

Contract Documents and Specifications for Well 14 GAC Replacement

City of Reedley

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|--------------------------|----------------|
| Public Works Director | Russ Robertson |
| Water Systems Supervisor | John Ornellas |

AECOM Technical Services, Inc.

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| Project Manager | Mark Reitz, PE |
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March 2018

SECTION 1

NOTICE INVITING SEALED PROPOSALS (BIDS)

FOR THE WORK:

Well 14 GAC Replacement

FOR THE:

City of Reedley

NOTICE IS HEREBY GIVEN that the City of Reedley (CITY) invites and will receive proposals (bids) up to the hour of 2:00 p.m. on April 2, 2018, for the furnishing to said CITY of all transportation, labor, materials, tools, equipment, services, permits, utilities, and other items necessary to complete said work.

Bids shall conform to and be responsive to the Contract Documents and Specifications for the work. Proposals may be sent via email or hand delivered to:

russ.robertson@reedley.ca.gov

Russ Robertson
Public Works Director
1733 Ninth St.
Reedley, Ca. 93654

Each bid shall be submitted using the attached form. Each bid sent via email shall have the word CONFIDENTIAL in the subject line. Each bid hand delivered or sent via regular mail shall be in a sealed envelope and marked as follows:

Attn: Russ Robertson
Well #14 GAC Proposal

Description of Work: Work includes removal and disposal of 80,000 lb of existing GAC and installation of 80,000 lb of virgin GAC and associated water testing to confirm that the GAC is meeting treatment goals.

Interpretations: All questions about the meaning or intent of the Contract Documents shall be directed to the office of the Public Works Director in writing. Interpretations or clarifications considered necessary by the Public Works Director in response to such questions will be resolved by the issuance of addenda delivered to all parties that received an invitation for proposals. Questions received less than 3 business days prior to the due date of proposals shall be considered nonresponsive and therefore not addressed. Only questions that have been resolved by formal written addenda shall be binding. Oral and other interpretations or clarifications will be without legal or contractual effect.

The City Council reserves the right to select the schedule(s) under which the bids are to be compared and contract(s) awarded, to reject any and all bids, and to waive any and all irregularities in any bid.

END OF SECTION

BID FORM

Name of Bidder: Prominent Systems, Inc

Business Address: 13095 E. Temple Avenue, City of Industry, CA 91746

Phone No. 424-245-9099

Pursuant to and in compliance with your Notice Inviting Sealed Proposals (Bids) and the other documents relating thereto, the undersigned Bidder, being fully familiar with the terms of the Contract Documents, local conditions affecting the performance of the contract, the character, quality, quantities, and scope of the work, the cost of the work at the place where the work is to be done, and having given such notice to the PUBLIC WORKS DIRECTOR of all conflicts, errors and deficiencies that the Bidder has detected and that the resolution thereof by the PUBLIC WORKS DIRECTOR is acceptable and that the Contract Documents are sufficient to convey an understanding of the terms and conditions for performing the work, hereby proposes and agrees to perform within the time stipulated in the contract, including all of its component parts and everything required to be performed, and to furnish any and all of the labor, material, tools, equipment, transportation, services, permits, utilities, and all other items necessary to perform the contract and complete in a workmanlike manner, all of the work required in connection with the delivery of said work all in strict conformity with the plans and specifications and other contract documents, including Addendum(s) N/A _____, for the prices hereinafter set forth.

The undersigned as Bidder, declares that the only persons or parties interested in this proposal as principals are those named herein; that this proposal is made without collusion with any person, firm, or corporation; and he proposes and agrees, if the proposal is accepted, that he will execute a contract with the OWNER in the form set forth in the Contract Documents and that he will accept in full payment thereof the following prices, to wit:

Name of Bidder Prominent Systems, Inc

SCHEDULE OF WORK ITEMS
(See Bid Item Descriptions, Section 012200, for Detailed Scope of Work)

| Item No. | Description | Quantity/ Units | Unit Price | Total Amount |
|----------|---|--------------------|---------------------|----------------------|
| 1 | Remove and properly dispose of spent GAC, and then furnish and install virgin GAC | 80,000 lb | \$ <u>1.25/lbs.</u> | \$ <u>100,000.00</u> |

The Owner reserves the right to reject all bids or to waive any informality of the bids received.

Name of Bidder Prominent Systems, Inc

The Contractor shall comply with the Subletting and Subcontracting Act as set forth in Chapter 4100 of the Public Contract Code. As required by Section 4104 of the Public Contract Code, the Contractor bidding shall hereinafter list the subcontractor(s) who will be the subcontractor(s) on the job for each particular trade or subdivision of the work and will state the firm name and principal location of the mill, shop, or office of each:

| Division of Work or Trade | Name of Subcontractor | Subcontractor's License No. | Subcontractor's Address and Telephone No. |
|--------------------------------------|-----------------------|--------------------------------|--|
| No Subcontractors will be used | | | |
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SECTION 3

AGREEMENT

THIS AGREEMENT, made and entered into by and between the City of Reedley, hereinafter referred to as "Owner" and Prominent Systems Inc., a corporation/partnership/joint venture/individual under the laws of the state of California, hereinafter referred to as "Contractor."

Owner and Contractor agree as follows:

- (1) SCOPE OF WORK: Contractor will furnish all materials and will perform all of the work for the completion of:

Well 14 GAC Replacement

in accordance with the scope of work and other contract documents therefor.

- (2) TIME FOR COMPLETION: The work shall be completed within 75 days from the date of agreement execution. Time is of the essence, and forfeiture due to delay will be assessed as provided for in the General Provisions.

- (3) CONTRACT SUM: Owner will pay Contractor in accordance with the prices shown in the Bid Form.

- (4) PAYMENTS: Monthly progress payments and the final payment will be made in accordance with the General Provisions.

- (5) COMPLIANCE WITH PUBLIC CONTRACTS LAW: Owner is a public agency in the State of California and is subject to the provisions of law relating to public contracts. It is agreed that all provisions of law applicable to public contracts are a part of this contract to the same extent as though set forth herein and will be complied with by Contractor.

- (6) CONTRACTOR'S REPRESENTATIONS: In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

- (a) Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
- (b) Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- (c) Contractor is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.
- (d) Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract times, and in accordance with the other terms and conditions of the Contract Documents.
- (e) Contractor has given Public Works Director written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution is acceptable to Contractor.
- (f) The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

- (7) ACCOUNTING RECORDS: Contractor shall check all materials, equipment, and labor entering into the Work and shall keep such full and detailed accounts as may be necessary for proper financial management under this Agreement, and the accounting methods shall be satisfactory to Owner. Owner shall be afforded access to all Contractor's records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner.
- (8) CONTRACT DOCUMENTS: The complete contract includes all the Contract Documents set forth herein, to wit: Notice Inviting Sealed Proposals (Bids), Bid Form, Agreement, Certificate of Insurance (Workers' Compensation and Employers' Liability), Insurance Endorsement (Workers' Compensation and Employers' Liability).
- (9) SUCCESSOR AND ASSIGNS: Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.
- (10) PROMPT PAYMENT: As required by California law, the provisions of California Public Contract Code Section 20104.50, regarding prompt payment to contractors, are hereby incorporated in their entirety.
- (11) ATTORNEYS' FEES: Should either party to the contract bring an arbitration or mediation proceeding or other action to enforce any provision of the contract, including an action pursuant to Public Contract Code Section 20104.4, the prevailing party shall be entitled to recover his reasonable attorneys' fees and costs in connection therewith. The term "prevail" as used in this section shall include any action at law, in equity, or pursuant to arbitration in which either party has been successful.

This Agreement is executed by the City pursuant to an action of its Governing Body in session on March 27, 2018, authorizing the same, and Contractor has caused this Agreement to be duly executed. The effective date will be the last date of execution by the parties.

Date: 4/19/18

Dated 4-17-18

By [Signature]
(Authorized Representative of City)

Title: City Manager
Prominent Systems, Inc
(Contractor)

By [Signature]
(Authorized Representative of Contractor)

Title Manager

SECTION 4

WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY CERTIFICATE OF INSURANCE

Description of Contract: City of Reedley
Well 14 GAC Replacement

Type of Insurance: Workers' Compensation and Employers' Liability Insurance

Prior to the execution of the Agreement, Contractor MUST provide the City with appropriate certificates of liability and workers' compensation insurance.

Insurance Company will give at least ten (10) days' written notice to the City prior to cancellation of such policies for nonpayment of premium and thirty (30) days' written notice to the City prior to cancellation of said policies for any other reason.

Amount of Liability Insurance

| | | |
|-----------------------|---|---|
| General Liability: | Bodily Injury and Property Damage coverage shall be for not less than | |
| | \$2,000,000 | General Aggregate. |
| | \$2,000,000 | Products/Completed Operations Aggregate. |
| | \$2,000,000 | Personal and Advertising Injury. |
| | \$2,000,000 | Each Occurrence. |
| | OR | |
| Automobile Liability: | Bodily Injury and Property Damage coverage shall be in a Combined Single Limit of not less than | |
| | \$2,000,000 | Each Occurrence and Aggregate. |
| | OR | |
| | Bodily Injury coverage shall be for not less than | |
| | \$1,000,000 | Each Person. |
| | \$2,000,000 | Each Accident. |
| | \$2,000,000 | Property Damage coverage shall be for not less than |
| Employers' Liability: | OR | |
| | \$2,000,000 | Bodily Injury and Property Damage coverage shall be in a Combined Single Limit of not less than |
| | Bodily Injury coverage shall be for not less than | |
| | \$1,000,000 | Each Accident. |
| | \$1,000,000 | Each Disease-Policy Limit. |
| | \$1,000,000 | Each Disease-Each Employee. |

NOTICE:

If the insurance called for is provided by more than one insurance company, a separate certificate shall be provided for each insurance company.

END OF SECTION

SECTION 5

BID ITEM DESCRIPTIONS

Compensation for all work specified to be performed under this contract will be made under payment items listed herein and shown on the Bid Schedule. The contract prices for the said payment items shall be full compensation for all of the costs connected therewith including all labor, materials, tools, equipment, all taxes, and incidentals furnished and doing all the work involved in completing the items of work including final cleanup as specified herein. It is the intent of this contract that the sum of all prices listed in the Bid Schedule shall represent the total lump sum cost of all work specified herein. Where items of work are not specifically defined in the schedule or included in the bid items, including mobilization and demobilization, these items shall be included in those bid items which are most closely related to the required work.

Separate payment will not be made for any item which is not specifically set forth in the bid items contained in the Proposal. Therefore, the Vendor's entire compensation for doing all work in accordance with the Contract Documents shall be included in the prices stated in the Proposal.

Bid Item 1 - Remove and Dispose of Spent GAC, and then Furnish and Install Virgin GAC

This unit price bid item (per pound dry weight) shall be full compensation for the following work:

The City will identify to the Vendor prior to removal the type and quantity of GAC within the on-site vessels. A fresh water source through a 2-inch connection will be provided by the City for wash down and other needs. The vessels are a "down flow" design and are equipped with an upper distributor which is capable of providing a significant flow of rinse water to aid in washing out any residual GAC. A water hose connection is also available to aid with wash down. Vendor shall be required to thoroughly wash down the interior top, sides and bottom of the vessel to remove all spent GAC. Vendor shall open and inspect from the man-way without entering the vessel interior to confirm all GAC is removed. The man-way is located on the side of the tank rather than on top. The Vendor shall provide all equipment necessary to slurry spent GAC from the vessels into the container truck. Removal by vacuum/super-sack is not an option under this contract. The Vendor shall use bulk pneumatic trailers that are dedicated non-hazardous and certified for transport of food grade material. City staff will be present on site during all transfer operations. The Vendor shall supply an air compressor to assist in slurry operations at the well site.

The Vendor shall be ultimately responsible for the identification and classification of the spent GAC and its adsorbed constituents. This responsibility shall include any necessary laboratory analysis of the material. The Vendor shall be responsible for obtaining, maintaining and assuring to the City that all permits necessary for the transportation of the vessel contents to the treatment/destruction facility are in full force. The Vendor shall obtain, and supply copies to the City, all documents needed to transport the material, and shall complete all applications and documents required, except documents which the City (as generator of the material) is required to complete.

The material must be transported off City property within 24 hours of its removal from the vessel. The Vendor shall provide for the safe and timely transportation of the material to the treatment/destruction facility within one week of removal from the GAC vessel.

The Vendor shall, by using their own facility or subcontracting the work, treat the spent GAC using a properly permitted plant licensed for the destruction of the laboratory established concentrations of the material absorbed on the GAC. Documentation of destruction or treatment shall be provided to the City within thirty calendar days from the date the spent GAC is removed from the well site.

Prior to installation of virgin GAC, the vessels and related plumbing will be inspected, sanitized and tested for bacterial contamination by the City. When all sample results are negative for bacterial contamination, the City will contact the Vendor to arrange for delivery. Results of bacteriological testing will be made available upon request.

The Vendor shall provide virgin GAC meeting the requirements of Specification 433282, including transportation to the project site. The Vendor shall use bulk pneumatic trailers that are dedicated non-hazardous and certified for transport of food grade material. The GAC shall be slurried into the vessel(s) in such a way as to eliminate the possibility of the carbon slurry stream impacting and abrading the interior vessel coating, the upper distributor, or the underdrain system. City staff will be present on site during all transfer operations. The vessel should be filled to one-third ($\frac{1}{3}$) the volume with water before commencing with the carbon fill, to minimize abrasive effects. The carbon piping shall be clear of any accumulated carbon. Vendor shall provide a temporary site glass for the carbon transfer piping. The Vendor shall also supply an air compressor to assist in slurry operations at all well sites.

Upon successful installation of GAC, Vendor shall be responsible for re-installing the man-way cover into the inspection port if removed by the Vendor for observation of the process. Care should be taken to insure all mating surfaces are clean and free of carbon dust and other debris and that man-way again be disinfected during the closing process. Vendor shall remove or properly dispose any materials brought by the Vendor to the site.

After GAC is installed in the vessel, the GAC will soak for a minimum of 48 hours at which time the City shall backwash the GAC to remove unwanted fines. Samples will then be collected by the City from the combined influent, vessel sample ports, and combined effluent (known as a "set") and analyzed by a State of California certified laboratory for bacteriological contamination as well as total arsenic and total nitrate. If any sample from the set should test positive for coliform bacteria using the Coliform Presence/Absence method, the City shall backwash the GAC a second time and collect a second bacteria sample set. The second sample set shall use two methods, the Multiple Tube Fermentation (MTF) and Heterotrophic Plate Count (HPC). If the MTF result should exceed 2.2 mpn or if the HPC exceed 500 cfu, the GAC shall be considered to be contaminated. The Vendor shall then, at his own expense, provide the labor and materials necessary to chemically treat the GAC bed with sodium hydroxide. A description of the disinfection procedure is included in the Operations Plan for the Well 14 site (attached for reference). Vendor shall comply with all safety standards when working with treatment chemicals. City approval of the laboratory results will comprise final approval of the GAC installation.

If any sample contains nitrate or arsenic above 80% of the State of California MCL, or 15% above the influent concentration (whichever is greater), the Vendor shall then arrange with the City to flush to waste for a maximum of 24 hours, after which time the Vendor shall resample the GAC effluent. If one or more samples still contain nitrate and/or arsenic above 80% of the MCL or 15% above the influent concentration (whichever is greater), the GAC bed will be considered contaminated and will be replaced by the Vendor at no cost to the City.

END OF SECTION

SECTION 6

GRANULAR ACTIVATED CARBON

PART 1 - GENERAL

Description

This section describes materials, installation, and testing of Granular Activated Carbon (GAC) described herein for the removal of dibromochloropropane (DBCP) and 1,2,3-trichloropropane (TCP) from groundwater. The work also includes removal of existing GAC from four treatment vessels containing approximately 20,000 lb of GAC each at Well 14.

Work to be Included

The GAC Vendor (Vendor) shall test the existing GAC at the treatment vessels at City of Reedley Well 14 and remove approximately 80,000 lb of carbon in the vessels.

The Vendor shall be responsible for the supply, delivery, and hydraulic loading of fresh virgin granular activated carbon at the City of Reedley Well 14 wellhead treatment system.

The Vendor or an approved representative shall be responsible for all washing or pretreatment of the GAC prior to delivery to the job site.

The existing GAC adsorption system (GACAS) includes the following elements:

- Downflow adsorber vessels including interior lining and exterior priming.

- Process and utility piping, valves, and accessories.

- Independent GAC fill and discharge piping.

- Vent and pressure relief piping and flush water connections.

- Air connections for GAC transfers, pressure gauges, and sample ports.

- Capacity for 20,000 pounds of GAC per adsorber.

- Spray nozzles for GAC vessel washdown.

Vendor's Qualifications

The Vendor shall have the following minimum qualifications:

- Have previously furnished GAC for at least five systems for potable water treatment of at least 1,000-gpm size for DBCP or TCP removal within the United States. GAC cited in experience submittals shall have been for downflow, pressure type configurations and meeting these specifications.

- Have a minimum of five years' experience in carbon handling aspects pertaining to the loading of virgin carbon and unloading of spent carbon using bulk trailers.

Submittals

The Vendor shall submit the following information in writing in accordance with the General Provisions:

Submittals

The Vendor shall submit the following information in writing in accordance with the General Provisions:

Statement of qualifications showing that the Vendor meets the requirements presented in Paragraph C, above.

Provide specifications of GAC to be utilized in the system. Provide recent lot laboratory analyses results to demonstrate that GAC supply is in accordance with published specifications.

Provide a copy of NSF/ANSI 61-2012 certification with their bid. The California Department of Public Health (DPH) has rescinded "Policy 94-005" in favor of NSF/ANSI 61-2012.

Samples: If so requested by the Owner's Representative, samples of the GAC shall be provided in accordance with paragraph 1.4.3, "Sampling and testing after delivery of shipment," of the AWWA Standard for Granular Activated Carbon (AWWA B604-71).

Test reports on the representative samples of GAC shall contain at a minimum the following information:

Apparent density

Mesh size confirmation

Effective size

Abrasion number

Iodine number

Moisture as packed (percent)

Water soluble ash (percent)

Total ash

Vendor's Services

Vendor shall provide all testing and equipment, material and labor necessary to remove spent GAC used for removing DBCP and TCP from well water and replace with virgin GAC. Vendor shall remove and transport the spent GAC from the site to a properly permitted and regulatory compliant reactivation or destruction facility for proper disposal or treatment.

Vendor shall be responsible for the timely destruction or treatment of the spent GAC in accordance with applicable Federal, State and local laws, regulations and standards, and shall deliver documentation of treatment or destruction of the GAC to the City within 30 calendar days from the date the spent GAC is removed from the treatment facility or well site.

Upon completion of all Work, the Vendor shall remove all surplus materials and rubbish. Vendor shall repair all damage caused by his workers and shall leave the premises in a clean and orderly condition. The Vendor shall be responsible for the protection of adjacent structures, landscaping and parked cars. All debris removed from the project site shall be legally disposed of at a site(s) obtained by the Vendor ("Disposal Site(s)"). Such Disposal Site(s) shall be a properly licensed and permitted facility pursuant to state and local regulations for purposes of accepting delivery of the

respective materials. No recyclable materials shall be disposed of at any landfill. All disposable recyclable materials shall be disposed in a manner that facilitates recycling. Vendor shall identify the proposed Disposal Site(s) to the Owner. All costs associated with disposal of materials shall be borne by the Vendor and shall be included in the Bid Proposal pricing. No additional costs will be paid by the Owner.

Performance Requirements

When adsorber vessels are filled with virgin GAC carbon as defined herein, the system shall be capable of producing treated water containing nondetectable levels of DBCP and TCP when the concentration of DBCP and TCP in the raw water is up to 1.0 and 0.100 µg/L, respectively.

Regulatory Requirements

The Vendor shall comply with all applicable regulatory requirements including, but not limited to, the following:

Occupational safety and health requirements of OSHA and Cal-OSHA.

U.S. Department of Transportation requirements for transportation of system and virgin GAC.

Local air pollution control requirements regarding potential releases of chemicals or particulates during transfer of GAC to absorber vessels.

The Vendor shall provide evidence of compliance with applicable permits where specifically required in these specifications. Additional evidence (copies of permits, etc.) shall be provided if requested by the City. The Vendor shall obtain all necessary permits related to the delivery of the system at his own expense.

Field Samples

The Owner reserves the right to obtain samples of GAC provided by the Vendor at the project site (field samples) to verify compliance with these specifications. Field samples may be obtained in addition to samples provided from the factory by the Vendor.

Deliver, Storage, and Handling

The Vendor shall familiarize himself with site constraints and characteristics prior to shipment of GAC. The Vendor shall provide the Owner one week's notice and 24-hour confirmation of his intent to deliver the GAC.

Project/Site Conditions

The Vendor shall familiarize himself with current and proposed site conditions, including improvements for this project by others, before GAC deliveries and installation. The site contains an operating potable water supply, pumping, and electrical facilities. The Vendor shall not operate these facilities without Owner's consent or cause the contamination of water produced or pumped at this facility.

Sampling Spent Carbon

If the Vendor so desires, the Vendor may request a sample of spent GAC for analysis to determine the amount of contaminant present on the GAC. The City will gather the representative GAC sample from the spent GAC bed for the Vendor to have analyzed. The Vendor shall send the

results of the analysis to the City immediately upon its availability. The results shall be sent under cover letter stating whether or not the spent GAC is considered hazardous or is a handling problem for the Vendor which would require total incineration of the GAC. Results shall be provided to the City within ten (10) business days after sampling. The Vendor shall bear responsibility to pick up sample bottles from the City or pay all costs for packing, shipping and analysis of spent GAC samples. The City's preference is for the successful Vendor to grant to the City a blanket acceptance agreement that will cover all GAC treatment facilities. This will result in a time and labor savings cost to both parties.

Transportation

If the spent carbon is tested and determined to be hazardous, the transporter shall be registered with the California Department of Toxic Substance Control and shall have an EPA ID number. The transporter shall comply with Department of Transportation requirements for packaging, labeling and marketing. For bulk delivery, the trailers used to deliver virgin GAC to city treatment sites shall be dedicated for the transport of potable water grade GAC and shall be sanitized before each delivery.

A. PART 2 - MATERIALS

B. Manufacturers

The GAC shall be manufactured by Evoqua, Calgon Carbon Corporation, Carbon Activated Corporation, or equal.

C. Granular Activated Carbon

GAC furnished and installed for filling the existing adsorber vessels shall be as specified herein.

1. General

The granular activated carbon shall be virgin material manufactured from select grade of coconut shell-based carbon. Activation shall be carefully controlled to produce a material having a high internal surface area with optimum pore size for effective adsorption of the contaminants to be removed.

2. Virgin GAC

The GAC shall be manufactured by one Manufacturer who is experienced in the production and application of GAC for potable water treatment. The GAC shall have the following characteristics:

Base material: Coconut shell

| | | |
|----------------------|-------------------|---------------|
| Iodine Number | Minimum | 1,050 |
| Abrasion Number | Minimum | 80 |
| Moisture (as packed) | Maximum percent | 2% |
| Water Soluble Ash | Maximum percent | 2% |
| Particle Size | (U.S. sieve size) | 8x30 or 12x30 |
| Oversize (8 mesh) | Maximum percent | 5% |
| Undersize (30 mesh) | Maximum percent | 4% |

| | | |
|--|-----------------|--------------|
| Apparent Density (backwashed & drained) | g/cc | 0.40 to 0.54 |
| Effective Size | Millimeters | 0.6 to 1.0 |
| Uniformity Coefficient | Maximum | 2.1 |
| Total Ash: | Maximum percent | 5 |

3. Handling Characteristics

The GAC's physical size and density must be such that it shall flow readily within the virgin and spent GAC transfer piping provided with the system and must form a workable slurry with a concentration of approximately 0.21 kg of carbon per liter (2 pounds of carbon per gallon) of water.

D. PART 3 - EXECUTION

A. Removal of GAC

1. Vendor shall be responsible for the removal of the spent GAC contained within the existing GAC vessels. Vendor shall provide all equipment necessary to slurry spent GAC from the vessels into the container truck. Removal by vacuum/super-sack is not an option under this contract. The Vendor shall use bulk pneumatic trailers that are dedicated non-hazardous and certified for transport of food grade material. City staff will be present on site during all transfer operations. The Vendor shall supply an air compressor to assist in slurry operations at the well site.
2. Vendor shall thoroughly wash down the interior top, sides and bottom of the vessel to remove all spent GAC. Vendor shall open and inspect from the man-way without entering the vessel interior to confirm all GAC is removed.
3. The Vendor shall be ultimately responsible for the identification and classification of the spent GAC and its adsorbed constituents. This responsibility shall include any necessary laboratory analysis of the material. The Vendor shall be responsible for obtaining, maintaining and assuring to the City that all permits necessary for the transportation of the vessel contents to the treatment/destruction facility are in full force. The Vendor shall obtain, and supply copies to the City, all documents needed to transport the material, and shall complete all applications and documents required, except documents which the City (as generator of the material) is required to complete.
4. The material must be transported off City property within 24 hours of its removal from the vessel. The Vendor shall provide for the safe and timely transportation of the material to the treatment/destruction facility within one week of removal from the GAC vessel.

B. Installation of GAC

5. Following testing, inspection, and disinfection of the system (completed under separate contract by others), each adsorber vessel shall be filled with a minimum 20,000 lb of virgin GAC in accordance with the specifications.
6. Vendor shall deliver GAC in trailers used solely for the transport of GAC. Trailers shall be thoroughly cleaned prior to filling with GAC and shall be lined or constructed with materials suitable for transporting GAC that will be in contact with potable water.

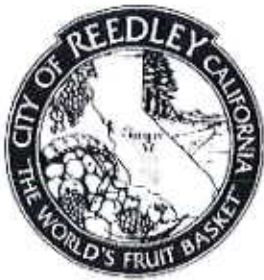
7. Makeup or rinse water needed for the transfer shall be potable water provided by the Owner. The Vendor shall provide any necessary hoses, site glasses, piping, and appurtenances for using this water. The compressed air supply required for transfer of carbon shall be provided by the Vendor.
8. All water used in the transfer process shall be discharged to the point on site designated by the Owner; no discharges will be permitted without the Owner's permission.
9. GAC shall be transferred as a water slurry only, using air pressure on the trailer as the motive force. Use of a pump or eductor to transfer the carbon from the trailer into the adsorber vessel will not be allowed. Bag loading or dry loading of the GAC into the adsorber vessel is prohibited. The GAC shall be loaded into the trailers before the units are driven on to the site.
10. The Vendor will be responsible for cleanup of all GAC and slurry spills that may occur during the GAC transfer operation.
11. After GAC is installed in the vessel, the GAC will soak for a minimum of 48 hours at which time the City shall backwash the GAC to remove unwanted fines.

E. Material Testing and Start-Up

1. Following completion of the backwash, samples will be collected by the City from the combined influent, vessel sample ports, and combined effluent (known as a "set") and analyzed by a State of California certified laboratory for bacteriological contamination as well as total arsenic and total nitrate. If any sample from the set should test positive for coliform bacteria using the Coliform Presence/Absence method, the City shall backwash the GAC a second time and collect a second bacteria sample set. The second sample set shall use two methods, the Multiple Tube Fermentation (MTF) and Heterotrophic Plate Count (HPC). If the MTF result should exceed 2.2 mpn or if the HPC exceed 500 cfu, the GAC shall be considered to be contaminated. The Vendor shall then, at his own expense, provide the labor and materials necessary to chemically treat the GAC bed with sodium hydroxide.
2. The groundwater provided by the Owner meets all the secondary State and Federal maximum contaminant levels (MCLs) for inorganic contaminants. The quality of the virgin carbon will be reflected by the quantity of inorganics leached into the effluent in terms of secondary inorganic contaminations of phosphates, ash, etc. The effluent shall be sampled by the City (after the washing is considered complete) and tested by an independent laboratory. This inorganics test will be repeated within two (2) weeks after startup. The treatment system must provide water that does not exceed the MCLs for secondary contaminants. GAC that fails to meet this standard shall be replaced at the Vendor's sole expense.
3. If disinfection becomes necessary, follow the disinfection procedure described in Section 4.5 of the Well 14 GAC System Operations Plan (attached to this bid package for reference).
4. If any sample contains nitrate or arsenic above 80% of the State of California MCL, or 15% above the influent concentration (whichever is greater), the Vendor shall then arrange with the City to flush to waste for a maximum of 24 hours, after which time the Vendor shall resample the GAC effluent. If one or more samples still contain nitrate and/or arsenic above 80% of the MCL or 15% above the influent concentration (whichever is greater), the GAC bed will be considered contaminated and will be replaced by the Vendor at no cost to the City.

5. City approval of the laboratory results will comprise final approval of the GAC installation.

END OF SECTION



REEDLEY CITY COUNCIL

- ☒ Consent Calendar
- ☐ Regular Item
- ☐ Workshop
- ☐ Closed Session
- ☐ Public Hearing

DATE: April 10, 2018

ITEM NO: 6

TITLE: APPROVAL OF ITEMS PERTAINING TO THE REMOVAL AND REPLACEMENT OF GRANULATED ACTIVATED CARBON (GAC) MEDIA FOR THE WATER FILTRATION VESSELS LOCATED AT WATER WELL #14.

- A. APPROVE AND AUTHORIZE THE CITY MANAGER TO EXECUTE AN AGREEMENT WITH PROMINENT SYSTEMS INC. FOR THE REMOVAL AND REPLACEMENT OF GAC MEDIA FOR THE WATER FILTRATION VESSELS LOCATED AT WATER WELL #14.
- B. ADOPT RESOLUTION NO. 2018-036 AMENDING THE 2017-2018 ADOPTED BUDGET TO APPROPRIATE \$110,000 FROM THE GROUNDWATER TREATMENT FUND FOR THE REMOVAL AND REPLACEMENT OF GAC MEDIA FOR THE WATER FILTRATION VESSELS LOCATED AT WATER WELL #14.

SUBMITTED: Russ Robertson, Public Works Director

APPROVED: Nicole R. Zieba, City Manager

RECOMMENDATION

That the City Council approve and authorize the City Manager or designee to execute an agreement with Prominent Systems Inc., as well as adopt Resolution No. 2018-036 appropriating \$110,000 from the Groundwater Treatment Fund for the removal and replacement of GAC media for the water filtration vessels located at water well #14.

EXECUTIVE SUMMARY

There are currently four filtration vessels located at City of Reedley municipal water well #14. The filter vessels are necessary to filter out the contaminate known as 1,2,3-trichloropropane (TCP). TCP is a manmade chlorinated hydrocarbon and is considered by the U.S. Environmental Protection Agency to be a "probable human carcinogen".

A proven method of TCP treatment is by utilizing GAC media inside the filter vessels to filter out the TCP contaminate. This method of treatment is considered to be the best available technology for the treatment of TCP.

Effluent water from the Well #14 filter vessels is closely monitored and when there is a breakthrough of the TCP contaminate, the GAC media in the filter vessels must be replaced. The well has been temporarily shut down until the media can be replaced.

In March of 2018, the City solicited bids from qualified firms for the replacement of the GAC media and three bids were received by the due date of April 2, 2018. The lowest bid is from Prominent Systems Inc. for a price of \$100,000 even.

The bid solicitation documents including the agreement, and the bid received from Prominent Systems Inc., are attached to this staff report. The total bid for the removal and replacement of the GAC media is \$100,000. Staff is requesting an additional 10% contingency of \$10,000, to bring the total appropriation request to \$110,000.

FISCAL IMPACT

No impact to the Water Enterprise Fund. Reduction of the Groundwater Treatment Fund in the amount of \$110,000.

ATTACHMENTS

Contract Documents and Specifications for Well 14 GAC Replacement
Bid Proposal from Prominent Systems Inc.
Resolution No. 2018-036