

Scope of Work

Sampling, Monitoring and Analysis

For the National Institute of Standards and Technology, Gaithersburg, Maryland

1. Background

The National Institute of Standards and Technology (NIST) is a Bureau within the Department of Commerce. NIST's mission is "to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life." NIST was founded in 1901 as the nation's first federal physical science research laboratory. For more than 100 years, the NIST has helped to keep U.S. technology at the leading edge.

This work specified herein will be conducted at the NIST Gaithersburg, Maryland Site. This site encompasses 579 acres and includes over 60 Buildings.

2. Scope of Work

The Contractor shall complete quarterly sampling and analysis of NIST wastewater as specified below and submit quarterly analytical reports to NIST documenting the analytical results.

On an as needed basis, the contractor shall analyze water samples collected by NIST for a list of analytes shown in Table 3 of this scope of work.

3. Specific Tasks

3.1 Quarterly Wastewater Sampling, Monitoring and Analysis

Sampling, monitoring and analysis of NIST wastewater shall be conducted as follows:

- a. Sampling and monitoring shall be conducted at the NIST Gate "E" manhole/flow weir.
- b. Sampling and monitoring shall be conducted on two calendar days during each quarter of the calendar year (total of eight days per year). On each of the calendar days selected for sampling the following shall be accomplished:
 - i. A 12-hour flow proportional sample shall be collected from 0630 to 1830 on each sampling day for laboratory analysis. Actual sampling start and stop times shall be reported, but shall begin at or before 0630 and end at or after 1830.
 - ii. The total sample volume collected each day shall be at least four liters and the actual quantity collected shall be reported.
 - iii. Each composite sample shall be analyzed for the parameters listed in Table 1 by the analytical methods also listed in Table 1.
(See section viii below. If pH data is invalid for a calendar day, collected composite and grab samples shall not be analyzed for that day)
 - iv. Two grab samples shall be collected on each calendar day that sampling is conducted. The grab samples shall be collected at least 15 minutes apart. The grab samples shall be composited in the laboratory. The grab sample collection times and compositing time shall be recorded and reported. Each composited grab sample shall be analyzed for Oil and Grease (Nonpolar Petroleum)/TPH and Fats, Oil and Grease (FOG, Polar).

- v. The total flow in gallons through the Gate "E" manhole/weir shall be measured for 24 hours on each calendar day that sampling is conducted and shall be reported. The measurement device must be capable of measuring flows with a maximum deviation of less than 10% for true discharge rates throughout the range of expected discharge volumes.
- vi. pH shall be monitored continuously for 24 hours on each calendar day that sampling is conducted with pH readings recorded every minute. All pH readings shall be reported and shall be graphed on a line chart of pH values versus time.
- vii. pH meters shall be calibrated using pH 7 and pH 10 buffers at the beginning and end of each 24-hour sampling day. Calibration checks shall also be conducted at the beginning and end of each 24-hour sampling day. Beginning and ending calibration checks must be with +/- 0.2 standard units from the buffer standard or the pH data shall be considered invalid. The calibrations and calibration checks shall be documented and reported.
- viii. If any pH calibration checks are invalid (outside of the allowable standard deviation noted in item vii above) the entire 24-hour pH monitoring must be re-accomplished until two full calendar days of valid pH data is obtained for the quarter. In addition, if pH data is invalid for a calendar day, collected composite and grab samples shall not be analyzed for that day. New composite and grab samples shall be collected on a day when valid pH monitoring data is available. Any resampling and reanalysis required due to invalid pH data, shall be completed within two weeks of noting the invalid data and shall have no additional cost to NIST.
- ix. The contractor shall be responsible for disposal of all wastewater samples after completion of analysis.

3.2 Additional water Sample Analysis

On an as needed basis, NIST will request analysis of water samples for the analytes listed in Table 3. There is no minimum number of analyses to be requested. NIST anticipates the need for approximately 20 samples to be analyzed per year.

NIST will:

- a. Notify the contractor as soon as the need for additional water analysis is identified,
- b. Inform the contractor of the number of samples that will need to be analyzed,
- c. Schedule a date and time for pick-up of the samples,
- d. Collect the samples and fill out a chain of custody form.

The contractor shall be responsible for the following:

- e. As requested, pick up the samples from NIST,
- f. Transport the samples to the contractor's laboratory,
- g. Analyze the samples for the requested analytes, and
- h. Provide NIST an analytical data report with the requested analysis results and the results of quality assurance tests required by the analytical method.
- i. Three day turn-around of analytical results is required.

4. Deliverables and Deliverable Due Dates		
<u>Deliverables</u>	<u>No. of Copies</u>	<u>Completion Dates</u>
Quarterly Analytical Reports Including: <ul style="list-style-type: none"> Analytical results for methods listed in Table 1 Total Flow during sampling periods Composite Sampling start/stop times and sample volumes Grab sample collection and composite times All pH monitoring data and graphs pH meter calibration times and calibration check results Chain of custody forms for sample transport. 	1 electronic copy e-mailed to the NIST Contract Officer's Representative (COR)	Each Calendar Year analytical reports shall be submitted as follows: Quarter 1 Report: March 15 Quarter 2 Report: June 15 Quarter 3 Report: Sept. 15 Quarter 4 Report: -Dec. 15
Additional Water Sample Analysis Reports: <ul style="list-style-type: none"> Analytical results for requested analyses Chain of custody forms 	1 electronic copy e-mailed to the COR	Three (3) days after receipt of samples from NIST

5. Period of Performance and Place Of Performance

The period of performance for this contract shall be 1 year with 4 option years.

Sampling/monitoring work shall be performed at the NIST-Gaithersburg Site. Sample analysis shall be performed at the contractor's facility.

Facility/Building/Campus Closures: During anticipated closure of the NIST Campus due to declared training holidays, administrative leave granted to the entire government staff, or other closure, contract employees may not be required to perform services, unless specifically scheduled. In the event of unplanned closure of the facility due to natural disasters, emergency, or severe weather, contract workers who are scheduled to work, shall not report to work unless notified differently by the COR.

6. Government-Furnished Property, Data and/or Information

All property, data and information provided by the Government in the performance of this task remains the property of the Government and shall be surrendered to the government upon completion or termination of this requirement. Likewise, all deliverables generated under this requirement remain the property of the Government.

The NIST COR will provide the following to the Contractor:

- a. Process Contractor's personnel through NIST security for site visits.
- b. Escort Contractor personnel to all facilities as needed.
- c. The COR will be available to answer questions.

7. Risk Assessment

The HSPD-12 Security Risk Level assigned to this contract is: "No Risk Level Required."

8. Performance Requirement Summary			
Desired Output	Required Service	Performance Standard	Monitoring Method
Monitoring, analysis and reporting conducted in accordance with published analytical methods and in accordance with this SOW.	The required services include all site visits required to conduct the required task and prepare all of the required deliverables along with the preparation and submission of the deliverables.	All deliverables must meet 100% of the requirements of the specified analytical method. The overall quality of the deliverables must meet the acceptance of NIST reviewers.	Sampling/monitoring techniques and Analytical Reports will be reviewed by the COR.

9. Deliverables And Payment Schedule

The Contractor may invoice the Government upon notice from the COR that a given deliverable has been received and is of acceptable quality.

10. Contractor's Minimum Qualifications

To ensure the integrity of samples is maintained, the Contractor's laboratory shall be within 50 miles of the NIST Gaithersburg Site.

The Contractor Staff performing the sampling/ monitoring shall have at least 5 years of experience performing wastewater sampling/monitoring in Montgomery County or Prince Georges County, Maryland (Washington Suburban Sanitary Commission regulatory area).

The contractor's laboratory shall have the following certifications:

A2LA Environmental

A2LA Biology

State of Maryland (Drinking Water)

11. General Information

This work does not involve confidential or proprietary data. The certification and accreditation requirements of Clause 1352.239-73 do not apply and a security accreditation package is not required.

Misconduct or Disruption of Services: At any time during the performance period of this contract, the Contracting Officer, Technical Information Contact (TIC) or Operating Unit (OU) Director may request the Contractor employee be immediately removed from the premises if they determine, at their unilateral discretion, that any of the Contractor employee's actions or impaired state to be a disruption to the workforce.

Safety: The Contractor employee shall be responsible for knowing and complying with all installation safety prevention regulations. Such regulations include, but are not limited to, general safety, fire prevention, and waste disposal.

Patent Rights: The Government retains a Government use license to all inventions arising from this work.

Security: NIST is a restricted campus. An identification badge is required for access for entry into buildings and also is shown to the armed Security Police when entering the campus.

Identification Badges: Contractor employees shall comply with NIST identification and access requirements. The Contractor employee is responsible for absences due to expired identification and access documents. Each Contractor employee shall wear a visible identification badge provided by the NIST Security Office. The badge must show the full name, title, and if required by NIST, the words "Contractor" in front. The Contractor employee shall turn in the NIST identification badge and vehicle pass to the TIC or Contracting Officer (CO) upon termination of their services under this contract.

Vehicle Registration: All Contractor employees must register their vehicles with the NIST Security Office to gain access to the campus. A valid driver's license, Government-furnished civilian ID, proof of insurance and current registration must be presented to the NIST Security Office, at which time a NIST vehicle pass will be issued. The pass shall be displayed on the vehicle's rear view mirror in accordance with instructions. The Contractor employee shall follow NIST procedures for removal and turn-in of the vehicle pass upon termination of services under this contract.

Media Inquiries: The Contractor employee shall not respond to any media inquiries. Any inquiries from the media shall be immediately relayed to the TIC and/or CO. There shall be no interviews, comments, or any other response without the knowledge and approval of the NIST Director.

TABLE 1 QUARTERLY WASTEWATER ANALYSIS PARAMETERS AND METHODS		
ANALYSIS/PARAMETER	SAMPLE TYPE	ANALYTICAL METHOD
Cadmium (T)	Composite	EPA 200.8
Copper (T)	Composite	EPA 200.8
Lead (T)	Composite	EPA 200.8
Chromium (T)	Composite	EPA 200.8
Molybdenum (T)	Composite	EPA 200.8
Nickel (T)	Composite	EPA 200.8
Silver (T)	Composite	EPA 200.8
Zinc (T)	Composite	EPA 200.8
Oil and Grease (Nonpolar, Petroleum)/TPH	Grab	EPA 1664A
Fats, Oil and Grease (FOG, Polar)	Grab	EPA 1664A
pH - 24 hour monitoring/readings recorded each minute/ Minimum and Maximum recorded for each 24 hour period		SM(20) 4500-H B
Total 12- hour Composite Sample Volume		
Flow (gpd)		
Time: Start: 0630		
Stop: 1830		

TABLE 2 COST PROPOSAL FOR WASTEWATER SAMPLING/MONITORING	
QUARTERLY REQUIREMENTS	UNIT COST PER QUARTER
Two days of wastewater sampling, monitoring, analysis and reporting as described in Section 3.1 and Table 1 of this SOW	

TABLE 3 ADDITIONAL WATER SAMPLE ANALYSIS TO BE CONDUCTED AS DESCRIBED IN SECTION 3.2 OF THIS SOW		

AND THE COST PROPOSAL FOR THESE SERVICES		
ANALYTE	METHOD	UNIT COST PER SAMPLE ANALYZED 3-DAY TURN-AROUND
Coliform Bacteria		
E-Coli		
Lead		
Copper		
Sample Pick up from NIST and delivery to the laboratory	N/A	
	Cost per sample:	

TABLE 4**TOTAL ANNUAL COST FOR CONTRACT SERVICES**

	UNIT COST		ANNUAL COST
QUARTERLY WASTEWATER SAMPLING/MONITORING	\$_____ per quarter	x4 quarters	
ADDITIONAL WATER SAMPLE ANALYSIS TO BE CONDUCTED AS DESCRIBED IN SECTION 3.2 OF THIS SOW	\$_____ per sample	x30 samples	
Total Annual Cost:			