

April 4, 2001

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 FEBRUARY 8, 2001, WITH  
CE NUCLEAR POWER TO DISCUSS CENPD-404-P, REV. 0 -  
"IMPLEMENTATION OF ZIRLO™ CLADDING MATERIAL IN  
CE NUCLEAR POWER FUEL ASSEMBLY DESIGNS"

On February 8, 2001, the staff held a public meeting, portions of which were proprietary and therefore closed to the public, with CE Nuclear Power, LLC (CENP) at the Nuclear Regulatory Commission (NRC) headquarters in Rockville, Maryland. The purpose of this meeting was for CENP to provide an overview of CENPD-404-P, Rev. 0. The topical report provides the technical basis for using ZIRLO™ cladding in CE designed fuel. Attachment 1 lists the meeting participants. The non-proprietary version of the slides are available in ADAMS under the accession number ML010430232.

CENP commenced the meeting by discussing the impact on performance caused by changing the fuel rod cladding material from ZR-4 to ZIRLO™. The performance areas included in the report are thermal, mechanical, loss of coolant accident (LOCA) and non-LOCA. CENP stated that the effect on performance is small. CENP briefed the staff in detail regarding the performance areas. CENP addressed the ZIRLO™ cladding operating experience. The staff commented on the insufficient level of detail regarding the cause of the fuel failures at Fort Calhoun and indicated they will need additional information.

After discussing the technical issues, CENP talked about the process for changing the cladding material to ZIRLO™. Changing the cladding material to ZIRLO™ affects over 50 NRC approved topical reports covering CENP methodologies. CENP decided that it would not be cost effective to revise all these topical reports to include ZIRLO™. Instead a single topical report, CENPD-404-P was written to discuss implementing ZIRLO™. A "roadmap" was developed by CENP showing the linkage between topical reports with a list cross referencing the engineering discipline and the methodology used. The staff stated that they found the roadmap very useful.

The staff closed the meeting by stating they would focus their review on the sensitivity of the analytical results using ZIRLO™ material properties to those using Ziracloy material properties. In addition, the staff will need to have a clear understanding of the behavior of oxidized ZIRLO™ material during design basis events.

Project No. 692

Attachment: Meeting Attendees

cc w/att: See next page

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Attachment: Meeting Attendees

cc w/att: See next page

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CE Owners Group

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**MEETING WITH CE NUCLEAR POWER**  
**CENPD-404-P REV. O, "IMPLEMENTATION OF ZIRLO™ CLADDING MATERIAL**  
**IN CE NUCLEAR POWER FUEL ASSEMBLY DESIGNS"**

**FEBRUARY 08, 2001**

**ATTENDANCE LIST**

**NRC**

Jack Cushing  
Ralph Caruso  
Margaret Chatterton  
Frank Orr  
Shih Liang Wu  
Ed Kendrick  
Sud Basu  
Stephen Dembek  
Sandra Frattalini

**WESTINGHOUSE**

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William Slaggle  
Joseph Cleary  
Howard Fields  
Chuck Molnar  
Zeses Karoutas  
Steve Hatfield  
Charles Brinkman  
Robert Hicks

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