

MEETING REPORT SUMMARY

Advisory Committee on Reactor Safeguards, Subcommittee on Quality and Quality Assurance in Design and Construction

November 24, 1987

1717 H. Street, NW - Room 1046
Washington, DC

Chairman Glenn Reed opened the "QA in Nuclear Power Plants/Waste Management" Subcommittee meeting with a statement regarding his experiences with an early Nuclear Power Plant (NPP) and the lack of Quality Assurance in those days. He presented a challenge to the subcommittee in his questioning of how to consistently upgrade the as-built quality in NPPs without increasing the paperwork often associated with those improvements.

Other Subcommittee members in attendance were Forrest J. Remick, C.P. Siess, Dade W. Moeller, and Charles L. Wylie. Mr. Al Igne was the Assisting Subcommittee Senior Staff Engineer.

The primary subject of this ACRS Subcommittee meeting was "readiness reviews" and how they can be beneficially applied to both NPP construction/operations and the high level radiation waste (HLW) management program.

Readiness reviews were defined a number of different ways during the subcommittee meeting. These two definitions convey the generic meaning of readiness reviews:

- 1) A management system to define, identify, schedule, and assess those activities that are necessary prerequisites to the transition of a project/program from one phase to the next; or
- 2) A formal assessment of readiness to proceed to the next critical phase of a project (i.e., planning to construction, construction to pre-operational testing, etc.).

Readiness reviews have been employed by both the DOE and NRC for years, although the NRC has not used that exact term to define its activities which meet the "readiness review" criteria. The name "flight readiness plans" originated in the Aerospace industry and the readiness review concept was spun off from that inception. Some typical events of the readiness review process include:

- Identification of individual work processes
- Procedures (administrative and technical)
- Readiness Review Plans
- In-depth assessment (by owner, licenses, etc.) with senior management overview

- Planned and systematic NRC involvement
- Analytical Methods
- Checklists
- Start-up Teams
- Independent Review Teams
- Quality Assurance (Audits/Surveillance)
- Early Resolution of Issues
- Documentation Requirements
- Incremental Acceptance
- Approval/Authorization Levels

(This listing is a combination of two separate lists so there is some overlap and redundancy)

Presentations throughout the day were provided to the subcommittee by the following individuals: J. Nelson Grace, NRC Region II Administrator, speaking on The Georgia Power Company (GPC) Vogtle NPP readiness review; Mr. Paul Rice, Project Manager, GPC, Vogtle NPP Unit 1, on the Results of the Vogtle NPP readiness review and the applicability of readiness reviews to other complex projects, including the Waste Management Program; Mr. Frank Hawkins, NRC NRR Division, substituting for Mr. L. Lewis who had taken ill, on the NRR perspective of readiness reviews; Dr. Frank Fogarty of INEL, on readiness reviews applied to NPP and Waste Management; R. Pierre Saget, Director, Quality Systems Division, Department of Energy, Hartford, WA, and Mr. James Kennedy, NMSS, on readiness reviews applied to HLWM.

Throughout all the presentations, there was lively discussion and debate by the Subcommittee members as the worth/value of readiness reviews applied to various projects. Although the Vogtle Unit project was approximately 70% complete, and \$10-12 Million was spent by Georgia Power Company on the readiness review, Mr. Rice is a strong proponent of readiness reviews as a method of establishing a measured, step-by-step process which assisted GPC in clearing up documentation problems which had plagued the project. Specifically, he listed these lessons learned from the Vogtle Unit 1 readiness review experiences:

1. Early NRC/GPC interfaces were improved and important.
2. Early work review and incremental acceptance of work was achieved.
3. Timing of operational readiness review activities was improved.
4. Handling of licensing changes can be improved by readiness reviews.
5. Readiness review program schedules adherence was achieved.
6. Management involvement throughout the readiness review process was most apparent.

7. There is a more coordinated management approach to the project when readiness reviews are utilized.
8. There is early identification and resolution of problems when readiness reviews are used.
9. There is early addressing of interpretation differences and earlier resolution of them by using the readiness review approach.

There was consensus on the Subcommittee that the readiness review concept has definite merit and should be applied if possible, to future, new NPP construction projects and to the HLW management program. NRC NUREG 1278 has been published which provides the lessons learned on the Vogtle Plant readiness review experience.

The Subcommittee will report its readiness review information to the full ACRS Committee.



Bruce Mabrito
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TENTATIVE AGENDA
A MEETING OF THE
ACRS SUBCOMMITTEE ON QUALITY AND QUALITY ASSURANCE
IN DESIGN AND CONSTRUCTION
ON
QA IN NUCLEAR POWER PLANTS/WASTE MANAGEMENT
NOVEMBER 24, 1987

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| I. Chairman's Opening Statement - G. Reed | 10 Min. | 8:30-8:40 a.m. |
| II. Region II | | |
| 1. Vogtle Readiness Review
J. Nelson Grace, Reg. II, Admin. | 45 Min. | 8:40-9:25 am |
| 2. Georgia Power views on
Readiness Review, Paul Rice | 45 Min. | 9:25-10:10 am |
| ***** BREAK ***** | 15 Min. | 10:10-10:25 am |
| III. NRR Presentation (L. Lewis) | 60 Min | 10:25-11:25 am |
| . Introduction & Organization | | |
| . NRR Perspective on Readiness
Review | | |
| . Readiness Review Discussion
and response to F. Remick's
questions (his letter to
Moeller & Reed, dated June 18,
1987) | | |
| IV. Readiness Review Applied to NPP
and Waste Management
- Frank Fogarty, INEL | 60 Min. | 11:25-12:25 pm |
| ***** LUNCH ***** | 60 Min. | 12:25-1:25 pm |
| V. Readiness Review on the
Basalt Waste Isolation Project
- R. Pierre Saget, Director | 60 Min. | 1:25-2:25 pm |
| VI. Readiness Reviews Applied to
HLWM, J. Kennedy, NMSS | 30 Min. | 2:25-2:55 pm |
| VII. Subcommittee Discussion and Adjournment | 35 Min. | 2:25-3:30 pm |

ATTACHMENT A