# CITY OF KALAMA
# 2017 CHEMICAL PROCUREMENT SPECIFICATIONS

## PART 1 GENERAL

### 1.1 SCOPE

The Contractor shall supply chemicals to the City of Kalama Drinking Water Treatment Facility (DWTF) and Wastewater Treatment Facility (WWTF) on an on-call basis in the approximate quantities listed below as requested by the City during the contract period. The contract period shall be for twelve months, commencing on January 1, 2017 and ending December 31, 2017.

### 1.2 QUALITY ASSURANCE

Chemicals listed in these specifications shall comply with listed and/or appropriate AWWA and USEPA Standards and Specifications, and shall be suitable for use in public drinking water supplies. 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.

With each delivered quantity of material, the Contractor shall provide an Affidavit of Compliance stating the material complies with all provisions of this Specification and with all stated references.

### 1.3 SUBMITTALS

The Contractor shall submit a Hauling and Delivery Plan to the City of Kalama prior to the first delivery. The Plan shall describe how the Contractor will coordinate delivery of the material to the facility(s), the methods to be used to place the material in the designated stockpile locations, and shall include a contact name and phone number to be used throughout the length of the Contract.

### 1.4 INSURANCE REQUIRMENTS

The Contractor shall maintain insurance in the following minimum amounts for the duration of the Contract:

| | |
|---|---|
| General Liability: | At least $1,000,000 per occurrence<br>$1,000,000 aggregate, Combined Single Limit |
| Automobile Liability: | At least $1,000,000 per accident, Combined Single Limit |

## 1.5 PAYMENT

All costs for furnishing and delivering chemicals including shipping (with any fuel surcharges) shall be included in the unit price bid item for each chemical. Sales tax will be paid according to the laws of the State of Washington for the purchasing of chemicals within this bid package and shall be listed separately on each invoice.

The unit quantities shown in the Proposal form are estimates and are stated only for bid comparison purposes. The City of Kalama does not warrant, expressly or by implication that the actual quantities will correspond with those estimates. Payment will be made on the basis of the actual quantities of each item required by the City of Kalama.

With each delivery, the Contractor shall submit an invoice for payment. The City of Kalama will pay the invoice within 30 days of receipt of the invoice.

## 1.6 INSTRUCTIONS FOR BIDDERS

### A. Proposal

Proposals shall be submitted on the Proposal form, which is included with the Specifications. All Proposals shall be completed, signed and dated. The City of Kalama will accept only those Proposals properly executed on the forms provided. All prices shall be in legible figures written in ink or typed. In the space provided on the Proposal, the Bidder shall identify all the Addenda that have been received. The Proposal shall be submitted in a sealed package, addressed to the City of Kalama, and plainly marked: "2017 Chemical Procurement Bid"– To be Opened at 1:00 p.m. on Tuesday, December 20, 2016. The City of Kalama will not consider proposals it receives after the time fixed for opening Proposals.

Bidders may bid on any or all chemicals listed. Contracts for each chemical shall be awarded separately. Bidders for diatomaceous earth should indicate the grade of diatomaceous earth to be provided on the appropriate blank in the bid form.

### B. Modification of Proposal

Modification of a Proposal will be considered only if the modification is received prior to the time announced for the opening of Proposals. All modifications shall be made in writing, executed and submitted in the same form and manner as the original Proposal. No oral, telegraphic, telephonic, or facsimile proposals or modifications will be considered.

**AWARD OF CONTRACT**

The City of Kalama will award the Contract separately for each chemical listed. The Contract will not be awarded until the City of Kalama is satisfied that the successful Bidder(s) is responsible, and has the necessary capital, tools, personnel and equipment to satisfactorily perform the Work. The City of Kalama reserves the right to waive informalities in the bidding, accept the Proposal of the lowest responsive, responsible Bidder(s), reject any or all Proposals, republish the call for Proposals, or cancel the call for Proposals.

## PART 2 PRODUCTS

### 2.1 DIATOMACEOUS EARTH FILTER MEDIA

The diatomaceous earth filter media shall be Eagle Picher Celatom Grade FW 50. Diatomaceous earth filter media shall have the following physical and chemical properties:

A. Physical Properties:

| **Parameter** | **Value(s)** |
|---|---|
| Specific Gravity | 2.3 |
| pH (10% slurry) | 10 |
| Permeability | 3.0 - 3.5 D'arcys |
| Bulk Density, Dry | 12 - 15 $lb/ft^3$ |
| Bulk Density, Wet | 18 –20 $lb/ft^3$ |
| Median Particle Size | 42 – 43 micron |
| Moisture | 0.1 – 0.5% |
| % Retained on 150 Mesh | 5 – 10 % |

B. Chemical Properties:

| **Compound** | **% of Total** |
|---|---|
| Silica ($SiO_2$) | 88 - 90 |
| Alumina ($Al_2O_3$) | 4.0 - 4.2 |
| Iron Oxide ($Fe_2O_3$) | 1.3 – 1.5 |
| Calcium Oxide (CaO) | 0.5 - 0.6 |
| Magnesia (MgO) | 0.3 -0.6 |
| Other Oxides | 5 (max.) |

The filter media shall be delivered to the DWTF in new, heavy-duty cloth or reinforced vinyl 1,000 lb. bulk bags suitable for use in a Sac-Master bulk bag handling system as manufactured by Schenk. The bags shall be marked on the

outside with the manufacturer's name, the brand name and generic names of the product, the grade of the product, the net weight of the bag, the manufacturer's coded batch control information, and all hazardous material information as required by State and Federal law.

## 2.2 SODIUM HYPOCHLORITE

The sodium hypochlorite (NaOCl) shall contain not less than 12.5% available chlorine. The solution shall contain less than 0.15% insoluble matter by weight and less than 1.5% total free alkali (expressed as NaOH) by weight. Sodium hypochlorite shall meet the requirements of AWWA B300-10.

Sodium hypochlorite shall be delivered to the DWTF in a tanked truck with a minimum of 75 feet of hose and a nozzle suitable for connecting to a 1-1/2" male cam-lock fitting. When the tank is filled, the Contractor shall purge the remaining chemical from the fill lines using compressed air.

With each shipment, the delivery truck shall provide documentation of the manufacturer's name, name of the product, the grade of the product, and all hazardous material information as required by State and Federal law.

## 2.3 SODIUM HYDROXIDE

The liquid sodium hydroxide (NaOH) shall contain approximately 25% NaOH. All sodium hydroxide shall meet the requirements of AWWA B501-08. The 25% solution must be at a temperature less than 110 $^{o}$ F. measured at the DWTF delivery site.

The sodium hydroxide shall be delivered to the DWTF in a tanked truck with a minimum 75 feet of hose and a nozzle for connecting to a 1" male cam-lock fitting. When the tank is filled, the Contractor shall purge the remaining chemical from the fill lines using compressed air.

With each shipment, the delivery truck shall provide documentation of the manufacturer's name, name of the product, the grade of the product, and all hazardous material information as required by State and Federal law.

## 2.4 SODIUM FLUORIDE

The sodium fluoride (NaF) supplied shall be the coarse crystalline grade and shall be at least 97% (on a dry basis) sodium fluoride, corresponding to approximately 44% fluoride ion. The moisture content shall be less than 0.5% by weight, insoluble matter shall be less than 0.6% by weight and heavy metals, expressed as lead, shall be less than 0.04% by weight.

The sodium fluoride shall meet the following gradation:

| Sieve Size | Percent Passing |
|---|---|
| No. 20 | ≥98 |
| No. 100 | ≥50 |
| No. 325 | ≤5 |

Sodium fluoride shall meet the requirements of AWWA Standard B701-11.

The sodium fluoride shall be delivered to the DWTF in 50 lb. bags with vapor barrier liners. The bags shall be marked with the manufacturer's name, the brand name and generic name of the product, the grade of the product, and all hazardous material information as required by State and Federal law.

## PART 3 EXECUTION

### 3.1 HANDLING AND STORAGE

Chemicals shall be handled and stored (if required) in a manner that will prevent contamination by moisture, dust, dirt, and other foreign substances. Covers shall be provided as necessary to protect the chemicals from the elements.

All containers shall be sound and free of leakage. Any defective sacks will not be accepted. All pallets shall be returned for credit. The City of Kalama accepts no responsibility for pallets damaged during shipping. Any chlorine cylinder found to be delivered unusable (i.e. valves that are stuck) shall be replaced by the Contractor within 24 hours of such notification. All costs associated with the return of the defective cylinder(s) shall be the responsibility of the Contractor.

### 3.2 DELIVERY

Periodic deliveries will be required of each chemical. Upon request by the City of Kalama, the Contractor will deliver the requested amount of chemical to the City of Kalama within seven calendar days of the request. Approximate delivery amounts are summarized in the following sections.

A. All shipments shall be F.O.B. to the Kalama DWTF, 153 Modrow Road, Kalama, WA 98625 and/or WWTF, 206 Hendrickson Drive, Kalama, WA 98625.

B. The following table summarizes the delivery unit, order size and estimated 2015 requirements for each chemical to be delivered to the DWTF and/or WWTF.

| No. | Chemical | Delivery Units | Approximate Order Size | Estimated 2017 Requirements |
|---|---|---|---|---|
| 1 | Diatomaceous Earth | 1,000 lb Bulk Sacks | 8 to10 sacks | 45,000 lbs. |
| 2 | 12.5 % Sodium Hypochlorite | Small Bulk | 500 gallons | 2,000 gallons |
| 3 | 25% Sodium Hydroxide | Small Bulk | 800 gallons | 14,000 gallons |
| 4 | Sodium Fluoride | 50-lb. Sacks | 2,000 lbs. | 5,000 lbs. |

C. Chemicals shall be delivered to the DWTF as approved in the Hauling and Delivery Plan. The Contractor shall ensure provisions are made for off-loading the material from the delivery truck and placing it in the City of Kalama designated stock-piling area within the Chemical Room of the DWTF or WWTF. Access to the Drinking Water

Treatment Facility Chemical Room is provided through a 12′ wide, roll-up door located above a 4′ high loading dock. A dock leveler allows for 6” adjustment of the unload platform. The Chemical Room includes an electronic pallet jack with a rated capacity of 4,000 pounds that is available for use in off-loading as necessary. Chemicals shall be delivered to the WWTF as approved in the Hauling and Delivery Plan. The Contractor shall ensure provisions are made for off-loading the material from the delivery truck and placing it in the City of Kalama designated stock-piling area within the WWTF. Delivery trucks must be provided with lift gates.

***** END OF SECTION *****