

**TECHNICAL SPECIFICATIONS**  
**FOR**  
**CONTRACT FOR SUPPLY OF LIQUID CHLORINE**  
**(ITB# 23-007-00129)**

1. Bidder shall guarantee that all quantities of liquid chlorine (elemental gas) supplied shall meet the following standards and requirements:
  - a. Shall be in conformance with ANSI/AWWA B301-18 and/or the latest revision or addendum applicable to this material as used in the treatment of wastewater and reclaimed water.
  - b. Shall be free of moisture and iron with a minimum 99.5% purity by volume.
  - c. Liquid chlorine supplied shall meet the following impurity standards:

<b><u>Impurity Constituent</u></b>	<b><u>Maximum Limit (mg/kg)</u></b>
Carbon Tetrachloride	100
Trihalomethanes	300
Mercury	7

2. Supplier shall have a cylinder maintenance and refurbishment/replacement program in accordance to Chlorine Institute standards and be able to provide such documentation upon request. Cylinders which have misaligned valves which prevent the installation of the chlorine feed equipment as well as valves which require excessive torque to be applied above Chlorine Institute recommendations. Upon discovery of these types of valve conditions, the supplier shall remove the affected cylinders from the site within 72-hours of District notification. The District is not responsible and shall not be liable, under any circumstance, for any charges associated with the unplanned pick-up of any non-complying cylinders. Supplier shall provide new lead gaskets with every one-ton cylinder (Typical of 2 per cylinder delivered). A total of one (1) new lead gasket shall be placed at all appropriate locations. The use of multiple lead gaskets at a single location will not be acceptable including within the valve outlet cap.
3. Cylinders shall be delivered to the District's WWTP site with painted arrows on the valve end of each one-ton cylinder indicating the 12-O'Clock position of the two valves. The arrows shall be visible when the protective bonnet is in place, thereby allowing proper positioning of the cylinder prior to removing the bonnet. The preferred area of placement is on the chime portion of the cylinder.

4. All one-ton cylinders delivered to the District's WWTP shall be labeled with the container number, dates of hydrostatic tests, and water capacity stamped on the portion of the chime at the valve end of each cylinder. Each of these items should be easily visible to the District staff.
5. The vendor shall supply a list of no less than five (5) references that can verify use of the product in a wastewater treatment plant in the State of Florida.
6. The manufacturer or vendor shall furnish an affidavit attesting that the liquid chlorine complies with all applicable specifications referenced in within this document.
7. Vendor shall certify liquid chlorine as suitable for contact with or treatment of drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals Health Effects. Evaluation shall be performed in accordance with requirements that are no less restrictive than those listed in ANSI/NSF Standard 60. Certification shall be performed by a certification organization accredited by the American National Standards Institute. A copy of that certification shall accompany bid documents.
8. Liquid chlorine shall be supplied and delivered in approved one-ton cylinders in accordance with specifications of the United States Department of Transportation and Florida Department of Transportation. Where a conflict exists between the two, the stricter of the two requirements shall govern. An affidavit of compliance or certificate of analysis may be required for delivery. The supplier shall provide the most up to date version of the Safety Data Sheet (SDS). Successful bidder shall also certify that the weight in tons of liquid chlorine in each delivered cylinder, as well as the gross weight in tons of the liquid chlorine and one-ton containers, shall be provided with the documentation at each delivery. The typical (i.e., may vary) quantity of delivery is eight (8), one (1) ton containers. Upon receipt of an order request via email from the District, the vendor shall make delivery of the requested number of one-ton cylinders within 96-hours.
9. Successful vendor shall provide their standard operating procedures for their drivers to the District's Safety and Compliance Officer prior to the first delivery. A copy of the District's current standard operating procedure for the delivery and offloading of liquid chlorine at the District's WWTP shall be provided to the successful bidder prior to the first delivery. All procedures shall be reviewed for acceptance and in compliance with the provisions of OSHA, Subpart H, 1910.119, titled "Hazardous Materials". Upon entering the District's WWTP, the driver is required to observe all safety and security policies, rules and approved standard operating procedures.
10. Successful Bidder shall provide documentation of driver(s) training and a list of the drivers and their licenses for identification for deliveries. This list shall be kept current. Training

and refresher courses are as required per OSHA - PSM 1910.119. Workers (drivers) trained in the handling are expected to wear proper protective clothing, goggles, face shields, and masks. Drivers observed disregarding safety procedures will not be tolerated at the District's WWTP site.

11. District Staff shall be promptly notified in the event of a chemical spill/leak. Mitigation and cleanup of any chemical spills/leaks due to vendor driver error or failure of his/her equipment shall be the responsibility of the vendor and shall follow all applicable local, State and Federal requirements.
12. Bidder certifies that all materials, equipment, and hardware used in the conveyance and handling of liquid chlorine, one-ton cylinders and other supporting equipment contained in this bid meets all OSHA requirements. Successful bidder certifies any materials, equipment, and hardware used in the conveyance and handling of chlorine that is delivered and subsequently found to be deficient in any OSHA requirement in effect or faulty on date of delivery or found by the Owner after delivery, all costs necessary to bring the materials, equipment, and hardware used in the conveyance and handling of chlorine, and/or repair damage resulting from deficiency, into compliance with the aforementioned requirements shall be borne by the bidder, including returning to the District's WWTP site to remove the materials, equipment, and hardware.
13. Point of Delivery: Loxahatchee River Environmental Control District Wastewater Treatment Plant site, 2500 Jupiter Park Drive, Jupiter, FL 33458.
14. Deliveries shall be accepted between 8:00 a.m. and 3:00 p.m. Monday through Friday excluding District Holidays or as otherwise approved by the District. Strict observance to the delivery times shall be enforced for the duration of the Contract unless it is in the best interests of the District to accept deliveries before 8:00 a.m. and/or after 3:00 p.m.
15. All quantities listed are estimated and are to be used only as a guide in preparing bids. Quantities delivered shall be made as requested by the Owner.
16. To be bid F.O.B. Delivered to the District's WWTP.
17. Escalation/de-escalation for freight will not be permitted under this Contract.
18. No escalation will be permitted for an increase in chemical cost for the duration of this contract.