QA-N

FY 1996 OCRWM QA Management Assessment

Preliminary Report for the M&O Segment

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Introduction: The FY 1996 Quality Assurance (QA) Management Assessment is an integrated assessment of OCRWM and its major participants. The QA Management Assessment has two principal objectives: (1) evaluate the status, adequacy, and implementation effectiveness of OCRWM's QA Program and (2) identify areas where improvement is needed.

A final report summarizing the results of the integrated QA Management Assessment and conclusions drawn by the assessment team regarding the adequacy and effectiveness of the OCRWM QA Program will be provided to the OCRWM Director at the conclusion of all assessments. Preliminary reports consisting of an executive summary of the observations and recommendations identified during the individual assessments are provided to the OCRWM Director after each assessment.

This preliminary report summarizes the observations and recommendations identified during the assessment of OCRWM's Management and Operating (M&O) contractor at its Las Vegas, NV and Vienna, VA locations.

On-site Assessment Dates: March 4-8, 1996, in Las Vegas, NV and June 10-12, 1996 in Vienna, VA.

Assessment Team: W. E. Booth, T. R. Colandrea (Team Leader), and J. R. Longenecker.

Conclusions: Based on the attributes evaluated during this assessment, the M&O's QA Program is determined to be adequate and effective.

Previous QA Management Assessment Recommendations: Recommendations from the previous QA management assessment were adequately addressed.

Executive Summary of Observations and Recommendations: The following attributes were assessed to determine the adequacy and effectiveness of M&O's QA program:

1. ***Effectiveness of Procedural Implementation:***

   Observations: The M&O has made significant progress since the last QA management assessment with respect to improving its QA-related procedures. The numerous recommendations made by the QAP 5-1 Natural Work Group contributed to this progress. This group was formed in March 1995 to streamline the procedure development process and facilitate procedural implementation and compliance.

Further improvement is needed, however, in managing the procedural system and in the procedures themselves. For example, the procedural system permits the development of lower-tier local procedures to augment upper-tier procedures (QAPs). This feature, if not closely managed, could create two procedures on the same subject. In this regard, the assessment team noted some redundancy between NLPs, VLPs, and QAPs in the area of design control.

An example of where the procedures themselves need improvement is reflected in the process used by the M&O to make engineering changes to design drawings and specifications. The M&O employs a series of "pen-and-ink" entries to incorporate Engineering Change Requests into the design specifications and drawings used by Kiewit/PB. The multiple strike-outs and additions created by this method make it difficult for the reader to determine the current design configuration of an item. For example, revision 3 of specification "*Steel Sets and Accessories Subsurface*" lacks visibility as to the design intent of the 12 "pen-and-ink" changes made to this revision of the document as of April 22, 1996.

The M&O is developing a plan, at OCRWM's direction, for a "One QA Program" approach which is designed to decrease the number of QA-related procedures, reduce the complexity of the QA program, and provide savings by lowering maintenance cost on procedures and training. This effort is another step toward OQA's goal for a single, consolidated QA Program for the entire OCRWM program.

Recommendation No. 1: It is recommended that the M&O initiate a similar "One QA Program" approach on its internal QA-related procedures (ILPs, NLPs, VLPs, QAPs, etc.) to identify opportunities for consolidating and simplifying these procedures.

Recommendation No. 2: With regard to "pen and ink" changes to design documents, it is recommended that the M&O consider changing applicable procedures to permit using the redline and cross-out features of current word processing programs and the automatic features of the CAD system to more clearly portray the changes. Implementation of this process will create a "clean" document with each change, thereby, improving readability and reducing the probability of human error.

2. ***Adequacy and Effectiveness of QA Training:***

Observations: The QA training program within the M&O has improved considerably since the previous QA management assessment. For example, the M&O consolidated the Las Vegas and Vienna training organizations and streamlined the training effort. Also, the M&O has implemented an automated, centralized system to track the status of personnel QA training.

The QA training program employs the self-study technique similar to OCRWM and other OCRWM participants. Selected classroom training is usually provided to new staff members or to address major programmatic changes.

As reflected in the Kiewit/PB preliminary report, the assessment team has identified a potential concern with the effectiveness of the self-study approach to training. This potential concern will be discussed with responsible OCRWM management and a recommendation, if warranted, will be made in the final report to be issued in September 1996.

Recommendations: To be determined.

3. ***Adequacy and Effectiveness of the Corrective Action Program:***

Observations: The M&O appears to have made substantial progress in this area since the last QA management assessment. For example, in engineering, the M&O's Office of Product Integrity (OPI) has been effective in identifying the cause of problems, providing meaningful measures to improve performance, and reducing the number of repetitive problems. It was also apparent that the line organizations are increasingly more likely to identify and document deficiencies within their organizations. Furthermore, the periodic reports published by M&O QA provide senior management with excellent visibility regarding the status of the corrective action program. These reports include information regarding overdue CARs, DRs, and PRs; a description of the problem; and their corrective action status.

The M&O's performance in this area could be further enhanced by improving the communication of quality-related lessons-learned information from one organization to another. For example, the reports published by OPI contain valuable information that would benefit other organizations outside M&O Engineering-Las Vegas if the key points were captured in a more visible manner and given broader distribution.

Recommendation No. 3: It is recommended that a streamlined, user-friendly method be implemented within the M&O for exchanging lessons learned information between organizations with similar interests.

4. ***Effectiveness of QA program application to OCRWM program elements considered critical to mission success:***

Observation (Records Retrieval/Technical Data Transfer): There are indications that some program participants (e.g., LANL and Sandia) have experienced problems retrieving records from the records processing facility in Las Vegas, and transferring data into the technical database (e.g., LANL data on volcanism). The assessment team will pursue these emerging issues as time permits.

Recommendations (Records Retrieval/Technical Data Transfer): To be determined.

Observation (Surveillances): The surveillances and oversight performed by the M&O appeared to be adequate and effective.

Recommendations (Surveillances): None.

5. ***Adequacy of resources and personnel provided to achieve and assure quality:***

Observations: A brief analysis was conducted of the similarities and differences between the M&O-Las Vegas Quality Engineering and OPI groups. The following observations were noted.

The Quality Engineering group conducts reviews of all "Q" designated engineering drawings, specifications, analyses, and other technical documents primarily to verify compliance with the programmatic aspects of procedures. In other words, the review verifies that the process was followed during development of the document.

In contrast, OPI performs a review for technical correctness, validity of engineering assumptions, inspectability, constructability, and value engineering. The review is conducted on selected engineering drawings, specifications, analyses, and other technical documents. Occasionally, OPI also performs procedure compliance reviews.

Engineering managers and staff appear to benefit from OPI's QA advice and believe that OPI's review comments add value to the final product. In contrast, they typically see little value in the role of the M&O Quality Engineering group, especially with regard to the reviews performed on calculations and classification analyses.

Management indicated that OPI, as an organizational entity, will likely be dissolved within the next year due to budget reductions. Current plans are to integrate the OPI staff into the engineering organization and conduct future OPI activity on a task-by-task basis.

Recommendation No. 4: The M&O should consider eliminating the QA review of those documents where it adds little or no value (e.g., design analyses) focussing, instead, on documents where the QA review can add value (e.g., specifications). This recommendation is consistent with the direction to make operations more efficient.

Recommendation No. 5: In addition to reducing the population of documents to be reviewed by QA, the M&O should consider shifting the focus of the QA review to achieve a better balance between compliance and performance-oriented activities similar to those performed by OPI. In the process of addressing this recommendation,

consideration should also be given to matching the experience of the reviewers with the documents being reviewed, and co-locating the quality engineers with the line organization to further improve the effectiveness of the M&O quality engineering function.

Programmatic/Hardware Deficiencies: No programmatic or hardware deficiencies were identified during this assessment.