

October 25, 2012

MEMORANDUM TO: James Beardsley, Chief  
Construction Inspection Program Branch  
Division of Construction Inspection  
and Operational Programs  
Office of New Reactors

FROM: Michael Brown, Senior Reactor Systems Engineer **/RA/**  
Construction Inspection Program Branch  
Division of Construction Inspection  
and Operational Programs  
Office of New Reactors

SUBJECT: SUMMARY OF OCTOBER 4, 2012 MEETING WITH SOUTHERN  
NUCLEAR OPERATING COMPANY TO DISCUSS REPAIRS MADE  
TO THE REACTOR VESSEL NOZZLE-TO-SAFE-END WELDS FOR  
VOGTLE ELECTRIC GENERATING STATION UNIT 3

The U.S. Nuclear Regulatory Commission (NRC) conducted a Category I public informational meeting and a closed informational meeting with Southern Nuclear Operating Company (SNC) on October 4, 2012, at the NRC's office located in Rockville, Maryland. The NRC's Office of New Reactors (NRO) staff met with SNC to discuss topics related to inside-diameter (ID) weld repairs made to the Vogtle Unit 3 reactor vessel inlet nozzle-to-safe-end welds. Specifically, SNC presented technical information on weld repairs that were made to the Unit 3 inlet nozzle-to-safe-end welds from the ID that resulted in the potential for tensile stresses to exist on the ID surface of the nozzle. SNC presented information discussing the factors that lead to primary-water stress-corrosion cracking (PWSCC) and how it was addressing each of the factors to ensure that PWSCC will not occur as a result of these weld repairs. SNC indicated that all of the repairs to the inlet nozzles met current construction requirements of the ASME Boiler and Pressure Vessel Code, Section III.

The staff discussed with SNC its plans to minimize weld residual stresses in order to eliminate the potential for PWSCC including the use of newer materials that are less susceptible to PWSCC. Although the use of material less susceptible to PWSCC plays an important role in mitigating PWSCC, it is not the only factor to control PWSCC adequately. Previous repairs and replacement work performed by licensees of operating plants have used a combination of newer less-susceptible materials and low residual stresses to minimize the occurrence of PWSCC. Because of the many uncertainties, limited research data on newer less-susceptible materials at this time, and other complex factors that can contribute to PWSCC, the staff noted that a prudent course of action is to eliminate as many potential causes of PWSCC in the early stages of construction to minimize the potential for PWSCC in the later years when the plant is operational. At this time, SNC has not determined whether to implement any mitigating measures or perform additional analyses to address weld residual stresses. Therefore, the staff plans to continue to monitor this issue and may pursue further reviews of the weld repairs in conjunction with future NRC inspections after the reactor vessel is received at the Vogtle site.

CONTACT: Michael Brown, NRO/DCIP  
(301) 415-4096

J. Beardsley

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Enclosed are the meeting agenda (Enclosure 1), meeting attendance list (Enclosure 2), and technical presentation slides (Enclosure 3) given during the public portion of the meeting. Enclosure 4 contains proprietary information and as such is withheld from public disclosure.

Docket Nos: 052-025  
052-026

Enclosures:

1. Meeting Agenda
2. Meeting Attendees List
3. Technical presentation slides for the public portion of the meeting (ML12277A349)
4. Technical presentation slides for the proprietary portion of the meeting – SUNSI (ML12291A616)

cc w/encls: See next page

J. Beardsley

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**NRC-001**

<b>OFFICE</b>	NRO/DCIP/CIPB	NRO/DCIP/CIPB : BC
<b>NAME</b>	MBrown	JBeardsley
<b>DATE</b>	10/25/12	10/25/12

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## Meeting Agenda

### Construction Inspection Program Related Activities

Thursday, October 4, 2012  
9:30 a.m. – 1:00 p.m.

PURPOSE: To discuss the reactor vessel inlet nozzle ID weld repairs made to Vogtle Electric Generating Station Unit 3

<u>Time</u>	<u>Topic</u>	<u>Led By</u>
9:30 a.m.	Opening Remarks	NRC
9:35 a.m.	Discussion of Issues	SNC/NRC
10:00 a.m.	**** <b>Proprietary Session</b> ****	NRC
1:00 p.m.	Adjourn	

**U.S. Nuclear Regulatory Commission (NRC)  
Southern Nuclear Operating Company (SNC)  
Public Meeting—October 4, 2012  
List of Attendees**

Name	Organization
M. Brown	NRC/NRO/DCIP
D. Terao	NRC/NRO/DE
J. Honcharik	NRC/NRO/DE
J. Beardsley	NRC/NRO/DCIP
R. Joshi	NRC/NRO/DNRL
R. Lukes	NRC/NRO/DCIP
D. Murray	NRC/NRO/DCIP
P. Buckberg	NRC/NRO/DCIP
M. Jardaneh	NRC/NRO/DCIP
P. O'Bryan	NRC/NRO/DCIP
A.. Issa	NRC/NRO/DCIP
M. Kowal	NRC/NRO/DCIP
A. Aughtman	Southern Nuclear Operating Company (SNC)
M. Dove	SNC
M. Wilson	SNC
R. Graham	SNC
D. McComb – via phone	SNC
J. McKinley	Westinghouse Electric Corp. (WEC)
S. Marlette	WEC
E. Willis	EPRI
E. Michel – via phone	NRC/ Region II
G. Khouri– via phone	NRC/ Region II
A.. Artayet– via phone	NRC/ Region II
J. Heisserer– via phone	NRC/ Region II
R. Davis– via phone	NRC/NRO/DE
S. Downey– via phone	NRC/NRO/DE
T. Terrell – via phone	SNC
T. Ray – via phone	WEC
K. Weitzman – via phone	SNC
W. Freebairn – via phone	Platts

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