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ISSUANCE DATE: **March 12, 2024**

RFP NO.: **RFQ NO. ASPA24.017 – SCADA System**

SUBJECT: **Addendum No. 1**

The American Samoa Power Authority hereby issues Addendum No. 1 to amend Request for Quotation (RFQ) requirements. This addendum is issued pursuant to the conditions of the RFQ documents and is hereby made part of the RFQ. The addendum serves to clarify, revise, and supersede information contained in the RFP. The Offeror must acknowledge receipt of this addendum in the appropriate space provided in the Addendum Form. Failure to do so may subject the Offeror to disqualification.

1. **The closing deadline has been extended as follows:**

   Closing Deadline: Friday, March 22, 2024 at 2:00PM

2. **An updated bid form is attached to this Addendum #1. Please use this Bid Form when submitting quotations.**

3. **A Scope of Work is also included with this Addendum #1.**

Should you have any questions or need clarification, please call me at (684) 699-3057 or procurement@aspower.com.

Sincerely,

Renee Leotele Togafau
Procurement Manager

Please sign and date below to acknowledge receiving Addendum 1. You may return this document via email at procurement@aspower.com, or the ASPA Procurement Office.

ACKNOWLEDGEMENT OF RECEIVING ADDENDUM 1

Received by _____, this _____day of _____ 2024.

Company _____ Title _____

Fax No. _____ Email Address _____

ATTACHMENT B – BID FORM

Title: Supply & Delivery of SCADA System for Wastewater Lift Station and Treatment Plants

RFQ #: ASPA24.017

No.	Description	U/M	QTY	U/Cost	TOTAL
1	**Software License & Support -** *SCADA Software License*				
1.1	Ignition Platform	Ea.	2		
2	**Hardware -** *Server Machine*				
2.1	OnLogic Karbon 801	Ea.	2		
3	**CIF ASPA Tafuna**	Ea.	1		
	Optional Bid Item				
4	Startup Commissioning & Training	Ea.	1		
	TOTAL				

American Samoa
Power Authority

PROJECT SCOPE AND CLASSIFICATION

American Samoa Wastewater Lift Station Upgrade

American Samoa Power Authority

Supply and Delivery of SCADA System for Wastewater Lift Stations and Treatment Plants

Table of Contents

1.0 INTRODUCTION

The American Samoa Power Authority (ASPA) owns and operates two wastewater treatment plants (WWTP) and the associated collection system infrastructure on the island of Tutuila. The collection system assets include over 57 miles of sewer mains, 1,500 manholes and twenty (20) lift stations. Additionally, each WWTP includes head-works bar screens, pumps, clarigesters, a UV disinfection reactor and an ocean diffuser. The construction of Tutuila's collection systems began as early as the 1960's and has degraded over the years resulting in deteriorated pipelines and manholes. The two WWTPs, Utulei and Fogagogo, were built in the 1970's. The Utulei WWTP serves the eastern-central portion of the island with a 6.0 MGD capacity and the Fogagogo WWTP serves the western-central portion of the island with a 6.0 MGD capacity. The islands of Ta'u, Ofu and Olosega, as well as many outlying villages on Tutuila, utilize cesspools and onsite septic systems for wastewater handling.

2.0 BACKGROUND INFORMATION OF PROJECT

The purpose of this SCADA project is to implement a central infrastructure for data Communications, system monitoring and control, disturbance reporting and alarming, historic data recording, analysis and reporting for the ASPA waste-water Lift Station facilities. The infrastructure will be capable of handling the SCADA requirements of the existing facilities and will have sufficient capacity or be expandable to accommodate future requirements.

- The ASPA plans to negotiate final contract terms and scope of service with the selected Vendor.
- The following is a summary description of the anticipated scope of services. This information is provided as a framework for Vendor responses and cost analyses. Vendors are free to make any additions that they believe will provide value or benefit to the project.
- Appendix A contains an itemized list and specifications for the system hardware and Software requirements.
- Appendix B contains list of engineering requirements.

3.0 PROJECT LOCATION

There are the Lift Station Sites included in this project. Also included is 5 new lift stations in Aua

4.0 SCOPE OF WORK (SOW)

The SOW for this project is detailed out below so it will provide vendors/bidders the expectation of such project and deliverables. Apart from the ones showing in the map above, we will focus on the one with installed VFD and multismart controllers.

4.1 PROJECT SITES

The site work involves installation of SCADA, to lift stations as per the list in the table below.

Site Name	No. Pumps per Sites	No. of VFD	No. of Flow Meter
Leloaloa	3	3	1
Lift Station 2 (Aua)	2	2	1
Lift Station 3 (Aua)	2	2	1
Lift station 4 (Aua)	2	2	1
Lift Station 5 (Onesosopo)	2	2	1
Maleloa	3	3	1
Faga'alu	2	2	1
Papa	2	2	1
Airport	2	2	1
Utulei WWTP	3	3	1
Tafuna WWTP	3	3	1

4.2. OVERALL CONTROL SYSTEM DESCRIPTION FEATURES/FUNCTION

a) The SCADA systems will be hosted on two dedicated servers (main and standby) provided by the vendor. The server shall also act as the Central Control Workstation (CCW) will be located at the wastewater treatment plant (Utulei & Tafuna SCADA Room). The Vendor will provide all components required for the CCW.

b) System must have a secure remote connection via the existing VPN.

c) Software must support multiple protocols as needed including DNP3, Modbus & EtherNet/IP, and other necessary to operate proposed system such as a wastewater treatment plant, water tanks and valves etc.

d) Web access to SCADA via encrypted internet connection.

e) Server/Data Back-Up

f) The server must be configured so that all necessary applications and configurations and setpoints will be loaded automatically during a restart.

g) The system must provide fully automated regular backup of all data, settings, logs and configuration information for controllers, graphical user interface and servers. These backups must operate without user input or initiation and provide sufficient data to completely restore the system after a catastrophic failure of any or all components.

h) The system must provide a reliable and user-friendly mechanism to create a hard copy of all of the above information for offsite storage. (network location, flash/hard drives, and a cloud location)

i) Note any additional back up procedures or offerings available to ensure the SCADA data is backed up and protected.

4.3. SCADA

a) No partial license or trial version will be accepted.
b) Bidders/Vendors shall include example screens of applications similar to those for this project.
c) The system will automatically log all alarm and events.
d) Alarms must be capable of customizable delay times.
e) The software must be able to provide notifications to operators via standard internet.
f) All historical data must be retrievable from the SCADA database, covering all configured alarms and events, for a minimum period of 12 months.
g) Data reports and history logs shall allow long term monitoring sample rates from 1 second to 24 hours.
h) The software must include an editor that enables the creation of both text and graphical display pages, without requiring any separate compilation process.
i) The software must be able to have tiered security access for different entities within the organization. Each user must have an account that is restricted to their appropriate areas of the system.
j) The system will automatically log all user activities.
k) System communication failure monitoring and alerting.
l) Software will monitor and report data in real-time.
m) Creation of templates and standard practices to propagate symbols and assets across site pages.

4.4. SECURITY

a) Identify all connections / access points to the SCADA system.
b) Strengthen SCADA network by ensuring only needed devices/ access is available.
c) Explain how features/ functions of the system will be utilized to ensure security of the SCADA system.
d) Include a method of reporting system access/ audit trail for monitoring.
e) Conduct a physical security evaluation of the completed system.
f) Document network architecture and identify systems that serve critical functions or contain sensitive information or controls.
g) Ensure secure passwords and access methods are used during implementation.
h) Provide backup and disaster recovery plan for system.

4.5. MAINTENANCE AND SUPPORT

a) Proposals should include maintenance and support services (on agreed schedule of rates) for all components of the SCADA system including hardware, software, and communications for a period of one year following ASPA's acceptance.

4.6. TRAINING

a) Training for the ASPA's personnel in the operation and maintenance of the SCADA systems will be performed by the Vendor/Bidder.
b) In conjunction with this effort, Operation and Maintenance manuals and documentation must be provided, that describe the system architecture, control logic and operating requirements, in sufficient detail to allow the ASPA's personnel to understand and troubleshoot the system.
c) The contractor shall provide two types of training prior to issuance of final project acceptance as follows:
    i. Programming & Troubleshooting
    ii. Installation & Commissioning
d) The training for programming and troubleshooting shall consist of a three day or longer class for SCADA personnel.

4.7. DESIGN DOCUMENTATION

a. The vendor shall provide 24/7 access and on-call services, technical support, and software updates as part of the maintenance & support agreement.

b. The Vendor shall provide I/O list for 11 sites.

c. The Vendor shall provide Control Description for 11 sites. The functionality shall enable pump monitoring and control based on the level, float switch position and pump state. For each site, the pump control mode shall include:

   i. Remote Auto
   ii. Remote Manual
   iii. Local Manual

In Remote Auto Mode, when two or more pumps are available, the system should cycle the run operation through all available pumps.

In Remote Manual Mode, each pump can be remotely activated to start via the SCADA system.

In Local Manual Mode, the pump can be operated through the existing local control panel.

d. The Vendor shall provide Communication Network Drawings (AutoCAD)

e. The Vendor shall provide SCADA screenshot review document for 11 sites.

f. The Vendor shall provide FAT & SAT documentation for 11 sites.

g. The Vendor shall provide Job Environment Safety Analysis and Commissioning Plan for 11 sites.

h. The Vendor shall provide SCADA Operations Training and Maintenance Manual

i. The Vendor shall provide the following:

   i. Creating IgnitionTemplates
   ii. Multi Smart Controller Cell Modem Integration
   iii. Server and Ignition Gateway
   iv. Single Server to manage all sites.
   v. 3 Computers for Each WWTP Facility for View/Operation
   vi. PostgreSQL Server for Historization
   vii. Gateway Setup
   viii. Device Connections
   ix. Connection to the SQL DB

x. Lift Station Templates
xi. Using the Multi Smart Controller Tags to develop necessary UDTs
xii. Tag Historization and Alarms
xiii. Mobile Interface for Controls
xiv. Maintenance Controls
xv. Map Overlay Display
xvi. Quick View of All Pump stations and Status with Dive In Mobile Menus
xvii. Overview of Waste-Water Treatment Facilities with Dive In Mobile Menus
xviii. Graphical Representation of Piping and Water Flow Direction
xix. Lift Station Reports with Alarming and Flow and Level Information
xx. Daily and Monthly via Email
xxi. Pump Station Comparison Reports of Flow Rate, Level, and Alarms
xxii. Daily and Monthly via Email
xxiii. Alarming, Phone Text and Voice Notifications for Critical Alarms
xxiv. Maintenance Management System
xxv. Track Required Maintenance Operations
xxvi. List of Last Perform and by Who
xxvii. List of When Next Due
xxviii. Notifications for Required Maintenance Operations
xxix. Mobile UI Controls for Tracking and Completing Maintenance Procedures per Lift Station

j. The Vendor shall provide a standards document outlining standard programming practices, colours, and symbols to be used for maintenance and development of SCADA screens.

5. Pre-SAT AND SAT

5.1. PRE-SAT

Conduct a Pre-SAT session before the SAT. The Pre-SAT will be carried out after the installation is completed for each site. The vendor shall travel to site to attend Pre-SAT with ASPA's representative, including:

1. Constructions verification

2. Instrumentation testing
3. Communication testing
4. Hardware I/O testing
5. Dry testing

Then vendor shall record, report and discuss installation issues to ASPA for resolutions.

5.2 . SAT

Once all installation issues are resolved, the vendor shall travel to site to attend SAT/ Commissioning will be conducted where an ASPA representative is there to witness the operation of the assets.

Before SAT, ASPA will ensure the site assets are safely isolated. During the SAT, conduct testing as follows:

1. SCADA I/O testing
2. Function testing
3. Wet commissioning

The vendor shall collaborate closely with the ASPA representative and/or operator to ensure strict adherence to the test procedure.

Upon completion of the Site Acceptance Testing (SAT), the vendor shall work in conjunction with ASPA to address and resolve any remaining punch list items.

6. MANAGEMENT PLAN

6.1. A quality, safety and environmental management plan for the project will be submitted to ASPA by the selected Vendor.

6.2. The plan shall detail project tasks, schedules, milestones, and responsibilities for each project.

6.3. The plan shall include a Gantt-type schedule to serve as the foundation of a phased approach per ASPA priorities.

6.4. The ASPA facilities must remain operational during the work. The management plan should address any required downtime needed for installation and / or implementation of the SCADA systems.

6.5. The management plan should address these requirements and clearly describe how downtime will be mitigated.

6.6. The plan should also list and describe work or items to be provided by others that are necessary to complete the SCADA systems.

6.7. The vendor must have overarching Quality, Safety and Environmental management system and must be able to provide a copy of the plan upon ASPA’s request.

6.8. The vendor must be certified system as follows:

6.8.1. ISO9001

6.8.2. ISO 45001

6.8.3. ISO 14001

6.9. The vendor must maintain internal policies concerning Quality, Safety, and Environmental standards and must be able to provide copies of these policies upon ASPA's request.

6.10. The vendor is required to implement a project KPI monitoring and tracking system and must be capable of providing KPI reports upon ASPA's request.

6.11. The plan will be submitted to the ASPA for review and approval prior to commencing work on the project.

APPENSIX A – New SCADA System Hardware and Software License Requirements

The hardware and software license requirements are listed below:

Material Breakdown	Qty
Software License & Support	
SCADA Software License	
Ignition Custom Package 8.1 - Master: - Ignition Platform - OPC UA Server Module - Core Drivers - Perspective Module - Symbol Factory - Reporting Module - Tag Historian - Alarm Notification Module - Twilio Alarm Notification	1
Ignition Custom Package 8.1 - Backup - Ignition Platform - OPC UA Server Module - Core Drivers - Perspective Module - Symbol Factory - Reporting Module - Tag Historian - Alarm Notification Module - Twilio Alarm Notification	1

APPENSIX B – Engineering Requirements

The engineering requirements are listed below:

Engineering Scope Breakdown
Project Management
Project Management (project setup, kick-off meeting, team coordination, procurement, client progress update meetings, progress update and site work mobilisation)
Lead Engineer Supervision (drawing, document and code reviews)
Site Audit
Site Audit for 11 sites
Documentation
Creating I/O list for 11 sites
Creating Functional Control Description for 11 sites
Creating Communication Network Drawings (AutoCAD)
Creating SCADA screenshot review document for 11 sites
Creating FAT & SAT documentation for 11 sites
Creating Job Environment Safety Analysis and Commissioning Plan for 11 sites
Creating SCADA Operations Training and Maintenance Manual
Programming
Creating Ignition SCADA Templates
Testing
Server set up and software installation in office for testing
PreFAT
Client witness FAT
Punchlist item fixing and prepare for site works
Site Work
PreSAT
Constructions verification, communication, and hardware I/O test (including travel time)
SAT
Site Commissioning and operator training (including travel time)