or the date of receipt by the City of Tulsa of the original copy of the purchase order with properly executed Affidavit of Claimant, whichever is the later date.
12. Direct purchase of certain items of equipment or material by the City of Tulsa are exempt from Federal Excise Tax and Oklahoma Sales Tax. In such cases the bidder shall quote prices which do not include Federal Excise Tax and Oklahoma Sales Tax. The City of Tulsa will furnish executed exemption certificates upon presentation by the bidder at the time of purchase.
13. Bid must show number of days required for delivery under normal conditions. Failure to state delivery time obligates bidder to complete delivery in fourteen (14) calendar days. Unrealistically short or long delivery promises may cause bid to be disregarded. Contractor must keep Purchasing Department advised at all times of status of order. Default in promised delivery or failure to meet specifications authorizes the Purchasing Agent to purchase supplies elsewhere and charge full increase of cost and handling to defaulting contractor. Consistent failure to meet delivery promises without valid reason may cause removal from bid list.
14. Bidder agrees to defend and save City of Tulsa from and against all demands, claims, suits, costs, expenses, damages and judgments based upon infringement of any patent relating to goods specified in this order or the ordinary use or operation of such goods by City or use or operation of such goods in accordance with bidders direction.
15. If the bid requires a written contract, the successful bidder shall execute a written contract with the City of Tulsa and return the required bonds and insurance certificates within ten (10) days after submission of contracts to said bidder by the City.

INTEREST AFFIDAVIT

STATE OF _____ }
 } ss
COUNTY OF _____ }

_____, of lawful age, being first duly sworn, states that s(he) is the agent authorized by the bidder to submit the attached bid. Affiant further states that no officer or employee of the City of Tulsa either directly or indirectly, owns a twenty-five percent (25%) interest in the bidder's business or such a percentage which constitutes a controlling interest. Affiant further states that the following officers and/or employees of the City of Tulsa have some direct or indirect interest in the bidder's business:

By _____
(Signature)

(Title)

Subscribed and sworn to before me this _____ day of _____, 19____.

NOTARY PUBLIC SIGNATURE

My Commission Expires:

The Interest Affidavit must be completed, signed by an authorized agent, and notarized.

BIDDER AFFIDAVIT - TITLE 74 O.S. (1974 SUPP.) 85.22-85.25

STATE OF _____ COUNTY OF _____

_____, of lawful age, being first duly sworn on oath says
Authorized Agent

1. (s)he is the duly authorized agent of _____, the bidder submitting the competitive bid which is attached to this statement, for the purpose of certifying the facts pertaining to the existence of collusion among bidders and between bidders and municipal officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to the bid to which this statement is attached.
2. (s)he is fully aware of the facts and circumstances surrounding the making of the bid to which this statement is attached and has been personally and directly involved in the proceedings leading to the submission of such bid; and
3. neither the bidder nor anyone subject to the bidder's direction or control has been a party;
 - a. to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding,
 - b. to any collusion with any municipal official or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract, nor
 - c. in any discussions between bidders and any municipal official concerning exchange of money or other thing of value for special consideration in the letting of a contract.

SIGNATURE OF AUTHORIZED AGENT

Subscribed and sworn to before me this _____ day of _____, 19_____.

Signature of Notary Public

MY COMMISSION EXPIRES

The Bidder Affidavit must be completed, signed by an authorized agent, and notarized.

CONTRACTOR/BIDDER INFORMATION SHEET

**To be completed by all Bidders
For Contracts with the City of Tulsa
(Please print or type)**

Project No. or Description _____

Full Name of Bidder _____

Legal Identity
(Corporation, Partnership,
Individual, etc.) _____

Address _____

Telephone No. _____

FAX No. _____

Taxpayer Identification Number _____

Contact Person _____

Phone No. _____

Fax No. _____

E-mail address _____

Webpage Address _____

Price Sheet Summary

Vendor Name: _____ Signature: _____
Date: _____

You will be able to obtain a copy of the Bid Summary on the City of Tulsa's Purchase-Net Fax-on-Demand and Website shortly after bid opening.

TAC 579

The bidder shall provide a separate cost for each of the following items:

1. Chlorine dioxide generator (leased) for the trial period. This cost will include the chlorine dioxide generator, Installation, start-up, technical support, and analytical Testing. \$ _____
2. Cost of sodium chlorite (bulk) for the trial period. \$ _____/lb
3. Cost to purchase the chlorine dioxide generation equipment At the end of the trial period. \$ _____
4. Cost of a new, unused, and current manufacture chlorine dioxide Generation equipment. \$ _____
5. Additional charge per one-quarter hour beyond the four(4) hour of free time \$ _____/per 1/4 hour

Any other charges or provisions anticipated by the bidder, which are not shown in these specifications, must be included in the bid submitted under the price for sodium chlorite.

For questions please contact: Monte Hannon @ 596-9598

**TAC 579
CHLORINE DIOXIDE TRIAL
PUBLIC WORKS DEPARTMENT**

INTENT:

To obtain a supply of sodium chlorite and an on-site generator to produce chlorine dioxide as a preoxidant at the City of Tulsa's AB Jewell Water Treatment Plant.

CONTRACT TIME:

The terms of the contract shall extend for a period of six months beginning from the date of written authorization to proceed with the trial. As part of this agreement the bidder must guarantee a price for aqueous sodium chlorite for the six-month trial period. **The contract period shall serve as an evaluation period after which the City of Tulsa may purchase the generation equipment outright and re-bid sodium chlorite or continue the lease of the equipment.** If the latter should occur, the contract shall be renewable with the consent of both parties for two (2) successive one (1) year periods. The City reserves the right to reject any and all bids and to award the contract to the bidder whose bid best serves the interest of the City.

HAZARD COMMUNICATION STANDARD:

The Oklahoma Hazard communication Standard is hereby made a part of this specification. The bidder shall provide Material Safety Data Sheets (MSDS) on products delivered under this contract. The MSDS shall be equivalent to a U.S. OSHA Form 20 MSDS. An MSDS shall be provided with every shipment of products.

AFFIDAVIT OF COMPLIANCE:

The seller shall supply an affidavit with the executed contract stating that all products furnished under this contract shall comply with all applicable requirements of AWWA for sodium chlorite. All chemicals must be NSF certified. A copy of the NSF certification shall be provided for all chemicals before any shipment is made. **An affidavit of compliance shall accompany each delivery.**

The Oklahoma Department of Environmental Quality (ODEQ) must approve the proposed chlorine dioxide system for use at the AB Jewell Water Treatment Plant. The successful bidder shall provide documentation with their bid submittal that the proposed system is approvable for use in this application by ODEQ.

EXPERIENCE:

All bidders shall have a minimum of five (5) years experience in U.S. installations of the type being proposed with a five-year satisfactory service level. A list of installations similar to the one specified including technical contacts shall be furnished to the City of Tulsa upon request.

PRICE ADJUSTMENT OPTION:

The price paid for a commodity under this contract shall not change during the term of this contract.

ALTERING BIDS:

Bids cannot be altered or amended after submission deadline. Any interlineation, alteration, or erasure made before opening time and date must be initialed by the signer of the bid, guaranteeing authenticity. Bids must be submitted in ink or typewritten. Penciling will not be accepted.

PRICING:

Bid prices, unless otherwise specified, must be net, including transportation and handling charges fully prepaid by vendor to destination and subject only to cash discount for prompt payment of invoice.

ADDENDA AND INTERPRETATIONS:

If it becomes necessary to revise any part of this bid, a written addendum will be provided to all the bidders. The City of Tulsa is not bound by any oral representations, clarifications, or changes made in the written specifications by City of Tulsa employees unless such clarification or change is provided to bidders in written addendum form from the Purchasing Division.

AWARD OF BID:

The bid shall be awarded to the firm whose proposal is responsive to the bid and is most advantageous to the City, considering the factors identified in the bid and Section 406E of Title 6, The Purchasing Ordinance set forth below:

406E. AWARD OF CONTRACT

1. Authority in the Mayor. The Mayor shall have the authority to award contracts within the purview of this chapter.
2. Lowest Secure Bidder. Contracts shall be awarded to the lowest secure bidder meeting specifications. Bid Specifications may include a point system for evaluating

the lowest secure bid. In determining "lowest secure bidder", in addition to price, the following factors shall be considered:

- a. The ability, capacity and skill of the bidder to perform the contract or provide the service required;
- b. whether the bidder can perform the contract or provide the service promptly or within the time specified, without delay or interference;
- c. the character, integrity, reputation, judgment, experience and efficiency of the bidder;
- d. the quality of performance of previous contracts or services;
- e. the previous and existing compliance by the bidder with laws and ordinances relating to the contract or service;
- f. the sufficiency of the financial resources and ability of the bidder to perform the contract or provide the service;
- g. the quality, availability and adaptability of the supplies or contractual services to the particular use required;
- h. the ability of the bidder to provide future maintenance and service for the use of the subject of the contract;

CHLORINE DIOXIDE PROCESS DESCRIPTION:

Chlorine dioxide shall be generated using the chlorine gas and sodium chlorite reaction under vacuum without the use of chemical metering pumps, separate mineral acid feed, or excess chlorine feed. An inline pH monitor shall monitor the reaction and a digital readout shall indicate the pH of the reaction. An automatic control valve shall adjust the sodium chlorite flow in response to changes in the raw water flow or chlorine dioxide residual. A linear flow device constructed of material compatible with the chemical shall measure the sodium chlorite flow. The actual sodium chlorite flow shall be the process variable for the sodium chlorite PID controller. The PID controller shall automatically adjust the chlorine gas feed rate to maintain the proper ratios. An automatic control valve shall adjust the chlorine gas feed rate to maintain a constant pH. The bidder shall provide a detailed description of the control system for the chlorine dioxide generator with the proposal.

1.0 General

1.1 All chlorine equipment shall meet the requirements of the Chlorine Institute

- 1.2 The chlorine dioxide generator shall be installed in the existing Chemical Feed Building (see drawing). The bidder shall provide a list of equipment and Floor plan showing how the proposed equipment will be arranged. All Equipment fit into the area designated.
- 1.2 To assure a complete and coordinated system a single supplier shall Furnish the chlorine dioxide generation system and appurtenant equipment.

2.0 Chlorine Dioxide Generator:

- 2.1 The chlorine dioxide generator shall be capable of producing a maximum of 1,250 pounds of chlorine dioxide per day. During the trial, raw water flows are expected to range from 25 MGD to 110 MGD, and ClO₂ doses may range from 0.2 mg/l to 1.5 mg/l depending on raw water demand. Turndown requirement may be met with multiple generators.
- 2.2 The chlorinator shall be a vacuum-operated solution feed type. It shall be of The sonic flow design and equipped with a flow meter having an integral scale and 20:1 range.
- 2.3 The chlorine flow control valve shall consist of a PVC housing containing a Precision shaped valve plug and corrosion resistant plastic seat. A control valve operator consisting of a solid-state electronic circuit, a servo motor, and a mechanism to position the plug valve shall position the plug with respect to the seat. A manual override knob shall allow manual operation of the valve.
- 2.4 The sodium chlorite flow control valve shall consist of a PVC housing Containing a precision shaped valve plug and seat. A stepping motor in 400 precise steps shall position the plug. A manual override knob shall allow manual operation of the valve.
- 2.5 Vacuum for the induction of both chemicals through the chlorine dioxide Generator shall be via water operated eductor. The eductor shall have available a selection of nozzles for optimizing the vacuum required and correct flow rate for the proper chlorine dioxide solution strength.

3.0 Controls:

- 3.1 The chlorine dioxide generating system shall respond to a 4-20 ma signal, which represents plant water flow. The flow-pacing signal shall be an input to the chlorine dioxide control panel. This shall allow the sodium chlorite flow controller to modulate the sodium chlorite flow control valve.
- 3.2 The chlorine dioxide system controller shall also accept a dosage set point furnished either by a local set point, or remotely by a future residual analyzer. The combination of this output signal with the flow-pacing signal will determine The proper ratio of chlorine dioxide flows to produce the required chlorine Dioxide residual.

3.3 All controls shall be mounted on a wall panel. Start-stop controls shall be furnished for local operation. NEMA 4X enclosures shall house all controls. All components shall be fully accessible from the front.

3.4 The chlorine dioxide generator shall shutdown when one of the major components fails as listed below:

- a) LOW CHLORINE GAS: An excess vacuum signal shall be used to induce a low chlorine gas signal.
- b) SODIUM CHLORITE FLOW DEVIATION: The sodium chlorite flow meter shall be compared to the flow set point if the actual flow falls +/- 10% of the set point an alarm shall signal.
- c) LOW WATER PRESSURE: A pressure transducer in the eductor water supply piping shall be used as a redundant shutdown control similar to the loss of vacuum signal. A time delay for shutdown control shall be incorporated in the circuitry so as to prevent inadvertent shutdown on a momentary drop in flow.
- d) GENERATOR LOW VACUUM: A loss of vacuum switch shall be provided to alarm the operator should the eductor vacuum lose vacuum.
- e) PH DEVIATION ALARM: pH indicator shall have adjustable high and low alarm contacts to alarm the operator should the reaction become unbalanced.
- f) LOW SODIUM CHLORITE LIQUID: A low-level alarm switch shall be provided in the sodium chlorite day tank to indicate when the sodium chlorite reaches a minimum operating level.

Note: All alarms shall be interlocked to prevent nuisance alarms on ordinary startup and shutdown.

3.5 An alarm panel with annunciators shall be furnished at the chlorine dioxide control panel of each generating facility specified. The alarms shall have contacts for remote indication and shall include the following:

- a) Low chlorine gas
- b) Sodium chlorite low flow
- c) Low water pressure
- d) Generator low vacuum alarm
- e) PH high/low alarm
- f) Low sodium chlorite liquid.

Annunciators shall be ISA Sequence A. The required features are:

- a) Window size: 1 X 3
 - b) Lamps: long life, two per window.
 - c) Engravings: ¼ minimum
 - d) Repeat contacts: required for each point wired to terminal blocks
 - e) Spare points: fully equipped – no engraving
 - f) Logic: Solid-state cards
 - g) Field contacts: 24 VDC
- 3.6 The current system production of chlorine dioxide and the current system set point shall be indicated on the control panel. The readout shall be based on the chlorine dioxide solution flow.
- 3.7 The chlorine dioxide control panel shall provide output signals for remote monitoring of both the pH level and sodium chlorite flow rates. Each output signal shall be 4-20ma DC isolated capable of driving 600 ohms.

STORAGE TANK:

The bidder shall provide one (1) high-density polyethylene storage tank, the approximate capacity of 650 gallons, to be used as a day tank. The storage tank shall be no larger than 60 inches in diameter. The bidder shall provide certification that the tank provided is compatible with sodium chlorite solution.

INSPECTION PROGRAM:

The successful bidder will perform monthly inspections of the system at a minimum. During each inspection, the successful bidder's technician shall perform the following:

1. Inspect the entire chlorine dioxide system for leaks and malfunctions of the equipment.
2. Analyze generator effluent by amperometric titration to insure a minimum 95% conversion of sodium chlorite to chlorine dioxide.
3. Analyze treated water for chlorine dioxide by amperometric titration and compare to the local analyst's results.
4. Provide for the analysis of five samples per month (four samples and a duplicate) for chlorite and chlorate by ion chromatography (EPA Method 300.0 or 300.1). All laboratory analysis shall be provided by laboratory certified to perform the requested analysis for drinking water.
5. Provide a written field service report detailing the inspection, maintenance, and all other findings.

Monthly service visits shall be performed during regular business hours, excluding City of Tulsa holidays. However, a service representative shall be available to the City of Tulsa 7 days a week, 24 hours a day in case of an emergency involving equipment or services provided as part of this contract. The bidder shall provide a detailed description of the support that will be provided as well as a description of how quickly they will be able to respond to an emergency situation.

TRAINING:

The successful bidder shall, at no additional charge, provide start-up and on-site operator training. Operator training shall cover the following areas:

1. Physical properties and safety training for the use of chlorine dioxide and sodium chlorite.
2. Safety training on the generator operation and chemical handling.
3. Chemistry of chlorine dioxide generation.
4. Method to optimize generator performance
5. Maintenance procedures
6. Sampling procedures.

INSTALLATION AND START-UP:

1. Equipment manufacturer shall furnish all labor necessary for installation of the chlorine dioxide generator(s) by a qualified service representative.
2. Start-up of the generator system(s) shall be by a qualified service representative. The representative shall certify that the equipment has been properly installed in an equipment installation report and that City of Tulsa personnel have been trained to operate the equipment
3. The following list shows items that the City of Tulsa shall provide:
 - a) **INSTALLATION:**
Suitable level site or foundation pad
Secondary containment
Safety shower and eyewash station
Adequate drain and wash down hose
Unloading, uncrating, positioning, and mounting.
 - b) **ELECTRICAL POWER AND UTILITIES:**
120 volt, 60 cycle, 1 phase with line protection
Power wiring and/or conduit to/from system and monitors
Potable grade water and pressure
Freeze protected environment and/or pipe wraps.
 - c) **PIPING AND MECHANICAL:**
Connection point to the existing bulk chlorine supply system
Inlet and outlet schedule 80 PVC piping to application points
Piping fittings to/from any remote equipment manufacture ancillary system.
Carrier trays or supports.

WARRANTY:

The equipment manufacturer shall warrant all parts free from defective material and workmanship for the contract period, and furnish to the owner replacements for any such items found to be defective during that period. If the City should decide to purchase the chlorine dioxide generator equipment following the trial period, the

equipment manufacturer shall warrant all parts for a period of one year following the date of purchase.

MANUALS:

The bidder shall supply a minimum of two copies of the Operation and Maintenance Manual, which provide complete instructions for the equipment installation, start-up, operation, and maintenance. The manuals shall include illustrations, dimensions, materials, performance capabilities, and wiring diagrams.

SPARE PARTS:

The following spare parts shall be provided for the chlorine dioxide system:

1. pH electrode complete – Qty 1
2. Complete o-ring set for sodium chlorine rotameter – Qty 1
3. Complete o-ring set for gas chlorine rotameter – Qty 1
4. Eductor nozzle – Qty 1
5. Bulbs of each type – Qty 5

The bidder shall comply with all provisions of the American Water Works Association Standard for Aqueous Sodium Chlorite, (AWWA B303-95, or latest edition) unless stated otherwise herein. The aqueous sodium chlorite solution shall meet the following specifications:

1. Active Ingredient (by weight as 100% active sodium chlorite NaClO_2): 25% (+/- 1.0% by wt.)
2. Inert Ingredient (sodium salts): 75% (+/-1.0% by wt)
3. NaNO_3 or NaCl (maximum 5.0%)
4. Chlorate content (as NaClO_3 maximum 0.8%)
5. Total Alkalinity Max. (as CaCO_3 maximum 13,000 mg/L)
6. Density lbs per gallon at 68 degrees F (minimum 10.15, maximum 10.50)
7. PH – Strongly alkaline
8. Appearance – Clear, slightly yellow, no visible turbidity and no appreciable sediment upon standing for 24 hours at ambient temperature.
9. Stability – Alkaline stock solutions are stable indefinitely
10. Shelf Life – 1 year minimum

The potable water demand shall determine the total amount of aqueous sodium chlorite required. **No minimum or maximum is guaranteed.** As a reference only the total pumpage at the A.B. Jewell Water Plant from July 1, 1999 to June 30, 2000 was 19,419 billion gallons.

DELIVERY:

Delivery of liquid sodium chlorite shall be in bulk and placed in existing fiberglass bulk storage tanks. Unloading and placement in storage is the responsibility of the bidder.

For safety reason, a City of Tulsa operator shall be present during the connection and disconnection of hoses for bulk filling.

Deliveries shall be made to:

A. B. Jewell Water Treatment Plant
18707 E. 21st., Tulsa, OK

Deliveries should be made between the hours of 7:00 a.m. and 2:00 p.m. Monday through Friday. No deliveries shall be made on City of Tulsa recognized holidays.

1. Shipping Invoice
2. Affidavit of Compliance
3. Bulk shipments to A.B. Jewell will require: Weighmaster's Certificate of Weight-Certificate must be from a local certified scale. Attached is a list of local certified scales.

Certified Scales

Bruce's Tulsa Truck Plaza, I-44 & 161st East Ave

Quick-Trip Truckstop, I-44 & 161st East Ave

Quick-Trip Truckstop, I-44 & 49th West Ave

Flying J Travel Plaza, 27 N. 129th East Ave

(Other area scales are available)

4. A certificate that delivery trailers are dedicated to the delivery of one product only or a certificate that the trailer was properly cleaned for the transport of the delivered product.

UNLOADING DURATION:

Unloading time shall be free of charge for a minimum of four (4) hours beginning upon arrival of the cargo trailer at the AB Jewel Water Treatment Plant, **with proper certification**, and ending upon its departure from the property. In no case will demurrage be charged if the bidders unloading time exceeds free time through no fault of the City. No charge shall be made for rejected shipments. Additional charges for each quarter of an hour beyond four (4) hours of free time shall be as quoted on the bid submittal.

EMERGENCY:

In the event of an emergency caused by the successful bidder for any reason, the bidder shall have a trained response team on-site within one hour of notification. A telephone number(s) which is continuously staffed shall be provided for this purpose.



AMERICAN INSTITUTE OF CHEMICAL ENGINEERS
 350 BROADWAY
 NEW YORK, N.Y. 10013



ARCHITECTS
 1000 BROADWAY
 NEW YORK, N.Y. 10018

PROJECT: CHEMICAL BUILDING
 SHEET: 8-11
 DATE: 10/1/61

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DATE: 10/1/61
 DRAWN BY: J. J. HARRIS
 CHECKED BY: J. J. HARRIS

SCALE: 1/8" = 1'-0"

ARCHITECTURAL
 CHEMICAL BUILDING
 BUILDING FLOOR PLAN

NOTE: 1) ACCURATE DIMENSIONS FOR A PARTIAL SECTION OF DETAILS, LOCATIONS, POINTS, AND DISTANCES, SHALL BE OBTAINED FROM THE ARCHITECT'S DRAWINGS AND NOT FROM THIS FLOOR PLAN. 2) ALL DIMENSIONS SHALL BE TO FINISH UNLESS OTHERWISE NOTED.

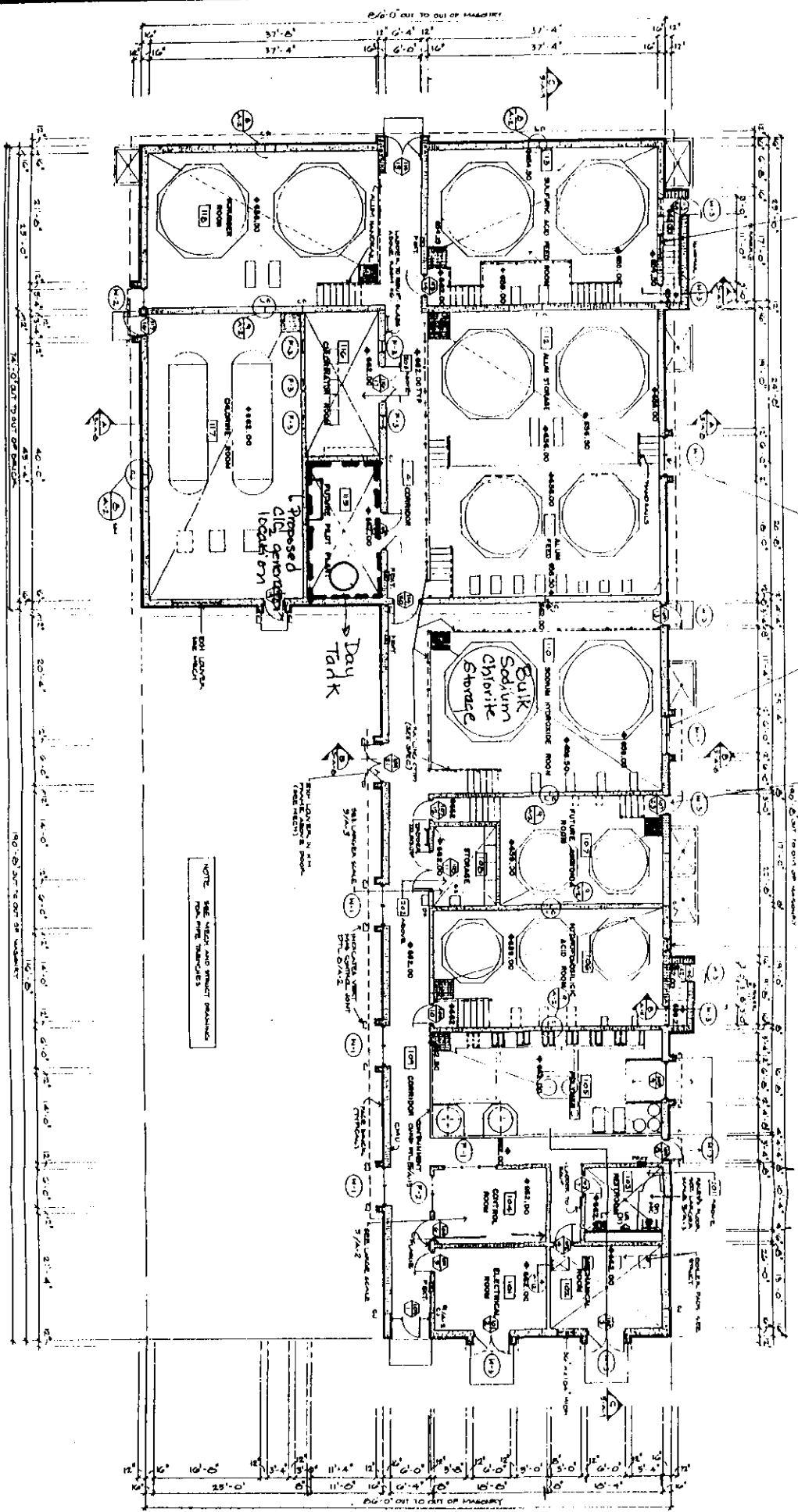
NOTE: SEE MECH AND ELECTR DRAWINGS FOR PIPE SCHEDULES

NOTE: 1) ACCURATE DIMENSIONS FOR A PARTIAL SECTION OF DETAILS, LOCATIONS, POINTS, AND DISTANCES, SHALL BE OBTAINED FROM THE ARCHITECT'S DRAWINGS AND NOT FROM THIS FLOOR PLAN. 2) ALL DIMENSIONS SHALL BE TO FINISH UNLESS OTHERWISE NOTED.

FLOOR PLAN
 SCALE: 1/8" = 1'-0"



NOTE: 1) ACCURATE DIMENSIONS FOR A PARTIAL SECTION OF DETAILS, LOCATIONS, POINTS, AND DISTANCES, SHALL BE OBTAINED FROM THE ARCHITECT'S DRAWINGS AND NOT FROM THIS FLOOR PLAN. 2) ALL DIMENSIONS SHALL BE TO FINISH UNLESS OTHERWISE NOTED.



SHEET 81
 DEC 8-11
 1000 BROADWAY
 NEW YORK, N.Y. 10018