

December 5, 2000

MEMORANDUM TO: Stuart A. Richards, Director
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

FROM: Jack Cushing, Project Manager, Section 2 */RA/*
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF MEETING HELD ON NOVEMBER 14, 2000, WITH CE
NUCLEAR POWER LLC

On November 14, 2000, the staff met with CE Nuclear Power LLC (CENP) at the NRC headquarters in Rockville, Maryland, to discuss a proposed topical report that will describe an alternate method of core cooling while in Mode 6. Attendees at this meeting are shown on the attached list. The meeting slides are available on the NRC's web site in ADAMS under the accession number ML003770485.

CENP presented information on an alternate Mode 6 cooling method that will use the spent fuel storage pool cooling system using Calvert Cliffs as the lead plant. The CEOG program will develop and document use of this alternate cooling path in a topical report that will be submitted for staff review and approval. The topical report will support changes in the current technical specifications; these changes would permit use of the alternate cooling method, movement of fuel, and securing of normal shutdown cooling while in Mode 6 operation. The alternate cooling method is to use the spent fuel pool heat exchangers to remove the decay heat from both the spent fuel pool and the core instead of shutdown cooling. Methodology in the topical report will be substantiated using shutdown cooling data obtained during an upcoming refueling outage at Calvert Cliffs. CENP plans to submit the topical report in January 2002 with staff approval requested by January 2003; implementation at the lead CEOG plant is planned for early 2004. The staff emphasized the need to coordinate submittal of the topical report with proposed technical specification changes through the Nuclear Energy Institute Technical Specification Task Force. The staff stated that the cover letter for the topical report should identify when the lead plant plans to submit their amendment request and if approved, when they plan to implement the change.

The staff identified several issues that need to be addressed in the proposed topical report. These include:

- Application of risk methodology to the proposed alternate cooling method.
- Impact of the alternate cooling method on damage to the fuel and issues of radiological release.

- Verification of the proposed one-dimensional natural circulation algorithm in the reactor vessel.
- Confirmation of the core and spent fuel decay heat rate as it relates to the time after shutdown, with an emergency shutdown presuming a prior core offload 36 days earlier.
- Controls in place to prevent unplanned boron dilution and sampling to monitor boron concentration in the core and spent fuel pool.
- Provide results of sensitivity studies to confirm the effects of critical parameters and dimensions.
- Identify any restrictions or surveillance requirements needed in the technical specifications that would affect reload fuel movement while in the alternate cooling mode.

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Attachment: Attendance List

cc w/att: See next page

- Verification of the proposed one-dimensional natural circulation algorithm in the reactor vessel.
- Confirmation of the core and spent fuel decay heat rate as it relates to the time after shutdown, with an emergency shutdown presuming a prior core offload 36 days earlier.
- Controls in place to prevent unplanned boron dilution and sampling to monitor boron concentration in the core and spent fuel pool.
- Provide results of sensitivity studies to confirm the effects of critical parameters and dimensions.
- Identify any restrictions or surveillance requirements needed in the technical specifications that would affect reload fuel movement while in the alternate cooling mode.

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Attachment: Attendance List

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MEETING TO DISCUSS ISSUES RELATED TO MODE 6

ALTERNATE COOLING

NOVEMBER 14, 2000

MEETING ATTENDEES

NAME

ORGANIZATION

Jack Cushing	NRC/NRR/DLPM/PDIV-2
Bob Tjader	NRC/NRR/DRIP/RTSB
Warren Lyon	NRC/NRR/DSSA/SRXB
Nick Saltos	NRC/NRR/DSSA/SPSB
Diane Jackson	NRC/NRR/DSSA/SPLB
David Shum	NRC/NRR/DSSA/SPLB
John Lehning	NRC/NRR/DSSA/SPLB
Stephen Dembek	NRC/NRR/DLPM/PDIV-2
Kerri Kavanagh	NRC/NRR/DSSA/RTSB
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Virgil Paggen	Westinghouse
Barry Lubin	Westinghouse
Mahmoud Massoud	CCNPPI
Pat Furio	CCNPPI
Jim Yoe	CCNPPI
Paul Phair	CCNPPI