



**TOWN OF YORKTOWN**  
**BID AND SPECIFICATIONS**  
**FOR**  
**VARIOUS CHEMICALS**  
**FOR THE**  
**YORKTOWN HEIGHTS**  
**WATER POLLUTION CONTROL PLANT**

Tom Diana  
Town Supervisor

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Town Engineer

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Assistant Superintendent  
Wastewater Treatment

**Dated: January 2023**

**INVITATION TO BID**

**VARIOUS CHEMICALS  
FOR THE  
YORKTOWN HEIGHTS WATER POLLUTION CONTROL PLANT**

**TOWN OF YORKTOWN, NEW YORK**

Sealed proposals will be received by the Town Clerk of the Town of Yorktown, Westchester County, New York, at the Town Hall, 363 Underhill Avenue, Yorktown Heights, New York, until **10:00 A.M., Thursday, February 16, 2023** for **Various Chemicals for the Yorktown Heights Water Pollution Control Plant, Bid #23-1**.

The bidder assumes the risk of any delay in the mail or in the handling of mail by the employees of the Town of Yorktown. Whether sent by mail or means of personal delivery, the bidder assumes the responsibility for having bids in on the time and the place specified above.

The Town of Yorktown reserves the right to waive any informalities in the bids, to reject any or all bids and reserves the right to accept that bid which it deems most favorable to **the interests of the Town of Yorktown**. **No bidder may withdraw his bid within sixty (60) days** after the actual date of the opening thereof.

Specifications and standard proposals for the bid may be obtained at the office of the Town Clerk at said Town Hall. Bid documents may also be obtained on the Town of Yorktown's website at [www.yorktownny.org](http://www.yorktownny.org) and [www.EmpireStateBidSystem.com](http://www.EmpireStateBidSystem.com).

All questions shall be submitted in writing to the Town Clerk at 363 Underhill Avenue, Yorktown Heights, NY 10598; email [dquast@yorktownny.org](mailto:dquast@yorktownny.org). The subject heading for all e-mails shall be:

**Subject: Various Chemicals for the Yorktown Heights Water Pollution Control Plant**

No response will be given to questions received less than five (5) business days before the Bid opening date. If mailed, sealed proposals must be addressed in care of the Town Clerk at the above address.

A submitted bid will consist of the following:

1. One original completed **Bid Proposal Form**, signed on behalf of Bidder with information for all blanks supplied, and a detailed listing of any exceptions taken by Bidder; and
2. Executed Option to Renew
3. A signed and notarized Non-Collusive Bidding Certificate.

Diana L. Quast  
Town Clerk

# TOWN OF YORKTOWN

## PROCUREMENT BID

### TABLE OF CONTENTS

The Bid Documents consists of the following documents:

1. **Instructions to Bidders**
2. **Part One** Bid Proposal Form
3. **Part Two** General Terms and Conditions of Bid
4. **Part Three** Technical Specifications
5. **Non-Collusive Bidding Certificate**

Note: A submitted bid will consist of:

1. one original completed **Bid Proposal Form**, signed on behalf of Bidder with information for all blanks supplied, and a detailed listing of any exceptions taken by Bidder; and
2. an Executed Option to Renew.
3. a signed Non-Collusive Bidding Certificate.

**TOWN OF YORKTOWN  
PROCUREMENT BID**

**PART ONE - BID PROPOSAL FORM**

**Instructions for Completing the Bid Form:**

The Town intends to award the Bid to the lowest responsible bidder(s) for each Bid Item on the Bid Summary Table.

Specifications for each of the Bid Items are contained in Part 3 – Technical Specifications.

Bidders shall fill in a Bid Price for one or more of the chemicals listed below.

**Bid Summary Table**

**Important:** Please refer to instructions above prior to completing this form.

1. Ferric Chloride  
\_\_\_\_\_ \$/per dry ton
  
2. Ferric Chloride 37% to 40%  
\_\_\_\_\_ \$/per 55 gal. drum  
\_\_\_\_\_ \$/per 275 gal. tote
  
3. Caustic Soda 50%  
\_\_\_\_\_ \$/gallon
  
4. Caustic Soda 25%  
\_\_\_\_\_ \$/per 55 gal. drum  
\_\_\_\_\_ \$/per 275 gal. tote
  
5. Citric Acid 50%  
\_\_\_\_\_ \$/per 55 gal. drum  
\_\_\_\_\_ \$/per 275 gal. tote
  
6. Sulfuric Acid (not more than 51%)  
\_\_\_\_\_ \$/per 55 gal. drum  
\_\_\_\_\_ \$/per 275 gal. tote

7. Sodium Bisulfite 38% \_\_\_\_\_ \$/per 55 gal. drum  
\_\_\_\_\_ \$/per 275 gal. tote

8. Sodium Hypochlorite 15% \_\_\_\_\_ \$/per 55 gal. drum  
\_\_\_\_\_ \$/per 275 gal. tote

9. Calgon Poly-E-Z or equivalent  
Trade Name of equivalent \_\_\_\_\_

Guaranteed application rate: \_\_\_\_\_ lb/ton  
(pounds of polymer per dry ton of dry sludge)

Cost per pound of Polymer: \$/lb \_\_\_\_\_

**OR**

**Cost per dry ton: \$/dry ton \_\_\_\_\_**

**(Note: Calgon Poly-E-Z or equivalent polymer bid will be awarded based on cost per dry ton)**

**The contract term for this project shall be for a duration of one (1) year, commencing on or about February 21, 2023. Upon mutual consent of the Contractor and the Town, the contract may be extended for one additional term of one (1) year at the same price, terms and conditions as stated herein.**

**Note: Prices in the bid must cover all of bidder's costs. There shall be no additional charges to the Town for delivery, training, set-up, lost time, mileage, etc.**

Name of person authorized to submit bid for bidder: \_\_\_\_\_

Signed: \_\_\_\_\_

[Signature of authorized person, if not a corporate officer attach corporate resolution authorizing submission of bid.]

TITLE of authorized person: \_\_\_\_\_

BIDDER'S CORPORATE NAME: \_\_\_\_\_

BIDDER CONTACT INFORMATION:

PRINT NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

Address: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**TOWN OF YORKTOWN  
PROCUREMENT BID**

**OPTION TO EXTEND THE TERM OF THE CONTRACT**

- A. The contract term for this project shall be for a duration of one (1) year, commencing on or about **February 23, 2023**. Upon mutual consent of the Contractor and the Town, the contract may be extended for one additional term of one (1) year at the same price, terms and conditions as stated herein.
  
- B. Said option shall be exercised by written notification from Town and the Bidder not less than thirty (30) calendar days prior to the expiration of the contract.
  
- C. If the Town and the Contractor exercise the option within the time frame prescribed herein, Contractor shall be contractually bound to perform the services for the option period.

\_\_\_\_\_  
Bidder Signature

**TOWN OF YORKTOWN  
PROCUREMENT BID**

**PART TWO**

**General Terms and Conditions of Bid**

<u>Section Numbers</u>	<u>Heading</u>
Section 1.	Bid Proposal Form
Section 2.	Quality and Samples
Section 3.	Request for information and/or clarification of the Bid Documents
Section 4.	Non-Collusion
Section 5.	Late Bids
Section 6.	Bid Opening
Section 7.	Acceptance and Rejection
Section 8.	Appeal of Determination of Non-Responsiveness and Non-Responsibility
Section 9.	Award
Section 10.	Notice of Award
Section 11.	Delivery Point
Section 12.	Date of Delivery
Section 13.	Damages
Section 14.	Warranty/Guarantee
Section 15.	Purchase of Additional Quantities of Bid Items
Section 16.	Breach of Contract/termination
Section 17.	Assignment Prohibited\
Section 18.	Special Requirements



Section 1. **Bid Proposal Form**

- 1.1 Bidder shall complete the Bid Proposal Form by filling in the unit price and the total price in the appropriate designated spaces. Unit price and total price of each item bid shall be written legibly in ink, or typed. All bids shall be signed in ink. Any erasures or alterations shall be initialed in ink by the signer. The completed Bid Proposal Form shall be submitted, along with any documentation in support of the bid proposal if required by the Bid Documents, in a sealed envelope addressed as required in the Invitation to Bidders on or before the time and at the place so designated. Any Bid Proposal Form which has been materially altered in any way may render the bid nonresponsive and the bid rejected.
- 1.2 In the event of a discrepancy between the unit price and the total price of the Bid Proposal Form, the unit price will prevail. All prices must be quoted “per unit” quantity specified. All items not bid shall be indicated as “not bid” in the total price space. When bids are requested on a lump sum basis, bidder must bid on each item in the lump sum group. A bidder desiring to bid “no charge” on an item in a group must so indicate.
- 1.3 Failure to comply with the provisions of this section may be grounds for rejection of the bid proposal.
- 1.4 Correction or withdrawal of a bid because of an inadvertent, non-judgmental mistake in the Bid Proposal Form requires careful consideration to protect the integrity of the competitive bidding process, and to ensure fairness. If the mistake is attributable to an error in judgment, the Bid Proposal Form may not be corrected. Bid correction or withdrawal by reason of the non-judgmental mistake is permissible at the sole discretion of the Town Clerk, but only to the extent that it is not contrary to the interests of the Town or the fair treatment of other bidders.
- 1.5 By signing the Bid Proposal Form, the bidder certifies that:
  - i. the person whose signature appears below is legally empowered to bind the bidder;
  - ii. the bidder has read the complete Bid Documents and understands and agrees to all terms and conditions set forth in the Bid Documents;
  - iii. if accepted by the Town, the bid is guaranteed as written and will be implemented as stated;

- iv. By submission of the bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to paragraph (b) of subdivision 3 of section 165-a of the New York State Finance Law.<sup>1</sup>

Section 2. **Quality and Samples**

- 2.1 All equipment, material and supplies bid upon must conform to the description and specifications set forth in the in the Bid Documents, or their approved equal or equivalent.
- 2.2 References in the Bid Documents to type, style, brand or trade name, and catalog are intended to be descriptive only and not restrictive.

Section 3. **Request for information or interpretation and/or clarification of the Bid Documents**

- 3.1 Bidders shall have seven (7) business days prior to the bid opening date to notify the Town Clerk in writing of any errors or defects in the Bid Documents which would prevent bidder from providing a responsive bid.
- 3.2 No interpretation of the Bid Documents will be made to any bidder orally by any representative of the Town.
- 3.3 Any request for information or interpretation and/or clarification of the Bid Documents must be addressed in writing to Diana Quast, Yorktown Town Clerk, 363 Underhill Avenue, Yorktown Height, NY 10598 or emailed **dquast@yorktownny.org** and be submitted not later than five (5) business days prior to the date fixed for the opening of bids.
- 3.4 Any written response to a request for information or interpretation and/or clarification of the Bid Documents shall be issued by Town Clerk and will be incorporated into and made part of the Bid Documents. The Town Clerk's decision shall be final and binding on all parties. Such Addenda will be mailed to all prospective bidders. The failure of any bidder to receive such Addenda will not relieve the bidder of any obligation to comply with the terms and conditions of the Addenda.

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<sup>1</sup> List found at <http://ogs.ny.gov/about/regs/docs/ListofEntities.pdf>.

3.5 If any questions or responses require revision to the bid solicitation as originally published, such revision will be by formal amendment only. If the solicitation includes a contact person for technical information, bidders are cautioned that any oral or written representation made by this or any other person that materially changes or appear to materially changes any portion of the solicitation must not be relied upon unless subsequently ratified by a written amendment to this solicitation. For determination as to whether any such representation requires an amendment, contact the Town Clerk.

Section 4. **Non-Collusion**

4.1 Bidder shall certify that it has complied with all of the requirements stated in the non-collusive bidding certificate by signing the form included in the Bid Documents. Failure by bidder to complete and sign the non-collusive bidding certificate will constitute grounds for rejection of the bid.

Section 5. **Late Bids**

5.1 All bids received after the deadline date and time stated in the Instructions to Bidders will not be considered and will be returned to the bidder unopened. The bidder assumes the risk of any delay in the mail and the handling of the mail by the employees of the Town. Whether sent by mail or by means of personal delivery, the bidder assumes all responsibility for having the bid delivered on time and to the place specified above.

Section 6. **Bid Opening**

6.1 Sealed bids will be publicly opened on the date and time specified in the Instructions to Bidders. Bids may be read aloud to those persons present when practicable. Any bidder may request to review any submitted Bid Proposal Forms by arranging a mutually convenient time with the Town Clerk.

6.2 The prices stated in the Bid Proposal Form are irrevocable until the Notice of Award is issued, unless the bid is withdrawn only after the expiration of sixty (60) days from the bid opening and only in writing received by the Town Clerk and in advance of the issuance of the Notice of Award.

Section 7. **Acceptance or Rejection**

7.1 A responsive bid is one that complies with all material terms and conditions of the Bid Documents. .

- 7.2 If the lowest price bid or proposal is found non-responsive, a determination setting in detail and with specificity the reasons for such finding shall be issued by the Town Clerk. A copy of such determination shall be mailed to the non-responsive bidder no later than two (2) business days after the determination is made.
- 7.3 The Town reserves the sole right to waive any informality that is a matter of form rather than substance without prejudice to other bidders and what is in the best interests of the Town. The Town's decision shall be final and binding.
- 7.4 A responsible bidder is one which has the capability in all respects to perform fully the contract requirements and the business integrity to justify the award of public tax dollars
- 7.5 Bidder must be fully qualified to deliver the goods specified in the Bid Documents. The Town reserves the right to request references from other parties for which bidder has provided similar goods.
- 7.6 The Town will consider the qualifications of all bidders. The Town may conduct such investigation as it deems necessary to assist in the evaluation of any bid and establish the responsibility, qualification and financial ability of the bidders to comply with the Bid Documents.
- 7.7 The Town reserves the right to reject the bid of any bidder which does not pass any such evaluation to the Town's satisfaction.
- 7.8 In evaluating a bidder's responsibility the Town may consider the following factors:
- i. financial resources;
  - ii. technical qualifications;
  - iii. experience;
  - iv. organization, material, equipment, facilities, and personnel resources and expertise (or the ability to obtain them) necessary to carry out the work and to comply with required delivery or performance schedules, taking into consideration other business commitments;
  - v. a satisfactory record of performance;
  - vi. a satisfactory record of business integrity;

- vii. where the contract includes provisions for reimbursement of contractor costs, the existence of accounting and auditing procedures adequate to control property funds, or other assets, accurately delineate costs, and attribute them to their causes; and
- viii. compliance with requirements for the utilization of small, minority-owned, and women-owned businesses as subcontractors.

7.9 Failure of a bidder to provide relevant information specifically requested by the Town may be grounds for a determination of non-responsive and/or non-responsible.

Section 8. **Appeal of Determination of Non-Responsiveness or Non-Responsible**

- 8.1 Any determination that a bid is non-responsive or a bidder is non-responsible may be appealed as set forth herein.
- 8.2 A bidder shall have five (5) business days from receipt of the determination of non-responsiveness or non-responsible to file an appeal with the Town Clerk. Receipt of notice by the bidder shall be deemed to be no later than five (5) business days from the date of mailing or upon delivery, if delivered. Filing of the appeal shall be accomplished by actual delivery of the appeal document to the Town Clerk. The bidder shall also send a copy of its appeal, for informational purposes, to the Town Attorney.
- 8.3 The appeal shall be in writing and shall briefly state all the facts or other basis upon which the bidder contests the finding of non-responsiveness or non-responsible. Supporting documentation, if any, shall be included.
- 8.4 Award of the contract shall be stayed pending the determination of the Town Clerk unless the Town Clerk makes a determination that proceeding with the award without delay is necessary to protect substantial Town's interests. Where such a determination is made, the bidder shall be advised of this action in the determination of non-responsiveness or, if the stay is removed at any time after the bidder has been notified of determination of non-responsiveness or non-responsible, notification shall be provided to the bidder no later than two (2) business days after such determination is made. The Town Clerk shall consider the appeal, and may, in his or her sole discretion, meet with the bidder to discuss the merits of the appeal. The Town Clerk shall make a prompt determination with respect to the merits of the appeal, a copy of which shall be sent to the bidder. The Town Clerk's determination shall be final.

Section 9. **Award**

9.1 Town reserves the right to make awards within sixty (60) days after the date of the bid opening, during which period bids may not be withdrawn.

- 9.2 Awards will be made to the responsible and responsive bidder submitting the lowest bid that fully complies with all the specifications stated in the bid document.
- 9.3 The Town may issue a Notice of Award based on either Lowest Responsible Bid or Best Value, in accordance with the 2012 amendments to General Municipal Law § 103, as implemented by Yorktown Town Code Chapter 78 entitled *Procurement for Goods and Services*.
- 9.4 Town reserves the right to reject all bids and to purchase any or all items on contracts awarded by agencies or departments of the State of New York or of the County of Westchester, if such items can be obtained on substantially the same terms, conditions, specifications, and at a lower price.

Section 10. **Notice of Award**

- 10.1 If the bid is awarded by Town, a written Notice of Award will be issued by the Town Clerk to the successful bidder. Such Notice of Award will constitute a binding enforceable contract between the successful bidder and the Town of Yorktown.
- 10.2 Upon receipt of the Notice of Award the successful bidder will be required to submit to the Town Clerk a completed W-9 form in addition to any other information or documents required by the Town. Failure to supply a completed W-9 form or such other information or documents required by the Town will invalidate the bid.

Section 11. **Delivery Point**

- 11.1 Deliveries shall be made in accordance with the specifications, and shall be made Monday through Friday from 8 a.m. to 2 p.m. unless otherwise stated in the Specifications, at the location set forth in the Specifications. F.O.B., except on national, state or local holidays when Town buildings are closed. Bidder shall be responsible to verify that the appropriate Town building for delivery is open prior to delivering items. All bid items shall be unloaded and placed within the particular Town building, at points of delivery, and in quantities, as directed by the Town. Any costs incurred by the Town or bidder due to the failure of bidder to comply with this requirement will be the responsibility of bidder. Bidder should be prepared to furnish proof of delivery, if requested by Town.
- 11.2 If bidder is shipping bid items to Town using a third-party carrier (US Postal Service, UPS, FedEx), there shall be no additional shipping charge to the Town.
- 11.3 Delivery will not be complete until the good are inspected and accepted by the Town.

Section 12. **Date of Delivery**

12.1 Delivery of all bid items under this bid shall be made not later than the date specified in the bid document. If bidder cannot meet the delivery date specified in the bid document, bidder shall state on the bid form the proposed date of delivery and such date will be considered when determining responsiveness in awarding the bid.

Section 13. **Damages**

13.1 Bidder shall be fully responsible for shipping and delivery of bid items in an undamaged condition. Bidder shall be fully responsible for performance of work in a satisfactory manner with satisfactory results in the discretion of the Town. Town will not consider the carrier responsible for damaged or delayed deliveries. Any bid item damaged or broken when delivered to Town shall be replaced immediately by bidder at no cost to the Town.

Section 14. **Warranty/Guarantee**

14.1 By submitting its bid, bidder is deemed to warrant and guarantee as follows:

14.2 All goods furnished in by the bidder are guaranteed against defects in workmanship and/or material for a period of one (1) year from the date of delivery, inspection and acceptance by the Town.

14.3 Any goods furnished must be standard, new, latest model of the regular stock product, as required by the specifications, with parts regularly used for the type of equipment offered.

14.4 No attachment or part will be substituted or applied contrary to manufacturer's recommended and standard practice. All regularly manufactured stock electrical items must bear the label of the Underwriters Laboratories, Inc. It is the responsibility of bidder to advise Town in the Bid Proposal Form if electrical equipment to be furnished hereunder does not have a U.L. label. Any equipment provided under the bid proposal which is or becomes defective during the guarantee period shall be replaced or redone by bidder, free of charge. All replacements shall carry the same guarantee as the original equipment. Bidder shall make any such replacement promptly upon receiving written notice from Town.

Section 15. **Purchase of Additional Quantities of Bid Items**

15.1 Unless Town requests bidder to supply used goods or materials, Town may purchase additional quantities of the bid items from bidder at any time during the contract period, for the same price and under the same terms and conditions as set in the Bid Proposal Form.

Section 16. **Breach of Contract/Termination**

16.1 If bidder fails to deliver as ordered, or within the time specified, or within reasonable time as interpreted by Town, or fails to make replacement of rejected or defective goods, whether so requested immediately or as directed by Town, that shall constitute a breach of the contract, and Town may purchase goods from other sources to take the place of the goods rejected found defective or not delivered. Town reserves the right to authorize immediate purchase (within 24 hours) from other sources against rejections on any contract when necessary. On all such purchases bidder agrees to reimburse Town promptly for excess costs occasioned by such purchases. Should the cost be less, bidder shall have no claim to the difference. Such purchases may be deducted from the outstanding invoices or claims, or charged back against future invoices. Without limiting the foregoing, Town reserves the right to terminate the Contract upon breach upon within ten (10) days of notice provided to bidder.

Section 17. **Assignment Prohibited**

17.1 Bidder shall not assign, transfer, convey, sublet, subcontract or otherwise dispose of the contract or its right, title, or interest therein, or its power to execute such contract, to any other person, or entity without the prior written consent of Town.

Section 18. **Special Requirements**

18.1 Special requirements for any bid may supersede and/or be added to any provision contained in the instructions noted above. These instructions are to be considered an integral part of all bid proposals.



**PART THREE**  
**TECHNICAL SPECIFICATIONS**

**GENERAL**

It is the intent of the Town of Yorktown to solicit bids for the supply and delivery of various chemicals for the Yorktown Heights Water Pollution Control Plant (YHWPCP). **The YHWPCP requires ferric chloride, ferric chloride 37% to 40%, caustic soda 25%, caustic soda 50%, citric acid 50%, sulfuric acid not more than 51%, sodium bisulfite 38%, sodium hypochlorite 15%, and Polymer (Poly-E-Z 6500 as manufactured by Calgon, or Town approved equal).** The award will be made after reviewing all factors herein and determining which bids are in the best interest of The Town of Yorktown. Failure to submit the requested information in the terms stated herein will result in the rejection of that bid. Bidders may bid on one or more of the required chemicals.

The Town of Yorktown intends to award a contract to the lowest responsible bidder for each chemical.

**The contract term for this project shall be for a duration of one (1) year, commencing on or about February 21, 2023. Upon mutual consent of the Contractor and the Town, the contract may be extended for one additional term of one (1) year at the same price, terms and conditions as stated herein**

Product must be manufactured in the United States by a producer certified for ISO 9002 quality standards and at the specific plant or site holding such certification. A copy of the valid certificate shall be furnished with the bid **prior** to the award. If the product is to be supplied by an agent or distributor of the producer, then the agent or distributor must also be certified to meet ISO 9002 quality standards. ISO 9002 Certification assures the Town of Yorktown of consistent conformance to product quality standards.

All deliveries are to be made within five (5) working days after receipt of order and during business hours of 7:00 a.m. to 3:00 p.m. **An email confirmation response of order shall be sent to: [matonucci@yorktownny.org](mailto:matonucci@yorktownny.org)**

Bidders must familiarize themselves with all aspects of the delivery location. Any deviation from the criteria set forth must be addressed in writing. Delivery shall be made to the Town of Yorktown Water Pollution Control Treatment Plant, 2200 Greenwood Street, Yorktown Heights, New York 10598.

A Certificate of Analysis noting proper corresponding lot numbers(s), date of manufacture, and pertinent product quality standards must accompany each delivery.

In the case of ferric chloride, the successful bidder must supply a Certificate of Analysis for each and every delivery of ferric chloride. A copy shall be faxed or emailed ([mantonucci@yorktownny.org](mailto:mantonucci@yorktownny.org)) to the wastewater plant at the time of shipment with a hard copy mailed at the same time.

Bill of Lading must accompany all deliveries. The Bill of Lading must identify the origin of shipment, the material being delivered and the number of units shipped. A copy of all scale tickets and material safety data sheets (MSDSs) must also accompany all deliveries.

## **FERRIC CHLORIDE**

1. The ferric chloride supplied must have the capability to act as a primary coagulant under wide fluctuations in wastewater characteristics and remove soluble and insoluble phosphorous.

2. Additional Product Requirements:

Liquid ferric chloride must be easily applied via metering pump.

Liquid ferric chloride must be available in bulk.

Liquid ferric chloride must conform to these specifications.

3. Properties:

Ferric Chloride	28.0 - 42.0% concentration
Ferrous Chloride	0.75% maximum
Free Acid as HCl	1.0% maximum
Insolubles	0.5% maximum (Anhydrous Basis)
Appearance	Dark brown liquid
Specific Gravity	1.38 to 1.49
Viscosity at 44 <sup>0</sup> F	12.1 centipoises for a 40% solution

\*Product is certified to meet American Water Works Association and Water Chemicals Codex Specifications.

4. Ferric chloride shall be delivered in bulk via NYS DOT approved vehicles, 40,000 lb maximum.

## **FERRIC CHLORIDE 37% to 40%**

This specification contains pertaining to the supply and delivery of Ferric Chloride 37% to 40% by weight minimum, corresponding to 12.7% by weight Ferric Iron.

Free Hydrochloric Acid – 1.0% by weight maximum.

Insoluble Material – 80 ppm by weight maximum.

## **Trace Metals**

<u>Element</u>	<u>Maximum Concentration Limit</u>
Arsenic (As)	1.0 ppm
Beryllium, (Be)	0.04 ppm
Mercury (Hg)	0.5 ppm
Selenium (Se)	3.0 ppm
Cadmium (Cd)	0.5 ppm
Chromium (Cr)	100 ppm
Lead (Pb)	3 ppm
Nickel (Ni)	40 ppm
Silver (Ag)	1 ppm
Copper (Cu)	60 ppm
Titanium (Ti)	50 ppm
Zinc (Zn)	20 ppm

In addition, there shall be no detectable amounts of any insecticide, pesticide, poly-chlorinated biphenyl (PCB), hexachlorobenzene or radionuclides in the delivered ferric chloride solution. Only material originating from the Steel Pickling process will be allowed. No material originating as a by-product of the Titanium Dioxide manufacturing process will be allowed. The material shall be free of any foreign element or compounds that may negatively affect the treatment plant operations or contaminate residuals for use in landfill or land application.

## **Delivery**

Product delivered must be in 55 gallon drums and/or 275 gallon totes based on container ordered. All shipping containers must be new and unused meeting all local, state, and federal requirements. All containers are to be intact, with no visible signs of damage, which would allow product to be exposed.

## **Drum Returns**

Empty containers are to be picked up by the supplier, at Yorktown Heights Water Pollution Control Plant (YHWPCP), at no cost to the Town for Recycling/Reuse.

## **CAUSTIC SODA 50%**

This specification contains requirements pertaining to the supply and delivery of 50% liquid caustic soda.

Caustic Soda 50% shall meet the following specifications:

<b>Characteristic</b>	<b>Unit</b>	<b>Lower Limit</b>	<b>Upper Limit</b>
<b>NaOH</b>	<b>wt%</b>	<b>49.5%</b>	<b>51.5%</b>
<b>Na<sub>2</sub>O</b>	<b>wt%</b>	<b>38.3%</b>	<b>39.9%</b>
<b>Fe</b>	<b>ppm</b>		<b>2.0</b>
<b>NaCl</b>	<b>wt%</b>		<b>0.0075%</b>
<b>Na<sub>2</sub>CO<sub>3</sub></b>	<b>ppm</b>		<b>500</b>
<b>Hg</b>	<b>ppm</b>		<b>0.010</b>
<b>Ni</b>	<b>ppm</b>		<b>.050</b>

### **Delivery**

Caustic Soda shall be delivered in bulk via NYS DOT approved vehicles. The container must be properly labeled and provide a lot number to identify batch allotments and date of manufacture. All shipping containers must be new and unused meeting all local, state, and federal requirements.

## CAUSTIC SODA 25%

This specification contains requirements pertaining to the supply and delivery of 25% liquid caustic soda.

<u>COMPONENT</u>	<u>BASIS</u>	<u>SPECIFICATION</u>
Total Alkalinity (as Na <sub>2</sub> O)	wt. %	19.4 min.
Hydroxide Alkalinity (as NaOH)	wt. %	25.0 min.
Na <sub>2</sub> CO <sub>3</sub>	wt. %	0.1 max.
NaCl	wt. %	0.6 max.
NaClO <sub>3</sub>	wt. %	0.07 max.
Na <sub>2</sub> SO <sub>4</sub>	ppm by wt	250 max.
Fe	ppm by wt.	5.0 max.
Cu	ppm by wt.	0.15 max.
Ni	ppm by wt.	1.5 max.

### Delivery

Product delivered must be in 55 gallon drums and/or 275 gallon totes based on container ordered. All shipping containers must be new and unused meeting all local, state, and federal requirements. All containers are to be intact, with no visible signs of damage, which would allow product to be exposed.

### Drum Returns

Empty containers are to be picked up by the supplier, at Yorktown Heights Water Pollution Control Plant (YHWPCP), at no cost to the Town for recycling/reuse.

This specification contains requirements pertaining to the supply and delivery of 25% liquid caustic soda.

## **CITRIC ACID 50%**

This specification contains requirements pertaining to the supply and delivery of 50% liquid citric acid.

### **APPEARANCE**

Specific Gravity 20/20 C

Assay WT %

Color APHA

### **FREE FROM FOREIGN MATTER**

1.237 to 1.249

49.0 to 51.0%

50 Max.

### **Delivery**

Product delivered must be in 55 gallon drums and/or 275 gallon totes based on container ordered. All shipping containers must be new and unused meeting all local, state, and federal requirements. All containers are to be intact, with no visible signs of damage, which would allow product to be exposed.

### **Drum Returns**

Empty containers are to be picked up by the supplier, at Yorktown Heights Water Pollution Control Plant at no cost to the Town for Recycling/Reuse.

## **SULFURIC ACID NOT MORE THAN 51%**

This specification contains requirements pertaining to the supply and delivery of sulfuric acid not more than 51%.

### **<51% - 1,400 Specific Gravity**

<u>IMPURITY</u>	<u>SPEC. MAX (%)</u>
Organic Matter	To Pass Test
Platinum	To Pass Test
Fixed Residue	0.016
Sulfurous Acid	0.0022
Iron	0.0027
Copper	0.0027
Zinc	0.0022
Arsenic	0.00005
Antimony	0.00005
Selenium	0.0011
Nickel	0.00005
Manganese	0.000011
Nitrate	0.00027
Ammonium	0.0005
Chloride	0.0005

### **Delivery**

Product delivered must be in 55 gallon drums and/or 275 gallon totes based on container ordered. All shipping containers must be new and unused meeting all local, state, and federal requirements. All containers are to be intact, with no visible signs of damage, which would allow product to be exposed.

### **Drum Returns**

Empty containers are to be picked up by the supplier, at Yorktown Heights Water Pollution Control Plant, at no cost to the Town for Recycling/Reuse.



## **SODIUM BISULFITE 38%**

This specification contains requirements pertaining to the supply and delivery of sodium bisulfite not more than 38%.

### **PROPERTIES**

Formula  $\text{NaHSO}_3$

Molecular Weight 104.06

Specific Gravity 1.32

	<b>Typical Analysis</b>	<b>Specification</b>
Total reducing substances (as $\text{NaHSO}_3$ )	39.3%	38.0-40.0%
PH (as is)	4.0	3.8-4.4
Iron (Fe)	1 ppm	2 ppm max
Alkalinity ( $\text{Na}_2\text{SO}_3$ )	0.25%	0.6% max
Turbidity (NTU)	0.3	2 max
Sodium Sulfate ( $\text{Na}_2\text{SO}_4$ )	0.2%	0.75% max

### **Delivery**

Product delivered must be in 55 gallon drums and/or 275 gallon totes based on container ordered. All shipping containers must be new and unused meeting all local, state, and federal requirements. All containers are to be intact, with no visible signs of damage, which would allow product to be exposed.

### **Drum Returns**

Empty containers are to be picked up by the supplier, at Yorktown Heights Water Pollution Control Plant, at no cost to the Town for Recycling/Reuse.

## **SODIUM HYPOCHLORITE 15%**

This specification contains requirements pertaining to the supply and delivery of sodium hypochlorite liquid 15%.

<u>COMPONENT</u>	<u>BASIS</u>	<u>SPECIFICATION</u>
Available Chlorine (Cl <sub>2</sub> )	grams/liter	150 min.
Sodium Carbonate (Na <sub>2</sub> CO <sub>3</sub> )	grams/liter	1.0 max.
Sodium Hydroxide (NaOH)	grams/liter	0.5-10.0
Heavy Metals	ppm by wt.	<1
Temperature	Fahrenheit	<90
Specific Gravity	H <sub>2</sub> O=1	1.180-1.210

Clarity – Free of particulate matter above 100 micron in size

### **Delivery**

Product delivered must be in 55 gallon drums and/or 275 gallon totes based on container ordered. All shipping containers must be new and unused meeting all local, state, and federal requirements. All containers are to be intact, with no visible signs of damage, which would allow product to be exposed.

### **Drum Returns**

Empty containers are to be picked up by the supplier, at Yorktown Heights Water Pollution Control Plant, at no cost to the Town for Recycling/Reuse.

**POLYMER (CALGON POLY-E-Z 6500 or Approved Equal)**

This specification contains requirements pertaining to the supply and delivery of emulsion cationic polymer to be used for the conditioning of sludge to dewater via existing continuous belt filter presses in operation at the Yorktown Heights Water Pollution Control Plant.

The emulsion polymer is to be used to facilitate the extraction of water from the sludge by use of two (2) BDP 2M belt filter presses prior to disposal.

Prior to conditioning, sludge concentrations will range from approximately 2.0-3.0% percent solids. Conditioned sludge is to be dewatered to produce a sludge cake of a minimum of 26.0% solid with a capture rate of not less than 94.0% solids at a feed rate of approximately 150 g.p.m. At any time, failure of the polymer to meet the guaranteed application rate or to perform as required by these specifications may be grounds for the Town of Yorktown to void the contract shall submit laboratory evaluations stating the polymer tested and polymer recommended as a result of the tests. Bids offered that specify a polymer other than the trial tested polymers will not be considered and the bid deemed nonresponsive by the Town. Chemicals offered must be certified commercially and available in production quantities.

The polymer shall be Calgon PEZ 6500, a high molecular weight, high cationic charge water-soluble polymer, or approved equal. Product equivalence will be based upon meeting specifications, laboratory evaluation, and plant evaluation.

The polymer shall have a minimum shelf life of 48 hours in the aqueous form and from six (6) months in the concentrated form.

The polymer shall be emulsion type, available in 55 gallon containers. Incidental to handling, it shall have a low toxicity with respect to contact with the skin and eyes and to accidental ingestion and inhalation, and with no objectionable odor.

## **Submittals:**

Prior to the first shipment, Contractor shall submit the following:

1. A producer Certification of Analysis showing product name, manufacturing lot number, and product quality criteria;
2. ISO 9002 Certification;
3. Minimum safe storage and usage temperatures;
4. pH of aqueous solution;
5. Recommendation of chemicals or other substances, which can be used for cleaning spills;
6. Material Safety Data Sheet;
7. Cationic charge density;
8. Recommended makedown solution strength as a percent (%).

## **Bench Testing**

Each prospective bidder will be required to perform bench testing in order to determine the most effective polymer for their proposal. The bench testing shall be performed at the YHWPCP's laboratory facility in the presence of the YHWPCP's staff and Engineer.

The bidder may request a sludge sample in advance of his scheduled testing date so that he may determine which polymer(s) he wishes to test during the YHWPCP's laboratory trials.

For the purpose of standardization, each bidder wishing to participate in the YHWPCP's laboratory trials will be required to conduct the same bench test on all polymer samples. The following procedures shall be used for each test:

1. Prepare a 0.25% solution for each polymer to be tested.
2. To a maximum six (6) 200 ml samples of thickened sludge, add differing amounts of the 0.25% solution (to be determined by bidder) to each sludge sample.
3. Mix all samples simultaneously by pouring back and forth between two beakers ten times.
4. Pour each sample into a Buchner Funnel (filter media to be similar in porosity to belt material on press).
5. Record filtrate volume to 5, 10, 15, 20, 25 and 30 seconds.
6. Evaluate and records Filtrate clarity and Cake compressibility.
7. Determine plant trial dosage from bench test as following:

$$\text{lbs/ton} = \frac{(\text{polymer sol.}\% \text{ (ml polymer sol.)}) (2000 \text{ lb./ton})}{(\text{sludge \% solids}) (\text{sludge sample ml})}$$

Example:

$$\text{lbs/ton} = \frac{(0.25\% \text{ polymer}) (40 \text{ ml polymer}) (2000/\text{lb/ton})}{(2.0\% \text{ sludge solids}) (200 \text{ ml sludge sample})} = 50 \text{ lbs./ton}$$

The bidder shall use the results of two of these trials in order to form his own opinion as to which polymer he wishes to use in his proposal.

## **Full Plant Test**

The Town of Yorktown will schedule laboratory times for bidders up to five (5) days prior to bid opening date, or as determined by the Town of Yorktown so as to not interfere with the operations of the facility. **Bidders shall contact the Yorktown Heights Water Pollution Control Plant's Operator Michael Antonucci (914-539-2120) ([mantonucci@yorktownny.org](mailto:mantonucci@yorktownny.org))** for scheduling a date for trials.

Arrangements of trial times and dates is on a first come, first serve basis and may be limited to a four (4) hour period for each bidder, depending on the number of those participating. At the time of the laboratory trials, each bidder shall furnish, at no cost to the Town of Yorktown, five (5) to ten (10) gallon samples of each polymer to be tested.

Samples of polymers and the containers shall be removed once the evaluation is completed. Failure to comply will result in rejection of bid.

The procedure of this application will be as follows:

- The polymer will be introduced into the YHWPCP's existing polymer feed equipment, at the optimum application rate as determined by the Bidder. All polymer solution shall be 0.25% in solution, and recorded as such. The YHWPCP's personnel shall determine the percent capture rate and the percent solid of the sludge cake. Four (4) samples will be collected and averaged.
- Once the bidder has determined his optimum dosage, both the sludge tank and polymer tank will be measured and recorded, after four (4) hours the trial will be complete. Again, the polymer tank will be measured to determine volumes.

$$\text{lbs/ton} = \frac{(\text{polymer sol. \%}) (\text{gals. polymer sol.}) (2000 \text{ lbs/ton})}{(\text{sludge solids\%}) (\text{gals. sludge})}$$

The results of the Application Plant trial, the offered polymer shall be submitted with the bid proposal. Only one bid may be submitted by each supplier.

For the purposes of the Application Plant trial, the offered polymer shall be capable of consistently producing a sludge cake of 26.0% solid minimum. The successful bidder shall furnish, at no extra cost to the Town of Yorktown, adequate chemicals and equipment necessary to conduct the performance test, if needed.

A technical service representative shall be present for the entire Application Plant trial and shall with assistance of the Owner's personnel, be responsible for conducting all field and laboratory experimentation relative to determining the effectiveness of the chosen polymer. The technical service representative shall explain to the YHWPCP's personnel the techniques used and results collected during the test, including any calculations.

The Town of Yorktown reserves the right to conduct independent laboratory analysis relative to the Application Plant trial in order to verify the bidder's results. The YHWPCP's personnel shall be furnished with sufficient information, in writing, in order to determine approximate quantities of polymer required per unit weight dry sludge as a result of the Application Plant trial.

The cost of independent testing conducted by the technical service representative or any other costs incurred by the bidder during the testing shall be the responsibility of the bidder.

At no time shall the testing interfere with the normal operation of the Owner's sludge handling and disposal activities, nor shall the polymer offered have any detrimental effects on the YHWPCP's treatment process or equipment. If the polymer offered fails to meet with the Town of Yorktown shall award to the next lowest responsible bidder.

### **Increase and Decrease in Quantities**

The Town of Yorktown reserves the right at any time during the life of the contract to increase or decrease the quantity of polymer to meet operating needs. Any increase or decrease as above provided shall in no way invalidate the contract. The Town of Yorktown will order polymer on an as-needed basis.

The Contractor will be paid per pound for the actual quantity of material furnished and delivered as designated in the proposal at the price stipulated. In case the quantity of materials is increased as above provided, the Contractor shall not be entitled to any increased compensation over and above the bid price per pound, and in case the quantity is diminished as above provided, the Contractor shall not have any claims for damages on account of loss of anticipated profits of such diminution.

### **Delivery**

Product delivered must be in 55-gallon, 465-pound net weight containers. The container must be properly labeled and provide a lot number to identify bath allotments and date of manufacture.

All shipping containers must be new and unused meeting all local, state, and federal requirements.

Product is to be delivered in minimum quantities of four (4) units per shipment. All containers are to be intact, with no visible signs of damage, which would allow product to be exposed

### **Drum Returns**

Empty drums are to be picked up by the supplier, at Yorktown Heights Water Pollution Control Plant, at no cost to the Town for Recycling/Reuse.

**NON-COLLUSIVE BIDDING CERTIFICATION**

This Non-Collusive Bidding Certificate is made pursuant to Section 103-d of the General Municipal Law of the State of New York.

By submission of this bid, Bidder and each person signing on behalf of Bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his or her knowledge and belief:

The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or with any competition.

Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by Bidder and will not knowingly be disclosed by Bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and

No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

A bid shall not be considered for award nor shall any award be made where (1) (2) and (3) above, have not been complied with; provided, however, that if in any case Bidder cannot make the foregoing certification, Bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where (1) (2) and (3) above have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

Dated: \_\_\_\_\_

Bidder: \_\_\_\_\_  
(Legal name of person, firm or corporation)

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Please Print Name)

\_\_\_\_\_  
(Title)

State of New York )  
County of \_\_\_\_\_)ss.:

On the \_\_\_\_ day of \_\_\_\_\_ in the year **2023** before me, the undersigned, personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

32 \_\_\_\_\_  
(Notary Public)