

## BID OPENING DATE AND TIME

On: April 29, 2009

AT: 10:30 A.M.

<b>BID NO.</b>  <b>S0Z56030</b>	<b>PAGE</b> 1 <b>OF</b> 40	<b>INVITATION AND BID</b>  <b>ADVERTISED</b>	<b>BIDDER MUST</b> <b>COMPLETE BELOW</b>  BIDDER AGREES TO COMPLY WITH ALL CONDITIONS OF THIS BID. UNSIGNED BIDS WILL NOT BE ACCEPTED.
This Invitation to Bid with your quotations must be received prior to the above cited bid opening date and time.		  <b>CITY OF PHILADELPHIA</b> <b>PROCUREMENT DEPARTMENT</b> <b>MUNICIPAL SERVICES BLDG.</b> <b>1401 JFK BLVD, ROOM 170A</b> <b>PHILADELPHIA, PA 19102-1685</b>	<b>NAME AND ADDRESS OF FIRM</b>
<b>DEPARTMENT</b> <b>Various</b>	<b>DIVISION</b> <b>Various</b>		Federal EIN/Social Security Number
<b>AWARDED</b>			<b>BUYER</b> <b>L. Lewicki</b> <b>J. Washington</b>
<b>DATE</b> <b>FOR THE PROCUREMENT COMMISSIONER</b>			

**TITLE OF BID**

**CHLOR ALKALI PRODUCTS**

### GENERAL INFORMATION

This Invitation to Bid is issued under the Anti-Discrimination Policy described in the Mayor's Executive Order 02-05.

While there are no Participation Ranges projected for this Bid, bidders are prohibited from discriminating in their selection of subcontractors and are encouraged to solicit quotes from businesses on an equitable basis with other firms.

For informational purposes only, please describe any such commitments on a separate sheet and identify the subcontractor's name, Commerce Department Office of Economic Opportunity (OEO) Certification Number, and dollar amount/ percentage of work.

### BID QUESTIONS

All questions concerning this Invitation to Bid, including specifications and conditions, must be presented prior to the bid opening date and time. Contact the Procurement Department, Public Information Center by calling (215) 686-4721, 686-4720, or 686-4719 with questions.

### BID SECURITY

When applicable, BIDDERS MUST SUBMIT BID SECURITY.

### BID SIGNATURE

**BIDDERS MUST SIGN  
PAGE 8 OF THE  
"TERMS AND CONDITIONS".**

For City Use Only

BID SECURITY See Conditions of Bidding	MASTER BID SECURITY		CERTIFIED CHECK SUBMITTED WITH BID	
	<input type="checkbox"/> YES	<input type="checkbox"/> NO	AMOUNT	CHECK NUMBER

**VOLUNTARY PARTICIPATION AND COMMITMENT FORM (BID)**

Please list any OEO Certified and SBA vendors that will participate in this bid, including the Primary Bidder.

*Minority (MBE), Women (WBE), and Disabled (DSBE) Owned Business Enterprises<sup>1</sup>*

<b>Bid Number</b>		<b>Name of Bidder</b>			
<b>Primary Bidder</b>	<b>MBE</b> <input type="checkbox"/>	<b>WBE</b> <input type="checkbox"/>	<b>DSBE</b> <input type="checkbox"/>	<b>N/A</b> <input type="checkbox"/>	<b>SBA</b> <input type="checkbox"/>
<b>Federal Tax Identification #</b>					
<b>Amount Committed</b>		<b>Type of Work or Materials</b>			
Dollar Amount	\$				
Percent of Total Bid	%				
<b>Sub Contractor</b>		<b>MBE</b> <input type="checkbox"/>	<b>WBE</b> <input type="checkbox"/>	<b>DSBE</b> <input type="checkbox"/>	
<b>Vendor Name</b>					
<b>Federal Tax Identification #</b>					
<b>Amount Committed</b>		<b>Type of Work or Materials</b>			
Dollar Amount	\$				
Percent of Total Bid	%				
<b>Sub Contractor</b>		<b>MBE</b> <input type="checkbox"/>	<b>WBE</b> <input type="checkbox"/>	<b>DS-DBE</b> <input type="checkbox"/>	
<b>Vendor Name</b>					
<b>Federal Tax Identification #</b>					
<b>Amount Committed</b>		<b>Type of Work or Materials</b>			
Dollar Amount	\$				
Percent of Total Bid	%				
<b>Sub Contractor</b>		<b>MBE</b> <input type="checkbox"/>	<b>WBE</b> <input type="checkbox"/>	<b>DSBE</b> <input type="checkbox"/>	
<b>Vendor Name</b>					
<b>Federal Tax Identification #</b>					
<b>Amount Committed</b>		<b>Type of Work or Materials</b>			
Dollar Amount	\$				
Percent of Total Bid	%				

REVISED 2-2009 OEO

<sup>1</sup> MBE/WBE/DSBES listed above **MUST** be certified by the OEO prior to Bid Opening Date.

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**SECTION 1: GENERAL BID SUBMISSION**

**1.1 TITLE: CHLOR ALKALI PRODUCTS**

**1.2 SCHEDULE NO: 60-02**

**1.3 CONTRACT TERM:** 07/01/2009 to 06/30/2010 (“Initial Term”). The City may, at its sole discretion, renew the contract for an additional period of up to three (3) months, commencing as of the expiration of the Initial Term (the “Additional Performance Period”), in order to ensure continuity in the provision of goods or services pending the award of a new contract therefore.

1.3.1 The City shall exercise such sole option to renew the Contract Term by issuing a letter (the “Renewal Notice”) notifying the Contractor that the Contract is renewed for the Renewal Term or Additional Performance Period (identified by commencement and termination dates) that is specified in the Renewal Notice. The Contract shall be deemed to be renewed for such Renewal Term or Additional Performance Period, and Contractor shall be obligated to perform all terms and conditions of the Contract throughout such Renewal Term or Additional Performance Period, as of the effective date indicated on the City’s Renewal Notice, whether or not Contractor has agreed, verbally or in writing, to such renewal of the Contract term.

1.3.2 If an individual Performance Bond and/or Payment Bond is required under this Invitation and Bid, such bond(s) shall be and remain in full force and effect throughout the Initial Term, all Renewal Terms, any Additional Performance Period, and the period of any unexpired warranty provided or required under the Contract, without notice of Contract renewal by the City to the surety or the consent of the surety thereto. It is the sole responsibility of the Contractor to ensure that such bond(s) remain in full force and effect as provided in this Section, and failure to do so shall be an event of default pursuant to Section 16, Default, of the attached Terms and Conditions of Bidding and Contract.

If participation in the City’s Master Performance Security Program is required under this Invitation and Bid, Contractor shall pay the required annual fee for such participation for each Renewal Term upon the issuance of the Renewal Notice.

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#### 1.4 **CONTRACT TYPE: REQUIREMENTS**

1.4.1 The following items are required in the operation of various City agencies as ordered. Exact quantities cannot now be determined but estimates thereof are listed herein. Quantities listed may be increased or decreased to meet the requirements of the City during the period of this contract. A minimum is not guaranteed. Purchase orders issued as a result of this bid will be for materials or services to be delivered generally on an as-needed basis. Successful bidders are cautioned not to deliver any materials or services without first being advised to do so by the ordering agency.

1.4.2 It is the intent of the Procurement Department to make an award for the period as stated above subject to the appropriation of funds in succeeding fiscal year/years by City Council. The City's fiscal year is from July 1st to June 30th inclusive.

Commodities or services on the bid to be ordered after the end of the fiscal year are subject to the issuance of purchase orders for the following fiscal years. The City is not liable for the award involving following fiscal years' funds until such orders are issued.

The successful bidder(s) obligation to deliver on such purchase orders shall not take effect until the orders are issued. To simplify the contract procedure, however, the successful vendor will be required to furnish a Performance Bond or Performance Security Fee to cover units awarded to him.

1.5 **METHODOLOGY OF ACQUISITION: PURCHASE** only.

#### 1.6 **STATEMENT OF DIRECTION:**

It is the intent of the City of Philadelphia to make an award for **Chlor-Alkali Products** for the various City agencies and departments as specified herein during the contract period.

#### 1.7 **BID SECURITY**

1.7.1 Bid security shall be based upon **cumulative bid amount per Section 5.**

All bids submitted with a total greater than \$30,000.00 must be accompanied by the proper Bid Security.

Bidders already enrolled in the City's Master Bid Security Program for July 1, 2006 to June 30, 2008 are not required to provide Bid Security if their bid

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total is \$500,000.00 or less (per paragraph 2 of “Terms and Conditions of Bidding and Contract”).

**The Master Security Program** allows bidders to qualify for bid security for individual bids submitted during the covered bidding period provided the individual bid total is \$500,000.00 or less.

1.7.2

**Bids Opening July 1, 2008 through June 30, 2010**

Bidders may qualify for the Master Bid Security Program described above for **July 1, 2008 – June 30, 2010** by submitting a check in the amount of **\$175.00** made payable to the City of Philadelphia. The check should be submitted, under separate cover, to the Bid Unit Supervisor at least one day prior to the first bid that the bidder wants covered under the program and is *non-refundable*. Or if, and only if, the bidder chooses to submit the check for the Master Bid Security Program with their bid, the check **MUST** form of a Certified, Treasurer’s or Cashier’s Check, Bank or United States Postal Money Order and is non-refundable.

If the bidder is not enrolled and does not intend to enroll; or if the total value of the bid submitted exceeds \$500,000.00, the Master Bid Security Program is not applicable. Bidders instead **MUST** submit with their bid a refundable Certified, Treasurer’s or Cashier’s Check, Bank Money Order or United States Postal Money Order in the amount as specified in Paragraph 2 entitled “Bid Security”, of the “Terms and Conditions of Bidding and Contract”.

1.8 **BID INFORMATION:**

- 1.8.1 All information concerning this bid will be contained in this bid document as issued or amended.
- 1.8.2 Information provided verbally by any City official shall not be binding or relevant.

1.9 **BID SUBMISSION:**

- 1.9.1 Bid information must be submitted to the City of Philadelphia no later than the time and date for the bid opening.
- 1.9.2 Advertised sealed bids will be received and read publicly at 10:30 AM in Room #170A, 1<sup>st</sup> Floor, Municipal Services Building, 1401 JFK Boulevard.

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- 1.9.3 Bid should be complete and include ALL information required as described in the various paragraphs of the bid specifications.
- 1.9.4 All pricing must be completed on the forms provided; be complete; and be in ink or typed.
- 1.9.5 The bid must be complete as to required bid signatures and corporate seal, and fully accept the terms and conditions contained in the bid.
- 1.9.6 **BID PROCESSING FEE:**  
All bids submitted where the bid total is greater than \$30,000 shall be accompanied by the proper Bid Processing Fee. The fee shall be in the form of a separate check or money order in accordance with Paragraph 3 of the “Terms and Conditions of Bidding and Contract.”
- 1.9.7 When M-BE, W-BE or DS-BE ranges are required on an Invitation and Bid, bidders are reminded that the submission of a blank “Commerce Department Office of Economic Opportunity (OEO)” Solicitation and Commitment Form” will be deemed non-responsive and ineligible for an award. Bidders are reminded to read carefully and entirely the “Bidder’s Guidelines relating to Executive Order 02-05”.

OR

If no M-BE, W-BE or DS-BE ranges are established for this Invitation and Bid, bidders are requested to complete the “Voluntary Participation and Commitment Form (Bid)” located after page 1 of the bid.

Completion of this form will not, in any way, impact the City’s determination concerning bidder’s responsiveness to the requirements of the bid and the award process. The information provided in the “Voluntary Participation and Commitment Form (Bid)” will be for the City’s information.

- 1.9.8 **BID QUESTIONS OR PROBLEMS**  
In preparing the bid response, should any bidder need clarification on the bid requirements, identify a discrepancy in the specifications, determine that a specified product has been discontinued or an alternate procedure is advised,

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etc.; then the bidder is STRONGLY encouraged to bring these issues to the attention of the Procurement Department's Public Information Unit prior to the bid opening by calling (215) 686-4720 or 4721, or by faxing (215) 686-4716. **Questions, whether phoned or faxed, should be received no later than seven (7) calendar days prior to the scheduled opening date of the bid. The City reserves the right to only respond to those questions submitted prior to the stated deadline.** If it is in the City's best interest to do so, the bid MAY be amended to reflect the proposed changes/modifications. **Exceptions taken DO NOT obligate the City to change the specifications. The City of Philadelphia, Procurement Department will notify all bidders in writing, by addendum duly issued, of any interpretations/changes made to specifications or instructions. The City will not accept responsibility for oral instructions, suggestions or changes by any City agency.**

Otherwise the successful bidder will have to provide the product or service exactly as defined in this bid, and in accordance with the specifications and requirements as listed in this Invitation and Bid.

- 1.9.9 **DO NOT SUBMIT MATERIAL SAFETY DATA SHEETS WITH BID**  
(See Paragraph 2.9)
- 1.9.10 Bidder must submit with bid submission a copy of letter of certification from the NSF (Section 2.3). Along with a letter of certification bidder is required to submit a detailed product analysis, including trace contaminants.
- 1.9.11 In paragraph 2.2 Proof of Compliance to be submitted at the time of the bid.

1.9.12 **CONTACT PERSON(S):**

**PRE-AWARD:**

Indicate below to whom in your firm questions concerning this Invitation and Bid should be directed:

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Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/ZC: \_\_\_\_\_

Telephone No.(\_\_\_\_) \_\_\_\_\_ Ext.: \_\_\_\_\_

Fax No.(\_\_\_\_) \_\_\_\_\_

E-mail address \_\_\_\_\_

**State Company Web Site Address:** \_\_\_\_\_

**POST-AWARD:**

Indicate below to whom in your firm questions concerning the Contract resulting from this Invitation and Bid should be directed:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/ZC: \_\_\_\_\_

Telephone No.(\_\_\_\_) \_\_\_\_\_ Ext.: \_\_\_\_\_

Fax No.(\_\_\_\_) \_\_\_\_\_

E-mail address \_\_\_\_\_

1.9.13

**ALTERNATES SUBMITTED:**

If an alternate to any item is offered, bidder must follow instructions in Paragraph 4 of "Terms and Conditions of Bidding and Contract". State the brand name and the model number of each alternate offered. Detailed technical information on the alternate should accompany the bid.



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Address: \_\_\_\_\_

Contact: \_\_\_\_\_

Phone #: \_\_\_\_\_

Type Work: \_\_\_\_\_

Years dealing  
w/your firm: \_\_\_\_\_

**SECTION 2:**

Previous purchase order(s)/contract(s) with the City; (State "None" if applicable)

P.O./Contract  
Number: \_\_\_\_\_

Department: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Phone #: \_\_\_\_\_

Item(s): \_\_\_\_\_

**NOTE: Do not provide the name and phone number of a Procurement Department Buyer in this section. Contact name(s) and phone number(s) must be from a City ordering department.**

**SECTION 2: GENERAL ITEM/SPECIFICATION REQUIREMENTS**

2.1 Successful bidder(s) shall be required to supply the City of Philadelphia's various agencies with chemicals as listed in Sections 2 and 5 of this Invitation and Bid.

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2.2 Water Treatment Chemicals suppliers must comply with PA Code, Title 25, Chapter 109.606 for all items in Section 2: Specifications and Section 5 Pricing. Proof of compliance with the state law for all items specified shall be submitted with the bid.

Each supplier shall submit proof of previous certification, if available. In addition, vendors should be able to prove material is produced for use in potable water by supplying a list of water suppliers and contact persons who have used or are using product, or are listing of all raw materials and certification by manufacturer that each is of food grade quality.

2.2.1 **Material Safety Data Sheets (MSDS):**

To comply with the Pennsylvania Community and Worker Right to Know Act of 1984, the City of Philadelphia requires bidders to submit a copy of the MSDS pertinent to the product(s) used or to the service(s) offered. A copy of MSDS may be required prior to award by the Procurement Department. Successful bidders shall be required to provide to each receiver an MSDS prior to, or accompanying, the first shipment and subsequent to any revision to the MSDS during the duration of this contract. For those products or substances which the bidder believes exempt from the State regulation to provide MSDS, the City requires those bidders to provide with their bid, written and signed documentation of the exemption by citing the specific applicable section of the state law upon which the exemption from MSDS provision is based.

**Labeling of Chemical Substances:**

Bidders for the provision of product(s) or service(s) must meet legal requirements under the Pennsylvania Community and Worker Right to Know Act of 1984 for the labeling of chemicals and of hazardous substances. For those products or substances which the bidder believes exempt from State labeling regulations, the City requires those bidders to provide with their bid, written and signed documentation of the exemption by citing the specific applicable section of the State law upon which the exemption from the labeling requirement is based.

The Material Safety Data Sheet or any other product information submitted by bidder in connection with this bid is for purposes of product description, information and specifications only. Bidder agrees that any additional terms or conditions contained therein, including, but not limited to, disclaimers or limitations of liability, do not become part of the bid.

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2.3 Items shall be in accordance with Procurement Department Specification 5-C-9n:10 dated 4/1/09 (attached). Bidders are requested to retain the specifications for future reference.

Materials identified in Procurement Department Specification 5-C-9n:10 as direct additives used in treatment of potable water should be certified 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.

The vendor shall supply a certified weight certificate and a certificate of analysis with each delivery. The analysis shall include product content as required in Para 2.9 Specific Requirements – Water Treatment Chemicals.

At delivery, when requested, the driver will be required to provide a sample from the truckload being delivered to confirm results by Water Department Laboratories. Philadelphia Water Department's Bureau of laboratory Services (BLS), 1500 E. Hunting Park will perform random check analyses of the delivered chemicals. In the case, when there is a disagreement on the analysis results between a vendor and a Water Department laboratory (BLS), BLS will have a final authority on determining the composition of the delivered product.

2.4 The successful vendor will be required to deliver material within forty eight (48) hours following the request from the using agency, unless otherwise specified in Section 2.8 Specific Requirements. The vendor shall be required to deliver material within twenty four (24) hours following the request from the using agency in the event of an emergency. The vendor shall adhere to a maximum delivery time of five (5) days. If the successful vendor is unable to provide the required material in the time-frame specified, he/she must so notify the using City department, agency, etc., no later than two (2) hours after the request is received or if the City office is closed during the two (2) hour notification period, by 10:00 AM the next business day.

In the event that the contractor cannot or does not supply material in the time-frame referenced above, the City reserves the right to purchase material on the open market and the supplier of record will be required to pay the difference to the City in having to purchase material on the open market. This will be calculated at the end of the contract period. The vendor will be notified by the Procurement Department of a specific dollar amount owed to the City.

2.5 **COPIES OF BID SPECIFICATIONS**

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This bid makes reference to Procurement Department Specifications and/or Purchase Descriptions (Attached). Bidders are requested to retain Procurement Department Specifications for future reference.

**2.6 PRODUCT CONTAMINANT LANGUAGE**

The successful vendor shall certify that contaminants in the drinking water treatment chemical will not cause the finished water to exceed the maximum contaminant level (MCL) identified in the regulated drinking water contaminant list as specified in 40 CFR, part 141 National Drinking Water Regulations, when the product is applied at the maximum usage level as listed by the supplier in the latest version of the ANSI/NSF Listings, Standard 60, Drinking Water Additives - Health Effects.

National Primary Drinking Water Regulations and National Secondary Drinking Water Regulations are listed on the EPA website at:

<http://www.epa.gov/safewater/mcl.html>.

**2.7 PRODUCT ANALYSIS**

Items shall be in accordance with Procurement Department Specification 5-C-9n:10 dated 04/01/2009.

Materials identified in Procurement Department Specification 5-C-9n:10 as direct additives used in treatment of potable water should be certified 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.”

The vendor shall supply a certified weight certificate and a certificate of analysis with each delivery. The analysis shall include product content as required in Para. 2.9 Specific Requirements.

At delivery, when requested, the driver will be required to provide a sample from the truckload being delivered to confirm results by Water Department Laboratories. Philadelphia Water Department’s Bureau of laboratory Services (BLS) will perform random check analyses of the delivered chemicals. In the case, when there is a disagreement on the analysis results between a vendor and a Water Department laboratory (BLS), BLS will have a final authority on determining the composition of the delivered product.

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## 2.8 **SECURITY OF DELIVERED CHEMICALS**

2.8.1 Bidders are advised that shipments of all products must be performed with the utmost care and caution to avoid product tampering and contamination.

All trucks delivering water treatment chemicals must prominently and clearly display the name of the chemical supply company and/or the company logo on the body of the tanker or on the doors of the tractor.

Bidders are advised that all truck delivery personnel must display a company issued photo identification badge. The drivers must prominently display the ID badge on the exterior of their clothing at the time of product delivery.

All tank truck hatchways or loading or unloading pipe connections must be secured and sealed prior to the delivery vehicle leaving the loading terminal. The seal must remain intact upon arrival at the water treatment plant site. The product delivery driver will be required to break the seal in the presence of the department representative. Failure to do so will be cause for rejection of the load.

Seals specifications are described in the paragraph 2.8.2.

Prior to first delivery a successful vendor must submit a written procedure that describes application and removal of security seals to the receiving City agency.

In addition to chemicals delivered in bulk transports, chemicals delivered in containers and drums must also be secured and sealed. Vendors making deliveries in drums and containers must submit written security seals procedures to a receiving City agency prior to making first delivery.

Vendors are advised not to start deliveries of the product before the security seals procedures are reviewed and accepted by the receiving agency. Failure to do so may be considered an event or condition constituting default.

Vendors delivering to the Water or Wastewater Treatment Plants are directed to Fax the following information prior to the arrival of the delivery truck at PWD sites:

1. An identification number for the chemical trailer delivering the product (i.e. trailer license plate number, trailer ID number, company label on trailer).

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2. The truck driver's name
3. The identification number(s) from the tamper resistant seals applied to the intake or discharge piping, man-ways and hoses on the delivery truck.

Fax numbers to be used are:

Baxter WTP – 215-333-9453  
Belmont WTP – 215-878-7393  
Queen Lane WTP – 215-685-2108  
Southeast WPCP-215-271-8899  
Southwest WPCP-215-685-4063  
Northeast WPCP-215-288-3412

Upon arrival of the delivery truck to the site, PWD personnel will cross check the driver's name and license number and the data on the delivery truck, as well as the condition of the tamper resistant seals on the hoses and truck man-ways, against the information provided by your office. At PWD's discretion, any observed information may be verified by directly communicating with vendor's transportation department.

**2.8.2 Tamper Resistant Security Seals Specifications**

Tamper resistant seals shall be plastic pull-up type beaded seals. Seals shall be red with white lettering, 16" in length. As a reference, American Casting and Manufacturing Corp. Plastic Pull-Up Seal Model 9001-16 describes the minimum requirement. Seals shall include 3 lines of text and a unique multi-digit identification number as follows:

CITY OF  
PHILADELPHIA  
WATER DEPT.  
# # # # # #

As an alternative, supplier can utilize custom vendor tag, which still must include a unique multi-digit identification number. Color requirement of tag does not apply. The vendor must provide tag information to each delivery location and receive the approval of receiving agency prior to first delivery. The approved security tag shall be utilized throughout the life of the contract.

**2.8.3 Off-hour Bulk Chemical Delivery Criteria**

Notwithstanding the other requirements defined in Section 2.8.1, vendors are advised that there are additional safeguards which are imposed whenever the

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delivery of bulk chemicals is to occur during off-hours, defined as 6:00 PM to 6:00 AM, Monday through Friday plus all Saturdays and Sundays.

Prior to the start of off-hour deliveries of products, vendors are directed to present their procedures for review and acceptance by the receiving agency. At a minimum, the vendor must:

1. Fax the ID number or the license plate number of the bulk chemical truck to the facility receiving the product. See 2.8.1 for fax numbers.
2. Fax the truck driver name
3. Fax the ID number from the tamper resistant seals applied to the fill pipe/valves and discharge pipe/valves on the delivery truck
4. The fax communication shall be sent during the conventional business hours, Monday through Friday, 8:00 AM to 3:00 PM, prior to delivery.
5. Upon arrival at the receiving plant entry gate, the bulk chemical truck driver shall communicate with the Senior Plant Operator by telephone or via the use of the intercom system. If the driver has access to a cellular phone, he/she may call the senior plant Operator's number, as follows:

Baxter WTP – 215-685-8055  
Belmont WTP – 215-685-0227  
Queen Lane WTP – 215-685-2117

The bulk chemical truck driver must identify him/herself by revealing his/her name, the name of the company and the identification numbers from the tamper resistant seals applied to the truck.

Prior to the start of off-hour deliveries, the vendor is to submit documentation to confirm that the team or pool of drivers are trained, equipped and capable of responding to the accidental spill of the product being delivered.

Should there be an accidental spill or release of product during the unloading process, the truck driver is to immediately communicate with the receiving

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plant representative to initiate the appropriate steps to stop the release, make the area safe for responders and to assist with the clean-up.

#### 2.8.4 **CHEMICAL SPILL RESPONSE REQUIREMENTS**

Each chemical vendor shall furnish the name, address and telephone number of a qualified Hazmat Response Team. This team shall be supplied by the vendor to clean-up and mitigate a chemical spill caused by the vendor or its designee. The Hazmat Response Team must meet OSHA requirements and be available twenty-four (24) hours per day, seven (7) days per week.

Response to a hazardous material clean-up shall occur within eight (8) hours of notification by the treatment plant or the authorized representative, Spill mitigation actions taken by PWD personnel shall not be construed as a replacement for Chemical Spill Response. The Plant Manager or authorized designee shall make the determination of need for Hazmat Response Team Assistance. Vendor must supply information on response team prior to first shipment.

#### 2.9 **SPECIFIC REQUIREMENTS - WATER TREATMENT CHLOR ALKALI CHEMICALS**

2.9.1 Sodium Hypochlorite in accordance with Procurement Specification 5-C-9n:10, Paragraph 3.18 and the following:

##### 2.9.1.1 **Specifications:**

Price shall be on the basis of tons of available chlorine by weight. Tons required are available chlorine by weight.

Material shall be a solution containing 12 percent min. unless otherwise specified available chlorine by weight, meeting AWWA Standard for Hypochlorite B300-04 or latest revision, except for concentrations stated above. Shipments must be of consistent concentration  $\pm$  2% during the term of this contract. Shipment shall be made in tank trucks.

Shall be a clear liquid containing not more than .15% insoluble material by weight and the total free alkali (as sodium hydroxide) in sodium hypochlorite shall not exceed 1.5% by weight. Chlorine and caustic soda used for manufacture of sodium hypochlorite shall meet requirements of AWWA standards and Water

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Chemicals Codex (max. dosage as chlorine 15 mg/L).

Shall not contain any organic or inorganic substances in quantities that would be deleterious or injurious to anyone consuming any water treated with acceptable quantities of hypochlorite. Vendor shall forward a chemical analysis with each shipment, including available chlorine by weight, free alkalinity, chlorine weight per gallon, pH, sodium hypochlorite by weight.

**30730 031 428 01**

2.9.1.1.2 Sodium Hypochlorite  
12% available Chlorine  
by weight (15% trade)

Quantity 20 Tons

**Daytime Delivery:  
6:00 AM – 6:00 PM**

2.9.1.1.3 **30730 031 429 01**

Sodium Hypochlorite, 14.4%  
Available Chlorine by Weight  
(18% trade)

**Daytime Delivery:  
6:00 AM – 6:00 PM**

Quantity: 2175 tons

At delivery, when requested, the driver will be required to provide a sample from the truckload being delivered to confirm results with Water Department Laboratories.

2.9.1.1.4 **30730 031 436**

Sodium Hypochlorite, 24%  
Available Chlorine by Weight  
(30% trade)

**Daytime Delivery:  
6:00 AM – 6:00 PM**

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Quantity: 100 tons

At delivery, when requested, the driver will be required to provide a sample from the truckload being delivered to confirm results with Water Department Laboratories.

2.9.1.2 **Daytime Deliveries:**

Delivery as needed and requested by the Chief Clerk. Deliveries shall arrive at the appropriate delivery location between 6 A.M. and 6 P.M. Deliveries shall be accompanied by a weight certificate from a certified weigher showing the net weight of the delivery within 24 hours after delivery, a weight certificate from a certified weigher shall be faxed or mailed to the receiving unit. Both weight certificates shall include the gross, tare and net weights.

**Delivery Points**

Baxter Plant, 9001 State Road  
Philadelphia, PA 19136

Belmont Plant, 3900 Ford Road  
Philadelphia, PA 19131

Queen Lane Plant, 3545 Fox Street, Philadelphia, PA  
19129

Oak Lane Reservoir, 5th & Cheltenham Avenue,  
Philadelphia, PA 19126

East Park Reservoir, 33rd & Montgomery, Philadelphia,  
PA 19121

Roxborough Reservoir, Harner Avenue & Port Royal  
Avenue, Philadelphia, PA 19128

Southwest Water Pollution Control Plant, 8200  
Enterprise Avenue, Philadelphia, PA 19153

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Queen Lane Raw Water Pumping Station Ridge Avenue  
& Schoolhouse Lane, Philadelphia, PA 19129

Northwest Water Pollution control Plant,  
3895 Richmond Street, Philadelphia, PA 19137

Southeast Water Pollution Control Plant,  
25 E. Pattison Avenue, Philadelphia, PA 19148

Totem Road Pumping Station  
Route 13 and Haunted Lane  
Croydon, PA 19020

**Basis of Award:** Based on the lowest price per ton of Sodium Hypochlorite including the price per ton for delivery.

**Bid price should be based on the tons of chlorine product and the price per ton to deliver product to designated locations.** Items 2.9.1.1.2 (para. 5.1) & 2.9.1.2.1(para. 5.2) will be awarded to the same vendor. Items 2.9.1.1.3 (para. 5.3) & 2.9.1.2.2 (para. 5.4) will be awarded to the same vendor.

2.9.1.2.1     **30730 031 430 01**  
Sodium Hypochlorite  
12% available Chlorine  
by weight (15% trade)  
Quantity 20 Tons

**Night time Delivery (Optional):  
6:00 PM – 6:00 AM**

2.9.1.2.2     **30730 031 431 01**  
Sodium Hypochlorite, 14.4%  
Available Chlorine by Weight  
(18% trade)

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**Night time Delivery (Optional):**

**6:00 PM to 6:00 AM**

Estimated Quantity: 2123 Tons

2.9.1.2.3

**30730 031 437**

Sodium Hypochlorite, 24%  
Available Chlorine by Weight  
(30% trade)

**Night time Delivery (Optional):**

**6:00 PM – 6:00 AM**

Quantity: 100 tons

At delivery, when requested, the driver will be required to provide a sample from the truckload being delivered to confirm results with Water Department Laboratories.

2.9.1.2.3.1 **Optional Delivery Times**

The City may elect to have deliveries between the hours of 6:00 PM to 6:00 AM for the following locations:

Baxter Water Treatment Plant  
9001 State Road  
Philadelphia, PA 19136

Belmont Water Treatment Plant  
3900 Ford Road  
Philadelphia, PA

Southwest Water Pollution  
Control Plant  
8200 Enterprise Avenue  
Philadelphia, PA 19153

Northeast Water Pollution  
Control Plant  
3895 Richmond Street  
Philadelphia, PA 19137

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Southeast Water Pollution  
Control Plant  
25 E. Pattison Avenue  
Philadelphia, PA 19148

Queen Lane Water  
Treatment Plant  
3110 Queen Lane  
Philadelphia, PA 19129

Totem Road Pumping  
Station  
Route 13 and Haunted Lane  
Croydon, PA 19020

Queen Lane Raw Water  
Pumping Station  
Ridge Avenue &  
Schoolhouse Lane  
Philadelphia, PA 19129

Bidder to state in Section 5, price per ton for deliveries between the hours of 6:00 PM and 6:00 AM. All of the specifications of paragraph 2.9.1 apply to these items except for delivery times.

**Basis of Award:**

Item 2.9.1.2.2 state percentage (%) off price per ton for night time delivery (Para. 5.2). Base price minus discount (stated as % from base price) = Unit Price Per Ton.

Item 2.9.1.2.3 State percentage (%) off price per ton for night time delivery (Para. 5.4). Base Price (minus discount (stated as % from base price) = Unit Price per ton.

Item 2.9.1.2.4 State percentage (%) off price per ton for night time delivery (Para. 5.6). Base

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Price (minus discount (stated as % from base price) = Unit Price per ton.

2.9.2 **30730 031 447 01**

Demurrage, Sodium Hypochlorite, tank truck delivery. There will be no charge to the City for the first eight (8) hours. Price shall be on a per hour basis for service after first eight (8) hours. This item will be awarded to the successful bidder(s) for 2.9.1.1.2 and 2.9.1.1.3.

2.9.3 **30730 031 462 02**

Sodium Hypochlorite less than 5000 gallon deliveries.

2.9.3.1 **Specifications**

Sodium Hypochlorite, liquid, in less than 5000 gallon deliveries, in accordance with Procurement Department Specification 5-C-9n:10 or latest revision, item 3.18.

Fairmount Park requires delivery of Sodium Hypochlorite to its fountains located throughout the City. Locations shall be indicated on the purchase order issued by the using department. The capacity of the tanks are from 110 to 1000 gallons and will require filling during the season as indicated below.

2.9.3.1.1 **Fairmount Park Delivery locations**

Logan Circle – 19<sup>th</sup> & Benjamin Franklin Parkway  
200 Gallons per Week

Eakins Oval – 24<sup>th</sup> & Benjamin Franklin Parkway  
100 Gallons per Week

Art Museum Fountain – 24<sup>th</sup> & Benjamin Franklin Parkway  
200 Gallons per Week

Horticulture Center – 100 Horticulture Drive/Montgomery

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Drive & Belmont Avenue  
150 Gallons per Week

JFK Plaza  
150 Gallons per Week

Water Works  
640 Water Works Dr.  
200 Gallons per Week

Phillips  
25th and Benjamin Franklin Blvd.  
(in front of the Art Museum)  
100 Gallons per week

Rodin Museun  
21st and Benjamin Blvd.  
100 Gallons per week

**Basis of Award:**

Based on Lowest Price per Gallon (Para. 5.8)

2.9.3.2 Sodium Hypochlorite in accordance with Procurement Department Specification 5-C-9n:10, Item 3.18. Delivery in 55 gallon drums.

**30730 031 433 01**  
2.9.3.2.1 One (1) to (2) drums  
(para. 5.9)

**30730 031 434 01**  
2.9.3.2.2 Three (3) to nine (9) drums  
(para. 5.10)

**30730 031 452**  
2.9.3.2.3 Drum Deposit

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(para. 5.11)

2.9.3.2.4 **Delivery Locations**

Baxter Water Treatment Plant  
9001 State Road  
Phila. PA 19136

Belmont Water Treatment Plant  
4300 Ford Road  
Philadelphia, PA 19131

**Basis of Award:** Based on the price per ton of Sodium Hypochlorite including the price per ton for delivery

**30730 031 036**

2.9.4 Delivery of training for Sodium Hypochlorite. In addition to the complimentary training sessions generally provided by the sodium hypochlorite supplier to promote safe handling of their product, the vendor shall provide, if required, one (1) full day of on-site technical training at Water Department installations receiving sodium hydroxide.

The training sessions shall include but not be limited to the characteristics of sodium hypochlorite, safe operation and maintenance practices, emergency response and technical guidance to assure that the workforce adequately acquainted with all aspects of handling and using the product. The vendor shall conduct hands-on demonstrations.

The instructor shall have sufficient experience and qualifications which will enable him/her to present a training session which is meaningful and complete. The instructor is to include hand-outs, pre-tests, post-tests, films, slides or any other material in the training program which will enable the workforce to grasp and retain the subject matter.

The vendor shall coordinate the scheduling of training with the respective water/wastewater treatment plant managers.

The bidder shall quote a daily rate for the Technical Instructor. All costs including transportation, meals, housing, training supplies,

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handouts and other expendable materials shall be included in the daily rate. The vendor shall be paid only for those training sessions actually provided. It is estimated that there will be one (1) training day for each location supplied by the vendor during the one year life of the contract.

**Basis of Award:**

Awarded to vendor for Sodium Hypochlorite (para. 5.12)

2.9.5 **30730 031 453**

**CALCIUM HYPOCHLORITE TABLETS**

White, 3 – inch. 55 LB/ Pail. Accu-Tab for ref.  
Fairmount Park uses an estimated 20 Pails per season.

**Basis of Award:** The lowest unit price submitted (para 5.13).

2.9.6 **SODIUM HYDROXIDE LIQUID**

**30730 001 048 05**

2.9.6.1 **SODIUM HYDROXIDE LIQUID**

In accordance with Procurement Department Specification 5C-9n:10, Item 3.17. (para. 5.14)  
Estimated Quantity: 2335 Tons

**Basis of Award:**

Bulk shipments shall be made as 25 weight percent solution in tank trucks in 4000 gallon deliveries to Baxter WTP, Queen Lane WTP and Belmont WTP.

Vendor shall supply analysis data with each delivery including sp. gravity and % of NaOH.

**Basis of Award:** Based on the lowest price per ton of Sodium Hydroxide including the price per ton for delivery (para 5.14)

2.9.6.2 **SODIUM HYDROXIDE LIQUID**

Delivery in 55 gallon drums

2.9.6.2.1 **30730 001 048 06**

One (1) to two (2) drums (para. 5.15)

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2.9.6.2.2 **30730 001 048 07**  
Three (3) to nine (9) drums (para. 5.16)

2.9.6.2.3 **30730 001 009 03**  
Drum Deposit (para. 5.17)

**Basis of Award:** Based on lowest price per drum.

**DELIVERY LOCATIONS**

Belmont Water Treatment Plant  
4300 Ford Rd. (19131)

Baxter Water Treatment Plant  
9001 State Road (19136)

Queen Lane Water Treatment Plant  
3545 Fox Street (19129)

**DELIVERY:**

As needed and required by Chief Operator. Deliveries shall arrive at the plant between 8:00 AM and 4:00 PM. Delivery shall be accompanied by a weight certificate from a certified weigher showing the net weight of the delivery and an affidavit of compliance with standards.

At delivery, when requested, the driver will be required to provide a sample from the truckload being delivered to confirm results with Water Department Laboratories.

2.9.7 **30730 033 000**

**DELIVERY OF TRAINING FOR SODIUM HYDROXIDE**

In addition to the complimentary training sessions generally provided by the sodium hydroxide supplier to promote safe handling of their product, the vendor shall provide, if required, one (1) full day of on-site technical training at Water Department installations receiving sodium hydroxide.

The training sessions shall include but not be limited to the characteristics of sodium hydroxide, safe operation and maintenance practices, emergency response and technical guidance to assure that the workforce

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is adequately acquainted with all aspects of handling and using the product. The vendor shall conduct hands-on demonstrations.

The instructor shall have sufficient experience and qualifications which will enable him/her to present a training session which is meaningful and complete. The instructor is to include hand-outs, pre-tests, post-tests, films, slides or any other material in the training program which will enable the workforce to grasp and retain the subject matter.

The vendor shall coordinate the scheduling of training with the respective water/wastewater treatment plant managers.

The bidder shall quote a daily rate for the Technical Instructor. All costs including transportation, meals, housing, training supplies, handouts and other expendable materials shall be included in the daily rate. The vendor shall be paid only for those training sessions actually provided. It is estimated that there will be one (1) training day for each location supplied by the vendor during the one year life of the contract.

**Basis of Award:** Awarded to vendor for Sodium Hydroxide. (para. 5.18)

2.9.8 Payment shall be made upon receipt of invoice(s) by the City and purchase order(s) by the vendor(s). Payment shall be calculated to the second decimal point.

**2.10 HAZARDOUS MATERIAL**

Bidders are reminded that where applicable they are required to submit with their bid, a copy of the Materials Safety Data Sheet pertinent to the product(s) offered. The successful bidders are required to provide, with delivery, Material Safety Data Sheets to the receiver. All hazardous materials containers must have warning notices affixed as described by law.

2.10.1 Vendor must submit a Material Safety Data Sheet (MSDS) prior to or accompanying the first delivery made under this contract.

2.10.2 Vendor must also submit a new MSDS prior to or accompanying the first shipment subsequent to any revision to the MSDS made during the duration of this contract.

2.10.3 The Material Safety Data Sheet or any other product information submitted by bidder in connection with this bid is for purposes of product description,

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information, and specification only. Bidder agrees that any additional terms or conditions contained therein, including, but not limited to, disclaimers or limitations 2 or liability, do not become part of the bid.

### 2.11 **BID PRICE DETERMINATION**

Total Bid price per unit measure will include the cost of delivery to the designated locations. There will be no additional award for transportation costs or fuel surcharges granted during the term of this contract.

## **SECTION 3: BID EVALUATION AND AWARD**

### 3.1 **EVALUATION:**

3.1.1 Bids will be evaluated by the Procurement Department.

3.1.2 Bids will be evaluated for responsiveness to the bid specifications and for responsibility of the bidders.

3.1.3 Bids which are determined to be non-responsive for reasons of:

- (i) improper bid security
- (ii) improper bid execution
- (iii) incompleteness
- (iv) offering counter terms and conditions
- (v) improper or incomplete execution of OEO documents (if applicable)

may be disqualified by the City without notice to the bidder. The decision of the City is final.

3.1.4 Bidders whose bids are determined to be non-responsible for reasons of bidder qualification shall be notified by the City of the reasons for the determination and may contest the finding of non-responsibility through the prescribed procedures described in paragraph 9 of "Terms and Conditions of Bidding and Contract".

### 3.2 **AWARD:**

3.2.1 Bids will be awarded on an item per item basis or as a whole, whatever is in the best interests of the City.

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3.2.2 The prices used for the calculation of the Basis of Award must be the same prices as quoted in Section 5 – “Pricing.” In the event of a conflict between the prices quoted in Section 5, “Pricing”, of the bid and those used in the Basis of Award, the prices quoted in the Pricing Section will prevail and will be used for calculations.

3.2.3 See Section 2, under each individual item, for explanation of bid pricing for Section 5.

3.2.4 **PERFORMANCE SECURITY:**  
Bidder’s attention is directed to paragraph 14 of “Terms and Conditions of Bidding and Contract,” for the required Performance Security.

Please note however, that all awards as a result of this bid will have a minimum contract amount of \$30,000.01. All awards at the \$30,000.01 amount will be subject to a \$50.00 Master Performance Security Fee.

Performance security shall be required for any subsequent renewal periods.

3.2.5 **City of Philadelphia-Business, Corporate and Slavery Era Insurance Disclosure**

In accordance with Section 17-104 of The Philadelphia Code, the Bidder, after execution of this Contract, will complete an affidavit certifying and representing that the Bidder (including any parent company, subsidiary, exclusive distributor or company affiliated with Bidder) has searched any and all records of the Bidder or any predecessor business entity regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era. The names of any slaves or slaveholders described in those records must be disclosed in the affidavit.

The Bidder expressly understands and agrees that any false certification or representation in connection with this Paragraph and/or any failure to comply with the provisions of this Paragraph shall constitute a substantial breach of this Contract entitling the City to all rights and remedies provided in this Contract or otherwise available in law (including, but not limited to, Section 17-104 of the Philadelphia Code) or equity and the contract will be deemed voidable. In addition, it is understood that false certification or

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representation is subject to prosecution under Title 18 Pa.C.S.A. Section 4904.

### 3.2.6

#### **INSURANCE:**

Insurance is a requirement for this bid in accordance with Paragraph 15 of the "Terms and Conditions of Bidding and Contract". No contract will be executed nor purchase order issued unless and until all required insurance certificates, in the required amount, are received. **All insurance MUST meet the following requirements:**

- Insured must be in the same name and address as the Bidder
- The insurance carrier must be rated "A" or better by AM Best
- The certificate holder must be the City of Philadelphia, and specifically named as an additional insured on the certificate in the "Description of Operations section".
- Certificate must be signed by an authorized representative of the insurance company/carrier

All certificates are to be sent to the Office of Risk Management, One Parkway, 1515 Arch Street, 14<sup>th</sup> Floor, Philadelphia, PA 19102, Attn. Debbie Lawton or FAX to (215) 683-1705.

## **SECTION 4: CONTRACT MANAGEMENT**

### 4.1 **CITY OF PHILADELPHIA RESPONSIBILITY:**

#### 4.1.1

City agencies will be notified by Procurement of award(s) and will be provided with vendor(s), vendor contact(s) and applicable pricing. Departments will prepare and submit through the appropriate review channels, a requisition detailing their specific needs and requirements to Procurement. The Procurement Department shall then apply the requisition against the contract and issue a purchase order.

#### **Order Against Contracts**

Subsequent to contract conformance of a Requirements bid, purchase orders will be issued at such time that the product and/or service is needed. Such purchase orders will show if delivery is to be made upon receipt of order, or only after notification by the using department.

#### 4.1.2

Invoices shall be submitted after delivery and acceptance of the product or service by the City. The City attempts to process invoices in a timely manner. Delays can occur because of incomplete or inaccurate invoicing information.

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Please make sure that invoices contain the following information to help the City process payments to the Contractor as quickly as possible.

- (a) After the delivery or services have been completed the Contractor must submit three (3) copies of the invoice for payment to the receiving department listed on the purchase order.
- (b) The invoice must correctly reference the purchase order number, the vendor name, address and Federal Employer Identification number.
- (c) Checks will only be made payable to the company name as shown on the purchase order; the invoice must reflect this same company name as the “pay to”.
- (d) The invoice must show the quantity and type of item or service and the price.
- (e) The unit of purchase on the invoice must agree with the unit cited on the purchase order. Reference to the specific line item is helpful.

4.1.3 The using agencies and departments are responsible for monitoring the services and/or products delivered as described in the contract. If any problems arise, a letter should be sent to the vendor requesting resolution by a specified date. A copy should be sent to the buyer. If vendor does not resolve the breach of contract by the requested date the matter should be turned over to the buyer.

4.1.4 **ADD-ONS:**  
The City reserves the right to add, delete and or change locations; acquire products/services that the vendor can supply that are similar to, but not specifically called for in this bid. The procedure for such acquisitions shall be as follows:

Procurement or the using department will obtain from the Vendor a letter (on his/her letterhead) verifying the items to be added. The letter shall include the complete description of the item, the location (if applicable), the bid number bid schedule number, the price to the City and the applicable contract period; and upon receipt and approval by the Procurement Department shall automatically become part of the contract. **The City, however, reserves the right to accept or reject the letter and to acquire the supplies or materials in the open market.**

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4.1.5 **MATERIALS TESTING:**

The City of Philadelphia, may, during the life of this contract, supply a delivered product from this contract to the Materials Testing Laboratory. These products shall be tested to ensure conformance with bid specifications. If product fails, or is different from product supplied at award stage, rejection procedures will be implemented.

4.2 **VENDOR RESPONSIBILITY:**

4.2.1 Contractor may deliver only products, services or equipment (as applicable) as authorized in the contract and only after receipt of a purchase order or other authorized document from the Procurement Department. All orders must be in writing. Contractor shall not accept verbal delivery requests until after receipt of purchase order or other authorizing document from Procurement.

4.2.2 Contractor may deliver only products, services or equipment (as applicable) at the prices quoted in the contract and that are reflected on a purchase order or a change to a purchase order (a change to a purchase order is issued whenever the items, unit price, total amount, or terms and conditions change from the original purchase order).

4.2.3 Contractors may deliver products, services or equipment (as applicable) up to the dollar limit of the purchase order and for the period shown on the purchase order. Contractors are requested to carefully monitor obligations against purchase orders and inform the departments of anticipated funding shortfalls.

4.2.4 **DELIVERY:**

Unless otherwise specified in Section 2, noted by bidder in Section 5, and/or approved by the Using Agency, delivery of product and/or service will be made within 30 days from date requested by Using Agency. **VENDOR NOTE:** In Section 5, specify delivery if other than 30 days.

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4.2.4.1 **Liquidated Damages:**

Liquidated Damages in the amount of 5% of the unit price may be applied to each item which exceeds the delivery schedule/requirement.

4.2.5 In the event that the contractor receives an order for products, services or equipment not specifically priced and incorporated into the contract, they must:

- (i) bring this to the immediate attention of the Procurement Dept., and
- (ii) notify the ordering agency in writing and refuse to deliver.

4.2.6 Should products, services, or equipment be delivered that are not specifically incorporated and priced into the contract, and/or be delivered without purchase order, the City shall have no obligation for payment.

4.2.7 For delivery of products or equipment, contractors shall honor and be paid for orders placed until the close of business of the date of purchase order expiration. Delivery of product may occur following purchase order expiration, so long as the order was placed prior to the purchase order expiration date.

4.2.8 For performance of services, contractor shall honor and be paid for orders placed until the close of business of the date of purchase order expiration. Performance of services may occur following purchase order expiration, so long as the order was placed prior to the purchase order expiration date.

4.2.9 **REPORTS**

The City requests information regarding any known or potential material content in the product that may be extracted and recycled after the product has served its intended purpose.

Product bid contains recycled content? YES  NO

Is your product packaged and/or shipped in material containing recycled content? YES  NO

Is your product recyclable after it has reached its intended end use? YES  NO

Is your product shipped in returnable

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Containers?

YES  NO

4.2.10 At the conclusion of this contract, Contractor agrees to cooperate with any incoming vendor on a transition plan to ensure an orderly changeover of responsibilities.

4.2.11 **Invoices/Receipts:**

4.2.11.1 Successful bidder(s) agrees not to invoice more than once per month.

4.2.11.2 All invoices/receipts for parts shall have the signature and payroll ID number of the authorized/designated City personnel.

4.2.11.3 Invoices should be sent in triplicate to each ordering department

4.2.11.3.1 One (1) original and two (2) copies fully itemized invoices.

4.2.11.3.2 See also item 4.1.2 above.

4.3 **MATERIAL SAFETY DATA SHEETS:**

4.3.1 Bidders are reminded that they are not required to submit copies of the Materials Safety Data Sheet with their bid. The successful bidders are required to provide, with delivery, Material Safety Data Sheets to the receiver. All hazardous material containers must have warning notices affixed as described by law.

4.3.2 Vendor must submit a Material Safety Data Sheet (MSDS) prior to or accompanying the first delivery made under this contract.

4.3.3 Vendor must also submit a new MSDS prior to or accompanying the first shipment subsequent to any revision to the MSDS made during the duration of this contract.

4.4 **CERTIFICATION:**

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At the time of delivery, the contractor certifies the item(s) as to physical and chemical properties, and that items delivered are in accordance with the specifications and agency requirements cited in the item description. In the event items are not as certified, the vendor shall provide, at his expense, removal of the non-certified chemical from the storage tanks at the Water Treatment Facilities and replacement chemicals for any item found to be in conflict with the contract specification.

4.5 **TERMINATION:**

The City reserves the right to terminate any resulting contract at any time.

4.6 **TRAINING AND TECHNICAL SERVICES**

4.6.1 As requested and unless otherwise specified, the chemical supplier shall provide at no additional cost to the City, a one-half day formal on-site classroom training session to City employees for each supplied chemical at each delivery location specified. The training classes shall be given during the contract period.

4.6.2 The training session shall include but not be limited to the characteristics of the supplied chemical, safe operating and maintenance practices, emergency response, routine operational observations or maintenance tasks, and technical guidance to assure that the workforce is adequately acquainted with all aspects of handling and using supplied chemical.

4.6.3 The instructor shall have sufficient experience and qualifications which will enable him/her to present a training session which is meaningful and complete. The instructor is to include hand-outs, pre-tests, post-tests, films, slides or any other material in the training program which will enable the workforce to retain the subject matter.

4.6.4 The vendor shall coordinate the scheduling of training with the respective unit managers.

4.7 **VENDOR ACCEPTANCES – IN SUBMITTING AN EXECUTED BID, THE BIDDER AGREES TO THE CONTRACT MANAGEMENT PROCEDURES IN THIS SECTION.**

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**SECTION 5: PRICING**

**Prices quoted must not contain more than three (3) decimal places. All prices must remain firm for the period of the contract.**

**NOTE: Unit of issues used in this bid:**

<b>TN - (Ton)</b>	<b>Pa - (Pail)</b>
<b>DR - (Drum)</b>	<b>GA - (Gallon)</b>
<b>CH - (Container)</b>	<b>LB - (Pound)</b>
<b>EA - (Each)</b>	<b>TE - (Tote)</b>
<b>MO- (Month)</b>	<b>HR - (Hour)</b>

For delivery instructions, please refer to individual commodity codes listed in Section 2.

	<u>Quantity</u>	<u>Unit of Measure</u>	<u>Unit Price</u>	<u>Total Amount</u>
<b>30730 031 428 01</b>				
5.1 Sodium Hypochlorite 12% Available Chlorine by weight (Min. 15% Trade) <b>Daytime Delivery</b> Para. 2.9.1.1.2	20	TN	\$_____	\$_____
<b>30730 031 430 01</b>				
5.2 Sodium Hypochlorite 12% Available Chlorine by weight <b>Night Time (Optional Delivery)</b> Para. 2.9.1.2.1	20	TN	\$_____	\$_____

State discount from unit price quoted in Item 5.1: \_\_\_\_\_%

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Discount will remain firm for the entire period of the contract to include any subsequent renewal and/or extension period(s).

**30730 031 429 01**  
 5.3 Sodium Hypochlorite 2175 TN \$\_\_\_\_\_ \$\_\_\_\_\_  
 14.4% available Chlorine by weight  
**Daytime Delivery** (Para. 2.9.1.1.3)

	<u>Quantity</u>	<u>Unit of Measure</u>	<u>Unit Price</u>	<u>Total Amount</u>
5.4 <b>30730 031 431 01</b> Sodium Hypochlorite 14.4% Available Chlorine by weight Para. 2.9.1.2.2 <b>Night Time (Optional Delivery)</b>	2123	TN	\$_____	\$_____

State discount from unit price quoted in Item 5.3: \_\_\_\_\_%

Discount will remain firm for the entire period of the contract to include any subsequent renewal and/or extension period(s).

**30730 031 436**  
 5.5 Sodium Hypochlorite 100 TN \$\_\_\_\_\_ \$\_\_\_\_\_  
 24% available Chlorine by weight  
**Daytime Delivery** (Para. 2.9.1.1.4)

**30730 031 437**  
 5.6 Sodium Hypochlorite 100 TN \$\_\_\_\_\_ \$\_\_\_\_\_  
 24% Available  
 Chlorine by weight  
 Para. 2.9.1.2.3  
**Night Time (Optional Delivery)**

State discount from unit price quoted in Item 5.5: \_\_\_\_\_%

Discount will remain firm for the entire period of the contract to include any subsequent renewal and/or extension period(s).

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	<u>Quantity</u>	<u>Unit of Measure</u>	<u>Unit Price</u>	<u>Total Amount</u>
<b>30730 031 447 01</b>				
5.7 Demurrage, Sodium Para. 2.9.2	24	HR	\$_____	\$_____
<b>30730 031 462 02</b>				
5.8 Sodium Hypochlorite, or delivery.... Para. 2.9.3	900	GA	\$_____	\$_____
<b>30730 031 433 01</b>				
5.9 Sodium Hypochlorite... One (1) to Two (2) Drums Para. 2.9.3.2.1	20	DR	\$_____	\$_____
<b>30730 031 434 01</b>				
5.10 Sodium Hypochlorite... Three (3) to Nine (9) Drums Para. 2.9.3.2.2	20	DR	\$_____	\$_____
<b>30730 031 452</b>				
5.11 Drum Deposit Para. 2.9.3.2.3	1	DR	\$_____	\$_____
<b>30730 031 036</b>				
5.12 Training for Sodium Hypochlorite Para. 2.9.4	24	HR	\$_____	\$_____
<b>30730 031 453</b>				
5.13	20	PA	\$_____	\$_____

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Calcium Hypochlorite Tablets  
55 LB/ Pail. Accu-Tab for ref. (Para. 2.9.5)

	<u>Quantity</u>	<u>Unit of Measure</u>	<u>Unit Price</u>	<u>Total Amount</u>
<b>30730 001 048 05</b>				
5.14 Sodium Hydroxide Liquid (bulk). Para 2.9.6.1	2335	TN	\$_____	\$_____
<b>30730 001 048 06</b>				
5.15 Sodium Hydroxide. One (1) to Two (2) Drums Para. 2.9.6.2.1	24	DR	\$_____	\$_____
<b>30730 001 048 07</b>				
5.16 Sodium Hydroxide... Three (3) to Nine (9) Drums. Para. 2.9.6.2.2	24	DR	\$_____	\$_____
<b>30730 001 009 03</b>				
5.17 Sodium Hydroxide Drum Deposit Para. 2.9.6.2.3	1	DR	\$_____	\$_____
<b>30730 033 000</b>				
5.18 Training for Sodium Hydroxide Para. 2.9.7	24	HR	\$_____	\$_____
<b>Extended Total Bid Amount \$</b>				_____

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**BIDDER TO STATE HOW PRODUCT(S), SUPPLIES AND/OR PARTS ARE TO BE DELIVERED TO THE CITY OF PHILADELPHIA: (E.G. ON-SITE DELIVERY VIA AWARDED VENDOR'S TRUCK, UNITED PARCEL, U.S. POSTAL SERVICE ETC.).**

**TYPE OF TRANSPORT:** \_\_\_\_\_



## **WATER TREATMENT CHEMICALS**

### **1. CLASSIFICATION**

This specification covers a series of chemicals to be used by the Water Department of the City of Philadelphia for the treating of the municipal water supply as follows:

1. Activated Carbon – Powdered
2. Aluminum Sulfate – Liquid
3. Ammonium Hydroxide – Liquid
4. Calcium Hypochlorite (Technical)
5. Calcium Oxide
6. Chlorine, Liquid
7. Dechlorination Agent
8. Ferric Chloride – Liquid
9. Ferric Sulfate - Liquid
10. Fluorosilicic Acid
11. Hydrated Lime
12. Hydrogen Peroxide
13. Phosphoric Acid – Liquid
14. Polymer, Liquid Anionic

15. Polymer, Liquid Cationic
16. Sodium Permanganate
17. Potassium Permanganate
18. Sodium Hydroxide – Liquid
19. Sodium Hypochlorite
20. Sodium Phosphate - Blended
21. Sulfuric Acid
22. Zinc Phosphate

**2. APPLICABLE SPECIFICATIONS:**

The following specifications or publications of the latest issue in effect on the date of the Invitation to Bid shall form a part of this specification, when and as indicated in Section 3.

- Applicable Standards of the American Water Works Association
- Applicable Federal Specifications
- Water Chemicals Codex
- Copies of Methods of Analysis for the following materials will be furnished on request:

Activated Carbon - Powdered

**3. REQUIREMENTS:**

**3.1 ACTIVATED CARBON - POWDERED**

The material furnished shall be an activated carbon, in powdered form. The trade name and brand identification of material offered shall be stated in the bid.

The better activated carbons for water treatment are produced by activation of lignite or charred wood pulp, sometimes called "Woodchar". Carbon is also manufactured from "Barkchar", the principal raw material for which is slabwood, which contains abnormal proportions of bark. The bark has a high content of acid insoluble ash (sand). The density of bark carbon is far greater, and the pore sizes are much smaller.

Taste and odor producing materials in water are varied, and characteristics of the molecules vary greatly. Large, or long-chain molecules cannot be absorbed in small pores. However, the smaller pore carbon may show good results with smaller molecules. The numerous materials in natural waters may vary in their molecular sizes, over many orders of magnitude. Therefore, the carbon pores must be able to accommodate a wide range of sizes.

Iodine molecules are relatively small, and phenols have moderately sized molecules. On the other hand, the amines that generally cause musty taste and odors, have long-chain molecules, which are typical of our major problem, musty odors.

The iodine value can be considered as a measure of the total pore area, the phenol value as measure of the effectiveness for removal of moderate-chain molecules, and the "Geosmin Test" for long-chain or large sized molecules such as the amines. Performance will be evaluated by these three tests.

The "Geosmin Test" will be performed by the Philadelphia Water Department's Bureau of Laboratory Services Organic Laboratory. Samples of powdered activated carbons must be submitted to the Water Department before time of bid in order to be tested by the Department and determined acceptable. Test procedures are available upon request for specified parameters.

Material must conform to AWWA Standard B600- 05, Water Chemicals Codex, and Philadelphia Water Department Geosmin Test criteria in order to be awarded. All analysis reported on Certificate of Analysis by vendor must be performed in a qualified laboratory in the United States of America. No foreign analytical results will be accepted.

The quality of activated carbon in each carload will be determined from the analysis of a sample collected at the time of delivery at the designated plant.

Analysis will be performed by the Water Department's Bureau of Laboratory Services in accordance with the properties listed below.

Properties:

Material shall conform to the following specifications when tested by Philadelphia Water Department's methods:

SPECIFICATIONS

1. Impurities Shall comply with Water Chemicals  
Codex (max. dosage 50 mg/l.)
2. Apparent Density (g/ml) 0.75 maximum  
0.20 minimum
3. Phenol Value (g/l) 3.5 maximum
4. Iodine Number 550 minimum
5. Moisture, % (when shipped) 8 maximum
6. Fineness: % through #100 sieve 99 minimum  
% through #200 sieve 95 minimum  
% through #325 sieve 90 minimum
7. Material must readily wet down to produce a suspension, and when applied in treatment it:
  - a) must not float
  - b) must not settle rapidly
8. Philadelphia Geosmin Removal Test:

In a specially prepared synthetic "challenge" water adjusted to simulate the competitive absorptions of Philadelphia's two surface water sources, the carbon must be able to lower the Geosmin level from 25 ppt to below 5 ppt with a dosage not more than 12 ppm (100 lbs./MG).

**NOTE:** Testing methods for items 2 through 6 are as specified in AWWA Standard for Powdered Activated Carbon (B600-05).

Testing methods for Philadelphia Geosmin Removal Test are available upon request.

Vendor must submit a manufacturer's Material Safety Data Sheet (MSDS) before or accompanying the first delivery made under this contract. Vendor must submit a new MSDS prior to or accompanying the first shipment subsequent to any revision to the manufacturer's MSDS or change in manufacturers made during the duration of this contract.

### **3.2 ALUMINUM SULFATE - LIQUID**

The material supplied, known commercially, as "Liquid Alum" shall contain not less than 8.0% of water soluble alumina ( $Al_2O_3$ ). It shall contain not less than 0.025% by weight of  $Al_2O_3$  in excess of the amount required to combine with the sulfur trioxide ( $SO_3$ ) present. It shall contain no substances deleterious or injurious to water treatment. Iron ( $Fe_2O_3$ ) content shall not exceed 0.35%.

The material shall comply with the American Water Works Association Standard for Aluminum Sulfate.B403-03

Quality and test procedures shall conform to the American Water Works Association Standard for Aluminum Sulfate B403-03.

Aluminum Sulfate is a direct additive used in the treatment of potable water. This material shall be certified 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.

Each bulk delivery shall be accompanied by a certification of the manufacturing company as to the brand and analysis of the material, also a weight certificate signed by a certified weigher.

Vendor must submit a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each of the delivery points. Vendor must submit a new MSDS subsequent to any revision or change during the duration of this contract.

**3.3 AMMONIUM HYDROXIDE - AQUA AMMONIA:**

The material furnished shall be technical grade liquid Ammonia, Type II of Federal Specification O-A-451f of December 10, 1975. This is a colorless transparent commercial liquid also known as Aqua Ammonia, weighing approximately 7.75 pounds per gallon, and containing nineteen percent (19%) of Ammonia (NH<sub>3</sub>). The bid price shall be on tons of Ammonia (NH<sub>3</sub>). It shall contain no extraneous materials deleterious or injurious to consumers of water treated with it in appropriate dosages. It shall contain no sediment that could clog or interfere with proper operation of feed pumps or other equipment used by the Water Department.

Ammonium Hydroxide is a direct additive used in the treatment of potable water. This material shall be certified 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.

Vendor must supply a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point. Vendor must submit a new MSDS subsequent to any revision or change during the duration of the contract.

**3.4 CALCIUM OXIDE: HIGH CALCIUM QUICKLIME**

The calcium oxide material shall be a high calcium, continuous flow kiln Oxide of Lime, containing ninety percent (90%) of Calcium Oxide (CaO). It shall contain no mineral or organic substances in quantities capable of producing deleterious or injurious effects upon the health of those consuming the water, which has been treated with it.

The quicklime shall have a reactive quality classified as high-reactive lime when tested in accordance with Section 5 of AWWA Standard B202-02: the quicklime shall produce 40 oF rise in temperature in 3 min and shall reach the maximum temperature in 10 minutes.

The quicklime shall slake satisfactorily, readily disintegrating into a suspension of finely divided material without the production of objectionable amounts of undissolved or unslaked material in the slaker.

Quick lime supplied under this standard shall be freshly burned and shall be substantially free from carbonate solids and siliceous residue. It shall be substantially free of core, ash and dirt, or extraneous materials.

Material must comply with AWWA Standard B202-02.

Quicklime is a direct additive used in the treatment of potable water. This material shall be certified 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.

Material shall not contain iron or aluminum, which is soluble in Hydrochloric Acid, in excess of the following amounts:

Iron in terms of $Fe_2O_3$	-	0.25%
Aluminum in terms of $Al_2O_3$	-	0.70%

Available calcium oxide shall be determined by test method shown in Section 5 of AWWA Standard B202-02

Material shall be 3/8" x 1/8" in size and none shall be retained on a 5/8" screen.

Bids shall state quoted prices on materials crushed, screened, and delivered.

Vendor must supply a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point specified in the bid. Vendor must supply a new MSDS subsequent to any revision made during the duration of this contract.

### **3.5 CHLORINE - LIQUID:**

The liquid chlorine material supplied shall contain no soluble mineral or organic substances in quantities that would be deleterious or injurious to anyone consuming any water treated with acceptable quantities of the chlorine. This includes, but is not limited to, chloroform, carbon tetrachloride, hexachlorobenzene, hexachloroethane, nitrogen trichloride, silicon tetrachloride, and ferric chloride.

The liquid shall be substantially free of impurities causing residues that clog lines or interfere with feeding of the chlorine.

The material shall comply with AWWA Standard B301-99. Quality and test procedures shall be in accordance with AWWA Standard for Liquid Chlorine, B301-99.

Liquid Chlorine is a direct additive used in the treatment of potable water. This material shall be certified 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.

Vendor must submit a manufacturer's Materials Safety Data Sheet (MSDS) prior to our accompanying the first delivery to each delivery point specified in the bid. Vendor must submit a new MSDS subsequent to any revision or change during the contract.

### 3.6 DECHLORINATION AGENT

The material supplied shall be a dechlorinating agent suitable for use in water treatment. This material shall be a Vitamin C based agent that fully neutralizes both chlorine and chloramines. It shall contain no mineral or organic substances deleterious or injurious to the water quality and aquatic life of receiving streams. This material shall be certified as suitable for use as a dechlorinating agent.

The material supplied shall come in both granular and tablet form. This product may contain a buffering agent to stabilize pH.

Material is to be either Vita – D- Chlor, Vita –D- Chlor Neutral or approved equal. Bidder shall certify that the material supplied is of similar percent activities, solids, viscosity, and molecular weight as Vita – D- Chlor, Vita –D- Chlor Neutral.

Vendor must submit a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point specified in the bid. Vendor must submit a new MSDS subsequent to any revision or change during the contract.

### 3.7 FERRIC CHLORIDE - LIQUID:

Ferric Chloride (Liquid) suitable for use in water treatment: It shall contain no mineral or organic substances deleterious or injurious to the health of consumers of the water treated.

The material shall comply with AWWA Standard B407-05.

Liquid Ferric Chloride is a direct additive used in the treatment of potable water. This material shall be certified 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.

Before starting deliveries the vendor shall state the percentage concentration that will be delivered and shall deliver a consistent concentration, plus or minus one percent (1.0%)  $\text{FeCl}_3$ , unless change is agreed upon between vendor and the Water Department of the City. Frequent changes will not be accepted. Content shall be in accordance with the following:

- A. Liquid ferric chloride shall contain between 37 % and 42%  $\text{FeCl}_3$  by weight.
- B. The free acid, expressed as HCl, shall not exceed 1.0 %.
- C. No more than 0.75% of the total iron shall be in the ferrous state
- D. The solution shall not contain more than 0.5% total insoluble matter by weight.

- E. The manganese concentration shall not exceed 1000 parts per million
- F. The specific gravity shall be between 1.390 and 1.480

Payment shall be made at the price bid on the basis of dry tonnage of  $\text{FeCl}_3$  contained in the liquid delivered. Delivery shall be accompanied by certificate of analysis that shall include percent ferric chloride ( $\text{FeCl}_3$ ) and the percent free acid. Shipment shall also be accompanied by certified weight slip showing net weight delivered.

Vendor shall supply a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point. The vendor must submit a new MSDS subsequent to any revision or change during the duration of the contract.

### **3.8 FERRIC SULFATE - LIQUID:**

The material supplied shall be a liquid ferric sulfate solution suitable for use in the treatment of potable water. It shall contain no substances, either organic or inorganic that can be deleterious or injurious to consumers of the water treated with acceptable quantities.

The material shall conform to AWWA Standard B406-97.

Ferric Sulfate is a direct additive used in the treatment of potable water. This material shall be certified 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.

Content of the liquid shall be in accordance with the following:

1. Total soluble iron content must be equal to or greater than 12.0 % in solution.
2. Total suspended solids shall not exceed 0.9%. The material shall contain not more than 3.0% of free sulfuric acid
4. The material shall contain no organic sulfides or other objectionable odor-producing matter that could affect the quality of the water.
5. The material shall contain no additives or detergents.

Ferric Sulfate supplied shall not contain any substances in quantities that will result in

treated sludges that will be designated as hazardous wastes by local, state, or federal authorities.

Price will be based on tons of trivalent iron (Fe).

Before starting deliveries, the vendor must state the percentage concentration of iron in the deliveries for the length of the contract, and shall deliver a consistent concentration, plus or minus 0.5% iron unless agreed upon between the vendor and the Philadelphia Water Department.

Analysis of the material in each shipment shall accompany each delivery and shall include the concentration of iron, the percent of free acid, and the specific gravity.

Methods of analysis used by the Philadelphia Water Department are those of AWWA Standard B406-97.

Vendor must submit a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point. Vendor must submit a new MSDS subsequent to any revision or change during the duration of the contract.

### **3.9 FLUROSILICIC ACID:**

The fluorosilicic acid material furnished under this specification shall be a liquid containing not less than twenty (20) or more than thirty (30) percent of  $H_2SiF_6$ .

Before starting deliveries the vendor must state the percentage concentration in the deliveries for the length of the contract, and shall deliver a consistent concentration, plus or minus one percent (1.0%)  $H_2SiF_6$  throughout the contract term unless change is agreed upon between the vendor and the Water Department of the City.

Material shall comply with AWWA Standard B703-00.

Fluorosilicic acid is a direct additive used in the treatment of potable water. This material shall be certified 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.

The material shall contain no mineral, or organic substance, or substances in quantities capable of producing deleterious or injurious effects on the health of the persons consuming water treated with Fluorosilicic acid. The material shall be free of suspended matter and shall be from colorless to no more than straw yellow in color. Straw yellow shall be determined as a material with maximum 100 units in accordance with method

2120B, visual comparison method.

Hydrofluoric acid content in Fluorosilicic acid shall not exceed 1%.

Content of Fluorosilicic acid ( $H_2SiF_6$ ) in material delivered shall be determined by method designated in Section 5 of the B703-00 "Standard for Fluorosilicic Acid" ( $H_2SiF_6$ ) by the American Water Work Association.

Analysis of the material shall accompany delivery stating specific gravity and percent (%) acid.

Payment for material shall be at the bid price, on amount of  $H_2SiF_6$  determined from the total weight of material delivered and analysis of the above methods. Total weight delivered may be determined from certified weighing, or from volume delivered and the determined specific gravity.

Vendor must supply a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point specified in bid. The vendor must supply a new MSDS subsequent to any revision or change in manufacturer made during the duration of this contract.

**3.10 HYDRATED LIME:**

The hydrated lime material shall be high calcium, hydrated product of a continuous-flow kiln Oxide of Lime, containing seventy percent (70%) of available Calcium Oxide ( $CaO$ ). It shall contain no mineral or organic substances in quantities capable of producing deleterious or injurious effects upon the health of those consuming the water, which has been treated with it.

The insoluble content of the Hydrated Lime shall not exceed 3% total by weight, as measured on a 100 mesh sieve.

It shall be white, dry, finely powdered and free from lumps or any foreign materials, which may interfere with the operation of dry feed equipment.

Material shall comply with AWWA Standard B202-02.

Hydrated lime is a direct additive used in the treatment of potable water. This material shall be certified 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.

The material shall not contain iron or aluminum, which is soluble in Hydrochloric Acid, in excess of the following amounts:

Iron in terms of $Fe_2O_3$	-	0.25%
Aluminum in terms of $Al_2O_3$	-	0.70%

Available Calcium Oxide shall be determined by test method shown in Section 5 of AWWA Standard B202-02.

Vendor must submit a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point specified in the bid. Vendor must supply a new MSDS subsequent to any revision made during the duration of this contract.

**3.11 HYDROGEN PEROXIDE– LIQUID, NSF Grade**

Hydrogen Peroxide is a special product containing levels of additive. Material shall be a clear, colorless liquid certified by NSF International for use in treatment of drinking water ANSI/NSF Standard 60 Drinking water Additives-Health Effects.

Properties:

Material shall conform to the following specifications when tested by Philadelphia Water Department's methods:

SPECIFICATIONS

H <sub>2</sub> O <sub>2</sub> content, % by weight	50 % ( 50.0 – 50.8 )
Stability, 24 hours @ 100°C	≥ 96.0 %
Apparent pH	2.8
Residue, ppm	< 20
Arsenic (ICP), ppm	< 1.0
Lead (ICP), ppm	< 0.002
Iron (ICP), ppm	< 0.002
Active Oxygen, % by weight	23.5 %
Specific Gravity @ 20°C	1.20
H <sub>2</sub> O <sub>2</sub> grams per liter @ 20°C	600
Lbs / U.S. gal (kg/M <sup>3</sup> ) @ 20°C	10.0 (1198)
Freezing Point, °C	-52 (-62)

Vendor must supply a new Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point. The vendor must supply a new

MSDS subsequent to any revision or change in manufacturer made during the duration of this contract.

**3.12 PHOSPHORIC ACID – LIQUID, Technical Grade**

Material shall be clear colorless liquid phosphoric acid with no foreign odor complying with Federal Specification 0-0-670C. Material shall be 75% H<sub>3</sub>P0<sub>4</sub>. Vendor is required to deliver a consistent strength product throughout the contract.

Material shall not exceed 140 degrees F at time of delivery.

Analysis of material shall accompany delivery stating specific gravity, percent ortho-phosphate, chloride (ppm), Iron (ppm) and mg/kg of arsenic, lead and heavy metals (as Pb).

Vendor must supply a new Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point. The vendor must supply a new MSDS subsequent to any revision or change in manufacturer made during the duration of this contract.

**3.13 POLYMER, LIQUID NONIONIC:**

Material shall be a high molecular weight, nonionic charge, water-soluble polymer complying with American Water Works Association (AWWA) Standard B451-98 or latest revision. Material shall be effective as a filter aid and flocculent aid in various liquid / solid separation applications. Material is to be either **Calgon POL EZ 652** or approved equal. Bidder shall certify that the liquid polymer is of similar percent activities, solids, viscosity, and molecular weight as Calgon's POL EZ 652.

Liquid nonionic polymer is a direct additive used in the treatment of potable water. This material shall be certified 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.

Product is to have a minimum shelf life of one (1) year. It shall not gel, crystallize, or lose effectiveness during storage.

**3.14 POLYMER, LIQUID CATIONIC:**

Material shall be a poly (Diallyl dimethylammonium chloride) polymer complying with American Water Works Association (AWWA) Standard B451-98 or latest revision. Material shall be twenty percent (20%) plus or minus one percent (1%) poly (Diallyl dimethylammonium Chloride) as determined by AWWA Standard

B451-98, Section 5. Cationic polymer shall be low monomer.

Material is to be either Calgon Cat-Floc-TL or approved equal. Bidder shall certify that the liquid polymer is of similar percent activities, solids, viscosity, and molecular weight as Calgon's Cat-Floc-TL.

Liquid cationic polymer is a direct additive used in the treatment of potable water. This material shall be certified as suitable for contact with or treatment of drinking water by an accredited certification organization in accordance with ANSI/N SF Standard 60,

Drinking Water Treatment Chemicals – Health Effects.

Product is to have a minimum shelf life of one (1) year. It shall not gel, crystallize, or lose effectiveness during storage.

### **3.15 SODIUM PERMANGANATE**

The material shall be liquid grade sodium permanganate ( $\text{NaMnO}_4$ ). It shall contain no impurities, organic or inorganic, that can be deleterious or injurious to the health of consumers of the water treated with it in acceptable quantities.

Sodium permanganate is a direct additive used in the treatment of wastewater. This material shall be certified as suitable for contact with or treatment of wastewater.

Material furnished shall not be less than 40% percent  $\text{NaMnO}_4$  with specific gravity of 1.36 – 1.39  $\text{g/cm}^3$  with a pH between 6.0 – 9.0 and a freezing point no greater than 5 degrees fahrenheit. The product should be miscible with water in all proportions and be stable for no less than eighteen months.. This product shall be Carus Chemical PLP4 or approved equal.

Vendor shall submit a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point. Vendor must submit a new MSDS subsequent to any revision or change during the duration of the contract.

### **3.16 POTASSIUM PERMANGANATE**

The material shall be free-flowing grade potassium permanganate ( $\text{KMnO}_4$ ), also called permanganate of potash. It shall contain no impurities, organic or inorganic, that can be deleterious or injurious to the health of consumers of the water treated with it in acceptable quantities.

Material supplied must conform to AWWA Standard B603-03.

Potassium permanganate is a direct additive used in the treatment of potable water. This material shall be certified 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.

Material furnished shall not be less than 97 percent  $\text{KMnO}_4$  by weight with specific gravity of 2.7 g/cm<sup>3</sup>. Bulk density should be 100lb/ft<sup>3</sup>.

Material supplied shall not form lumps in the package lumps that cannot be easily broken up by rubbing between the fingers with minimal pressure and shall have no other characteristics that will prevent its use in dry-type chemical feeders. The potassium permanganate may be treated with an additive to cause free-flowing without sacrifice in other properties. The particle size of the material shall be such as that no more than 7% by weight shall pass through a US #200 (75) sieve and no more than 20% by weight shall be retained on a US #40 (425) sieve.

Vendor shall submit a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point. Vendor must submit a new MSDS subsequent to any revision or change during the duration of the contract.

TEST METHODS: Test methods used by the Philadelphia Water Department will be those of AWWA Standard B603-03.

### **3.16.1 Potassium Permanganate, Granular**

The material shall be a granular form of potassium permanganate ( $\text{KMnO}_4$ ), also called permanganate of potash. Material will be used for the purposes of odor control at the City's wastewater treatment plants

Material supplied shall be certified as to not to affect sludge quality when added at the maximum application rate, published by the manufacturer.

Material furnished shall not be less than 96.5 percent  $\text{KMnO}_4$  by weight.

The potassium permanganate may be treated with an additive to cause free-flowing without sacrifice in other properties. The particle size of the material shall be such as that no less than 20% by weight shall pass through a US #850 sieve (formerly #20).

Granular potassium permanganate should have following characteristics:

Bulk Density – 70 lb/ft<sup>3</sup>

Solubility – 54 lb/100gal at 20°C

Settling Rate – 1 foot/second

Dissolution rate in water – 1 gram/hour

Vendor shall submit a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point. Vendor must submit a new MSDS subsequent to any revision or change during the duration of the contract.

**3.17 SODIUM HYDROXIDE - LIQUID:**

The liquid sodium hydroxide furnished, known commercially as "Caustic Soda", shall be suitable for the use in treating potable water. Either Rayon or Diaphragm grade is acceptable. Liquid sodium hydroxide supplied shall contain 25 % NaOH. The concentration of sodium hydroxide must be consistent plus or minus 1% throughout this contract. The material shall contain no minerals or organics that can be deleterious or injurious to consumers of the water treated in acceptable dosages.

Material shall meet AWWA Standard B501-03

Sodium hydroxide is a direct additive used in the treatment of potable water. This material shall be certified 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.

The product shall contain no contaminants which results in any corrosion or negative impact to chemical storage tanks or chemical feed equipment. Moreover the product shall contain no contaminants which result in a change to the products inherent "basic" characteristics, e.g. contamination by a chlorine product as an example. In the event of product contamination, the vendor shall be liable for all costs associated with damages and remediation. Vendor must supply a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point. Vendor must supply a new MSDS subsequent to any change or revision during the duration of the contract.

**3.18 SODIUM HYPOCHLORITE - LIQUID**

The material supplied shall be a solution containing a 12% minimum concentration of available chlorine by weight, unless otherwise specified in the bid requirements. Material shall meet AWWA Standard for Hypochlorites B300-04. Material shall be a clear liquid containing not more than the following:

- Less than 0.15% insoluble material by weight
- the total free alkali (as sodium hydroxide) in sodium hypochlorite shall not exceed 0.4 % excess caustic.

- Less than 1500 mg/L  $\text{ClO}_3$
- Less than 0.5 mg/L iron
- Less than 0.05 mg/L nickel and copper

The Chlorine and caustic soda used for the manufacture of sodium hypochlorite shall meet the requirements of AWWA Standards for each.

Sodium hypochlorite is a direct additive used in the treatment of potable water. This material shall be certified 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.

The material shall not contain organic or inorganic substance in quantities that would be deleterious or injurious to anyone consuming any water treated by acceptable quantities of the sodium hypochlorite.

The concentration of available chlorine must be consistent plus or minus 1% throughout this contract.

Vendor must supply a chemical analysis with each shipment, including available chlorine by weight, free alkalinity, chlorine weight per gallon, pH, and sodium hypochlorite by weight.

Vendor must submit a Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point. Vendor must submit a new MSDS subsequent to any revision or change during the duration of the contract.

### **3.19 Sodium Polyphosphate - Blended Sodium Polyphosphate Lime Dispersant**

Sodium Phosphate blend should contain 34% of total phosphate including both ortho and polyphosphate in a 30/70 ratio.

Material should be a clear liquid with a specific gravity of 1.36 +/- 0.03, pH of 5.0 +/- 0.3 and density of 11.4 pounds per gallon.

Material components shall conform to the American Water Works Association Standards quality and test procedures.

Blended sodium polyphosphate will be used as a direct additive in treatment of potable water. This material shall be certified 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.

A certification of the manufacturing company as to the brand and analysis of the material shall accompany each delivery.

Vendor must submit a manufacturer's Materials Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each of the delivery points. Vendor must submit a new MSDS subsequent to any revision or change during the duration of this contract.

### **3.20 SULFURIC ACID:**

The sulfuric acid (oil of vitriol) to be supplied must be technical grade. Material must conform to Water Chemicals Codex (max. dosage 50 mg/l). The material must be suitable for use in treating potable water and contain nothing deleterious or injurious to the health of consumers of the water treated with it.

Specific gravity must be a minimum of 1.84 and the percent sulfuric acid a minimum of 93%.

Sulfuric Acid is a direct additive used in the treatment of potable water. This material shall be certified 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.

### **3.21 ZINC ORTHOPHOSPHATE - CORROSION INHIBITOR**

Material shall be liquid containing food grade chemicals which provide dissociated zinc and phosphate ions specifically produced for use in potable water to control corrosion of distribution lines and other contacted metal surfaces and shall be harmless to non-metallic materials. Vendor should be able to prove material is produced for use in potable water by supplying a list of water suppliers and contact persons who have used or are using product, or a listing of all raw materials and certification by the manufacturer that each is of food grade quality, if the Water Department requests such.

Additionally, the following shall be met:

- Material shall contain one part zinc to 12.5 parts ortho-phosphate (1:12.5) by weight
- Material must be certified against NSF Standard 60 for use in drinking water by approved laboratory.
- Material shall be harmless to non-metallic materials and shall not corrode in any way 304 stainless steel.
- Material shall contain no mineral or organic substances deleterious or injurious to consumers of water treated with material at appropriate dosages.
- Material shall not contain any insoluble material upon delivery, nor shall the

product generate precipitated salts during storage.

- Material shall have the following physical and chemical properties:
  - Appearance: Clear, colorless
  - Odor: None
  - Specific Gravity: 1.3 to 1.6 at 70 degrees F.
  - pH: 0.8 min.
  - Freeze-Thaw Recovery: complete at 60 degrees F.
  - Zinc content: Should not exceed 4% by weight

Vendor must supply a manufacturer's Material Safety Data Sheet (MSDS) prior to or accompanying the first delivery to each delivery point. Vendor must supply a new MSDS subsequent to any revision or change during the duration of the contract.

Vendor must obtain prior Water Department approval to any change in manufacturer or chemical before making delivery of new material. City reserves the right to terminate this contract for failure to abide by this specification.

**3.21.1 ALTERNATE #1 TO ZINC PHOSPHATE - CORROSION INHIBITOR:**

Bidders have an option to supply material which is free of extraneous salts that do not provide corrosion protection, as follows:

- Chloride contents: <1% by weight
- Sulfate contents: <1% by weight
- Insolubles: <0.2 % by weight

Alternate must comply with all other pertinent specifications of 3.18.

**4. SAMPLING, INSPECTION, AND TESTS:**

Certificates of analysis and/or other information shall be furnished for those items where specified in Section 3 above.

Tests shall be conducted according to methods indicated herein. Most tests methods are those specified in applicable AWWA Standards, however, for those chemicals that have no associated AWWA Standard or when other tests methods are referenced in Section 3 above, copies of Methods of Analysis will be furnished upon request.

**5. ORDERING AND DELIVERY:**

- 5.1 All chemicals will be ordered by the Chief Operator or each delivery point specified in the bid. Deliveries are to be made only after receipt of such orders.
- 5.2 Unless otherwise stated in the Invitation to Bid, or under Section 3 above, all chemicals are to be delivered to the plant designated within five days after receipt of order.
- 5.3 All deliveries shall be made between 8 AM and 4 PM Monday through Friday, except legal holidays, unless otherwise agreed to between the supplier and Manager of the delivery point.
- 5.4 The City shall not be held responsible for demurrage charges, therefore, the vendor shall make allowances for the unloading time required at each of the delivery points in the bid price.

**6. SUBSTITUTIONS OR CHANGES IN MANUFACTURER:**

Vendor may not substitute another manufacturer's product or deliver any other chemical than what is agreed to at the time of award without prior written approval from the City of Philadelphia Procurement Department. Failure to obtain such approval can result in forfeiture of contract and the vendor removing any delivery made at vendor cost. When delivery is made to large storage tank containing other amounts of chemical, vendor will reimburse the City for any loss of chemical due to contamination with the delivery.