Central Files

The Best Performing CE Plants Are Fueled With ABB FUEL

52-002

To: Bob Jones, NRR/NRC	From: Ron Freelrun
Fax Number: 1-301-415-3577	Department: 5322-AD10
Date: 4/17/96 Time:	For Information Call: 1-860-687-8042
Total Pages (including cover): 5	Fax Number: 1-860-687-8024 -8031
Subject: Transmittal of CEOG-96-116	

Per approval of CEOG, attached is CEOG Task 931 Survey Questionnaire - CEA Insertion Experience with High Burnup Fuel Management

Ron

ABB COMBUSTION ENGINEERING NUCLEAR OPERATIONS
COMBUSTION ENGINEERING, INC.
102 ADDISON ROAD
WINDSOR, CT 06095-0500

C:\WINFAX\COVER\BLANK1.CVP

190015

DF03 1/0

ABB

COMBUSTION ENGINEERING OWNERS GROUP

April 1, 1996
CEOG-96-116

Analysis Subcommittee
Licensing Subcommittee
Participants in Task 931

Gentlemen:

Subject: CEOG Task 931 Survey Questionnaire-CEA Insertion Experience with High Burnup Fuel Management

The purpose of this letter is to transmit a questionnaire developed under CEOG Task 931. CEOG Task 931 has been designed to allow the CEOG to proactively address NRC Bulletin 96-01. NRC Bulletin 96-01 was irecently ssued based upon control rod insertion problems in higher burnup fuel assemblies at several Westinghouse PWR units. Although formal action is required only from PWR licensees of Westinghouse units, the NRC requested in a March 27, 1996 meeting that CEOG and B&WOG proactively respond to the issues of the Bulletin. CEOG Task 931 has been authorized to provide a formal response through the development of a CEA insertion experience data base for all CE plant designs and a technical report on this issue for CEOG member use and reference. The questions in this survey are intended to produce a comprehensive CEA insertion experience data base.

The Analysis Subcommittee member is requested to coordinate the response to the enclosed questionnaire. Additionally, the Analysis Subcommittee member is requested to provide the name and telephone number of a technical point of contact for this task to the Task Leader listed below. Responses to the questionnaire are requested by April 15, 1996.

Mr. Ron Freeburn
ABB Combustion Engineering
2000 Dayhill Road
CEP Code 5327-AD10
Windsor, CT 06095

Phone: (860) 687-8042, Fax: (860) 687-8051
H.Ronald. Freeburn@ussev.mail.abb.com

If you are aware of additional information relevant to this topic that is not specifically requested in the survey, please discuss the information with Ron Freeburn. If you have any questions, please contact Ron or me at (860) 285-3115.

Sincerely,

Paul J. Hijeck
Assistant Project Manager
C-E Owners Group

Attachment

cc: G. C. Bischoff, ABB
R. Freeburn, ABB
P. W. Richardson, ABB
I. Rickard, ABB

ANALYSIS SUBCOMMITTEE

J. Brown, APS (Tonopah)
G. Jarka, CPC (Covert)
B. Daiber, Entergy Operations-ANO (Russellville)
J. Holman, Entergy Operations-Waterford (Killona)
H. Thompson, NU (Waterford)
K. Holthaus, OPPD (Ft. Calhoun)
A. Brough, SCE (Irvine)
J. A. Mihalcik, BGE (Lusby)
B. T. Lubin, ABB (Windsor)
L.A. Martin, FPL (Juno)
H. Jones, MY (Brunswick)

LICENSING SUBCOMMITTEE

J. Provasoli, APS (Tonopah)
C. M. Molnar, ABB (Windsor)
E. J. Weinkam III, FPL (Jensen Beach)
G. Ashley, Entergy Operations-ANO (Russellville)
P. Caropino, Entergy Operations-Waterford (Killona)
M. Robles, Jr., NU (Millstone)
W. Hansher, OPPD (Omaha)
B. Woods, SCE (San Clemente)
S. Bauer, APS (Tonopah)
J. Osborne, BGE (Lusby)
B. Vincent, CPC (Covert)
J. Brinkler, MY (Brunswick)

Questionnaire-CEA Insertion Experience with High Burnup Fuel Management

Questions:

1. Provide copies of any Licensing Event Reports (LERs) written on CEA operability issues within the last 10 years, including any problem related to slow CEA insertions, restricted CEA insertions or failure of CEAs to fully insert. Indicate the type of CEA affected (e.g., shutdown, part length). Within this same time period, have rod bottom lights ever failed to light after a reactor trip or during rod drop testing?

2. Provide copies of any root cause analyses performed related to CEA operability issues in Question 1.

3. Have CEAs ever been noted to be stuck within fuel assemblies or difficult to withdraw or insert during refueling or maintenance operations within containment or at the spent fuel pool, where LERs were not required? Provide details of each event.

4. Provide CEA drop time test data obtained over a minimum of the last five years (four or more cycles), including reactor cycle number, time in cycle, drop time by CEA, type of CEA and raw data if available. Provide average burnup of each assembly under a CEA for each such test. Indicate when replacement CEAs are first used.

5. Provide CEA scram data obtained over a minimum of the last five years (four or more cycles), including reactor cycle number, time in cycle, scram time by CEA, type of CEA and raw data if available. Provide average burnup of each assembly under a CEA for each scram experienced.

6. Has your review of drop time test data or scram data indicated that these data may provide precursor information relative to CEAs sticking within guide tube or dashpot region (e.g., such as the lack of rod recoil observed in traces for Westinghouse control rods at higher burnup)?

7. Have you ever performed CEA drag tests at any of your CE units? If so, please provide results.

8. Have you performed visual (e.g., boroscopic) inspections of guide tube inner diameter wall within the last 10 years? If so, please provide results.

9. Have indications ever been documented of unusual crud or corrosion buildup on interior walls of guide tubes or dashpot regions? Have these deposits been tied to a change in CEA insertion times? Please provide details.

10. Excessive fuel assembly distortions (e.g., abnormal bow and twist) have been suggested as a possible contributing factor to stuck Westinghouse control rods. Has fuel assembly distortion been noted to be any more severe in higher burnup fuel assemblies such that unusual handling situations result? Please provide specific details of any event.

11. What suggestions do you have for reasonably obtaining supplemental operating data that assures acceptable CEA operability on a continuing basis? In particular, what are important considerations (pros and cons) for performing a rod drop test from low power at EOC and/or CEA drag testing in higher burnup discharged fuel assemblies?