CUYAHOGA VALLEY NATIONAL PARK
BRECKSVILLE, OHIO

REMOTE CHLORINE MONITORING

PERFORMANCE WORK STATEMENT

NATIONAL PARK SERVICE
2/27/2026

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PART 1 – GENERAL

ITEM 1 – LOCATION AND DESCRIPTION OF WORK

1.1 Background: Located in Northeastern Ohio, Cuyahoga Valley National Park consists of 33,000 acres and is situated along 22 miles of the Cuyahoga River Valley between the cities of Akron and Cleveland. Cuyahoga Valley National Park has a need for nine (9) remote chlorine monitoring systems at various locations within the park. Each location uses potable water delivered to cisterns that provides water service to the location. The Ohio EPA has found each location to be an unclassified, hauled-water, transient non-community public water system that requires daily free-chlorine residual testing every day the facility is open to the public.

1.2 Purpose: This Performance Work Statement (PWS) is to furnish, install, and configure a complete remote chlorine monitoring system. The system shall integrate with existing Mission Communication telemetry infrastructure or provide a new iQ2 Remote Water Monitoring IIoT web platform at nine (9) locations. The system shall provide continuous free chlorine residual monitoring, secure cloud-based telemetry, alarm notifications, and compliance with National Park Service IT and facility requirements.

1.3 Work Covered by the Contract Documents:

A. Project Location: Cuyahoga Valley National Park, 15610 Vaughn Road, Brecksville Ohio 44141

Work is to be performed at the following locations throughout Cuyahoga Valley National Park

Building Name	**Address**
Boston Mills Visitor Center	6947 Riverview Rd, Peninsula, Ohio 44264
Boston Mills Visitor Center Comfort Station	6947 Riverview Rd, Peninsula, Ohio 44264
Boston Store	1550 Boston Mills Rd, Peninsula, Ohio 44264
Dzerzynski House	1550 Boston Mills Rd, Peninsula, Ohio 44264
Hines Hill Conference Center	1403 W. Hines Hill Rd, Peninsula, Ohio 44264
Hines Hill Guest House	1403 W. Hines Hill Rd, Peninsula, Ohio 44264
Lock 29 Restrooms	1648 Mill Street, Peninsula, Ohio 44264
Savacoal House	5795 Stanford Rd, Peninsula, Ohio 44264
Stanford House Dorm	6093 Stanford Rd, Peninsula, Ohio 44264

B. Work consists of: The Contractor shall provide all labor, materials, equipment, testing, documentation, and training necessary to deploy a complete indoor remote chlorine monitoring system at nine (9) locations.

C. Equipment Furnishing:
   a. Reagentless Chlorine Analyzer/Sensor: Halogen HaloSense, Hach 9185 sc, or equivalent regent-free chlorine amperometric analyzer suitable for indoor potable water monitoring.
   b. RTU/field Controller: MyDro 150/850, Mission M800, or equivalent IIoT-capable RTU supporting 4-20 mA or Modbus.
   c. Cloud Platform: Mission Communications or iQ2 Remote Water Monitoring web-based IIoT system with real-time dashboards, alarming, and historical data tools.
   d. Power: Connection to a dedicated 120 VAC outlet. Six (6) locations have a dedicated outlet provided; three (3) locations will need a dedicated outlet installed as part of the contract. All electrical work shall comply with NEC standards.
   e. Connectivity: Remote connectivity via secure cellular telemetry.
   f. Sample line components: Isolation valves, 3/8” or 1/2” tubing, flow cell, drain line and mounting hardware.

D. Instrumentation Requirements:
   a. Measurement range: 0–5 mg/L free chlorine.
   b. Sensor accuracy: +/- 5% or better.
   c. Materials compliant with NSF 61 and ANSI/NSF standards.

E. Installation:
   a. All equipment shall be installed indoors in a climate-controlled utility space.
   b. Install reagentless chlorine analyzer per manufactures requirements. Contractor shall field verify and obtain written approval from the COR for chlorine analyzer and sensor position at each location.
   c. Connect sample inlet and drain lines to NPS-approved potable water piping. Contractor shall field verify and obtain written approval from COR for connection points of inlet and drain lines on NPS-approved potable water piping.
   d. Connect analyzer and RTU to 120 VAC receptacle.
   e. Connect sensor signals to RTU using 4-20 mA, Modbus RS485, or digital protocol.

F. System Configuration:
   a. Option A - Integration with existing Mission Communications 123SCADA platform.
      i. Integrate chlorine analyzer outputs (4-20 mA or Modbus) with Mission Communications Remote Terminal Units (RTUs).
      ii. Configure new analog/digital inputs with Mission RTUs.
      iii. Update Mission web dashboard to display Free Chlorine Residual (mg/L), Alarm Status (low/high chlorine), and device status/fault conditions.
   b. Option B - New iQ2 Remote Water Monitoring IIoT
      i. Register RTU/Controller to the iQ2 platform
      ii. Configure real-time chlorine residual display, trending, and historical data.
      iii. Enable 5-minute data transmission intervals.
      iv. Set up encrypted communications with iQ2.

G. Testing & Commissioning:
   a. Verify analyzer accuracy using handheld or grab sample comparison.

b. Conduct full signal-path verification. (sensor to RTU to SCADA or iQ2 cloud)
c. Confirm proper function of alarms and notification pathways.
d. Demonstrate stable data trending for a minimum of 24 hours.
e. Submit commissioning checklist and report.

H. Training & Documentation:
a. On-site training for federal personnel.
b. Provide manuals, maintenance guides, and dashboard use (Mission or iQ2 platform)

I. Performance Standards
a. Continuous 24/7 monitoring with ≤5% downtime.
b. Data transmission latency <5 minutes.
c. Alarm generation for regulatory compliance thresholds.

J. Federal Compliance & Regulatory References
a. Safe Drinking Water Act (SDWA) compliance.
b. ANSI/NSF 61 standards.
c. Applicable agency cybersecurity policies.

K. Include 1-year subscriptions to web portal and any data plans associated with services.

L. All work will be performed under a single contract.

Period of performance: Work shall be completed within 90 calendar days.

ITEM 2 - EXISTING UTILITIES

2.1 Existing Utilities: Notify Contracting Officer (CO) and Contracting Officer's Representative (COR) to coordinate proposed locations.

2.2 Contractor shall be responsible for locating and preventing damage to known utilities. If contractor damage occurs, alert CO and COR as soon as safely possible, and repair utility at no additional expense to the Government. If damage occurs to an unknown utility, contact CO and COR as soon as safely possible.

2.3 Existing Utility Interruptions: Contractor shall coordinate water shutdowns with NPS at least 72 hours in advance.

ITEM 3 - CONTRACTOR'S USE OF PREMISES

3.1 Conduct of Operations: At all times the contractor shall conduct his operations in conformance with the rules and regulations promulgated by the Secretary of the Interior for the National Park Service, and applicable park rules and regulations prescribed by the Park Superintendent.
Superintendent's Compendium - Cuyahoga Valley National Park (U.S. National Park Service)

A. No signs or advertisements (except those specified herein and as required for safety) shall be displayed on the site or within the park unless approved by the Contracting Officer.

B. Smoking is not permitted within any Federal building or within 25 feet of entrances, operable windows, or outdoor air intakes.

A. Public Use of Site: Contractor shall at all times conduct operations to ensure the least inconvenience to the public. The Contractor shall not stage removed or new materials, tools, nor equipment within public areas of the building.

3.2 On-site work hours: Work shall be generally performed during normal business working hours of 8 a.m. to 4:30 p.m., Monday through Friday, except when otherwise indicated.

A. Work on Saturdays, Sundays, Federal holidays, early morning, or at night may not be performed without prior consent from the CO and COR. Submit requests for work outside of the stated normal business hours to the CO and COR for approval at least 48 hours in advance of the work.

The following Federal holidays are observed by the National Park Service:
New Year Day
Martin Luther King, Jr's Birthday
Washington's Birthday
Memorial Day
Juneteenth National Independence Day
Independence Day
Labor Day
Columbus Day
Veterans Day
Thanksgiving Day
Christmas Day

B. Note: Any of the above holidays falling on a Saturday will be observed on the preceding Friday; holidays falling on Sunday will be observed on the following Monday. The specific day that each holiday is recognized for each year can be found at the following site: Federal Holidays (opm.gov).

3.3 Contractor Use of Site:

A. General: Contractor shall have limited use of the site. Do not disturb portions of Project site beyond areas in which the Work is indicated.

B. Driveways and Entrances: Keep driveways, access roads, and entrances serving premises clear and available to Government, Government's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize use of driveways and entrances.

C. Utilities
   a. General: Cost or use charges for temporary facilities shall be included in the Contract Sum as required.
   b. Water Service: Water from existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as

required for operations without any additional permit costs. Use resources wisely and minimize waste of water.

c. Electric Power Service: Electric power from existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for operations without any additional permit costs. Power may or may not meet your power tool requirements, provide generators if questionable. Use power in a resourceful manner and avoid excess power waste.

D. Security and Protection facilities: Some of this may be relevant and some may not.

1 Environmental Protection: Provide protection, operate temporary facilities, and conduct work in ways and by methods that comply with state and federal environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

2 Cleaning of Equipment: The Contractor shall ensure that prior to moving on to the Project Area, all service equipment, is free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds. Disassembly of equipment components or specialized inspection tools are not required.

3.4 Preservation of Natural Features: N/A

3.5 Housekeeping:

A. Keep project neat, orderly, and in a safe condition at all times.

a. Dispose of waste materials and recycling legally outside the park. The contractor shall not use park dumpsters

b. Address Recycling: Government goal is to salvage and recycle as much nonhazardous waste as possible. Use sustainable methods to extent possible during this project, recycling material as is probable with local means. Maintain accurate documentary records for submittal of all recycled materials used including fly ash and slag cement.

3.6 Photo Documentation:

Contractor must provide existing condition, progress and completion photos. All photos shall be in focus, show maximum range of depth of field general photo and then close up detail photo as needed. Shall be in JPEG digital form and submitted electronically by email within 7 days from time of taken or as approved by COR.

3.7 Fire and Life Safety:

3 Comply with the requirements of NFPA.

4 Store and handle hazardous materials in accordance with manufacturer's and OSHA 29CFR1926 Subpart D requirements 1926 | Occupational Safety and Health Administration (osha.gov). Maintain readily available, on site, MSDS/Safety Data Sheets (SDS) for each chemical.

i. Immediately report all spills of hazardous materials to the CO, COR and park.
ii. Maintain a spill emergency response kit.
iii. Train employees how to respond to a spill and use an emergency response kit.

3.8 Noise and Acoustics Management: N/A

ITEM 4 - EXAMINATION OF THE SITE

4.1 All interested contractors are urged to visit the job site and examine existing conditions before submitting quotes. Contractors will be expected to complete the work as quoted.

ITEM 5 - PROJECT CLOSEOUT

5.1 Cleaning: Remove all tools, equipment, surplus materials, and rubbish. At time of final inspection, project shall be thoroughly clean and ready for intended use.

5.2 Completion: Contractor shall request a final inspection to the Contracting Officer and COR.

5.3 Warranties

A. Workmanship Warranty will be based on project acceptance and will remain in effect for 1 year following acceptance. The contractor will also support manufacturer warrantied items and repair work during this period.
B. Provide all manufacturer warranty information of products installed. All contact information, extent of coverage and conditions shall be clearly noted as well as date of overall final acceptance.
C. Information shall include operation and maintenance manuals for each warranted product.

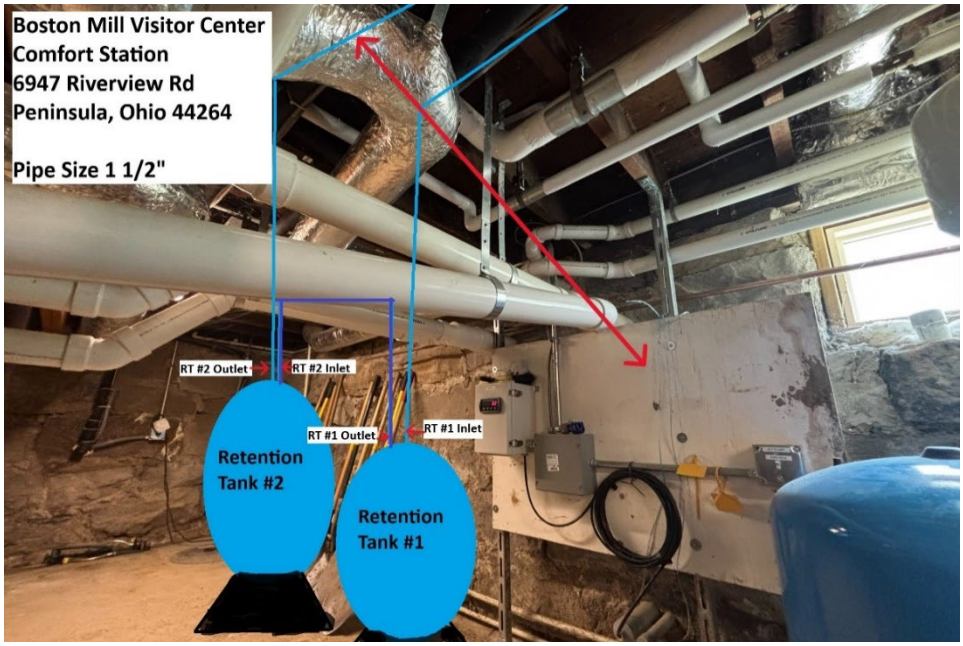
5.4 Deliverables:

A. Calibration Reports: Certificates and QA/QC reports for each sensor.
B. Remote Access: Credentials and set up for web tool access.
C. Training Materials: Manuals, user guide, and training documentation.

END OF SECTION

PHOTOGRAPHS

Boston Mill Visitor Center Comfort Station: Connect sample inlet to exisitng 1 ½" PVC. Analyzer/sensor mounting location on plywood as shown in picture. New 120VAC will need installed, +/- 40ft run from panel. If needed, any wall/floor penetrations will be completed by NPS.

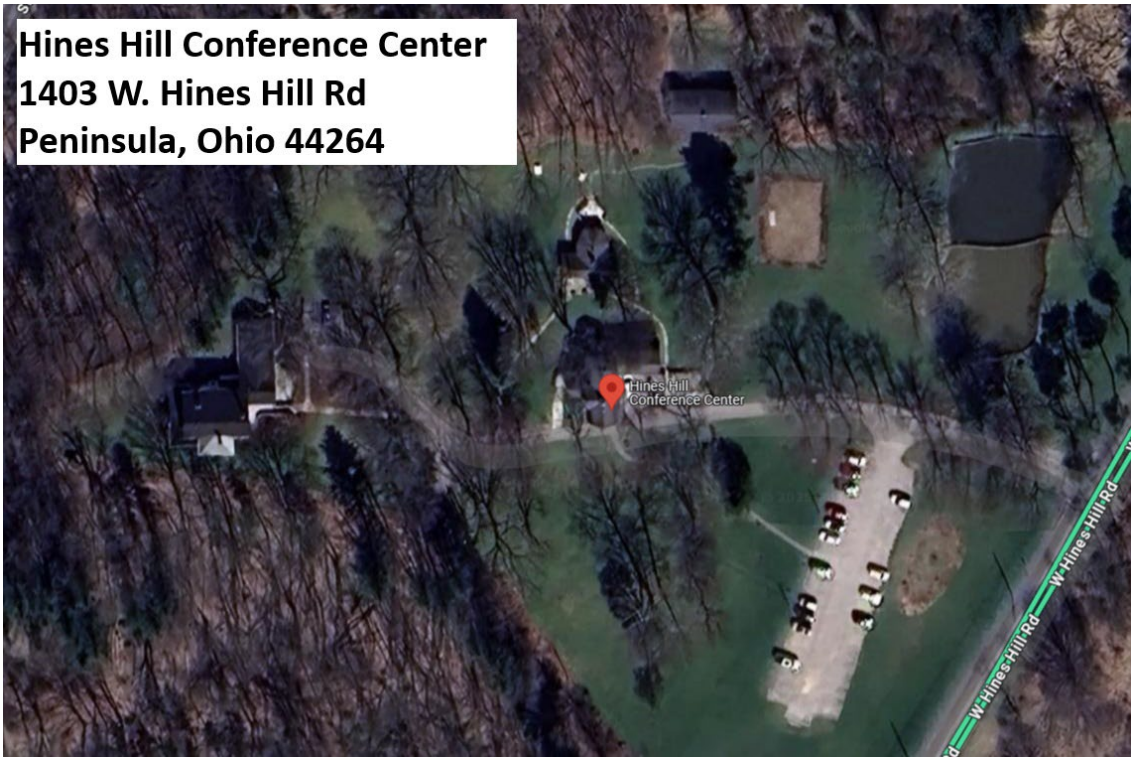


Boston Mill Visitor Center: Connect sample inlet to exisitng 1” copper. Remove exisitng pipe insulation as needed to make connection. Analyser/sensor mounting location on wall as shown in picture. New 120VAC will need installed, +/- 30ft run from panel. If needed, any wall/floor penetrations will be completed by NPS.

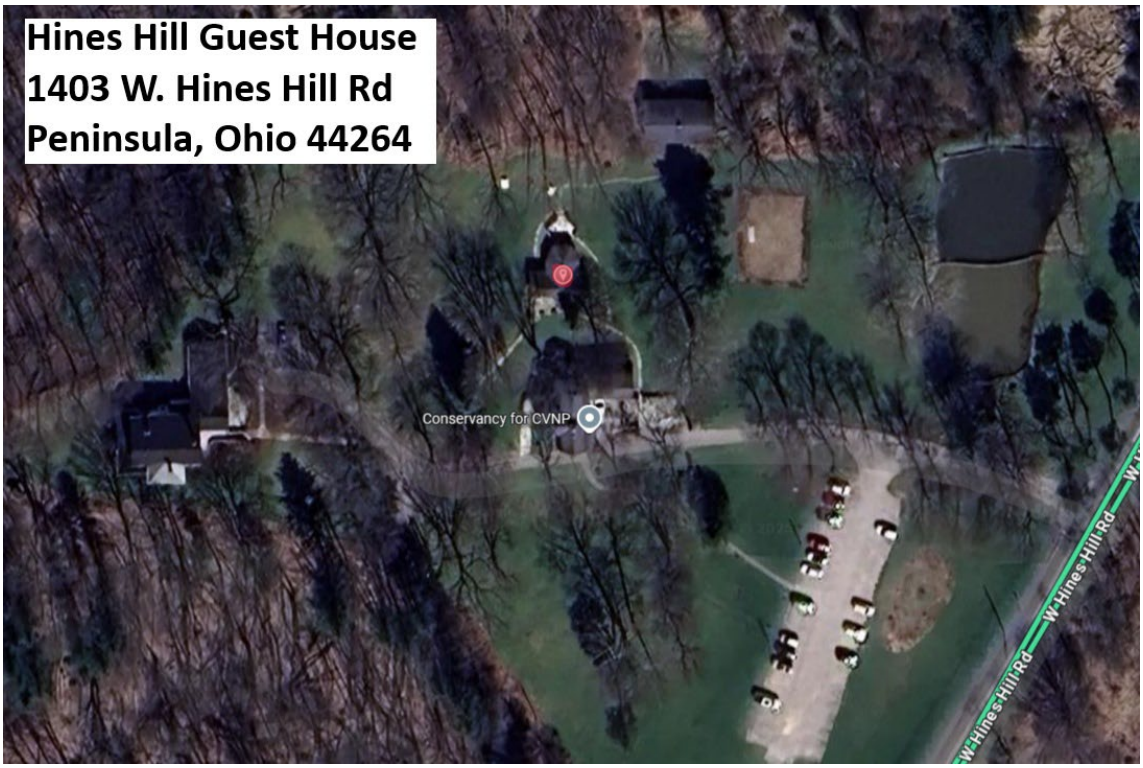
Dzerzynski House: Connect sample inlet to exisitng 1” copper. Analyser/sensor mounting location on wall as shown in picture.

Boston Store: Connect sample inlet to exisitng 3/4” copper. Remove exisitng pipe insulation as needed to make connection. Analyser/sensor mounting location on wall as shown in picture. New 120VAC will need installed, +/- 50ft run from panel. If needed, any wall/floor penetrations will be completed by NPS.

Hines Hill Conference Center: Connect sample inlet to exisitng 3/4” copper. Analyser/sensor mounting location on wall as shown in picture.



Hine Hill Guest House: Connect sample inlet to exisitng 3/4” copper. Analyser/sensor mounting location on wall as shown in picture.



Lock 29 Restrooms: Connect sample inlet to exisitng 1” copper. Analyser/sensor mounting location on wall as shown in picture.

Savacoal House: Connect sample inlet to exisitng 3/4” copper. Analyser/sensor mounting location on wall as shown in picture.

Stanford House: Connect sample inlet to exisitng 1” copper. Analyser/sensor mounting location on wall as shown in picture.