

Arid West Water Quality Research Project
QUALITY INTEGRATED WORK PLAN
Template

-- for --

Arid West Water Quality Research Project Studies

NOTES TO USERS:

This Template is designed to help investigators develop quality assurance documentation for research studies/projects as part of the Arid West Water Quality Research Project (WQRP). By responding to the elements presented under the following Sections, an individual researcher or a team of researchers can generate a comprehensive Quality Integrated Work Plan (QIWP) for the project under consideration. All projects funded, managed or performed for the Arid West Water Quality Research Project must be supported by an approved QIWP. Minimum required QIWP approval for a project consists of sign-off by the Project Manager for WQRP. Review and approval also will be made by the Research Manager and the Quality Assurance Consultant for the WQRP.

- The use of the word "project" in this template is synonymous to the following words: program, task, study, work assignment or technical effort.
- Please respond with the information requested in each section. *Explanatory information is presented in italics.*
- If a section or certain section elements do not apply to your specific project, please enter your rationale for excluding that section/element as your response under that section/element, e.g., 'not applicable to this project'.
- Attach all relevant SOPs/protocols in appendices to the QIWP.
- The Document Control Format is in the Header of this template document.
- This document's unique identification number will be the two letters **PC-** followed by the contract number assigned by Pima County for the project. This ID number will be used in the header of this document and on the Signature Approval Page where indicated. The contract number assigned by Pima County will be the project identifier.

This document template is a modified version of Appendix A in Hook, L. A., M. D. Cheng, and T.A. Boden's 1998 NARSTO Quality Planning Handbook. (Environmental Sciences Division Publication No.4786. April, 1998. Oak Ridge National Laboratory. Oak Ridge, TN. 56 pp.)

PC- _____

Revision No. _____

Revision Date: ___/___/___

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APPROVAL PAGE
for

PROJECT NAME:		
ISSUED BY:		
REVISION: 0	ID#:PC-	ISSUE DATE:
PREPARED BY:		
Project Investigator		Date
APPROVED BY:		
Principal Investigator		Date
Project Manager/WQRP		Date
Research Manager/WQRP		Date
Quality Assurance Consultant/WQRP		Date

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Principal Investigator		Date
Project Manager/WQRP		Date
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QUALITY INTEGRATED WORK PLAN FOR (PROJECT TITLE)

1.0 PROJECT PLANNING AND ORGANIZATION

*Planning and organization are critical to the success of research projects. The primary purpose of planning and organizing is to identify and clarify work requirements, objectives, and responsibilities. The planning and organizational assumptions made for a project should be continually evaluated to ensure that the project is on track. Sections 1, 2, and parts of 3 relate to management functions and address the **Quality Assurance** aspects of the overall project. The remaining Sections relate to the technical functions specific to the accomplishment of the overall project. These sections address the **Quality Control** aspects of the critical work activities being performed under the project. If the project involves several participating institutions, then each institution responsible for a critical phase of the project effort must comply with this overall QIWP and must provide relevant SOPs for the conduct of its own activities. Please respond to each subsection listed below. Reference relevant RFP by name and date where indicated and elsewhere as appropriate.*

1.1 Introduction

Provide the what, why, how, when and where for the project. What is being proposed? Why is it being proposed and why is this specific approach being recommended? What is expected to be learned? How will the results be used? Where will the project be conducted? When will the project begin and end?
[Reference RFP]

1.2 Background

List any pertinent background that will help place this project in perspective. Is it part of a larger program; expansion of a smaller project; independent effort; collaborative effort; single pollutant; multiple pollutant; pilot-scale; large-scale; in-house; extramural; etc.? [Reference RFP]

1.3 Project Scope and Work Objectives

*The establishment of clear objectives is perhaps the most important part of planning. The objectives should be developed with the cooperation of all organizations affected by or participating in the planned project. Appropriate review and approval also should be obtained from the participating organizations. When data are an essential product of the project, this section must state the project **Data Quality Objectives (DQOs)**. Once established, the work objectives should be clearly communicated to all affected parties.*

Discuss the questions, issues and DQOs important to the project effort, describe the various organizations and disciplines required to accomplish the work, and clearly state the project objectives. [Reference RFP]

1.4 Project Description

Develop the work activities with input from the participating organizations. Discuss the relationship between the planned measurement and analysis activities and stated WQRP goals. Work activities should receive sufficient review by peers and supervisory approval to assure technical adequacy, identify constraints, and communicate any unusual or special requirements.

Define your work activities and describe how those activities will lead to the accomplishment of the project objectives.

1.5 Experimental Design

The design of experiments can significantly enhance the success of a project. Questions to be answered by the project must be correctly formulated and a method(s) selected that will meet the accuracy required and guard against various pitfalls that might be encountered. Well planned experimental designs can make a project more cost-effective, can optimize the acquisition of data, and can maximize information obtained. A statistical design provides an important determinant to the success of a project, whether the major objective is the testing of one or more null hypotheses or the estimation of attributes (characteristics or parameters), such as means or percentiles. Projects designated as "range finding" will follow the same tenets. However, range finding projects may require deviations that must be documented in writing.

In a statistical design, primary factors to be considered are: (1) hypothesis(es) to be tested; (2) dependent, independent and co-variables to be estimated; (3) desired precision characteristics of the estimated measurement variables; and

(4) required discriminatory power of the test [i.e., the ability of the design to differentiate the null hypothesis (H_0) from the alternative hypothesis (H_a)].

Please address the following elements that apply to your project:

- Hypothesis(es) to be tested
- Dependent and independent variables and any key co-variables
- Acceptable ranges for precision and accuracy of estimated variables
- Discriminating power of test(s)
- Acceptable limits on number of false positive and false negative results

1.6 Personnel Qualifications

Having adequately qualified people to perform research tasks is required in order to obtain excellent project results. Certification or additional training may be required for some project personnel. Project management defines the qualifications needed for each task and verifies that an individual meets the qualifications. Simple verification (e.g., a CV) showing a person is qualified because of education, experience and job knowledge can suffice. Different circumstances may call for demonstrated job skill proficiency.

List the required qualifications for specific tasks in the research study and explain how the proposed co-principal investigators, consultants and other participants meet the requirements.

1.7 Training Required

Management should establish a training system to assure that technicians are adequately trained and that they are retrained as changes in work practices occur. Training records should be maintained that show the past and current training status of each person, including scientific and engineering personnel. Training provided to technical personnel should be documented.

Describe any specialized training, if needed, that must be completed before personnel can be part of the project. Specialized training provided to technical and other personnel or attendance at related conferences/seminars must be documented.

1.8 Communication Plan

The how, when, where, and by whom the study results are distributed and communicated is very important. Therefore, communication policy issues must be identified. Providing a plan designed to establish lines of communication and dissemination for information and data between study participants and nonparticipants is important. The plan should be approved by the study management team to ensure against the inappropriate or unauthorized discussion of policy issues or premature release of study results.

Discuss reports as required by the WQRP, for example, the monthly memo reports on the progress of project activities and the Final Report. Indicate who will be responsible for submitting the reports to WQRP personnel for information and review of progress activities.

2.0 MANAGEMENT ASSESSMENT

Peer review can be used for verifying the technical adequacy of work. One of the most frequent forms of peer review occurs when results are prepared and submitted for publication in a technical journal or for presentation at a technical meeting. Another option for verifying the technical adequacy of work is to use in-house reviewers who are not involved in the project. An organization can go outside for reviewers, particularly for reviewers with levels of expertise higher than that available in-house or with established reputations in a particular field. In addition, the use of outside reviewers supports the concept that reviewers should be independent of the project reviewed. Other effective assessment tools are the Management Systems Review (MSR), the Technical Systems Audit (TSA) and the Performance Evaluation (PE). The Research Manager and/or Quality Assurance Consultant for WQRP will perform assessments on a schedule as delineated in the contract with Pima County.

Please discuss below what forms of assessment will be provided internally by your organization for this project and define who will be responsible. Note that these activities will be in addition to those performed by the WQRP personnel.

2.1 Assessment Responsibility

Peer reviews and/or audits should be planned and conducted by the organization responsible for the work and by the funding organization. Depending on the project, the plan may recommend an audit by an independent second or third party. The organization also is responsible for following up on

recommendations and comments coming from a review, including the documentation of actions taken to ensure that all issues raised have been addressed. Reviews and/or audits will be planned and conducted by relevant management of WQRP, e.g. Research Manager and Quality Assurance Consultant. Management of WQRP is responsible for following up on recommendations and comments coming from those performing reviews.

Define who is responsible in your organization for conducting internal review(s) of your project.

2.2 Assessment Type(s)

Review can be informal or formal. Audits and MSRs are more formal in nature. An informal review can consist of a review of work by uninvolved co-workers, a review by persons outside the work group, or the publication and presentation of papers that are subject to peer review within the scientific community. Formal reviews, on the other hand, are characterized by a formal review plan, the issuance of a peer review meeting notification letter identifying participants, time and place where presentations about the work are made to the participants and a detailed report of the review is issued, and a written response from the organization is required regarding recommendations and comments made by the reviewers.

For WQRP projects, assessment will be performed both by peer review (submission of a draft article for publication at completion of the project tasks) as well as semiformal/formal inspections as deemed necessary by the Research Manager and Quality Assurance Consultant to ensure project activities are being implemented according to the overall Work Plan.

Please show your plan for peer review and internal inspections and propose a tentative schedule during the course of the project.

2.3 Assessment Usage

Peer reviews and inspections are used to evaluate project objectives and interim progress in attaining the objectives. They also are used to verify the technical adequacy of procedures and techniques being used to attain the objectives. Formal reviews should be used when any of the following actions occur: major changes are being made in an investigation, significant reports are being issued that will have major impact on a project, or corrective actions

are being recommended for deficiencies (including accidents) having major impact on the project.

Discuss what your organization will do to review and evaluate whether project objectives are being attained.

2.4 Assessment Criteria

External reviews and audits will be planned and conducted by WQRP personnel using the following criteria: reviewers will not be directly involved in performing the study; reviewers will have technical expertise; reviewers will be provided with sufficient information about the work, including purposes and objectives, to adequately evaluate the work; and results of the review or audit will be documented. Internal reviews should meet the same criteria.

Explain how your planned internal reviews meet these criteria.

2.5 Assessment Documentation

The degree of documentation will depend on the type of review/inspection. Documentation of an informal review could be simply the signing and dating of a page in a data record by a qualified reviewer. It could be a dated and signed letter from the reviewer to the manager of the organization stating what was reviewed and giving comments on the work. Formal reviews, MSRs and audits should be documented with a report that includes, in detail, the following kinds of information: date of review, place, participants, activities reviewed, evaluation process used, results of evaluation, and recommendations.

Inspections or audits by WQRP personnel will submit written reports to the Project Manager of WQRP with a copy to the reviewed organization. At a minimum, the report should contain sufficient detail to provide a clear understanding of the quality of the data generated. These reports, including any notification letters and responses from the organization will become a part of the archived records associated with the project.

Describe the documentation requirements for the internal reviews of your project and where these records will be located.

3.0 PROJECT IMPLEMENTATION

The project implementation section should communicate the basic steps that must be taken to accomplish the objectives of the project. This section must describe how the work will be conducted and how the project objectives will be achieved.

3.1 Project Responsibilities

Clear and specific assignments of responsibilities should be defined in writing and an organizational chart naming responsible individuals should be prepared. Organizational relationships should be defined.

Define the responsibilities and interfaces for all management and technical personnel (including internal QA/QC persons) associated with this project within your organization. Define who will be responsible for interfacing with WQRP personnel. Provide an organizational chart delineating the relationship(s).

3.2 Project Design Criteria

The establishment of design criteria is critical when designing studies in response to the objectives and work tasks.

Describe the criteria for each of the following in response to the objectives and work tasks for the project as described in the WQRP RFP. Note that if an area is not applicable to this specific project, indicate that it is not and proceed to the next item.

- Site Selection
- Sample Collection Media
- Sample Type(s) (including QC samples)
- Sampling Time and Frequency
- Sample Collection
- Sample Handling
- Sample Custody
- Sample Preparation
- Sample Analysis

3.3 Data Quality Indicators

The identification of data quality indicators (DQOs) is an important exercise. These indicators normally represent either the minimum acceptable levels of data quality or they are statistically determined data quality goals needed to achieve the objectives of the project.

Please discuss these indicators and how they will be determined for this project. Note that if an area is not applicable to this specific project, indicate that it is not and proceed to the next item.

- Accuracy requirements
- Precision requirements
- Detection limit requirements
- Comparability requirements
- Completeness requirements
- Representativeness requirements

4.0 DATA ACQUISITION

The practices used to acquire, screen, preserve, and analyze data are crucial to all projects. Such practices should be documented as Standard Operating Procedures (SOPs), data sheets or other acceptable format. In this way, requirements relating to the acquisition, protection and evaluation of data are established and readily available.

4.1 Data Recording

Data must be recorded in some manner when they are produced or they risk being lost. Recording may be done manually in a notebook, a log book or on data sheets. Data may be recorded by an automatic device or computerized system. Regardless of the method used, provisions must exist to permit recording of all information the researcher encounters during a project, including changes made in steps taken and conditions used.

Describe the recording methods for your project and how changes or corrections will be documented.

4.2 Identification of Data

*Procedures should be established to assure that all data are clearly identifiable and traceable to the project from which the data were produced. It is **very** important that this identification and traceability be maintained throughout the lifetime of the data. Note that upon acceptance of a proposal and issuance of a contract, a project identifier will be issued by Pima County. This identifier must be placed on each item of documentation (e.g., logbooks, progress and final reports, etc.) containing project data.*

Describe how data on your project will be identified in addition to the project identifier.

4.3 Control of Erroneous Data

Procedures are needed for controlling data that are erroneous, rejected, superseded or otherwise unsuited for their intended use. These procedures need to provide for the identification, flagging, and/or segregation of inadequate data to avoid their inadvertent use. The use of electronic notebooks and computerized data acquisition systems presents special control problems. If electronic data collection systems are used on your project, the controls imposed to protect the integrity of the data and information recorded must be described.

Describe the procedures that will be used for identifying and controlling data considered unsuitable in your project.

4.4 Data Evaluation

The statistical and/or mathematical methods used to evaluate data are dependent on how much planning preceded the data collection process and on whether a formal statistical design was followed when the data were collected. When the data are collected according to a preplanned, statistically designed experiment, the use of analysis of variance methods is appropriate. Occasionally, maintaining all of the variables at the prescribed series of constant levels may be difficult or impossible. Under these circumstances, analysis of covariance, regression or general linear model methods can be used to infer the relationships or factor effects. To ensure that the best use can be made of experimental results, it is important to preplan and design the entire experimental program so the data, when collected, will be suitable for analysis by one of the standard statistical methods.

Describe the statistical, mathematical or other procedures that will be used to evaluate and identify inadequate data generated in the project.

4.5 Data Validation

Validation checks that will be performed on the data in any given research study should be specified. A validation level and status discussion should be included in the record or information associated with the data.

Describe the validation check(s) to be performed on the data collected in the project.

5.0 DATA MANAGEMENT

The data management activities that should be discussed in this QIWP are the minimum set needed to support the project implementation plan (Sect. 3) and data acquisition, evaluation, and validation activities (Sect. 4). Note that if an area is not applicable to this specific project, indicate that it is not and proceed to the next item.

Address the following data management elements as they apply to your project in sufficient detail to ensure adequate planning and control of data.

- Types of data to be collected, processed, and utilized
- Data sources
- Data management resources needed
- Data collection activities
- Data processing activities
- Data verification and validation activities (e.g. how are calculations, such as standard deviations, averages etc., performed by purchased software programs validated?)
- Data management and geographic information systems (GIS) systems to be used
- Data, data base, and systems controls and administration (e.g. is there a system of password protection for confidential information and levels of access?)
- Data reporting needs
- Data archival (e.g., where and how will disks, tapes be archived?)

6.0 RECORDS MANAGEMENT

Records provide the supporting evidence for the technical interpretations, judgements, and decisions made during a project. Records preparation and control should be an integral part of work activities. Project records (particularly those in logbooks, data sheets, chromatograms, electronic printouts, laboratory notebooks and manual calculations) may be subject to reviews and evaluations, which may occur several years after a record was produced. They should provide the historical information needed for reviews, reevaluation, planning future research and development activities, and for use in other activities that may be based on the results of the project.

Many acceptable and varied procedures can be found that discuss the use and management of project records. The selected method or system should include certain generally accepted features and practices. An effective system of records management will provide records that are legible, identifiable and retrievable.

6.1 Records Management System

A system for managing project records must be in place. Data records must be protected to avoid loss and controlled to permit retrievability. Written procedures and other descriptions of the records system should be prepared and distributed to appropriate personnel. The practices established for records management should consist of a documented system that includes or references procedures for records generation, identification, authentication, indexing, distribution, disposition, retention times, storage, preservation, safekeeping, and retrieval.

Briefly describe the overall records management system for this project. Elaborate below for each element of the system.

6.2 Records Identification, Authentication, and Indexing

Project records identification, including an appropriate indexing system, must include sufficient information to permit identification of the record with the item or activity to which it applies. The authentication practices (which may include stamping, initialing, signing, dating, and transmittal statements) should result in records that are clearly traceable and identifiable as the valid product of the responsible organization, individual, or project. The indexing system must provide information that permits information retrieval.

Describe how records will be identified, authenticated and indexed in this project (e.g., use of the Project Identifier [PC-xxxxxxx] assigned by Pima County and your internal identification system.)

6.3 Records Distribution and Storage

The records management system should clearly define records distribution and handling practices. Individuals or the organization responsible for distribution, receiving, and storage of records should be identified. What procedures will be followed to provide for interim or work-site handling and storage of records before being transferred to central storage facilities. Interim and final storage procedures should be established to provide necessary retrieval capability, physical preservation and safekeeping. Facility requirements for records storage should be identified.

Describe the distribution and interim and final storage procedures to be used during your project.

6.4 Records Retrieval

An indexing system must provide sufficient information to permit easy retrieval of records. Inability to retrieve records possibly may create suspicion about the quality of data.

Describe the indexing system and records retrieval process to be used for your project.

6.5 Records Retention

A very important part of the indexing/identification system is the records retention policy. The retention policy should have clearly established rules and instructions that permit disposal of records when they are no longer needed. Raw data that may have significance in the future explanation and verification of the results should be retained on some long-term basis. Raw data should not be discarded until permission of the sponsor (Arid West Water Quality Research Project) has been secured. Describe the records retention policy for your project.

Describe how long a copy of your study records will be retained after the completion of the project and how the records will be stored. At the completion of the project, the original records will be submitted to WQRP to be stored in their Permanent Archives.

7.0 ROUTINE CONTROLS AND PROCEDURES

The suitability of equipment and materials can play a significant part in the acceptability of data. Control over the handling and use of equipment and materials should be established and maintained throughout a project. Standard Operating Procedures (SOPs) should be in place for these types of activities.

7.1 Control and Calibration of Measurement and Test Equipment

The adequacy of data is highly dependent on how measurement equipment used to produce data is selected, calibrated, and used. Technically sound practices should be established and used to provide for appropriate selection, calibration, adjustment, maintenance, identification, handling, and storage of measurement equipment. Calibration procedures should include criteria that show when equipment is out-of-calibration and actions required to reestablish calibrations, and frequency of calibrations. The selection, preparation, use and maintenance of calibration standards should be included as part of calibration procedures. A records management system should be maintained so that the calibration status of individual measurement devices is readily verifiable.

Briefly describe, attach, or reference the measurement device procedures to be used on this project, including calibration and maintenance activities.

7.2 Procedures

Much laboratory and field work involves routine (repetitive) activities. Routine activities include operation of instruments, the preparation of apparatus, the testing of equipment, and the analysis of materials. Typically, projects are a blend of the routine (the repetitive, the known) and the new (the untried, the unknown). The degree of each depends on the particular project.

Most routine activities are carried out in a planned and systematic manner to ensure verifiable project results. Each activity usually involves discrete actions taken in a specific order. Any change in an action or in the order without a valid reason will most likely result in an unsatisfactory outcome. To control the processes and avoid errors, standard operating procedures (SOPs) are written

that provide guidance for those doing the work. Each SOP must be approved by the Project Director and any changes or modifications made to or deviations from the SOP must be documented, signed and dated. Reviews of procedures should be done on a planned schedule.

Non-repetitive activities (the non-routine, the untried) are planned initially, but may be subject to changes as an experiment or study proceeds. However, the planned protocol must be clearly written in an easy to follow step-by-step format and approved by the Project Director. Any changes made to it during the project life-cycle must be documented, signed and dated.

Describe procedure(s) and protocol(s) that will be used in this project(s) to document the routine and non-routine activities.

7.3 Establishing the Adequacy of Technical Practices

Many procedures and techniques used regularly by scientists and engineers are established and recognized by the technical community as technically adequate when applied properly, for example, EPA-approved methodologies or Standard Methods. References of methods used should be documented in the laboratory records system and in technical reports as appropriate. Peer review can also be used to verify technical adequacy. If changes are made to established practices, those changes must be carefully documented and signed by the individual making the changes, and then approved by management.

Describe how the technical adequacy of project procedures will be verified.

7.4 Maintenance of Equipment

Equipment, whether used in the laboratory or in the field, must be maintained in proper working order. Procedures should be in place to identify equipment that is not working properly and to control its use until it has been repaired. A maintenance, use and repair log should be maintained for each item of equipment. Such a log documents the status of each item.

Discuss the procedure(s) for ensuring a piece of equipment has been calibrated, is in good working order and is ready to use.

7.5 Quality of Consumables

Requirements for consumables must be established and specified. If the use of deficient materials would have a significant or adverse effect on a project's results or when if otherwise appropriate, methods must be in place to verify the quality of consumables before they are used.

Discuss what procedure(s) will be used to verify and ensure quality of consumables used in the project.

7.6 Labeling

Substances received from a manufacturer must include appropriate information such as identification, composition, safety hazards, stability, storage and handling requirements. Containers also should be labeled with date of receipt and date opened. Requirements should be established for corrective actions when a label is missing or incorrect.

Substances prepared in the field or laboratory should have labels that contain at a minimum, the substance name, concentration, date prepared and preparer's initials. If the substance requires any other pertinent information (e.g., store in dark), this too should be included on the label.

Discuss the procedure(s) for labeling substances.

7.7 Acceptance of Equipment and Materials

When the purchase of equipment and materials is required, specifications and other requirements that define the desired characteristics should be clearly established and included in procurement documents. Control over those documents should be established so that changes in specifications and other requirements are not made without proper review and approval. Acceptance of equipment and materials should be based on verification that specifications and other requirements have been met through inspection upon receipt or through suppliers' certification.

Discuss the procedure(s) for accepting or rejecting equipment and materials. Include a discussion of the acceptance/rejection criteria and steps to be followed upon receipt.

7.8 Storage of Equipment and Materials

Storage containers should protect materials from contamination and other adverse effects. Storage conditions should meet special requirements such as limits of exposure to light, humidity, and temperature. Some substances, such as organic solvents and acids, should be stored separately or in "explosion proof" cabinets. Those requirements should be stated in the appropriate procedures.

Discuss the procedure(s) for how materials and substances will be stored.

8.0 TECHNICAL ASSESSMENT AND RESPONSE

The unpredictability associated with research projects means that mistakes and failures can occur. Problems in a system can cause a project to go off track. If not found and corrected, these problems can lead to loss of data, erroneous data, or even incorrect interpretation of the data. Problems can result from something as simple as an improperly trained technician. A system to identify potential problems and to deter their occurrence should be established and used.

8.1 Assessment Procedures

Defective equipment and materials often are found after inspection and testing. Defective equipment can be found through calibration activities. Inadequate data also may be found by peer reviews and through statistical evaluations. Tags or other means of identification should be used on defective equipment to prevent its improper use.

Problems also can occur in operational and administrative activities associated with the technical work. Those problems usually are found during audits and inspections. Prompt reporting of problems will assure that corrective actions can be taken before more serious consequences occur.

Assessments and/or inspections will be performed periodically by WQRP personnel as defined in the contract with Pima County. Describe your internal procedures for identification of operational problems such as defective equipment, impure substances or poor administrative activities.

8.2 Assessment Evaluation

Problems must be examined to learn the root cause(s). The important part of the examination is identifying the required actions for correction, including the

actions required to preclude recurrence. A peer review process can be used, when justified, to assure technical adequacy of the evaluations.

Describe your procedure(s) for evaluating problem causes and identifying the corrective actions needed to rectify the problem.

8.3 Assessment Response and Follow-up

Responsibilities for taking a response action should be identified and a schedule for response established. The assigned actions and schedules should be recorded and reported to responsible project management. The final actions taken should be documented and reported. It is important that actions taken be reported and communicated to the responsible and involved technical and managerial participants. Follow-up is a necessary action to assure that prescribed assessment response(s) has been taken.

Describe the procedure(s) that define who is responsible for responding to problem, defining and scheduling any corrective actions, and following-up to ensure corrective action has been implemented.

NOTE: All pertinent Standard Operating Procedures or Protocols (or any other supporting documentation) associated with the responses made under each of the previous sections should be attached to the printed version of this document when submitted for review and approval. WQRP's designated Project Manager, Research Manager and/or Quality Assurance Consultant reserve the right to request copies of these documents before approving this Work Plan.

The WordPerfect 8.0 and RTF versions of the Quality Integrated Work Plan are available for download on the [AWWQRP website](#)