

LIMITED DISTRIBUTION

January 12, 2004

MEMORANDUM TO: Hubert T. Bell
Inspector General

FROM: Samuel J. Collins */RA/*
Deputy Executive Director for Reactor Programs
Office of the Executive Director for Operations

SUBJECT: RESPONSE TO OFFICE OF INSPECTOR GENERAL (OIG) EVENT
INQUIRY CASE NO. 03-02S (NRC'S OVERSIGHT OF DAVIS-BESSE
BORIC ACID LEAKAGE AND CORROSION DURING THE APRIL 2000
REFUELING OUTAGE)

The Nuclear Regulatory Commission (NRC) staff has reviewed the subject report and agrees that improvements should be made to our regulatory programs to enhance the NRC's ability to identify and respond to problems such as those identified at the Davis-Besse plant. The issues identified in the subject OIG report are similar to a subset of those identified by the Davis Besse Lessons Learned Task Force (DBLLTF), and as such, corrective actions have already begun or have been completed for each of the OIG findings. Attached to this memorandum is a matrix that contains each of the findings contained in the OIG report, related DBLLTF recommendations, associated corrective actions, and completion status.

While the subject OIG report focused on the inspection program, it is important to recognize that the problem at Davis-Besse represented an institutional failure on the part of the NRC. Accordingly, the DBLLTF identified concerns with many aspects of NRC's activities. We believe that our planned corrective actions to the DBLLTF recommendations will address these concerns. A full listing of all the DBLLTF recommendations and associated corrective actions is contained in the, "Semiannual Report - Status of Implementation of Davis-Besse Lessons Learned Task Force Report Recommendations," dated August 29, 2003 (Accession Number ML032310212).

Attachment: As stated

LIMITED DISTRIBUTION

LIMITED DISTRIBUTION

January 12, 2004

MEMORANDUM TO: Hubert T. Bell
Inspector General

FROM: Samuel J. Collins */RA/*
Deputy Executive Director for Reactor Programs
Office of the Executive Director for Operations

SUBJECT: RESPONSE TO OFFICE OF INSPECTOR GENERAL (OIG) EVENT
INQUIRY CASE NO. 03-02S (NRC'S OVERSIGHT OF DAVIS-BESSE
BORIC ACID LEAKAGE AND CORROSION DURING THE APRIL 2000
REFUELING OUTAGE)

The Nuclear Regulatory Commission (NRC) staff has reviewed the subject report and agrees that improvements should be made to our regulatory programs to enhance the NRC's ability to identify and respond to problems such as those identified at the Davis-Besse plant. The issues identified in the subject OIG report are similar to a subset of those identified by the Davis Besse Lessons Learned Task Force (DBLLTF), and as such, corrective actions have already begun or have been completed for each of the OIG findings. Attached to this memorandum is a matrix that contains each of the findings contained in the OIG report, related DBLLTF recommendations, associated corrective actions, and completion status.

While the subject OIG report focused on the inspection program, it is important to recognize that the problem at Davis-Besse represented an institutional failure on the part of the NRC. Accordingly, the DBLLTF identified concerns with many aspects of NRC's activities. We believe that our planned corrective actions to the DBLLTF recommendations will address these concerns. A full listing of all the DBLLTF recommendations and associated corrective actions is contained in the, "Semiannual Report - Status of Implementation of Davis-Besse Lessons Learned Task Force Report Recommendations," dated August 29, 2003 (Accession Number ML032310212).

Attachment: As stated

DISTRIBUTION:
See attached page

Package Accession Number:ML033630728
Incoming Accession Number:ML032930385
Response Accession Number:ML033630695

G20030635

OFFICE	PM/IIPB	SC/IIPB	BC/IIPB	D/DIPM
NAME	JJacobson*	JAndersen*	SRichards*	BBoger*
DATE	12/29/2003	12/30/2003	12/30/2003	12/31/2003

OFFICE	RIII	ADIP
NAME	GGgrant *SReynolds for	JCraig* BBoger for
DATE	12/29/2003	12/31/2003

OFFICE	D/NRR	DEDR
NAME	JDyer	SCollins
DATE	01/8/2004	01/12/2004

OFFICIAL RECORD COPY

LIMITED DISTRIBUTION

LIMITED DISTRIBUTION

DISTRIBUTION FOR GREEN TICKET NO. G20030635 - SAMUEL J. COLLINS RESPONSE
TO HUBERT T. BELL

DATED: January 12, 2004

NON-PUBLIC

W. Travers

S. Collins

W. Kane

C. Paperiello

P. Norry

W. Dean

J. Dyer/W. Borchardt

J. Craig

D. Weaver

OGC

OPA

OCA

NRR Mailroom (EDO #G20020635)

K. Johnson

N. Correa

B. Boger

S. Reynolds

S. Richards

D. Coe

J. Jacobson

IIPB R/F

G. Grant

S. Burns

J. Caldwell

A. Howell

K. Cyr

OIG File

LIMITED DISTRIBUTION

LIMITED DISTRIBUTION

IG Finding	Associated DBLLTF Recommendations	Associated Corrective Actions	Completion Status
<p>1. OIG found that NRC Headquarters did not integrate the issues raised in Generic Letters 88-05 and 97-01 into NRC's inspection program.</p>	<p>3.3.2.1 - Develop inspection guidance that provides for timely, periodic inspection of PWR plant boric acid corrosion control (BACC) programs.</p> <p>3.2.2.1 - Implement inspection guidance as necessary to assess the adequacy of PWR BACC programs.</p> <p>3.3.4.3 - Develop inspection guidance or revise inspection guidance to ensure that vessel head penetration nozzles and the reactor head area are periodically reviewed by the NRC during licensee ISI activities.</p> <p>3.3.4.2 - The NRC should strengthen its inspection guidance pertaining to the periodic review of operating experience.</p> <p>3.1.2.5 - Conduct follow-on verification of licensee actions associated with a sample of other significant generic communications.</p>	<p>Short term actions - Issued Bulletin 2002-02, "Reactor Pressure Vessel Head and Vessel Head Penetration Nozzle Inspection Programs. Issued Order EA-03-009 which established interim licensee inspection requirements for reactor pressure vessel heads at PWRs. Issued Temporary Instruction 2515/150 to provide NRC inspection guidance to follow-up on order.</p> <p>Long-term actions - Inspection procedures are being revised. Implementation to commence upon issuance of revised procedures.</p> <p>Operating experience task force review completed. Strengthening the agency's review of operating experience should provide highlighted information to both managers and inspectors of issues and events that would otherwise not normally be focused on by the inspection program, such as the effects of boric acid corrosion on reactor vessel heads.</p> <p>Polling of regions, NRR, and RES conducted to identify high priority issues. Formulating approach for</p>	<p>Bulletin, Order, and TI issued.</p> <p>Due 3/04</p> <p>Awaiting recommendations from results of Operating Experience Task Force. Completion due 12/04.</p> <p>High priority issues identified. Due 11/04</p>

LIMITED DISTRIBUTION

LIMITED DISTRIBUTION

IG Finding	Associated DBLLTF Recommendations	Associated Corrective Actions	Completion Status
<p>2. OIG determined that there was ineffective communication among Region III managers concerning boric acid leakage and corrosion at Davis-Besse.</p>	<p>3.3.5.1 - Ensure inspector training includes the effects of boric acid corrosion and PWSCC of nickel based alloy nozzles.</p> <p>3.3.1.1 - Provide training and reinforce expectations to managers and staff to maintain a questioning attitude.</p> <p>3.3.2.3 - The NRC should provide enhanced Inspection Manual Chapter guidance to pursue issues and problems identified during plant status reviews.</p> <p>3.3.4.2 - The NRC should strengthen its inspection guidance pertaining to the periodic review of operating</p>	<p>Developed an inspector read and sign training process and issued training module on boric acid corrosion.</p> <p>Developed an inspector read and sign training module on the importance of maintaining a questioning attitude using the Columbia Space Shuttle accident report. Followed up training with presentations at regional counterpart meetings.</p> <p>Changes made to IP 71152 to require review of 3-6 annual samples to allow for in-depth review. Changes made to IP 71152 to require that the resident inspectors perform a semi-annual trend report. This change should enhance the NRC's ability to identify equipment trends that by themselves are not particularly risk significant, but might be indicative of a more significant issue and should also provide for enhanced communication of the identified trends throughout the NRC management chain and with licensees.</p> <p>Operating experience task force review completed. Strengthening the agency's review of operating</p>	<p>Training module issued and completed.</p> <p>Training module issued with completion date set at 12/31/03. Counterpart meeting presentations complete.</p> <p>Procedure changes complete. First trend review to be completed in June 2004.</p> <p>Awaiting recommendations from results of Operating Experience Task Force. Completion due 12/04.</p>

LIMITED DISTRIBUTION

LIMITED DISTRIBUTION

IG Finding	Associated DBLLTF Recommendations	Associated Corrective Actions	Completion Status
<p>3. OIG determined that Region III managers, while planning inspection activities for 12 RFO, reviewed NRC inspection reports which documented recurring boric acid leakage and its effects on reactor components at Davis-Besse. Region III also received numerous accounts of boric acid leakage and corrosion from the Davis-Besse Resident Inspectors. However, Region III managers did not direct any inspection activities during 12 RFO to verify that FENOC completed its action plan, documented in Region III Inspection Report 50-346/99010, to resolve its boric acid leakage and corrosion problems.</p>	<p>3.3.1.1 - Provide training and reinforce expectations to managers and staff to maintain a questioning attitude.</p> <p>3.3.5.1 - Ensure inspector training includes the effects of boric acid corrosion and PWSCC of nickel based alloy nozzles.</p> <p>3.3.4.2 - The NRC should strengthen its inspection guidance pertaining to the periodic review of operating experience.</p>	<p>Developed an inspector read and sign training module on the importance of maintaining a questioning attitude using the Columbia Space Shuttle accident report. Followed up training with presentations at regional counterpart meetings.</p> <p>Developed an inspector read and sign training process and issued training modules on boric acid corrosion and maintaining a questioning attitude. Followed up training with presentations at regional counterpart meetings.</p> <p>Changes have been made to IP 71152 to require in-depth follow-up of licensee evaluations and corrective actions of 3-6 issues per year in addition to those issues reviewed as part of the biennial corrective action team inspection.</p> <p>Operating experience task force review completed. Strengthening the agency's review of operating experience should provide highlighted information to both managers and inspectors of issues and events that would otherwise not normally be focused on by the inspection program, such as the</p>	<p>Training module issued with completion date set at 12/31/03. Counterpart meeting presentations complete.</p> <p>Training module issued and completed.</p> <p>Complete</p> <p>Awaiting recommendations from results of Operating Experience Task Force. Completion due 12/04.</p>

LIMITED DISTRIBUTION

LIMITED DISTRIBUTION

IG Finding	Associated DBLLTF Recommendations	Associated Corrective Actions	Completion Status
<p>4. OIG determined that the Senior Resident Inspector, Resident Inspector, and possibly the ISI Inspector reviewed Davis-Besse CR 2000-0782 during 12 RFO. These inspectors did not recognize the significance of the boric acid corrosion described in CR 2000-0782.</p>	<p>3.3.5.1 - Ensure inspector training includes the effects of boric acid corrosion and PWSCC of nickel based alloy nozzles.</p> <p>3.3.1.1 - Provide training and reinforce expectation to managers and staff to maintain a questioning attitude.</p> <p>3.3.4.2 - The NRC should strengthen its inspection guidance pertaining to the periodic review of operating experience.</p>	<p>Developed an inspector read and sign training process and issued training modules on boric acid corrosion.</p> <p>Developed an inspector read and sign training module on the importance of maintaining a questioning attitude using the Columbia Space Shuttle accident report. Followed up training with presentations at regional counterpart meetings.</p> <p>Changes have been made to IP 71152 to require in-depth follow-up of licensee evaluations and corrective actions of 3-6 issues per year in addition to those issues reviewed as part of the biennial corrective action team inspection.</p> <p>Operating experience task force review completed. Strengthening the agency's review of operating experience should provide highlighted information to both managers and inspectors of issues and events that would otherwise not normally be focused on by the inspection program, such as the effects of boric acid corrosion on reactor vessel heads.</p>	<p>Training module issued and completed.</p> <p>Training module issued with completion date set at 12/31/03. Counterpart meeting presentations complete</p> <p>Complete</p> <p>Awaiting recommendations from results of Operating Experience Task Force. Completion due 12/04.</p>

LIMITED DISTRIBUTION

LIMITED DISTRIBUTION

IG Finding	Associated DBLLTF Recommendations	Associated Corrective Actions	Completion Status
<p>5. Region III inspectors at Davis-Besse did not relay the information depicted in CR 2000-0782 to Region III managers. Consequently, the information contained in CR 2000-0782 was not provided to NRC Headquarters staff and was not considered in NRC's November 2001 decision to allow Davis-Besse to operate past December 31, 2001.</p>	<p>3.3.5.1 - Ensure inspector training includes the effects of boric acid corrosion and PWSCC of nickel based alloy nozzles.</p> <p>3.3.1.1 - Provide training and reinforce expectation to managers and staff to maintain a questioning attitude.</p> <p>3.3.4.2 - The NRC should strengthen its inspection guidance pertaining to the periodic review of operating experience.</p>	<p>Developed an inspector read and sign training process and issued training modules on boric acid corrosion.</p> <p>Developed an inspector read and sign training module on the importance of maintaining a questioning attitude using the Columbia Space Shuttle accident report. Followed up training with presentations at regional counterpart meetings. Training included the need for managers to seek out minority opinions when making risk-significant decisions.</p> <p>Changes to IP 71152 to require semi-annual trend reports. This will be a vehicle for documenting equipment trends and allow for clear communication of the issues throughout the management chain.</p> <p>Operating experience task force review completed. Strengthening the agency's review of operating experience should provide highlighted information to both managers and inspectors of issues and events that would otherwise not normally be focused on by the</p>	<p>Training module issued and completed.</p> <p>Training module issued with completion date set at 12/31/03. Counterpart meeting presentations complete. Presentation given to NRR Executive Team and Leadership Team.</p> <p>Procedure changes complete. First trend review to be completed in June 2004.</p> <p>Awaiting recommendations from results of Operating Experience Task Force. Completion due 12/04.</p>

LIMITED DISTRIBUTION

LIMITED DISTRIBUTION

LIMITED DISTRIBUTION