

JUSTIFICATION AND APPROVAL

Justification for Other Than Full and Open Competition (FAR 6.3)

1. Contracting Agency and Activity. The Department of the Interior, United States Geological Survey (USGS), Office of Acquisition and Grants, plans to contract by means other than full and open competition. This document sets forth the justification and approval for use of one of the exceptions to full and open competition allowed under the Competition in Contracting Act (CICA) of 1984.

2. Nature of Action Being Approved. The U.S. Geological Survey (USGS), Associate Director for Water, Office of Water Quality requests a sole source competition acquisition with the following manufacturer and instrument models:

N-Con Systems Company, Inc., P.O. Box 809, 180 North Street, Crawford, Georgia, 30630, for the purchase of Atmospheric Deposition Samplers and Mercury Deposition Network Samplers.

3. Description of Supplies or Services. Quantity 82 of the Atmospheric Deposition Samplers and quantity 2 of the Mercury Deposition Samplers for the USGS, Office of Water Quality Atmospheric Deposition Program for deployment at the National Atmospheric Deposition Program network sites. The specifications for the Atmospheric Deposition Samplers are as follows:

Note: The specifications for the Mercury Deposition Sampler are the same as below with the exception that the specification for resolution is Collection of ≥ 5 ml of sample per 0.05 cm liquid equivalent depth.

Range	Collection for representative precipitation samples of 0-25 cm liquid equivalent depth unattended (without user intervention)
Resolution	Collection of ≥ 32 ml of sample per 0.05 cm liquid equivalent depth.
Sensitivity	Instrument shall expose collection vessel to precipitation within 15 seconds of the onset of precipitation of any type or rate and shall end exposure within 120 seconds of cessation of any form of precipitation.
Accuracy, sample volume in relation to rain gage	For rates of precipitation less than 2.5 cm per hour, +0/- 20% for liquid equivalent depths of 0 to 0.25 cm of precipitation. +0/- 10% for liquid equivalent depths > 0.25 cm of precipitation
Real Time Reporting	Instrument shall report initiation and ending of sample collection array exposure in real time.

False reporting	Instrument shall not expose sample collection array or report any exposure, in the absence of any form of precipitation.
Low temperature operational limit	-45 C fully operational
High temperature operational limit	+50 C fully operational
Low temperature withstanding limit	-55 C
High Temperature withstanding limit	+55 C
Operational wind limits	15 m/s steady, 25 m/s gust (5 second), fully operational. All aspects of sampler operation shall be unbiased with respect to wind direction.
Withstanding wind limits	35 m/s steady, 60m/s gust (5 second)
Height	Sampler height shall not exceed 5 feet
Materials	All external surfaces will be constructed of a weather resistant, non-reactive material.
Reliability, maintainability, availability	Periodic maintenance interval \geq 90 days Mean time between failure $>$ 1000 days
Error recovery	Sampler shall have provision for automatic reset recovery in the event of transient equipment malfunction, (such as may occur during jamming of drive mechanism or power interruption)
Sample splash contamination	The surfaces of the instrument shall be designed to eliminate the splash of raindrops off the surfaces from affecting the chemical quality of sample collected or by affecting the sensitivity of the precipitation sensing mechanism. Rhodamine dye applied to adjacent collector surfaces shall not be found in sample containers following simulated or actual precipitation events
Collector orifice and container materials	Sample orifice and container materials shall be constructed of materials appropriate for each NADP network program.
Sample cover seal	Each sample shall be isolated by an weather-resistant seal in the absence of precipitation
Materials contamination	Samples shall not be contaminated by any material used to channel sample between orifice and collector vessel or by residues from past events. Sample orifice cover shall not contaminate samples.
Sample collection period	Sampler shall be capable of operating without site operator assistance for one-week periods.
Anti-icing properties	The surfaces of the instrument shall be designed so as to eliminate the build-up of snow, ice or rime from interfering in proper

	operation of the sampler. The cover shall not seize during icing conditions.
Electrical Power	Sampler shall be powered by 110 V AC, 10 amp circuit line power or by external 12 V DC battery with use of an inverter. Overload protection via an automatic or user resettable circuit breaker will be provided.
Height above ground	Sampler orifices and precipitation sensor should be at the same height as the accompanying reference rain gauge.
Data reporting and failure indication	Instrument should provide a status report through a data port to an external data logger indicating operational sampler status. A simplified on-site status checking capability by "ready lights" or other means shall be provided.
Lightning protection	Field induced and other phenomena surge shall not damage instrument
Safety	Moving parts shall be shielded or employ other safety features that will preclude injury to persons operating or servicing the equipment.
Grounds maintenance	It shall be possible to bring a lawnmower or string trimmer up to the base of the sampler. String trimmers shall not damage collector base.

4. Estimated Dollar Value. The estimated dollar value is [REDACTED] per Atmospheric Deposition Sampler @ quantity 82 and [REDACTED] per Mercury Deposition Sampler @ quantity 2).

5. Statutory Authority. The proposed action may be awarded without full and open competition under 41 U.S.C. 253(c)(1), as implemented in FAR 6.302-(1)(a), Unique Source.

6. Rationale Supporting Use of Citation in No. 5. The N-Con Systems, Inc. Atmospheric Deposition Samplers are the only deposition samplers that are currently sold and approved for precipitation monitoring sites within the National Atmospheric Deposition Program (NADP) of which the USGS is a participant. It is a network requirement under interagency agreements of the NADP Executive committee that all participating agencies operating NADP sites must purchase an approved sampler when establishing a new site or when purchasing new replacement equipment for existing NADP sites. The Aerochem Metrics model 301 sampler is approved for continued use at existing sites, however it is no longer manufactured or marketed and therefore for new sites and for sites wishing to upgrade samplers, N-Con Systems, Inc. Atmospheric Deposition and Mercury Samplers is the only commercially available and NADP approved model.

The NADP is a public, nonprofit, unincorporated, interstate association of parties interested in atmospheric deposition and its effects. It is structured as a cooperative program that represents coordinated efforts of many individuals in federal, state, academic, and private organizations to operate monitoring sites, report data, and oversee research activities related to atmospheric deposition. Membership in NADP is open to individuals and institutions interested in participating in any aspect of atmospheric deposition monitoring and/or research stemming from NADP data. This organizational structure is consistent with State Agricultural Experiment Station (SAES) Guidelines for Multi-state Research Activities.

The final approval of the N-Con samplers was made at the NADP Network Operations Subcommittee and Executive Committee meetings on October 19, 2010 and is documented on the equipment modernization section of the NADP website at the following URL:
<http://nadp.isws.illinois.edu/newissues/newequip.aspx>.

The USGS Atmospheric Deposition Program for the NADP seeks to procure the samplers to upgrade all USGS-NADP sites to approved models of new atmospheric deposition samplers. Purchase of these specific deposition samplers is required for this objective. The existing samplers at USGS-NADP sites were procured in 1982 and currently experience a much higher than acceptable rate of equipment failure. The manufacturer of these samplers is no longer in business.

7. Other Information.

In 1999, NADP began to investigate various commercially-available atmospheric deposition samplers that collect all types of precipitation reliably and accurately, and that are equipped to produce a remotely accessible digital electronic signal. Many bench tests and multi-year field tests were conducted and following analysis of these tests, N-Con Systems, Inc. samplers were subsequently approved for use at the NADP sites. NOAA, as an NADP participant, funded the development of a sampler by YES, Inc. through the NOAA SBIR program, however, NADP bench and field trials of that sampler identified serious and numerous deficiencies that were not corrected or resolved. All NADP decisions are documented in NADP minutes available at <http://nadp.sws.uiuc.edu/committees/minutes.aspx> Additional information on NADP is provided at <http://nadp.sws.uiuc.edu/>

8. The Efforts to Identify Additional Sources Including the Market Research Conducted.

Competition does not currently exist in the reseller market for these samplers. Future requirements will be competed to the maximum extent practical. The NADP Executive Committee has only approved the new and in-production Atmospheric Deposition and Mercury Atmospheric Deposition samplers by N-Con Systems, Inc.

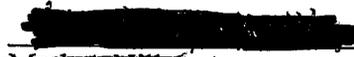
This acquisition will be synopsisized in FedBizOpps as required by FAR 5.201 along with the date of the notice published as part of market research (10.002), presolicitation notice (15.404), and/or in fulfillment of FAR 5.201.

9. Future Plans to Permit Competition.

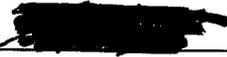
The network has in the past and will continue to test additional new atmospheric deposition samplers models on an ongoing basis, and when/if other atmospheric deposition samplers are found to meet network requirements for performance, reliability and practicality for use in a standardized network mode of operation, these samplers will be brought before the interagency Network Operations and Executive Committee for evaluation of testing results and consideration for approval.

10. Recommendation and Certification from Program Office

Based on the above, I recommend this acquisition be conducted on the basis of other than full and open competition. I certify that technical data which form a basis for this justification that are the responsibility of technical or requirements personnel are complete and accurate.



Signature



Date

12-7-10

Office of Water Quality

11. Certifications from the Contracting Officer:

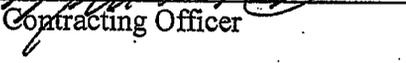
The Contracting Officer has determined that the anticipated cost to the Government will be fair and reasonable based on a published price list for the samplers.

All of the requirements of the Competition in Contracting Act, (41 U.S.C. 253), as implemented in the Federal and Interior Acquisition Regulations, have been considered in preparing this justification. This justification is accurate and complete to the best of my knowledge and belief.

12. Approvals



Contracting Officer



Date

12-7-10



Date

12/8/2010



Date

12/15/2010

Search

- About NADP
- QA Information
- Cooperating Agencies
- Contacts
- Equipment Modernization

Equipment Modernization

NTN Collector

At the NADP Executive Committee meeting on October 19th, 2010, a new wet-deposition collector was accepted for use in the NADP/National Trends Network for collection of precipitation chemistry samples. The new collector is the N-CON Systems Co., Inc.'s Atmospheric Deposition Sampler (Model 00-120-2, ADS/NTN). This new sampler was tested following the NADP requirements and was deemed to have met these standards and to fulfill the needs of the network. Therefore N-CON Systems ADS/NTN sampler is now acceptable for use in collecting wet deposition samples.

- [Announcement](#)
- [Brochure](#)

Rain gages and Wind Screens

With a goal of maintaining an efficient measurement system that meets the data and information needs of scientists, policy-makers, educators, and the public, NADP committees in 2006 passed two resolutions requiring equipment changes for all NTN, MDN, and AIRMoN sites. The first resolution requires all sites to install an approved electronic precipitation gage by the end of 2011. The second resolution requires those sites receiving at least 20 percent of their annual precipitation as snow to install an Alter-type wind shield.

- [Approved Precipitation Gages](#)
- [Wind Screens](#)

Upcoming Meetings

Spring 2011 NADP Subcommittee Meeting
May 3-5, 2011
Pensacola, FL

Recent News

NADP has approved a new [Precipitation Collector](#). The Atmospheric Mercury Network ([AMNet](#)) is NADP's newest network. Presentations from the 2009 Annual Meeting and Scientific symposium are [now online](#).