



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6  
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*Los Alamos NMD 950515  
Technical File*

MEMORANDUM

*2234 General*

SUBJECT: Quality Assurance Program Plan for Los Alamos National Laboratory

FROM: Robert G. Forrest *RGF*  
Chief  
Office Quality Assurance (6E-Q)

TO: Larry Maassen  
Quality Assurance Project Leader  
Los Alamos National Laboratory (MS K481)

THRU: Richard D. Mayer, Jr.  
RCRA Facility Manager (6H-PS)

We have reviewed the Los Alamos National Laboratory Program Plan and find it to be very good. The plan can be approved, and we suggest a few minor changes. The suggestions are:

- To be consistent with EPA's "Guidelines and Specifications for Preparing Quality Assurance Program Plans" (QAMS 004/80), the sections could be renumbered. The first item in the Table of Contents would be Identification of Office, Region, or Laboratory Submitting Quality Assurance Program Plan.
- The Program Manager in EPA Region 6 who must concur in the acceptability of work could be listed in this section along with the Los Alamos Program Manager. Is there someone in DOE who must also concur? If so that individual could be identified. These persons should sign the document to indicate their concurrence and acceptance.
- In conjunction with the renumbering we would suggest placing the Construction Quality Assurance Project Plan in Section 6 as 6.4.

These changes seem trivial, but as you require others to prepare Quality Assurance Plans (QAPP's), e.g., contractors doing projects you will find that it is easier and more organized to have all plans prepared in the same format. Otherwise you spend a great deal of &time trying to match the sections with the elements of QAMS. Additionally we require all elements to be addressed even though some may not be applicable for a particular program.



- . **Section 2.0, first paragraph last sentence:**  
Suggest the sentence be restructure, e.g.,  
Quality assurance serves as both a guideline and management tool to ensure that all activities are performed in an appropriate well regulated manner that generates reliable, scientifically valid and thoroughly documented data.
- . **Section 3.0:**  
We suggest that an organizational chart be provided. The chart could show the Los Alamos organization and reporting responsibilities to DOE and EPA.
- . **Section 3.1: first bullet:**  
Suggest rephrasing.
- . **Section 4.0:**  
We suggest the specific qualifications required of the present personnel associated with this QAPP be given and documentation that the staff meet these qualifications. Resumes could be placed in appendices. As personnel change the QAPP should be updated and resubmitted for approval.

This protocol is necessary for the management of the Quality Assurance Program at Los Alamos, but establishes the pattern for those who you will require to prepare QAPP's. This same process should be applied in the QAPjP's. As contracts go, there are constant changes in personnel as well as resources. The provision for maintaining a good program will be assured if these requirements are stated up front,

- . **Section 6.1, Scientifically Valid:**  
The statements are useful, but are not necessarily related to science. It is difficult to state what would make data scientifically valid, but scientific principles must be employed, standards of the highest purity must be used, i.e., NIST standards, ACS grade chemicals, etc., and methods used that have been proven sensitive, accurate and specific. This section could be restated to address standards, methods and confirmation of results by other methods.
- . **Section 6.2, elements 5 of QAPjP:**  
Data Quality Objectives (DQO) is a current emphasis in EPA. Guidance has been provided for establishing DQO's.

This process is primary to the decisions relative to the level of precision, accuracy, representativeness, comparability and completeness of the data that is to be obtained in the project.

We suggest that "objectives" be substituted for the word "requirement". Additionally we recommend the inclusion of procedures for establishing DQO's which could include scoping sessions with persons of all the disciplines required to formulate those objectives, which could include experts in engineering, geology, hydrology, biology, toxicology, chemistry, statistics, legal councilors and others.

. **Section 6.2:**

We would recommend additional emphasis be given to sampling. Sampling has the potential of being the source of errors of greater magnitude when compared to those resulting from analytical processes. References to guidance documents for sampling could be made.

. **Section 8.0:**

The assessment of data quality should be related to the DQO's. Have these objectives been met? Was the level of precision, accuracy acceptable in meeting the objectives? Were data comparable, representative and complete as set out in the DQO's? We suggest addressing these aspects of data quality.

. **Section 8.2, Traceability of Samples:**

We suggest the documentation of who collected the sample and who received the sample as could be explained in the Chain of Custody procedure.

. **Section 8.3:**

We recommend defining the terms representativeness, comparability and completeness.

. **Section 6.2, page 3, next to last bullet for QAPjP:**

The procedures should cover comparability and representativeness also; per QAMS 004/80.

. **Section 6.2, Standard Operating Procedures (SOP):**

The QAPP is a good opportunity to make Quality Control charts mandatory in projects. The charting of on going processes are best followed by this mechanism and corrective action can be employed immediately, rather than after data has become archived.

- **Section 7.0:**

A comparable statement could be made about laboratory data as for field data. The bench records of the analysts must be maintained.

- **Sections 7.2:**

To reaffirm the value of Quality Control charts, the assurance that the analytical operations were in control during any particular run is easier to evaluate if the QC charts are maintained.

In compliance with request to provide recommendations for the QAPP so that your program will have a successful start we have examined the plan with care. Please let me or Kendall Young (FTS-255-2217) if you have any questions.

CC: S. Slaton (6H-PS)