



RFQ No. W912DW-04-Q-0048

**US Army Corps
of Engineers®**
Seattle District

Project: TOTAL DISSOLVED GAS MONITORING PROGRAM

**LOCATION: CHIEF JOSEPH DAM, BRIDGEPORT WA
LIBBY DAM, LIBBY MO
ALBENI FALLS DAM, OLDTOWN, ID**

SERVICE SOLICITATION AND SPECIFICATIONS

**Closing Date: 18 FEBRUARY 2004
Closing Time: 9:00 AM LOCAL TIME PST**

REMARKS: Quotes may be faxed to (206) 764-6817, Attention: Patricia Ortiz, or mailed to US Army, Corps of Engineers, Seattle District, Attention: Patricia Ortiz, P.O. Box 3755, Seattle, WA 98124-3755.

REQUEST FOR QUOTATIONS <i>(THIS IS NOT AN ORDER)</i>		THIS RFQ <input checked="" type="checkbox"/> IS <input type="checkbox"/> IS NOT A SMALL BUSINESS SET-ASIDE			PAGE 1	OF PAGES 24
1. REQUEST NO. W912DW-04-Q-0048	2. DATE ISSUED 09-Feb-2004	3. REQUISITION/PURCHASE REQUEST NO. W68MD9-4014-7912	4. CERT. FOR NAT. DEF. UNDER BDSA REG. 2 AND/OR DMS REG. 1	RATING		
5a. ISSUED BY USA ENGINEER DISTRICT, SEATTLE ATTN: CENWS-CT 4735 EAST MARGINAL WAY SOUTH SEATTLE WA 98134-2329			6. DELIVER BY (Date) SEE SCHEDULE			
			7. DELIVERY <input checked="" type="checkbox"/> FOB DESTINATION <input type="checkbox"/> OTHER (See Schedule)			
5b. FOR INFORMATION CALL: (Name and Telephone no.) (No collect calls) PATRICIA A ORTIZ 206-764-3516			8. TO: NAME AND ADDRESS, INCLUDING ZIP CODE			
			9. DESTINATION (Consignee and address, including ZIP Code) SEE SCHEDULE			
10. PLEASE FURNISH QUOTATIONS TO THE ISSUING OFFICE IN BLOCK 5a ON OR BEFORE CLOSE OF BUSINESS: (Date) 18-Feb-2004						
IMPORTANT: This is a request for information, and quotations furnished are not offers. If you are unable to quote, please so indicate on this form and return it to the address in Block 5a. This request does not commit the Government to pay any costs incurred in the preparation of the submission of this quotation or to contract for supplies or services. Supplies are of domestic origin unless otherwise indicated by quoter. Any representations and/or certifications attached to this Request for Quotations must be completed by the quoter.						
11. SCHEDULE (Include applicable Federal, State, and local taxes)						
ITEM NO. (a)	SUPPLIES/ SERVICES (b)	QUANTITY (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	
SEE SCHEDULE						
12. DISCOUNT FOR PROMPT PAYMENT		a. 10 CALENDAR DAYS %	b. 20 CALENDAR DAYS %	c. 30 CALENDAR DAYS %	d. CALENDAR DAYS No. %	
NOTE: Additional provisions and representations <input type="checkbox"/> are <input type="checkbox"/> are not attached.						
13. NAME AND ADDRESS OF QUOTER (Street, City, County, State, and ZIP Code)			14. SIGNATURE OF PERSON AUTHORIZED TO SIGN QUOTATION		15. DATE OF QUOTATION	
			16. NAME AND TITLE OF SIGNER (Type or print)		TELEPHONE NO. (Include area code)	

Section A - Solicitation/Contract Form

SMALL BUSINESS SET-ASIDE – LARGE BUSINESSES WILL NOT BE CONSIDERED

NOTES

1. REPRESENTATIONS AND CERTIFICATIONS CONTAINED HEREIN MUST BE COMPLETED BY QUOTERS AND RETURNED WITH OFFERS.

2. MARKING OF QUOTE ENVELOPES: ENVELOPES SHALL BE PLAINLY MARKED AS FOLLOWS:

QUOTE FOR: CONDUCT TOTAL DISSOLVED GAS PROBE CALIBRATION AND MAINTENANCE, WATER YEAR 2004
CHIEF JOSEPH DAM, LIBBY DAM, AND ALBENI FALLS

REQUEST FOR QUOTE NO.: W912DW-04-Q-0048

CLOSING DATE AND TIME: 18 FEB 2004, 9:00 AM. Local Time

AMENDMENTS NUMBERED _____ HAVE BEEN RECEIVED

3. Responses may be faxed or emailed until the date and time set for closing. Attention Faxes to Patricia A. Ortiz, (206) 764-3516. Email: patricia.a.ortiz@usace.army.mil.

4. CONTRACTORS OUTSIDE EDI SHALL BE ALLOWED TO QUOTE. **CONTRACTORS ARE REQUIRED TO SUBMITT QUESTION FORMS WITH QUOTE.**

5. Pricing will be evaluated inclusive of Base plus Option Years.

6. ANY CONTRACTOR RECEIVING AN AWARD IS REQUIRED TO BE REGISTERED IN THE CCR (CENTRAL CONTRACTING REGISTRY). LACK OF REGISTRATION IN THE CCR DATABASE WILL MAKE AN OFFER INELIGIBLE FOR AWARD.

7. *AWARD SHALL BE MADE TO THE TECHNICALLY ACCEPTABLE RESPONSIVE RESPONSIBLE OFFEROR, PRICE IS CONSIDERED SECONDARY*

8. ELECTRONIC FUNDS TRANSFER (EFT): Effective 99 Jun 01, the Government will make all payments by EFT (unless the Government VISA credit card is accepted). The only exceptions are: 1) Foreign Vendors; 2) Government Agencies, and 3) One time payments. The EFT forms and instructions are on the USACE Finance Center (UFC) Web Page; www.fc.usace.army.mil The UFC points of contact for this action are Ms. Nita Clower, 901/874-8542 and Mr. Michael Rye, 901/874-8543.

9. CONTRACTOR IS REQUIRED TO PROVIDE THE FOLLOWING INFORMATION WITH YOUR QUOTE.

Federal Taxpayer's ID Number: _____

DUNS Number: _____

Remit to Address:

Company Name: _____

Address: _____
City/State/Zip: _____

PROSPECTIVE OFFERORS : The Director of Defense Procurement has issued a final rule amending the Defense Federal Acquisition Regulations Supplement (DFARS) to require contractors to be registered in the DOD Central Contractor Registration (CCR) for awards resulting from solicitations issued after May 31, 998.

This rule more efficiently implements the Debt Collection Improvement Act of 1996, as it requires contractors to be registered in CCR for consideration of future solicitations, awards, and payment. Registration is required prior to award of any contract, basic agreement, basic ordering agreement, or blanket purchase agreement from a solicitation issued after May 31, 1998. **LACK OF REGISTRATION IN THE CCR DATABASE WILL MAKE AN OFFER INELIGIBLE FOR AWARD.**

The web site may be accessed at <http://ccr/edi/disa.mil/>. You may call 1-888-227-2423 to obtain a Registration Packet or to register On Line at www.acq.osd.mil/ec.

ANNOUNCEMENT TO BIDDERS/OFFERORS

Due to recent national events Seattle District US Army Corps of Engineers shall be conducting business under heightened security for the foreseeable future.

Access to Federal Center South, 4735 E Marginal Way S, Seattle WA 98124 will be through the front Lobby only. The building is under Federal Protective Service, which means that persons entering the facility are subject to inspection; including purses, packages, etc. All deliveries shall be thoroughly inspected. In addition, visitors may be required to be escorted by Corps personnel while in the building.

Please allow sufficient time to deliver your bid/proposal so that it reaches the Contract Specialist by the required date and time.

For any questions please contact the Contract Specialist assigned to your project or check our website at www.nws.usace.army.mil for up-to-date information.

INSTRUCTIONS, CONDITIONS, AND NOTICES TO FIRMS

Introduction

This request for quotation contains evaluation factors for the Total Dissolved Gas Monitoring Project in accordance with the enclosed Statement of Work.

Evaluation and award procedures: Sufficient material must be included in the proposal to allow the Government to evaluate the technical proposal. If sufficient material for any of the factors listed and/or material submitted does not meet the requirements specified in the RFQ the proposal would be determined unacceptable. Those offerors not meeting the requirement of any of the factors shall be determined to be non-acceptable and receive no further consideration. Technical proposal shall be evaluated on an acceptable and not acceptable basis only. Award will be made to the lowest priced technically acceptable proposal. However, if after initial evaluation of the proposals, if all proposals are determined to be not acceptable, at the Contracting Officer's discretion, all firms may be contacted for written or oral discussions. As a result of discussions, offerors may be required to make revisions to their initial offers.

Price Proposal: Price is considered equally important to the Technical Evaluation Factors. For those proposal which have been deemed technically acceptable, price will become the deciding factor upon which award will be made. Accordingly, Award will be made to the offeror whose proposal is determined to be technically acceptable and at the lowest price. Price is considered independently from technical factors. Price will be reviewed for completeness reasonableness and realism. The review of price will also aid in the determination of the offer's understand of the work and the offeror's ability to perform this contract.

Source Selection Board: The Contracting Officer may establish a Source Selection Board to conduct an evaluation of each proposal received in response to this solicitation. The evaluation will be based exclusively on the merits and contents of each proposal and any subsequent submission required. The board will not consider any information incorporated by reference.

Evaluation Criteria

Technical Evaluation Factors for Award: The following criteria will be utilized as evaluation factors for Award. Contractors are to submit the required documentation to demonstrate they meet the requirement of the criterion listed below. An unacceptable determination on any one criterion will deem the entire proposal **to be unacceptable**.

A. Contractor's experience within the past 3 years with TDG equipment

Provide information detailing at least two previous user experiences with the operation, repair, and maintenance of (1) Hydrolab MiniSonde TDG sensors, (2) Sutron Data Collection Platform (DCP) equipment, and (3) Geomation DCP equipment. Include reference data for each project used in your description, including project dates and location.

B. Contractor's recent experience within past 3 years with projects of a similar nature

Provide information detailing at least two previous jobs similar in nature to those proposed in this scope of work. Include reference data for each project used in your description, including contact name, address and phone number. The Seattle District Corps of Engineers reserves the right to check references.

C. Success of contractor in completing projects within the past 3 years on Schedule and within budget.

Provide information detailing two previous experiences with successfully completing projects of a similar nature on time and within budget. Include reference data for each project used in your description, including contact name, address and phone number. The Seattle District Corps of Engineers reserves the right to check references.

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	<p>BASE YEAR-CHIEF JOSEPH DAM PROVIDE ALL LABOR AND MATERIALS TO CONDUCT TOTAL DISSOLVED GAS MONITORING PROGRAM AT CHIEF JOSEPH DAM. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ONE GOVERNMENT PROVIDED TDG SENSORS DURING THE PERIOD OF 1 APRIL 2004 TO 15 SEPTEMBER 2004. CONTRACTOR SHALL PROVIDE MONTHLY AND FINAL REPORTS IN ACCORDANCE WITH THE SCOPE OF WORK, SCHEDULE, AND DELIVERABLES.</p> <p>INSTALLATION OF TWO (2) SENSORS = \$ _____</p> <p>MAINTENANCE RATES: PER MONTH \$ _____ X 5.5 MO = \$ _____</p> <p>PURCHASE REQUEST NUMBER: W68MD9-4014-7912</p>		Lump Sum	_____	_____
				NET AMT	_____

LINE ITEM 0002 IS RESERVED FOR FUNDING PURPOSES FOR LINE ITEM 0001

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003	<p>BASE YEAR- LIBBY DAM PROVIDE ALL LABOR AND MATERIALS TO CONDUCT TOTAL DISSOLVED GAS MONITORING PROGRAM AT LIBBY DAM. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ONE GOVERNMENT PROVIDED TDG SENSORS DURING THE PERIOD OF 1 APRIL 2004 TO 15 SEPTEMBER 2004. CONTRACTOR SHALL PROVIDE MONTHLY AND FINAL REPORTS IN ACCORDANCE WITH THE SCOPE OF WORK, SCHEDULE, AND DELIVERABLES.</p> <p>INSTALLATION OF TWO (2) SENSORS = \$ _____</p> <p>MAINTENANCE RATES: PER MONTH \$ _____ X 5.5 MO = \$ _____</p> <p>PURCHASE REQUEST NUMBER: W68MD9-4014-7912</p>	1	Lump Sum	_____	_____
				NET AMT	_____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004	<p>BASE YEAR-ALBENI FALLS DAM PROVIDE ALL LABOR AND MATERIALS TO CONDUCT TOTAL DISSOLVED GAS MONITORING PROGRAM AT ALBENI FALLS DAM. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ONE GOVERNMENT PROVIDED TDG SENSORS DURING THE PERIOD OF 1 APRIL 2004 TO 15 SEPTEMBER 2004. CONTRACTOR SHALL PROVIDE MONTHLY AND FINAL REPORTS IN ACCORDANCE WITH THE SCOPE OF WORK, SCHEDULE, AND DELIVERABLES.</p> <p>INSTALLATION OF TWO (2) SENSORS = \$ _____</p> <p>MAINTENANCE RATES: PER MONTH \$ _____ X 5.5 MO = \$ _____ PURCHASE REQUEST NUMBER: W68MD9-4014-7912</p>	1	Lump Sum	_____	_____
				NET AMT	_____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005	<p>1ST OPTION YEAR-CHIEF JOSEPH DAM PROVIDE ALL LABOR AND MATERIALS TO CONDUCT TOTAL DISSOLVED GAS MONITORING PROGRAM AT CHIEF JOSEPH DAM. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ONE GOVERNMENT PROVIDED TDG SENSORS DURING THE PERIOD OF 1 APRIL 2005 TO 15 SEPTEMBER 2005. CONTRACTOR SHALL PROVIDE MONTHLY AND FINAL REPORTS IN ACCORDANCE WITH THE SCOPE OF WORK, SCHEDULE, AND DELIVERABLES.</p> <p>INSTALLATION OF TWO (2) SENSORS = \$ _____</p> <p>MAINTENANCE RATES: PER MONTH \$ _____ X 5.5 MO = \$ _____ PURCHASE REQUEST NUMBER: W68MD9-4014-7912</p>	1	Lump Sum	_____	_____
				NET AMT	_____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006	1 ST OPTION YEAR-LIBBY DAM PROVIDE ALL LABOR AND MATERIALS TO CONDUCT TOTAL DISSOLVED GAS MONITORING PROGRAM AT LIBBY DAM. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ONE GOVERNMENT PROVIDED TDG SENSORS DURING THE PERIOD OF 1 APRIL 2005 TO 15 SEPTEMBER 2005. CONTRACTOR SHALL PROVIDE MONTHLY AND FINAL REPORTS IN ACCORDANCE WITH THE SCOPE OF WORK, SCHEDULE, AND DELIVERABLES. INSTALLATION OF TWO (2) SENSORS = \$ _____ MAINTENANCE RATES: PER MONTH \$ _____ X 5.5 MO = \$ _____ PURCHASE REQUEST NUMBER: W68MD9-4014-7912	1	Lump Sum	_____	_____
				NET AMT	_____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007	1 ST OPTION YEAR-ALBENI FALLS DAM PROVIDE ALL LABOR AND MATERIALS TO CONDUCT TOTAL DISSOLVED GAS MONITORING PROGRAM ATALBENI FALLS DAM. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ONE GOVERNMENT PROVIDED TDG SENSORS DURING THE PERIOD OF 1 APRIL 2005 TO 15 SEPTEMBER 2005. CONTRACTOR SHALL PROVIDE MONTHLY AND FINAL REPORTS IN ACCORDANCE WITH THE SCOPE OF WORK, SCHEDULE, AND DELIVERABLES. INSTALLATION OF TWO (2) SENSORS = \$ _____ MAINTENANCE RATES: PER MONTH \$ _____ X 5.5 MO = \$ _____ PURCHASE REQUEST NUMBER: W68MD9-4014-7912	1	Lump Sum	_____	_____
				NET AMT	_____

0008

1 Lump Sum

2ND OPTION YEAR-CHIEF JOSEPH DAM
 PROVIDE ALL LABOR AND MATERIALS TO CONDUCT TOTAL DISSOLVED
 GAS MONITORING PROGRAM AT CHIEF JOSEPH DAM. CONTRACTOR
 SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ONE
 GOVERNMENT PROVIDED TDG SENSORS DURING THE PERIOD OF 1 APRIL
 2006 TO 15 SEPTEMBER 2006. CONTRACTOR SHALL PROVIDE MONTHLY
 AND FINAL REPORTS IN ACCORDANCE WITH THE SCOPE OF WORK,
 SCHEDULE, AND DELIVERABLES.

INSTALLATION OF TWO (2) SENSORS = \$ _____

MAINTENANCE RATES:
 PER MONTH \$ _____ X 5.5 MO = \$ _____
 PURCHASE REQUEST NUMBER: W68MD9-4014-7912

NET AMT _____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0009		1	Lump Sum	_____	_____

2ND OPTION YEAR-LIBBY DAM
 PROVIDE ALL LABOR AND MATERIALS TO CONDUCT TOTAL DISSOLVED
 GAS MONITORING PROGRAM AT LIBBY DAM. CONTRACTOR SHALL BE
 RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ONE
 GOVERNMENT PROVIDED TDG SENSORS DURING THE PERIOD OF 1 APRIL
 2006 TO 15 SEPTEMBER 2006. CONTRACTOR SHALL PROVIDE MONTHLY
 AND FINAL REPORTS IN ACCORDANCE WITH THE SCOPE OF WORK,
 SCHEDULE, AND DELIVERABLES.

INSTALLATION OF TWO (2) SENSORS = \$ _____

MAINTENANCE RATES:
 PER MONTH \$ _____ X 5.5 MO = \$ _____
 PURCHASE REQUEST NUMBER: W68MD9-4014-7912

NET AMT _____

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0010		1	Lump Sum	_____	_____

2ND OPTION YEAR-ALBENI FALLS DAM
 PROVIDE ALL LABOR AND MATERIALS TO CONDUCT TOTAL DISSOLVED
 GAS MONITORING PROGRAM ATALBENI FALLS DAM. CONTRACTOR
 SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ONE
 GOVERNMENT PROVIDED TDG SENSORS DURING THE PERIOD OF 1 APRIL
 2006 TO 15 SEPTEMBER 2006. CONTRACTOR SHALL PROVIDE MONTHLY
 AND FINAL REPORTS IN ACCORDANCE WITH THE SCOPE OF WORK,
 SCHEDULE, AND DELIVERABLES.

INSTALLATION OF TWO (2) SENSORS = \$ _____

MAINTENANCE RATES:

PER MONTH \$ _____ X 5.5 MO = \$ _____

PURCHASE REQUEST NUMBER: W68MD9-4014-7912

NET AMT _____

SOW

STATEMENT OF WORK
Chief Joseph Dam, Libby Dam, and Albeni Falls Dam
Total Dissolved Gas Probe Calibration and Maintenance Water Year 2004

The Services provided under this contract are divided infor four sections, Statement of Work, Schedule, Deliveries and Evaluation Criteria

Task 1 – Installation and Removal

The contractor will install government owned and supplied Hydrolab MiniSonde total dissolved gas (TDG) probes at Chief Joseph Dam on the Columbia River, Libby Dam on the Kootenai River, and Albeni Falls Dam on the Pend Orielle River.

- The contractor will install two TDG probes at Chief Joseph Dam, one TDG probe at Libby Dam, and two TDG probes at Albeni Falls Dam by 1 April 2004.
- The contractor will maintain two additional TDG probes to be dedicated to Chief Joseph Dam, one additional TDG probe to be dedicated to Libby Dam, and two additional TDG probes to be dedicated to Albeni Falls Dam.
- The TDG probes will be maintained until 15 September 2004, after which time the Corps of Engineers will remove the probes.

Task 2 – Calibration and Maintenance

The contractor will calibrate and maintain the TDG probes following the US Army Corps of Engineers Northwest Division (USACE-NWD) Data Quality Criteria protocol provided in Attachment A. The calibration and maintenance will include, but not be limited to, the following points.

- Calibration and maintenance will be performed on a two-week cycle.
- TDG probes will be rotated on a two-week cycle at each station. The “extra” TDG probe for each site will be lab calibrated before its rotation into the field. Once it is deployed, the probe will be field calibrated and checked as described in detail in Attachment A.
- Laboratory calibration forms, field inspection forms, and field calibration logs will be completed during every field visit to the site, and will be provided to the Corps of Engineers within a week of each site visit.
- The contractor will prepare monthly calibration reports for all sites and provide them to the Corps of Engineers on a monthly basis.

Task 3 – Emergency Site Visits

In the event that the TDG system exhibits problems, such as data are not updated, data are outside of acceptable parameters, no data available etc., the contractor will visit the site within forty eight (48) hours of the problem notification, and correct the problem, if possible. In the event that real-time data reporting is not feasible, the contractor will work with the Corps to update the TDG database via post-processing of data.

Task 4 – Data Review

The contractor will review the quality of the data to identify and deal with questionable data. The data review process will include visually looking at the tables of data, filling out a data quality checklist, flagging questionable data, and evaluating how to best deal with suspect data (either by correcting the data or by deleting the data), and post-processing of data.

Task 5 – Data Analysis and Reporting

The contractor will provide the Corps of Engineers with a year-end water quality data report documenting the overall performance of the TDG probes with respect to data reliability, data quality, and data completeness. The contractor will follow USACE-NWD data quality assurance/quality control (QA/QC) protocols. An example of a water quality QA report can be found at: http://www.nwd-wc.usace.army.mil/tmt/wq/tdg_and_temp/2002/app_i.pdf.

Schedule

The contractor's services will continue through the end of the year 2004. Installation, calibration, and maintenance will be conducted from 1 April 2004 to 15 September 2004. A final year-end water quality data report will be completed by 15 November 2004.

Deliverables

The following deliverables will be required as part of the completion of this project:

Deliverables	Description
Field and laboratory calibration forms	Sent to the Corps project manager within a week of each site visit.
Monthly progress reports	A brief memorandum to be delivered to the Corps project manager that provides an update on data quality collected by the TDG probe, including laboratory and field inspection/calibration forms.
Year-end water quality report	Includes a review and analysis of data QA/QC.

ATTACHMENT A
DATA QUALITY CRITERIA

**DATA QUALITY CRITERIA
FOR FIXED MONITORING STATIONS
5 April 2002**

GENERAL OVERVIEW

As a general overview, the Data Quality criteria for fixed monitoring stations (FMS) include having two dedicated TDG probes for each site, which provides redundancy instead of redundant stations. The “extra” TDG probes for each site is lab calibrated before its bi-monthly rotation into the field. Once it is deployed, it is again calibrated and/or checked. The data from the FMS is sent to USGS and USACE-NWD. USGS reviews the data and performs corrections. There is a goal of 95% data completeness.

PROPOSED DATA QUALITY CRITERIA

The proposed data quality criteria for fixed monitoring station cover three main parts:

- 1. Calibration Protocols:** laboratory and field calibrations
- 2. Reviewing Data Quality:** data quality checks and dealing with suspect data
- 3. Completeness of Data**

The items are described as following:

CALIBRATION PROTOCOLS:

There are two general types of calibrations performed on Fixed monitoring stations (FMS): lab calibrations and field calibration.

Laboratory calibration:

There are four data quality criteria associated with laboratory calibration, including calibration of the secondary TDG standard; the secondary barometric pressure standard; the field instrument TDG sensor; and secondary standard thermistor. Each is described as follows:

1. Calibration of Secondary TDG Standard

Calibrate the TDG sensor at two points using the primary National Institute of Standards and Technology (NIST) standard. The TDG pressure must be +/- 2 mm Hg at both pressures; otherwise the secondary standard is recalibrated. Pressures at which the sensor is calibrated must bracket the expected range of field measurements. For an index of primary and secondary standards, see Table 1.

2. Calibration of Secondary Barometric Pressure Standard

Calibrate the secondary standard barometer at ambient barometric pressure to the NIST standard. The barometer must be +/- 1 mm Hg of the primary standard (NIST certified instrument) otherwise the secondary standard is recalibrated.

3. Calibration of Field Instrument TDG sensor

The two point TDG sensor calibration must agree within +/- 2 mmHg at both pressures, otherwise the sensor is recalibrated. Pressures at which the sensor is calibrated must bracket the expected range of field measurements.

4. Calibration of Secondary Standard Thermistor

The instrument's thermistor must agree within +/- 0.2°C with the primary NIST standard. This variance will be monitored and if the probe performs outside this range, it will be returned to the manufacturer for maintenance. A check or verification still constitutes a calibration and should be documented in records.

Field calibration

There are two data quality criteria associated with field calibration: Calibrations and Performance checks. Calibrations include two fixed points and two point TDG sensor calibration.

Calibrations:

1. **Two Fixed Points:** In order to reduce TDG calibration variability, two fixed points should be chosen and incorporated in the TDG calibration protocol. For example, calibrate the first point to ambient barometric pressure, and the second point to 200 mmHg over barometric pressure. The calibrated range for this example brackets 100-126 % TDG saturation. This ensures the same calibration curve is established each time for every instrument.
2. **Two Point TDG Sensor Calibration:** Following a two-week deployment, a two point TDG sensor calibration must agree within +/- 4 mmHg at both pressures. Pressures at which the sensor is calibrated must bracket the expected range of field measurements. If the pressure is not +/- 4 mmHg of the standard, the data will be considered "suspect" and handled as described in "Reviewing Data Quality".

Performance checks:

There are four data quality criteria associated with performance checks: TDG pressure compared to secondary standard; standby probes deployed; thermistor compared to secondary standard; and field barometer compared to secondary standard. Each is described as follows:

1. **TDG Pressure Compared to Secondary Standard:** After the deployment period, prior to removal of the field instrument, the TDG pressure will be compared to the secondary standard. The actual decision point regarding adjusting the data would be in the lab following the two point TDG sensor calibration described in field instrument post calibration. The field comparison actually involves sampling precision and should not be used as a decision point for shifting data.
2. **Standby Probe Deployed:** During initial deployment of a new TDG probe, after sufficient time for equilibration (up to one hour), the TDG pressure must be +/- 10 mmHg of the secondary standard otherwise another (standby) probe is deployed.
3. **Thermistor Compared to Secondary Standard:** During initial deployment of the new instrument, the thermistor will be +/- 0.4°C of the secondary standard, corrected for calibration, or the instrument will be replaced with a standby.
4. **Field Barometer Compared to Secondary Standard:** At each visit the field barometer reading should be the same as the secondary standard or the field barometer will be calibrated.

REVIEWING DATA QUALITY

The data from the fixed monitoring stations is sent to the USACE-NWD's CROHMS database which stores the raw data. At the same time, the same data is sent to the USGS's ADAP database. The USGS performs the review, correction and deletion process described below on ADAP's data, thus it stores corrected data. USACE-NWD created a copy of CROHMS called WQAL where the same corrections are made.

Reviewing the fixed monitored station data involves two steps: reviewing the data and dealing with suspect data.

Reviewing Data:

Once data are received, one or more of the following review processes occur:

- **Visually look at the tables of data:** There are certain signs in the data that may indicate mechanical problems. An instance, when the TDG pressure rises to 1,000 mmHg suddenly, and remains at that level, there may be a membrane tear. If there are extreme changes in any parameter, this shows that the data is erroneous.

- **A data checklist is completed.** The data quality checklist shown below provides an example of questions that can be used to assist in identifying problems with data.

- **Review graphs of the data.** Creating graphs of the data can show unusual spikes in a parameter and draw your attention to the data quickly. Spikes in graphed data can suggest further investigation may be necessary. For instance, a sudden rise of 5 °C in one hour stands out and is suspect. The graph shown below is an example of what is currently used.

Dealing with Suspect Data:

Once suspect data are identified, one of the following actions can be taken:

Correct the data: If there is a constant amount of shift or a continual drift, the data can be corrected using the USGS NWIS software. This is not usually the case. Sensor drift can be handled using a linearly prorated correction.

Delete the data: If there appears to be no means of correcting the data, then it is deleted from the USGS ADAPS database and they inform the Corps of the erroneous data. The Corps can decide what to do with the erroneous data.

COMPLETENESS OF DATA:

Completeness of data includes how completeness is calculated and the data quality criteria goal.

Completeness Calculation:

- The calculation of data set completeness is based on temperature and % TDG, which encompasses barometric pressure and TDG pressure.
- Data completeness is not based on the completeness of one parameter but of an entire suite.

Completeness Goal: Data collected at each site will be 95% of the data that could have been collected during the defined monitoring period.

Glossary - Definitions and Acronyms

NIST - National Institute of Standards and Technology

Primary Standard - NIST certified instrument

RPA - Reasonable and Prudent Alternative

Secondary Standard - Instrument calibrated with a primary standard, often used for checking instrumentation in the field

TABLE 1

PRIMARY AND SECONDARY STANDARDS

PARAMETER	PRIMARY STANDARD	SECONDARY STANDARD
Temperature	Mercury thermometer	Lab Hydrolab
Barometer Pressure	National Weather Service barometer	Hand held barometer
Total Gas Pressure	Digital pressure gauge calibrated to NIST	Lab Hydrolab checked to 4 pressures and calibrated to a 2-point curve.

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.204-3	Taxpayer Identification	OCT 1998
52.222-48	Exemption from Application of Service Contract Act	AUG 1996
	Provisions for Contracts for Maintenance, Calibration, and/or Repair of Certain ADP, Scientific and Medical, and/or Office and Business Equipment - Contractor Certification	
52.245-4	Government-Furnished Property (Short Form)	JUN 2003

CLAUSES INCORPORATED BY FULL TEXT

Security Contract Language for all Corps of Engineers' Unclassified Contracts (PIL 2003-06, 19 Feb 03)

All Contractor employees (U.S. citizens and Non-U.S. citizens) working under this contract (*to include grants, cooperative agreements and task orders*) who require access to Automated Information Systems (AIS), (stand alone computers, network computers/systems, e-mail) shall, at a minimum, be designated into an ADP-III position (non-sensitive) in accordance with DoD 5220-22-R, Industrial Security Regulation. The investigative requirements for an ADP-III position are a favorable National Agency Check (NAC), SF-85P, Public Trust Position. The contractor shall have each applicable employee complete a SF-85P and submit to the Seattle District, U.S. Army, Corps of Engineers, PO Box 3755, Seattle, WA 98124-3755, Security Officer within three (3) working days after award of any contract or task order, and shall be submitted prior to the individual being permitted access to an AIS. Contractors that have a commercial or government entity (CAGE) Code and Facility Security Clearance through the Defense Security Service shall process the NACs and forward visit requests/results of NAC to the Seattle District, U.S. Army, Corps of Engineers, PO Box 3755, Seattle, WA 98124-3755, Security Officer. For those contractors that do not have a CAGE Code or Facility Security Clearance, the Seattle District, U.S. Army, Corps of Engineers, PO Box 3755, Seattle, WA 98124-3755, Security Office will process the investigation in coordination with the Contractor and contract employees.

In accordance with Engineering Regulation, ER 380-1-18, Section 4, foreign nationals who work on Corps of Engineers' contracts or task orders shall be approved by the HQUSACE Foreign Disclosure Officer or higher before beginning work on the contract/task order. This regulation includes subcontractor employees. (NOTE: exceptions to the above requirement include foreign nationals who perform janitorial and/or ground maintenance services.) The contractor shall submit to the Division/District Contract Office, the names of all foreign nationals proposed for performance under this contract/task order, along with documentation to verify that he/she was legally admitted into the United States and has authority to work and/or go to school in the US. Such documentation may include a US passport, Certificate of US citizenship (INS Form N-560 or N-561), Certificate of Naturalization (INS Form N-550 or N-570), foreign passport with I-551 stamp or attached INS Form I-94 indicating employment authorization, Alien Registration Receipt Card with photograph (INS Form I-151 or I-551), Temporary Resident Card (INS Form I-688), Employment Authorization Card (INS Form I-688A), Reentry Permit (INS Form I-327), Refugee Travel Document (INS Form I-571), Employment Authorization Document issued by the INS which contains a photograph (INS Form I-688B).

Classified contracts require the issuance of a DD Form 254 (Department of Defense Contract Security Classification Specification).

(End of Clause)

Successor Contracting Officers (52.201-4001)

The Contracting Officer who signed this contract is the primary Contracting Officer for the contract. Nevertheless, any Contracting Officer assigned to the Seattle District and acting within his/her authority may take formal action on this contract when a contract action needs to be taken and the primary Contracting Officer is unavailable.

52.213-4 TERMS AND CONDITIONS--SIMPLIFIED ACQUISITIONS (OTHER THAN COMMERCIAL ITEMS)
(JAN 2004)

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses that are incorporated by reference:

(1) The clauses listed below implement provisions of law or Executive order:

(i) 52.222-3, Convict Labor (June 2003) (E.O. 11755).

(ii) 52.222-21, Prohibition of Segregated Facilities (Feb 1999) (E.O. 11246).

(iii) 52.222-26, Equal Opportunity (Apr 2002) (E.O. 11246).

(iv) 52.225-13, Restrictions on Certain Foreign Purchases (Oct 2003) (E.o.s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).

(v) 52.233-3, Protest After Award (Aug 1996) (31 U.S.C. 3553).

(2) Listed below are additional clauses that apply:

(i) 52.232-1, Payments (Apr 1984).

(ii) 52.232-8, Discounts for Prompt Payment (Feb 2002).

(iii) 52.232-11, Extras (Apr 1984).

(iv) 52.232-25, Prompt Payment (Oct 2003).

(v) 52.233-1, Disputes (Jul 2002).

(vi) 52.244-6, Subcontracts for Commercial Items (APR 2003).

(vii) 52.253-1, Computer Generated Forms (Jan 1991).

(b) The Contractor shall comply with the following FAR clauses, incorporated by reference, unless the circumstances do not apply:

(1) The clauses listed below implement provisions of law or Executive order:

(i) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (Jan 2004) (E.O. 13126). (Applies to contracts for supplies exceeding the micro-purchase threshold.)

(ii) 52.222-20, Walsh-Healey Public Contracts Act (DEC 1996) (41 U.S.C. 35-45) (Applies to supply contracts over \$10,000 in the United States, Puerto Rico, or the U.S. Virgin Islands).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212) (Applies to contracts of \$25,000 or more).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793) (Applies to contracts over \$10,000, unless the work is to be performed outside the United States by employees recruited outside the United States.) (For purposes of this clause, United States includes the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.)

(v) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212) (Applies to contracts over \$25,000).

(vi) 52.222-41, Service Contract Act, As Amended (May 1989) (41 U.S.C. 351, et seq.) (Applies to service contracts over \$2,500 that are subject to the Service Contract Act and will be performed in the United States, District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, Johnston Island, Wake Island, or the outer continental shelf lands.)

(vii) 52.223-5, Pollution Prevention and Right-to-Know Information (Aug 2003) (E.O. 13148) (Applies to services performed on Federal facilities).

(viii) 52.225-1, Buy American Act--Supplies (June 2003) (41 U.S.C. 10a-10d) (Applies to contracts for supplies, and to contracts for services involving the furnishing of supplies, for use in the United States or its outlying areas, if the value of the supply contract or supply portion of a service contract exceeds the micro-purchase threshold and the **acquisition--**

(A) Is set aside for small business concerns; or

(B) Cannot be set aside for small business concerns (see 19.502-2), and does not exceed \$25,000.)

(ix) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (May 1999). (Applies when the payment will be made by electronic funds transfer (EFT) and the payment office uses the Central Contractor Registration (CCR) database as its source of EFT information.)

(x) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (Oct 2003). (Applies when the payment will be made by EFT and the payment office does not use the CCR database as its source of EFT information.)

(xi) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (APR 2003) (46 U.S.C. Appx 1241). (Applies to supplies transported by ocean vessels (except for the types of subcontracts listed at 47.504(d).)

(2) Listed below are additional clauses that may apply:

(i) 52.209-6, Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (JULY 1995) (Applies to contracts over \$25,000).

(ii) 52.211-17, Delivery of Excess Quantities (SEPT 1989) (Applies to fixed-price supplies).

(iii) 52.247-29, F.o.b. Origin (JUN 1988) (Applies to supplies if delivery is f.o.b. origin).

(iv) 52.247-34, F.o.b. Destination (NOV 1991) (Applies to supplies if delivery is f.o.b. destination).

(c) FAR 52.252-2, Clauses Incorporated by Reference (FEB 1998). This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

FAR: <http://www.arnet.gov/far> or <http://farsite.hill.af.mil>

DFAR: <http://www.acq.osd.mil/dp/dars/dfars.html>

(d) Inspection/Acceptance. The Contractor shall tender for acceptance only those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its postacceptance rights--

(1) Within a reasonable period of time after the defect was discovered or should have been discovered; and

(2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(e) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence, such as acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(f) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges that the Contractor can demonstrate to the satisfaction of the Government, using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred that reasonably could have been avoided.

(g) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(h) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(End of clause)

The Government may require continued performance of any services within the limits and at the rates specified in contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 30 days which the Contracting Officer may exercise the option).

(End of clause)

52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within 60 days within which the Contracting Officer may exercise the option); provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 3 years..

(End of clause)

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (APR 2002)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 8713.

(2) The small business size standard is \$4.0 MILLION.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it () is, () is not a small business concern.

(2) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, that it () is, () is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it () is, () is not a women-owned small business concern.

(4) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it () is, () is not a veteran-owned small business concern.

(5) (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.) The offeror represents as part of its offer that it () is, () is not a service-disabled veteran-owned small business concern.

(6) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, as part of its offer, that--

(i) It () is, () is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It () is, () is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. (The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture:_____.) Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(c) Definitions. As used in this provision--

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern," means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern," means a small business concern --

(1) That is at least 51 percent owned by one or more women; in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

- (i) Be punished by imposition of fine, imprisonment, or both;
- (ii) Be subject to administrative remedies, including suspension and debarment; and
- (iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)