Abstract for ANS 0606

Safety Culture Enhancements to the Reactor Oversight Process

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The NRC's Reactor Oversight Process (ROP) has had, since its inception, three cross-cutting issues the effects of which were assumed to be manifest in the cornerstones of safety. These issues are human performance, problem identification and resolution, and safety conscious work environment. Events at Davis-Besse and the Salem and Hope Creek site have shown that the ROP was not sufficiently robust to identify the symptoms of a weakening safety culture. At Davis-Besse this weakening culture led to the degraded reactor vessel head event. At Salem-Hope Creek, there was no single event, but a series of equipment reliability findings and allegations that resulted in the need for a deviation memo from the ROP, since the ROP process did not directly allow for the follow-up actions thought by the NRC to be needed to address the underlying safety culture problems at the site. In part, because of these situations and other influences the Commissioners directed staff to take action to enhance the Reactor Oversight Process (ROP) treatment of cross-cutting issues to more fully address safety culture and to include, as part of its enhanced inspection activities for plants in the Degraded Cornerstone Column, a determination of the need for a specific evaluation of the licensee's safety culture and means for conducting the evaluation.

The staff, working with stakeholders, has developed proposed enhancements to baseline inspections, special inspections, the assessment process, supplemental inspections, and inspector training. This paper describes the process used by the staff to develop the changes, the changes themselves, and their bases. The paper will describe the components of safety culture thought to be most relevant to the regulatory process. These components were derived from multiple sources, including the international community, the nuclear industry, and research results. The framework for the enhancements was the existing ROP. The focus of the enhancements is on the information sources that would be used, how the information would be documented, the proposed changes to the assessment process in Manual Chapter 0305, "Operating Reactor Assessment Program," and the follow-up activities that could be expected if a substantive cross-cutting issue is determined to exist or if a plant is in the degraded column of the action matrix.

These enhancements have been discussed at multiple stakeholder meetings, been subjected to the ROP change process reviews, and will be implemented July 1, 2006.