



Davis-Besse Nuclear Power Station NRC UPDATE

September 2004

Independent Assessments Underway at Davis-Besse

FirstEnergy has begun a series of four independent assessments required by a Confirmatory Order, issued by the NRC to FirstEnergy as part of its authorization to resume operations at Davis-Besse. The Order requires the utility to conduct independent assessments of four key areas at the plant: operations performance, corrective action program, engineering program effectiveness, and organizational safety culture, including a safety conscious work environment.

These assessments are to be conducted each year for a five-year period.

The operations performance assessment was conducted August 16-25, and the corrective action program assessment began September 13. The reports of these assessments are to be submitted to the NRC within 45 days of completion of the assessments. The reports will be publicly available.

The engineering assessment is scheduled to begin October 11 and the safety culture assessment will start November 8.

The NRC has been monitoring each assessment as it is being conducted. NRC lead inspectors have been designated to review each of the assessment areas. The NRC's evaluations will be documented and publicly available.

Steven Reynolds replacing Jack Grobe as Panel Chairman

Jack Grobe, who has served as the Chairman of the NRC Davis-Besse Oversight Panel since it was formed in April 2002, will be filling a new position in the agency and will be leaving the Panel at the end of the year. Steven Reynolds, who is acting Director of the Division of Reactor Projects in NRC Region III, will be assuming the role of Panel chairman, replacing Grobe. William

NRC Resident Inspection Staff

Three fully qualified resident inspectors are assigned to the Davis-Besse site on a full-time basis. The normal complement for a reactor site is two inspectors, but a third inspector was added in September 2003 to provide additional oversight. All three inspectors and their families live in the vicinity of the Davis-Besse plant.

Christopher S. "Scott" Thomas has been the senior resident inspector at Davis-Besse since January 2002. He previously was a resident inspector at the Prairie Island Nuclear Power Station in Minnesota. Scott specialized in nuclear engineering with the U.S. Navy for 15 years before joining the NRC. He holds a master's degree in environmental engineering.

John E. "Jack" Rutkowski was assigned as a resident inspector at Davis-Besse in June 2003. Prior to joining the NRC in 2002, Jack held a wide range of technical and management positions in the nuclear industry. He also served in the U.S. Navy. He holds a master's degree in nuclear science and engineering and a master's degree in business administration.

Monica P. Salter-Williams became the third member of the resident inspection staff in September 2003, coming to Davis-Besse from the NRC's Region I office. She was previously an engineer at a nuclear power plant in Pennsylvania. Monica has a master's degree in nuclear engineering from Pennsylvania State University and a bachelor's degree in chemistry from Georgia State University.

Nancy Keller is the resident office assistant. She has been the administrative backbone of the NRC resident inspectors' office since 1994.

Ruland, Director of Projects Directorate III in the NRC's Office of Nuclear Reactor Regulation, remains as Vice Chairman of the panel.

Both Grobe and Reynolds will attend the panel's September 28 public meeting in Oak Harbor, Ohio, and Reynolds will be participating in other panel activities as well. Grobe will remain as chairman until the planned transition is completed at the end of December.

The panel coordinates the NRC's regulatory activities for Davis-Besse. The panel held public meetings monthly in the Oak Harbor area during the Davis-Besse shutdown and startup phase and continues to hold public meetings approximately bimonthly to review the status of plant operations and continuing improvement programs, hear comments and answer questions from the public.

Grobe has been part of the NRC Region III Office staff since 1980, and will now be moving to the NRC Headquarters as Director of Nuclear Security Special Projects. This is a new position established to direct NRC activities regarding the identification and evaluation of enhanced security precautions and strategies for commercial nuclear power plants.

Reynolds joined the NRC as a reactor inspector in Region III in 1986 and served in several positions in the NRC Headquarters in Rockville, Maryland, from 1989 to 1998. He returned to Region III in 1998 as a Deputy Division Director. In his current position of acting Division Director, Reynolds supervises the day-to-day inspection activities by NRC resident inspectors at the nuclear plants in the Midwest, including Davis-Besse. As such he has been fully aware of the agency's activities at Davis-Besse.

Risk of Core Damage At Davis-Besse Estimated at 6 in 1,000

The NRC's Office of Nuclear Reactor Research has issued a preliminary study showing that the probability of an accident at Davis-Besse leading to damage to the reactor core was 6 chances in 1,000 in the year before the reactor vessel head damage was discovered. This probability is about 100 times greater than the risk of core damage from normal plant operations.

This study encompasses the reactor vessel head damage as well as other safety system problems at Davis-Besse - cracking of control rod drive nozzles, improper coatings and other debris which could have clogged the screens for the containment sump, and high pressure injection pumps which might have failed under certain accident conditions. All of the equipment problems which contributed to the increased core damage risk have been corrected.

This research was directed at the probability of the safety system problems causing damage to the reactor core. Even if the core had been damaged, radioactivity released from the reactor fuel would be confined to the sealed concrete and steel containment surrounding the reactor. A significant release of radioactivity would have been unlikely.

The research reviewed other plant problems which occurred during the study period (February 2001 to February 2002) but found none that would have increased the probability of a reactor core damage accident. Additional details on the research results, called the "Accident Sequence Precursor" (ASP) study, are available on the NRC's Davis-Besse web site.

NRC to Review Performance of All Three FirstEnergy Nuclear Plants

The NRC staff plans to meet in mid-November with FirstEnergy to discuss the performance of its three nuclear operations in March after a two-year shutdown to replace the reactor vessel head and make other improvements of several equipment problems over the past two years and the utility's inadequate response to those problems.

The meeting is being held for the NRC to obtain the utility's corporate perspective on the performance of the three plants and the efforts underway to improve performance at Davis-Besse and Perry.

The meeting, which will be open to public observation, will be held in northern Ohio, but the location has not yet been determined. Details of the meeting will be posted on the NRC's web site when they are finalized.

NRC Issues Inspection Report

Permanent Modifications, Changes, Tests and Experiments Inspection (Report No. 50-346/04-10) documents the results of the inspection that focused on permanent modifications to the plant's safety systems and safety evaluations of changes, tests and experiments conducted at Davis-Besse in the past two years. The goal of the inspection was to make sure that the modifications did not result in a degradation in the performance of the plant's safety significant systems; that changes to the facility and the procedures have been properly reviewed and documented; and that the utility had obtained approval for the changes that required an authorization from the NRC. The inspectors identified two violations of minor significance.

NRC Inspection Reports Being Prepared

Integrated Resident Inspection reviews the results of seven weeks of inspection by the NRC resident inspectors.

Triennial Fire Protection Baseline Inspection evaluated Davis-Besse's fire protection programs, fire protection features, post-fire safe shutdown capabilities and plant layout. The goal of the inspection was to make sure that fire protection programs and physical measures at the plant are adequate to minimize the impact of a fire on the plant's safety equipment.

Management and Human Performance Inspection evaluated the effectiveness of plant's management and human performance corrective actions developed from its assessment of the November 2003 Safety Conscious Work Environment survey. The inspection focused on the effectiveness of corrective actions put in place after the utility identified an increase in negative responses from the same survey in March 2003 and the utility's assessment of the effectiveness of its corrective actions. In addition, the NRC team reviewed the quarterly safety culture monitoring business practice and its implementation, the implementation of the Teamwork, Ownership, and Pride Team and continued observation of the Safety Conscious Work Environment Review Team meetings.

Inspection reports and other documents related to the Davis-Besse plant are available on the NRC's web site at <http://www.nrc.gov> - select "Davis Besse/Reactor Vessel Head Degradation" from the Key Topics menu.

Public Participation in the Process

The NRC's experience is that members of the public, including public officials and citizens, often raise questions or provide insights that are important to consider. If you have questions or want to provide information or a point of view, please contact us. For feedback on this newsletter, contact Viktoria Mitlyng 630/829-9662 or Jan Strasma 630/829-9663 (toll free 800/522-3025 - ext -9662 or -9663). E-mail: opa3@nrc.gov. Extensive information about the Davis-Besse reactor vessel head damage and the ensuing activities is available on the NRC web site: <http://www.nrc.gov> - select "Davis-Besse" under the list of key topics.