

August 29, 2001

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

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

SUBJECT: SUMMARY OF MEETING HELD ON AUGUST 27, 2001, WITH THE
COMBUSTION ENGINEERING OWNERS GROUP (CEOG)
REGARDING BULLETIN 2001-01, "CIRCUMFERENTIAL CRACKING
OF REACTOR PRESSURE VESSEL HEAD PENETRATION NOZZLES"

On August 27, 2001, a public meeting was held at the NRC Headquarters office in Rockville, Maryland, between the Combustion Engineering Owners Group (CEOG) and the NRC staff. The list of attendees is attached. The slides are available in ADAMS under accession number ML012400112.

As described by the CEOG, the purpose of the meeting was to present an integrated inspection plan for the CEOG fleet which would include a one cycle deferral of inspections for plants that have refueling outages scheduled in the fall of 2001, and for some plants that would only perform a partial inspection in the spring of 2002. When questioned by the staff on exactly how many plants would be requesting a deferral, the CEOG stated that possibly six plants would request a deferral; however, the licensees would make the final determination in their response to the Bulletin.

The CEOG opened their presentation with a discussion of the difficulties associated with inspecting the vessel head penetration (VHP) nozzles at Combustion Engineering plants. The difficulties include:

- insulation panels and collars that restrict access to the VHP nozzles,
- head disassembly or destructive removal of the insulation to permit access to the VHP nozzles,
- the shroud inhibits access to some of the VHP nozzles at some plants,
- asbestos handling and occupational protection issues associated with insulation removal at some plants,
- maintaining worker radiation exposure as low as reasonably achievable, and
- new insulation design.

The CEOG estimated the dose to perform the inspections would range from 18.4 rem to 75 rem at a cost of half a million to 2 million dollars (not including costs associated with additional outage time).

With the list of difficulties identified by the CEOG in performing visual inspection of the VHP nozzles, the staff asked the CEOG if the affected licensees have considered performance of under-the-head inspections, such as eddy current or a volumetric inspection (e.g., ultrasonic), that would not require insulation removal and would avoid the difficulties identified by the CEOG. The CEOG replied that the equipment is not available to perform all the inspections in the time frame required.

The CEOG stated that a qualitative risk review showed that the increase in core damage frequency (CDF) due to delaying the inspection by one cycle is very small; however, a full risk assessment had not been performed. The staff questioned many aspects of the CEOG's qualitative analysis, including whether there is statistically sufficient data available to support a risk assessment.

As described by the NRC staff in its comments and questions at the meeting, the CEOG presentation would require additional development in the following areas:

- a sufficient case for the safety basis of the proposed one cycle inspection deferral,
- assessment of the impacts of the deferral, in terms of changes in CDF, costs, personnel exposures, etc., and
- consideration and evaluation of alternatives, such as under-the-head eddy current or ultrasonic inspections, that would satisfy the intent of the Bulletin.

The meeting concluded with the staff stating that they would evaluate the licensees' responses to the Bulletin when they are submitted.

Project No. 692

Attachment: Meeting Attendees

cc w/att: See next page

The CEOG estimated the dose to perform the inspections would range from 18.4 rem to 75 rem at a cost of half a million to 2 million dollars (not including costs associated with additional outage time).

With the list of difficulties identified by the CEOG in performing visual inspection of the VHP nozzles, the staff asked the CEOG if the affected licensees have considered performance of under-the-head inspections, such as eddy current or a volumetric inspection (e.g., ultrasonic), that would not require insulation removal and would avoid the difficulties identified by the CEOG. The CEOG replied that the equipment is not available to perform all the inspections in the time frame required.

The CEOG stated that a qualitative risk review showed that the increase in core damage frequency (CDF) due to delaying the inspection by one cycle is very small; however, a full risk assessment had not been performed. The staff questioned many aspects of the CEOG's qualitative analysis, including whether there is statistically sufficient data available to support a risk assessment.

As described by the NRC staff in its comments and questions at the meeting, the CEOG presentation would require additional development in the following areas:

- a sufficient case for the safety basis of the proposed one cycle inspection deferral,
- assessment of the impacts of the deferral, in terms of changes in CDF, costs, personnel exposures, etc., and
- consideration and evaluation of alternatives, such as under-the-head eddy current or ultrasonic inspections, that would satisfy the intent of the Bulletin.

The meeting concluded with the staff stating that they would evaluate the licensees' responses to the Bulletin when they are submitted.

Project No. 692

Attachment: Meeting Attendees

cc w/att: See next page

DISTRIBUTION: See attached list

PACKAGE: ML012410313

MEETING NOTICE:: ML012320091

ACCESSION NO.: ML012410295

OFFICE	PDIV-2/PM	PDIV-2/LA	PDIV-2/SC
NAME	JCushing:am	EPeyton	SDembek
DATE	8/29/01	8/29/01	8/29/01

OFFICIAL RECORD COPY

DISTRIBUTION FOR MEETING SUMMARY HELD ON AUGUST 27, 2001, WITH THE
COMBUSTION ENGINEERING OWNERS GROUP

Dated: August 29, 2001

Hard Copy:

PUBLIC
PDIV-2 R/F
JCushing
EPeyton

E-Mail:

RidsNrrDlpm (JZwolinski/TMarsh)
RidsOgcMailCenter
RidsAcrsAcnwMailCenter
BSheron (RidsNrrAdpt)
FEltawila
JStrosnider
WBateman
KWichman
AHiser
JChung
ALee
JCollins
BMoroney
MCaruso
NRC Web Page

CE Owners Group

Project No. 692

cc:

Mr. Gordon C. Bischoff, Project Director
CE Owners Group
Westinghouse Electric Company
CE Nuclear Power, LLC
M.S. 9615-1932
2000 Day Hill Road
Post Office Box 500
Windsor, CT 06095

Mr. Richard Bernier, Chairman
CE Owners Group
Mail Stop 7868
Arizona Public Service Company
Palo Verde Nuclear Generating Station
P.O. Box 52034
Phoenix, Arizona 85072-2034

Mr. Charles B. Brinkman, Manager
Washington Operations
Westinghouse Electric Company
CE Nuclear Power, LLC
12300 Twinbrook Parkway, Suite 330
Rockville, MD 20852

Mr. Virgil Paggen
CE Nuclear Power LLC
M. S. 9383-1922
2000 Day Hill Road
Windsor, CT 06095-1922

Mr. Philip W. Richardson, Manager
Windsor Nuclear Licensing
Westinghouse Electric Company
CE Nuclear Power, LLC
P.O. Box 500
2000 Day Hill Road
Windsor, CT 06095-0500

ATTENDANCE LIST FOR MEETING BETWEEN

NRC AND THE CEOG

REGARDING BULLETIN 2001-01

AUGUST 27, 2001

CEOG AND ASSOCIATES

G. Pavis (Calvert Cliffs)
E. Fernandez (APS)
M. Melton (APS)
B. Hardies(Calvert Cliffs)
D. Finnicum (Westinghouse)
C. Brinkman (Westinghouse)
E. Siegel (Westinghouse)
S. Lurie (Westinghouse)
B. Hinton (Westinghouse)
W. Bamford (Westinghouse)
V. Paggen (Westinghouse)
W. Sims (EOI)
S. Boggs (FPL)
E. Weinkam (FPL)
S. Collard (FPL)
M. Moran (FPL)

NRC

B. Sheron
F. Eltawila
J. Strosnider
W. Bateman
K. Wichman
A. Hiser
J. Chung
A. Lee
J. Collins
B. Moroney
M. Caruso
J. Cushing

NEI

K. Cozens

SCIENTECH

D. Raleigh

SERCH LICENSING/BECHTEL

A. Wyche

RGE

M. Flaherty

LSS

R. Huston