

SECTION 01 78 25
OPERATIONS AND MAINTENANCE SUPPORT SERVICES

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes scope of work and requirements for Full-Service Operation and Maintenance Contract of the South Rim WWTP for a 12-month period following Government assuming Beneficial Occupancy of Phase 1 of project, as defined in Section 01 11 00, Summary of Work.

1.02 SUBMITTALS

- A. Submit proposed staffing plan.
- B. Submit a minimum of two qualified candidate resumes for each position. Contracting Officer will select a primary and secondary candidate from the qualified candidates based on resumes and interviews.

1.03 OPERATION LABOR

- A. Contractor shall provide sufficient number of certified qualified personnel, including management, administrative, operational, technical, laboratory, and clerical, who meet relevant State of Arizona requirements and certifications regarding wastewater treatment operations and maintenance, and are capable and demonstrate experience necessary to operate and maintain the facility.
- B. Supply a minimum of one qualified Operations and Maintenance Supervisor to oversee day-to-day plant operations for the Contract term. This shall include:
 - 1. 40-hour week for non-emergency work.
 - 2. 8 hours per day.
 - 3. Shifts may be rotated to accommodate NPS staff to include Saturday.
 - 4. Must meet minimum experience and qualifications as specified in Supplement located at the end of this section, Minimum Qualifications Operation and Maintenance Supervisor.
 - 5. Hold current certifications required for operation of wastewater facilities in the State of Arizona.
 - 6. This position should expect to be responsible for and coordinate contract operation and maintenance staff and day-to-day execution of operation and maintenance activities.

- C. Contractor shall make the secondary qualified candidate available in the event the primary will be absent during Contract term.
- D. Contractor shall provide over-the-shoulder type training for NPS plant operations and maintenance staff.

1.04 OTHER LABOR

- A. Provide staff that possess the skills and ability to perform routine operation, maintenance and repairs, and ensure operation of all systems according to equipment manufacturer specifications and compliant with ADEQ permit requirements.
- B. Provide staffing that meets the certification requirements of the State of Arizona for wastewater treatment facilities operation.
- C. Provide staff to conduct routine sampling and laboratory analysis for biological treatment process operation and control and regulatory compliance.
- D. Candidates for all positions must meet minimum experience and qualifications. Requisite experience and qualifications are detailed in Supplement located at the end of this section, Rate Schedule for Operation and Maintenance Services/Positions.

1.05 EMERGENCY RESPONSE LABOR - AFTER HOURS RESPONSE TO EMERGENCIES

- A. In the event of an after-hours emergency, Contractor shall communicate to Contracting Officer by telephone and then in writing to notify the Contracting Officer of an after-hours and or emergency condition and response plan.
- B. Contractor shall meet the following after-hours and or emergency response times, based on NPS designated severity rating, and as further defined below:
 - 1. Severity 1: Urgent, Contractor staff must arrive at facility in 2 hours or less.
 - 2. Severity 2: Important, Contractor staff must arrive at facility in 4 hours or less.
 - 3. Severity 3: Routine, Contractor staff must arrive at facility in 8 hours or less.
- C. Contractor labor charges for after-hours and or emergency response are at no additional cost.

1.06 MATERIALS AND EQUIPMENT

- A. Materials and equipment are excluded from this Contract. In the event that these are required, Contractor shall notify the Contracting Officer within 24 hours. Notification shall be in writing and shall include the following details at a minimum:
1. Description of the requirement.
 2. Level of urgency and as further defined:
 - a. Urgent: Needed as soon as possible.
 - b. Important: Needed in the next 7 days.
 - c. Routine: Needed in the next 30 days.
 3. Material details, manufacturer, model number, serial number, catalog number or any other descriptors to aid procurement.
 4. A minimum of three vendors. Vendor information shall include:
 - a. Name.
 - b. Address.
 - c. Telephone Number.
 - d. Web Address.
 - e. Primary contact (name, telephone, and email).
 - f. Secondary contact (name, telephone, and email).
 5. If the material is to be sole-sourced, Contractor shall designate the procurement as such and provide necessary justification in accordance with the Federal Acquisition Regulations (FAR) Part 6 Competition Requirements.

1.07 PREVENTATIVE MAINTENANCE PROGRAM

- A. Develop Preventative Maintenance Program (PMP) for the new facilities based on equipment manufacturers recommendations. To include:
1. Manufacturer Information: name, address, telephone number, email address and web address.
 2. Make, model, serial and any data that identifies the equipment.
 3. Vendor information, name, point of contact, telephone, email and website.
 4. Recommended spare parts.
 5. Preventive maintenance tasks. Include the task, materials and health and safety details.
 6. Predictive maintenance tasks. Include the task, materials and health and safety details.
- B. Provide and upload PMP spreadsheet (format compatible with NPS Maximo) for project equipment to Project Website.

1.08 MANAGE WARRANTY CLAIMS/REPAIRS AND WARRANTY
MAINTENANCE.

- A. Contractor shall be responsible for warranty repairs during the Contract term.
- B. Contractor shall notify Contracting Officer of a warranty need when they arise. Notification may be made by telephone, and in all cases in writing.
- C. At the completion of any warranty by the Contractor, Contractor shall submit within 7 calendar days a summary of the warranty failure, cause(s) and a summary of what materials and labor was used to complete the warranty response (after action review).
- D. Contracting Officer shall designate the severity of the warranty needed to provide Contractor guidance on response. Contracting Officer shall designate warranty needs as follows:
 - 1. Severity 1: Urgent, Contractor staff must arrive at facility in 2 hours or less.
 - 2. Severity 2: Important, Contractor staff must arrive at facility in 8 hours or less.
 - 3. Severity 3: Routine-important, Contractor staff must arrive at facility in 24 hours or less.
 - 4. Severity 4: Routine, Contractor staff must arrive at facility in 7 days or less.
- E. During the warranty period Contractor shall be responsible for all warranty costs, including materials, taxes, and subcontract expenses and in accordance with contract terms and conditions.

1.09 TRAINING - HANDS-ON NPS OPERATORS TRAINING

- A. Develop operation/process monitoring checklists for daily/weekly/monthly rounds.
 - 1. Checklists shall be provided in electronic format.
 - 2. Where the information is primarily tabular, these shall be provided as MS Excel files.
 - 3. Where this information is primarily text, these shall be provided in an MS Word file.
- B. Update Standard Operating Procedures (SOPs):
 - 1. Update all SOPs to reflect discovery and changes identified during startup and commissioning.

2. SOPs shall also include:
 - a. Health and safety considerations and mitigation plans.
 - b. Tool required to perform the task.
 - c. Personnel necessary to perform the task.
 - d. Step by step instructions of how to perform the task safety and completely.
 3. SOPs shall conform to the US Environmental Protection Agency publication, Guidance for Preparing Standard Operating Procedures (SOPs), USEPA document number EPA/600/B-07/001.
 4. SOPs shall be submitted for review and comment to the Contracting Officer. Contractor should allow 14 calendar days for NPS review and provision of comments.
 5. Update Uniform Process Control Procedures (UPCP): Contractor shall update all UPCPs to reflect discovery and changes identified during startup and commissioning.
 6. UPCPs shall include:
 - a. Unit Process capacities, design criteria and equipment specifications.
 - b. Startup procedures.
 - c. Shutdown procedures.
 - d. Process control strategy.
 - e. Summary of control targets based on each control strategy.
 - f. Monitoring and Control Responsibilities.
 - g. Troubleshooting guide.
- C. Provide up to 8 hours of training of the SOPs and UPCPs. Training must be a blend of classroom and hands-on-training. Training is in addition to training provided by Contractor as part of startup and commissioning.

1.10 CONSUMABLES

A. Utilities:

1. Government will be responsible for the following utilities:
 - a. Potable water.
 - b. Reclaimed water (if available).
 - c. Power.
 - d. Diesel fuel.

B. Treatment Chemicals:

1. Contractor will supply treatment chemicals for wastewater treatment operation. Additionally:
 - a. Contractor shall develop and maintain a chemical inventory.
 - b. Chemical inventory shall be updated daily.

- c. Chemical inventory shall include maximum and minimum quantities of treatment chemicals.
- d. The chemical inventory forms shall be provided to the Contracting Officer in native format.

C. Lab Reagents / Laboratory Supplies / Chemicals:

- 1. Contractor will supply Lab Reagents, Laboratory Supplies and Chemicals. Additionally:
 - a. Contractor shall develop and maintain Lab Reagents / Chemicals, inventory.
 - b. Lab Reagents/Chemicals inventory shall be updated weekly.
 - c. Lab Reagents/Chemicals inventory shall include maximum and minimum quantities of treatment chemicals.
 - d. Lab Reagents / Chemicals inventory forms shall be provided to Contracting Officer in native format.

D. Cleaning Supplies:

- 1. Government will supply all Cleaning Supplies for occupied facilities. Additionally:
 - a. Contractor shall develop and maintain Cleaning Supplies inventory.
 - b. Cleaning Supplies inventory shall be updated weekly.
 - c. Cleaning Supplies inventory shall include maximum and minimum quantities of treatment chemicals.
 - d. Cleaning Supplies inventory forms shall be provided to Contracting Officer in native format.

E. Consumables - Residuals Disposal:

- 1. Government will provide hauling for dewatered/dried biosolids using existing Government fleet vehicles, as is current practice.
- 2. Government will provide hauling (through a third-party contract) for grit and screenings to landfill, as is current practice.
- 3. Contractor shall provide rate schedule for additive service for alternate hauling of dewatered/dried biosolids and grit and screenings – Supplement located at the end of this section, Qualification Schedule for Operation and Maintenance Services/Positions, and provide such service if requested by Contracting Officer.

1.11 REGULATORY - MONTHLY REPORTING AND COMPLIANCE COMMUNICATIONS

- A. Park is point of contact to the regulatory agency for day-to-day communication, designated by Contracting Officer.

- B. Contractor shall develop template(s) for all required regulatory reports.
- C. Native copies of all templates shall be provided to Government.
- D. Contractor shall be responsible to and prepare all regulatory reports.
- E. Contractor signs off on regulatory reports.
- F. Draft reports shall be submitted to Contracting Officer a minimum of 5 business days before the report due date or deadline for submittal.
- G. Contracting Officer representative reviews regulatory reports and submits to regulatory agency.

1.12 MEETINGS - ROUTINE MEETINGS FOR COORDINATION WITH EXISTING PLANT AND STAFF

- A. Contractor shall hold Daily Meetings:
 - 1. Daily process control, safety, and work coordination meetings for Contractor O&M staff and NPS O&M staff. Contractor shall provide a detailed agenda to Contracting Officer prior to the morning meeting.
 - 2. Existing NPS plant O&M staff will attend the meetings.
 - 3. The meetings outline or agenda shall include the following topics at a minimum:
 - a. Health and safety.
 - b. Regulatory.
 - c. Staffing.
 - d. Process control status and proposed changes.
 - e. The days maintenance activities.
 - f. Any expected deliveries.
 - g. Residual hauling when applicable.
 - h. The outline or agenda shall include any significant or non-routine tasks for the day, next day, next 7-day period and 4-week look ahead.
- B. Contractor shall hold Monthly Management Focused Meeting:
 - 1. Contractor shall provide an outline or agenda for this meeting. The outline or agenda shall be transmitted to the Contracting Officer a minimum of 5 business days before the monthly meeting.
 - 2. The meetings outline or agenda shall include the following topics at a minimum:
 - a. Health and safety.
 - b. Regulatory.
 - c. Staffing.
 - d. Upcoming procurement actions.

- e. Upcoming maintenance activities.
- f. Eight-week look ahead of any significant or non-routine tasks for the next period.

1.13 ONSITE LABORATORY - ROUTINE PROCESS CONTROL AND REGULATORY REQUIRED LAB ANALYSIS

- A. Contractor shall provide a sampling and analysis plan.
- B. The sampling and analysis plan shall detail all process control and regulatory samples for the next 12-month period.
 - 1. The plan shall be updated within 14 days of the end of the Contract.
- C. The plan shall include:
 - 1. Daily process control or regulatory samples.
 - 2. Weekly process control or regulatory samples.
 - 3. Monthly process control or regulatory samples.
 - 4. Semi-annual process control or regulatory samples.
 - 5. Annual process control or regulatory samples.
- D. The plan shall include the method number (US EPA or Standard Methods) for any regulatory samples. The method(s) shall comply with all State and Federal regulatory requirements.
- E. Contractor shall complete all onsite sample collection and management.
- F. Contractor shall be responsible for all analytical laboratory work.
- G. Contractor shall develop a lab reagent inventory, that includes maximum and minimum stocking levels.
- H. The inventory form(s) shall be transmitted to the Contracting Officer.
- I. Contractor shall supply necessary reagents.
- J. Contractor shall maintain minimum 45 days of reagent inventory.

1.14 EXTERNAL LABORATORY TESTING - ROUTINE PROCESS CONTROL AND REGULATORY REQUIRED LAB ANALYSIS

- A. Contractor shall manage external laboratory contracts to include sample management (shipping) costs and the cost for analysis.

B. This shall be in accordance with sampling and analysis plan detailed in the previous section.

C. Contractor is responsible if any sample analyses need to be expedited.

1.15 HOUSING - HOUSING FOR CONTRACTOR STAFF

A. Government will provide housing within the park for Contractor staff.

B. Contractor is responsible for all incidental housing expenses, including utilities, and any and all meals for their staff.

C. Contractor is responsible for any and all meals and incidental expenses for their staff.

1.16 CONTRACTOR FACILITIES - FOR CONTRACTOR

A. Contractor shall provide temporary offices and workspace for Contractor personnel.

B. Contractor is responsible for all utilities needed for Contractor work space, including internet access.

1.17 VEHICLES

A. Contractor will provide vehicles for Contractor staff, as needed.

B. Contractor is responsible for fuel costs and any and all incidental expenses.

1.18 SUPPLEMENTS

A. The supplements listed below, following “End of Section,” are a part of this specification:

1. Minimum Qualifications O&M Supervisor.
2. Qualification Schedule for Operation and Maintenance Services / Positions.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

MINIMUM QUALIFICATIONS O&M SUPERVISOR

Position: Operations and Maintenance Supervisor

Reports to: Contracting Officer

Supervises: All Contractor operational and maintenance personnel (excludes any performance related supervisory requirements).

General Statement

Supervises the operation, repair, and maintenance of wastewater treatment plant facility and Contractor O&M staff.

Essential Duties and Responsibilities

- Plans and directs Contractors staff and activities.
- Prepares proposed work schedules. These schedules shall include all projected non-routine activities, such as maintenance, and or residuals hauling.
- Determines remedial action in emergencies.
- Prepare required reports and maintain complete record keeping procedures.
- Inspects plant to determine efficiency of operations, cleanliness, and maintenance activities.
- Diagnoses operating problems and directs effective correction procedures.
- Analyzes recording instrument readings and laboratory test results and adjusts various plant processes accordingly.
- Coordinates with NPS O&M staff.
- Provides over the shoulder training for NPS employees.
- Establishes and maintains cooperative relationships with those contacted during the course of Work.
- Performs other duties as required.

Minimum Qualifications

- High school diploma or GED.
- Wastewater operators, certification at or above the level required by the State of Arizona.
- Possess a valid driver's license.
- Good communications skills (verbal and written).
- Minimum 5-years' experience supervising a WWTP and/or performing facility commissioning and start-up activities. Experience shall be in WWTPs of similar size and scope.
- Detailed knowledge of the principles, methods, and tools employed in the general operation of engines, pumps, valves, motors, and related equipment; general maintenance work; safe work practices; principles and methods of biological and chemical sewage analyses, effects, and problems of industrial waste in water/wastewater treatment processes, principles of supervision and training; principles of budget preparation and expenditure control.

- Detailed knowledge of computer software including but not limited to Microsoft Word, Excel, Outlook, data management systems and be able to operate plant PLC's and SCADA systems.

Preferred Qualifications

- Highest level wastewater operators, certification in the State of Arizona.
- Registered professional engineer in the State of Arizona.
- Bachelors degree in one of the sciences (environmental, engineering, chemistry, mathematics, biology and physics).

Working Conditions & Physical Requirements

The work area can involve a working environment indoors as well as outdoors, which could cause exposure to outdoor elements; proper environmental attire will be required. Some areas can have loud noise, active machinery, high pressure fluid systems, electrical equipment, confined spaces, heights and depths, fumes, air borne particles, noxious gases, pathogens and various chemicals. The use of appropriate safety equipment will be mandatory in these areas to prevent hazardous contact.

Must be able to sit, stand, stoop, twist and bend at the waist, turn, kneel, squat, raise arms above shoulder height, grasp, reach, perform repetitive hand movements and fine coordination when preparing reports and using a computer keyboard, have vision sufficient to read computer screens, printed documents and operate office equipment, have hearing in the normal range with or without correction. In an 8-hour shift must be able to transport self across the facility, ascend and descend stair steps, lift objects up to 50 pounds from floor level to waist height, wear and use appropriate safety equipment.

**QUALIFICATION SCHEDULE FOR OPERATION AND MAINTENANCE
SERVICES / POSITIONS**

Item	Labor Classification / Position	Minimum Qualifications / Experience	General Responsibilities
1	Operation and Maintenance Supervisor	5 years	Plans, organizes, directs, and coordinates the operations and maintenance activities of the WWTP and ancillary facilities, including performing a variety of technical and highly specialized tasks within the functions of the operations and maintenance.
2	Senior Wastewater Treatment Operator	2 years	Under general direction from the WWTP Operations Supervisor, control, monitor, operate, inspect, and maintain the WWTP and ancillary facilities.
3	Wastewater Treatment Operator	1 year	Under direct supervision from the control, monitor, operate, inspect, and maintain the WWTP and ancillary facilities.
4	Lab Technician	2 years	Under direction from the Operations Supervisor perform sampling of process streams, handle samples in accordance with approved methodologies and best practices, conduct laboratory analyses, maintain lab records.
5	Maintenance Mechanic	2 years	Under direction from the Operations Supervisor and working closely with Plant Operations staff and the instrument and control technician, modify, repair, and maintain the WWTP and ancillary facilities.
6	Electrician	2 years	Under general direction from the Operations Supervisor, install, modify, maintain and operate a variety of electrical equipment for the WWTP and ancillary facilities.
7	Instrumentation Technician	2 years	Under general direction from the Operations Supervisor, install, modify, maintain and operate a variety of control, protection, and computer equipment for the WWTP and ancillary facilities.

Item	Basic Services	Description	Quantity	Unit	Rate
1	Hauling dewatered/dried biosolids offsite to Lagoons (3 miles on dirt road one way trip)				
2	Hauling dewatered/dried biosolids to landfill				
3	Hauling grit and screenings to landfill				