

PERFORMANCE WORK STATEMENT

**FAFB GAC O&M –EMERGENCY REPAIR CONTRACT (RW-296 and RW-20)
FAIRCHILD AIR FORCE BASE, SPOKANE, WA**

~~18 NOV~~
~~Revised 2 DEC 2022~~

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PERFORMANCE WORK STATEMENT (PWS)

ENVIRONMENTAL REMEDIATION PROGRAM SERVICES FAIRCHILD AIR FORCE BASE PFAS GAC SYSTEM O&M,

PART 1 GENERAL INFORMATION

- 1 **GENERAL INFORMATION:** This is a non-personal services Firm-Fixed Price Purchase Order to provide Services at Fairchild Air Force Base (FAFB), Spokane, Washington. The Government shall not exercise any supervision or control over the contract service providers performing the services herein.
 - 1.1 **Description of Services/Introduction:** The Contractor shall provide all personnel, equipment, supplies, facilities, transportation, tools, materials, supervision, and other items and non-personal services necessary to perform Environmental Remediation Services at FAFB as defined in this Performance Work Statement (PWS). The Contractor shall perform to the standards in this contract. This is a performance based contract; the success of the Contractor's performance is detailed in Attachment 1, Performance Requirements Summary. Approval of work and/or deliverables involves review and acceptance or concurrence from Air Force Civil Engineer Center and U.S. Army Corps of Engineers representatives, applicable regulatory authorities, and/or other project stakeholders as deemed appropriate by the Government.
 - 1.2 **Background:** Fairchild AFB is located in northeastern Washington, approximately 12 miles west of Spokane, in Spokane County, and encompasses approximately 4,300 acres. The installation is comprised of one major runway supported by numerous taxiways and support facilities, a medical clinic, housing units, and an elementary school. The City of Airway Heights lies northeast of Fairchild AFB. The Airway Heights water system serves 1,572 customers with a service population of approximately 8,425.

On previous contracts, residential Granular Activated Carbon (GAC) treatment systems have been installed and are maintained at houses impacted by per-and polyfluoroalkyl substances (PFAS) contaminants Perfluorooctane sulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) above the Health Advisory Level (HA) to ensure residential drinking water following GAC treatment is below the HA. A separate contract currently provides maintenance of the residential GAC systems, but does not include broader piping maintenance support that extends beyond the GAC system needed to address any impacts of the GAC system installation on the broader residential piping system.

RW-296: The residence associated with RW-296 (1704 N Huntington Spokane, 99224) has noticed a significant reduction in water flow following recent GAC system installation. AF received a call from RW-296 stating that since their filtration system hookup (8/11/2022), the home has been experiencing low flow issues and has found sediment /sand in numerous appliances/faucets. This contract will replace all piping, faucets and appliances to repair flow for frost free hydrants (FFH), spigots and faucets. The contract will also service the pressure tank, install water softener in house or existing GAC shed and provide vouchers for resident to stay in a hotel during days where service will be interrupted.

RW-X(TBD) – Optional:

~~There are a number of new GAC systems getting installed over the coming months under a separate contract. The subject contract shall provide capacity for replacement of additional water lines, faucets, FFHs and water related appliances for one additional house (similar in scope to RW-296 above) as an option in case similar low flow emergency conditions occurs within the Period of Performance.~~

RW-20: A residence associated with RW-20 identified a broken water line (post GAC system) which need repaired with the utmost urgency. The water line leak is estimated to be located in the backyard of the residence (~~14728~~14725 West Thorpe Road, Medical Lake, 99022). Currently this issue is preventing clean water access to the house. Under this contract the water line post-GAC system, shall be investigated and repairs to the pipeline made upstream of the house as needed to ensure drinking water is restored to the residence. If the water line is replaced, and sufficient hot and cold water flow is not restored, then all water

lines and water related appliance shall be replaced inside the home, similar to the scope of RW-296. RW-20 is a 1.5 story house (0.5 is loft space) with a basement. The home was built in 1916, and is 1728 sq ft.

A plumber was hired by the Air Force during the week of 29 August 2022 to examine the pipes at two other residences that had previously experienced similar low flow associated with GAC system installation. The plumber hypothesized that low flow is due to calcium buildup within the pipes. The specific cause of the significant low flow issues for each house following GAC system installation has not been decisively determined but evidence suggests that the low water may be caused from calcium buildup or sediment on the walls of the pipe that was dislodged/released when the water lines were cut for GAC system installation and now broken pieces of this calcium buildup and/or sediment are likely obstructing the flow somewhere beyond the GAC system tie-in.

This contract is intended to address those issues needing immediate attention for the two identified residence at RW-296 and RW-20 ~~and one optional third residence~~ to ensure required flow and pressure is returned to all outlets as soon as possible. ~~The optional third residence will be referred to as RW-X.~~

Anticipated actions to be taken at both RW-296 ~~and RW-X (Optional)~~ are summarized below:

1. **Root Cause Assessment** - Complete pre-inspection of each residence to confirm root cause of low flow and determine actions needed to fix low flow/pressure issues.
2. **Intrusive Work Plan** - Complete pre-coordination activities with AF/residents on plan for any intrusive work occurring inside the residence and throughout property. Develop a written plan to be signed by AF/resident/contractor prior to construction work defining what actions will be taken and using what related materials/faucets/finishes to bring residence's home floors, walls, ceilings, faucets and yard back to equivalent pre-construction conditions.
3. **Replace water lines and fixtures, restore impacted floors, walls, and ceilings** - Replace the main water line (well to home) and piping connections to toilets, showers/bathtubs, appliances and all faucets; including removal and subsequent repair of materials damaged to gain access to said pipes. Replace residential faucets, exterior hose bibbs and other water outlets throughout pre-manufactured [homeshome](#) (~1000 sf ~~each~~) at RW-296 ~~and RW-X (Optional)~~ to resolve low flow conditions in all house and exterior water outlets.
4. **Frost Free Hydrants and line replacement, and restoration of impacted lawn** - Replace piping and related spigot for up to seven exterior frost-free hydrants.
5. **Photo documentation** - Complete photo documentation of preexisting conditions, in-progress construction and post construction conditions.
6. **Water Softener installation** - Install a water softener on the main water lines downstream of the GAC system to help reduce future sediment and calcium buildup at each residence.
7. **Pressure Tank Maintenance** - Provide a pressure tank maintenance check to ensure the tank is functioning as intended. Complete any anticipated GAC related issues if possible or replace the unit if repair is not feasible.
8. **Hot Water Heater Replacement** - Replace hot water heater at each residence.

1.3 **Objectives:** The Government will rely on the Contractor's expertise in recognizing and addressing problematic issues and successful execution of this contract. The Contractor shall perform all work in accordance with federal, state, and local statutes and regulations. Remedies shall conform to environmental permits, decision document requirements, and other legal requirements. Requirements include efficient management of this contract including, but not limited to, the submission of accurate, on-time, quality contract deliverables and timely identification and solution of impediments to successful project execution. Technical requirements include, but are not limited to, early involvement in the process to allow for the development of the most cost-effective and technically sound approach or solution.

1.4 **Scope:** The type of services to be provided include: the full range of methods, technologies, and supporting activities necessary to assess and replace the main water line (well to home) and piping connections to toilets, bathtubs/showers, appliances, faucets, and exterior frost free hydrants; including removal and subsequent repair of materials damaged to gain access to said pipes. This will include replacing residential faucets, exterior hose bibbs and other water outlets throughout pre-manufactured [homeshome](#) (~1000 sf) to resolve low flow

conditions in all house and exterior water outlets to impacted residences in the vicinity of Fairchild Air Force Base (FAFB), Washington (WA) in accordance with technical and regulatory requirements as addressed herein.

1.5 Period of Performance: The work is needed to be completed as soon as possible. The period of performance shall be for a period of 12 months.

1.6 General Information:

1.6.1 Quality Control: The Contractor shall develop and maintain an effective quality control program to ensure services are performed in accordance with this PWS. The Contractor shall develop and implement procedures to identify, prevent, and ensure non-recurrence of defective services. The Contractor's quality control program is the means by which he assures himself that his work complies with the requirement of the contract. The Contractor shall prepare and submit a written Contractor's Quality Control Plan (CQCP) for the provision of environmental remediation services pursuant to this PWS. The CQCP should describe the process by which the Contractor will provide technical writing, review and editing of technical documents prior to submitting to the Government. The CQCP shall be submitted as part of an overall Project Management Plan (PMP) that describes the Contractor's plan to implement the work required in this PWS. The PMP shall be submitted as detailed in Part 5, Specific Tasks, of this PWS. After acceptance of the quality control plan, the Contractor shall receive the Contracting Officer's acceptance in writing of any proposed change to his QC system.

1.6.2 Quality Assurance: The Government shall evaluate the Contractor's performance under this Purchase Order in accordance with the Quality Assurance Surveillance Plan (QASP). This plan is primarily focused on what the Government must do to ensure that the Contractor has performed in accordance with the performance standards. It defines how the performance standards will be applied, the frequency of surveillance, and the minimum acceptable defect rate(s).

1.6.3 Recognized Holidays: Unless specified otherwise in this PWS, the Contractor is not required to perform services on the following recognized holidays. The Contractor If the Contractor wants to work holidays prior arrangements must be made with the AFCEC through the Contracting Officer's Representative (COR), and final approval by the Contracting Officer (KO).

New Year's Day	Labor Day
Martin Luther King Jr.'s Birthday	Columbus Day
President's Day	Veteran's Day
Memorial Day	Thanksgiving Day
Juneteenth Day	Christmas Day
Independence Day	

1.6.4 Hours of Operation: The Contractor is responsible for conducting business, between the hours of 0730 and 1630 PT Monday thru Friday except Federal holidays or when the Government facility is closed due to local or national emergencies, administrative closings, or similar Government directed facility closings. The Contractor can negotiate with the individual homeowners but work shall not start earlier than 0700 and work shall be completed by 2200 PT to comply with Washington State quiet hours. If the Contractor wants to work an alternative work schedule, prior arrangements must be made with the COR, and with the approval of the KO. The Contractor must at all times maintain an adequate workforce for a timely completion of all tasks within this PWS. When hiring personnel, the Contractor shall keep in mind that the stability and continuity of the workforce are essential.

1.6.5 Place of Performance: The work to be performed under this Purchase Order will be performed near FAFB, Spokane, WA as further detailed in Part 5, Specific Tasks, of this PWS.

1.6.6 Type of Contract: The Government will award a firm-fixed price Purchase Order for this requirement.

1.6.7 Security Requirements:

a. Employee Identification Requirements. The Contractor shall be responsible for furnishing an identification badge/card to each employee prior to the employee's work on site, and for requiring each employee engaged on the work to display identification. It is acceptable for employees performing construction activities to have an identification badge available to show upon request rather than one on display. The Contractor shall verify that identification credentials presented by all Contractor and subcontractor employees to obtain security badges, passes, cards, or decals used during the duration of this contract are current and correct. As a minimum, verification should be conducted with the Social Security Administration (<http://www.ssa.gov/employer/ssnv.htm>), the FBI Criminal Justice Information Services, Identification & Investigative Services Section (304-625-5590) and the Form I-9 Employment Eligibility Verification (<http://www.uscis.gov/portal/site/uscis>).

b. All Contractor employees (U.S. citizens and Non- U.S. citizens) working under this contract who require access to Automated Information Systems (AIS), (stand alone computers, network computers/systems, e-mail) shall, at a minimum, be designated into an Information Technology (IT)-III position (non-sensitive) in accordance with DoD 5220-22-R, Industrial Security Regulation. The investigative requirements for an IT-III position are a favorable National Agency Check with Inquiries (NACI), SF-85. The Contractor shall have each applicable employee complete an SF-85 using PSIP and submit the Questionnaire to the Security Office within three (3) working days after award of any contract, and shall be submitted prior to the individual being permitted access to an AIS. Contractors that have a commercial or government entity (CAGE) Code and Facility Security Clearance through the Defense Security Service shall process the NACIs and forward visit requests/results of NACI to the US Army Corps of Engineers, Seattle District, ATTN: District Security Office, 4735 E. Marginal Way South, Seattle, WA 98134. For those contractors that do not have a CAGE Code or Facility Security Clearance, the Seattle District Security Office will process the investigation in coordination with the Contractor and contract employees.

c. In addition to the requirements in paragraphs a-c, in accordance with Engineering Regulation, ER 380-1-18, Section 4, foreign nationals who work on Corps of Engineers' contracts shall be approved by the HQUSACE Foreign Disclosure Officer or higher before beginning work on the contract. This regulation includes subcontractor employees. (NOTE: exceptions to the above requirement include foreign nationals who perform janitorial and/or ground maintenance services). The Contractor shall submit to the District Contract Office, the names of all foreign nationals proposed for performance under this contract, along with documentation to verify that he/she was legally admitted into the United States and has authority to work and/or go to school in the US. Such documentation may include a US passport, Certificate of US citizenship (INS Form N-560 or N-561), Certificate of Naturalization (INS Form N-550 or N-570), foreign passport with I-551 stamp or attached INS Form I-94 indicating employment authorization, Alien Registration Receipt Card with photograph (INS Form I-151 or I-551), Temporary Resident Card (INS Form I-688), Employment Authorization Card (INS Form I-688A), Reentry Permit (INS Form I-327), Refugee Travel Document (INS Form I-571), Employment Authorization Document issued by the INS which contains a photograph (INS Form I-688B).

1.6.7.1 Physical Security: The Contractor shall be responsible for safeguarding all government equipment, information and property provided for Contractor use. At the close of each work period, government facilities, equipment, and materials shall be secured.

1.6.7.1.1.1 The Contractor shall be responsible for protecting the lives and health of employees and other persons on the work site; preventing damage to property, materials, supplies, and equipment; avoiding work interruptions; and complying with Occupational Safety and Health Administration (OSHA) regulations and installation safety office requirements. The Contractor shall perform all operations in a prudent, conscientious, safe and professional manner and conform to the safety requirements contained in the contract. The Contractor shall maintain training records and have written Health and Safety Plans (HSP) available for workers and/or regulatory review. The Contractor shall provide the

Contracting Officer (KO) copies of any OSHA report(s) regarding a project site, submitted during the duration of this purchase order.

- 1.6.7.1.1.2 In the event of an accident/mishap resulting in death, injury, or occupational disease, the Contractor shall immediately contact appropriate emergency personnel (DIAL 911 for emergency response), take reasonable and prudent action to establish control of the accident/mishap scene, and prevent further damage to persons or property and preserve evidence. The Contractor shall record and report promptly (within 1 hour) by telephone to the KO, the COR, the installation POC, and to the military's installation's Safety Office all available facts relating to damage to government property or injury to personnel. If the government elects to conduct an investigation of the accident/mishap, the Contractor shall cooperate fully and assist government personnel in the conduct of an investigation until said investigation is completed. The Contractor agrees that his personnel and equipment are subject to safety inspections by government personnel while on federal property.
- 1.6.7.2 Fire Prevention and Protection: The Contractor and his employees shall comply with the military installation's regulations, and Air Force Occupational and Environmental Safety, Fire Prevention and Health (AFOSH) Program, as applicable. A copy of these regulations will be made available by the installation POC at the post award conference. The Contractor shall coordinate with the base fire department for hot permits (for welding or open flame operations), as required.
- 1.6.7.3 Work-Site Maintenance: The Contractor shall maintain the work site to prevent the spread of contamination, provide for the safety of all individuals in the vicinity of the work site areas, and prevent the release of any contamination to the environment. The work site shall be well marked to prevent inadvertent entry into all work areas. Access to work areas shall be monitored and thoroughly controlled. Standard work zones and access points for controlled operations shall be established and maintained as the site conditions warrant. The Contractor shall ensure compliance with any federal, state, and local regulations and QA/QC protocols and procedures for decontaminating tools, equipment, or other materials, as required. The Contractor shall keep the work area free from accumulation of waste and non-essential hazardous materials. The Contractor shall remove non-essential equipment from the work site when not in use. The work site shall be maintained to present an orderly appearance and to maximize work efficiency. Before completing the work at each work location, the Contractor shall remove from the work premises any rubbish, tools, equipment, and materials that are not the property of the government. The Contractor shall properly dispose of all construction debris, investigation derived waste, and other waste(s). Upon completing the work, the Contractor shall leave the area clean, neat, orderly, and return the work site(s) to the original condition. [Dirt, mud, water, etc. brought into the house must be cleaned up after every workday. Booties must be worn weather dependent.](#)
- 1.6.7.4 Geographical Information System: The Contractor shall use Global Positioning System (GPS) at all field locations to mark all points of the field investigation. GPS data will be recorded in a format compatible with the installation's Geographical Information System (GIS). The Contractor shall coordinate all field survey operations with installation personnel and USACE PM and COR to attain these objectives. The Contractor shall provide for the detection of underground utilities utilizing geophysical or other techniques. All necessary permits and coordination shall be completed prior to commencement of individual sampling operations. Frequent communication and coordination with the Government shall be necessary to accomplish these goals.
- 1.6.7.5 Storage: The Contractor shall be responsible for security and weatherproofing of stored material and equipment. Equipment or materials used in the work, requiring storage on the installation, shall be placed at site(s) designated by the installation POC. At the completion of the work, the Contractor shall remove all temporary fences and structures (used to protect materials and equipment) from the installation unless otherwise directed by the CO. The Contractor shall clean the storage area of all debris and material and perform repairs as required to return the site to its pre-project condition. The Contractor shall be responsible for safeguarding all government property provided for Contractor use. The Contractor shall maintain an inventory of government property, a copy of government property control procedures at the site, and dispose of government property as directed by the COR. All hazardous materials shall be

handled, stored, labeled, and transferred in accordance with Resource Conservation and Recovery Act (RCRA) and OSHA regulations.

- 1.6.7.6 Key Control: The Contractor shall establish and implement methods of making sure all keys/key cards issued to the Contractor by the Government are not lost or misplaced and are not used by unauthorized persons. NOTE: All references to keys include key cards. No keys issued to the Contractor by the Government shall be duplicated. The Contractor shall develop procedures covering key control that shall be included in the Quality Control Plan. Such procedures shall include turn-in of any issued keys by personnel who no longer require access to locked areas. The Contractor shall immediately report any occurrences of lost or duplicate keys/key cards to the Contracting Officer.
 - 1.6.7.6.1.1 In the event keys, other than master keys, are lost or duplicated, the Contractor shall, upon direction of the Contracting Officer, re-key or replace the affected lock or locks; however, the Government, at its option, may replace the affected lock or locks or perform re-keying. When the replacement of locks or re-keying is performed by the Government, the total cost of re-keying or the replacement of the lock or locks shall be deducted from the monthly payment due the Contractor. In the event a master key is lost or duplicated, all locks and keys for that system shall be replaced by the Government and the total cost deducted from the monthly payment due the Contractor.
 - 1.6.7.6.1.2 The Contractor shall prohibit the use of Government issued keys/key cards by any persons other than the Contractor's employees. The Contractor shall prohibit the opening of locked areas by Contractor employees to permit entrance of persons other than Contractor employees engaged in the performance of assigned work in those areas, or personnel authorized entrance by the Contracting Officer.
- 1.6.7.7 Lock Combinations: The Contractor shall establish and implement methods of ensuring that all lock combinations are not revealed to unauthorized persons. The Contractor shall ensure that lock combinations are changed when personnel having access to the combinations no longer have a need to know such combinations. These procedures shall be included in the Contractor's Quality Control Plan.
- 1.6.8 Special Qualifications: Special qualifications for Contractor employees are outlined in Section 1.6.11, Key Personnel and in Part 5, Specific Tasks, as required.
- 1.6.9 Post Award Conference/Periodic Progress Meetings: The Contractor agrees to attend any post award conference convened by the contracting activity or contract administration office in accordance with Federal Acquisition Regulation Subpart 42.5. The KO, COR, and other Government personnel, as appropriate, may meet periodically with the Contractor to review the Contractor's performance. At these meetings the contracting officer will apprise the Contractor of how the government views the Contractor's performance and the Contractor will apprise the Government of problems, if any, being experienced. Appropriate action shall be taken to resolve outstanding issues. These meetings shall be at no additional cost to the government.
- 1.6.10 Contracting Officer Representative (COR): The COR will be identified by separate letter. The COR monitors all technical aspects of the contract and assists in contract administration. The COR is authorized to perform the following functions: assure that the Contractor performs the technical requirements of the contract: perform inspections necessary in connection with contract performance: maintain written and oral communications with the Contractor concerning technical aspects of the contract: issue written interpretations of technical requirements, including Government drawings, designs, specifications: monitor Contractor's performance and notifies both the Contracting Officer and Contractor of any deficiencies: coordinate availability of government furnished property, and provide site entry of Contractor personnel. A letter of designation issued to the COR, a copy of which is sent to the Contractor, states the responsibilities and limitations of the COR, especially with regard to changes in cost or price, estimates or changes in delivery dates. The COR is not authorized to change any of the terms and conditions of the resulting order.

- 1.6.11 Key Personnel: The following personnel are considered key personnel by the Government: Project Manager and Alternate, Process Engineer, and a licensed, bonded Plumber. The Contractor shall provide a Project Manager who shall be responsible for the performance of the work. The name of this person and an alternate who shall act for the Contractor when the manager is absent shall be designated in writing to the Contracting Officer. The Project Manager or alternate shall have full authority to act for the Contractor on all contract matters relating to daily operation of this contract. The Project Manager or alternate shall be available either on-site or via telephone/email between 0730 to 1630 PT, Monday thru Friday except Federal holidays or when the government facility is closed for administrative reasons.
- 1.6.11.1 Organizational Chart. The Contractor shall submit an organizational chart displaying key and other personnel involved in the effort. The Contractor shall immediately notify the KO and COR, in writing or email, of any changes to Contractor personnel. The Contractor shall obtain KO and COR approval of any proposed changes to key personnel along with the steps taken/proposed to ensure there are no impacts to the schedule or costs associated with individual tasks. The Contractor shall identify to the KO and COR all subcontractors to be used pursuant to this PWS and shall provide subcontractor qualifications to the KO and COR prior to subcontractor utilization.
- 1.6.12 Identification of Contractor Employees: All contract personnel attending meetings, answering Government telephones, and working in other situations where their contractor status is not obvious to third parties are required to identify themselves as such to avoid creating an impression in the minds of members of the public that they are Government officials. They must also ensure that all documents or reports produced by contractors are suitably marked as contractor products or that contractor participation is appropriately disclosed.
- 1.6.13 Contractor Travel: The Contractor will be required to travel to Spokane, WA during the performance of this Purchase Order to meet the requirements of this PWS. Other Direct Costs: NOT APPLICABLE.
- 1.7 Payment: The Contractor shall invoice the Government on a monthly basis. The invoice, including supporting documentation for work performed, a monthly activity report, and a summary table of expenditures broken into contract items, shall be submitted no later than 30 days following the end of each fiscal calendar month.

Original invoices: Department of the Army
Army Corps of Engineers Finance Center
ATTN: CEFC-AO-P
5720 Integrity Drive
Millington, TN 38054-5005

Copies of invoices: Seattle District, U.S. Army Corps of Engineers
ATTN: CENWS- PMM: Karah Haskins
4735 East Marginal Way South
Building 1202
Seattle, WA 98134-2385

1.8 Administrative Requirements:

- 1.8.1 Regulatory Interface. The Contractor shall assist in the application of general and site-specific regulatory requirements that pertain to assigned AFCEC projects and maintain currency with changing DoD regulations and federal, state, and local statutes and regulations. The Contractor shall complete project requirements in accordance with the following identified regulations:
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
 - Model Toxics Control Act, Revised Nov 2007
 - Washington Administrative Code 246-290
- 1.8.1.1 The Contractor is not an employee of the government and shall not represent the government in an official or unofficial capacity without the express prior written permission from the KO. In the event that

any regulatory representative approaches the Contractor with a stated intent to inspect the activities of the Contractor without the previous direction of the KO, the Contractor shall respectfully decline the inspection until the KO is properly notified and a duly appointed Contracting Officer Representative (COR) is present or other direction is issued by the KO. If this is not possible, due to project constraints, the Contractor shall notify the KO, COR, and base point of contact (POC) at the earliest possible time following the inspection.

- 1.8.2 Coordination with Private Residential Well Owners and Occupants. The Contractor shall make an effort to minimize additional impacts and inconveniences for the residences. The Contractor shall facilitate communication with private residential well owners and occupants by maintaining a phone number for contacting the Contractor with issues/concerns/problems related to services provided by the Contractor. The Contractor shall check for notifications at least every hour during normal hours of operation and at least every four hours on weekends and holidays. The Contractor shall respond to notifications within one business day for routine concerns and immediately for emergencies (water outage, electrical problems, , etc). The Contractor shall conspicuously place the phone number with notice of its purpose within the active work area. These requirements apply until all construction and restoration activities are complete and the contractor has completely demobilized from the site. [The Contractor shall provide the resident with a phone number for emergencies including no water flow after Contractor has left the site for the day.](#)
- 1.8.3 Coordination with Other Contractors. The Contractor shall cooperate fully with other contractors and government employees. The Contractor shall not commit any act that will interfere with the performance of work by any other contractor or government employee. The KO will resolve work schedule conflicts between this contract and other contracts. The KO will provide written direction to the Contractor to reschedule work when required.
- 1.8.4 Government Points of Contact. Points of contact for this project will be provided under separate cover. Until written COR delegation is received, all correspondence and communication shall be to and through the KO.
- 1.8.5 Training. The Contractor is responsible for the proper and timely training and certification of Contractor personnel to perform their jobs in accordance with all applicable legal, regulatory, and compliance requirements.
- 1.8.6 Compliance with regulations. The Contractor shall identify applicable federal, state and local laws and regulations; applicable Installation-specific orders, agreements, or rules; and perform its work in accordance with said authorities. The Contractor shall ensure that all activities performed by its personnel, subcontractors and suppliers are executed in accordance with said authorities. Any incident of noncompliance noted by the Contractor shall immediately be brought to the attention of the COR and Installation telephonically and then by written notice. Nothing in this contract shall relieve the Contractor of its responsibility to comply with applicable laws and regulations. The Contractor shall obtain all permits, licenses, approvals, and/or certificates required or necessary to accomplish the work. The Contractor shall comply with all Installation- or site-specific time and procedural requirements (federal, state, and local) described in the permits obtained. The Installation Technical POCs will also independently review Contractor work to ensure compliance with all applicable requirements. Any work left in place shall comply with local building codes.
- 1.8.7 Warranty. The Contractor shall warranty all work for one year following inspection and acceptance by the Government. Notwithstanding inspection and acceptance by the Government or any provision concerning the conclusiveness thereof, the Contractor warrants that all services performed under this contract will, at the time of acceptance, be free from defects in workmanship and conform to the requirements of this contract. The Contracting Officer shall give written notice of any defect or nonconformance to the Contractor. If revegetation associated with lawn restoration activities is unsuccessful due to watering deficiencies by the home owner, the contractor will not be held responsible for regrowth of grass or other vegetation as long as original work completion was accepted.

- 1.8.8 Environmental Management System. The Contractor shall review and fully understand "Executive Order 13693 – Planning for Federal Sustainability in the Next Decade," in particular those requirements pertaining to environmental management system (EMS). The Contractor shall also be required to review and adhere to the installation's EMS, including the environmental policy and significant aspects / impacts.
- 1.8.8.1 The Contractor shall consider and implement green response/remediation strategies and applications to maximize sustainability, reduce energy and water usage, promote carbon neutrality, promote industrial materials reuse and recycling, and protect and preserve land resources, consistent with DOD's Policy on Consideration of Green and Sustainable Remediation Practices in the Defense Environmental Restoration Program. The Contractor shall present green remediation options and approaches in its work plans, maintain records of "green-related" activities, and report this information to the COR, PM, and the installation in project status reports.
- 1.8.9 Integrating Antiterrorism (AT) and Operations Security (OPSEC) Requirements
- 1.8.9.1 Identify and reporting suspicious activity through See Something, Say Something. All Contractor employees, to include subcontractor employees, requiring access to Army installations, facilities, controlled access areas, or require network access, shall view the video at the following link: <https://www.dhs.gov/see-something-say-something/seesay-day>.
- 1.8.9.2 Access and General Protection/Security Policy and Procedures. All Contractor and all associated subcontractors employees shall comply with applicable installation, facility and area commander installation/facility access and local security policies and procedures (provided by government representative). Contractor workforce must comply with all personal identity verification requirements (FAR clause 52.204-9, Personal Identity Verification of Contractor Personnel) as directed by DOD, HQDA and/or local policy. In addition to the changes otherwise authorized by the changes clause of this contract, should the Force Protection Condition (FPCON) at any installation or facility change, the Government may require changes in contractor security matters or processes.
- 1.8.9.3 Pre-screen Candidates Using E-Verify Program. The Contractor must pre-screen Candidates using the E-verify Program (<http://www.dhs.gov/E-Verify>) website to meet the established employment eligibility requirements. The Vendor must ensure that the Candidate has two valid forms of Government issued identification prior to ensure the correct information is entered into the E-verify system. An initial list of verified/eligible Candidates must be provided to the COR no later than 3 calendar days after the initial contract award.
- 1.9 Special Notifications:
- 1.9.1 Health Risks. The Contractor shall immediately report to the KO and COR and the AFCEC POC, using telephone or e-mail notification, as specified in this TO, any issues or incidents which may indicate potential imminent risk to contracted, federal, or local personnel, the public at large, or the environment. Following the verbal or e-mail notification, a written notice with supporting documentation, to include photographic documentation whenever appropriate, shall be prepared and delivered within three (3) working days to the KO. Upon request of the KO, or the COR, the Contractor shall provide pertinent raw laboratory data immediately (not to exceed two [2] weeks) via e-mail or tele-facsimile, and then provide final results and laboratory quality data as soon as possible.
- 1.9.2 Identification and Change of Critical Contractor Personnel. The Contractor shall submit an organizational chart displaying key personnel involved in the effort and their respective labor categories. The Contractor shall immediately notify the COR and USACE PM, in writing or email, of any changes in critical Contractor personnel. The Contractor shall obtain KO and COR approval of any proposed changes in project personnel along with the steps taken/proposed to ensure there are no impacts to the schedule or costs associated with individual tasks. The Contractor shall identify to the KO and COR all subcontractors to be used under this contract, issued pursuant to this PWS, prior to signing any subcontract or initiating

any work. The Contractor shall provide subcontractor qualifications to the KO and COR prior to subcontractor utilization.

- 1.10 Permits: The Contractor shall be responsible for obtaining any necessary permits and/or permit modification applicable to the performance and completion of the work without additional expense to the Government. Where the permits requires Air Force signature, this shall be coordinated in advance with the COR or KO. The Contractor shall maintain a library of these documents at the Contractor's work site office. The Contractor shall comply with all applicable permit conditions.

PART 2 DEFINITIONS & ACRONYMS

2 DEFINITIONS AND ACRONYMS:

2.1 DEFINITIONS:

- 2.1.1 **ACTIVITY-BASED SCHEDULE.** Activities and milestones defined at the detail level and logically sequenced to support, and manage completion of the performance objectives.
- 2.1.2 **CONTRACTOR.** A supplier or vendor awarded a contract to provide specific supplies or service to the government. The term used in this contract refers to the prime.
- 2.1.3 **CONTRACTING OFFICER (KO).** A person with authority to enter into, administer, and or terminate contracts, and make related determinations and findings on behalf of the government. Note: The only individual who can legally bind the government.
- 2.1.4 **CONTRACTING OFFICER'S REPRESENTATIVE (COR).** An employee of the U.S. Government appointed by the contracting officer to administer the contract. Such appointment shall be in writing and shall state the scope of authority and limitations. This individual has authority to provide technical direction to the Contractor as long as that direction is within the scope of the contract, does not constitute a change, and has no funding implications. This individual does NOT have authority to change the terms and conditions of the contract.
- 2.1.5 **CONTRACTOR'S PROJECT COSTS.** Costs incurred by the Contractor (including costs covered by insurance and the PMP) in executing the work required to achieve the performance objectives identified in the PWS for all sites identified in this contract.
- 2.1.6 **DEFECTIVE SERVICE.** A service output that does not meet the standard of performance associated with the Performance Work Statement.
- 2.1.7 **DELIVERABLE.** Anything that can be physically delivered, but may include non-manufactured things such as meeting minutes or reports. Documentation or data that support the completion of milestones or achievement of the performance objectives identified in this PWS.
- 2.1.8 **GOVERNMENT-FURNISHED PROPERTY (GFP).** Property in the possession of the Government made available to the Contractor to use on this purchase order.
- 2.1.9 **KEY PERSONNEL.** Contractor personnel that are evaluated in a source selection process and that may be required to be used in the performance of a contract by the Key Personnel listed in the PWS. When key personnel are used as an evaluation factor in best value procurement, an offer can be rejected if it does not have a firm commitment from the persons that are listed in the proposal.
- 2.1.10 **MILESTONES.** Significant events or activities that occur in the course of the Contractor achieving the performance objectives identified in this PWS.
- 2.1.11 **PHYSICAL SECURITY.** Actions that prevent the loss or damage of Government property.
- 2.1.12 **PROJECT MANAGEMENT PLAN documents.** The original PMP (including project schedule), revisions, and status reports.
- 2.1.13 **PROJECT-RELATED INFORMATION.** Includes all previous environmental restoration documentation of a technical nature developed by the Air Force and previous Air Force Contractors for the sites specified in this PWS, and all the documentation developed by the Contractor in order to achieve the performance objectives specified in this PWS.

- 2.1.14 **QUALITY ASSURANCE.** The government procedures to verify that services being performed by the Contractor are performed according to acceptable standards.
- 2.1.15 **QUALITY ASSURANCE SURVEILLANCE PLAN (QASP).** An organized written document specifying the surveillance methodology to be used for surveillance of Contractor performance.
- 2.1.16 **QUALITY CONTROL.** All necessary measures taken by the Contractor to assure that the quality of an end product or service shall meet contract requirements.
- 2.1.17 **SUBCONTRACTOR.** One that enters into a contract with a prime contractor. The Government does not have privity of contract with the subcontractor.
- 2.1.18 **WORK DAY.** The number of hours per day the Contractor provides services in accordance with the contract.
- 2.1.19 **WORKING DAY (OR BUSINESS DAY).** Monday thru Friday except Federal holidays (as specified in Section 1.6.3) or when the Government facility is closed due to local or national emergencies, administrative closings, or similar Government directed facility closings.
- 2.1.20 **WORK WEEK.** Monday through Friday, unless specified otherwise.

2.2 ACRONYMS:

AFCEC	Air Force Civil Engineering Center
AF	Air Force
AFB	Air Force Base
AIS	Automated Information System
AR	Army Regulation
AFFF	Aqueous film forming foam
APP	Accident Prevention Plan
AT	Antiterrorism
ATCTS	Army Training Certification Tracking System
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CLIN	Contract Line Item Number
CMI(O)	Corrective Measures Implementation (Operations)
CMR	Contractor Management Reporting
CMS	Corrective Measures Study
CONUS	Continental United States
COR	Contracting Officer Representative
COTR	Contracting Officer's Technical Representative
CPAR	Contractor Performance Assessment Report
CSDGM	Content Standard for Digital Geospatial Metadata
DERP	Defense Environmental Restoration Program
DFARS	Defense Federal Acquisition Regulation Supplement
DID	Data Item Description
DOD	Department of Defense
EIM	Environmental Information Management
ELAP	Environmental Laboratory Accreditation Program
EM	Engineer Manual
EMS	environmental management system
EO	Executive Order
FAFB	Fairchild Air Force Base
FPCON	Force Protection Condition
FSC	Federal Service Code
GAC	Granular Activated Carbon
GFP	Government-furnished property
GIS	geographic information system
GWM	groundwater monitoring
HA	Health Advisory
HIPAA	Health Insurance Portability and Accountability Act of 1996
HSP	Health and Safety Plans
HQAES	Headquarter Army Environmental System
IA	Information Assurance
IDW	Investigative Derived Waste
INRMP	Integrated Natural Resources Management Plan
IT	Information Technology
KO	Contracting Officer
LTM	Long-Term Management
OCI	Organizational Conflict of Interests
OEM	Original Equipment Manufacturer
OPSEC	Operations Security
O&M	Operations and maintenance
PFAS	per and poly fluoroalkyl substances
PFOS	Perfluorooctanesulfonic acid
PFOA	Perfluorooctanoic Acid

PBA	Performance-Based Acquisition
PMP	Project Management Plan
POC	Point of Contact
POP	Period of Performance
PPE	Personal Protective Equipment
PRS	Performance Requirements Summary
PSIP	Personnel Security Investigation Portal
PWS	Performance Work Statement
QA	Quality Assurance
QAP	Quality Assurance Program
QASP	Quality Assurance Surveillance Plan
QC	Quality Control
QCP	Quality Control Plan
QSM	Quality Systems Manual
RCRA	Resource Conservation and Recovery Act
SSHP	Site Safety and Health Plan
TP	Technical Paper
UIC	Unit Identification Code
USACE	U.S. Army Corps of Engineers
USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
WAC	Washington Administrative Code

PART 3 GOVERNMENT FURNISHED PROPERTY, EQUIPMENT, AND SERVICES

3 GOVERNMENT FURNISHED ITEMS AND SERVICES:

Equipment: The existing residential treatment systems. Details on the existing residential treatment systems can be found in Attachment 3 (As-built, photographs, technical data).

Services: Government will provide rights of entry coordination with the home owners prior to private residential treatment system installation, maintenance and/or sampling.

PART 4 CONTRACTOR FURNISHED ITEMS AND SERVICES

4 **CONTRACTOR FURNISHED ITEMS AND RESPONSIBILITIES:**

- 4.1 General: The Contractor shall furnish all supplies, equipment, facilities and services required to perform work under this purchase order, as further detailed in Section 5 of this PWS and with consideration of the Government furnished items and services listed under Section 3 of this PWS.
- 4.2 Investigation Derived Waste Disposal. The Contractor is responsible for the disposal of all IDW. The Contractor shall include details for waste disposal in work plans and all sampling and analysis plan(s) developed under this purchase order.
- 4.3 Waste Disposal. Any associated waste shall be disposed of in accordance with all applicable federal statutes, Washington state laws, and DOD regulations. The Contractor shall comply with all DOD regulations for the shipment of all material, equipment, samples, and generated waste. The Contractor shall transport all waste to an approved facility for treatment and/or disposal, as applicable. Prior coordination with Fairchild AFB is required prior to waste shipment for manifesting via the USACE COR and PM. The Contractor is responsible for all necessary permits required for waste disposal, treatment, and transport. All waste disposal and treatment shall occur at a permitted location off-site of Fairchild AFB. Any waste generated held temporarily shall be stored in a secure manner ensuring no environmental release or human exposure occurs and shall comply with all DOD regulations for temporary waste storage.

PART 5 SPECIFIC REQUIREMENTS

5 **SPECIFIC REQUIREMENTS**

Refer to Attachment 2 for a summary of deliverables and associated schedule.

5.1 Project Management, Planning, and Reporting Requirements

The Contractor shall plan project activities including the development, implementation, and maintenance of project schedules, events, status of resources, report(s) on the activities and progress toward accomplishing project objectives, and document for Government review and approval the results of the project. The costs associated with completing the following requirements should be assumed in Task 1.

5.1.1 Project Management Plan: The Contractor shall develop and maintain a detailed Project Management Plan (PMP). The PMP shall be based on the Contractor's proposal and shall specify the schedule, technical approach, and resources required for the planning, execution, and completion of the performance objectives. The PMP shall be due within three (3) days of the contract award. As a part of the PMP, the Contractor shall develop and maintain a project schedule that fully supports the technical approach and outlines the due dates for all major deliverables and milestones and integrates the Government's associated management, review, and oversight activities.

5.1.1.1 The Contractor shall include an organizational chart displaying key personnel involved in the effort and their respective labor categories.

5.1.1.2 The PMP shall include the Contractor's Quality Control Plan (CQCP) as further detailed in Section 1.6.1 of this PWS and shall include an Accident Prevention Plan/Site Safety and Health Plan (APP/SSHP) per EM 385-1-1, US Army Corps of Engineers Safety and Health Requirements Manual and Base Contract, Section C, Performance Work Statement, Section 3.5, Safety and Health. The Contractor shall achieve COR approval of the PMP to include the CQCP and APP/SSHP. The Contractor shall organize, document, prepare procedures for, and implement a management-driven system to provide maximum assurance that products and services conform to specified requirements. Products and services submitted in the performance of this contract shall be according to the American National Standard Institute (ANSI)/American Society for Quality (ASQ) standards if applicable, or Best Commercial Practice, and contract requirements. All work accomplished by the Contractor shall be of sufficient quality and level of acceptance by federal, state, and local regulators.

5.1.2 Project Kick-Off Meeting: Within three (3) working days after contract award the Contractor shall participate in on-site kick-off meetings to discuss work to be accomplished under this purchase order. It is anticipated that the meetings will occur over 2 hours. During the meetings aspects of the restoration requirements of this PWS, and preliminary plans and schedules for contractor performance shall be presented and reviewed. Project team members and Points-of-Contact (POCs), logistics and security requirements, project constraints, and other important aspects of conducting such work in accordance with AFCEC guidelines shall be discussed. The Contractor shall prepare an agenda and any relevant presentation materials and submit to the Government at least one (1) working day in advance of the scheduled meeting. The Contractor shall prepare and provide detailed meeting minutes with a list of all attendees from the kick-off meetings and submit to the Government within three (3) working days after the meeting.

5.1.3 Status Reports: The Contractor shall prepare and submit a monthly Contractor's Progress, Status, and Management Report (CPSMR) to the USACE PM and AFCEC POC. The CPSMR shall be used to review and evaluate the overall progress of the project, along with any existing or potential problem areas. The CPSMR shall include a summary of the events that occurred during the reporting period, discussion of performance, identification of problems, proposed solutions, corrective actions taken, and outstanding issues. The CPSMR shall also include project schedule status and cost information.

5.1.4 Weekly Meeting: The Contractor shall provide no less than weekly informal status updates to the USACE PM and AFCEC POC on work progress, accomplishments, issues, upcoming activities, schedule updates, and deliverable status. Meetings shall include a review of technical and/or issues, accomplishments, and

forecasts. The Contractor shall prepare and provide meeting minutes, including a list of all attendees, from progress meetings and submit to the Government within three (3) working days after the meeting. The contractor shall assume that weekly meetings will be 1 hour.

- 5.1.5 Significant Event Reporting: Significant events or issues shall be immediately reported to the USACE COR and PM and AFCEC POC by appropriate means of communication. Significant events or issues include but are not limited to: unintended residential water or GAC system shut-down, unintended water releases, resident conflicts, installation operational impacts, work coordination issues, delays or other challenges in achieving performance objectives.
- 5.1.6 Resident Coordination Involvement: Contractor shall provide coordination support for one resident meeting each. Coordination support shall include: agendas and presentation materials, coordinating meeting times, providing technical support, briefing project status and results, participating in discussions, and prepare meeting notes. The Contractor shall attend additional meetings with residents and support discussions as requested by the Government. The Contractor shall prepare and provide an email summary from additional meetings if key information is discussed during these meetings that impacts scope, schedule or budget and submit to the Government within three (3) working days after the meeting.
- 5.1.7 Recordkeeping: The Contractor shall create and maintain in one location written and electronic records sufficient to recreate each sampling, analytical, testing and monitoring event (i.e. ERPIMS Submittals). The Contractor shall make these records available to the government upon request. The Contractor shall maintain records of, and derived from, all activities outlined in the appropriate portion of the SAP or QPP supporting the generation of these sampling and analysis records. The Contractor shall also retain written calculations using information obtained from sampling, analysis monitoring and testing activities, to include all raw data.
- 5.1.8 Deliverable Requirements: Unless noted otherwise within this PWS, all reports and plans must be produced with at least draft and final versions for Government internal review. Project schedules shall allow no less than 7 calendar days for the Government to provide comments to the Contractor after receiving documents. Within 7 calendar days after receiving comments, the Contractor addresses comments and revises the document, as necessary, and provides a final version. A written response to comments shall be provided with the revised document. As appropriate, Government review of documents will involve feedback from the homeowners. The Contractor shall ensure that all technical editing is complete prior to submission of draft documents. The document will be finalized when all comments have been resolved.
 - 5.1.8.1 The Contractor shall present the planned approach for remedial action operations, groundwater monitoring plans, long term management, and remedial actions during a meeting with the Government during the draft version of a deliverable. The Contractor shall conduct a separate meeting to ensure Contractor responses to Government comments are revised on project deliverables as needed. Regularly scheduled Weekly Meetings may be used to accomplish these in-person meetings, as appropriate.
- 5.1.9 Hazardous Materials: In the event the Contractor purchases a product that meets the tracking requirements of the Emergency Planning and Community Right-to-Know Act (EPCRA), or its state or local equivalent, or any hazardous material, the Contractor shall provide the appropriate installation office and the COR with any details required by them to accomplish tracking as soon as the acquired products are brought onto a government installation.

5.2 Task Description

5.2.1 TASK 1 - Project Management, Planning, and Reporting

The requirements of this task are described above in Section 5.1.

5.2.1.1 **PMP** - Include PMP requirements as referenced in Section 5.1.1. Not including appendices, the project management plan should not exceed 10 pages.

5.2.1.2 **Root Cause Assessment** - Complete pre-inspection of each system to confirm root cause of low flow and determine actions needed to fix low flow/pressure issues. The Contractor shall summarize key findings from the Root Cause Assessment within the Intrusive Work Plan.

5.2.1.3 **Intrusive Work Plan** - Develop a written plan to be signed by AF/resident/contractor prior to construction work defining what actions will be taken, what results are required and using what related in-kind materials/faucets/finishes to bring residence's home floors, walls, ceilings, faucets and yard back to equivalent pre-construction conditions.

The Contractor shall submit a photo log demonstrating photos of pre-existing conditions. The photos will document the residential piping system and any areas where intrusive work will be done. Prior to completing intrusive work plan, the contractor will identify all items that may be damaged in the replacement of piping, fixtures and other required parts to complete the required work.

The document should also include plans for house access. The final signed restoration plan shall be signed by all parties prior to starting of intrusive work. Photos will be included in daily and weekly reports to document status throughout the process. Initial, in progress and final photos will be included in a summary report.

The Final Intrusive Work Plan shall be submitted following the Pre-Construction Visit and initial concurrence from the homeowner. The contractor shall assume separate work plans per residence.

5.2.1.4 **Pre-Construction Visit** – Prior to the Pre-Construction Visit the Contractor shall submit the Draft Intrusive Work Plan to the government for concurrence. During the pre-construction visit, the contractor will work with the resident to talk through all work that will be completed to remedy low flow issues and discuss plans for in-kind materials to include paint color, wall or floor tile, bath surrounds or other house finishing details necessary. A summary of the specific detail discussed at this meeting will be documented following the pre-construction visit, with both Contractor, resident and AF signing the document on plans to resolve any damage occurring during intrusive work. The contractor shall present the final plan agreed to by the Government and homeowner within the Intrusive Work Plan.

5.2.2 TASK 2 - Field Work

Replace water lines and fixtures- Replace the main water line (well to pre-GAC system, and post-GAC system to home) at RW-296 ~~and RW-X(Optional)-.~~

Replace the water line from the well pump to the GAC treatment system shed and from the treatment system shed to the home, including additional laterals to FFH or other features. The existing water lines below the treatment system shed will not be replaced as to not compromise the shed foundation. To ensure these lines are clear of blockages, flush the lines with clean water. The contractor shall notify USACE PM to coordinate with the GAC treatment system operator to configure the valves to bypass the system during flushing. A schematic of the GAC system is provided for each residence in Attachment 3. Ensure GAC system is not damaged during repair activities. Additionally, the contractor shall notify the USACE PM to coordinate with the treatment system operator prior to turning back on water to ensure GAC system is appropriated plumbed.

Replace residential piping connections to toilets, showers/bathtubs, appliances and faucets, exterior hose bibs and other water outlets using PEX pipe throughout the pre-manufactured home (~1000 sf each) at to resolve low flow conditions in all house and exterior water outlets.

The Contractor shall assume removing and replacing 400 LF of in-kind water supply around the property and under the house plus water lines to all fixtures. The Contractor shall assume fixtures associated with 1 kitchen sink, 1 utility sink, 2 bathroom sinks and two showers, 1 washing machine replacement, and 1 dishwasher replacement per home. The contractor shall also assume inspection and service of the pressure tank. If service identifies functionality issues with the pressure tank, this unit will be replaced in kind. The contractor shall assume replacement of in-kind bath/shower inserts/surrounds.

For all work completed on site, including restoration work described in Task 3, the contractor shall submit Daily Field Reports. The Daily Field Reports shall document actions taken, in progress photos and personnel present at each residence. The Daily Field Reports shall be submitted to the government with 24 hours.

The Contractor shall not leave the homeowner without a useable toilet/shower/sink at the end of each workday. If the homeowner is left without water flow overnight, the contractor shall provide a hotel voucher for \$200 a night (resident must provide proof of hotel receipt).

5.2.2.1 **Water Softener installation** - Install a water softener in an existing structure downstream of the GAC system to help reduce future sediment and calcium buildup at each residence. The contractor will need to determine the most appropriate water softener specifications to support the system flow and requirements.

5.2.2.2 **Post Repair System Flow requirements testing** - Following piping flow repair activity completion, the Contractor shall document measurements confirming that the flow leaving the GAC system meets the system requirements of providing a minimum output of 7.5 gpm at 28 psi post-treatment. The contractor will also document measurements confirming a minimum flow at each outlet as follows:

Outlet	Min Flow
Time for toilet to fill	3 min fill
Kitchen faucets	1.5 gpm
Bathroom faucets	1.0 gpm
Exterior Hose Bibs	5 gpm
Frost Free Hydrants	5 gpm
Laundry water line	3 gpm

5.2.2.3 **Frost Free Hydrants and line replacement** - Replace with in-kind piping and related spigot for up to seven frost free hydrants per house. Abandon prior lines in place and cut off historic FFH at grade. Assume maximum of ~250 ft from treated line will need to be replaced for FFHs.

5.2.2.4 **Hot Water Heater Replacement** - Replace hot water heater at each residence with equivalent tank size currently present at each home (assume 40 gal electric tank).

5.2.2.5 **Replace Main Water Line RW-20:** The main water line at RW-20 [from GAC system effluent to house entry](#) shall be ~~repaired~~[replace](#) and made operational. If ~~repair~~[replacement](#) of the main water line results in sufficient hot and cold water flow to all faucets and FFHs at the residence, then this is the extent of work required. If flow remains below contract minimums, then piping ~~and~~[, FFH replacement,](#) fixture replacement [and appliance replacement,](#) similar to RW-296 shall occur at RW-20.

5.2.3 TASK 3 – Restoration

- 5.2.3.1 **Restore impacted floors, walls, and ceilings in home and in GAC sheds** - Complete subsequent repair of drywall, tile, flooring and other house surfaces impacted to gain access to said pipes. All repairs should be completed in-kind and restored to prior conditions. Any cutting of exterior walls will be repaired with like-kind exterior materials and paint. All key restoration assumptions shall be captured and agreed to in the Intrusive Work Plan prior to construction. If changes to the plan are required in the field, coordination with government and homeowner is necessary.

Construction and restoration activities should be complete within 10 working days of Pre-Construction Site Visit.

- 5.2.3.2 **Restore impacted lawn** - Complete subsequent repair to lawns and yards from exterior trenching activities or other intrusive work. All repairs should be completed in-kind and restored to prior conditions. Appropriate seed mix and erosion control measure should be taken for any disturbed soils. All key restoration assumptions shall be captured and agreed to in the Intrusive Work Plan prior to construction. If changes to the plan are required in the field, coordination with government and homeowner is necessary.

Construction and restoration activities should be complete within 10 working days of Pre-Construction Site Visit.

5.2.4 TASK 4 - Completion Report

The Completion Report shall be prepared once all work has been completed at the Sites. Following work completion, provide a summary report that documents initial conditions and identified water flow issues, actions taken, final plumbing schematics, photo documentation, daily reports, and lessons learned to limit similar issues from reoccurring in the future. Photos should document in progress and post construction conditions. Photos should include existing pipe removal and pipe replacement before new piping is enclosed in drywall. Also provide photos of the cross-section of the removed lines to document the condition of the lines and buildup within the lines for each residence. The completion report should also include any materials/appliance manuals to be turned over to the homeowner. There shall be one overall report for both properties but sections within the report shall be specific to each site so that information can be shared with individual residents without referencing work from the second residence.

PART 6 APPLICABLE PUBLICATIONS

6 APPLICABLE PUBLICATIONS (CURRENT EDITIONS)

The Contractor must abide by all applicable regulations, publications, manuals, and local policies and procedures as further detailed in Section 5 of this PWS including, but not limited to:

EA Engineering, Science, and Technology, Inc., PBC. 2021. Residential Drinking Water Treatment Systems As-Built. Fairchild Air Force Base, Spokane County, WA. June 2021.

EA Engineering, Science, and Technology, Inc., PBC. 2019. Operation and Maintenance Manual for Residential Drinking Water Treatment Systems. Fairchild Air Force Base, WA. September 2019.

OSHA. Occupational Safety and Health Standards, Part 1910. Current version.

USACE. 1992. Safety and Occupational Health Requirements for Hazardous, Toxic, and Radioactive Waste (HTRW) Activities, USACE ER-385-1-92. Located at http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_385-1-92.pdf.

USACE. 2014. Safety and Health Requirements, USACE EM-385-1-1. Located at http://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_385-1-1.pdf.

United States. 42 U.S. Code Chapter 103. Comprehensive Environmental Response, Compensation, and Liability Act of 1980. Located at <https://www.gpo.gov/fdsys/pkg/USCODE-2017-title42/html/USCODE-2017-title42-chap103.htm>. Current Version.

Washington State Department of Ecology. 2013. Model Toxics Control Act Regulation and Statute. Publication 94-06. Revised 2013. Located at <https://fortress.wa.gov/ecy/publications/documents/9406.pdf>

Washington Administrative Code. 2016. Chapter 246-290 WAC Group A Public Water Supplies. Located at <https://apps.leg.wa.gov/WAC/default.aspx?cite=246-290>

PART 7 ATTACHMENT LISTING

7 **ATTACHMENT LIST:**

- 7.1. Attachment 1 - Performance Requirements Summary
- 7.2. Attachment 2 - Deliverables Schedule
- 7.3. Attachment 3 - Site Layout for RW-296 and RW-20

7.1 ATTACHMENT 1

PERFORMANCE REQUIREMENTS SUMMARY

The Contractor service requirements are summarized into performance objectives that relate directly to mission essential items. The performance threshold describes the minimum acceptable levels of service for each requirement. These thresholds are critical to mission success.

Attachment 1 - Table A

Performance Objective		Standard	Performance Threshold	Method of Surveillance
1000	Task 1 - Project Management, Planning, and Reporting		No less than marginal performance in Quality, Timeliness, and Safety standards as detailed in Attachment 1, Table B.	Direct observation and periodic inspection of work <ul style="list-style-type: none"> • Oversight to ensure work is completed per PWS • Technical writing, data presentation and overall quality of deliverables • Work coordination and scheduling • Status Reports/Progress Mtgs 100% inspection of deliverables <ul style="list-style-type: none"> • Review and approval Validated customer complaint
2000	Task 2 – ReplaceRepair water mainline – RW-20			
2001	<u>RW-20 – Additional Support</u> Task 1 - Intrusive Work Plan Update Task 2 - Replace water lines and fixtures, up to 7 FFHs, hot water heater replacement. Task 3 - Restore impacted floors, walls and ceilings in home and in GAC shed, restore impacted lawn.			
3000	<u>RW-296</u> Task 2- Replace water lines and fixtures. Replace Hot Water Heater, Dish washer, Washing Machine. Service Pressure tank. Install Water Softener. Task 2- Frost Free Hydrants and line replacement (7 FFH max) Task 3 - Restore impacted floors, walls, and ceilings in home and in GAC sheds. Restore impacted lawn			
3001	Task 2 – Pressure tank Replacement– RW-296			
4000	Task 4 - Completion Report			
5000	<u>RW X (TBD) – Optional</u> Task 1 – Intrusive Work Plan Update, effort for meetings, site visit Task 2 – Replace water lines and fixtures. Replace Hot Water Heater, Dish washer, Washing Machine. Service <u>Pressure</u> tank. Install Water Softener. Task 2 – Frost Free Hydrants and line replacement (7 FFH max) Task 3 – Restore impacted floors, walls, and ceilings in home and in GAC sheds. Restore impacted lawn for RW 296			
5001	Task 2 – (Optional) Pressure tank Replacement – RW 296			

Attachment 1 - Table B

Standard	Superior	Acceptable	Marginal	Unacceptable
Quality	Contractor performs at fully acceptable levels for quality, timeliness, and safety and completes all work within on or ahead of schedule and with little or no need for comment or revision to deliverables.	Contractor coordinates activities, schedule, and workflow with Government and executes work such that AFCEC/ mission, operations, and program goals are met.	Contractor execution deviates from coordinated activities, schedule, or workflow resulting in minor impacts to AFCEC/ mission, operations, and program goals.	Contractor fails to coordinate activities, schedule, and workflow with Government and/or execution deviates from coordinated activities, schedule, and workflow resulting in significant impacts to AFCEC/ mission, operations, and program goals.
		Contractor employees and subcontractors meet all security requirements without incident.	Minor deficiencies in security requirements are identified that are not reportable outside purview of the Contract and that are immediately addressed and require corrective measures.	Deficiencies in security requirements are identified that are significant; and/or that are reportable outside purview of the Contract; and/or that are not, or cannot be immediately addresses by corrective measures.
		Standards of the PWS are achieved.	Deficiencies are noted by the Government, and the Contractor requires corrective measures to meet PWS standards.	Deficiencies are noted by the Government, and the Contractor fails to complete corrective measures to meet PWS standards.
		Deliverables are accurate, contain the most current information, and comply within production standards. Government comments, to include regulators and stakeholders, are minor and are fully addressed in one review iteration resulting in full regulator and stakeholder acceptance.	Deliverables contain significant errors or omissions; and/or do not comply within established production standards; and/or require multiple submittal or review iterations to correct deficiencies; and/or achieve regulator and stakeholder acceptance.	Contractor fails to correct errors or omissions; and/or does not comply with established production standards; and/or regulatory and stakeholder acceptance is not achieved.
	Zero validated customer complaints during either Base or Optional periods of performance	No more than one validated customer complaint per quarter (two cumulative for Base and four cumulative for Optional periods) , and coordination with Government results in mutually agreed and timely corrective action.	More than one validated customer complaint per quarter (two cumulative for Base and four cumulative for Optional periods) , and coordination with Government results in mutually agreed and timely corrective action.	Contractor coordination with Government fails to results in mutually agreed or timely corrective action for validated customer complaints.

Standard	Superior	Acceptable	Marginal	Unacceptable
Timeliness	As above	Contractor meets suspense dates for all deliverables or coordinates with Government, to include regulators and stakeholders, in advance, mutually agreed delays.	Contractor fails to meet suspense dates for deliverables and coordination with Government fails to achieve mutually agreed delay(s).	Contractor fails to provide a required deliverable.
		Contractor coordinates activities, schedule, and workflow with Government and executes work such that AFCEC mission, operations, and program goals are met	Contractor execution deviates from coordinated activities, schedule, or workflow resulting in minor impacts to AFCEC mission, operations, and program goals.	Contractor fails to coordinate activities, schedule, and workflow with Government and/or execution deviates from coordinated activities, schedule, and workflow resulting in significant impacts to AFCEC mission, operations, and program goals.
		Standards of the PWS are achieved.	Deficiencies are noted by the Government, and the Contractor requires corrective measures to meet PWS standards.	Deficiencies are noted by the Government, and the Contractor fails to complete corrective measures to meet PWS standards.
		No more than one validated customer complaint per quarter (two cumulative for Base and four cumulative for Optional periods), and coordination with Government results in mutually agreed and timely corrective action.	More than one validated customer complaint per quarter (two cumulative for Base and four cumulative for Optional periods), and coordination with Government results in mutually agreed and timely corrective action.	Contractor coordination with Government fails to results in mutually agreed or timely corrective action for validated customer complaints.

Standard	Superior	Acceptable	Marginal	Unacceptable
Safety	As above	Contractor employees and subcontractors meet all security requirements without incident.	Minor deficiencies in security requirements are identified that are not reportable outside purview of the Contract and that are immediately addressed by corrective measures.	Deficiencies in security requirements are identified that are significant; and/or that are reportable outside purview of the Contract; and/or that are not, or cannot be, immediately addresses by corrective measures.
		Contractor employees and subcontractors operate equipment and perform services in a safe manner with no reportable or lost time accidents above industry standard. The industry standard will be the Experience Modification Rate (EMR) of 1.0 or less.	Reportable lost time accidents above industry standard; no regulatory citations.	Contractor experiences lost time accidents above industry standard and received regulatory citation for non-compliance.
		Standards of the PWS are achieved.	Deficiencies are noted by the Government, and the Contractor requires corrective measures to meet PWS standards.	Deficiencies are noted by the Government, and the Contractor fails to complete corrective measures to meet PWS standards.
		Contractor coordinates activities, schedule, and workflow with Government and executes work such that AFCEC mission, operations, and program goals are met.	Contractor execution deviates from coordinated activities, schedule, or workflow resulting in minor impacts to AFCEC mission, operations, and program goals.	Contractor fails to coordinate activities, schedule, and workflow with Government and/or execution deviates from coordinated activities, schedule, and workflow resulting in significant impacts to AFCEC mission, operations, and program goals.
		No more than one validated customer complaint per quarter (two cumulative for Base and four cumulative for Optional periods) , and coordination with Government results in mutually agreed and timely corrective action.	More than one validated customer complaint per quarter (two cumulative for Base and four cumulative for Optional periods) , and coordination with Government results in mutually agreed and timely corrective action.	Contractor coordination with Government fails to results in mutually agreed or timely corrective action for validated customer complaints.

7.2 ATTACHMENT 2

ATTACHMENT 2: DELIVERABLES/MEETING/SITE VISIT SCHEDULE

<u>Deliverable</u>	<u>PWS Reference</u>	<u>Frequency*</u>	<u># of Copies</u>	<u>Medium/Format**</u>	<u>Submit To</u>
Project Kick-Off Meeting including agenda, presentation materials and notes	5.1.2	Within 3 (working) days after purchase order award; agenda and presentation materials are due at least 1 day prior to meeting; notes are due within 3 days after meeting	Final 1	Electronic	AFCEC, USACE
Project Management Plan	5.1.1	Within 3 days of Award	Final 1	Electronic	AFCEC, USACE
Root Cause Assessment Site Visit	5.2.1.1	Within 5 days of Award	No deliverable	No deliverable	No deliverable
Intrusive Work Plan	5.2.1.3	Draft within 7 days of Award	Draft 1	Electronic	AFCEC, USACE
		Final within 2 days of Pre-Construction Site Visit	Final 1	Electronic/1 printed copy for signature	AFCEC, USACE
Pre-Construction Site Visit	5.2.1.4	Within 1 day of Government Concurrence on Draft Intrusive Work Plan	No deliverable	No deliverable	No deliverable
Construction Completion	5.2.3.1 & 5.2.3.2	Within 10 days of Pre-Construction Site Visit	No deliverable	No deliverable	No deliverable
Status Reports	5.1.3	Monthly within 10-days after end of reporting period	Final 1	Electronic	AFCEC, USACE
Weekly Meeting	5.1.5	Weekly; meeting notes are due 3 days after meeting	Final 1	Electronic	AFCEC, USACE
Daily Field Reports	5.2.2.1	Within 24 hours of daily work completion	Final 1	Electronic	AFCEC, USACE
Completion Report	5.2.4	Within 10 days of all work completion	Draft 1	Electronic	AFCEC, USACE
		Within 10 days of receipt of government comments	Final 1	Electronic	AFCEC, USACE

* All days are counted as working/business days.

** All electronic deliverables shall be provided in both native (e.g., MS Office products, GIS files, etc) and searchable PDF versions. Electronic deliverables shall be submitted via email or other acceptable electronic file transfer method as well as any other medium/format specified (e.g., Disk).

7.3 ATTACHMENT 3

Site Layout for RW-296 and RW-20



Notes for RW-296

6-GAC, 20 GPM system

Pump size: 2 HP, 10 gpm

Water line runs to garage before going to house, location of that line is unknown.

Estimated 4 FFH onsite.

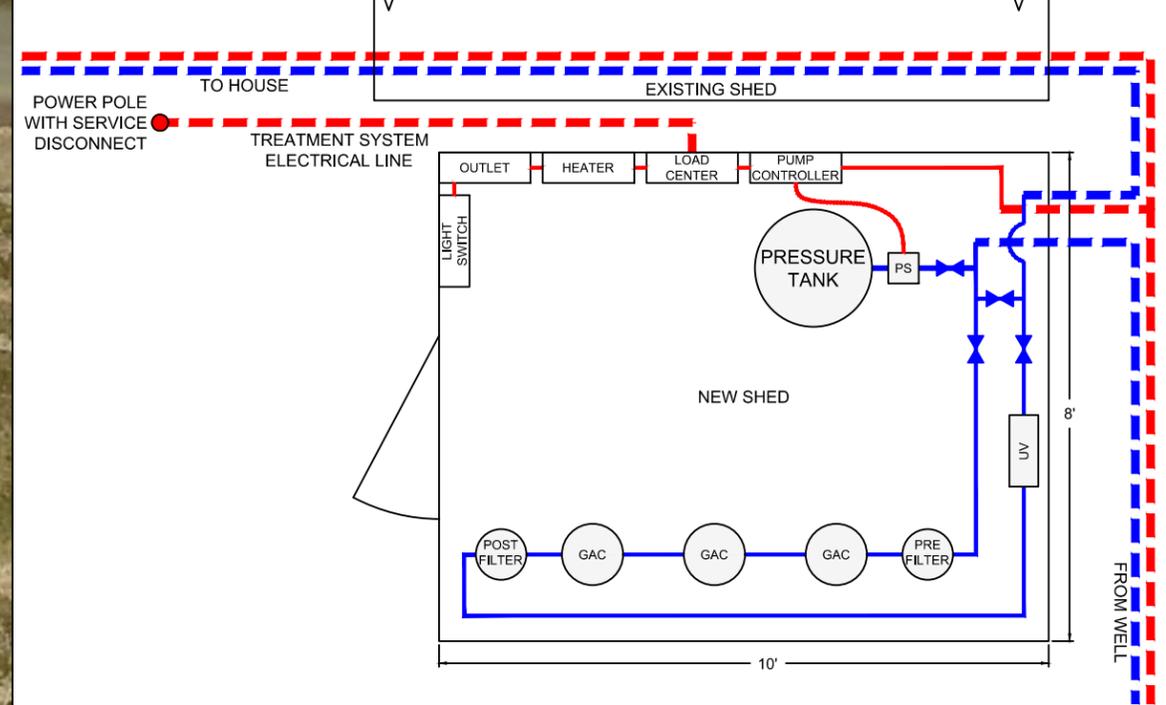


- LEGEND:**
- WELL
 - FROST FREE HYDRANT OR SPIGOT
 - BURIED WATER LINE
 - ABOVEGROUND WATER LINE
 - BURIED ELECTRICAL LINE
 - ABOVEGROUND ELECTRICAL LINE
 - BURIED GAS LINE

Note: Not all FFH locations are identified on this figure.

COMMISSIONED 2 APR 2019	SITE TYPE C NEW SHED	AS-BUILT
NOTE: FOR OFFICIAL USE ONLY (FOUO). This document contains information which must be protected IAW the Privacy Act of 1974 (5 U.S.C. 552a), DoD 5400.11R, AFI 33-332, and AFI 1-401. Disclaimer: For general reference purposes only. DO NOT USE to determine, certify, or verify map features, scale and/or other information.		

TREATMENT SYSTEM LAYOUT (NOT TO SCALE)



AS-BUILT TABLES

Construction As-Built Items					
	New or Existing	Quantity	Manufacturer	Model or Part #	Notes
Treatment System Building					
Shed	New	1	Tuff Shed	Garden Premier	8'X10'
Insulation	New	--	--	--	Walls-R16 / Ceiling-R16/ Floor-R10
Sheeting	New	--	--	--	OSB on walls and ceiling
Pump Equipment					
Pump	Existing	1	--	--	Submersible
Pump Controller	New	1	Franklin Electric	2801074915	3/4HP 1PH 230V
Local Disconnect	New	1	Square D	QO6-12L100DS	On load center
Pressure Tank	New	1	Flexcon Industries	WR240R	81 Gallon WellRite
Pressure Switch	New	1	Square D	9013FSG	Series B
Treatment System Equipment					
GAC Filter	New	3	Culligan	CH30948	Pentair vessel/ Calgon Filtrasorb 400 carbon media
Pre-Treatment Particulate Filter	New	1	Watts	PWHP20FF1CPR	20" 5 micron pleated filter cartridge
Post-Treatment Particulate Filter	New	1	Watts	PWHIB34VIH	5 micron filter cartridge
UV Disinfection Unit	New	1	Viqua	D4	--
Piping Materials					
Treatment System	New	--	--	--	Sch 40 1" PVC/ Sch 40 fittings
Piping Pre/Post Bypass Connection	Existing	--	--	--	1" galvanized
Electrical Equipment					
Load Center	New	1	Square D	QO6-12L100DS	Series G04
Heater	New	1	King	U12100	1000W 120V/ Set to lowest setting (40° F)
Outlets	New	1	Leveton	BR20-GY	15A 120VAC Duplex
Light	New	1	Metalux	4CWPLD4040C	120V/ 4 ft LED
Flow Control/Measurement					
Flow Meter	New	1	Dayton	32ZN69	Measures 1.3 to 32 GPM
Brass Gate Valve	New	1	--	--	Maximum flow rate adjusted to 10 GPM

Decommissioned Equipment				
	Quantity	Location Prior to Treatment System Install	Left In Place or Removed	Notes
Pump Equipment				
Pump Controller	1	On well	Removed	Make: Franklin Electric/ Model: 2801074915/ 3/4HP 230V
Local Disconnect	1	Existing shed	Left in place	On load center
Pressure Tank	1	Existing shed	Removed	Make: WellMate / Model: WM25-WB/ Size: ~80 gallon
Pressure Switch	1	Existing shed	Removed	--



Air Force Civil Engineering Center
2261 Hughes Ave
Building 171, Suite 155
JBSA Lackland, TX 78236



REV	DATE	BOOKING	TRIAL	REVISION DESCRIPTION
1	24	5	2019	AS-BUILT

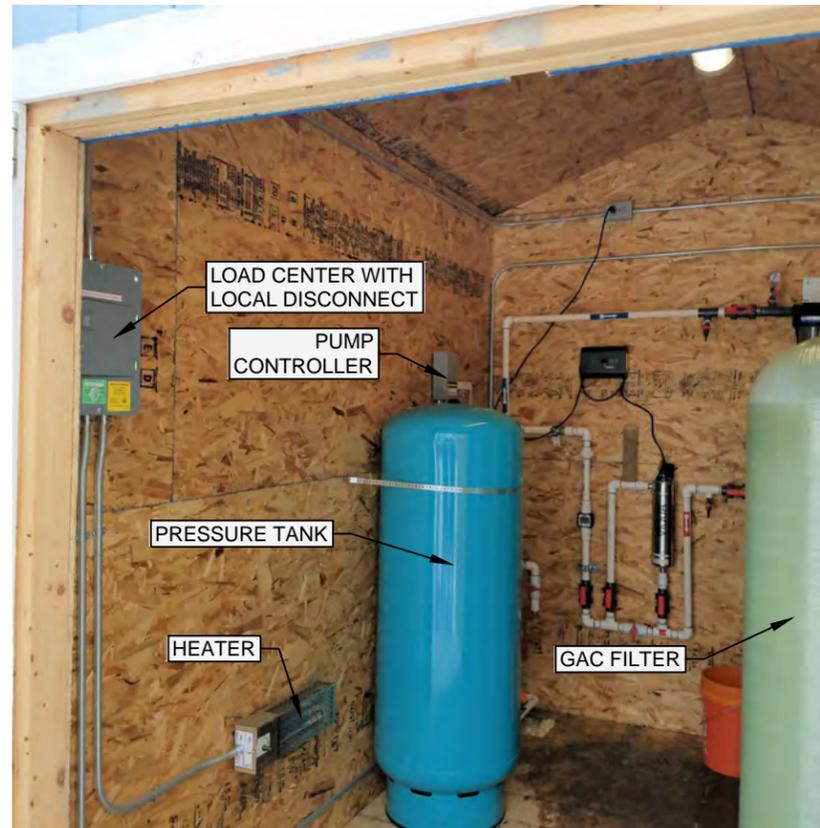
RW-20
14725 W. Thorpe Rd.
Medical Lake, WA 99022

DATE: 24 MAY 2019
PROJECT NO.: 775303101.FAFO08
SHEET: C-009A
SHEET 1 of 2



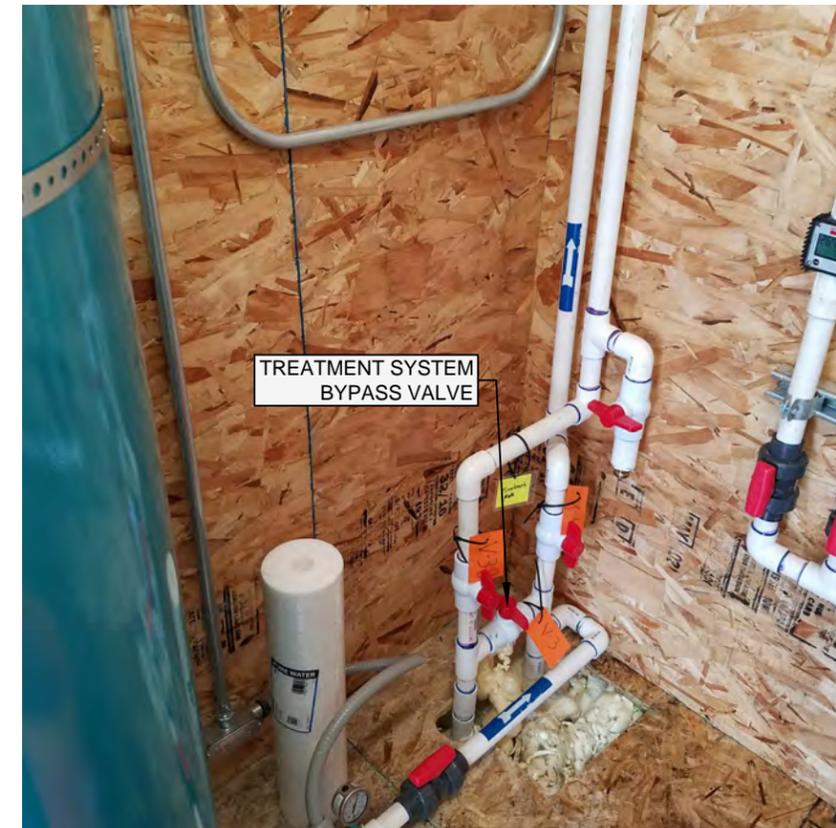
TREATMENT SYSTEM SHED

TREATMENT SYSTEM LOCATED IN NEW SHED.



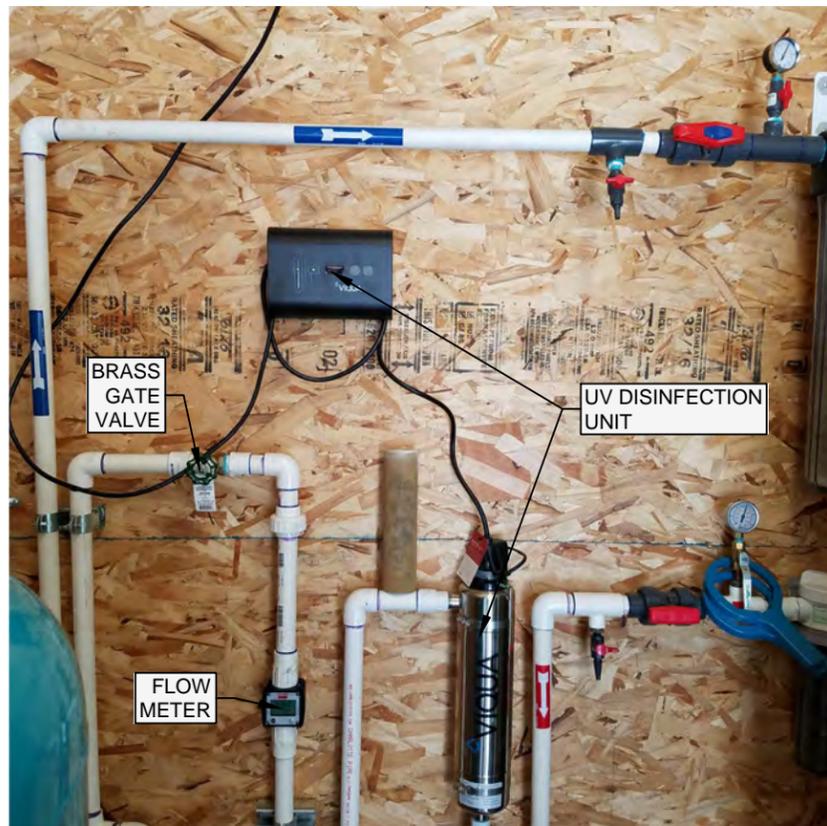
LOAD CENTER WITH LOCAL DISCONNECT
PUMP CONTROLLER
PRESSURE TANK
HEATER
GAC FILTER

TREATMENT SYSTEM SHED ENTRANCE VIEW.



TREATMENT SYSTEM BYPASS VALVE

TREATMENT SYSTEM BYPASS MANIFOLD.



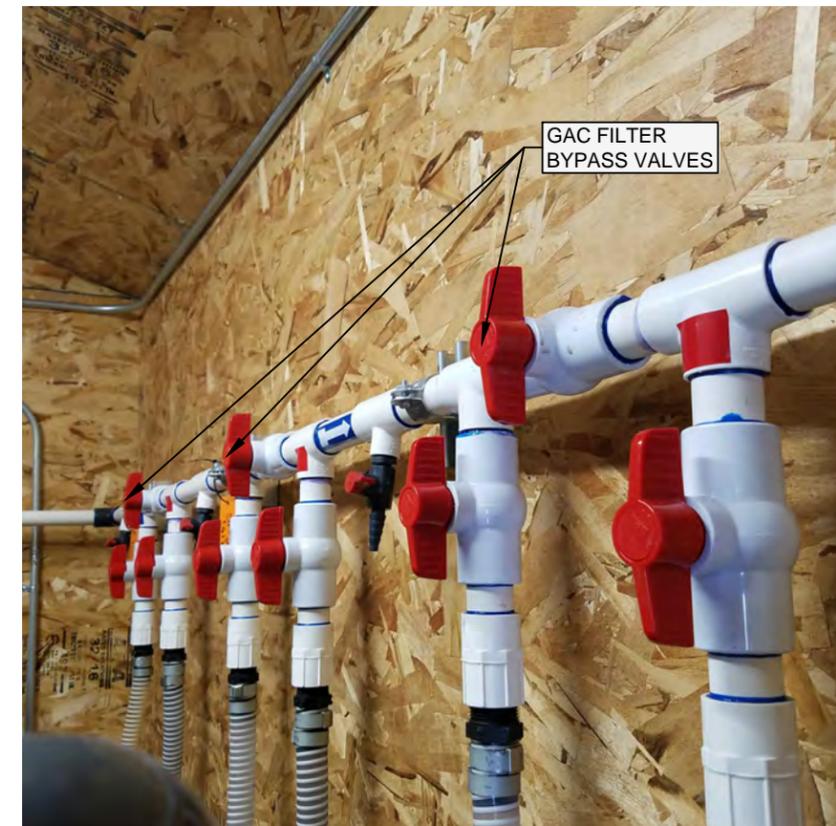
BRASS GATE VALVE
FLOW METER
UV DISINFECTION UNIT

UV DISINFECTION UNIT.



PRE-TREATMENT PARTICULATE FILTER
POST-TREATMENT PARTICULATE FILTER

TREATMENT SYSTEM MANIFOLD.



GAC FILTER BYPASS VALVES

GAC FILTER MANIFOLD.

AS-BUILT



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Engineering Center
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REV	DATE	DESCRIPTION
1	24	AS-BUILT

RW-20
14725 W. Thorpe Rd.
Medical Lake, WA 99022

DATE 24 MAY 2019
PROJECT NO. 775303101.FA008
SHEET C-009B
SHEET 2 of 2