

Project Quality Assurance Plan Guidelines for Preparation

A Project Quality Assurance Plan (PQAP) is the first report for all ISTC-funded projects. These guidelines are designed to aid in the preparation of that plan. Although the guidelines are most applicable to projects with a laboratory and/or data collection component, they are general enough for use with any project where data are generated or information gathered. The information requested for the PQAP is required for all laboratories performing analytical work for the project, including the researcher's laboratory and any subcontract laboratories. The document should include a description of the project design and approach to the problem, a statement of expected deliverables, and a description of how the data will be reported, i.e., as individual measurements or in reduced form. It should also describe actions that will be used to control/verify experimental procedures, and to ensure results obtained are representative of the experimental parameters being evaluated. Include in the PQAP all of the following items that are appropriate to your research.

Field Sampling Guidelines

For research requiring field sampling, include a sampling plan outlining the methods, equipment, and procedures. A brief description of the method used for site selection, the procedures for recording sampling conditions, and the transport and storage procedures (e.g., refrigeration, holding times) used to ensure sample integrity should be included. Include information on sample containers, sample volumes, amount of sample available for each analysis, and a list of analytes. Describe any compositing or sample splitting procedures. For other data-gathering projects, such as surveys, this should include the method for sample selection, training of field staff, and secure processing and reporting of results.

Laboratory Guidelines

This section should include information on sample preparation. The analytical methods to be used must be specified. Referencing an EPA or other "standard" method is generally sufficient. Reference Standard Operating Procedures (SOPs) for specialized or unpublished methods or significant modifications of standard methods. Where nonstandardized methods are to be used, data demonstrating performance equivalent to standard methods should be generated and provided in subsequent quarterly progress reports. Include information on calibration frequency and calibration standards to be used. A summary of all measurements to be made, including parameter, measurement site, and frequency is desirable.

Data Quality, Precision, Accuracy, and Bias

This section must include your data quality objectives (DQOs). Your project data interpretation will likely depend on some defined level of data quality for all measurements. These data quality objectives should be specified for each measured parameter. Discuss procedures to be used to demonstrate detection/reporting limits, precision, accuracy, and completeness appropriate to these objectives. The data quality objectives may be presented in tabular form as shown in Table 1 attached. Provide formulas and/or appropriate references used for calculating statistical parameters.

Quality Control

State the quality control (QC) procedures used by the laboratory, including the type of QC samples used and the frequency of their use. Include a statement indicating how you will use replicates, spikes and other control samples. Describe the corrective action to be taken when problems occur, such as when reference checks indicate the system is generating data outside of the control limits. The data may be presented in tabular form whenever appropriate, as shown in Table 2. ISTC may choose to audit the project to evaluate progress, experimental procedures, methods, and the quality assurance program.

Quality Assurance Report

A reporting of your quality program results is required at the conclusion of your project and should be incorporated into your final project report. The report should include the following:

- a summary of the QA program;
- results of technical systems and performance evaluation audits;
- corrective actions taken and the results of those actions;
- data quality assessment in terms of precision, accuracy, representativeness, completeness, comparability, and reporting limits;
- a discussion of whether the QA objectives were met, and the resulting impact on decision making; and
- limitations on use of the data collected during the project.

If you have questions about your project quality assurance plan, contact Elizabeth Meschewski, Sponsored Research Coordinator, at 217/333-7403 or by email at elm2@illinois.edu.