



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

***Fuel Cycle Technologies
QA Program Update***

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Quality Assurance Program Document (QAPD) and Supporting Documents

■ Current QAPD (Revision 2)

- Was issued December 20, 2012
- Reviewed annually for any needed changes
 - No revisions required 2012 - 2015
- Changes suggested to Deliverable Form (Appendix E), April 2016
 - Revision in progress

Quality Assurance Activities FY 2015 - 2016

- **QA POCs have performed assessment and support activities at their laboratories (this is an ongoing effort)**
 - Working with Work Package Managers and Project Personnel
 - Support QRL Assignments
 - Other support as requested or required by Lab guidance

- **FCT QA Program assessments / audits in FY 15 – 16 included:**
 - Lawrence Berkeley: QA Review / Assessment, February 2015
 - Program in compliance with FCT QAPD
 - Oak Ridge: QA Audit, February 2016 (Canister Design project)
 - In compliance with NQA-1

- **FCT QA Program assessments for remainder of FY 16:**
 - One or two additional Labs (TBD)



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NUREG-1055
For Comment

Improving Quality and the Assurance of Quality in the Design and Construction of Nuclear Power Plants

A Report to Congress

**U.S. Nuclear Regulatory
Commission**

Office of Inspection and Enforcement

W. Altman, T. Ankrum, W. Brach



Nuclear Energy

NRC: Improving Quality and the Assurance of Quality in the Design and Construction of ... Page 1 of 1

At the request of Congress, NRC conducted a study of existing and alternative programs for improving quality and the assurance of quality in the design and construction of commercial nuclear power plants. A primary focus of the study was to determine the underlying causes of major quality-related problems in the construction of some nuclear power plants and the untimely detection and correction of these problems. The study concluded that the root cause for major quality-related problems was the failure or inability of some utility managements to effectively implement a management system that ensured adequate control over all aspects of the project. These management shortcomings arose in part from inexperience on the part of some project teams in the construction of nuclear power plants. NRC's past licensing and inspection practices did not adequately screen construction permit applicants for overall capability to manage or provide effective management oversight over the construction project.

The study recommends a number of improvements in industry and NRC programs. For industry, the study recommends self-imposed rising standards of excellence, treatment of quality assurance as a management tool, not a substitute for management, improved trend analysis and identification of root causes of quality problems, and a program of comprehensive third party audits of present and future construction projects. To improve NRC programs, the study recommends a heavier emphasis on team inspections and resident inspectors, an enhanced review of new applicant's capabilities to construct commercial nuclear power plants, more attention to management issues, improved diagnostic and trending capabilities, improved quality and quality assurance for operating reactors, and development of guidance to facilitate the prioritization of quality assurance measures commensurate with the importance of plant structures, systems, and components to the achievement of safety.