



Bid Number 50-00127876

**TWO (2) YEAR CONTRACT FOR THE SUPPLY OF ZINC SODIUM
HEXAMETAPHOSPHATE FOR THE JEFFERSON PARISH
DEPARTMENT OF PUBLIC WORKS - WATER**

BID DUE: October 10, 2019 at 2:00 PM

ATTENTION VENDORS!!!

**Please review all pages and respond accordingly, complying with all provisions
in the technical specifications and Jefferson Parish Instructions for Bidders and
General Terms and Conditions. All bids must be received in the Purchasing
Department by the bid due date and time.**

**Jefferson Parish Purchasing Department
200 Derbigny Street
General Government Building, Suite 4400
Gretna, LA 70053
Buyer Name: Melissa Ovalle
Buyer Email: movalle@jeffparish.net
Buyer Phone: (504) 364-2687**



JEFFERSON PARISH

Department of Purchasing

Michael S. Yenni
Parish President

Renny Simno
Director

June 2019

CHANGES TO JEFFERSON PARISH BIDDING PROCEDURES

The Jefferson Parish Purchasing Department would like to make vendors aware of the following changes:

DEDUCTIBLES: The Parish Attorney with concurrence of the Director of Risk Management have waived the deductible section of the Terms and Conditions for all Invitations to Bid, until further notice.

PROTESTS: Only those vendors that submit bids in response to a solicitation may protest any element of the procurement, in writing to the Director of the Purchasing Department. Written protest must be received within 48 hours of the release of the bid tabulation by the Purchasing Department. After consultation, the Parish Attorney's Office will then respond to protests in writing.
(For more information, please see Chapter 2, Article VII, Division 2, Sec. 2-914.1 of the Jefferson Parish Code of Ordinances.)

Please contact the Jefferson Parish Purchasing Department at 504-364-2678 if you have any questions or need assistance.

**TWO (2) YEAR CONTRACT FOR THE SUPPLY OF ZINC SODIUM
HEXAMETAPHOSPHATE FOR THE JEFFERSON PARISH
DEPARTMENT OF PUBLIC WORKS - WATER**

Specifications for Bid Number 50-00127876

- A. The zinc sodium hexametaphosphate bid must be equivalent to Virginia Chemical Vir Chem 937, Shannon Chemical Shan-no-cor, or Calgon C-8 or C-9, containing no less than 65% as phosphate and 6.5% as zinc. Product supplied must be a free-flowing granular material sized such that at least 75% will pass a 10 mesh sieve and will be retained on an 80 mesh sieve and must be soluble up to 3 lb/gal of cold tap water and remain free of precipitates for at least 5 days after preparation. Products requiring hot water for solution preparation are not acceptable.
- B. The zinc sodium hexametaphosphate must be certified for use in drinking water under National Sanitation Foundation Standard 60.
- C. **A technical information sheet indicating the percent composition of active ingredients must accompany each bid. Failure to submit the required technical information sheet with bid submission will deem bid non-responsive and rejected.** The bid award will be based upon the lowest price per ton of the primary active ingredient, metaphosphate (P_2O_5).
- D. The zinc sodium hexametaphosphate must be supplied in 50-pound pails loaded on wooden pallets such that the pallets may be directly offloaded by waterworks personnel using their forklift. A flatbed trailer is required. Jefferson Parish personnel will not board or enter a closed trailer to facilitate unloading. The East Bank Water Treatment Plant is located at 3600 Jefferson Highway, Jefferson, LA 70121. The West Bank Water Treatment Plant is located at 4500 West Bank Expressway, Marrero, LA 70072.
- E. The zinc sodium hexametaphosphate must be delivered freight prepaid in 20-ton shipments to both the East and West Bank Water Treatment Plants as required and within 30 calendar days after the order is placed.
- F. Approximate total quantity for the 2-year contract is 120 tons. Quantity listed is for bidding purposes only and is not to be construed as the actual quantity to be purchased over the 2-year contract period. Actual requirements may be more or less than quantity listed.

DATE: 9/25/2019
BID NO.: 50-00127876

INVITATION TO BID
THIS IS NOT AN ORDER

Page: 1

JEFFERSON PARISH

PURCHASING DEPARTMENT
P.O. BOX 9
GRETNA, LA. 70054-0009
504-364-2678

BUYER: MOVALLE@jeffparish.net

BIDS WILL BE RECEIVED IN THE WEST BANK PURCHASING DEPT, SUITE 4400, JEFFERSON PARISH GENERAL GOVERNMENT BUILDING, 200 DERBIGNY STREET, GRETN, LA 70053 UNTIL 2:00 PM, 10/10/2019 AND PUBLICLY OPENED THEREAFTER.

For convenience, bidders may also submit bids in the East Bank Purchasing Department, Suite 404, Jefferson Parish Joseph S. Yenni Building, 1221 Elmwood Park Blvd., Jefferson LA 70123. However, if submitting bids on the day of bid opening, bidders must submit at the West Bank location only. All bids will be publicly opened at the West Bank location.

At no charge, bidders may also submit via Jefferson Parish's electronic procurement page by visiting www.jeffparishbids.net to register for this free site. Additional instructions are included in the text box highlighting electronic procurement.

LATE BIDS WILL NOT BE ACCEPTED

Unless submitting via online (see Page 3), each bid must be submitted in a sealed envelope bearing on the outside; the name of the Bidder, his address, and the name of the project for which the bid is submitted and the bid number.

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN, AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL AND/OR PHOTOSTATIC FIGURES OR SIGNATURES SHALL RESULT IN BID REJECTION.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

THE FOLLOWING INSTRUCTIONS APPLY TO ALL BIDS

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 113646 and/or Resolution No. 113647.

Jefferson Parish adheres to the Louisiana Code of Governmental Ethics, contained in Louisiana Revised Statutes Annotated, R.S. 42:1101, et seq. Vendor/Proposer by this submission, warrants that there are no "conflicts of interest" related to this procurement that would violate applicable Louisiana Law. Violation of the Louisiana Code of Governmental Ethics may result in rescission of contract, permit or licenses, and the imposition of fines and/or penalties, without contractual liability to the public in accordance with applicable law.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from <http://purchasing.jeffparish.net> and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Further, a current W-9 form and respective Tax Identification number must be supplied upon contract execution, should you be awarded a contract and/or issued purchase order. Failure to do so may result in delay of payment.

All quotations shall be based on F.O.B. Agency warehouse or job site, anywhere within the Parish as designated by the Purchasing Department. This provision does not apply to public works projects

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alterations from the specifications must be indicated and/or supporting documentation supplied with bid submission.

Bidders should submit all questions in writing via email to the buyer's email address as indicated above, no later than Five (5) working days prior to the bid opening. Bid numbers should be mentioned in all requests. If submitting online, vendors may send questions via the E-Procurement site no later than Five (5) working days prior to the bid opening.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum. Please note that all official communication will be expressed in the form of an addendum.

All formal Addenda require written acknowledgement on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected. JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. Vendors must not alter the bid forms. Doing so will cause the bid to be rejected.

A corporate resolution or written evidence of the individual signing the bid having such authority must be submitted with the bid. Failure to comply will cause bid to be rejected. For corporate entities, such written evidence may be a printout of the Louisiana Secretary of State's website listing the signatory as an officer. Such printout shall be included with the bid submission. Bids submitted by Owners or Sole Proprietorships must include certification that he or she owns the entity for which the bid is signed. This documentation must be submitted with the bid. Failure to do so will result in bid rejection.

NOTE: A sample corporate resolution can be downloaded from our website <http://purchasing.jeffparish.net> or you may provide your own document. A sample certification of sole proprietorship can also be downloaded from our website <http://purchasing.jeffparish.net> or you may provide your own document.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

A. AWARD OF CONTRACT: JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIVE and RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE. SPLIT AWARDS MADE TO SEVERAL VENDORS WILL ONLY BE GRANTED TO THOSE DEEMED RESPONSIVE AND RESPONSIBLE.

All bid prices shall remain valid for 45 days. Jefferson Parish and the lowest responsive and responsible bidder(s) by mutual written consent may mutually agree to extend the deadline for award by one (1) or more extensions of thirty (30) calendar days.

PROTESTS: Only those vendors that submit bids in response to this solicitation may protest any element of the procurement, in writing to the Director of the Purchasing Department. Written protest must be received within 48 hours of the release of the bid tabulation by the Purchasing Department. After consultation, the Parish Attorney's Office will then respond to protests in writing. (For more information, please see Chapter 2, Article VII, Division 2, Sec. 2-914.1 of the Jefferson Parish Code of Ordinances.)

PREFERENCE: Unless federal funding is directly spent by Jefferson Parish for this purchase, preference is hereby given to materials, supplies, and provisions produced, manufactured or grown in Louisiana, quality being equal to articles offered by competitors outside the state. "LSA – R.S. 38:2251-2261"

B. USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

C. CANCELLATION OF CONTRACT: JEFFERSON PARISH reserves the right to cancel all or any part if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel any contract at anytime and for any reason by issuing a THIRTY (30) day written notice to the contractor.

For good cause and as consideration for executing a contract with Jefferson Parish, vendor conveys, sells, assigns and transfers to Jefferson Parish or its assigns all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of Louisiana, relating to the particular good or services purchased or acquired by Jefferson Parish.

D. PRICES: Jefferson Parish is exempt from paying sales tax under LSA-R.S. 47:301 (8)(c). All prices for purchases by Jefferson Parish of supplies and materials shall be quoted in the unit of measure specified and unless otherwise specified, shall be exclusive of state and Parish taxes. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit price shall prevail.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A17.1-1961).

Jefferson Parish and its partners as the recipients of federal funds are fully committed to awarding a contract(s) to firm(s) that will provide high quality services and that are dedicated to diversity and to containing costs. Thus, Jefferson Parish strongly encourages the involvement of minority and/or woman-owned business enterprises (DBE's, including MBE's, WBE's and SBE's) to stimulate participation in procurement and assistance programs.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

The purpose and intention of this invitation to bid is to afford all suppliers an equal opportunity to bid on all construction, maintenance, repair, operating supplies and/or equipment listed in this bid proposal. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet specifications.

Advertised bids will be tabulated and a copy of the tabulation will be forwarded to each responding bidder.

IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online.

This is a secure site and authorized personnel have limited read access only. Bidders are encouraged to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at www.jeffparishbids.net to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at <http://purchasing.jeffparish.net>.

The general specifications for construction projects and the purchase of materials, services and/or supplies are those adopted by the JEFFERSON PARISH Council by Resolution No. 113646 or 113647 dated 12/09/09. The general conditions adopted by this resolution shall be considered as much a part of this document as if they were written wholly herein. A copy may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at <http://purchasing.jeffparish.net> and clicking on Online Forms.

ADDITIONAL REQUIREMENTS FOR THIS BID

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE CORRESPONDING INSTRUCTIONS BELOW.

10,12,13,15

1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(I), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.
2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.
3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.
4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid envelope. Failure to comply will cause the bid to be rejected. Additionally if submitting the bid electronically, then the license number must be entered in the appropriate field in the Electronic Procurement system. Failure to comply will cause the bid to be rejected.
5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.
6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

7. **PUBLIC WORKS BIDS:** All awards for public works in excess of \$5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of \$25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise state in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.
8. **NON-PUBLIC WORKS BIDS:** A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.
9. **NON-PUBLIC WORKS BIDS:** A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.
10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Prior to contract executions/purchase order issuance, the successful bidder will be required to provide final insurance certificates which shall name Jefferson Parish as an additional insured in accordance with the instructions in the aforementioned "Standard Insurance Requirements" sheet.
11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. Acceptable forms shall be limited to cashier's check, certified check, or surety bid bond. All sureties must be in original format (no copies) If submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.
12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.
13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.
14. **PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required;** This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
15. **NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required** in conformity with the provisions contained in LSA – RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted with bid submission. Failure to submit applicable certifications with bid submission will result in bid rejection.
17. For this project, the Contractor shall not pay any state or local sales or use taxes on materials and equipment which are affixed and made part of the immovable property of the project or which permanently incorporated in the project (hereinafter referred to as "applicable materials and equipment"). All purchases of applicable materials or equipment shall be made by the contractor on behalf of and as the agent of Jefferson Parish (Owner), a political subdivision of the State of Louisiana. No state and local sales and use taxes are owned on applicable materials and equipment under the provisions of Act 1029 of the 1991 Regular Session – Louisiana Revised Statute 47:301(8)(c). Owner will furnish contractor a certificate form which certifies that Owner is not required to pay such state or local sales and use taxes, and contractor shall furnish a copy of such certificate to all vendors or suppliers of the applicable materials and equipment

It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission: and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to Jefferson Parish Code of Ordinances Section 2-155.10(19). By submitting a bid, vendor acknowledges this and will abide by all provisions of the referenced Jefferson Parish Code of Ordinances.

See Page 1 for Conflicts of Interest Statement



JEFFERSON PARISH

Department of Purchasing

Michael S. Yenni
Parish President

Renny Simno
Director

October 7, 2019

ADDENDUM # 1

Bid No.: 50-00127876

Bid Opening Date: October 10, 2019, 2:00 pm

For: TWO (2) YEAR CONTRACT FOR THE SUPPLY OF ZINC SODIUM HEXAMETAPHOSPHATE FOR THE JEFFERSON PARISH DEPARTMENT OF PUBLIC WORKS - WATER

❖ CLARIFICATION OF SPECIFICATIONS:

QUESTIONS AND ANSWERS:

- Q1: Would delivery be acceptable in an enclosed trailer with the driver using a pallet jack to bring the pallets to the back of the truck? This would allow the waterworks personnel to use their forklift without boarding or entering the closed trailer to facilitate unloading.
- A1: Yes, an enclosed trailer where the driver would be responsible for using their own pallet jack to bring the pallets to the back of the truck and allow the Waterworks personnel to use our forklift will be acceptable. Waterworks personnel will not board or enter the enclosed trailer under any circumstances.
- Q2: Are you currently receiving the product in pails?
- A2: Yes, current product is delivered in pails.

Sincerely,

Melissa Ovalle

Melissa Ovalle, Buyer II
Jefferson Parish Purchasing Department

Bidders must acknowledge all addenda on the bid form. Bidder acknowledges receipt of this addendum on the bid form as indicated. Failure to do so will result in bid rejection.

This addendum is a part of the contract documents and modifies the original bidding documents and specifications. The contents of this addendum shall be included in the contract documents. Changes made by this addendum shall take precedence over the documents of earlier date.

DATE: 9/25/2019

Page: 5

BID NO.: 50-00127876

BID FORM
Non Public Works

All Public Work Projects are required to use the Louisiana Uniform Public Work Bid Form

All prices must be held firm unless an escalation provision is requested in this bid. Jefferson Parish will allow one escalation during the term of the contract, which may not exceed the U.S. Bureau of Labor Statistics National Index for all Urban Consumers, unadjusted 12 month figure. The most recently published figure issued at the time an adjustment is requested will be used. A request must be made in writing by the vendor, and the escalation will only be applied to purchases made after the request is made.

Are you requesting an escalation provision?

YES _____ NO X

MAXIMUM ESCALATION PERCENTAGE REQUESTED 0 %

INITIAL BID PRICES WILL REMAIN FIRM THROUGH THE DATE OF 2 Years from Contract Date

For the purposes of comparison of bids when an escalation provision is requested, Jefferson Parish will apply the maximum escalation percentage quoted by the bidder to the period to which it is applied in the bid. The initial price and the escalation will be used to calculate the total bid price. It will be assumed, for comparison of prices only, that an equal amount of material or labor is purchased each month throughout the entire contract.

DELIVERY: FOB JEFFERSON PARISH

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES

3-5 Days ARO

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable)

n.a.

THIS SECTION MUST BE COMPLETED BY BIDDER:

FIRM NAME: Shannon Chemical Corporation

ADDRESS: P.O. Box 376

CITY, STATE: Malvern, PA

ZIP: 19355

TELEPHONE: (610) 363-9090

FAX: (610) 524-6050

EMAIL ADDRESS: dcflynn@shannonchem.com

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form. Bidder must acknowledge receipt of an addendum on the bid form as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: #1

NUMBER: _____

NUMBER: _____

NUMBER: _____

TOTAL PRICE OF ALL BID ITEMS: \$ 280,016.40

AUTHORIZED
SIGNATURE: D C FLYNN

Daniel C. Flynn

Printed Name

TITLE: Vice President-Operations

SIGNING INDICATES YOU HAVE READ AND COMPLY WITH THE INSTRUCTIONS AND CONDITIONS.

NOTE: All bids should be returned with the BID NUMBER and BID OPENING DATE indicated on the outside of the envelope submitted to the Purchasing Department.

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00127876

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
1	120.00	TN	<p>TWO (2) YEAR CONTRACT FOR THE SUPPLY OF ZINC SODIUM HEXAMETAPHOSPHATE FOR THE JEFFERSON PARISH DEPARTMENT OF PUBLIC WORKS - WATER</p> <p>0010 - ZINC SODIUM HEXAMETAPHOSPHATE (DELIVERED FREIGHT PREPAID IN 20 TON SHIPMENTS TO BOTH EASTBANK AND WESTBANK WATER TREATMENT PLANTS AS REQUIRED).</p> <p>DELIVERY LOCATIONS: EASTBANK PLANT - JEFFERSON, LA 70121 WESTBANK PLANT - MARRERO, LA 70072</p>	<p>\$2,333.47</p> <p>per ton</p>	<p>\$280,016.40</p>

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF
Shannon Chemical Corporation
INCORPORATED.

AT THE MEETING OF DIRECTORS OF Shannon Chemical Corporation
INCORPORATED, DULY NOTICED AND HELD ON September 26, 2019,
A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT
WAS:

RESOLVED THAT Daniel C. Flynn, BE AND IS HEREBY
APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-
FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON
BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS
AND TRANSACTIONS WITH THE PARISH OF JEFFERSON OR ANY OF ITS AGENCIES,
DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO, THE
EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES,
CONTRACTS AND ACTS AND TO RECEIVE ALL PURCHASE ORDERS AND NOTICES
ISSUED PURSUANT TO THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS
CORPORATION HEREBY RATIFYING, APPROVING, CONFIRMING, AND ACCEPTING
EACH AND EVERY SUCH ACT PERFORMED BY SAID AGENT AND ATTORNEY-IN-
FACT.

I HEREBY CERTIFY THE FOREGOING TO BE
A TRUE AND CORRECT COPY OF AN
EXCERPT OF THE MINUTES OF THE ABOVE
DATED MEETING OF THE BOARD OF
DIRECTORS OF SAID CORPORATION, AND
THE SAME HAS NOT BEEN REVOKED OR
RESCINDED.


Karl Spivak
SECRETARY-TREASURER

10/08/19

DATE

Non-Public Works Bid**AFFIDAVIT**STATE OF PennsylvaniaPARISH/COUNTY OF ChesterBEFORE ME, the undersigned authority, personally came and appeared: Daniel C. Flynn

_____, (Affiant) who after being by me duly sworn, deposed and said that
he/she is the fully authorized V.P.-Operations of Shannon Chemical Corporation (Entity),
the party who submitted a bid in response to Bid Number 5000127876, to the Parish of
Jefferson.

Affiant further said:

Campaign Contribution Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A _____ Attached hereto is a list of all campaign contributions, including the date and amount of each contribution, made to current or former elected officials of the Parish of Jefferson by Entity, Affiant, and/or officers, directors and owners, including employees, owning 25% or more of the Entity during the two-year period immediately preceding the date of this affidavit or the current term of the elected official, whichever is greater. Further, Entity, Affiant, and/or Entity Owners have not made any contributions to or in support of current or former members of the Jefferson Parish Council or the Jefferson Parish President through or in the name of another person or legal entity, either directly or indirectly.

Choice B X there are **NO** campaign contributions made which would require disclosure under Choice A of this section.

Debt Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A _____ Attached hereto is a list of all debts owed by the affiant to any elected or appointed official of the Parish of Jefferson, and any and all debts owed by any elected or appointed official of the Parish to the Affiant.

Choice B X There are **NO** debts which would require disclosure under Choice A of this section.

Affiant further said:

That Affiant has employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for Affiant; and

[The remainder of this page is intentionally left blank.]

That no part of the contract price received by Affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for Affiant.

DCF

Signature of Affiant

Daniel C. Flynn

Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME

ON THE 8th DAY OF October, 2019.

Kimberly D'Ambrosio
Notary Public

Kimberly D'Ambrosio

Printed Name of Notary

Notary/Bar Roll Number

Commonwealth of Pennsylvania - Notary Seal
KIMBERLY D'AMBROSIO - Notary Public
Chester County
My Commission Expires Apr 7, 2023
Commission Number 1260997

My commission expires _____.

STANDARD INSURANCE REQUIREMENTS FOR BIDDING PURPOSES

All required insurance under this bid shall conform to Jefferson Parish Resolution No. 113646 or No. 113647, as applicable. Contractors may not commence any work under any ensuing contract unless and until all required insurance and associated evidentiary requirements thereto have been met, along with any additional specifications contained in the **Invitation to Bid**. Except as where otherwise precluded by law, the Parish Attorney or his designee, with the concurrence of the Director of Risk Management or his designee, may agree on a case-by-case basis, to deviate from Jefferson Parish's standard insurance requirements, as provided in this Section. Vendors requesting deviation therefrom shall submit such requests in writing, along with compelling substantiation, to the Purchasing Department prior to the bid's due date. Any changes to the insurance requirements will be reflected in the bid specifications and addenda. Prior to contract execution and at all times thereafter during the term of such contract, contractors must provide and continuously maintain all coverages as required by the foregoing Resolutions, and the contract documents. Failure to do so shall be grounds for suspension, discontinuation or termination of the contract.

For bidding purposes, bidders must submit with bid submission a current (valid) insurance certificate evidencing the required coverages. Failure to comply will cause bid to be rejected. The current insurance certificate will be used for proof of insurance at time of evaluation. Thereafter, and prior to contract execution, the low bidder will be required to provide final insurance certificates to the Parish which shall name **the Jefferson Parish, its Districts Departments and Agencies under the direction of the Parish President and the Parish Council** as additional insureds regarding negligence by the contractor for the Commercial General Liability, Workmen's Compensation Insurance and the Comprehensive Automobile Liability policies. Additionally, said certificates should reflect the name of the Parish Department receiving goods and services and reference the respective Jefferson Parish bid number.

JEFFERSON PARISH REQUIRED STANDARD INSURANCE☐ **WORKER'S COMPENSATION INSURANCE**

As required by Louisiana State Statute, exception; Employer's Liability, Section B shall be \$1,000,000 per occurrence when Work is to be over water and involves maritime exposures to cover all employees not covered under the State Worker's Compensation Act, otherwise this limit shall be no less than \$500,000 per occurrence.

Note: If your company is not required by law to carry workmen's compensation insurance, i.e. not a Louisiana company, sole employee of the company, then bidders must request a workmen's compensation insurance declaration affidavit prior to the bid opening date. This insurance declaration affidavit must be fully completed, signed, properly notarized and submitted with the bid. A scanned copy may be submitted with the bid; however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being

rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

☐ **COMMERCIAL GENERAL LIABILITY**

Shall provide limits not less than the following: \$1,000,000.00 Combined Single Limit per Occurrence for bodily injury and property damage.

☐ **COMPREHENSIVE AUTOMOBILE LIABILITY**

Bodily injury liability \$1,000,000.00 each person; \$1,000,000.00 each occurrence.
Property Damage Liability \$1,000,000.00 each occurrence.

Note: This category may be omitted if bidders do not/will not utilize company vehicles for the project or do not possess company vehicles. Bidder must request an automobile insurance declaration affidavit prior to the bid opening date. This insurance declaration affidavit must be fully completed, signed, properly notarized and submitted with the bid. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid; however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

DEDUCTIBLES - The Parish Attorney with concurrence of the Director of Risk Management have waived the deductible section of the Terms and Conditions for all Invitations to Bid, until further notice.

UMBRELLA LIABILITY COVERAGE

An umbrella policy or excess may be used to meet minimum requirements.

FOR CONSTRUCTION AND RENOVATION PROJECTS:

The following are required unless otherwise specified in the bid. Such insurance is due upon contract execution.

1) **OWNER'S PROTECTIVE LIABILITY**

To be for the same limits of liability for bodily injury and property damage liability established for commercial general liability.

2) **BUILDER'S RISK INSURANCE**

The contractor shall maintain Builder's Risk Insurance at his own expense to insure both the owner (Parish of Jefferson) and contractor as their interest may appear.



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
5/29/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER SASSA & CONCANNON INSURANCE PO Box 187 Norwood, PA 19074-0187	CONTACT NAME: Steve Hollingsworth		
	PHONE (A/C No. Ext): (610) 583-3523	FAX (A/C No.): (610) 583-3406	
	E-MAIL ADDRESS: stevehinsurance@gmail.com		
INSURED Shannon Chemical Corporation PO Box 376 Malvern, PA 19355 610-363-9090	INSURER(S) AFFORDING COVERAGE		NAIC#
	INSURER A: Nautilus Insurance Company		17370
	INSURER B: Great Divide Insurance Company		25224
	INSURER C: Aspen Specialty Insurance Company		10717
	INSURER D:		
	INSURER E:		
INSURER F:			

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY	Y		GLP2018247-13	06/01/2019	06/01/2020	EACH OCCURRENCE	\$ 1,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 300,000
							MED EXP (Any one person)	\$ 10,000
							PERSONAL & ADV INJURY	\$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	\$ 3,000,000
	<input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input checked="" type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG	\$ 3,000,000
	OTHER:							\$
B	AUTOMOBILE LIABILITY	Y		BAP2018248-13	06/01/2019	06/01/2020	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO						BODILY INJURY (Per person)	\$
	<input type="checkbox"/> ALL OWNED AUTOS						BODILY INJURY (Per accident)	\$
	<input checked="" type="checkbox"/> HIRED AUTOS						PROPERTY DAMAGE (Per accident)	\$
	<input type="checkbox"/> SCHEDULED AUTOS							\$
	<input type="checkbox"/> NON-OWNED AUTOS							\$
C	<input checked="" type="checkbox"/> UMBRELLA LIAB	Y		EXAGH9X19	06/01/2019	06/01/2020	EACH OCCURRENCE	\$ 9,000,000
	<input checked="" type="checkbox"/> EXCESS LIAB						AGGREGATE	\$ 9,000,000
	<input type="checkbox"/> DED <input type="checkbox"/> RETENTIONS							\$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	Y/N	N/A	WCA2026297-11	06/01/2019	06/01/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						E.L. EACH ACCIDENT	\$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	\$ 1,000,000
A	Site Pollution Liability	Y	Y	SSP2018250-13	06/01/2019	06/01/2020	\$1,000,000 per occurrence \$3,000,000 Aggregate	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Certificate Holder is to read as follows:

The Parish of Jefferson, it's Districts, Departments, and Agencies under the direction of the Parish President and the Parish Council; Department of Water, 1221 Elmwood Park Boulevard, Suite 909, Jefferson, LA 70123, is named as an additional insured where required by written contract.

CERTIFICATE HOLDER

CANCELLATION

The Parish of Jefferson, Etal
Jefferson Parish Water Department
1221 Elmwood Park Blvd.
Suite 909
Jefferson, LA 70123

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Request for Taxpayer Identification Number and Certification

Give Form to the
requester. Do not
send to the IRS.

► Go to www.irs.gov/FormW9 for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. Shannon Chemical Corporation	
	2 Business name/disregarded entity name, if different from above	
	3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes. <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ► Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see Instructions) ►	4 Exemptions (codes apply only to certain entities, not individuals; see Instructions on page 3): Exempt payee code (if any) Exempt Exemption from FATCA reporting code (if any) (Applies to accounts maintained outside the U.S.)
	5 Address (number, street, and apt. or suite no.) See instructions. P.O. Box 376	Requester's name and address (optional)
	6 City, state, and ZIP code Malvern, PA 19355	
	7 List account number(s) here (optional)	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number								
			-					
or								
Employer identification number								
2	3		-	1	8	5	6	7 9 3

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person ► <i>DC 21-</i>	Date ► 10/08/19
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.



Shannon Chemical Corp.
P.O. Box 376 Molok, PA 19355 * Phone: (610) 363 9090 * Fax: (610) 524 6050

LETTER OF CERTIFICATION

SHAN-NO-CORR

Corrosion Inhibitor & Sequestering Agent

Water Treatment Compound

SHANNON CHEMICAL CORPORATION certifies that SHAN-NO-CORR is a 1:10 ratio bimetallic zinc phosphate which is certified to ANSI/NSF Standard 60.

SHAN-NO-CORR has the following physical and chemical characteristics:

Color	White, Granular Powder
Odor	None
Chlorine Demand	None
Solubility	2.5#/gallon
pH 1% Solution	Less than 2.5
Zinc as Zn	6.7%
Phosphate as PO ₄	67%
Zinc: PO ₄ Ratio	1:10

The raw materials used in the formulation of **SHAN-NO-CORR** meet or exceed the specifications for additives to potable drinking water as stated in the Water Chemicals Codex and the Water Chemicals Codex: Supplementary Recommendations For Direct Additives.

DCM -
Daniel C. Flynn
Vice President-Operations
SHANNON CHEMICAL CORPORATION



Shannon Chemical Corp.
P.O. Box 376 Malvern, PA 19355 • Phone: (610) 363-9090 • Fax: (610) 524-6050

Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

1.1 Product Identifier

Product Name	• SHAN-NO-CORR (S-N-C)
Synonyms	• Zinc Phosphate
CAS Number	• Proprietary Blend
SDS Number/Grade	• 0046

1.2 Use of Substance/Mixture

Recommended use	• Water treatment; sequestration; corrosion inhibitor
-----------------	---

1.3 Company Identification

Name	• Shannon Chemical Corporation
Address	• P.O. Box 376 Malvern, PA 19355

1.4 Contact Information

Information #	• (610) 363-9090
Chem Tel #	• (800) 255-3924
Emergency #	• (484) 354-9773

SECTION 2: HAZARDS IDENTIFICATION

2.1 Hazards

Classification of the substance or mixture

Hazard Statements:

- H302 – Harmful if swallowed
- H318 – Causes serious eye damage
- H410 – Very toxic to aquatic life with long lasting effects

Precautionary Statements:

- P264 – Wash hands and forearms thoroughly after handling
- P280 – Wear eye protection, face protection, protective gloves, protective clothing
- P305+P351+P338 – If in eyes: Rinse cautiously with copious amounts of water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P310 – Immediately call a POISON CENTER or doctor

Hazard Symbols



Signal Word

DANGER!

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Composition			
Chemical Name	Identifiers	%	LD50/LC50
Polyphosphoric acid, sodium salt	CAS: 68915-31-1	> 50	Oral-Rat LD50 • 3053 mg/kg
Sodium Hydrogen Sulfate	CAS: 7681-38-1	<50	Oral-Rat LD50 • 2800 mg/kg
Zinc Sulfate Mono	CAS: 7446-19-7	<50	No Data Available

SECTION 4: FIRST AID MEASURES

4.1 Eye Exposure

• Immediately flush eyes with copious amounts of water, occasionally lifting both upper and lower eyelids. If irritation persists contact a physician.

4.2 Skin Exposure

• Rinse with water for 5 minutes. Remove and wash any clothing exposed to the solution before reuse. If irritation and swelling persist, seek medical attention.

4.3 Inhalation

• Remove from further exposure. Expose individual to fresh air. If not breathing, give proper artificial respiration. If breathing is difficult, trained personnel should administer oxygen. Seek immediate medical attention.

4.4 Ingestion

• If victim is conscious and alert give 2-3 glasses of water or milk. **Do Not** induce vomiting. Do not give anything to drink to an unconscious person. Do not leave victim unattended. To prevent aspiration, lay victim on side with head lower than waist. Vomiting may occur simultaneously. Seek immediate medical attention.

4.5 Most Important Symptoms/Effects; Acute and Delayed

Potential Acute Health Effects

Eye Contact

Inhalation

Skin Contact

Ingestion

- Causes serious eye damage
- Inhalation of dust may irritate nose, throat and/or lungs
- Prolonged exposure may cause skin irritation
- Small amounts (tablespoonful) swallowed are not likely to cause injury; however, swallowing large amounts may irritate or burn digestive tract.

Over-exposure Signs/Symptoms

Eye Contact	• Adverse symptoms may include the following: pain, watering, redness
Inhalation	• No known significant effects or critical hazards.
Skin Contact	• Adverse symptoms may include the following: pain or irritation, redness, blistering (if repeated exposure)
Ingestion	• Adverse symptoms may include the following: stomach pains

4.6 Indication of Immediate Medical Attention and Special Treatment Needed, if Necessary

Notes to Physician	• Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific Treatments	• No specific treatment
Protection of First-aiders	• No action shall be taken involving any personal risk without suitable training

SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing Media**

Suitable Extinguishing Media	• Not combustible. Use extinguishing media suitable for surrounding fire.
Unsuitable Extinguishing Media	• None known

5.2 Special Hazards

Unusual Fire and Explosion Hazards	• No specific fire or explosion hazards.
Special Fire Fighting Procedures	• No special measures required.
Special Protective Equipment for Fire Fighters	• Wear appropriate protection equipment and self-contained breathing apparatus (SCBA).

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal Precautions, Protective Equipment & Emergency Procedures**

Personal Precaution	• Do not touch or walk through spilled material.
Emergency Procedures	• Keep unauthorized personnel away.

6.2 Methods and Material for Containment and Cleaning Up

- | | |
|----------------------|--|
| Containment/Clean-up | <ul style="list-style-type: none"> • Sweep or vacuum up and place in appropriate closed container. Avoid dispersal of dust in the air. LARGE SPILLS: Cover powder with plastic sheet or tarp to minimize spreading. |
|----------------------|--|

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling

- | | |
|----------|---|
| Handling | <ul style="list-style-type: none"> • Avoid contact with skin, eyes, clothing and mucous membranes. Wear protective clothing. Handle and use in a manner consistent with good industrial/manufacturing techniques and practices. Use in a well-ventilated area. |
|----------|---|

7.2 Conditions for Safe Storage, Including Any Incompatibilities

- | | |
|---------|--|
| Storage | <ul style="list-style-type: none"> • Store in a cool, dry location away from direct sunlight and source of heat. Store away from incompatible materials. (See Section 10) |
|---------|--|

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control Parameters

- | | |
|-------------------------------|--|
| Exposure Limits/Guidelines | <ul style="list-style-type: none"> • No exposure limits were found for this product or any of its ingredients. |
| Engineering Measures/Controls | <ul style="list-style-type: none"> • Dilution ventilation. Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. |

8.2 Personal Protections

- | | |
|------------------------|---|
| Respiratory Protection | <ul style="list-style-type: none"> • For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced. |
| Skin Protection | <ul style="list-style-type: none"> • Where direct contact is likely, wear neoprene chemical resistant gloves and a protective apron or chemical suit if necessary. |
| Eye Protection | <ul style="list-style-type: none"> • Wear eye protection. |
| Body Protection | <ul style="list-style-type: none"> • A rubber apron or other impermeable body protection is suggested. Full body chemical protective clothing is recommended for emergency response procedures. |
| Ventilation Protection | <ul style="list-style-type: none"> • Not required |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 General Information

Appearance	• White Powder/Granular
Odor	• None

9.2 Important Health Safety and Environmental Information

pH 1% Solution:	• Less than 2.5
Melting/Freezing Point:	• 177°C
Boiling Point/ Range:	• No Data
Flash Point:	• No Data
Evaporation Rate:	• No Data
Flammability (solid, gas):	• No Data
Flammability	• No Data
Explosive Limits:	• No Data
Vapor Pressure:	• No Data
Vapor Density:	• No Data
Relative Density:	• No Data
Solubility (ies):	• 1.5 – 2.5#/gallon
Partition Coefficient:	• No Data
Auto-ignition Temperature:	• No Data
Decomposition Temperature:	• No Data
Viscosity:	• No Data
Product Density:	• 68 – 75#/ft ³

SECTION 10: STABILITY AND REACTIVITY

10.1 Chemical Stability

- Stable under normal ambient conditions of temperature and pressure.

10.2 Conditions to Avoid

- Dusting conditions, extreme humidity

10.3 Incompatible Materials

- Strong oxidizing agents

10.4 Hazardous Decomposition Products

- Toxic fumes of PO_x may be emitted if decomposition temperature is reached. Oxides of sodium; oxides of phosphate.

10.5 Hazardous Polymerization

- Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity Estimates

	CAS #	Route	Species	LD50	Target Organs
Polyphosphoric Acid, sodium salt	68915-31-1	Ingestion/Oral	Rat	3053 mg/kg	No Data
Sodium Hydrogen Sulfate	7681-38-1	Ingestion/Oral	Rat	2800 mg/kg	No Data
Zinc Sulfate Mono	7446-19-7	Ingestion/Oral	Rat	No Data	No Data

GHS Properties	Classification
Acute Toxicity	OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	OSHA HCS 2012 • Classification criteria not met
Skin Corrosion/Irritation	OSHA HCS 2012 • Classification criteria not met
Skin Sensitization	OSHA HCS 2012 • Classification criteria not met
STOT-RE	OSHA HCS 2012 • Classification criteria not met
STOT-SE	OSHA HCS 2012 • Classification criteria not met
Toxicity for Reproduction	OSHA HCS 2012 • Classification criteria not met
Respiratory Sensitization	OSHA HCS 2012 • Classification criteria not met
Serious Eye Damage/Irritation	OSHA HCS 2012 • Classification criteria not met

11.2 Potential Health Effects

Inhalation

- | | |
|-------------------|--|
| Acute (Immediate) | • Exposure to dust may cause irritation. |
| Chronic (Delayed) | • No data available. |

Skin

- | | |
|-------------------|--|
| Acute (Immediate) | • May cause mild irritation. Exposure to dust may cause mechanical irritation. |
| Chronic (Delayed) | • No data available. |

Eye

- | | |
|-------------------|--|
| Acute (Immediate) | • May cause mild irritation. Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes. |
| Chronic (Delayed) | • No data available. |

Ingestion

- | | |
|-------------------|--|
| Acute (Immediate) | • Ingestion of large quantities may cause nausea, vomiting, diarrhea and abdominal discomfort. |
| Chronic (Delayed) | • No data available. |

Carcinogenic Effects

- This product does not contain any ingredient designed by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

SECTION 12: ECOLOGICAL INFORMATION

Biodegradability	• No Data Found
Ecotoxicity	• No Data Found
Biological Oxygen Demand (BOD5)	• No Data Found
Chemical Oxygen Demand	• No Data Found
Additional Ecological Information	• The phosphate component of this product may act as a plant nutrient causing eutrofication.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Product Waste**

- In case of spill, contain material and call local authorities for emergency assistance. Collect in appropriate containers. Dispose of all waste in accordance with appropriate Federal, State and local regulations.

13.2 Container Disposal

- State and local requirements for container disposal often differ with Federal laws. Consult local authorities regarding proper disposal of drums and containers.

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name	• Not Applicable
DOT Hazard Class	• Not Applicable
U.N. Number	• Not Applicable
Reportable Quantity (RQ)	• 5,000#
Packaging Group	• Not Applicable

SECTION 15: REGULATORY INFORMATION**U.S. Federal Regulations**

Chemical Inventory Status – Part 1:

Ingredient	CAS #	TSCA	EC
Zinc Sulfate	7446-19-7	Yes	Yes
Sodium Hydrogen Sulfate	7681-38-1	Yes	Yes

		SARA 302		SARA 313	
Ingredient	CAS #	RQ	TPQ	List	Chemical Catg.
Zinc Sulfate	7446-19-7	No	No	Yes	Yes (Zinc compounds)
Sodium Hydrogen Sulfate	7681-38-1	No	No	No	No

Ingredient	CAS #	CERCLA	RCRA	TSCA 8(d)
Zinc Sulfate	7446-19-7	Yes (RQ = 1000 lbs)	No	No
Sodium Hydrogen Sulfate	7681-38-1	No	No	No

Ingredient	CAS #	CWC	TSCA 12 (b)	SARA 311/312
Zinc Sulfate	7446-19-7	No	No	10,000 lbs
Sodium Hydrogen Sulfate	7681-38-1	No	No	10,000 lbs

Ingredient	CAS #	Acute	Chronic	Fire	Pressure	Reactivity	Mixture/Solid
Zinc Sulfate	7446-19-7	Yes	Yes	No	No	No	Mixture
Sodium Hydrogen Sulfate	7681-38-1	Yes	Yes	No	No	No	Mixture

CAS# 7733-02-0 is found on the following state right to know lists: California, New Jersey, Pennsylvania, and Massachusetts.

CAS# 7681-38-1 is found only on the following NJ right to know list.

SECTION 16: OTHER INFORMATION

Preparation Date: 01/01/2014

Last Revision Date: 06/01/2018

Disclaimer/Statement of Liability

• The information herein is given in good faith but no warranty, expressed or implied, is made.



OFFICIAL LISTING

NSF International Certifies that the products appearing on this Listing conform to the requirements of
NSF/ANSI Standard 60 - Drinking Water Treatment Chemicals - Health Effects

This is the Official Listing recorded on August 1, 2018.

Shannon Chemical Corp.
P.O. Box 376
Malvern, PA 19355
610-363-9090

Facility: Exton, PA

Chemical/ Trade Designation	Function	Max Use	
Blended Corrosion Inhibitor			
SHAN-NO-CORR Lead Free ^[ZN]	Corrosion & Scale Control	15	mg/L
SNC-4442	Corrosion & Scale Control	13	mg/L
	Sequestering		
SNC-Lead Free ^[ZN]	Corrosion & Scale Control	15	mg/L
SNC-N2	Corrosion & Scale Control	10	mg/L
SNC-NO LEAD ^[ZN]	Corrosion & Scale Control	15	mg/L
Blended Phosphates			
SLI-1226	Corrosion & Scale Control	27	mg/L
SLI-5215	Corrosion & Scale Control	28	mg/L
	Sequestering		
SLI-5225	Corrosion & Scale Control	26	mg/L
	Sequestering		
SLI-5230	Corrosion & Scale Control	28	mg/L
	Sequestering		
SLI-5240	Corrosion & Scale Control	28	mg/L
	Sequestering		
SLI-5250	Corrosion & Scale Control	28	mg/L
	Sequestering		
SLI-5260	Corrosion & Scale Control	28	mg/L
	Sequestering		
SLI-5270	Corrosion & Scale Control	28	mg/L
	Sequestering		
SLI-5275	Corrosion & Scale Control	30	mg/L
	Sequestering		
SLI-5285	Corrosion & Scale Control	28	mg/L
	Sequestering		
SLI-5370	Corrosion & Scale Control	28	mg/L
	Sequestering		
SLI-5385	Corrosion & Scale Control	28	mg/L
	Sequestering		
SLI-7150	Corrosion & Scale Control	30	mg/L
SLI-7275	Corrosion & Scale Control	30	mg/L
	Sequestering		

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SLI-7425	Corrosion & Scale Control	28	mg/L
	Sequestering		
SLI-7450	Corrosion & Scale Control	28	mg/L
	Sequestering		
SLI-7575	Corrosion & Scale Control	36	mg/L
	Sequestering		
SLI-B	Corrosion & Scale Control	27	mg/L
SLI-DP	Corrosion & Scale Control	30	mg/L
SLI-HP	Corrosion & Scale Control	30	mg/L
	Sequestering		
SLI-K200	Corrosion & Scale Control	36	mg/L
	Sequestering		
SNC-1226	Corrosion & Scale Control	14	mg/L
SNC-5210	Corrosion & Scale Control	10	mg/L
	Sequestering		
SNC-5220	Corrosion & Scale Control	10	mg/L
	Sequestering		
SNC-5225	Corrosion & Scale Control	10	mg/L
	Sequestering		
SNC-5230	Corrosion & Scale Control	10	mg/L
	Sequestering		
SNC-5240	Corrosion & Scale Control	10	mg/L
	Sequestering		
SNC-5250	Corrosion & Scale Control	10	mg/L
	Sequestering		
SNC-5270	Corrosion & Scale Control	10	mg/L
	Sequestering		
SNC-5275	Corrosion & Scale Control	10	mg/L
	Sequestering		
SNC-5295	Corrosion & Scale Control	10	mg/L
	Sequestering		
SNC-5420	Corrosion & Scale Control	10	mg/L
SNC-5520	Corrosion & Scale Control	10	mg/L
	Sequestering		
SNC-7220	Corrosion & Scale Control	12	mg/L
	Sequestering		
SNC-7435	Corrosion & Scale Control	10	mg/L
SNC-HW	Corrosion & Scale Control	10	mg/L
SNC-RS2	Corrosion & Scale Control	10	mg/L
SNC-TYPE B	Corrosion & Scale Control	10	mg/L
Citric Acid ^{[2] [3]}			
SE-CA-50	Membrane Cleaner	N/A	
	Well Cleaning Aid		
Hydrofluosillicic Acid			
SE-1900 L-25	Fluoridation	6	mg/L
Miscellaneous Corrosion Chemicals			
SHAN-NO-CORR ^[ZN]	Corrosion & Scale Control	10	mg/L
SHAN-NO-CORR Plus, SNC + ^[ZN]	Corrosion & Scale Control	10	mg/L
SHAN-NO-CORR TYPE L ^[ZN]	Corrosion & Scale Control	20	mg/L
SHAN-NO-CORR TYPE N ^[ZN]	Corrosion & Scale Control	10	mg/L

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SHAN-NO-CORR-ZOP ^[ZN]	Corrosion & Scale Control	10	mg/L
SLI-333 ^[ZN]	Corrosion Control	25	mg/L
SLI-444 S	Corrosion & Scale Control	25	mg/L
SNC-444	Corrosion & Scale Control	10	mg/L
SNC-444 S	Corrosion & Scale Control	18.6	mg/L
SNC-ZOP 123 ^[ZN]	Corrosion & Scale Control	11	mg/L
SNC-ZOP 321 ^[ZN]	Corrosion & Scale Control	11	mg/L
Miscellaneous Treatment Chemical			
RSC-100X ^[1]	Ion Exchange Supplement	750	mg/L
Monosodium Orthophosphate			
SLI-5179	Corrosion Control	25	mg/L
SLI-SE 100	Corrosion Control	25	mg/L
SNC-5179	Corrosion & Scale Control	12.6	mg/L
	Sequestering		
SNC-MSP	Corrosion & Scale Control	12.6	mg/L
	Sequestering		
Phosphoric Acid			
SLI-PHOS 36	Corrosion & Scale Control	25	mg/L
SLI-PHOS 50	Corrosion & Scale Control	20.5	mg/L
SLI-PHOS 75	Corrosion & Scale Control	12	mg/L
Potassium Permanganate^[PO]			
SE-3955 C	Disinfection & Oxidation Oxidant	50	mg/L
SE-3955 F	Disinfection & Oxidation Oxidant	50	mg/L
SE-3955 N	Disinfection & Oxidation Oxidant	50	mg/L
Sodium Acid Pyrophosphate			
SNC-318	Corrosion & Scale Control	12	mg/L
SNC-5185	Corrosion & Scale Control	12	mg/L
Sodium Permanganate^[PO]			
SE-2355-10	Disinfection & Oxidation Oxidant	352	mg/L
SE-2355-15	Disinfection & Oxidation Oxidant	234	mg/L
SE-2355-20	Disinfection & Oxidation Oxidant	176	mg/L
SE-2355-25	Disinfection & Oxidation Oxidant	140	mg/L
SE-2355-40	Disinfection & Oxidation Oxidant	88	mg/L
Sodium Polyphosphates, Glassy			
SHAN-O-PHOS	Corrosion & Scale Control Sequestering	10.7	mg/L
SLI-5125	Corrosion & Scale Control Sequestering	42.8	mg/L
SLI-5130	Corrosion & Scale Control Sequestering	35.6	mg/L

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SLI-5135	Corrosion & Scale Control	30.5	mg/L
	Sequestering		
SLI-5140	Corrosion & Scale Control	26.7	mg/L
	Sequestering		
SLI-5145	Corrosion & Scale Control	23.8	mg/L
	Sequestering		
SLI-5150	Corrosion & Scale Control	21.4	mg/L
	Sequestering		
SLI-5155	Corrosion & Scale Control	19.5	mg/L
	Sequestering		
SLI-5160	Corrosion & Scale Control	17.8	mg/L
	Sequestering		
SLI-Quest 25	Corrosion & Scale Control	42.8	mg/L
	Sequestering		
SLI-Quest 30	Corrosion & Scale Control	35.6	mg/L
	Sequestering		
SLI-Quest 35	Corrosion & Scale Control	30.5	mg/L
	Sequestering		
SLI-Quest 40	Corrosion & Scale Control	26.7	mg/L
	Sequestering		
SLI-Quest 45	Corrosion & Scale Control	23.8	mg/L
	Sequestering		
SLI-Quest 50	Corrosion & Scale Control	21.4	mg/L
	Sequestering		
SLI-Quest 55	Corrosion & Scale Control	19.5	mg/L
	Sequestering		
SLI-Quest 60	Corrosion & Scale Control	17.8	mg/L
	Sequestering		
SNC-5190	Corrosion & Scale Control	10.7	mg/L
	Sequestering		
Sodium Tripolyphosphate			
SHAN-O-POLY	Corrosion & Scale Control	12	mg/L
	Sequestering		
SNC-5177	Corrosion & Scale Control	12	mg/L
	Sequestering		
Tetrapotassium Pyrophosphate			
SLI-6120	Corrosion & Scale Control	30	mg/L
	Sequestering		
SLI-6134	Corrosion & Scale Control	22.5	mg/L
	Sequestering		
SLI-K100	Corrosion & Scale Control	30	mg/L
	Sequestering		
SLI-KPHOS	Corrosion & Scale Control	22.5	mg/L
	Sequestering		
SNC-6157	Corrosion & Scale Control	14	mg/L
	Sequestering		
SNC-KPHOS	Corrosion & Scale Control	14	mg/L
	Sequestering		
Zinc Chloride^[ZN]			
SLI-2125	Corrosion & Scale Control	15	mg/L

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SLI-2150	Corrosion & Scale Control	8	mg/L
SLI-2162	Corrosion & Scale Control	6	mg/L
Zinc Orthophosphate [ZN]			
SLI 3535	Corrosion & Scale Control	24	mg/L
SLI 4217	Corrosion & Scale Control	28	mg/L
SLI 5050	Corrosion & Scale Control	17	mg/L
SLI-1010	Corrosion & Scale Control	20	mg/L
SLI-1021	Corrosion & Scale Control	22	mg/L
SLI-1521-C	Corrosion & Scale Control	22	mg/L
SLI-2020	Corrosion & Scale Control	10	mg/L
SLI-321	Corrosion & Scale Control	10	mg/L
SLI-321L	Corrosion & Scale Control	10	mg/L
SLI-5024	Corrosion & Scale Control	16	mg/L
SLI-5210	Corrosion & Scale Control	20	mg/L
SLI-5215	Corrosion & Scale Control	40	mg/L
SLI-5216	Corrosion & Scale Control	29	mg/L
SLI-5217	Corrosion & Scale Control	28	mg/L
SLI-5218	Corrosion & Scale Control	25	mg/L
SLI-5219	Corrosion & Scale Control	22	mg/L
SLI-7215	Corrosion & Scale Control	28	mg/L
SLI-932	Corrosion & Scale Control	26	mg/L
SLI-939	Corrosion & Scale Control	25	mg/L

- [1] This product is designed to be used in conjunction with ion exchange resins for the purpose of reducing radium from drinking water.
- [2] This product is designed to be used off-line and flushed out prior to using the system for drinking water, following manufacturer's use instructions.
- [3] The pH of the influent and effluent water should be monitored to ensure that all traces of the product have been removed before placing into service.
- [PO] The finished drinking water shall be monitored to ensure that levels of manganese do not exceed 0.05 mg/L.
- [ZN] Based on an evaluation of health effects data, the level of zinc in the finished drinking water shall not exceed 2.0 mg/L.

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