

PROFESSIONAL CONSULTANT SERVICES AGREEMENT

CARBON ACTIVATED CORPORATION

Granular Activated Carbon Testing (No. RPU-2018)

THIS PROFESSIONAL CONSULTANT SERVICES AGREEMENT ("Agreement") is made and entered into this _____ day of _____, 2020 ("Effective Date"), by and between the CITY OF RIVERSIDE, a California charter city and municipal corporation ("City"), and CARBON ACTIVATED CORPORATION, a California corporation ("Consultant").

1. **Scope of Services.** City agrees to retain and does hereby retain Consultant and Consultant agrees to provide the services more particularly described in Exhibit "A," "Scope of Services" ("Services"), attached hereto and incorporated herein by reference, in conjunction with Granular Activated Carbon Testing (No. RPU-2018) ("Project").

2. **Term.** This Agreement shall be effective on the date first written above and shall remain in effect until December 31, 2021, unless otherwise terminated pursuant to the provisions herein.

3. **Compensation/Payment.** Consultant shall perform the Services under this Agreement for the total sum not to exceed One Hundred Twenty-One Thousand Two Hundred Dollars (\$121,200.00), payable in accordance with the terms set forth in Exhibit "B." Said payment shall be made in accordance with City's usual accounting procedures upon receipt and approval of an itemized invoice setting forth the services performed. The invoices shall be delivered to City at the address set forth in Section 4 hereof.

4. **Notices.** Any notices required to be given, hereunder shall be in writing and shall be personally served or given by mail. Any notice given by mail shall be deemed given when deposited in the United States Mail, certified and postage prepaid, addressed to the party to be served as follows:

To City

Riverside Public Utilities
City of Riverside
Attn: Robin Glenney
3750 University Avenue, Suite 300
Riverside, CA 92501

To Consultant

Carbon Activated Corporation
Attn: Dale Kerr
2250 S. Central Avenue
Compton, CA 90220

5. **Prevailing Wage.** If applicable, Consultant and all subcontractors are required to pay the general prevailing wage rates of per diem wages and overtime and holiday wages determined by the Director of the Department of Industrial Relations under Section 1720 et seq. of the California Labor Code and implemented by Resolution No. 13346 of the City Council of the City of Riverside. The Director's determination is available on-line at www.dir.ca.gov/dlsr/DPreWageDetermination.htm and is referred to and made a part hereof; the wage rates therein ascertained, determined, and specified are referred to and made a part hereof as though fully set forth herein.

6. **Contract Administration.** A designee of the City will be appointed in writing by the City Manager or Department Director to administer this Agreement on behalf of City and shall be referred to herein as Contract Administrator.

7. **Standard of Performance.** While performing the Services, Consultant shall exercise the reasonable professional care and skill customarily exercised by reputable members of Consultant's profession practicing in the Metropolitan Southern California Area, and shall use reasonable diligence and best judgment while exercising its professional skill and expertise.

8. **Personnel.** Consultant shall furnish all personnel necessary to perform the Services and shall be responsible for their performance and compensation. Consultant recognizes that the qualifications and experience of the personnel to be used are vital to professional and timely completion of the Services. The key personnel listed in Exhibit "C" attached hereto and incorporated herein by this reference and assigned to perform portions of the Services shall remain assigned through completion of the Services, unless otherwise mutually agreed by the parties in writing, or caused by hardship or resignation in which case substitutes shall be subject to City approval.

9. **Assignment and Subcontracting.** Neither party shall assign any right, interest, or obligation in or under this Agreement to any other entity without prior written consent of the other party. In any event, no assignment shall be made unless the assignee expressly assumes the obligations of assignor under this Agreement, in a writing satisfactory to the parties. Consultant acknowledges that any assignment may, at the City's sole discretion, require City Manager and/or City Council approval. Consultant shall not subcontract any portion of the work required by this Agreement without prior written approval by the responsible City Contract Administrator. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement, including without limitation, the insurance obligations set forth in Section 12. The Consultant acknowledges and agrees that the City is an intended beneficiary of any work performed by any subcontractor for purposes of establishing a duty of care between any subcontractor and the City.

10. **Independent Contractor.** In the performance of this Agreement, Consultant, and Consultant's employees, subcontractors and agents, shall act in an independent capacity as independent contractors, and not as officers or employees of the City of Riverside. Consultant acknowledges and agrees that the City has no obligation to pay or withhold state or federal taxes or to provide workers' compensation or unemployment insurance to Consultant, or to Consultant's employees, subcontractors and agents. Consultant, as an independent contractor, shall be responsible for any and all taxes that apply to Consultant as an employer.

11. Indemnification.

11.1 Design Professional Defined. For purposes of this Agreement, “Design Professional” includes the following:

- A. An individual licensed as an architect pursuant to Chapter 3 (commencing with Section 5500) of Division 3 of the Business and Professions Code, and a business entity offering architectural services in accordance with that chapter.
- B. An individual licensed as a landscape architect pursuant to Chapter 3.5 (commencing with Section 5615) of Division 3 of the Business and Professions Code, and a business entity offering landscape architectural services in accordance with that chapter.
- C. An individual registered as a professional engineer pursuant to Chapter 7 (commencing with Section 6700) of Division 3 of the Business and Professions Code, and a business entity offering professional engineering services in accordance with that chapter.
- D. An individual licensed as a professional land surveyor pursuant to Chapter 15 (commencing with Section 8700) of Division 3 of the Business and Professions Code, and a business entity offering professional land surveying services in accordance with that chapter.

11.2 Defense Obligation For Design Professional Liability. Consultant agrees, at its cost and expense, to promptly defend the City, and the City’s employees, officers, managers, agents and council members (collectively the “Parties to be Defended”) from and against any and all claims, allegations, lawsuits, arbitration proceedings, administrative proceedings, regulatory proceedings, or other legal proceedings to the extent the same arise out of, pertain to, or relate to the negligence, recklessness or willful misconduct of Consultant, or anyone employed by or working under the Consultant or for services rendered to the Consultant in the performance of the Agreement, notwithstanding that the City may have benefited from its work or services and whether or not caused in part by the negligence of an Indemnified Party. Consultant agrees to provide this defense immediately upon written notice from the City, and with well qualified, adequately insured and experienced legal counsel acceptable to City. Consultant will reimburse City for reasonable defense costs for claims arising out of Consultant’s professional negligence based on the percentage of Consultant’s liability. This obligation to defend as set forth herein is binding on the successors, assigns and heirs of Consultant and shall survive the termination of Consultant’s Services under this Agreement.

11.3 Indemnity For Design Professional Liability. When the law establishes a professional standard of care for Consultant’s services, to the fullest extent permitted by law, Consultant shall indemnify, protect and hold harmless the City and the City’s employees, officers, managers, agents, and Council Members (“Indemnified Parties”) from and against any and all claim for damage, charge, lawsuit, action, judicial, administrative, regulatory or arbitration proceeding, damage, cost, expense (including counsel and expert fees), judgment, civil fines and penalties,

liabilities or losses of any kind or nature whatsoever to the extent the same arise out of, pertain to, or relate to the negligence, recklessness or willful misconduct of Consultant, or anyone employed by or working under the Consultant or for services rendered to the Consultant in the performance of the Agreement, notwithstanding that the City may have benefited from its work or services and whether or not caused in part by the negligence of an Indemnified Party.

11.4 Defense Obligation For Other Than Design Professional Liability.

Consultant agrees, at its cost and expense, to promptly defend the City, and the City's employees, officers, managers, agents and council members (collectively the "Parties to be Defended") from and against any and all claims, allegations, lawsuits, arbitration proceedings, administrative proceedings, regulatory proceedings, or other legal proceedings which arise out of, or relate to, or are in any way connected with: 1) the Services, work, activities, operations, or duties of the Consultant, or of anyone employed by or working under the Consultant, or 2) any breach of the Agreement by the Consultant. This duty to defend shall apply whether or not such claims, allegations, lawsuits or proceedings have merit or are meritless, or which involve claims or allegations that any or all of the Parties to be Defended were actively, passively, or concurrently negligent, or which otherwise assert that the Parties to be Defended are responsible, in whole or in part, for any loss, damage or injury. Consultant agrees to provide this defense immediately upon written notice from the City, and with well qualified, adequately insured and experienced legal counsel acceptable to City. This obligation to defend as set forth herein is binding on the successors, assigns and heirs of Consultant and shall survive the termination of Consultant's Services under this Agreement.

11.5 Indemnity For Other Than Design Professional Liability. Except as to the sole negligence or willful misconduct of the City, Consultant agrees to indemnify, protect and hold harmless the Indemnified Parties from and against any claim for damage, charge, lawsuit, action, judicial, administrative, regulatory or arbitration proceeding, damage, cost, expense (including counsel and expert fees), judgment, civil fine and penalties, liabilities or losses of any kind or nature whatsoever whether actual, threatened or alleged, which arise out of, pertain to, or relate to, or are a consequence of, or are attributable to, or are in any manner connected with the performance of the Services, work, activities, operations or duties of the Consultant, or anyone employed by or working under the Consultant or for services rendered to Consultant in the performance of this Agreement, notwithstanding that the City may have benefited from its work or services. This indemnification provision shall apply to any acts, omissions, negligence, recklessness, or willful misconduct, whether active or passive, on the part of the Consultant or anyone employed or working under the Consultant.

12. Insurance.

12.1 General Provisions. Prior to the City's execution of this Agreement, Consultant shall provide satisfactory evidence of, and shall thereafter maintain during the term of this Agreement, such insurance policies and coverages in the types, limits, forms and ratings required herein. The rating and required insurance policies and coverages may be modified in writing by the City's Risk Manager or City Attorney, or a designee, unless such modification is prohibited by law.

12.1.1 Limitations. These minimum amounts of coverage shall not constitute any limitation or cap on Consultant's indemnification obligations under Section 11 hereof.

12.1.2 Ratings. Any insurance policy or coverage provided by Consultant or subcontractors as required by this Agreement shall be deemed inadequate and a material breach of this Agreement, unless such policy or coverage is issued by insurance companies authorized to transact insurance business in the State of California with a policy holder's rating of A or higher and a Financial Class of VII or higher.

12.1.3 Cancellation. The policies shall not be canceled unless thirty (30) days' prior written notification of intended cancellation has been given to City by certified or registered mail, postage prepaid.

12.1.4 Adequacy. The City, its officers, employees and agents make no representation that the types or limits of insurance specified to be carried by Consultant pursuant to this Agreement are adequate to protect Consultant. If Consultant believes that any required insurance coverage is inadequate, Consultant will obtain such additional insurance coverage as Consultant deems adequate, at Consultant's sole expense.

12.2 Workers' Compensation Insurance. By executing this Agreement, Consultant certifies that Consultant is aware of and will comply with Section 3700 of the Labor Code of the State of California requiring every employer to be insured against liability for workers' compensation, or to undertake self-insurance before commencing any of the work. Consultant shall carry the insurance or provide for self-insurance required by California law to protect said Consultant from claims under the Workers' Compensation Act. Prior to City's execution of this Agreement, Consultant shall file with City either 1) a certificate of insurance showing that such insurance is in effect, or that Consultant is self-insured for such coverage, or 2) a certified statement that Consultant has no employees, and acknowledging that if Consultant does employ any person, the necessary certificate of insurance will immediately be filed with City. Any certificate filed with City shall provide that City will be given ten (10) days' prior written notice before modification or cancellation thereof.

12.3 Commercial General Liability and Automobile Insurance. Prior to City's execution of this Agreement, Consultant shall obtain, and shall thereafter maintain during the term of this Agreement, commercial general liability insurance and automobile liability insurance as required to insure Consultant against damages for personal injury, including accidental death, as well as from claims for property damage, which may arise from or which may concern operations by anyone directly or indirectly employed by, connected with, or acting for or on behalf of Consultant. The City, and its officers, employees and agents, shall be named as additional insureds under the Consultant's insurance policies.

12.3.1 Consultant's commercial general liability insurance policy shall cover both bodily injury (including death) and property damage (including, but not limited to, premises operations liability, products-completed operations liability, independent contractor's liability, personal injury liability, and contractual liability) in an amount not less than \$1,000,000 per occurrence and a general aggregate limit in the amount of not less than \$2,000,000.

12.3.2 Consultant's automobile liability policy shall cover both bodily injury and property damage in an amount not less than \$1,000,000 per occurrence and an aggregate limit of not less than \$1,000,000. All of Consultant's automobile and/or commercial general liability

insurance policies shall cover all vehicles used in connection with Consultant's performance of this Agreement, which vehicles shall include, but are not limited to, Consultant owned vehicles, Consultant leased vehicles, Consultant's employee vehicles, non-Consultant owned vehicles and hired vehicles.

12.3.3 Prior to City's execution of this Agreement, copies of insurance policies or original certificates along with additional insured endorsements acceptable to the City evidencing the coverage required by this Agreement, for both commercial general and automobile liability insurance, shall be filed with City and shall include the City and its officers, employees and agents, as additional insureds. Said policies shall be in the usual form of commercial general and automobile liability insurance policies, but shall include the following provisions:

It is agreed that the City of Riverside, and its officers, employees and agents, are added as additional insureds under this policy, solely for work done by and on behalf of the named insured for the City of Riverside.

12.3.4 The insurance policy or policies shall also comply with the following provisions:

- a. The policy shall be endorsed to waive any right of subrogation against the City and its sub-consultants, employees, officers and agents for services performed under this Agreement.
- b. If the policy is written on a claims made basis, the certificate should so specify and the policy must continue in force for one year after completion of the services. The retroactive date of coverage must also be listed.
- c. The policy shall specify that the insurance provided by Consultant will be considered primary and not contributory to any other insurance available to the City and Endorsement No. CG 20010413 shall be provided to the City.

12.4 **Errors and Omissions Insurance.** Prior to City's execution of this Agreement, Consultant shall obtain, and shall thereafter maintain during the term of this Agreement, errors and omissions professional liability insurance in the minimum amount of \$1,000,000 to protect the City from claims resulting from the Consultant's activities.

12.5 **Subcontractors' Insurance.** Consultant shall require all of its subcontractors to carry insurance, in an amount sufficient to cover the risk of injury, damage or loss that may be caused by the subcontractors' scope of work and activities provided in furtherance of this Agreement, including, but without limitation, the following coverages: Workers Compensation, Commercial General Liability, Errors and Omissions, and Automobile liability. Upon City's request, Consultant shall provide City with satisfactory evidence that Subcontractors have obtained insurance policies and coverages required by this section.

13. **Business Tax.** Consultant understands that the Services performed under this Agreement constitutes doing business in the City of Riverside, and Consultant agrees that Consultant will register for and pay a business tax pursuant to Chapter 5.04 of the Riverside Municipal Code and keep such tax certificate current during the term of this Agreement.

14. **Time of Essence.** Time is of the essence for each and every provision of this Agreement.

15. **City's Right to Employ Other Consultants.** City reserves the right to employ other Consultants in connection with the Project. If the City is required to employ another consultant to complete Consultant's work, due to the failure of the Consultant to perform, or due to the breach of any of the provisions of this Agreement, the City reserves the right to seek reimbursement from Consultant.

16. **Accounting Records.** Consultant shall maintain complete and accurate records with respect to costs incurred under this Agreement. All such records shall be clearly identifiable. Consultant shall allow a representative of City during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Consultant shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of three (3) years from the date of final payment under this Agreement.

17. **Confidentiality.** All ideas, memoranda, specifications, plans, procedures, drawings, descriptions, computer program data, input record data, written information, and other materials either created by or provided to Consultant in connection with the performance of this Agreement shall be held confidential by Consultant, except as otherwise directed by City's Contract Administrator. Nothing furnished to Consultant which is otherwise known to the Consultant or is generally known, or has become known, to the related industry shall be deemed confidential. Consultant shall not use City's name or insignia, photographs of the Project, or any publicity pertaining to the Services or the Project in any magazine, trade paper, newspaper, television or radio production, website, or other similar medium without the prior written consent of the City.

18. **Ownership of Documents.** All reports, maps, drawings and other contract deliverables prepared under this Agreement by Consultant shall be and remain the property of City. Consultant shall not release to others information furnished by City without prior express written approval of City.

19. **Copyrights.** Consultant agrees that any work prepared for City which is eligible for copyright protection in the United States or elsewhere shall be a work made for hire. If any such work is deemed for any reason not to be a work made for hire, Consultant assigns all right, title and interest in the copyright in such work, and all extensions and renewals thereof, to City, and agrees to provide all assistance reasonably requested by City in the establishment, preservation and enforcement of its copyright in such work, such assistance to be provided at City's expense but without any additional compensation to Consultant. Consultant agrees to waive all moral rights relating to the work developed or produced, including without limitation any and all rights of identification of authorship and any and all rights of approval, restriction or limitation on use or subsequent modifications.

20. **Conflict of Interest.** Consultant, for itself and on behalf of the individuals listed in Exhibit "C," represents and warrants that by the execution of this Agreement, they have no interest, present or contemplated, in the Project affected by the above-described Services. Consultant further warrants that neither Consultant, nor the individuals listed in Exhibit "C" have any real property, business interests or income interests that will be affected by this project or, alternatively, that Consultant will file with the City an affidavit disclosing any such interest.

21. **Solicitation.** Consultant warrants that Consultant has not employed or retained any person or agency to solicit or secure this Agreement, nor has it entered into any agreement or understanding for a commission, percentage, brokerage, or contingent fee to be paid to secure this Agreement. For breach of this warranty, City shall have the right to terminate this Agreement without liability and pay Consultant only for the value of work Consultant has actually performed, or, in its sole discretion, to deduct from the Agreement price or otherwise recover from Consultant the full amount of such commission, percentage, brokerage or commission fee. The remedies specified in this section shall be in addition to and not in lieu of those remedies otherwise specified in this Agreement.

22. **General Compliance With Laws.** Consultant shall keep fully informed of federal, state and local laws and ordinances and regulations which in any manner affect those employed by Consultant, or in any way affect the performance of services by Consultant pursuant to this Agreement. Consultant shall at all times observe and comply with all such laws, ordinances and regulations, and shall be solely responsible for any failure to comply with all applicable laws, ordinances and regulations. Consultant represents and warrants that Consultant has obtained all necessary licenses to perform the Scope of Services and that such licenses are in good standing. Consultant further represents and warrants that the services provided herein shall conform to all ordinances, policies and practices of the City of Riverside.

23. **Waiver.** No action or failure to act by the City shall constitute a waiver of any right or duty afforded City under this Agreement, nor shall any such action or failure to act constitute approval of or acquiescence in any breach thereunder, except as may be specifically, provided in this Agreement or as may be otherwise agreed in writing.

24. **Amendments.** This Agreement may be modified or amended only by a written agreement and/or change order executed by the Consultant and City.

25. **Termination.** City, by notifying Consultant in writing, shall have the right to terminate any or all of Consultant's services and work covered by this Agreement at any time. In the event of such termination, Consultant may submit Consultant's final written statement of the amount of Consultant's services as of the date of such termination based upon the ratio that the work completed bears to the total work required to make the report complete, subject to the City's rights under Sections 15 and 26 hereof. In ascertaining the work actually rendered through the termination date, City shall consider completed work, work in progress and complete and incomplete reports and other documents only after delivered to City.

25.1 Other than as stated below, City shall give Consultant thirty (30) days' prior written notice prior to termination.

25.2 City may terminate this Agreement upon fifteen (15) days' written notice to Consultant, in the event:

25.2.1 Consultant substantially fails to perform or materially breaches the Agreement; or

25.2.2 City decides to abandon or postpone the Project.

26. **Offsets.** Consultant acknowledges and agrees that with respect to any business tax or penalties thereon, utility charges, invoiced fee or other debt which Consultant owes or may owe to the City, City reserves the right to withhold and offset said amounts from payments or refunds or reimbursements owed by City to Consultant. Notice of such withholding and offset, shall promptly be given to Consultant by City in writing. In the event of a dispute as to the amount owed or whether such amount is owed to the City, City will hold such disputed amount until either the appropriate appeal process has been completed or until the dispute has been resolved.

27. **Successors and Assigns.** This Agreement shall be binding upon City and its successors and assigns, and upon Consultant and its permitted successors and assigns, and shall not be assigned by Consultant, either in whole or in part, except as otherwise provided in paragraph 9 of this Agreement.

28. **Venue.** Any action at law or in equity brought by either of the parties hereto for the purpose of enforcing a right or rights provided for by this Agreement shall be tried in the Superior Court, County of Riverside, State of California, and the parties hereby waive all provisions of law providing for a change of venue in such proceedings to any other county. In the event either party hereto shall bring suit to enforce any term of this Agreement or to recover any damages for and on account of the breach of any term or condition of this Agreement, it is mutually agreed that each party will bear their own attorney's fees and costs.

29. **Nondiscrimination.** During Consultant's performance of this Agreement, Consultant shall not discriminate on the grounds of race, religious creed, color, national origin, ancestry, age, physical disability, mental disability, medical condition, including the medical condition of Acquired Immune Deficiency Syndrome (AIDS) or any condition related thereto, marital status, sex, genetic information, gender, gender identity, gender expression, or sexual orientation, military and veteran status, in the selection and retention of employees and subcontractors and the procurement of materials and equipment, except as provided in Section 12940 of the California Government Code. Further, Consultant agrees to conform to the requirements of the Americans with Disabilities Act in the performance of this Agreement.

30. **Severability.** Each provision, term, condition, covenant and/or restriction, in whole and in part, of this Agreement shall be considered severable. In the event any provision, term, condition, covenant and/or restriction, in whole and/or in part, of this Agreement is declared invalid, unconstitutional, or void for any reason, such provision or part thereof shall be severed from this Agreement and shall not affect any other provision, term, condition, covenant and/or restriction of this Agreement, and the remainder of the Agreement shall continue in full force and effect.

31. **Authority.** The individuals executing this Agreement and the instruments referenced herein on behalf of Consultant each represent and warrant that they have the legal power, right and actual authority to bind Consultant to the terms and conditions hereof and thereof.

32. **Entire Agreement.** This Agreement constitutes the final, complete, and exclusive statement of the terms of the agreement between the parties pertaining to the subject matter of this Agreement, and supersedes all prior and contemporaneous understandings or agreements of the parties. Neither party has been induced to enter into this Agreement by and neither party is relying on, any representation or warranty outside those expressly set forth in this Agreement.

33. **Interpretation.** City and Consultant acknowledge and agree that this Agreement is the product of mutual arms-length negotiations and accordingly, the rule of construction, which provides that the ambiguities in a document shall be construed against the drafter of that document, shall have no application to the interpretation and enforcement of this Agreement.

33.1 Titles and captions are for convenience of reference only and do not define, describe or limit the scope or the intent of the Agreement or any of its terms. Reference to section numbers, are to sections in the Agreement unless expressly stated otherwise.

33.2 This Agreement shall be governed by and construed in accordance with the laws of the State of California in effect at the time of the execution of this Agreement.

33.3 In the event of a conflict between the body of this Agreement and Exhibit "A" - Scope of Services hereto, the terms contained in Exhibit "A" shall be controlling.

34. **Exhibits.** The following exhibits attached hereto are incorporated herein to this Agreement by this reference:

Exhibit "A" - Scope of Services
Exhibit "B" - Compensation
Exhibit "C" - Key Personnel

IN WITNESS WHEREOF, City and Consultant have caused this Agreement to be duly executed the day and year first above written.

CITY OF RIVERSIDE, a California
charter city and municipal corporation

CARBON ACTIVATED CORPORATION,
a California corporation

By: _____
City Manager

By:  _____

Lionel Pereria

[Printed Name]

President

[Title]

Attest: _____
City Clerk

Certified as to Availability of Funds:

By:  _____
Chief Financial Officer

By:  _____

Anne Nash

[Printed Name]

Corporate Secretary

[Title]

Approved as to Form:

By: Susan D. Wilson
Assistant City Attorney

EXHIBIT “A”

SCOPE OF SERVICES

EXHIBIT A

Scope of Services

The Work shall consist of, a phased approach to evaluate virgin and reactivated bituminous coal based granular carbon removal efficiencies of PFAS and VOCs.

Phase 1, Contractors to respond to RFP with performance data and product specifications for bituminous coal based granular activated carbon removal efficiencies of PFAS and VOCs. City will evaluate proposals and select one or more contractor(s) to fill a vessel in phase 2, for full scale GAC testing.

Phase 2, Selected Contractor(s) shall remove and dispose of spent carbon and install virgin bituminous coal based GAC/ followed by custom reactivated carbon into a vessel located at Palmyrita Water Treatment Facility, and/or Garner B Water Treatment Facility, and/or Gage Water Treatment Facility. (one vessel 20,000 lbs). The City may request testing up to 3 vessels at each treatment facility for a total of 18 carbon trials for each carbon supplier. City will collect PFAS and VOC samples, and submit them to a third party state certified laboratory to analyze samples.

Phase 3, upon completion of data collection of Phase 1 and Phase 2 removal efficiencies will be evaluated. If it is in the best interest of the City additional vessels may be requested to be filled with Virgin GAC, and custom reactivated GAC thereafter. The City may choose one carbon supplier for all three treatment facilities or a different carbon supplies per treatment facility based on performance and price. Custom reactivated carbon must be processed and stored separate from other reactivated GAC and may only be returned to the same treatment facility within RPU per SWRCB-DDW permit regulations. Due to the potential length of this project cost adjustments may be made based on the current CPI.

Furnishing and Installation Requirements

This section covers the furnishing and installation requirements for the granular activated carbon (GAC) for 20,000 lb. GAC vessels. The GAC will be used to remove 1,2-dibromo-3-chloropropane (DBCP), 1,2,3 Trichloropropane, Per and Polyfluoroalkyl Substances (PFAS) and other volatile organic compounds (VOCs) detected in potable water supply wells. Each change-out shall include an inspection of the GAC vessel and a chlorine disinfection of the vessel before installation of new GAC. Each installation may include a caustic wash treatment if bacteriological testing of the installation results in a failure.

The GAC to be supplied and installed shall be suitable for use as an adsorptive media in a potable water treatment plant and be effective in the removal of PFAS, DBCP and other VOCs associated with contaminated groundwater supplies. The carbon shall be virgin or custom reactivated, durable GAC free of pathogenic material, capable of being used as specified below.

Reference Specifications, Codes and Standards

All work specified herein shall conform to or exceed the requirements of the applicable sections of the following documents to the extent that the requirements therein are not in conflict with the provisions of this section. Where such documents have been adopted as a code or ordinance by the public agency having jurisdiction, such code or ordinance shall take precedence. The provisions of AWWA B604, NSF 61, ASTM (latest editions) shall also apply as herein specified.

Site Conditions

The GAC system at Palmyrita Water Treatment Facility consists of seven (7) sets of two parallel pressure vessels and one single vessel (fifteen total) each containing 20,000 pounds of GAC. Each pressure vessel is a down flow-type ASME code steel adsorber with an underdrain system. Raw groundwater conveyed to the GAC system enters the top of a vessel, flows over the GAC where DBCP is removed. A collector system collects the treated water and retains the GAC media in the bed. The treated water is discharged from the GAC system through the effluent piping. A GAC backwash system allows backwashing of each pressure vessel.

The Palmyrita Water Treatment Facility, is located in the City of Riverside on the northeast corner of La Cadena Drive East and Oxford Street. The Gage Water Treatment Facility, is located in San Bernardino, CA near the intersection of Tippecanoe Avenue and Central Avenue (2 vessels). The Garner B Water Treatment Facility, is located in Riverside, CA near the intersection of Sieck Rd and Placentia Lane (5 vessels).

Materials

General

The granular activated carbon supplier(s) shall have the ability to supply, deliver, load, and unload the activated carbon using equipment dedicated to food grade materials. All GAC shall be supplied by a single supplier.

Granular activated carbon for use as an adsorption media in the treatment of VOCs and PFAS for municipal water supplies shall conform to the requirements of most recent edition of AWWA B-604. The GAC shall conform to NSF 61 standard. The activated carbon shall have the minimum standards and performance criteria regarding material specifications and physical properties. These performance criteria shall be evaluated based on representative samples of the proposed material which are submitted to the Engineer, lab reports and the Engineer's onsite tests of the delivered material. Failure of samples to meet the performance criteria shall result in rejection of the activated carbon and, in the case of jobsite samples, in the removal and replacement of any installed materials, at no cost to the Owner.

Submittals

Detailed specifications and material quality and testing results shall be approved prior to final acceptance of the activated carbon. Complete manufacturer's descriptive data and specifications for the granular activated carbon shall be submitted for review prior to shipment, in accordance with Part 1, Section 2. All manufacturer's tests report shall include the following information for each type of carbon supplied.

Manufacturer's name.

Material source and manufacturer plant location.

Date of sampling.

Lot or stockpile.

The activated carbon test results for the required specifications and physical properties.

The supplier shall provide an affidavit of compliance stating that the activated carbon furnished complies with the applicable provisions of AWWA B-604 and these specifications.

Granular Activated Carbon

General

The GAC shall be virgin, granular, and manufactured from bituminous coal based reagglomerated activated combined with suitable binders as required. Custom reactivated carbon should be used thereafter. Custom reactivated carbon must be processed and stored separate from other reactivated GAC and may only be returned to the same treatment facility within RPU per SWRCB-DDW permit regulations. The reactivation facility(ies) shall be NSF certified reactivation facilities producing NSF/ANSI 61 certified products. The material shall be visually free of clay, dirt and deleterious material and shall be free of pathogenic contamination as measured by coliform tests of GAC filtrate. Lignite, peat or wood-based granular activated carbon media are not acceptable for this application.

Properties

The granulated activated carbon to be furnished shall meet the following specifications and physical properties:

Parameter	Spec	Standard
Iodine Number (mg/g), min.	1000	ASTM D4607
Moisture, weight %, max.	2	ASTM D2867
Effective size, mm	0.55 – 0.75	ASTM D2862
Uniformity Coefficient, max.	1.9	ASTM D2862
Abrasion No., min.	75	AWWA B604
Trace Capacity Number, (mg/cc), min.	10	TM-79, TM-85 (converted to TCN)
Screen Size (US Sieve), weight %		
* Larger than No. 12, max.	5	ASTM D2862
* Smaller than No. 40, max.	4	ASTM D2862
Ash, Max.	10%	ASTM D2866
<u>Typical Property</u>	<u>Value</u>	
Apparent Density, g/cc, min.	0.54	ASTM D2854
Water Extractables	<1%	AWWA B604
Non-Wettable	<1%	AWWA B604

In addition to these standards, the GAC shall satisfy the requirements of the Food Chemicals Codex and NSF 61. The GAC may be of either domestic or international origin.

All tests required shall be performed by an independent, State-certified testing laboratory approved by the Owner prior to performance of the initial test(s).

A minimum of three (3) weeks prior to the first anticipated delivery, the Contractor shall submit a 10-pound representative sample of each of the granular activated carbon to be used for this project. Samples shall be packaged in clean, waterproof, vapor proof containers that are identified as to the contents. A duplicate sample shall be tested by the manufacturer and a certified test report shall be submitted to the Owner along with the 10- pound sample. The manufacturer's test report shall indicate compliance with the specification requirements, along with a statement certifying that the material for shipment will be manufactured from comparable raw materials via the same manufacturing process as the sample submitted for testing. All tests shall be conducted in accordance with the standards and procedures indicated herein.

The Owner may authorize delivery on the basis of the manufacturer's test results and the certification of quality. The Owner may also test the reference sample(s) submitted to confirm compliance before delivery is authorized. Authorization to deliver material will not constitute acceptance of the activated carbon(s).

The Owner will accept or reject the granular activated carbon(s) delivered to the work site based on tests performed by the Owner on representative samples of the delivered material. After receipt of shipment, samples for testing will be collected in accordance with the procedures outlined in AWWA B604, 3.1. Material delivered to the work site will be subjected to a minimum of three (3) tests (for each) by the Owner prior to acceptance. Samples shall be stored in airtight, sealed glass containers after thorough mixing.

If the test of the material received at the work site using the first sealed sample reveals that it does not comply with the specifications, the Owner shall so notify the Contractor within twelve (12) calendar days after receipt of shipment. The results of the Owner's test shall prevail unless the Contractor notifies the Owner within five (5) working days of the notice that it desires a retest, which shall be completed within ten (10) calendar days. In the event that the results obtained by the Contractor, upon re-testing, using the second sealed sample, do not agree with the results obtained by the Owner, the third sealed sample shall be forwarded, unopened, to a laboratory agreed upon by both parties for analysis. The results of this third analysis shall be accepted as final.

The cost of the third analysis shall be paid for by the Contractor if the analysis shows that the material does not meet specifications and by the Owner if it does meet specifications.

If the material does not meet all of the requirements of the specifications, the material will be rejected and shall be removed and replaced with acceptable material at no cost to the Owner.

Execution

Packing and Shipping

Shipment of GAC material shall be bulk truck shipments. Shipments of GAC in bulk shall be in clean trucks with tight closures to avoid loss and contamination of material in transit. Shipments

in open-top trucks will not be acceptable. The type of truck shall be approved by the Engineer prior to shipment.

Shipments shall be accompanied by weight certificates of certified weighers. An independent certified weigher shall be used by the Contractor, at his/her own expense, for each shipment. The weighing procedures and the independent certified weigher to be used shall be submitted to the Owner for approval.

All shipments of GAC shall include certification that the trucks and GAC material are free of organic, radioactive, or any other contaminants. The batch of GAC delivered shall be accompanied with a Certificate of Analysis.

The Contractor shall provide 48-hour notification prior to delivery. Weight tickets shall be provided at the time of delivery. The GAC shall be delivered after 8:00 a.m., Monday through Friday, holidays excepted and shall be delivered early enough to permit the change-out of two vessels by 3:30 p.m.

Unload Spent GAC and Inspection

Spent GAC shall be transferred into DOT containers and be transported to a reactivation facility. The spent carbon shall be processed and a certificate of reactivation is issued for the batch of carbon. The certificate of reactivation shall be submitted with the invoice for payment of carbon removal. No payment will be processed for "Removal and disposal of spent carbon" without the certificate of reactivation.

Inspection of each GAC vessel shall be performed after unloading spent GAC. Contractor shall provide the services of qualified technical representative to inspect the internal of the GAC vessel. At minimum, exterior, internal upper chamber, internal lower chamber of the vessel and the vessel laterals, valves, seals, and coating shall be inspected for corrosion, wear, and leaks. The instrumentation on the vessel shall be inspected for proper operation. Conditions of the vessel shall be documented a report to be submitted to the Engineer. The report shall contain the professional evaluation and recommended resolution. Owner has the option to perform the repairs at extra cost. At such time, the loading of GAC will be suspended until repairs are completed. Owner shall not incur any extra cost for the delay.

At the closing of the vessel, gaskets and other minor maintenance parts shall be replaced as needed with a new one. Owner will provide the parts. Contractor will install at no extra cost.

Instillation and Disinfection by Contractor

Unless the requirement is waived by the Owner, in writing, the activated carbon manufacturer(s) shall provide the services of qualified technical representatives as necessary to review all procedures required for disinfecting a GAC vessel and placement of the activated carbon into the GAC pressure adsorbers. Onsite technical direction shall be provided by the activated carbon Manufacturer as required to ensure that materials are processed, handled, and installed in a manner meeting the manufacturer's recommendations. After completing the internal inspection of the vessel and prior to loading the GAC media, the vessel shall be disinfected according to AWWA Standard C653.

Pathogenic Growth Testing

After each vessel is loaded with the new GAC media, pathogenic growth shall be conducted as follows:

- Backwash the vessels to remove carbon fine.
- Soak the GAC in each vessel for a minimum of 24 hours.
- Downward flush continuously until the vessel is online.
- Supplier shall take bacteriological samples for two consecutive days, and will make provision for the City to take bacteriological samples in conjunction with the Contractor's test as verification procedure. If the two consecutive samples show that the total coliform is negative AND the HPC <200 cfu/100 mL, then the carbon will be accepted.
- If the bacteriological samples show fecal coliform positive, total coliform positive, or the HPC greater than 200 cfu/ml, Contractor shall immediately initiate remedial action, at Contractor's expenses, such as caustic wash/caustic rinse. If a caustic wash is performed, it shall follow the protocol described herein.

Caustic Wash Treatment

General

When a GAC vessel fails the pathogenic growth test, it shall then receive a caustic wash treatment as described below. After treatment, the vessel shall be re-tested for pathogenic growth. If the tests indicate that the vessel is contaminated, the vessel shall receive another caustic wash treatment followed by additional testing for contamination. This process shall be continued until testing indicates that the vessel does not have any contamination.

Caustic Wash Procedure

The newly installed Carbon shall be disinfected using a caustic wash using the following procedure:

- Remove any free water or remove sufficient water to introduce needed quantity of chemical.
- If necessary, pump ~1000 gallons of clean water through the effluent line to fill tank.
- Begin circulating water through vessel.
- Pump sufficient 50% NAOH (or equivalent) into the adsorber through the effluent line.
- Fill the Adsorber with clean water through the effluent line at a rate not exceed 5 gpm/ft².
- After the filling process is complete, monitor the pH of the water to ensure it attains, at least a pH of 12.
- Establish a recirculation water flow through the adsorber using the effluent header and the 4" GAC fill line and a suitable transfer pump. The caustic/water flow should be down flow through the vessel.
- Continue recirculation for 1½ - 3 hours to insure exposure of all surfaces and the GAC to the caustic solution. Monitor pH to assure it is a minimum of 12.
- Stop the recirculation and let vessel remain in a soaking mode for 4 -12 hours.
- After completing the soak mode, resume recirculation for an additional 45 minutes.
- Neutralize pH to 7.0 using a sufficient amount of HCl (37%) introduced through the

effluent line of the adsorber.

- Add clean water through the effluent line until the adsorber overflows.
- Soak for at least one hour and check the pH for neutralization effect.
- Once the water has reach acceptable pH range (6.6 – 8.0), discharge the water.
- Backwash the adsorber until the discharge water meets the pH criteria.

Payment for Caustic Wash

The price to do a caustic wash, including labor and materials, after the installation of GAC shall be incurred by Contractor. Contractor shall pay for costs due to vessel contamination, including the costs for additional caustic wash treatments as well as the costs for additional testing. Only one caustic wash is allowed per year for all 15 vessels. If a GAC vessel fails the pathogenic growth test and no caustic wash allotment is available, the contaminated GAC must be replaced within one week at no cost to the City.

Optional Caustic Wash

At its option, the City may request the Contractor to perform a caustic wash on a vessel. In this case, the Contractor shall be paid by the City at the rate shown on Schedule A of the Proposal.

EXHIBIT “B”
COMPENSATION

Bid Results for Project Granular Activated Carbon Testing (RFP 2018)

Issued on 04/16/2020

Bid Due on May 18, 2020 2:00 PM (Pacific)

Exported on 10/14/2020

Line Totals (Unit Price * Quantity)

Item Num	Description	Quantity	Carbon Activated Corporation - Unit Price
1	Phase 2a Line item for 20,000 lbs of Virgin bituminous coal based GAC.	1	\$36,000.00
2	Phase 2b Line item for 20,000 lbs of custom reactivated GAC installed thereafter	1	\$24,600.00
3	Phase 3a Line item for 20,000 lbs of Virgin bituminous coal based GAC Only	1	\$44,200.00
4	Phase 3b Line item for 20,000 lbs of Virgin bituminous coal based GAC for reactivation	1	\$44,200.00
5	Phase 3c Line item for 20,000 lbs of custom reactivated GAC installed thereafter	1	\$24,600.00
		Subtotal	
		Total	

EXHIBIT “C”
KEY PERSONNEL

Company Personnel

Project Personnel:

Dale Kerr

Email: dalek@activatedcarbon.com

Compton Office Phone: 310 885-4555 Cell Phone: 310 418-2430 Number of years of experience: 30 years

Current position: Regional Senior Account Manager, and Technical expert on Carbon and Filter Systems.

Duties include Project Development, Project Cost analysis, Filter System Design, Project Procurement of materials, Establish Procedures, and Training of Company Service Technicians.

1. The Experience in this position is as follows: Supervise and Manage a team of Company personnel, Sub Contractors, and Engineers for the review of project plans to establish costing and if needed Filter System design.
2. Site Superintendent Management: Manage all phase of the project to include all company personnel and Sub Contractors including Customer Service Relations (CSR) with the customer.
3. Developed techniques that increase job site Productivity, Safety, and Plant Operations.
4. Company Trainer for Haz Communications, Forklift Operations, Confined Space, Fall Protection, AWWA C653 Disinfection Procedures, and Respirators

Specific Skills include:

Team Building	Carbon Quality Control Procedures
Project Management to include Budgeting, costing, approvals, and inspections	Filter System Design and Trouble Shooting
Environmental Regulations	Carbon use based on Chemical concentrations
Site Specification Conformations	AWWA and ASTM test methods and procedures
Manufacturing of and Reactivation of Carbon	AWWA C653 Disinfection Procedures Company Trainer

Sriyan Goonawardana

Email: sriyang@activatedcarbon.com

Compton Office Phone: 310 885-4555 Cell Phone: 310 869-4863 Number of years of experience: 16 years

Current position: Service Department Manager and Technical expert on Carbon Reactivation Systems.

Duties include Project Scheduling, Project Team Building, Reactivation System Operations, Project Scheduling of materials, Establish Procedures, and Training of Company Service Technicians.

1. The Experience in this position is as follows: Manage a team of Company Service Technicians, Reactivation Technicians, and coordinate Sub Contractors as needed.
2. Management of personnel for outside projects and carbon reactivation scheduling to include Customer Service Relations (CSR) with the customer.
3. Developed techniques that increase job site Productivity, Safety, and Reactivation Plant Operations.
4. Company Trainer for Haz Communications, Forklift Operations, Confined Space, Fall Protection, and Respirators

Specific Skills include:

Team Building	Manufacturing of and Reactivation of Carbon
Management to include Budgeting, costing, testing, and approvals Environmental Regulations	Reactivation Carbon Quality Control Procedures
AWWA and ASTM test methods and procedures	AWWA C653 Disinfection Procedures Company Trainer

Ajith Peiris

Email: sriyang@activatedcarbon.com

Compton Office Phone: 310 885-4555 Cell Phone: 310 213-2622 Number of years of experience: 6 years

Current position: Service Department Assistant Manager.

Duties include Project Scheduling, Project Team Building, Project Scheduling of materials, and Training of Company Service Technicians.

1. The Experience in this position is as follows: Manage a team of Company Service Technicians, and coordinate Sub Contractors as needed.
2. Management of personnel for outside projects and Customer Service Relations (CSR).
3. Onsite job Productivity, and Safety.
4. Company Trainer for Haz Communications, Forklift Operations, Confined Space, Fall Protection, and Respirators.

Specific Skills include:

Team Building	Manufacturing of and Reactivation of Carbon
Management of Project to include Budgeting	AWWA C653 Disinfection Procedures Company Trainer

Daniel Martinez

Email: None

Compton Office Phone: 310 885-4555 Company Cell: 310 570-6680 Number of years of experience: 18 years

Current position: Lead Field Tech

Duties include Class A Simi Truck Driver, Pneumatic Tanker Tech, Vacuum Tech, Caustic Disinfection, AWWA C653 Disinfection, and Forklift Operator.

1. The Experience in this position is as follows: Supervise a team of Company personnel, Sub Contractors for both Pneumatic Tanker and Vacuum Change Outs.
2. Supervise team for AWWA C653 and Caustic Wash Disinfection of Filter systems.
3. Site Supervisor: Supervise all phase of the project to include all company personnel and Sub Contractors including Customer Service Relations (CSR) with the customer.

Specific Skills include:

Team Building	Sampling of Granular Activated Carbon
Pneumatic Tanker Operations	Filter System Trouble Shooting
Forklift Equipment operations	Caustic Wash Filter Disinfection
Vacuum System Operations	AWWA C653 Trained
HAZWOP 40 Certified	Confined Space Trained

Jose Rojas

Email: None

Compton Office Phone: 310 885-4555 Company Cell: (310) 365-9980 Number of years of experience: 8 years

Current position: Lead Field Tech

Duties include Class A Simi Truck Driver, Pneumatic Tanker Tech, Vacuum Tech, Caustic Disinfection, AWWA C653 Disinfection, and Forklift Operator.

1. The Experience in this position is as follows: Operation all company vacuum systems, Pneumatic Operations, Disinfection of Filter systems to include pH adjustment and Chlorine.
2. Supervise team for AWWA C653 and Caustic Wash Disinfection of Filter systems.

Specific Skills include:

Team Building	Sampling of Granular Activated Carbon
Pneumatic Tanker Operations	Filter System Trouble Shooting
Forklift Equipment operations	Caustic Wash Filter Disinfection
Vacuum System Operations	AWWA C653 Trained
HAZWOP 40 Certified	Confined Space Trained

Able Martinez

Email: None

Compton Office Phone: 310 885-4555 Company Cell: 310 699-6843 Number of years of experience: 17 years

Current position: Lead Field Tech

Duties include Class A Simi Truck Driver, Pneumatic Tanker Tech, Vacuum Tech, Caustic Disinfection, AWWA C653 Disinfection, and Forklift Operator.

1. The Experience in this position is as follows: Complete knowledge of the operation of both Pneumatic Tanker and Vacuum Systems.
2. Supervise team for AWWA C653 and Caustic Wash Disinfection of Filter systems.

Specific Skills include:

Pneumatic Tanker Operations	Filter System Trouble Shooting
Forklift Equipment operations	Caustic Wash Filter Disinfection
Vacuum System Operations	AWWA C653 Trained
HAZWOP 40 Certified	Confined Space Trained
Sampling of Granular Activated Carbon	

Manny Magana

Email: None

Compton Office Phone: 310 885-4555 Company Cell: 310 941-9316 Number of years of experience: 12 years

Current position: Field Tech

Duties include Class A Simi Truck Driver, Pneumatic Tanker Tech, Vacuum Tech, Caustic Disinfection, AWWA C653 Disinfection, and Forklift Operator.

1. The Experience in this position is as follows: Operation all company vacuum systems, Pneumatic Operations, Disinfection of Filter systems to include pH adjustment and Chlorine.
2. Supervise team for AWWA C653 and Caustic Wash Disinfection of Filter systems.

Specific Skills include:

Pneumatic Tanker Operations	Filter System Trouble Shooting
Forklift Equipment operations	Caustic Wash Filter Disinfection
Vacuum System Operations	AWWA C653 Trained
HAZWOP 40 Certified	Confined Space Trained
Sampling of Granular Activated Carbon	

Alex Lopez

Email: None

Compton Office Phone: 310 885-4555 Company Cell: 323 359-0496 Number of years of experience: 6 years

Current position: Field Tech

Duties include Class A Simi Truck Driver, Pneumatic Tanker Tech, Vacuum Tech, Caustic Disinfection, AWWA C653 Disinfection, and Forklift Operator.

1. The Experience in this position is as follows: Operation all company vacuum systems, Pneumatic Operations, AWWA C653 Disinfection and Caustic Wash Disinfection of Filter.

Specific Skills include:

Pneumatic Tanker Operations	Sampling of Granular Activated Carbon
Forklift Equipment operations	Caustic Wash Filter Disinfection
Vacuum System Operations	AWWA C653 Trained
HAZWOP 40 Certified	Confined Space Trained

Ennis Lowe

Email: None

Compton Office Phone: 310 885-4555 Company Cell: n/a Number of years of experience: 2.5 years

Current position: Field Tech

Duties include Vacuum Tech, Forklifts, Caustic Disinfection, AWWA C653 Disinfection, and Change out Specialist.

1. The Experience in this position is as follows: Operation all company vacuum systems, assisted in Pneumatic Operations, AWWA C653 Disinfection and Caustic Wash of Filter systems.

Specific Skills include:

Forklift Equipment operations	Caustic Wash Filter Disinfection
Vacuum System Operations	AWWA C653 Trained
HAZWOP 40 Certified	Confined Space Trained
Sampling of Granular Activated Carbon	

Christian Castillo

Email: None

Compton Office Phone: 310 885-4555 Company Cell: n/a Number of years of experience: 1.5 years

Current position: Field Tech

Duties include Vacuum Tech, Forklifts, Caustic Disinfection, AWWA C653 Disinfection, and Change out Specialist.

1. The Experience in this position is as follows: Operation all company vacuum systems and assisted in Pneumatic Operations.

Specific Skills include:

Forklift Equipment operations	Caustic Wash Filter Disinfection
Vacuum System Operations	AWWA C653 Trained
HAZWOP 40 Certified	Confined Space Trained

Luis Castillo

Email: None

Compton Office Phone: 310 885-4555 Company Cell: n/a Number of years of experience: 2 years

Current position: Field Tech

Duties include Vacuum Tech, Forklifts, Caustic Disinfection, AWWA C653 Disinfection, and Change out Specialist.

1. The Experience in this position is as follows: Operation all company vacuum systems and assisted in Pneumatic Operations.

Specific Skills include:

Forklift Equipment operations	HAZWOP 40 Certified
Vacuum System Operations	Confined Space Trained