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OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD
Before Administrative Judges:

Michael C. Farrar, Chairman
E. Roy Hawkens
Nicholas G. Trikouros

In the Matter of	)	Docket No. IA-05-052
DAVID GEISEN	)	ASLBP No. 06-845-01-EA

DAVID GEISEN'S MOTION TO COMPEL THE PRODUCTION, OR ALTERNATIVELY THE *IN CAMERA* INSPECTION, OF AN UNREDACTED COPY OF THE OFFICE OF INVESTIGATIONS REPORT DATED AUGUST 22, 2003

David Geisen ("Geisen"), by counsel, and pursuant to 10 C.F.R. § § 2.323, 2.336(b)(5) and 2.705(h), moves for the entry of an order compelling the production to Mr. Geisen of an unredacted copy of the NRC's Office of Investigations Report dated August 22, 2003 (Case No. 3-2002-006) ("August 2003 OI Report") previously disclosed, in redacted form, by NRC Staff to Mr. Geisen in the above-captioned action. Alternatively, Mr. Geisen moves for the entry of an order compelling the production of an unredacted copy of the August 2003 OI Report to the Board for an *in camera* inspection to determine whether and to what extent NRC Staff properly redacted the August 2003 OI Report on privilege grounds.

In support hereof, Geisen incorporates by reference the accompanying Memorandum of Points and Authorities, including the exhibits attached thereto.

WHEREFORE, Geisen respectfully requests that the Board grant this Motion and enter an order (a) overruling NRC Staff's assertion of the deliberative process and "personal privacy"

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privileges regarding the August 2003 OI Report, (b) compelling NRC Staff to produce to Mr. Geisen an unredacted copy of the August 2003 OI Report and (c) awarding Mr. Geisen such other and further relief as the Board deems just and proper. Alternatively, Mr. Geisen requests that the Board enter an order (a) compelling NRC Staff to produce an unredacted copy of the August 2003 OI Report to the Board for an *in camera* inspection to determine whether and to what extent NRC Staff properly redacted the August 2003 OI Report on privilege grounds. Pursuant to 10 C.F.R. § 2.323(b), a proposed Order is attached hereto.

Respectfully Submitted,

Dated: August 11, 2006

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CERTIFICATION OF GOOD FAITH EFFORTS

I HEREBY CERTIFY, pursuant to 10 C.F.R. § § 2.323(b) and 2.705(h), that counsel for David Geisen communicated with NRC Staff on several occasions, both in writing and orally, in a good faith effort to resolve the dispute that is the subject of this Motion. Many of those communications are described in or attached to the Memorandum in Support of this Motion. Despite those efforts, the parties were not able to resolve the dispute prior to the filing of this Motion.

Charles F. B. McAleer, Jr.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that, on the 11th day of August, 2006, true and genuine copies of the foregoing were served on the following persons via email as indicated by an (*) and by regular mail as indicated by an (**):

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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Before Administrative Judges:

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In the Matter of	)	Docket No. IA-05-052
DAVID GEISEN	)	ASLBP No. 06-845-01-EA

MEMORANDUM OF POINTS AND AUTHORITIES IN SUPPORT OF GEISEN'S MOTION TO COMPEL THE PRODUCTION, OR ALTERNATIVELY THE *IN CAMERA* INSPECTION, OF AN UNREDACTED COPY OF THE OFFICE OF INVESTIGATIONS REPORT DATED AUGUST 22, 2003

Introduction

David Geisen ("Geisen") is a veteran who served his country honorably in the United States Navy from 1982 to 1988. In 1988, he began working for First Energy Nuclear Operating Company ("FENOC") and was promoted through the ranks at FENOC over the next fourteen years, serving ultimately as the Manager of Design Basis Engineering at FENOC's Davis-Besse Nuclear Power Station ("Davis-Besse"). After leaving FENOC, Mr. Geisen worked for three years as Supervisor of Nuclear Engineering at Kewanee Nuclear Power Plant ("Kewanee"), which is owned and operated by Dominion Energy Resources, Inc.

On January 4, 2006, the Office of Enforcement of the U.S. Nuclear Regulatory Commission ("NRC") entered an order immediately banning Mr. Geisen from working in the nuclear power industry for a period of at least five (5) years. The primary basis cited by the

Office of Enforcement for that punitive action was a report issued by the NRC's Office of Investigations on August 22, 2003 following a year of interviews and factual investigation.

Having sought and obtained the January 4, 2006 Order against Mr. Geisen, NRC Staff now seeks to hide significant portions of the August 2003 OI report behind assertions of privilege, specifically the deliberative process privilege and the "personal privacy" privilege. Based even on the very limited information provided so far by NRC Staff to Mr. Geisen regarding those privilege assertions, NRC Staff has failed to assert those protections in a procedurally sufficient or substantively justified manner. A review of the heavily-redacted August 2003 OI Report and accompanying privilege logs suggests that NRC Staff has not met its high burden to justify withholding potentially critical information that Mr. Geisen needs to defend himself against the charges in the January 4, 2006 Order and to recover his livelihood. Even were NRC Staff somehow able to meet its burden, both of the privileges asserted by NRC Staff regarding the August 2003 OI Report are *qualified* privileges that must yield to Mr. Geisen's overriding need for the withheld information.

It is axiomatic that evidentiary privileges curtail the truth-seeking function and, for that reason, are disfavored in the law. If there is any hope of arriving at the truth in this matter, NRC Staff's privilege assertions regarding the August 2003 OI Report should be overruled and an unredacted version disclosed to Mr. Geisen. At a minimum, the Board should conduct an *in camera* inspection of the NRC Staff's redactions to make sure that only information that properly falls within the narrowest application of the asserted privileges is withheld and that all other information is disclosed immediately to Mr. Geisen.

Summary of Relevant Facts and Proceedings

A summary of the factual background of this matter was previously presented to the Board in Mr. Geisen's Opposition to The NRC Staff's Motion to Hold The Proceeding in Abeyance dated March 20, 2006. Mr. Geisen will not repeat that factual background here but instead incorporates it by reference. The following is a summary of the procedural events that relate specifically to this Motion:

1. On January 4, 2006, the NRC's Office of Enforcement issued an order prohibiting Mr. Geisen's involvement in NRC-licensed activities for a period of five (5) years, effective immediately ("January 4, 2006 Order").

2. In the January 4, 2006 Order, the NRC's Office of Enforcement cited, as a significant basis for its ruling, the findings and conclusions contained in a report issued on August 22, 2003 by the NRC's Office of Investigations, Case No. 3-2002-006 ("August 2003 OI Report").

3. On February 23, 2006, Mr. Geisen filed his Answer to the January 4, 2006 Order and requested an expedited hearing. On March 16, 2006, the Board was established to preside over the above-captioned matter.

4. On March 20, 2006, NRC Staff filed a Motion to Hold Proceeding in Abeyance, in which NRC Staff requested, among other things, "a stay of discovery and hearing rights during the regulatory proceeding to accommodate the needs of" a related criminal proceeding involving Mr. Geisen and others.[1] Geisen opposed NRC Staff's Motion to Hold Proceeding in Abeyance.

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[1] On January 19, 2006, Mr. Geisen and two other individuals were indicted in a proceeding pending in the United States District Court for the Northern District of Ohio, styled *U.S. v. David Geisen, et al.*, Case No. 3:06CR712 (N.D. Ohio) ("Criminal Proceeding").

On May 19, 2006, the Board entered an order denying NRC Staff's Motion to Hold Proceeding in Abeyance.

5. On May 31, 2006, NRC Staff filed a Petition for Interlocutory Review of the Board's May 19, 2006 Order. On June 9, 2006, Geisen filed an Opposition to NRC Staff's Petition for Interlocutory Review. On July 26, 2006, the Commission affirmed the Board's May 19, 2006 Order denying NRC Staff's Motion to Hold Proceeding in Abeyance.

6. On June 1, 2006, the Board entered a protective order governing the "use and dissemination of proprietary materials" in this matter. *See* Protective Order (June 1, 2006) (Governing Disclosure of Proprietary Materials).

7. While NRC Staff's Petition for Interlocutory Review was pending before the NRC, on June 5, 2006, NRC Staff served their Initial Disclosure pursuant to 10 C.F.R. § 2.336(b) and produced an initial set of documents.

8. Among the documents that NRC Staff produced with its June 5, 2005 Initial Disclosure was a copy of the August 2003 OI Report (Bates Numbered 30000-30232) from which substantial text had been redacted. A copy of the redacted version of the August 2003 OI Report produced by NRC Staff to Mr. Geisen is attached as Exhibit 1.

9. Along with their Initial Disclosures, NRC Staff served the following logs or lists:

- "10 C.F.R. 2.336(b)(5) Deliberative Process Privilege Log"
- "10 C.F.R. 2.336(b)(5) Personal Privacy Privilege Log"
- "10 C.F.R. 2.336(b)(5) Law Enforcement Privilege Log"
- "10 C.F.R. 2.336(b)(5) Attorney Client Privilege Log"
- "10 C.F.R. 2.336(b) Proprietary Document List"

NRC Staff did not include with its Initial Disclosure any affidavit or other verified statement relating to or supporting the privilege determinations referenced in the foregoing logs. Copies of NRC Staff's Deliberative Process Privilege Log and Personal Privacy Privilege Log are attached as Exhibits 2 and 3, respectively.

10. A supposedly unredacted copy of the August 2003 OI Report is referenced in its entirety on page 5 of the Deliberative Process Privilege Log. *See* Exhibit 2, at p. 5 (referencing "OI Report of Investigation (ROI): Davis-Besse Nuclear Power Plant" and Bates Numbers 30235-30468). The only "description" given for the privilege assertion is "Agent's Analysis Withheld." In the Deliberative Process Privilege Log, there was no page-by-page or redaction-by-redaction description or assertion regarding the August 2003 OI Report.

11. An unredacted copy of the August 2003 OI Report is also referenced in its entirety on page 21 of the Personal Privacy Privilege Log. *See* Exhibit 3, at p. 21 (referencing "OI Report of Investigation (ROI): Davis-Besse Nuclear Power Plant" and Bates Numbers 30235-30468). The only "description" given for the privilege assertion is "Unsubstantiated Allegations Withheld to Protect Personnel Privacy." As with the Deliberative Process Privilege Log, there was no page-by-page or redaction-by-redaction description or assertion regarding the August 2003 OI Report in the Personal Privacy Privilege Log.

12. After receiving the redacted version of the August 2003 OI Report (*see* Exhibit 1, Bates Nos. 30000-30232), counsel for Mr. Geisen determined, through their own efforts, that the redactions appeared on the following pages:

PAGE	DESCRIPTION OF REDACTION
30003-30005	In eight places, selectively redacting some, but not all, names and/or allegations allegedly "substantiated" by the investigation.
30004	Redaction of name of person as to whom the investigation did not "substantiate" that he allegedly "deliberately failed to accurately

	and/or completely document his 12 RFO Quality Assurance audit activities relative to the BACC Program."
30007-10, 30017	Several redactions
30030	Several redactions
30031	Four redactions
30042-53	Entire section redacted (presumably including "Agent's Analysis" section). Conclusion section appears to redact name(s) but does not redact conclusion itself, which was presumably based in part on the redacted portions of evidence summarized in pages 30033-53.
30063-64	"Agent's Analysis" (Allegation I-2) and Conclusion sections entirely redacted.
30064-74	Entire section redacted (presumably including "Agent's Analysis" section). Conclusion section on page 30075 is not redacted: "Based on the evidence developed, this investigation did not substantiate that FENOC personnel willfully failed to take adequate corrective action to determine the cause of rust particles on the RE filters or that FENOC personnel willfully failed to take adequate corrective actions to determine the cause of the rust-colored boric acid deposits found on the CACs."
30080	"Agent's Analysis" section (Allegation II-1) entirely redacted. Conclusion section on page 30081 is not redacted.
30081-82	Entire sections redacted (presumably including "Agent's Analysis" section). Conclusion section appears to redact name(s) but does not redact conclusion itself, which was presumably based in part on the redacted portions of evidence summarized in pages 30081-82.
30101-102	"Agent's Analysis" section (Allegation III-1A) entirely redacted.
30105-106	"Agent's Analysis" section (Allegation III-1B) entirely redacted.
30124-125 (Page 30126 is missing)	"Agent's Analysis" section (Allegation III-1C) entirely redacted.
30130-131	"Agent's Analysis" section (Allegation III-1D) entirely redacted.
30134-135	"Agent's Analysis" section (Allegation III-1E) entirely redacted.
30135	Conclusion section appears to redact certain names but does not redact conclusion itself, which was presumably based in part on the redacted portions of evidence summarized in pages 30083-30135.
30174-178	"Agent's Analysis" section (Allegation III-2A) entirely redacted.
30185-186	"Agent's Analysis" section (Allegation III-2B(1)) entirely redacted.
30193, 30195	"Agent's Analysis" section (Allegation III-2B(2)) entirely redacted.
30197	"Agent's Analysis" section (Allegation III-2B(3)) entirely redacted.
30197	Conclusion section appears to redact certain names but does not redact conclusion itself, which was presumably based in part on the redacted portions of evidence summarized in pages 30135-30197.
30200-201	"Agent's Analysis" section (Allegation III-3) entirely redacted.
30201	Conclusion section appears to redact certain names but does not redact conclusion itself, which was presumably based in part on the

	redacted portions of evidence summarized in pages 30198-30201.
30201-205	Entire section(s) redacted (presumably including "Agent's Analysis" section).
30205	Conclusion entirely redacted.
30206	Names redacted (Allegation IV).
30207-208	Entire section(s) redacted (Allegation IV) (presumably including "Agent's Analysis" and Conclusion sections). Names redacted.
30209-210	Names redacted. Other text redacted.

13. Counsel for Mr. Geisen also determined that the August 2003 OI Report contained, in unredacted form, at least 109 paragraphs titled "Agent's Notes" that were not withheld or redacted on the basis of any alleged privilege or protection.

14. On June 20, 2006, counsel for Mr. Geisen wrote NRC Staff concerning the redactions in the August 2003 OI Report and challenging the manner and sufficiency by which NRC Staff has asserted privilege protection regarding the document. *See* Letter from Richard A. Hibey to Sara E. Brock (June 20, 2006) (attached as Exhibit 4). Counsel for Mr. Geisen also requested supplementation of the privilege logs to provide "the basis for the distinction that was apparently made between 'Agent's Notes' and 'Agent's Analysis' when preparing the privilege logs," and "additional descriptive information accordingly, including the name, title and job description of the person(s) who made the determination that the withheld documents were allegedly entitled to privilege protection."

15. On June 21, 2006, counsel for Mr. Geisen telephoned NRC Staff to discuss the issues raised in the June 20, 2006 letter. While providing some clarification regarding certain copying and production issues, NRC Staff was unable during that telephone conversation to respond substantively to the issues raised in the June 20, 2006 letter or to provide the requested supplementation. NRC Staff instead promised to respond to the June 20, 2006 after further review.

16. As of July 10, 2006, NRC staff had not responded to the June 20, 2006 letter or otherwise provided the supplemental information requested by counsel for Mr. Geisen. Accordingly, on July 11, 2006, counsel for Mr. Geisen sent a second letter. *See* Letter from Richard A. Hibey to Sara E. Brock (July 11, 2006) (attached as Exhibit 5).

17. The following day, on July 12, 2006, NRC Staff responded to the June 20, 2006 letter from counsel for Mr. Geisen. *See* Letter from Michael A. Spencer to Richard A. Hibey (July 12, 2006) (attached as Exhibit 6). Without providing any detailed information regarding the redactions, NRC stated simply that it would "continue to assert the deliberative process and personal privacy privileges for the redactions made to the OI Report." With respect to the assertion of "personal privacy" privilege, NRC Staff stated that it "regard[s], as both irrelevant and an unwarranted invasion of personal privacy, the disclosure of either unsubstantiated allegations or substantiated allegations involving individuals against whom the NRC Staff did not issue an order." On that point, NRC Staff claimed that "[o]nly the culpability of Mr. Geisen is at issue in this proceeding."

18. NRC Staff enclosed with its July 12, 2006 letter an affidavit apparently submitted by Mr. Guy P. Caputo in two other proceedings involving FENOC employees.[2] In the affidavit in the *Moffitt* and *Miller* matters, Mr. Caputo, who is the Director of the Office of Investigations of the Office of the Executive Director for Operations, made the following assertions regarding the August 2003 OI Report:

> I have personally reviewed the Report of Investigation and have determined, in accordance with the guidance in Management Directive 3.4, that it contains pre-decisional information concerning the Staff's investigation of wrongdoing by

[2] *See* Affidavit of Guy P. Caputo (April 25, 2006) ("Caputo Affidavit") submitted in *In the Matter of Steven P. Moffitt*, IA-05-054, ASLBP No. 06-847-03-EA and *In the Matter of Dale L. Miller*, IA-05-053, ASLBP No. 06-846-02-EA ("*Moffitt* and *Miller* matters").

> FENOC employees at the Davis-Besse Nuclear Power Plant. The Report of Investigation contains the Staff's analyses, recommendations, opinions, or evaluations, and *may not necessarily* reflect the final agency position with respect to matters discussed therein. This material is *concentrated* in portions of the Report entitled "Agent's Analysis." These portions of the report in particular comprised part of the deliberative process necessary to the Staff's review of the allegations of wrongdoing by FENOC employees at Davis-Besse Nuclear Power Plant.

Caputo Affidavit ¶ 4 (Ex. 6) (emphasis added). Mr. Caputo also stated, as follows:

> Further, I have determined that disclosure of the "Agent's Analysis" portions of the Report of Investigation *could* result in harm to the agency, in that it would (a) disclose the preliminary views of individual Staff members and/or the Staff prior to reaching a final agency decision, and could thus create confusion as to the actual policy or views of the NRC staff; (b) hinder the efficiency of the Staff, in that forced disclosure of their internal discussion could serve to chill future deliberations and could interfere with its ability to engage in free exchange of opinions and analyses prior to publishing our final decisions; and (c) imply or suggest incorrectly that the opinions of Staff members involved in these communications were actually final decisions of the agency.

Id., ¶ 5 (emphasis added). On that basis, Mr. Caputo had apparently decided to "formally invoke the deliberative process privilege with respect to the portions of the Report of Investigation entitled 'Agent's Analysis.'" *Id.* ¶ 6. Nothing in the Caputo Affidavit addresses NRC Staff's assertion of "personal privacy" privilege concerning the August 2003 OI Report.

19. On July 19, 2006, counsel for Mr. Geisen sent NRC Staff a letter responding to NRC Staff's July 12, 2006 letter. *See* Letter from Richard A. Hibey to Michael A. Spencer (July 19, 2006) (attached as Exhibit 7). In that letter, counsel for Mr. Geisen explained in detail various outstanding issues relating to NRC Staff's assertions of privilege protection regarding the August 2003 Report that had not been resolved by NRC Staff's July 12, 2006 letter (or the Caputo Affidavit in the *Moffitt* and *Miller* matters). Among other things, counsel for Mr. Geisen noted, on a very basic level, that NRC Staff had not given counsel for Mr. Geisen any basis on which "to distinguish between the portions of the August 22, 2003 OI Report [NRC Staff]

redacted on the basis of 'personal privacy' privilege and those [NRC Staff] redacted on the basis of deliberative process privilege." *See* Exhibit 7 at pp. 1-2.

20. On July 27, 2006, the Board entered an order directing the parties to confer regarding "a process for resolving any 'privilege' disputes" and other matters and to submit a joint status report on August 2, 2006. *See* Order (July 27, 2006) (Calling for Status Report).

21. On July 31, 2006, counsel for Mr. Geisen and NRC Staff conferred by telephone regarding the matters required by the Board's July 27, 2006 Order. During that telephone call, the parties discussed, but were unable to resolve, NRC Staff's assertions of privilege regarding the August 2003 OI Report. Later that day, however, NRC Staff sent counsel for Geisen excerpts of a discovery response served by NRC Staff on June 30, 2006 in the *Moffitt* and *Miller* matters in which NRC Staff provided a breakdown, by page at least, of the portions of the August 2003 OI Report redacted on deliberative process privilege grounds and those redacted on "personal privacy" privilege grounds. *See* E-mail from Mary C. Baty to Charles F. B. McAleer, Jr. (July 31, 2006) (attached as Exhibit 8). With respect to the assertion of the deliberative process privilege, NRC Staff simply referenced the Caputo Affidavit and provided a listing of pages from the August 2003 OI Report containing the relevant redactions. With respect to the assertion of the "personal privacy" privilege, NRC Staff essentially echoed the statement in its July 12, 2006 letter to counsel for Geisen (*see* Ex. 6) by stating that "disclosure [of the redacted information] would constitute an unwarranted invasion of personal privacy" and that "[i]n general, these pages are devoted to unsubstantiated allegations and/or allegations that do not involve Messrs. Moffitt and Miller." Exhibit 8.

22. If NRC Staff's discovery responses in the *Miller* and Moffitt matters are any indication (*see* Exhibit 8), it appears that the NRC Staff is allocating its privilege assertions regarding the redactions in the August 2003 OI Report, as follows:

Redactions of OI Report (By Page)	**Deliberative Process Privilege**	**"Personal Privacy" Privilege**
30003-05		X
30007-10		X
30017		X
3030-31		X
30042-53		X
30063	X	
30064-73		X
30074	X	
30080	X	
30081-82		X
30082	X	
30101-02	X	
30105-06	X	
30124-26	X	
30130-31	X	
30134-35	X	
30135		X
30174-78	X	
30185-86	X	

30193	X	
30193-95	X	
30195	X	
30197	X	
30197		X
30200-01	X	
30201		X
30202-08		X
30208	X	
30209-10		X

23. On August 2, 2006, the parties submitted a Joint Status Report to the Board, as required by the Board's July 27, 2006 Order. In pertinent part, the parties reported that they had been unable to resolve the privilege issues regarding the August 2003 OI Report and that Mr. Geisen would be filing this motion on or before August 11, 2006. Additionally, Mr. Geisen requested the opportunity to file a Reply Brief to any Opposition that NRC Staff files in response to this motion. NRC Staff noted its consent to that request. Finally, the parties confirmed their agreement "that they preserve, and do not waive, their right to file other motions regarding privilege assertions, including such assertions in the Initial Disclosures and written discovery responses, during the course of discovery in this matter" and "that the time limits set forth in 10 C.F.R. § 2.323 for filing motions to compel shall not apply to privilege disputes." *See* Joint Status Report at p. 4 (August 2, 2006).

24. On August 4, 2006, the Board entered an Order setting a conference call for August 17, 2006, granting Mr. Geisen's request to file a Reply Brief in support of this motion

and tentatively reserving the afternoon of September 6, 2006 for possible oral argument on this motion. *See* Order (August 4, 2006) (Setting Conference Call, Granting Leave to File Reply Brief and Reserving Date for Oral Argument).

Argument

I. Applicable Law

A. Deliberative Process Privilege

The deliberative process privilege "covers 'documents reflecting advisory opinions, recommendations and deliberations comprising part of a process by which governmental decisions and policies are formulated.'" *Dep't of Interior and Bureau of Indian Affairs v. Klamath Water Users Protective Ass'n*, 532 U.S. 1, 8 (2001), *quoting NLRB v. Sears, Roebuck & Co.*, 421 U.S. 132, 150 (1975); *In re Entergy Nuclear Vermont Yankee, LLC,* No. 50-271-)LA, ASLBP No. 04-832-02-OLA, 2005 NRC LEXIS 209, *25 (Dec. 21, 2005) ("The deliberative process privilege protects documents 'reflecting advisory opinions, recommendations and deliberations comprising part of a process by which governmental decisions and policies are formulated,' [citation omitted], but does not extend to factual material severable from the deliberative context."); *Texaco P.R., Inc. v. Department of Consumer Affairs*, 60 F.3d 867, 884 (1st Cir. 1995) ("The deliberative process privilege 'shields from public disclosure confidential inter-agency memoranda on matters of *law* and *policy*.") (citation omitted) (emphasis added). It "rests on the obvious realization that officials will not communicate candidly among themselves if each remark is a potential item of discovery and front page news, and its object is to enhance 'the quality of agency decisions,' by protecting open and frank discussion among those who make them within the Government." *Klamath*, 532 U.S. at 8-9, *quoting Sears, Roebuck*, 421 U.S. at 151.

As the party invoking the deliberative process privilege, NRC Staff has the burden of justifying its application. *Pac. Gas & Elec. Co.. v. United States*, 70 Fed. Cl. 128, 133 (2006), *citing Kaufman v. City of New York*, No. 98 Civ. 2648, 1999 U.S. Dist. LEXIS 5779, at **10-11 (S.D.N.Y. Apr. 22, 1999). "'Like all evidentiary privileges that derogate a court's inherent power to compel the production of relevant evidence, the deliberative process privilege is narrowly construed.'" *Id.*, *quoting Greenpeace v. Nat'l Marine Fisheries Serv.*, 198 F.R.D. 540, 543 (W.D. Wash. 2000); *see also Kaufman*, 1999 U.S. Dist. LEXIS 5779, *11 ("'The [deliberative process] privilege, as it is in derogation of the search for truth, is not to be expansively construed.'").

The material that the NRC Staff seeks to protect must be both "pre-decisional" and "deliberative." *Pacific Gas*, 70 Fed. Cl. at 133, *citing Jade Trading, LLC v. United States*, 65 Fed. Cl. 487, 493 (2005). "To qualify as pre-decisional, the material sought to be protected 'must address activities antecedent to the adoption of any agency policy.'" *Id.*, *quoting Walsky Constr. Co. v. United States*, 20 Cl. Ct. 317, 320 (1990). "'Subjective documents which reflect the personal opinion of the writer, rather than the policy of the agency are considered privileged information because they are pre-decisional.'" *Id.*, *quoting New York ex rel. Boardman v. Nat'l R.R. Passenger Corp.*, No. 1:04cv0962, 2006 U.S. Dist. LEXIS 4684, at *32 (N.D.N.Y. Jan. 9, 2006). "To qualify as deliberative, the material sought to be protected 'must address 'a direct part of the deliberative process in that it makes recommendations or expresses opinions on legal or policy matters.'" *Id.*, *quoting Walsky*, 20 Cl. Ct. at 320.

"'The privilege does not protect factual or investigative material, except as necessary to avoid indirect revelation of the decision-making process.'" *Pacific Gas*, 70 Fed. Cl. at 134, *quoting Scott Paper Co. v. United States*, 943 F. Supp. 489, 496 (E.D. Pa. 1996). "'Thus,

'factual findings and conclusions, as opposed to opinions and recommendations' are not protected.'" *Id.*, *quoting Reino de Espana v. Am. Bureau of Shipping*, No. 03cv3573, 2005 U.S. Dist. LEXIS 15685, at *34 (S.D.N.Y. Aug. 1, 2005) (citation omitted). "'Where possible, 'facts that are separable from the privileged portion of a document should be disclosed.'" *Pacific Gas*, 70 Fed. Cl. at 134 n.7, *quoting New York ex rel Boardman*, 2006 U.S. Dist. LEXIS 4684, at *33 (citation omitted); *Maine v. Department of the Interior, et al.*, 124 F. Supp. 2d 728, 746 (D. Maine 2001) (the privilege does not apply to facts that can be severed from any otherwise privileged information). In fact, courts often require the Government to show that unprivileged facts cannot be severed from the information it seeks to protect from disclosure.). *Maine*, 124 F. Supp. 2d at 737.

The deliberative process privilege is a qualified privilege "subject to judicial oversight." *Marriott Int'l Resorts, L.P. v. United States*, No. 05-5046, 2006 U.S. App. LEXIS 2654, at *15 (Fed. Cir., Feb. 3, 2006); *Pacific Gas*, 70 Fed. Cl. at 134; *Walsky*, 20 Cl. Ct. at 320; *Scott Paper*, 943 F. Supp. at 946. If and as "the government makes a sufficient showing of entitlement to the privilege, the court should balance the competing interests of the parties." *Scott Paper*, 943 F. Supp. at 496 (citation omitted).

The party contesting the assertion of the privilege may overcome the privilege by "making 'a showing of evidentiary need . . . that outweighs the harm that disclosure of such information may cause to the'" to the party asserting the privilege. *Pacific Gas*, 70 Fed. Cl. at 134, *quoting Alaska v. United States*, 16 Cl. Ct. 5, 11 (1988); *Marriott*, 2006 U.S. App. LEXIS 2654, at *15 ("[A] showing of compelling need can overcome the qualified deliberative process privilege.").

A court should "carefully scrutinize the manner of assertion of the [deliberative process] privilege." *Pacific Gas*, 70 Fed. Cl. at 134, *quoting Revelle v. Trigg*, No. 95-5885, 1999 U.S. Dist. LEXIS 890, at **4-5 (E.D. Pa. Feb. 2, 1999). Among other things, "the party seeking protection 'must state with particularity what information is subject to the privilege.'" *Pacific Gas*, 70 Fed. Cl. at 134, *quoting Walsky*, 20 Cl. Ct. at 320. "[T]he information or documents sought to be shielded must be identified and described." *Reino*, 2005 U.S. Dist. LEXIS 15685, at *37. Finally, "the agency must supply the court with 'precise and certain reasons' for maintaining the confidentiality of the requested document." *Walsky*, 20 Cl. Ct. at 320 (citation omitted). "Blanket assertions of the privilege are insufficient." *Nat'l Marine Fisheries Serv.*, 198 F.R.D. at 543; *see also Kaufman*, 1999 U.S. Dist. LEXIS 5779, at *12 ("[A] blanket approach to asserting the privilege is unacceptable and is itself grounds for denying invocation of the privilege."); *Revelle*, 199 U.S. Dist. LEXIS 890, at *6 ("indiscriminate claim of privilege may in itself be sufficient reason to deny it.").

B. "Personal Privacy" Privilege

NRC Staff has yet to specify the legal basis or authority for the "personal privacy" privilege that it is asserting. Based on the minimal description that NRC Staff has provided, it appears that NRC Staff is proceeding under one or more of the exemptions listed in 10 C.F.R. § 2.390(a). Protections afforded by such exemptions are recognized by the Commission. *See, e.g., In re Entergy Nuclear Vermont Yankee, LLC,* 2005 NRC LEXIS 209, *32-37. As the Commission has noted, however, such protections or "privileges," are qualified, just like the deliberative process privilege. Under 10 C.F.R. § 2.390, the burden is clearly on the person seeking to restrict access to the requested document or information to establish that the information falls within the exemption. The needs of the requesting party can and should be

considered in determining whether such needs override the alleged desire for non-disclosure. Moreover, the Board is fully empowered to enter protective orders to address both the need for access and the need for confidentiality. *See* 10 C.F.R. § § 2.390(f) and 2.705(c)

II. The August 2003 OI Report Is Not Protected By The Deliberative Process Privilege

In his communications to NRC Staff, Mr. Geisen has explained in detail the manner in which NRC Staff's assertion of the deliberative process privilege with respect to the August 2003 OI Report was untimely and insufficient. *See, e.g.,* Exhibits 4, 5 and 7. NRC Staff did not provide any specification when it first asserted the deliberative process privilege in its Initial Disclosure; rather, it provided one generalized statement applicable to the entire document. There was no specific articulation as to each redaction, nor was there even a listing of pages as to which NRC Staff was asserting the deliberative process privilege. The basic page-level detail only came two months later, after repeated requests by Mr. Geisen, and then only in the form of information provided in the *Moffitt* and *Miller* matters. NRC Staff never has filed or served an affidavit in this matter providing the basis for the assertion of the deliberative process privilege as to Mr. Geisen. Simply put, even after repeated requests well documented in the record, NRC Staff has not provided the level of information necessary to properly and timely assert the deliberative process privilege concerning the August 2003 OI Report.

Even if NRC Staff had asserted the privilege in a timely and proper manner, the little information presently available to Mr. Geisen suggests strongly that the deliberative process privilege does not apply to the redactions or that it has been waived. NRC Office of Enforcement issued the January 4, 2006 Order and made serious allegations therein in substantial part on the basis of the August 2003 Report and, having done so, should not be permitted to restrict Mr. Geisen's access to all relevant information or information that could lead to the discovery of

admissible evidence. Additionally, NRC Staff has not offered an explanation of how its assertion of the deliberative process privilege regarding the pages referenced in paragraph 22 above survives its disclosure of approximately 109 paragraphs of "Agent's Notes" in other portions of the August 2003 OI Report. Nor has NRC Staff explained its decision to redact some, but not all, of the various categories of information summarized in paragraph 12 above. NRC Staff has also not verified, under oath, that there is absolutely no factual information (e.g., an account or recitation of a statement by a witness) contained in any of the redactions as to which NRC Staff asserts the deliberative process privilege. Indeed, in the Caputo Affidavit submitted in the *Moffitt* and *Miller* matters, NRC Staff dances around that issue by vaguely asserting that the protected material is "*concentrated* in portions of the Report entitled 'Agent's Analysis.'" *See* Exhibit 6 (emphasis added). As the caselaw summarized above makes clear, the deliberative process privilege does not protect from disclosure factual information, and Mr. Geisen is entitled to every piece of factual information for his defense, free from NRC Staff's gatekeeping.

Finally, NRC Staff has not explained, let alone specified, how disclosure of the redacted information in this matter, under the terms of a protective order, would in fact cause any harm to the NRC or its processes. In the Caputo Affidavit submitted in the *Moffitt* and *Miller* matters, Mr. Caputo vaguely asserted that disclosure of the redacted portions of the August 2003 OI Report "could" result in harm to the agency. *See* Exhibit 6. It is difficult to understand how disclosure of an unredacted version of the August 2003 OI Report would, in fact, cause harm to the NRC, which issued the January 4, 2006 Order and should be required to substantiate its reasons for doing so. This is especially so given the protections against use and disclosure available in the June 1, 2006 Protective Order.

By contrast, the harm to Mr. Geisen from having access only to what NRC Staff decides it wants to give him is real and palpable. If, as NRC Staff has acknowledged, there were allegations during the underlying investigation that were unfounded, unsubstantiated or not credible, Mr. Geisen is entitled to full discovery on those points. For example, if the allegations failed because certain witnesses were not credible or certain information was not reliable, Mr. Geisen is entitled to know the details; if the information suggests that a particular witness has a bias, Mr. Geisen has a right to know that information as well. It is not for NRC Staff, through unsubstantiated assertions of the deliberative process privilege, to cherry-pick the allegations, witnesses and evidence it likes, while preventing Mr. Geisen from knowing what and who failed the test of reliability or credibility. Whether and to what extent any evidence is relevant and admissible are issues for the Board's determination at an evidentiary hearing based on a complete record, not for NRC Staff to make in its Initial Disclosures. In the end, the deliberative process privilege is a qualified privilege that should be narrowly construed and applied and that is clearly overcome here by the very real prejudice and injury to Mr. Geisen.

III. The August 2003 OI Report Is Not Protected By The "Personal Privacy" Privilege

In his communications to NRC Staff, Mr. Geisen has explained in detail the manner in which NRC Staff's assertion of the "personal privacy" privilege with respect to the August 2003 OI Report lacks merit. *See, e.g.,* Exhibits 4, 5 and 7. NRC Staff has done nothing to explain or particularize the basis for this assertion other than to state that the redacted information relates *either* to "unsubstantiated allegations" *or* "substantiated allegations involving individuals against whom NRC Staff did not issue an order" and that, in NRC Staff's judgment, the redacted information is "irrelevant" because "[o]nly the culpability of Mr. Geisen is at issue in this proceeding." *See* Exhibit 6. NRC Staff has the burden to establish the proper basis for this

assertion of privilege, and Mr. Geisen should not be required to articulate at this time every conceivable way in which information concerning "unsubstantiated allegations" or "substantiated allegations" against persons who received a pass from NRC Staff for whatever reason may be relevant and admissible in Mr. Geisen's defense of the January 4, 2006 Order. In the era of modern discovery, such relevancy determinations are not appropriate for the discovery phase, especially "if the information sought appears reasonably calculated to lead to the discovery of admissible evidence. *See* 10 C.F.R. § 2.705(b)(1).

Finally, NRC Staff has not articulated or documented any claim that disclosure of the information at issue would cause harm to the NRC. Nor has the NRC indicated that any of the persons who allegedly are the subject of the redacted information have requested the redactions or even been given notice of this issue. In the absence of such information, NRC Staff's attempt to withhold the information constitutes just another self-help device to limit Mr. Geisen's access to discoverable information. Even were NRC Staff to make a demonstration of some theoretical harm, it is highly unlikely that any such harm would occur if the redacted information were disclosed under the June 1, 2006 Protective Order governing this matter.

IV. Alternatively, The Board Should Conduct An *In Camera* Review

It has long been held that "*in camera* review is a highly appropriate and useful means of dealing with claims of governmental privilege." *Kerr v. U.S. Dist. Court for the N. Dist. Of Cal.*, 426 U.S. 394, 406 (1976); *United States v. Bd. Of Educ. Of Chicago*, 610 F. Supp. 695, 699 (N.D. Ill. 1985) ("An in camera inspection may properly be used to decide whether a party's claim of litigative need outweighs the government's interest in confidentiality."); *Scott Paper*, 943 F. Supp. at 498 n.8 ("Several courts have held that given the strong competing interests to be

balanced, th[e deliberative process] privilege usually requires examination of the documents in camera.").

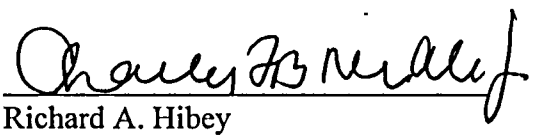
While Mr. Geisen believes that the Board can, and should, order the immediate production of the August 2003 OI Report because NRC Staff has failed to maintain its burden to assert and establish privilege protection for the document, Mr. Geisen is entitled, at a minimum, to have the Board conduct an *in camera* review of the document to ensure that all non-privileged information in the document is released and to assess the parties' competing needs and interests regarding the document. Thus, as alternative relief, Mr. Geisen requests that the Board at a minimum order and conduct an *in camera* review of the unredacted version of the August 2003 OI Report.

Conclusion

For the reasons set forth above, as well as other grounds that Mr. Geisen will present in his Reply Brief and at any oral argument, Mr. Geisen requests that the Board grant his accompanying Motion to Compel and award him the relief requested therein.

Respectfully Submitted,

Dated: August 11, 2006



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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that, on the 11th day of August, 2006, true and genuine copies of the foregoing were served on the following persons via email as indicated by an (*) and by regular mail as indicated by an (**):

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD
Before Administrative Judges:

Michael C. Farrar, Chairman
E. Roy Hawkens
Nicholas G. Trikouros

In the Matter of	)	Docket No. IA-05-052
DAVID GEISEN	)	ASLBP No. 06-845-01-EA

[PROPOSED] ORDER GRANTING DAVID GEISEN'S MOTION TO COMPEL PRODUCTION OF AN UNREDACTED COPY OF THE OFFICE OF INVESTIGATIONS REPORT DATED AUGUST 22, 2003

THIS MATTER, having come before the Board on the motion of David Geisen, by counsel, pursuant to 10 C.F.R. § § 2.323, 2.336(b)(5) and 2.705(h), for the entry of an order compelling the production to Mr. Geisen of an unredacted copy of the NRC's Office of Investigations Report dated August 22, 2003 (Case No. 3-2002-006) ("August 2003 OI Report"), which was previously disclosed, in redacted form, by NRC Staff to Mr. Geisen in the above-captioned action ("Motion to Compel"); and

WHEREAS, having considered the Motion to Compel, NRC's Opposition thereto and Mr. Geisen's Reply, it appears to the Board that good cause exists for granting the relief requested in the Motion to Compel; it is now therefore

ORDERED that the Motion to Compel is hereby GRANTED, that NRC Staff's assertions of the deliberative process and "personal privacy" privileges regarding the August 2003 OI

Report are overruled and that, on or before _____, 2006, NRC Staff shall produce to Mr. Geisen a complete, unredacted copy of the August 2003 OI Report.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

By_____
Michael C. Farrar, Chairman
ADMINISTRATIVE JUDGE

Rockville, Maryland
_____, 2006

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD
Before Administrative Judges:

Michael C. Farrar, Chairman
E. Roy Hawkens
Nicholas G. Trikouros

In the Matter of	)	Docket No. IA-05-052
DAVID GEISEN	)	ASLBP No. 06-845-01-EA

EXHIBITS TO MEMORANDUM IN SUPPORT OF DAVID GEISEN'S MOTION TO COMPEL THE PRODUCTION, OR ALTERNATIVELY THE *IN CAMERA* INSPECTION, OF AN UNREDACTED COPY OF THE OFFICE OF INVESTIGATION'S REPORT DATED AUGUST 22, 2003

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Counsel for David Geisen

Dated: August 11, 2006

EXHIBIT 1

(To David Geisen's Motion To Compel
The Production, Or Alternatively The In Camera
Inspection, Of An Unredacted Copy Of The Office
Of Investigation's Report Dated August 22, 2003)

OI report for public release

Title: DAVIS-BESSE NUCLEAR POWER PLANT

WILLFUL FAILURE TO TAKE ADEQUATE CORRECTIVE ACTIONS; DELIBERATE FAILURE TO ACCURATELY AND/OR COMPLETELY DOCUMENT THE AS-LEFT REACTOR VESSEL HEAD CONDITION, AND WORK DELIBERATELY PERFORMED WITHOUT AN APPROVED WORK ORDER; DELIBERATE FAILURE TO ACCURATELY AND/OR COMPLETELY DOCUMENT THE 2000 REFUEL OUTAGE QUALITY ASSURANCE AUDIT ACTIVITIES; CONSPIRACY TO PROVIDE INCOMPLETE AND/OR INACCURATE INFORMATION TO THE NRC IN RESPONSES TO NRC BULLETIN 2001-01; DELIBERATE FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN RESPONSES TO NRC BULLETIN 2001-001; DELIBERATE FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN RESPONSE TO AN NRC SUBPOENA

Licensee:

FirstEnergy Nuclear Operating Company
76 South Main Street
Akron, OH 44308

Docket No.: 50–346

Case No.: 3-2002-006

Report Date: August 22, 2003

Control Office: OI:RIII

Status: CLOSED

Reported by:

Joseph M. Ulie, Senior Special Agent
Office of Investigations
Field Office, Region III

Michele F. Janicki, Special Agent
Office of Investigations
Field Office, Region III

Reviewed and Approved by:

James A. Gavula, Senior Reactor Inspector
Division of Reactor Safety
Region III

Richard C. Paul, Director
Office of Investigations
Field Office, Region III

WARNING

DO NOT DISSEMINATE, PLACE IN THE PUBLIC DOCUMENT ROOM OR DISCUSS THE CONTENTS OF THIS REPORT OF INVESTIGATION OUTSIDE NRC WITHOUT AUTHORITY OF THE APPROVING OFFICIAL OF THIS REPORT. UNAUTHORIZED DISCLOSURE MAY RESULT IN ADVERSE ADMINISTRATIVE ACTION AND/OR CRIMINAL PROSECUTION.

30000

Region III

FROM: Richard C. Paul, Director
Office of Investigations Field Office
Region III

SUBJECT: DAVIS-BESSE NUCLEAR POWER PLANT: WILLFUL FAILURE TO TAKE ADEQUATE CORRECTIVE ACTIONS; DELIBERATE FAILURE TO ACCURATELY AND/OR COMPLETELY DOCUMENT THE AS-LEFT REACTOR VESSEL HEAD CONDITION, AND WORK DELIBERATELY PERFORMED WITHOUT AN APPROVED WORK ORDER; DELIBERATE FAILURE TO ACCURATELY AND/OR COMPLETELY DOCUMENT THE 2000 REFUEL OUTAGE QUALITY ASSURANCE AUDIT ACTIVITIES; CONSPIRACY TO PROVIDE INCOMPLETE AND/OR INACCURATE INFORMATION TO THE NRC IN RESPONSES TO NRC BULLETIN 2001-01; DELIBERATE FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN RESPONSES TO NRC BULLETIN 2001-001; DELIBERATE FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN RESPONSE TO AN NRC SUBPOENA (OI CASE NO. 3-2002-006)

Attached, for whatever action you deem appropriate, is the Office of Investigations (OI) Report of Investigation concerning the above matter. The exhibits to this report will be issued under separate cover.

Neither this memorandum nor the report may be released outside the NRC without the permission of the Director, OI. Please ensure that any internal office distribution of this report is controlled and limited only to those with a need-to-know and that they are aware of the sensitivity of its contents. Treat as "Official Use Only."

Attachment: Report

cc w/att:
F. Congel, OE
L. Chandler, OGC
H. Clayton, OE:RIII
S. Collins, DEDR
R. Borchardt, NRR (ATTN: G. Cwalina, OAC, NRR)
A. Thadani, RES

Distribution:
c/f
sf 3-2002-006
L. Boyd, OI:HQ (2 memos, 1 report w/exhibits; 1 report only)
B. Barber, OI:HQ w/Title Page & Synopsis

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DATE	08/22/03		08/22/03		08/22/03		08/22/03	

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30001

MEMORANDUM TO: James L. Caldwell, Regional Administrator
Region III

FROM: Richard C. Paul, Director
Office of Investigations Field Office, Region III

SUBJECT: DAVIS-BESSE NUCLEAR POWER PLANT: WILLFUL FAILURE TO TAKE ADEQUATE CORRECTIVE ACTIONS; DELIBERATE FAILURE TO ACCURATELY AND/OR COMPLETELY DOCUMENT THE AS-LEFT REACTOR VESSEL HEAD CONDITION, AND WORK DELIBERATELY PERFORMED WITHOUT AN APPROVED WORK ORDER; DELIBERATE FAILURE TO ACCURATELY AND/OR COMPLETELY DOCUMENT THE 2000 REFUEL OUTAGE QUALITY ASSURANCE AUDIT ACTIVITIES; CONSPIRACY TO PROVIDE INCOMPLETE AND/OR INACCURATE INFORMATION TO THE NRC IN RESPONSES TO NRC BULLETIN 2001-01; DELIBERATE FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN RESPONSES TO NRC BULLETIN 2001-001; DELIBERATE FAILURE TO PROVIDE COMPLETE AND ACCURATE INFORMATION IN RESPONSE TO AN NRC SUBPOENA (OI CASE NO. 3-2002-006)

On August 22, 2003, OI issued the case report on this investigation. On September 5, 2003, OI issued the exhibits to this case report. A review of these records revealed that corrections needed to be made to the Report of Investigation's List of Exhibits and a few of the exhibits. The corrected List of Exhibits and a corrected CD for the exhibits are attached. Please destroy the incorrect pages and the previously issued CD and replace with the attached. The exhibits can be viewed using the Adams Viewer. Some documents are rather large and will take a little longer to load. Please be patient.

Neither this memorandum nor the exhibits may be released outside the NRC without the permission of the Director, OI. Please ensure that any internal office distribution of these exhibits is controlled and limited only to those with a need-to-know and that they are aware of the sensitivity of its contents. Treat as "Official Use Only."

Attachments: As stated

cc w/atts:
F. Congel, OE
L. Chandler, OGC
H. Clayton, OE:RIII

cc w/o atts:
S. Collins, DEDR
J. Dyer, NRR (ATTN: G. Cwalina, OAC, NRR)
A. Thadani, RES
Distribution: c/f, sf 3-2002-006
L. Boyd, OI:HQ (2 memos, 1 report w/exhibits; 1 report only)

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OFFICE	DRS	/	OI:RIII		OI:RIII		OI:RIII	
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30002

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SYNOPSIS

This investigation was initiated on April 22, 2002, by the U.S. Nuclear Regulatory Commission (NRC), Office of Investigations, Region III, to determine whether FirstEnergy Nuclear Operating Company (FENOC) personnel at the Davis-Besse Nuclear Power Plant (Davis-Besse) willfully violated NRC requirements regarding the reactor vessel head (RVH). The allegations investigated included the following:

Allegation I-1: Willful Failure to Take Adequate Corrective Action to Implement a Modification and to Assure No Pressure Boundary Leakage was Occurring

Based on the evidence developed, this investigation did substantiate that FENOC personnel [redacted] willfully failed to take adequate corrective action for a significant condition adverse to quality, in that they failed to assure the modification to install the enlarged access ports was implemented. This would have permitted a complete inspection and cleaning of the RVH nozzle areas, as required by the Boric Acid Corrosion Control (BACC) procedure and 10 CFR Part 50, Appendix B, Criterion XVI. In addition, they failed to assure no pressure boundary leakage was occurring as required by Technical Specifications.

Allegation I-2: Willful Failure to Take Adequate Corrective Actions to Determine the Cause of the Red/Brown Boric Acid Residue on the RVH Flange

Based on the evidence developed, this investigation did substantiate that FENOC personnel [redacted] willfully failed to take adequate corrective actions to determine the cause of the red/brown boric acid residue on the RVH flange.

Allegation I-3: Willful Failure to Take Adequate Corrective Action to Determine the Cause of Corrosion Products in Radiation Element Filters and Containment Air Coolers

Based on the evidence developed, this investigation did not substantiate that FENOC personnel willfully failed to take adequate corrective action to determine the cause of rust particles on the radiation element filters, or that FENOC personnel willfully failed to take adequate corrective action to determine the cause of the rust-colored boric acid deposits found on the containment air coolers.

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Allegation II-1: Deliberate Failure to Accurately and/or Completely Document the As-Left RVH Condition and Work Deliberately Performed Without an Approved Work Order

Based on the evidence developed, this investigation did substantiate that a former System Engineer deliberately failed to accurately and/or completely document the as-left condition of the RVH, and deliberately performed RVH cleaning activities without an approved work order.

Allegation II-2: Deliberate Failure to Accurately and/or Completely Document the 2000 Refueling Outage (12RFO) Quality Assurance Audit Activities Relative to the BACC Program

Based on the evidence developed, this investigation did not substantiate that a [redacted] deliberately failed to accurately and/or completely document his 12RFO Quality Assurance audit activities relative to the BACC Program.

Allegation III: Conspiracy to Provide Incomplete and/or Inaccurate Information to the NRC in Responses to NRC Bulletin 2001-01

Based on the evidence developed, this investigation did substantiate that FENOC personnel [redacted] Manager of Design Engineering; Senior Design Engineer; [redacted] Supervisor of Compliance; Director of Technical Services; System Engineer; [redacted] conspired to provide incomplete and/or inaccurate information to the NRC in response to NRC Bulletin 2001-01 in writing by letters dated September 4, October 17, and two letters dated October 30, 2001; and orally on October 3 and 11, 2001.

Allegation III-1: Deliberate Failure to Provide Complete and Accurate Information to the NRC in the September 4, 2001, Response (Serial 2731) to NRC Bulletin 2001-01

Based on the evidence developed, this investigation did substantiate that FENOC personnel [redacted] Design Engineering Manager; Senior Design Engineer; [redacted] Compliance Supervisor; Technical Services Director; System Engineer; [redacted] deliberately failed to provide complete and accurate information to the NRC in response to NRC Bulletin 2001-01 in writing by letter dated September 4, 2001.

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Allegation III-2: Deliberate Failure to Provide Complete and Accurate Information to the NRC in the October 17, 2001, Response (Serial 2735) to NRC Bulletin 2001-01

Based on the evidence developed, this investigation did substantiate that FENOC personnel (Design Engineering Manager; Senior Design Engineer; [redacted] Compliance Supervisor; Technical Services Director; System Engineer; [redacted] deliberately failed to provide complete and accurate information to the NRC in response to NRC Bulletin 2001-01 in writing by letter dated October 17, 2001.

Allegation III-3: Deliberate Failure to Provide Complete and Accurate Information to the NRC in the October 30, 2001, Responses (Serials 2741 and 2744) to NRC Bulletin 2001-01

Based on the evidence developed, this investigation did substantiate that FENOC personnel (Senior Design Engineer; Design Engineering Manager; [redacted] Technical Services Director; [redacted] Compliance Supervisor; [redacted] System Engineer) and [redacted] deliberately failed to provide complete and accurate information to the NRC in the October 30, 2001, responses (Serials 2741 and 2744) to NRC Bulletin 2001-01.

Allegation IV: Deliberate Failure to Provide Complete and Accurate Information in Response to an NRC Subpoena

Based upon the evidence developed, this investigation did substantiate that a [redacted] deliberately failed to provide complete and accurate information in response to an NRC subpoena.

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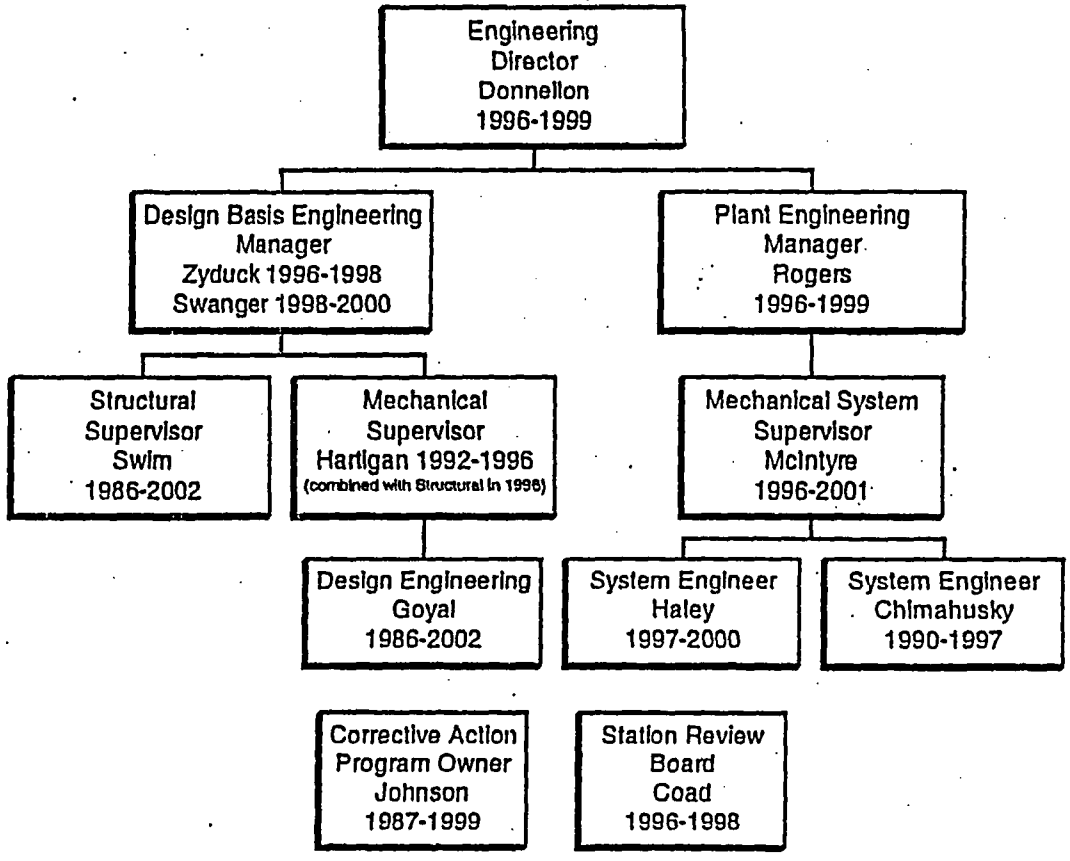
Davis-Besse Organization Associated with Allegation I-1



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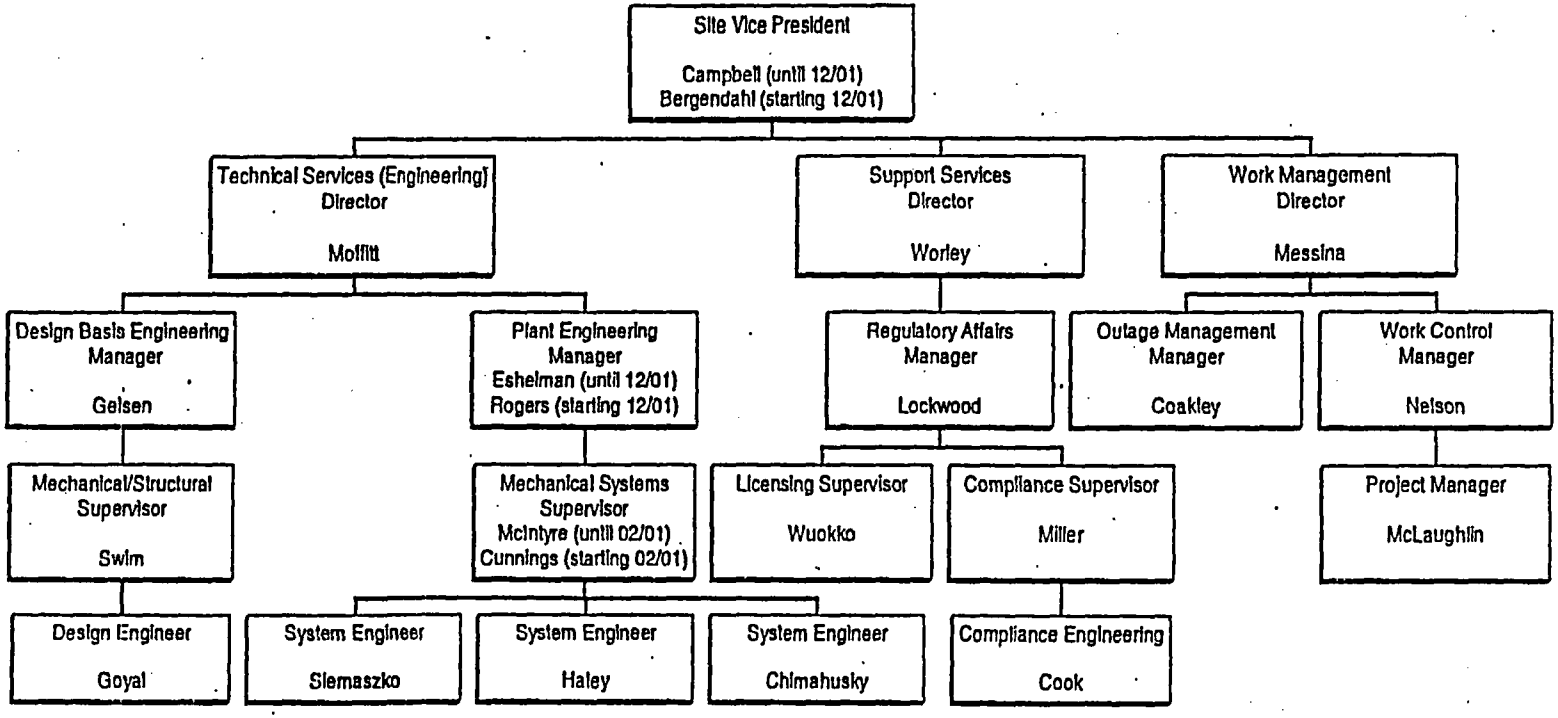
Davis-Besse Organization Circa 2001



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LIST OF ACRONYMS

AIT	Augmented Inspection Team
ALARA	As Low As Reasonably Achievable
ANO	Arkansas Nuclear One
ARB	Allegation Review Board
ASME	American Society of Mechanical Engineers
BACC	Boric Acid Corrosion Control
B&W	Babcock and Wilcox
B&WOG	B&W Owners Group
CAC	Containment Air Coolers
CATPR	Corrective Action to Prevent Recurrence
CATS	Corrective Action Tracking System
CD	Compact Disk
CEOG	Combustion Engineering Owners Group
CR	Condition Report
CRD	Control Rod Drive
CRDM	Control Rod Drive Mechanism
DBNPS	Davis-Besse Nuclear Power Station
DOL	U.S. Department of Labor
ECT	Eddy Current Testing
EFPY	Effective Full Power Years
EICS	Enforcement and Investigation Coordination Staff
EPRI	Electric Power Research Institute
FTI	Framatome Technologies, Inc.
GL	Generic Letter
HP	Health Physics
JCO	Justification for Continued Operation
LOCA	Loss of Coolant Accident
MRC	Management Review Committee
MRP	Materials Reliability Program
NDE	Non-destructive Examination
NEI	Nuclear Energy Institute
NRR	Nuclear Reactor Regulation
OMC	Outage Management Central
ONS	Oconee Nuclear Plant
PCAQR	Potential Condition Adverse to Quality Report
PRA	Probabilistic Risk Assessment
PRC	Project Review Committee
PWR	Pressurized Water Reactor

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PWSCC	Primary Water Stress Corrosion Cracking
QA	Quality Assurance
RCA	Root Cause Analysis
RCS	Reactor Coolant System
RE	Radiation Element
RFO	Refuel Outage
ROI	Report of Investigation
RPV	Reactor Pressure Vessel
RVH	Reactor Vessel Head
RWP	Radiation Work Permit
S&L	Sargent and Lundy
SIA	Structural Integrity Associates
SRI	Southwest Research Institute
TA	Technical Assistant
TMI	Three Mile Island
UT	Ultrasonic Testing
VHP	Vessel Head Penetration
WO	Work Order
WSC	Work Scope Committee

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DETAILS OF INVESTIGATION

Applicable Regulations

10 CFR 50, Appendix B, Criteria V, XVI and XVIII, 1996 Edition (Allegations I-1 through I-3, and II-2)

10 CFR 50.5: Deliberate Misconduct, 2000, 2001, and 2002 Editions (Allegations II-1, II-2, III and IV)

10 CFR 50.9: Completeness and Accuracy of Information, 2000, 2001, and 2002 Editions (Allegations II-1, II-2, III and IV)

18 USC 1001: Statements or Entries Generally (Allegation III)

18 U.S.C. 371: Conspiracy (Allegation III)

42 USC 2273 (Atomic Energy Act): Violation of Sections Generally (All Allegations)

Purpose of Investigation

This investigation was initiated on April 22, 2002, by the U.S. Nuclear Regulatory Commission (NRC), Office of Investigations (OI), Region III (RIII), to determine whether FirstEnergy Nuclear Operating Company (FENOC) personnel stationed at the Davis-Besse Nuclear Plant (Davis-Besse) willfully violated NRC requirements regarding the Reactor Vessel Head (RVH).

Background (Exhibit 1)

On or about March 6, 2002, at Davis-Besse, FENOC personnel identified a significant cavity in the RVH that was apparently caused by corrosion due to boric acid leaking from a crack in or near a control rod drive mechanism (CRDM) nozzle. An NRC Augmented Inspection Team (AIT) was organized, in part, to determine what caused the problem and concluded that the corrosion process may have been actively ongoing for as long as 6 years. As a result of the AIT inspection activities, several potential violations were identified.

Initially, on April 22, 2002, at an Allegation Review Board (ARB), the NRC staff identified concerns related to whether FENOC personnel: (1) willfully failed to take adequate corrective actions for the circumstances surrounding the corrosion problem that had been occurring to the RVH; (2) willfully failed to implement the Boric Acid Corrosion Control (BACC) procedure; and (3) provided inaccurate and/or incomplete information to the NRC regarding FENOC's

responses to NRC Bulletin 2001-01 and the 12 Refuel Outage (RFO) RVH activities.

> Agent's Note: The dispositioning of the concerns discussed at the April 22, 2002, ARB are detailed in Exhibit 274 of this Report of Investigation (ROI).

Subsequently, on May 3, 2002, an emergency ARB was held and OI was requested to include additional concerns that were considered potential willful violations of NRC requirements by NRC Nuclear Reactor Regulation (NRR) personnel. These additional concerns involved correspondence provided to the NRC by FENOC during the Fall of 2001 that allegedly contained statements that were not complete and accurate in all material respects.

> Agent's Note: These 13 issues were grouped into Concern 4 of RIII-02-A-0060. These issues will be addressed under separate cover.

In addition, RIII technical staff identified an additional potential willful violation of Technical Specification (Tech Spec) 3.4.6.2, involving a Limiting Condition for Operation (LCO) for reactor coolant system (RCS) leakage. The willful aspect of this concern is that FENOC knowingly operated in excess of that allowed by tech specs.

> Agent's Note: This issue was Concern 5 of RIII-02-A-0060 and is considered covered in Allegation I-1 of this ROI.

Further, the May 3, 2002, ARB discussed concerns brought to Doug SIMPKINS, RIII Resident Inspector, by a Davis-Besse [redacted] (AMS No. RIII-02-A-0072). The Enforcement and Investigation Coordination Staff (EICS) separated [redacted] allegation into [redacted] The NRC staff requested that OI include questions during its investigation addressing a potential chilling effect. OI's results of the chilling effect issues were documented in a memorandum from R. Paul to H. CLAYTON, EICS, dated March 25, 2003. Concern 1 of RIII-02-A-0072 relates to the integrity of a former System Engineer, Andrew SIEMASZKO. This concern is considered covered in Allegation II-1 of this ROI.

Further, an issue developed from the OI interview of [redacted] that was not addressed during the May 3, 2002 ARB. This issue involved [redacted] Specifically [redacted] felt the [redacted]

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Agent's Note: This new potential allegation was transmitted to EICS by memorandum dated May 8, 2002, and is discussed in the Supplemental Information section of this ROI.

[redacted]

Additional ARBs were held on July 10, 2002 (RIII-02-A-0107); July 29, 2002 (RIII-02-A-0116); December 23, 2002 (RIII-02-A-0178); January 23, 2003 (RIII-03-A-0017, addressed in OI Case No. 3-2003-002); March 3, 2003 (RIII-2003-A-0024, addressed in OI Case No. 4-2003-005); March 10, 2003 (RIII-2003-A-0030, addressed in OI Case No. 3-2003-006); and April 7, 2003 (RIII-2002-A-0060), having varying degrees of relationship or perceived applicability to this investigation.

Agent's Note: The disposition of the issues discussed at these ARBs are summarized in Exhibit 274.

[redacted]

Coordination with Regional Staff

On April 22, 2002, an ARB requested that OI initiate an investigation to determine whether Davis-Besse personnel willfully violated NRC requirements.

On May 3, 2002, an emergency ARB was held and OI was requested to include additional concerns considered potential willful violations of NRC requirements raised by NRC:NRR personnel. Additional willful violations were also raised by the RIII technical staff.

At each of the additional ARBs identified in the Background section of this report, the issues were discussed and dispositioned as shown in Exhibit 274 of this ROI.

On April 9, 2003, members of OI (Mary Kay Fahey, Assistant to the Director; and Ulie) and OI's Technical Assistant James Gavula, Senior Reactor Inspector assigned to OI:RIII during this investigation, met with representatives of EICS (James HELLER, Senior Allegations Coordinator) and the Davis-Besse Oversight Panel (Monte PHILLIPS, Technical Assistant) to discuss the dispositioning of the voluminous number of allegation concerns.

In support of this investigation, Gavula provided technical expertise as requested by OI:RIII on a full-time basis throughout this investigation. Additionally, OI has been providing briefings of Regional and Headquarters management on the progress of the investigation on a continuing basis.

Coordination with Regional Counsel

This investigation was initiated with the concurrence of NRC:RIII Counsel Bruce A. BERSON, that if substantiated, the allegations would be violations of NRC regulations and/or requirements.

Additionally, various discussions occurred with NRC staff from the Office of General Counsel in support of the issuance of six subpoenas issued during this investigation.

Allegation I-1: Willful Failure to Take Adequate Corrective Action to Implement a Modification and to Assure No Pressure Boundary Leakage was Occurring

Evidence

Document Review

B&W Safety Evaluation for RVH CRDM Nozzle Cracking

In 1991, cracks were found in an Alloy 600 vessel head penetration (VHP) at Bugey 3, a French pressurized water reactor (PWR). Examinations of PWRs in France, Belgium, Sweden, Switzerland, Spain, and Japan were performed, and additional VHPs with axial cracks were detected in several European plants. Short axial crack indications were revealed in 59 of 1,850 penetrations (Exhibit 2, p. 30).

> Agent's Note: As a result of the above findings, an action plan was implemented by the NRC staff in 1991 to address primary water stress corrosion cracking (PWSCC) of Alloy 600 VHPs at all U.S. PWRs. Consequently, the following actions occurred.

On May 26, 1993, Babcock & Wilcox (B&W) issued a "Safety Evaluation For B&W Design Reactor Vessel Head Control Rod Drive Mechanism Nozzle Cracking." This safety evaluation indicated that B&W Owners Group (B&WOG) utilities, which included Davis-Besse, developed plans to visually inspect the CRDM nozzle area to determine if through-wall cracking had occurred. According to the evaluation document, if any leaks or boric acid deposits were located, the source of the leak and the extent of any wastage was to be evaluated. The NRC issued a safety evaluation related to this subject on November 19, 1993. This safety evaluation concluded that PWSCC of CRDM nozzle cracking in PWRs did not create an immediate safety issue as long as the required visual inspections continued in accordance with Generic Letter (GL) 88-05, "Boric Acid Corrosion of Carbon Steel Reactor Pressure Boundary Components in PWR Plants" (Exhibit 2, pp. 11-12, 28, 43).

PCAQR 94-0295

On March 17, 1994, Edward CHIMAHUSKY, System Engineer, initiated Potential Condition Adverse to Quality Report (PCAQR) 94-0295 because he did not believe that Davis-Besse was in compliance with the "commitment" to perform visual inspections of the RVH during each refueling outage to determine potential nozzle cracking in support of the B&WOG's 1993 safety evaluation. According to the PCAQR, this commitment was "closed without being properly evaluated" and "there is currently no method to ensure this inspection is scheduled each refueling outage" (Exhibit 2, p. 1).

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In the Proposal for Remedial Action and Justification section of this PCAQR, it was acknowledged that the NRC staff, in their November 19, 1993, safety evaluation, accepted the items the B&WOG presented. The PCAQR further stated that the NRC stated in their evaluation, "the staff believes it is prudent for NUMARC [i.e., B&WOG, et. al] to consider the implementation of an enhanced leakage detection method for detecting small leaks during plant operations." The evaluation of this PCAQR determined "that there was no commitment made to the NRC by TE [Davis-Besse] or the B&WOG to perform any other inspections than those already being performed to satisfy the requirements of Generic Letter 88-05.... Regulatory Affairs and Design Engineering believe that although the enhanced visual inspection is not a commitment made to the NRC, it is recommended that it be done." However, Plant Engineering did not believe that these inspections were necessary because no cases of head cracks had been identified in the U.S. and the significant risk of a crack being present was low. "In addition, the inspection methods currently available to us are not highly reliable. Therefore, he [MATRANGA, Primary Systems Supervisor] does not believe that it is necessary to perform the inspections at this time." Based on this information, the PCAQR and the "commitment" were closed on April 28, 1994 (Exhibit 2, pp. 7-9).

Request For Modification 94-0025

CHIMAHUSKY initiated Modification (Mod) 94-0025 on May 27, 1994; Robert DONNELLON, Engineering Director, was the sponsor; MATRANGA, Engineering Supervisor, signed this request; and Theo S. SWIM, Design Engineering Supervisor, signed the approval. Mod 94-0025 was initiated to install inspection/access holes in the service structure to allow for adequate access to the top surface of the head to clean and inspect it. There was limited access to the RVH or the CRDM reactor vessel nozzles without the installation of this modification. All B&W plants with the exception of Davis-Besse and Arkansas Nuclear One (ANO) had already installed this modification (Exhibit 3, pp. 1-2).

> Agent's Note: This modification could only be implemented during a refuel outage when the reactor was shut down.

BACC Procedure, Revision 1/C1

Step 5.3.4 of BACC Procedure NG-EN-00324, Revision 1/C1, dated June 13, 1994, specifies, "Plant Engineering shall be responsible for: ...Determining the root cause and source of the coolant leak." Further, Step 6.3.1.d specifies, "the affected components should be carefully inspected to determine if a boric acid solution is present or just crystals and residue. If active leakage is present a leak rate should be measured or estimated and then action taken to stop the leakage" (Exhibit 4, pp. 1, 9-10, 14).

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Agent's Note: Although no definitions were provided in this version of the BACC procedure, they were provided in Revision 2, dated September 30, 1999. According to that revision, the term "active leakage" meant leakage from any plant systems containing boric acid, e.g., RCS, that resulted in accumulation of moist boric acid crystals or visible moisture or fluid.

PCAQR 96-0551

PCAQR 96-0551, dated April 21, 1996, discussed both the head and flange inspection results. This PCAQR was written because steps in BACC Procedure NG-EN-00324, Revision 1/C1, could not be fully implemented. Boric acid deposits were unable to be cleaned from the RVH due, in part, to the design of the service structure and the cleaning equipment limitations. Further, the PCAQR stated that the B&W safety evaluation for the nozzle cracking issue relied on performing the CRDM nozzle inspection. A detailed narrative described the basis for the RVH inspection, explaining that if there was a nozzle crack, boric acid deposits would build-up on the RVH throughout the operating cycle, which would then be detected during the visual head inspection. This PCAQR also noted that during 8RFO (1993), "the boric acid deposits were removed (to the extent possible) by washing the RV head" (Exhibit 5, pp. 1-2, 4-7, 11).

Based on the head inspection results, the extent of the visual inspection at Davis-Besse was limited to approximately 50-60 percent of the RVH area because of the restrictions imposed by the location and size of the mouse holes and because of boron deposits in the vicinity of various nozzles. The PCAQR stated, "the condition of the area from which boron could not be removed is not known." The restricted access to the top of the RVH resulted in the inadequate ability to completely inspect and clean the head. Mod 94-0025 had previously been initiated to install inspection/access holes in the service structure so as to allow for adequate access to the top surface of the head to clean and inspect it. The modification was necessary to inspect the nozzle penetrations of the head. According to the PCAQR, the videotape of the flange inspection was reviewed and did not show any leakage during operating cycle 10 (Exhibit 5, pp. 11-14, 17).

Agent's Note: Failing to remove boric acid deposits from the RVH affected both the ability to determine the condition of the RVH from a corrosion standpoint and the ability to determine the source of the leakage. The inability to clean deposits from the RVH also masked the identification of potential nozzle leakage.

This PCAQR, authored by Prasoon GOYAL, former Design Engineer, FENOC, documented whether the existing leakage occurred because of the leaking flanges or nozzles as follows:

- "Since the boric acid deposits are not cleaned it is difficult to distinguish whether the deposits occurred because of the leaking flanges or the leaking CRDM. This situation represents an adverse trend with the potential for greater than marginal consequences" (Exhibit 5, pp. 4-5).

  Agent's Note: This PCAQR was a Category 2 condition and was considered a "Significant Condition Adverse To Quality." This was because if a through-wall nozzle crack existed, it was understood that pressure boundary leakage was occurring, which would have been in violation of Tech Spec 3.4.6.2. This tech spec states in part that RCS leakage shall be limited to no pressure boundary leakage, and that with any pressure boundary leakage, the unit is to be in cold shutdown within 36 hours. The tech spec bases section specifically states that pressure boundary leakage of any magnitude is unacceptable since it may be indicative of an impending gross failure of the pressure boundary. The RCS pressure boundary provides one of the critical barriers that guard against the uncontrolled release of radioactivity. The term "CRDM" is used for both nozzles and flanges in the PCAQR (Exhibit 5, pp. 3-5; Exhibit 6, pp. 11, 56).

- "There is an industry wide concern regarding CRDM nozzle cracking due to PWSCC. This concern is addressed by RV head inspections. The inspection is done to check the CRDM nozzle [for] cracking which can be detected by boron deposits on the head. The existing boron deposits make it very difficult to draw any conclusions from the inspection" (Exhibit 5, pp. 6-7).

Additionally, other statements made in the PCAQR package appear to indicate that because of the inability to clean the deposits from the RVH, a clear determination of flange or nozzle leakage could not be made. The following are a summation of those statements:

- "...because the head has not been completely cleaned, it is not possible to make a clear determination that we do not have active leakage" (written on or about August 7, 1997, by Glenn McINTYRE, former Supervisor in Engineering, FENOC) (Exhibit 5, p. 18).

- "It cannot be determined, without some element of doubt, if these deposits are all due to some past leakage source that has been corrected or if there is a new leak present" (written on or about December 17, 1997, by Daniel E. HALEY, System Engineer, FENOC, and/or McINTYRE, former Mechanical System Supervisor, FENOC) (Exhibit 5, p. 19).

  Agent's Note: HALEY testified that this reference was referring to flange leakage. In subpoenaed information obtained by OI containing internal licensee

interview notes of HALEY, he acknowledged that he thought the leakage referred to in the above statement could be coming from somewhere else, i.e., nozzle leakage, since this is the only other source of leakage forming deposits on the RVH (Exhibit 7, p. 33; Exhibit 8, p. 1).

The PCAQR noted that there could have been corrosion damage within the RVH penetration due to boric acid from a through-wall crack in a nozzle, but the possibility was considered "extremely low since no large accumulation of boron was found on the head," and concluded the pressure boundary was not impacted. GOYAL observed that there were "several patches of boric acid accumulation on the RV head." However, he also wrote, "it is extremely difficult to develop an estimate of the amount of deposit because of the deposit scatter and the limited inspection" (Exhibit 5, pp. 1, 7, 11).

Agent's Note: Guidance provided to OI by RIII technical staff (John JACOBSON, Senior Reactor Inspector, RIII Division of Reactor Safety) indicated the use of a "low probability" justification for not inspecting was unacceptable. Because of the limited inspection, which GOYAL noted violated a BACC procedural step, he was not able to accurately determine the amount of accumulation of boron that was on the head. GOYAL's mention of the term "pressure boundary leakage," shows his awareness of the tech spec safety significance of the term (Exhibit 9).

According to the PCAQR, on or about December 17, 1997, HALEY and McINTYRE determined the modification to install the access/inspection ports needed to be pursued. The PCAQR points out that without access to the entire surface of the RVH, it was not possible to perform a complete inspection and cleaning of the head, including deposits remaining on the RVH. It was specified that those deposits could not be reached for cleaning through the current access ports. FENOC personnel contacted Three Mile Island Nuclear Plant (TMI), Duke Power (Oconee), and Crystal River nuclear plant representatives and learned that the RVHs of these plants were able to be entirely cleaned because they each had completed the enlarged inspection access ports modification (Exhibit 5, pp. 15, 19).

Agent's Note: Even though the decision to pursue the modification was made prior to the 1998 refuel outage, the meeting to schedule the modification was postponed until after the outage (Exhibit 5, p. 30).

The PCAQR discussed an analysis which indicated that with a head temperature of greater than 550 degrees, deposits on the head would create negligible corrosion concerns (Exhibit 5, p. 7).

Agent's Note: Since nozzle cracking and corrosion were the subject of the inspection, the temperature analysis had limited applicability. A nozzle crack would be pressure boundary leakage and there would be a tech spec requirement to shut down.

PCAQR 96-0551 remained open until January 19, 1999, and asked for a Root Cause evaluation, but the PCAQR was subsequently downgraded to an Apparent Cause (less significant) issue. Individuals named in PCAQR 96-0551 with engineering or management decision-making roles included GOYAL; John HARTIGAN, Senior Engineer; DONNELLON; SWIM; McINTYRE; Joe ROGERS, Plant Engineering Manager; John JOHNSON, PCAQR Review Board Chairman; HALEY; and Robert B. COAD, Assistant Plant Manager. Each of these individuals' specific roles are discussed in the Testimony section (Exhibit 5, pp. 21-23).

Agent's Note: At the time GL 97-01 was issued on April 1, 1997, PCAQR 96-0551 continued to be discussed.

White Paper on Control Rod Drive Nozzle Cracking

By memorandum dated May 8, 1996, DONNELLON, Engineering Director, sent a copy of a "white paper" that dealt with control rod drive nozzle cracking to various Davis-Besse supervisory personnel, which was prepared by GOYAL. The paper explained that because of a through-wall CRDM nozzle crack discovered during hydrostatic testing at the Bugey 3 plant in France, each Owners Group submitted a safety assessment to the NRC on this issue. The NRC issued a safety evaluation (November 19, 1993) and concluded that RVH nozzle cracking was not an immediate safety concern based on the expectation that boric acid leakage detected during visual inspections would be sufficient to alert licensees to this potential problem. The paper mentioned that all of the B&W plants except Davis-Besse and ANO had the access/inspection ports installed to inspect and clean the entire head. It was noted that Davis-Besse's access was limited to about 50 percent of the head area. Implementing Mod 94-0025 was recommended in this document (Exhibit 10, pp. 1-2, 11-12).

PRC/WSC Meeting History Minutes for Mod 94-0025

At a March 7, 1995, Project Review Committee (PRC) meeting, Mod 94-0025 was tabled by DONNELLON. GOYAL was present at this meeting (Exhibit 11, pp. 1, 5).

At an April 4, 1995, PRC meeting, CHIMAHUSKY presented a request to incorporate Mod 94-0025 into the scope of 10RFO (1996), which was tabled. In attendance were COAD, DONNELLON, GOYAL, ROGERS, SWIM, and Dale WUOKKO, Supervisor of Licensing (Exhibit 11, p. 1; Exhibit 12, p. 3).

During a June 15, 1995, PRC meeting, DONNELLON stated the modification was being held open pending further industry information/investigation concerning the actual benefits (Exhibit 11, p. 1).

> On January 7, 1997, at a PRC meeting, SWIM requested that the committee defer this modification until 12RFO (2000) because no further industry information was available (Exhibit 11, p. 2).
>
> Agent's Note: Rather than assuring that the known plant-specific inadequacies were resolved, which included the inability to access/inspect a significant portion of the RVH, FENOC personnel were apparently focused on what the industry was doing. This was despite the PCAQR stating that there was an inability to distinguish whether the existing deposits were from flange or nozzle leakage (Exhibit 5, pp. 5-7, 15).

A Work Scope Committee (WSC) meeting to discuss Mod 94-0025 was held on September 3, 1997. According to the minutes, it was explained that sections of the reactor vessel could not be inspected or cleaned. Attendees included DONNELLON, David L. ESHELMAN, Plant Engineering Manager, ROGERS, and WORLEY. The meeting minutes were distributed to Guy G. CAMPBELL, Vice President; COAD; Scott COAKLEY, Outage Manager; DONNELLON; ESHELMAN; ROGERS; SWIM; and WORLEY (Exhibit 11, p. 2; Exhibit 13, pp. 2-3).

On September 1, 1998, at a PRC meeting, a schedule change for the modification was recommended for approval to 13RFO (2002). According to the meeting minutes, "there is less than 50% accessibility to the reactor vessel head, which does not allow for complete inspection or cleaning of potential boric acid deposits.... On-going industry concern of acid leakage from CRDM reactor vessel head nozzles could be better assessed." Attendees at this meeting were McINTYRE, GOYAL, COAKLEY, ROGERS, and Walt MOLPUS, System Engineer (Exhibit 11, p. 3; Exhibit 14, pp. 1, 6).

At a WSC meeting on September 17, 1998, Mod 94-0025 was discussed. According to the meeting minutes, "there is less than 50% accessibility to the reactor vessel head, which does not allow for complete inspection or cleaning. The mod resolves PCAQ 96-0551, one of ten oldest PCAQs.... The RCS leakage source is known and it is not on the head. We have inspected any boric acid sitting on the head. It has been in a dry condition and corrosion attack is not an issue." When asked about the basis for deferral to 13RFO (2002), ROGERS responded, "there are no failures in the industry." Attendees at this meeting included COAKLEY, DONNELLON, ESHELMAN, GOYAL, HALEY, McINTYRE, ROGERS, and WORLEY. Minutes of the

meeting were distributed to CAMPBELL, COAD, COAKLEY, DONNELLON, ESHELMAN, ROGERS, SWIM, WORLEY, and Steve MOFFITT, Technical Services Director (Exhibit 15, pp. 2-3, 9).

At a PRC meeting on September 7, 2000, the committee deferred Mod 94-0025 to 14RFO (2004) in order to meet 2001/2002 expenditure targets. "The committee recommended deferral to 14RFO with cash flow moving from years 2001/2002 to 2003/2004. D.L. ESHELMAN to recommend a Project Manager." Attendees included COAD, COAKLEY, ESHELMAN, David H. LOCKWOOD, Regulatory Affairs Manager, and David C. GEISEN, Design Engineering Manager (Exhibit 16, pp. 2-3, 8).

NRC Generic Letter 97-01

NRC issued this GL on April 1, 1997, to PWR licensees requesting a description of their programs for ensuring the timely inspections of CRDM and other vessel closure head penetrations. Per this GL and based upon the NRC November 1993 safety evaluation, the NRC staff continued to conclude that visual inspections of the RVH were necessary and that non-destructive examination (NDE) should be performed to ensure there was no unexpected cracking in domestic PWRs (Exhibit 17).

FENOC responded to this GL by letter dated January 14, 1999, endorsing the B&WOG response dated July 28, 1997, which FENOC stated applied to the Davis-Besse plant. The B&WOG response stated, "leakage on the RV head due to a through-wall [nozzle] crack caused by PWSCC...would easily have been detected" (Exhibit 18, p. 1; Exhibit 19, pp. 6, 8).

PCAQRs 98-0767 and 98-0649

PCAQR 98-0767, dated April 24, 1998, was written in 11RFO (1998) to again address the issue of boric acid on the RVH. According to the PCAQR, a video inspection performed on April 24, 1998, showed several "fist" size clumps of boric acid, and where clumps were not present, a light dusting of boric acid deposits was found around CRDM nozzle penetrations. A diagram used in the PCAQR indicated that the area around or near 21 nozzles was affected by the clumps. The boric acid varied in color "from rust brown to white." It was also noted that "very slight pitting" of the head had occurred. This PCAQR also noted that white streaks on the CRDM housing indicated flange leakage. According to the results of the flange inspection conducted during the 1998 refuel outage and detailed in PCAQR 98-0649, only one flange, D10, was identified as having a minor leak. Individuals named in PCAQR 98-0767 with engineering or relevant concurrence roles included MAINHARDT, McINTYRE, GOYAL, SWIM, and JOHNSON. Individuals involved in PCAQR 98-0649 included McINTYRE, CHIMAHUSKY, and JOHNSON (Exhibit 20; Exhibit 21).

Agent's Note: Per OI's technical review of the past documentation and RVH cleaning videos, the head was not washed between 1993 and 2000; it was only vacuumed.

CR 2000-1037

Condition Report (CR) 2000-1037, dated April 17, 2000, was written in 12RFO (2000) by SIEMASZKO to address the issue of boric acid on the RVH for the third consecutive refuel outage. According to the CR, inspection of the RVH indicated large accumulations of boric acid on the RVH and in the area of the CRDM nozzle penetrations. Reference is made in the CR to NRC GL 97-01, stating, "In order to perform required inspections the nozzles as well as the penetrations must be free of boron deposits. Once the head is free from the boron, new boric acid deposits may be easily noted and remedial actions taken." Other individuals named in CR 2000-1037 included McINTYRE and GEISEN (Exhibit 22).

Agent's Note: The terms "condition report (CR)" and "potential condition adverse to quality report (PCAQR)" are interchangeable. FENOC changed the title of these corrective action reports throughout the years.

E-mail dated December 13, 2000

An e-mail from GOYAL to SIEMASZKO and cc'd to GEISEN, SWIM and McINTYRE, stated with regard to the Oconee situation, "it is important to have a clean head for a good visual inspection. If the head is not clean, the chances of finding boric acid such as that observed at Oconee 1 are not very good" (Exhibit 23).

Memorandum dated January 30, 2001

This memorandum from GOYAL to SWIM and cc'd to GEISEN, stated regarding Oconee, "Boric Acid crystals were detected on RVH during the routine visual head inspection. They were able to find this leak because their CRDM flanges do not leak and the head was in pristine condition" (Exhibit 24).

Testimony

Interview of CHIMAHUSKY

CHIMAHUSKY said that in 1994 he became aware of the nozzle cracking issue, and he knew adequate inspections of the RVH could not be performed without the inspection access ports being installed, due to the service structure design. As a result, CHIMAHUSKY stated, he

initiated Mod 94-0025 because he thought that during the next scheduled refuel outage (1996) it would be necessary to inspect for nozzle cracks (Exhibit 25, pp. 24-25).

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Conclusion

Based on the evidence developed, this investigation did substantiate that FENOC's [redacted] willfully failed to take adequate corrective action for a significant condition adverse to quality, in that they failed to assure the modification to install the enlarged access ports was implemented. This would have permitted a complete inspection and cleaning of the RVH nozzle areas, as required by the BACC procedure and 10 CFR Part 50, Appendix B, Criterion XVI. In addition, they failed to assure no pressure boundary leakage was occurring as required by tech specs.

Allegation I-2: Willful Failure to Take Adequate Corrective Actions Determine the Cause of the Red/Brown Boric Acid Residue on the Reactor Vessel Head Flange

Evidence

Document Review

RCA Report for CR 1998-0020

The RC-2 Pressurizer Spray Valve RCA Report for CR 1998-0020, dated March 1999, concluded that two carbon steel nuts corroded away due to boric acid corrosion. This condition was considered important to nuclear safety because the valve forms part of the RCS pressure boundary. The RC-2 problem was considered a significant event at the plant and heightened the awareness of the corrosive nature of boric acid on carbon steel. According to the RCA report, the boric acid removed from the RC-2 valve area showed signs of great iron content, including being very brown in color. Plant Engineering was responsible for performing and documenting the inspections of the leakage. Reference was made to the step in the BACC procedure that stated that the affected area should be inspected to identify any signs of corrosion, and that these signs will most likely be exhibited by red rust or red/brown stained boron. The report noted the

non-white color of the boric acid buildup and brought into question the depth of the boric acid corrosion evaluation done for RC-2. It was pointed out that the valve's studs and nuts were stainless steel and should not have experienced significant boric acid corrosion. Corrective actions included revising the BACC procedure and plant-wide training, including specifically the Engineering Department, so that more thorough evaluation and documentation of boric acid leakage would occur. Also, management was to become more involved in the problem solving of plant safety-significant problems, which included decision-making training for Directors, Managers, and Supervisors. In addition, "emphasize to employees the importance of not subverting the procedure's intent by not performing steps when 'should' [instead of "shall"] is used in the procedures" (Exhibit 40, pp. 1-2, 5, 10, 15-16, 25, 31, 33).

All Directors and Managers were required to read the RC-2 RCA report, and each signed a memo documenting that they had completed this review. The corrective actions that resulted from the RC-2 RCA report were completed during 1999-2000, prior to the 2000 refuel outage. The Effectiveness Review of the RC-2 RCA report concluded that the actions taken in response to the RCA report were effective (Exhibit 41, pp. 7-10).

BACC, Revision 2

Step 6.3.1.e of BACC Procedure NG-EN-00324, Revision 2, dated October 1, 1999, stated, "the affected areas should be inspected to identify any signs of potential corrosion. This will most likely be exhibited by red rust or red/brown stained boron. If corrosion is present, any boric acid deposits should be removed to allow a detailed inspection to be performed" (Exhibit 42, pp. 11).

Step 6.4.1 of the BACC procedure stated in part, "if a detailed inspection is deemed necessary, then Plant Engineering shall perform the following as required and document [the] results on Attachment 1.... c.4. If corrosion is present, then the amount of wastage should be determined if possible. This information may be required for the analysis of component integrity. Measurements should include wall thickness, diameter, and corrosion depths as needed" (Exhibit 42, p. 13).

Step 6.6.3 of the BACC procedure stated, "if the leak is in a normally unobservable location, Plant Engineering shall complete an evaluation that addresses the acceptability of the condition based on current inspection data and attach the evaluation to the inspection form" (Exhibit 42, p. 15).

Step 6.5.7 of the BACC procedure stated, "if the magnitude of the leak or the extent of the component corrosion is deemed Substantial, Design Engineering shall perform an evaluation to identify extent of damage and any corrective maintenance that will repair the deficiency shall be performed" (Exhibit 42, p. 14).

Step 4.4 of the BACC procedure defined Substantial Leakage as, "leakage has gone beyond the immediate area of the component to affect other components" (Exhibit 42, p. 7).

Attachment 3 of the BACC procedure stated, "the existence of boric acid crystals should not be confused with corrosion, which is wastage of a metal component.... Carbon steel components can experience wastage rates up to one third inch per month under worst case conditions. Accelerated corrosion rates occur...when active leakage exists" (e.g., when a through-wall nozzle crack above the J-groove weld exists) (Exhibit 42, p. 23).

BACC Procedure Training

MOLPUS, former Senior Engineering Advisor/BACC Coordinator, discussed the BACC procedure during the General Continuing Training Program. According to the training outline, topics included were: Corrosion Principles, Effects of BA Buildup on Corrosion, Symptoms, Substantial Leakage, Basis for Limits, Initial Inspection, Detailed Inspection, and Evaluation. At the completion of the approximately 1 hour training session, an examination was administered (Exhibit 43, pp. 4-5, 8, 10-12).

According to December 6, 1999, attendance sheets, McINTYRE and SWIM attended and successfully completed a BACC procedure training session. Attached to SIEMASZKO's December 10, 1999, attendance sheet for a BACC procedure training session, was his exam, showing he received a 95 percent score. Two of the questions that SIEMASZKO answered correctly pertained to boric acid corrosion: one to identify a sign of corrosion, red or brown crystal formations; and the other to identify "substantial" boric acid corrosion (Exhibit 43, pp. 15-18, 25, 28).

CR 2000-0782

This CR was initiated on April 6, 2000, by MAINHARDT. It identified boric acid leakage from the RVH flange weep holes, most notably from the east side, and referenced that photographs and an inspection record were included. The leakage was identified as "red/brown in color" and appeared "to be a dried steam." MAINHARDT also wrote that an initial "inspection of the head through the weep holes indicates clumps of Boric Acid are present on the east and south sides." In the attached "Inspection Checklist," MAINHARDT circled "yes" that corrosion was present as evidenced by the red/brown deposits and noted that there was "heavy leakage from head weepholes." He also recommended that a detailed inspection be conducted based on the fact that this was "new leakage from head which was not evident during 11RFO" (Exhibit 44, pp. 1, 5).

Agent's Note: The head flange area should not be confused with the CRDM flanges, which are made of stainless steel and would not be subject to rusting.

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Immediate actions that were identified as "taken or needed" included (Exhibit 44, p. 1):

- "Notified BACC Coordinator per Step 6.3.5...;"
- "Further evaluation required after detailed inspection delineated in Step 6.4.1 of NG-EN-00324 is performed"; and
- "Possible Mode 4 restraint."

Attached to the CR was an "Initial Inspection" sheet and seven digital photos of the reactor head flange area. The inspection listed "heavy leakage from head weepholes." The component internals affected but not visible were listed as the head and control rod drive (CRD) tubes. Corrosion was identified as being present, evidenced by the red/brown deposits. A detailed inspection was recommended based on the leakage being considered new from the head, which was not evident during 11RFO (1998) (Exhibit 44, pp. 5-9).

SIEMASZKO provided the response to the CR on April 14, 2000. McINTYRE provided handwritten comments to SIEMASZKO's response and approved the CR on April 27, 2000 (Exhibit 44, pp. 2-4).

The CR was categorized as "Routine" and had a cause determination of "Apparent," the lowest of the three rankings. The deposits were characterized as "lava like" and originating from the "mouse holes and CRD flanges." Five CRDM flanges were identified as leaking, and flange F10 was identified as the main source of leakage. The recommendation was to replace the gaskets or repair each of the CRD flanges. SIEMASZKO noted that "the size and type of the leak seen at Davis-Besse was not unusual" (Exhibit 44, pp. 2-4).

> Agent's Note: Although the CR stated that F10 was the main source of leakage, CR 2000-1037 documented that the F10 flange did not need to be machined, but the D10 flange did need to be machined. Contrary to SIEMASZKO's note that the size and type of the leak was not unusual, MAINHARDT testified the boric acid leakage he observed was significant and an "unbelievable" change from what he had seen during 11RFO . MOLPUS said the CR 2000-0782 photos showed a "significant" leakage condition (Exhibit 45, p. 115; Exhibit 46, p. 22).

Framatome 12RFO Outage Log

A review of Framatome's Davis-Besse 12RFO Outage Log noted the following information (Exhibit 47, pp. 32, 36, 45, 50):

- For April 11, 2000, the 0800 entry stated, "Talked w/Andrew SIEMASZKO about weep hole [RVH] inspection. He's having boron mountain cleaned out before the inspection."

- For April 13, 2000, the 0830 and 0930 entries stated, respectively, "In to do weephole insp! Out. Big mess in there, they need to do more cleaning, left system there for inevitable re-inspect."

- For April 16, 2000, the 1100 and 1320 entries stated, respectively, "Roger going in with Andrew S. to do weep holes. Out. Part of head clean, part not. Will do again."

- For April 17, 2000, the 2000 entry stated, "Andrew said that he didn't plan performing any more inspections * however he may have to do more cleaning w/water & re-inspect in canal if his evaluation of boron is not bought off."

RCS Engineer's Notebook

Several entries were made in the System Engineer's Notebook regarding boric acid on the RVH. On April 12, 2000, the following entry was made (Exhibit 48, p. 15):

> "Mode Restrain CR 2000-0782...Glenn's [McINTYRE's] comments have been incorporated. CR is ready for the second review. Tomorrow I will try to close this CR in CATS [corrective action tracking system]. No follow-up actions have been proposed.

On April 13, 2000, the following entries were made (Exhibit 48, pp. 16-18):

> "Small boron deposits were noted on the West side of the head. Large deposits of soft boron were noted on the South and East sides. North side is not accessible from any direction due to the boron buildup and lack of the scaffold on the North side."
>
> "Boron removal from the Rx [reactor] head.... Today should be called 'Boron removal day.' It started with turnover from Theo [SWIM] and escalated to the 4th floor OMC [outage management central] around 5PM. The following was done: ...Decon [decontamination] people 'broke' through the boron to the inside of the Rx [reactor] head with crowbars and reported solid rock hard deposits on the head."
>
> "Tomorrow at 8AM I [SIEMASZKO] am scheduled to conduct the video inspection through the mice [mouse] holes with Framatome. Results will be presented to Glenn [McINTYRE]/Theo [SWIM] and OMC. My recommendations at this time are:

- "Continue to remove as much boron as possible through the mice [mouse] holes. Once some head surface is exposed an evaluation of the head condition can be performed."

- "Contact the B&W owners group and seek information to justify not removing all boron deposits."

- "I DO NOT recommend the use [of] water or steam to remove boron deposits at this time. It is better for us to justify leaving boron deposited on the Rx [reactor] head then [sic] to use water or steam."

"System Engineering requested from Licensing to investigate if Davis Besse is committed to periodic Alloy 600 inspections. If the commitment was made then the only option for DB [Davis-Besse] is to remove boron deposits to the point at which the evaluation of the head condition can be made. If there is no commitment found, the range of options will increase. As a system engineer for the RCS I recommend to the outage management to provide necessary resources and the focus to this emerging mode restraining condition."

Testimony

Interview of MOLPUS

MOLPUS, former Senior Engineering Advisor/BACC Coordinator, described the implementation process of the BACC procedure. He said after an initial inspection is performed, Plant Engineering uses a checklist form to validate the initial inspection findings and identify whether a more detailed inspection is required. The Plant Engineering inspection would include documenting the color of the boric acid, the amount of build-up, and categorizing the problem as minor, moderate or significant. MOLPUS said the CR 2000-0782 photos showed a "significant" leakage condition because of the amount of boric acid deposits and because the leakage had come out from underneath the head. MOLPUS stated, "if the leakage is significant to a point where or great enough to a point where it is called significant leakage, then, a detailed inspection is warranted then. And you go off and write a Red Condition Report" (Exhibit 46, pp. 4, 14, 16-18, 20, 22-23, 31).

MOLPUS said the overall purpose of the BACC procedure is to identify leaks, notify appropriate personnel, evaluate the leak, including any degradation, and resolve the problem. In the training, he emphasized that the "boric acid needs to be removed so you can understand how much corrosion and what's going on underneath" (Exhibit 46, pp. 11, 35).

Interview of MAINHARDT

MAINHARDT, Senior Nuclear Engineer (System Engineer), wrote CR 2000-0782 in accordance with the BACC procedure following an inspection of the head flange area. MAINHARDT found heavy leakage that warranted further inspection. He took digital photographs showing the leakage coming out of the mouse holes, which was actually "molten" at that point. MAINHARDT said as a result of the RC-2 problem, a lot more emphasis on corrosion control and boric acid inspections occurred in 12RFO (2000) than occurred in 11RFO (1998). He said the BACC program was revamped and everyone received additional training (Exhibit 45, pp. 4, 16-17, 106-107, 122-123).

MAINHARDT felt the boric acid leakage he found in 12RFO (2000) was significant and an "unbelievable" change from what he had seen during the 11RFO (1998). He said the red-brown rust he observed was characteristic of corrosion of a carbon steel component. He documented the leakage as "heavy, lava-like leakage" and recommended a detailed comprehensive inspection be done as required by the BACC program. He explained that the term "lava-like" was because it had a red-brown color to it and had molten streams pouring out of the mouse holes (Exhibit 45, pp. 106-108, 115).

MAINHARDT said after his initial inspection, he went directly to outage management and "provided a 20-minute, detailed, turnover on my findings." He identified providing this information to ROGERS and COAKLEY, Outage Directors; McINTYRE, Acting Engineering Manager; ESHELMAN, Director of Regulatory Affairs, who at the time was acting Plant Engineering Manager; and SWIM, Supervisor of Design Engineering. MAINHARDT explained they knew he was very concerned about the leakage because he pointed out that it was "a night and day difference" from what he had seen in 11RFO (1998). MAINHARDT testified that when he informed outage management of the leakage, they got a little sick of hearing him pleading about the problem, and "they got a little mad at me with elevated voices and said, 'Okay, you've made your point. We're going to check into it.'" He said the digital photographs were made part of the outage turnover and were carried as an outage management issue (Exhibit 45, pp. 46-50, 109).

MAINHARDT said SIEMASZKO was directed by McINTYRE to implement the BACC program by cleaning and inspecting the head. MAINHARDT said McINTYRE assigned him to provide a turnover to SIEMASZKO on how to do the head inspections so that a comparison could be done between 11RFO and 12RFO inspections. MAINHARDT felt SIEMASZKO did not care about the plant procedures. MAINHARDT said SIEMASZKO told him he was going to inspect the head his way and he did not care about how else it was done (Exhibit 45, pp. 18-20).

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MAINHARDT said SIEMASZKO knew he had to implement the BACC program because he had been told not only by MAINHARDT, but by McINTYRE and the CR process. MAINHARDT stated in part, "he [SIEMASZKO] just seemed to be cavalier about the whole thing." According to MAINHARDT, "the [BACC] procedure says that when a detailed inspection is required, you remove the boric acid, and you inspect the component for corrosion. Now, you can't do that if you don't remove the boric acid" (Exhibit 45, pp. 73-75, 109-110).

Interview of SIEMASZKO

SIEMASZKO, former System Engineer, indicated that after MAINHARDT completed the initial inspection of the head flange area, he conducted an inspection of the CRDM flanges and found boric acid "one and a half foot tall on the top of the insulation." He also said that after removing the vessel to the head stand, he found deposits inside between the top of the head and the insulation. SIEMASZKO acknowledged if boric acid existed on a component, "we would want to clean it and evaluate the component condition" (Exhibit 49, pp. 15-16, 18).

> Agent's Note: Contrary to SIEMASZKO's statement that when the inspection of the flanges was conducted there was "one and a half foot tall on the top of the insulation," CHIMAHUSKY testified that during the 2000 outage they found "a couple flanges that leaked. It was not major compared to what we saw in the past" (Exhibit 25, pp. 41-42).

According to SIEMASZKO, the objective of his work was to remove what deposits he could, but it was not possible to get the lava-like deposits removed. SIEMASZKO felt the BACC procedure that was in place during 12RFO (2000) was poorly written and did not identify that all boric acid deposits needed to be removed. SIEMASZKO denied he received any on-the-job training or guidance on implementing the BACC procedure. He acknowledged that there was a lava-like condition coming from the mouse holes and he believed it was a CRDM flange leak, specifically from the D10 flange (Exhibit 49, pp. 21-24, 31, 35).

> Agent's Note: As previously discussed, training records show SIEMASZKO attended BACC procedure training on December 10, 1999. According to MOLPUS, the Instructor, the training emphasized that "the boric acid needs to be removed so you can understand how much corrosion and what's going on underneath" (Exhibit 46, p. 35).

When asked if the lava-like flow, the rust color, and the obscured nozzles caused him any concern, SIEMASZKO responded it did cause concern. He explained that it had been 600 degrees on the head, which melted the deposits into lava and made the deposits glass-like. He did not offer an explanation for the rust color or the obscured nozzles (Exhibit 49, p. 172).

Interview of HARRIS

James R. HARRIS, Principal Engineer, Framatome, recalled that the boric acid leakage was "significant enough" that they could not get the tensioners to seat against the reactor vessel flange. HARRIS could not recall an incident in other inspections he had performed where the amount of leakage was as extensive as it was at Davis-Besse (Exhibit 50, pp. 5-6, 34-36).

Interview of McINTYRE

McINTYRE, former Supervisor of Engineering, acknowledged receiving the CR with the photographs showing red rust leakage attached. When asked if this was considered to be substantial leakage in terms of the BACC procedure at the time, McINTYRE responded, "I would say it's much more than we had seen in the past," but he did not relate the leakage to the BACC procedure. McINTYRE said it was his mindset that it was flange leakage. McINTYRE understood it was more than MAINHARDT had seen during the previous outage (Exhibit 33, pp. 94-97).

According to McINTYRE, a management review team assigned the category ranking as "routine." McINTYRE did not know the basis for this designation. McINTYRE acknowledged that he could have proposed upgrading the CR to "significant" if he disagreed with the review team; however, "I guess I didn't -- it didn't occur to me or I didn't -- I didn't take the action to go ahead and upgrade it" (Exhibit 33, pp. 98-101).

Interview of ROGERS

ROGERS, who was the 12RFO Night Shift Outage Director, acknowledged seeing pictures of the leakage from the weep holes, but could not recall if it was during 12RFO (2000). He remembered MAINHARDT coming and generally talking about the leakage, but did not recall this discussion being as if MAINHARDT was talking about a concern. ROGERS stated, "it was actually a social discussion. It wasn't a technical discussion" (Exhibit 36, pp. 37-42).

Interview of SWIM

SWIM was Engineering Outage Manager during the 2000 refuel outage. He recalled hearing about it, but did not recall MAINHARDT coming to him with the pictures of the leakage. When asked by OI how he would categorize the leakage, SWIM stated, "based on my general knowledge of being around the plant, I would say this was not routine." He said this condition did not resemble what he recalled from the 1996 inspection (Exhibit 34, pp. 103, 105-106).

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Interview of COAKLEY

COAKLEY, Outage Manager during 12RFO, recalled an issue that there was a leak and boron on the head, which he assumed was flange leakage. He could not remember who told him this. He thought it was more like a housekeeping type problem. COAKLEY could not recall seeing the photographs of the head flange area. COAKLEY did not remember any discussion in 12RFO regarding a significant difference from what was seen during 11RFO. COAKLEY said he dealt with many issues on a daily basis during the outage (Exhibit 51, pp. 7, 14, 30-33).

COAKLEY had no specific recollection of seeing CR 2000-0782 during 12RFO. He said there were too many CRs for him to review all of them. With regard to it's category ranking, he felt in today's environment this CR would be considered significant rather than routine, but, at the time, it was thought to be flange leakage. According to COAKLEY, the issue about boric acid on the head would have been assigned to Plant Engineering, who had the responsibility for an issue's significance. COAKLEY explained that he focused on the critical path activities and this issue was not involved. He said there was only one item at a time which was critical path, it just kept changing, but this issue was not one of them (Exhibit 51, pp. 40-41, 43-44).

> Agent's Note: The computerized Outage Log for April 6, 2000, shows the log listed the reactor head work as "Critical Path Overview" (Exhibit 52, p. 9).

Interview of ESHELMAN

ESHELMAN, who was Assistant Outage Director during 12RFO, did not recall seeing the photograph of the head flange area at the time, nor CR 2000-0782. When asked about the characterization of the red/brown deposits described in the CR, he claimed not to be aware of this characterization. His practice at the time was to go through CRs quickly to determine what the issues were. He said if he had seen the picture at the time of the outage, "it definitely should have caused me concern." His organization, including supervisors McINTYRE and SWIM, was responsible for this issue (Exhibit 31, pp. 58-60, 62-63, 67, 71).

With regard to knowing how this issue was finally dealt with, he would have been aware of the issue being removed from the outage issues list. His prior understanding was that brown in color was an indication of old deposit residue, which was not active, rather than corrosion and rust (Exhibit 31, pp. 61, 68-69).

When asked if what was seen on April 6, 2000, as described in the CR, was significantly different than past outages, ESHELMAN stated in part, "not at the time. However, since my case study review...there was some verbiage in there that indicated more [boric acid]" (Exhibit 31, pp. 69-70).

Agent's Analysis I-2

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Conclusion

[redacted]

Allegation I-3: Willful Failure to Take Adequate Corrective Action to Determine the Cause of Corrosion Products in Radiation Element Filters and Containment Air Coolers

Background

Prior to the discovery of the RVH degradation in March of 2002, FENOC personnel had identified: (1) rust particles in the containment radiation monitoring system, which adversely clogged the radiation element (RE) filters; and (2) rust-colored boric acid deposits on the containment air coolers (CACs), which restricted air flow across the cooling fins. The presence of rust in and on these components inside containment indicated that active corrosion was occurring. Beyond identifying this problem, the licensee was required to take corrective action to determine the cause of the rust and prevent recurrence.

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Conclusion

Based on the evidence developed, this investigation did not substantiate that FENOC personnel willfully failed to take adequate corrective action to determine the cause of rust particles on the

RE filters or that FENOC personnel willfully failed to take adequate corrective actions to determine the cause of the rust-colored boric acid deposits found on the CACs.

Allegation II-1: Deliberate Failure to Accurately and/or Completely Document the As-Left RVH Condition and Work Deliberately Performed Without an Approved Work Order

Background

During 12RFO (2000), a statement in CR 2000-1037 claimed that accumulated boron deposits between the reactor head and the thermal insulation were removed during the cleaning process performed under WO 00-001846-000. However, contrary to this, following discovery of the cavity degradation in March 2002, it was learned that not all of the boric acid deposits had been removed from the RVH during 12RFO. CRs and WOs are documents required to be maintained by the licensee's procedures.

Evidence

Document Review

BACC Procedure

Step 6.3.1.b of BACC Procedure NG-EN-00324, Revision 2, dated September 30, 1999, states, "the area of the identified boron build-up should be inspected to verify that the boron is localized to the identified area. This should include a verification that a boron build-up is not located at an elevation above or below the identified area or on other near-by components" (Exhibit 42, p. 11).

Step 6.3.1.d of the BACC procedure states, "the affected components should be carefully inspected to determine if active boric acid leakage is present or just dry crystals and residue" (Exhibit 42, p. 11).

Step 6.3.1.e of the BACC procedure states, "the affected areas should be inspected to identify any signs of potential corrosion. This will most likely be exhibited by red rust or red/brown stained boron. If corrosion is present, any boric acid deposits should be removed to allow a detailed inspection to be performed" (Exhibit 42, p. 11).

Step 6.3.4 of the BACC procedure states in part, "Plant Engineering shall document and maintain the examination results...also verify that one or both of the following actions have occurred: a. A Condition Report has been initiated...b. ...Work Order has been initiated..." (Exhibit 42, p. 12).

Step 6.3.5 of the BACC procedure states, "a copy of Attachment 1, Boric Acid Corrosion Control Inspection Checklist or equivalent, shall be forwarded to the Boric Acid Corrosion Control Coordinator" (Exhibit 42, p. 12).

Step 6.4.1 of the BACC procedure states in part, "if a detailed inspection is deemed necessary, then Plant Engineering shall perform the following as required and document [the] results on Attachment 1...: c.4. If corrosion is present, then the amount of wastage should be determined if possible. This information may be required for the analysis of component integrity. Measurements should include wall thickness, diameter, and corrosion depths as needed" (Exhibit 42, p. 13).

Step 6.6.3 of the BACC procedure states, "if the leak is in a normally unobservable location, Plant Engineering shall complete an evaluation that addresses the acceptability of the condition based on current inspection data and attach the evaluation to the inspection form" (Exhibit 42, p. 15).

Attachment 3 of the BACC procedure states, "the presence of corrosion on a low alloy/carbon steel component cannot be determined until accumulated boric acid is removed and the bare metal exposed" (Exhibit 42, p. 23).

BACC Procedure Training and RC-2 RCA Training

According to December 10, 1999, attendance sheets, SIEMASZKO attended a BACC procedure training session. Attached to SIEMASZKO's attendance sheet is his exam, showing he received a 95 percent score (Exhibit 43, pp. 17-18).

CR 2000-0782

On April 6, 2000, MAINHARDT, System Engineer, initiated CR 2000-0782, which indicated boric acid leakage occurred from the weep holes, with the worst accumulation being on the east side weep holes. A preliminary inspection of the head through the weep holes indicated that clumps of boric acid were present on the east and south sides (Exhibit 44, p. 1).

Immediate actions that were identified as "taken or needed" included (Exhibit 44, p. 1):

- "Notified BACC Coordinator per Step 6.3.5...;"
- "Further evaluation required after detailed inspection delineated in Step 6.4.1 of NG-EN-00324 is performed"; and

- "Possible Mode 4 restraint."

The attached inspection checklist noted "heavy leakage from head weep holes." The component internals affected but not visible were listed as the head and CRD tubes. Corrosion was identified as present, evidenced by the red/brown deposits. A detailed inspection was recommended based on the consideration that the leakage from the head was new and had not been evident during 11RFO (1998) (Exhibit 44, pp. 5-9).

SIEMASZKO provided the response to this CR on April 14, 2000. McINTYRE provided handwritten comments to SIEMASZKO's response and approved the CR on April 27, 2000 (Exhibit 44, pp. 2-4).

RWP 2000-5132

Radiation Work Permit (RWP) 2000-5132 stated, "Clean Boric Acid from Rx Head," and was prepared on April 6, 2000. It specified in part, "large deposits of boron have accumulated...on the Reactor Vessel Head." It also stated, "should additional cleaning be required, the process will be repeated until all boric acid deposits are removed or as directed by HP [Health Physics]." The RWP access records indicated that SIEMASZKO signed-in on three occasions during 12RFO, April 17, 26, and 28, 2000 (Exhibit 77, pp. 1, 8, 14-16, 21).

CR 2000-1037

CR 2000-1037 was initiated on April 17, 2000, by SIEMASZKO to address the accumulation of boron in the area of the CRD nozzle penetrations. The Condition Description further stated, "the CRD leakage issues are discussed in CR 2000-0782." The Remedial Actions for CR 2000-1037 were: "accumulated boron deposited between the reactor head and the thermal insulation was removed during the cleaning process performed under W.O. 00-001846-000. No boric acid induced damage to the head surface was noted during the subsequent inspection." SIEMASZKO provided the response to this CR on May 1, 2001, and referenced NRC GL 97-01, which was issued to require licensees to inspect CRDM nozzle penetrations. He stated, "in order to perform required inspections the nozzles as well as penetrations must be free of boron deposits." This response was approved by McINTYRE (Exhibit 22).

The Management Review Committee placed a "Mode 4 Restraint" on operations until all actions necessary to restore identified equipment were complete. The "Removal from Mode 4 Restraint" sheet attached to CR 2000-1037 stated in part, "CR2000-0782 addressed the concern of boron on the Reactor Vessel Head. This CR was written for boron on the CRD nozzles on the head but the review performed under CR2000-0782 encompassed this area. No separate review or evaluation is necessary. The Reactor Vessel Head will be cleaned of all boron deposits.... The cleaning is

scheduled and will occur prior to the head is [sic] [being] moved from the head stand." This sheet was signed by GEISEN on April 27, 2000 (Exhibit 22).

WO 00-001846-000

According to the WO 00-001846-000, one area that required cleaning was, "below the insulation on the top of the reactor vessel head." The WO used identical language as found in CR 2000-1037 regarding NRC GL 97-01. The WO indicated it was completed on April 25, 2000. SIEMASZKO signed the WO, making a handwritten notation stating, "work performed without deviations" (Exhibit 78, pp. 4, 6).

Outage Insider

The *Outage Insider*, a Davis-Besse newsletter, dated April 29, 2000, stated in part, "the Reactor Head was successfully cleaned yesterday, thanks to Andrew's [SIEMASZKO's] efforts.... This is the first time in Davis-Besse history that the Reactor Head has been cleaned" (Exhibit 79).

Testimony

Interview of SIEMASZKO

SIEMASZKO began employment at Davis-Besse on July 6, 1999, as the RCS Engineer, and had worked 9 years prior to this at ANO. SIEMASZKO said he was exposed to the BACC program first by means of a job familiarization guide to meet system engineering qualifications. SIEMASZKO initially denied having any formal training on the BACC procedure, but upon further questioning, did acknowledge receiving classroom training by MOLPUS on the BACC procedure on December 10, 1999 (Exhibit 49, pp. 4-8).

SIEMASZKO said he initiated WO 00-001846-000 for the "purpose to have an administrative means of cleaning" the RVH, yet, he stated, "that work order was nothing else but the means to provide me a support." SIEMASZKO explained that the less confining the WO was, the more easily the job could be executed. He said, "so I had a certain purpose for the work order and it was written." When asked about the specific words in the WO that in order to perform the required inspections, the nozzles, as well as the penetrations, must be free of boron deposits, SIEMASZKO denied writing those words. He said the planner (Dennis A. LISKA) used standard words in the WO and "he put more words than I wanted him to do." SIEMASZKO admitted that cleaning activities did continue even though he had signed-off on April 25, 2000. He acknowledged that this was a problem, but he knew he had not backdated anything, because at ANO, where he used to work, "they were getting fired for doing it" (Exhibit 49, pp. 12-13, 78-88; Exhibit 78, pp. 1, 4, 6).

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SIEMASZKO acknowledged discrepancies were found in the WO, but contended there was no requirement or commitment to clean the RVH, that he "did not have to do anything. This was my action that I wanted to do." SIEMASZKO explained that he attempted to clean the head because of GL 88-05 and because "other utilities have clean heads." SIEMASZKO stated, "I did not want to continue the partial cleaning and neglecting of the boric acid on the head, so my attempts were directed to clean the head 100 percent, so I can have an easy life." He indicated he was not 100 percent successful, but that he was the one who initiated the effort to do it. SIEMASZKO denied his intent was to violate the WO. He rationalized that the words "work performed without deviation" meant "I did not hurt anything, we didn't destroy the gasket, we didn't deviate like we had to stop the job and rethink. The objective of the work was to remove the -- whatever we could" (Exhibit 49, pp. 12-13, 19-20, 23).

SIEMASZKO testified to OI that he told COAKLEY, "we have done all [of the cleaning] we could, but we couldn't remove all the boric acid from the head." He said he also told this to McINTYRE and MOFFITT, and that MOFFITT responded they would do a 100 percent cleaning at the next outage. SIEMASZKO testified he told FENOC management he could not satisfy the BACC procedure (Exhibit 49, pp. 64-67, 77).

During SIEMASZKO's initial interview with OI on May 19, 2002, he testified that on April 29, 2000, the day after the RVH was cleaned all day, he went to various managers and informed them the head was not yet cleaned (Exhibit 49, pp. 88-90).

Interview of MAINHARDT

According to MAINHARDT, SIEMASZKO told him that the RVH had been fully inspected during 12RFO (2000) and was completely free of corrosion. MAINHARDT said Michael M. WILLOUGHBY, a former Quality Assurance (QA) Auditor, FENOC, documented in his report during the outage that the RVH was clean (Exhibit 45, pp. 14-15, 23, 149-150).

Interview of COAKLEY

COAKLEY, Outage Director, testified his understanding was that the work crew "had tried as hard as they could to get it [RVH] cleaned off, and that there was -- and basically they were done. They did not relate any safety significance to what was left on the head." When COAKLEY was questioned about who "they" were, he stated, "again, I have no recollection of exactly this conversation. But my understanding was Andrew [SIEMASZKO] was the one that told me he had done everything he could do." COAKLEY acknowledged that there was boric acid left on the head at the end of 12RFO (Exhibit 51, pp. 48-49, 51-53)].

Interview of LISKA

LISKA, Mechanical Maintenance Planner, explained that he was the planner involved in working with SIEMASZKO to determine what SIEMASZKO wanted, and to route the WO for approval. LISKA denied he incorporated the language describing the extent of the cleaning effort that was to be done to the RVH into the WO. LISKA indicated the verbiage on page 6 of the WO regarding the RVH cleaning information was really SIEMASZKO's. LISKA recalled SIEMASZKO needing this WO to clean the RVH. LISKA said this was his first time he had been involved in a work activity related to the RVH. According to LISKA, SIEMASZKO, being the Plant Engineer, had the lead on this WO project and was the responsible individual (Exhibit 262, pp. 4-9, 15).

Agent's Analysis II-1

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Conclusion

Based on the evidence developed, this investigation did substantiate that SIEMASZKO deliberately failed to accurately and/or completely document the as-left condition of the RVH, and deliberately performed RVH cleaning activities without an approved WO.

Allegation II-2: Deliberate Failure to Accurately and/or Completely Document the 2000 Refueling Outage (12RFO) Quality Assurance Audit Activities Relative to the BACC Program

Evidence

Document Review

[redacted]

[redacted]

Conclusion

Based on the evidence developed, this investigation did not substantiate that [redacted] deliberately failed to accurately and/or completely document his 12RFO QA audit activities relative to the BACC program.

Allegation III: Conspiracy to Provide Incomplete and/or Inaccurate Information to the NRC in Responses to NRC Bulletin 2001-01

Allegation III-1: Deliberate Failure to Provide Complete and Accurate Information to the NRC in the September 4, 2001, Response (Serial 2731) to NRC Bulletin 2001-01

Background

As a result of finding cracks in control rod drive nozzles at Oconee and ANO, the NRC issued Bulletin 2001-01 (Bulletin), "Circumferential Cracking of Reactor Pressure Vessel Head Penetration (VHP) Nozzles," on August 3, 2001. Although cracking in VHP nozzles had been an industry-wide issue since the late 1980s, the circumstances associated with the cracks at Oconee and ANO significantly changed the industry's previous perspective relative to probability, detectability, and significance of this cracking (Exhibit 85, pp. 1, 3).

Awareness of the VHP nozzle cracking issue was evident at Davis-Besse since at least 1994 and continued through the Bulletin's issuance. During this time, Davis-Besse engineers initiated actions to conduct inspections of the VHP nozzles, sponsored modifications to provide reasonable access to perform VHP inspections, documented shortcomings of previous activities which diminished VHP inspection effectiveness, and evaluated inspection findings for leakage indications with specific reference to the VHP cracking concern. By the time the Bulletin was issued in 2001, Davis-Besse personnel had substantial prior involvement with the VHP nozzle cracking issue (Exhibit 2; Exhibit 3; Exhibit 10; Exhibit 5; Exhibit 20; Exhibit 22).

In addition, the NRC had maintained an ongoing level of concern regarding VHP nozzle cracking. In 1997, the NRC issued GL 97-01, "Degradation of Control Rod Drive Mechanism Nozzle and Other Vessel Closure Head Penetrations," to ensure licensees were performing timely VHP inspections for this issue. At that time, VHP nozzle cracking was not considered an immediate safety concern because of the belief that: (1) the cracks would be predominantly axial in orientation; (2) the axial cracks would result in substantial and detectable leakage before catastrophic nozzle failure; and (3) the expected large amount of leakage would be detected during visual examinations before significant damage to the RVH occurred (Exhibit 85, p. 3).

However, the cracks identified at Oconee caused the NRC to reassess its conclusion in GL 97-01. The Bulletin discussed the findings at Oconee where circumferential cracking, which could cause a catastrophic failure, occurred contrary to the previous conclusions that the cracking would be predominantly axially oriented. In addition, the presence of circumferential cracking at Oconee, where only a small amount of boric acid residue indicated a problem, called into question the adequacy of ongoing visual examinations for detecting either axial or circumferential cracking in

VHP nozzles. This was especially significant if prior existing boric acid deposits on the RVH masked the identification of new deposits (Exhibit 85, p. 4).

The Bulletin requested, in part, that the licensees provide information relative to the structural integrity of their VHP nozzles. A critical portion of this information was a description of the inspections that licensees had performed in the past 4 years of the VHP nozzles and the RVH. The Bulletin explicitly discussed visual examinations for identifying VHP nozzle cracking, and emphasized an ability to detect and discriminate small amounts of boric acid deposits as follows (Exhibit 85, pp. 4-8, 11-12):

> "...the RPV head may have to be cleaned at a prior outage for effective identification of new deposits from VHP nozzle cracking if new deposits cannot be discriminated from the existing deposits from other sources."
>
> "One aspect of conducting effective visual examinations...is the need to successfully distinguish boric acid deposits originating with VHP nozzle cracking from deposits that are attributable to other sources."
>
> "An inability to provide assurance...to discriminate prior existing boric acid deposits caused by non-safety-significant sources from boric acid deposits caused by CRDM nozzle cracking could limit the effectiveness of visual examinations."
>
> "Circumferential cracking of CRDM nozzles was identified by the presence of relatively small amounts of boric acid deposits. This finding increases the need for more effective inspection methods to detect the presence of degradation in CRDM nozzles before the nozzle integrity is compromised."
>
> "For the subpopulation of plants considered to have a moderate susceptibility...an effective visual examination...that is capable of detecting and discriminating small amounts of boric acid deposits from VHP nozzle leaks...may be sufficient to provide reasonable confidence that PWSCC degradation would be identified prior to posing an undue risk. This effective visual examination should not be compromised by the presence of insulation, existing deposits on the RPV head, or other factors that could interfere with the detection of leakage."
>
> "...the subpopulation of plants considered to have a high susceptibility...indicates the need to use a qualified visual examination of 100% of the VHP nozzles. This qualified visual examination should be able to reliably detect and accurately characterize leakage from cracking of VHP nozzles...[and] should not be compromised by the presence of

insulation, existing deposits on the RPV head, or other factors that could interfere with the detection of leakage."

Davis-Besse initially responded to the Bulletin in their letter dated September 4, 2001 (Serial 2731), and indicated that the VHP nozzles would be visually inspected during the next refueling outage, in the Spring of 2002. Since Davis-Besse was ranked as a "high susceptibility" plant, they were expected to perform a qualified visual examination of all VHP nozzles by December 31, 2001, or provide the basis for concluding that the applicable regulatory requirements would continue to be met until the inspections were performed. In that context, Davis-Besse's response letter was intended to provide their bases for not shutting down by December 31, 2001, which would have been approximately 3 months earlier than their scheduled refueling outage. Rodney M. COOK, New Tennessee Energy Services Corporation contractor; GOYAL; SWIM; WUOKKO; Dale L. MILLER, Supervisor of Compliance; LOCKWOOD; CAMPBELL; Mark McLAUGHLIN, Project Manager; and GEISEN, among others, reviewed and approved Serial 2731 (Exhibit 86, p. 1; Exhibit 85, pp. 11-12; Exhibit 87, pp. 1, 3-5).

Serial 2731 Response

Request Item 1.d. of the Bulletin asked for "a description of the VHP nozzle and RPV head inspections (type, scope, qualification requirements, and acceptance criteria) that have been performed at your plant(s) within the past 4 years, and the findings," and to include "a description of any limitations (insulation or other impediments) to accessibility of the bare metal of the RPV head for visual examinations." In addition, Request Item 3.a. asked for "plans for future inspections (type, scope, qualification requirements, and acceptance criteria) and the schedule" (Exhibit 85, pp. 11-12).

In responding to these items, there are several instances where Davis-Besse did not provide complete and accurate information, and these will be identified and discussed individually throughout this section. To help organize these items, the information will be broken into the following five sections: Limitations and Impediments, 1998 Inspection Results, 2000 Inspection Results, Subsequent Videotape Reviews, and Future Inspections. These sections will show that Davis-Besse's response neither accurately described the known limitations for access due to the size and locations of the weep holes in the service structure, nor discussed long standing boric acid deposits that compromised the effectiveness of both past and future head inspections. Further, it will be shown that the description of the extent of the prior head inspections was intentionally vague, and the capability of these inspections to detect small amounts of boric acid deposits and to distinguish deposits originating from VHP nozzle cracking, as opposed to deposits from other sources, was not described accurately.

A. Limitations and Impediments

The first two paragraphs of Davis-Besse's response to Request Item 1.d. stated the following, with the passages in question in bold italics (Exhibit 86, p. 5):

> "The DBNPS has performed two inspections within the past four years, during the 11th Refueling Outage (RFO) in April 1998 and during the 12th RFO in April 2000. ***The scope of the visual inspection was to inspect the bare metal RPV head area that was accessible through the weep holes to identify any boric acid leaks/deposits.*** The DBNPS also inspected 100% of Control Rod Drive Mechanism (CRDM) flanges for leaks in response to Generic Letter 88-05, 'Boric Acid Corrosion of Carbon Steel Reactor Pressure Boundary Components in PWR Plants.' The results of these two recent inspections are described below.
>
> "Inspections of the RPV head are performed with the RPV head insulation installed in accordance with DBNPS procedure NG-EN-00324, 'Boric Acid Corrosion Control Program,' which was developed in response to Generic Letter 88-05. As stated previously, a gap exists between the RPV head and the insulation, ***the minimum gap being at the dome center of the RPV head where it is approximately 2 inches, and does not impede visual inspection.*** The service structure envelopes the DBNPS RPV head and has 18 openings (weep holes) at the bottom through which inspections are performed. There are 69 CRDM nozzles that penetrate the RPV head. The metal reflective insulation is located above the head and does not interfere with the visual inspection. ***The visual inspection is performed by the use of a small camera.*** This camera is inserted through the weep holes" (emphasis added by OI).

Later in the response, under the 12RFO inspection results, it stated that the "***...RPV head area was cleaned with demineralized water to the greatest extent possible while maintaining the principals of As-Low-As Reasonably-Achievable (ALARA) regarding dose***" (emphasis added by OI) (Exhibit 86, p. 6).

The above boldfaced statements will be considered together because they all refer to quantifying the area of the RVH that was actually inspected and the historical impediments that existed but were never identified in this response.

Evidence

Document Review

Mod 94-0025/PRC Meeting History

According to the proposal for Mod 94-0025, initiated on May 27,1994, a request was made to install service structure inspection openings for three reasons: "there is no access to the reactor vessel head or the CRDM reactor vessel nozzles without the installation of this modification;" inspections of the RVH are "difficult and not always adequate" and "do not encompass a 100% inspection of the vessel head;" and "cleaning of excessive boric acid residue from the reactor vessel head also does not encompass 100%." All B&W units, other than Davis-Besse and ANO, had successfully installed these inspection openings. CHIMAHUSKY and MATRANGA initiated this request for modification and SWIM concurred (Exhibit 3, pp. 1-2).

Numerous meetings held over the years (through 2001) to discuss the implementation of this modification were summarized in the Davis-Besse PRC Meeting History. A constant theme throughout the notes was that the head could not be completely cleaned or inspected without these openings. On September 3, 1997, F. L. SWANGER, Manager, Design Basis Engineering, explained to members of the committee that "sections of the reactor vessel head cannot be cleaned and or inspected." Some committee members present were DONNELLON, ESHELMAN, LASH, ROGERS, and WORLEY. At two meetings in September 1998, McINTYRE, GOYAL, and HALEY noted that access to the RVH was less than 50 percent. Present for one or both of these September 1998 meetings were COAKLEY, ROGERS, DONNELLON, ESHELMAN, LASH, SWANGER, and WORLEY. In addition to those at the meetings, CAMPBELL and MOFFITT were on the distribution list for a copy of the September 17, 1998, meeting minutes which included this information (Exhibit 11, pp. 1-4; Exhibit 13, pp. 3, 7; Exhibit 14, pp. 1, 6; Exhibit 15, pp. 2, 4, 9).

> Agent's Note: Regardless of these ongoing concerns, the modification was deferred and never incorporated because of financial considerations and "pending further industry information/investigation concerning actual benefit" (Exhibit 11, pp. 1-4).

PCAOR 96-0551

On April 21, 1996, GOYAL initiated this PCAQR and identified "several patches of boric acid accumulation on the RV head. Also, one of the CRDM nozzles, 67 ([correlates to flange] P6) shows rust or brown stained boron at the bottom of the nozzle where it meets the head. The head area in this vicinity also has rust or brown stained boron accumulation," i.e., a potential sign of corrosion. GOYAL further noted in this PCAQR that the inspection "was limited to

approximately 50-60% of the head area because of the restrictions imposed by the location and size of the mouse holes." GOYAL said that the flange inspection video was reviewed and determined that "CRDM nozzle #67 flange did not show any leakage during cycle 10 which indicates that the leakage marks and boron accumulation on CRDM nozzle #67 are due to leakage from previous operating cycles." GOYAL mentioned that because the boric acid deposits had not been cleaned, "it is difficult to distinguish whether the deposits occurred because of the leaking CRDM flanges or the leaking CRDM." HARTIGAN signed as the supervisor for initiation of this PCAQR (Exhibit 5, pp. 1, 4-5, 11).

On August 7, 1997, a meeting to discuss this PCAQR was held with the following attendees; GOYAL, HARTIGAN, SHEPHERD, CHIMAHUSKY, HALEY, and McINTYRE. A summary of this meeting was provided in the PCAQR and noted, "because the head has not been completely cleaned, it is not possible to make a clear determination that we do not have an active leak." Between September and November 1998, corrective action for this PCAQR called for the implementation of Mod 94-0025 to install the access ports to allow for "both direct and remote visual inspection capabilities. The modification will also allow for adequate access to the top of the surface of the head to clean/remove any accumulation of boric acid buildup." GOYAL conveyed that if all the boron deposits were removed, "the issue of ongoing corrosion will go away." This corrective action was concurred on by COAD, HALEY, McINTYRE, ROGERS, and DONNELLON. Eventually, this PCAQR was closed by management in late 1998 because the modification for the access ports had been initiated and was scheduled, after several deferrals, for implementation in 13RFO (2002). Others that signed this PCAQR at various times were JOHNSON and SWIM (Exhibit 5, pp. 4, 10-18, 23, 29-30).

Memorandum dated May 8, 1996

DONNELLON forwarded a "white paper" written by GOYAL on the subject of "Control Rod Drive Cracking." DONNELLON's introduction recognized GOYAL's position as "our representative on the B&W Owners Group (B&WOG) Materials Committee." This document was distributed to LASH and copied to HARTIGAN and MATRANGA (Exhibit 10, p. 1).

In his write-up, GOYAL again recommended, in part, the implementation of Mod 94-0025 to add the large access ports. His recommendation further noted that the holes "will provide the capability of inspection of the external area of the entire head" (emphasis added by OI) (Exhibit 10, p. 12).

E-mail dated August 11, 2001, from GOYAL

GOYAL forwarded information to GEISEN, SWIM, and WUOKKO about a meeting held that day. GOYAL attended this meeting along with LOCKWOOD, KENNEDY, WUOKKO,

WORLEY, MOFFITT, ESHELMAN, and John MESSINA, Work Management Director. GOYAL recorded in his e-mail, "it was pointed out that we can not clean our head thru the mouse holes and Andrew SIEMASZKO is requesting that 3 large holes be cut in the Service Structure for viewing [inspection] and cleaning" (Exhibit 88).

E-mail dated August 30, 2001, from GOYAL

GOYAL stated that Davis-Besse did "not say anywhere in our response to the Bulletin that inspection thru the mouse holes creates an impediment (sic) for 100% visual examination. (management need[s] to know this). Even with crawler we may not be able to inspect the nozzles at the top of the head because of only 2" gap." This e-mail was addressed to SIEMASZKO, McLAUGHLIN, COOK, and MILLER (Exhibit 89).

> Agent's Note: Since the mouse holes preclude 100 percent inspection of the RVH, then the effectiveness of any cleaning activity could not be verified.

Engineering Work Request dated August 30, 2001

This request was to cut access ports into the RVH service structure. According to the Statement of Problem section, because the Bulletin required a visual inspection of 100 percent of the CRDM nozzles, these ports were "to be provided to enable removal of the boric acid and inspection of the nozzles." This section also noted that the 12RFO inspection found that some boric acid deposits had accumulated on top of the RVH and that attempts to remove the deposits at that time were unsuccessful. SIEMASZKO signed as the initiator of this request and John CUNNINGS, Mechanical Systems Supervisor, signed as SIEMASZKO's supervisor (Exhibit 90).

Draft Responses to the Bulletin

> Agent's Note: Although the drafts of Davis-Besse's Bulletin response were never transmitted to the NRC, they were reviewed as part of this investigation because they provided insights into the licensee's thought process and intentions in responding to the Bulletin.

An August 9, 2001, version of the inspection summary section stated that the scope of the visual inspections for 11RFO and 12RFO "was to inspect the entire head (bare metal) area accessible through the weep holes to identify any boric acid leaks/deposits." This draft was e-mailed from GOYAL to SIEMASZKO and CUNNINGS (Exhibit 91, pp. 1, 3).

This language remained consistent through out several drafts until an August 27, 2001, version was sent by COOK to McLAUGHLIN, GOYAL, SIEMASZKO, KENNEDY, MILLER, WUOKKO, and LOCKWOOD. According to the e-mail that COOK used to forward the document, a change, which included omitting the word "entire," was made "to ensure that we state that not all of the head was accessible or inspected for inspection for whatever reason." These words read the same as they appeared in the final September 4, 2001, version, i.e., "to inspect the bare metal RPV head area that was accessible through the weep holes to identify any boric acid leaks/deposits" (Exhibit 92, pp. 1, 7).

Regarding the gap between the insulation and RVH, a version of the Bulletin response from COOK's files, dated August 14, 2001, did not refer to the 2-inch gap in Response Item 1.c., which asked for a description of the RVH insulation type and configuration, nor was it mentioned in Response Item 1.d. regarding prior inspection results and historical inspection conditions. However, in Response Item 1.d. reference was made to the metal reflective insulation located "well above the head" and stated, it "does not interfere with the visual inspection" (Exhibit 93, pp. 5-6).

> Agent's Note: This information came from summary drafts prepared by SIEMASZKO of the prior inspection results. SIEMASZKO's summaries also provided a service structure description. Those who either received or sent these versions were GOYAL, SIEMASZKO, CUNNINGS, KENNEDY, and SWIM (Exhibit 91; Exhibit 94; Exhibit 95).

In later drafts, when Davis-Besse added the specific information about the 2-inch gap to Response Item 1.c., they stated, it "<u>will not</u> impede a qualified visual inspection" (emphasis added by OI), while maintaining the statement in Response Item 1.d. that the insulation (not the gap), "<u>does not</u> interfere with the visual inspection" (emphasis added by OI). This draft was dated August 18, 2001, and sent via e-mail on August 20, 2001. This draft was sent by COOK to GOYAL, KENNEDY, McLAUGHLIN, WUOKKO, MILLER, and LOCKWOOD (Exhibit 96, pp. 1, 5-6).

The distinction between "will not" and "does not" continued for the next version of the draft, although other changes were being made to the document. This distinction became more apparent in yet another version dated August 22, 2001, in which the 2 inch gap information was added to Response Item 1.d. Again, it was noted that the gap "<u>will not</u> impede visual inspection;" however, the "metal reflective insulation...<u>does not</u> interfere with the visual inspection" (emphasis added by OI). The use of the word "will" continues for the next several versions of the draft regarding the gap. Davis-Besse personnel who either received or sent these

versions are COOK, McLAUGHLIN, GOYAL, WUOKKO, MILLER, SIEMASZKO, KENNEDY, LOCKWOOD, CAMPBELL, WORLEY, MOFFITT, MESSINA, and GEISEN (Exhibit 97, p. 7; Exhibit 98, pp. 1, 7; Exhibit 99, pp. 1, 7; Exhibit 100, pp. 1, 7; Exhibit 92, pp. 1, 7; Exhibit 101, pp. 1, 7; Exhibit 102, pp. 1, 7; Exhibit 103, p. 5).

> Agent's Note: Also within this August 22, 2001, draft of Serial 2731 was a reference (later removed) in the 2000 inspection results section that "approximately 90% of the nozzles were inspected" (Exhibit 97, p. 8).

In describing the 2-inch gap between the RVH head and the insulation, the word "will" was changed to "does" by FENOC Vice President CAMPBELL in both Response Items 1.c. and 1.d. on September 4, 2001, in what appears to have been a final draft. A version of this response identifying that CAMPBELL's comments had been incorporated was forwarded for final review to McLAUGHLIN and MOFFITT by COOK under separate e-mails (Exhibit 104; Exhibit 105, p. 6; Exhibit 106, pp. 1, 6; Exhibit 107, pp. 1, 6).

Considering the mechanics of how the inspections were performed, another phrase noted in the August 9, 2001, draft stated that the inspections were performed "by the use of a small camera mounted on a wire pole" inserted into the weep holes. This wording stayed intact until the phrase "mounted on a wire pole" was edited out by CAMPBELL in the September 4, 2001, draft. This draft, acknowledging CAMPBELL's comments, was sent by COOK to McLAUGHLIN and MOFFITT (Exhibit 91, p. 3; Exhibit 105, p. 6; Exhibit 106, pp. 1, 6; Exhibit 107, pp. 1, 6).

Regarding the statement in Serial 2731 that "in 2000 the RVH area was cleaned with demineralized water to the greatest extent possible," in the first August 9, 2001, draft, this sentence was originally broken into the following two sentences: "The head cleaning was limited by the opening size of the weep holes. The head was cleaned with demineralized water as best as it could be considering the dose and the method." This draft was sent by GOYAL with his comments to SIEMASZKO and CUNNINGS (Exhibit 91, pp. 1, 4).

The next draft, dated less than 1 hour later, added more information to the first sentence. It stated, "The head cleaning was limited by the location and opening size of the weep holes." This version was sent from GOYAL to SIEMASZKO, KENNEDY, CUNNINGS and SWIM; and KENNEDY forwarded it to COOK (Exhibit 94, pp. 1, 4).

In a version that COOK sent from his FENOC e-mail address to what appears to be his personal e-mail address, these sentences were moved from the 2000 inspection section to the 1998 inspection results section. These sentences were also incorporated into one sentence which read,

"The head cleaning was limited by the location and opening size of the weep holes and was as best as it could be considering the dose and the method." This draft was dated August 16, 2001 (Exhibit 93, pp. 1, 6).

On August 20, 2001, COOK sent a draft, which included the above noted change, to GOYAL, KENNEDY, and McLAUGHLIN. He also copied WUOKKO, MILLER, and LOCKWOOD. This version of the letter also included a sentence under the 2000 inspection results section that read, "the RPV head was cleaned with demineralized water as best as could be considering the dose and method." COOK advised in his introductory e-mail that he was waiting for the Justification for Continued Operation (JCO) "and a review of the 2000 inspection results description" (Exhibit 96, pp. 1, 6-7).

On August 22, 2001, COOK sent another draft of Davis-Besse's response to McLAUGHLIN, SIEMASZKO, GOYAL, WUOKKO, MILLER, and KENNEDY, with COOK acknowledging that most of the changes were "editorial." The sentence in the 2000 inspections section of this version read very similar to the final version with, "the RPV head was cleaned with demineralized water to the greatest extent possible while maintaining the principles of As-Low-As-Reasonably-Achievable (ALARA) regarding the dose." All references to the cleaning limitations due to the size and location of weep holes were removed (Exhibit 97, pp. 1, 7-8).

Testimony

Interview of COOK

COOK stated that he was a contractor to Davis-Besse. He said that on August 8, 2001, he was asked to work on Davis-Besse's response to the Bulletin because the responsible individual from Licensing was busy. COOK said he discussed with the Licensing and Engineering Departments who would provide the information that he would need for the response. COOK said he reported to MILLER on this assignment (Exhibit 108, pp. 5, 7-8, 17, 24).

COOK said he spoke to GOYAL quite a few times about the "inspections of the head and the mouse holes." He explained that they discussed that the large access ports would make inspections easier; however, since ANO had been able to perform good inspections using fiberoptics, it was really "a techniques issue we had a problem with" (Exhibit 108, p. 21).

> Agent's Note: According to ANO's response to the Bulletin, they were only able to identify nozzle cracking after aggressively cleaning their RVH in 1R14 (Spring 1998) and then utilizing a robotic camera in 1R16 (Spring 2001), "which allowed better access to

the head...[and] has only minor limitations for the inspection of the upper nine nozzles on the top center of the head" (Exhibit 109, p. 5).

COOK said that Davis-Besse used a camera on a pole to perform their inspections. COOK said GOYAL told him that he could not inspect all the nozzles on the head with that technique, but SIEMASZKO told him he could, although "it was difficult." COOK did not recall who removed the words "mounted on a wire pole" from Davis-Besse's response, nor did he know the intent. COOK recalled that it may have been asked if those words were really important (Exhibit 108, pp. 20-24, 44, 125).

Agent's Note: GOYAL was Davis-Besse's representative on the B&WOG Materials Committee and was considered an expert in the area of nozzle cracking.

COOK stated that WUOKKO reviewed drafts and provided comments, especially on format and language. COOK recalled that WUOKKO asked a lot of questions which may have influenced changes in drafts. COOK collected information from individuals, which he then coordinated and incorporated into the response (Exhibit 108, pp. 32-33, 36).

Agent's Note: From COOK's e-mails attached to several versions of the drafts, he (COOK) was also making comments and changes to the document (Exhibit 97, p. 1; Exhibit 99, p. 1; Exhibit 110, p. 1; Exhibit 106, p. 1).

According to COOK, SIEMASZKO told him that he had cleaned the head in 12RFO and left "a little" boric acid on the RVH, but that SIEMASZKO added this "would not impede him from inspecting those nozzles." COOK said, "When 2731 went out, the head was thought to be clean." COOK said that the boric acid on the head was attributed to leaking flanges (Exhibit 108, pp. 38-39, 45-47, 58).

COOK was asked specifically about e-mails that GOYAL had sent regarding his concerns about impediments to the head inspections. COOK said he discussed these concerns with GOYAL. Again, he said he told GOYAL that this was not a "design impediment," but rather a "technique issue," something that COOK said could be fixed. COOK acknowledged that his argument about the technique issue was forward looking. The impression that COOK got from GOYAL about the past inspections was that Davis-Besse had "found a scattering" of boric acid and that it was from flange leakage (Exhibit 108, pp. 50-52, 57-59, 63, 67).

COOK said he did not necessarily view the Bulletin question about impediments as referring to the past, even though it was pointed out to him that the information specifically requested by the Bulletin and repeated in Response Item 1.d. referred to inspections performed within the past 4 years. COOK admitted that knowing what he knows today he probably would have answered

the question about impediments differently. He said, "...we'd probably say that, you know, the design does not lend itself through the mouse holes; and also, we've got boric [acid]." He said he knew from SIEMASZKO and GOYAL that not all the nozzles could be viewed in the past, but added that what they were seeing was not indicative of nozzle leakage, it was flange leakage. He said the 1998 and 2000 inspections were for boric acid corrosion control and in 2002 the inspection was to be a qualified visual inspection. COOK said he knew the qualified visual meant 100 percent, but was not sure what the rigor was for the past exams (Exhibit 108, pp. 67-73, 121-123).

When asked about specific changes of words used in the response drafts versus the final versions, COOK said he did not make those changes. He said he did not make a change to the letter unless someone asked him to make it. COOK could not recall who asked him to make those changes. COOK acknowledged that the drafts had "a lot more raw information" than the finals. COOK also acknowledged that with information he received after Serial 2731 was issued, he believed that Davis-Besse was more favorably presenting their past inspections "than what they really saw" (Exhibit 108, pp. 123-126, 146-148).

Interview of CAMPBELL

CAMPBELL, during his interview with OI, stated that he was not aware of Mod 94-0025 until sometime in the Fall of 2001, nor was he aware of any CRs or PCAQRs related to the RVH inspections. CAMPBELL said he only reviewed a 30-second video clip of the head inspection during the 12RFO and another short clip of a head inspection around late October 2001 (Exhibit 111, pp. 19-21, 27).

CAMPBELL initially did not recall making any changes from the drafts to the final version on September 4, 2001. However, he did recall that he probably questioned what was meant by "small camera mounted on a wire pole." He said that "didn't sound right" and asked the question, "is that what we really do?" He said he also probably questioned the use of the word "will" because "either it does or it doesn't." He said he had no concerns about the use of "will" in a future tense because "it needs to be a positive statement" (Exhibit 111, pp. 81-83).

Interview of LOCKWOOD

LOCKWOOD said he had always operated with the mindset that cleaning the RVH was difficult, but it could be done. He said he came to that conclusion while working on the Davis-Besse responses. LOCKWOOD thought the access ports would assist with the cleaning and inspection of the RVH, but these tasks could be done without them (Exhibit 112, pp. 16-20, 24-25).

LOCKWOOD did not recall the August 11, 2001, meeting where it was discussed that boric acid had been left on the RVH after 12RFO. However, GOYAL's e-mail that day identified that LOCKWOOD attended the meeting. LOCKWOOD stated he believed that the head had been cleaned after each outage. LOCKWOOD said he thought the deposits were from flange leakage because that is what the "engineering folks" told him. LOCKWOOD thought that if he had been aware at the time that the RVH could not be completely cleaned, then that information should have been added to Serial 2731 (Exhibit 112, pp. 19-23, 28-29, 43-46, 56-57).

LOCKWOOD, Regulatory Affairs Manager, said he would have been the last person to review any correspondence before it went to the Vice President. LOCKWOOD said that he would not have given much thought to the use of the words "will" versus "does" while reviewing the drafts. He acknowledged that "will not impede" is forward looking and thought that "does not impede" applied to past inspections which, he said, "was consistent with what I understood." LOCKWOOD did not recall any discussions during the drafting of the response that related specifically to the inability to clean or inspect the head. LOCKWOOD said he was only aware of past flange and head inspection results based upon what he read in Davis-Besse's responses (Exhibit 112, pp. 7, 24, 30, 32-37, 57).

Interview of MILLER

Regarding the e-mail from GOYAL dated August 30, 2001, MILLER recalled the inference that 100 percent visual inspection could not be done was controversial at the time of the Bulletin response. MILLER said GOYAL did not believe that the inspections could be done, but others in Engineering, like McLAUGHLIN, thought they could. MILLER said this was based on the fact that ANO was able to do their inspections. It was his impression from Engineering that 100 percent inspections had not been done in the past. MILLER said he even looked up "impede" in the dictionary to determine if the mouse holes, the curvature of the RVH, or the 2-inch gap impeded or obstructed the view. MILLER said that these may "hinder," but did not "obstruct" (Exhibit 113, pp. 52-58).

MILLER was shown the Bulletin and asked why Davis-Besse was answering to the future when the Bulletin specifically asked for information based upon the past 4 years of inspections. He then stated that Engineering was producing this response and he did not "have a reason to question them." He added that if GOYAL had a concern about addressing the impediments before issuing Davis-Besse's response, then GOYAL should have made it known through other means besides an e-mail. He also said there was a management chain that GOYAL should have followed. MILLER went on to question whether this information was even pertinent to the response (Exhibit 113, pp. 58-62, 65).

MILLER thought that the term "mounted on a wire pole" was taken out because "that was probably only one of maybe several ways it could be done." He acknowledged that the words "will not" are future tense to him (Exhibit 113, pp. 76-77).

MILLER said he did not draft the response, but he was responsible for reviewing portions of it. He said he did not review information about the past flange or head inspection during the preparation of the responses (Exhibit 113, p. 87).

> Agent's Note: At the time Davis-Besse responded to the Bulletin, MILLER's title was Supervisor of Compliance (Exhibit 113, p. 6).

Interview of WUOKKO

WUOKKO said it was his understanding in the August 2001 time frame that the 2-inch gap would allow for a camera to be inserted to conduct inspections at the top of the RVH. He said he believed that the modification for the access ports would make inspections easier and faster. He said he was not aware at that time that a 100 percent inspection had not been done. He said it was not until March of 2002 that he learned the head had not been completely cleaned "and had the amount of boron [on it]." WUOKKO said he did not review any of the flange or head video inspections pursuant to his review of the Bulletin responses (Exhibit 114, pp. 19-20, 22-23, 34, 39-40, 55-56, 62).

> Agent's Note: WUOKKO offered little additional information during his interview with OI, although he noted he was the primary interface with the NRC "if they had questions on what the letter said." When questioned about the specifics in the letter and various e-mails he received associated with the Bulletin response, the majority of WUOKKO's responses were, "I don't recall" (Exhibit 114, p. 14).

Interview of COAKLEY

COAKLEY said he was the Outage Director in 12RFO and the Outage Manager in 11RFO. COAKLEY claimed that work done on the head during the outages was non-critical path so he did not have much involvement. He said he thought the boric acid on the head was coming from the flanges and was a housekeeping issue. COAKLEY said that even though cleaning boric acid from the reactor head was an outage issue, it was not something on his "radar screen." He did mention that critical path activities constantly changed and listed one as "taking the head off [the stand]." COAKLEY was aware that boric acid remained on the head after 12RFO, but did not believe it was related to any safety issues. He also knew that SIEMASZKO had to use a hammer

and a pole to try to break off the boric acid from the RVH. He said that the information he got from SIEMASZKO was that everything that could be done to clean the head had been done (Exhibit 51, pp. 13-15, 18-19, 30-31, 41, 43-44, 48, 52-53).

COAKLEY said he concurred on the September 4, 2001, Davis-Besse Bulletin response for David NELSON, who was sick at the time. COAKLEY said his review of the letter on NELSON's behalf was to look for any commitments for future work or something that had to be scheduled during the outage (Exhibit 51, pp. 68-70).

Interview of GEISEN

GEISEN said he knew the Bulletin was looking for past inspection results, but he did not place emphasis on the inspections, rather he placed emphasis on the likelihood of having a circumferential crack relative to Oconee 3. GEISEN said the 2-inch gap, the mouse holes, and the deposits left on the head were not discussed as impediments as far as responding to the Bulletin. Instead, he said, they were discussed regarding future inspections. GEISEN said the past was not discussed because "what was past was past." GEISEN said he would have reviewed the September 4, 2001, response from his discipline, which was Design Engineering, and he would have reported to MOFFITT (Exhibit 115, pp. 84, 102-103, 116-117).

Interview of GOYAL

GOYAL stated that he read the response letters before they were sent to the NRC. GOYAL acknowledged that he was responsible for reviewing some portions of the response letters for accuracy (Exhibit 26, pp. 43-44, 46, 98-99).

GOYAL explained that he initiated PCAQR 96-0551 because there was limited access to the RVH for inspecting and cleaning. The access, he said, was limited because of the mouse holes and the curvature of the head. GOYAL also acknowledged that he initiated PCAQR 96-0551 because he was concerned about wastage of the head from boric acid corrosion on areas that he could not see. GOYAL did not know if the past inspection documents were reviewed during Davis-Besse's preparation of their responses to the Bulletin (Exhibit 26, pp. 50-51; Exhibit 27, pp. 21-24, 37-38).

At the time of GOYAL's e-mail dated August 30, 2001, he said had discussions with SIEMASZKO and McLAUGHLIN about impediments to the RVH inspections. He said it was discussed that if the proper tool, e.g., crawler, was used, there would be no impediment. GOYAL said that he pointed out that he had an access problem. GOYAL also said it was his impression at the August 11, 2001, meeting, which he referenced in a same day e-mail, that no

one present at that meeting was surprised to hear that the head could not be cleaned through the mouse holes (Exhibit 27, pp. 70-75; Exhibit 88).

While discussing Serial 2731, GOYAL said that despite the concerns he noted in the PCAQRs and e-mails, ANO had been able to inspect their entire head, and SIEMASZKO told him that he was able to see all the head with the exception of the top four nozzles. GOYAL also recalled talking to McLAUGHLIN about not installing the access ports. McLAUGHLIN said the inspections could be performed using the crawler. GOYAL knew that the e-mails he sent in the August time frame voiced his concerns, and added that "every place has their own culture" (Exhibit 27, pp. 102-104, 156-157).

GOYAL acknowledged that Davis-Besse was forward looking in their responses to the Bulletin, but he knew that NRC was asking about past inspections as well (Exhibit 27, p. 155).

Interview of SIEMASZKO

SIEMASZKO initiated the WO in 2000 for cleaning the RVH as "an administrative means of cleaning." He said that besides the men that worked on the head and videotaped it, it was "common knowledge to the entire plant" that the head had not been completely cleaned at that time. SIEMASZKO specifically mentioned that he told this to COAKLEY, MOFFITT, and McINTYRE (Exhibit 49, pp. 11-12, 55-59, 65-70).

SIEMASZKO said his assignment for responding to the Bulletin was to review the videotapes and count the nozzles he could see. SIEMASZKO said that originally Davis-Besse provided "a very generic response," and the subsequent responses provided "more and more." SIEMASZKO said he was "asked to make a generic statement in which we are telling NRC that the facts -- that we haven't seen all, and what we could see we could not see any evidence of boric acid nozzle cracking." SIEMASZKO said he was part of a team and he was asked specific questions about whether there was nozzle leakage. He added he "was not deciding how severe the response would be." He said it was mentioned in the CRs that there were nozzles that could not be seen (Exhibit 49, pp. 97-98, 121-123, 173-178).

> Agent's Note: The CRs that SIEMASZKO talked about were neither referenced nor provided in Serial 2731.

In a later interview with OI, SIEMASZKO said he requested that the access ports be cut into the head. He said he requested this, in part, because access to the top of the head was insufficient for cleaning boric acid from it. He said he asked ESHELMAN and SWIM about implementing Mod 94-0025, but was told there was not enough time to do so prior to 12RFO (Exhibit 116, pp. 8-12).

SIEMASZKO's initial Bulletin response write-up stated that the cleaning of the head was limited, in part, by the access through the mouse holes. SIEMASZKO said he gave his response to MILLER, who provided it to COOK. SIEMASZKO said this portion of the response was revised without his knowledge (Exhibit 116, pp. 27-30, 119).

> Agent's Note: By e-mail dated August 22, 2001, SIEMASZKO was requested to review a version of Serial 2731 that did not contain any reference to the cleaning limitations due to access through the mouse holes. This portion remained consistent through issuance on September 4, 2001 (Exhibit 97).

Interview of McLAUGHLIN

McLAUGHLIN said that after 12RFO, it was his impression that the head was "bare metal clean." He does not recall how he got that impression or if someone told him specifically that it had been cleaned (Exhibit 117, pp. 75-77).

McLAUGHLIN said it was his responsibility to provide "configuration information" for the Bulletin response based upon his past outage experience. McLAUGHLIN explained that this "configuration information" included the RVH description, but excluded the past inspection information. McLAUGHLIN said he did not feel that it was his job to verify the accuracy of all the information in the responses because it was "a team effort." He was only responsible for the configuration and future inspection plans information (Exhibit 117, pp. 78-79, 82-83, 85-86).

McLAUGHLIN thought he learned that boric acid had been left on the head after 12RFO, somewhere between the September 4 and the October 17, 2001, responses to the Bulletin. He did not recall the August e-mails sent by GOYAL that included him on distribution. At the time the responses were being prepared, McLAUGHLIN's impression was that a 100 percent qualified visual examination could be conducted at the next outage. He said this impression was based upon the fact that ANO could do their inspections. He did not recall having any discussions with GOYAL that GOYAL was concerned about Davis-Besse's ability to perform these inspections. McLAUGHLIN understood that GOYAL was someone that should have been relied upon for technical information (Exhibit 117, pp. 87-95, 106-107).

During his OI interview, McLAUGHLIN questioned why GOYAL was commenting in his August 30, 2001, e-mail that "we do not say anywhere in our response to the Bulletin that inspection through the mouse holes creates an impediment to 100 percent visual examination." McLAUGHLIN said that was a true statement and Davis-Besse "did not say that because it doesn't" (Exhibit 117, pp. 95-96).

McLAUGHLIN did not interpret the Bulletin to mean that the plant might have to shut down by December 31, 2001. He said that there were "no plans to shut down before December 31, 2001." According to McLAUGHLIN, the Bulletin expected plants to have boron on their RVHs. McLAUGHLIN said that Davis-Besse provided a justification for continuing to operate based upon how certain criteria were met. When asked if he believed that Davis-Besse provided complete and accurate information, McLAUGHLIN stated, "By the time November came around, I believe that they had the accurate and complete story" (Exhibit 117, pp. 100-108, 127).

> Agent's Note: Davis-Besse's initial response on September 4, 2001 (Serial 2731), was considered final by Davis-Besse regarding past inspections. Davis-Besse did provide considerably more information by the November 2001 time frame, but only in response to NRC requests for additional information (Exhibit 86, p. 8).

McLAUGHLIN said that Response Item 1.c. was forward looking. He based his response on the fact that ANO had performed a 100 percent visual inspection using a crawler, and therefore he knew it was possible. He did not remember thinking there was a difference between Response Items 1.c. and 1.d. McLAUGHLIN said it was not the insulation that caused the impediment, but rather the curvature of the head and choice of camera. However, he acknowledged that Davis-Besse did not say anything in their response about the curvature or camera being impediments. He also acknowledged that the Bulletin was looking for historical information (Exhibit 117, pp. 135-140).

Interview of MOFFITT

MOFFITT did not have any specific recollection about the August 11, 2001, e-mail or the meeting. MOFFITT did think that it was common knowledge by August 11, 2001, that the RVH had not been completely cleaned during the last refueling outage, based that upon an investigation conducted by FENOC personnel during the Spring of 2002. MOFFITT believed that SIEMASZKO told him during the August 2001 time frame that approximately 80 percent of the head had been cleaned during 12RFO (2000). MOFFITT said this was something he asked SIEMASZKO in passing because he knew that Davis-Besse was being asked to do more visuals and possibly more elaborate inspections at the next outage and he wanted to be prepared. MOFFITT could not recall speaking to SIEMASZKO during 12RFO about boric acid being left on the RVH. MOFFITT believed that he learned while working night shift during 12RFO that a complete visual inspection of the RVH had not been possible and the head had not been completely cleaned (Exhibit 118, pp. 27-39, 44-45).

MOFFITT said he reviewed several of Davis-Besse's responses to the Bulletin, but could not specifically recall doing so for Serial 2731. A review of the sign off sheets for the various letters indicated that GEISEN initialed for MOFFITT on this particular letter (Exhibit 118, pp. 45-47).

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Agent's Note: While the sign off sheets did not reflect MOFFITT's concurrence, other e-mails and drafts of the letter indicate that MOFFITT was kept informed during the drafting of Serial 2731, and based upon his interview with OI, MOFFITT had knowledge about the preparation of this letter.

MOFFITT thought the reason that Mod 94-0025 never got implemented was a matter of "enhancement versus a necessity." He did not recall any specific discussions about impediments to cleaning and inspecting the RVH as they related to the Bulletin response. Rather, the discussions he remembered focused on which nozzles could be seen, what could they take credit for, and what was their level of confidence (Exhibit 118, pp. 58-60).

Agent's Analysis III-1A

[redacted]

[redacted]

B. 1998 Inspection Results

The next paragraph of Davis-Besse's September 4, 2001, response to Request Item 1.d. stated the following, with the passages in question in bold italics (Exhibit 86, pp. 5-6):

> "***This visual inspection showed an uneven layer of boric acid deposits scattered over the head. There were some lumps of boron, with the color varying from brown to white. The outside diameter of the CRDM tubes showed white streaks, providing evidence of downward flow and attributable to CRDM flange leakage.*** The head was

cleaned by use of a manual scrubber and vacuum through the weepholes. The head was videotaped after cleaning for future reference" (emphasis added by OI).

Evidence

Document Review

PCAQR 96-0551

This corrective action document was initiated during 10RFO as a result of finding boric acid deposits on the RVH. In the "Remedial Action" section, it was noted that the lack of removal of boron deposits from the RVH after each operating cycle was one of the apparent causes of the condition. In addition, it was noted in this section that the boron "was removed to the extent practical considering cleaning equipment limitations...." Under the "Work Completion" section, it was noted that "during 8th refueling outage the boric acid deposits were removed (to the extent possible) by washing the RV head" (Exhibit 5, pp. 6, 8, 11).

PCAQR 98-0767

In April 1998, PCAQR 98-0767 was initiated by MAINHARDT to address the issue of boric acid on the head. The PCAQR stated that a video inspection of the RVH identified "several 'fist' size clumps" and "where clumps were not present, a light dusting of Boric Acid was found." A diagram used in this PCAQR indicated that the area around or near 21 nozzles was affected by the clumps. GOYAL, as the evaluator of this PCAQR, wrote that the boric acid varied in color from "rust brown to white." He attributed that "rust or brown color is an indication of the old boric acid deposits." GOYAL further noted under the "Apparent Cause" section that a videotape of the RVH "showed that most of the head area was covered with an uneven layer of boric acid along with some large lumps of boric acid." GOYAL stated the head area "was cleaned as best we can" (Exhibit 21, pp. 1-3).

> Agent's Note: According to the Davis-Besse BACC procedure in place at that time, "the affected areas should be inspected to identify any signs of corrosion. This will most likely be exhibited by red rust or red/brown stained boron" (Exhibit 119, p. 14).

PCAQR 98-0767 noted that the root cause evaluation and Corrective Action to Prevent Recurrence (CATPR) for PCAQR 96-0551 were in progress and that PCAQR 98-0767 could also be closed once these actions were completed. Other names listed on this PCAQR were McINTYRE, JOHNSON and SWIM (Exhibit 21, pp. 1-2).

Agent's Note: Although a root cause evaluation for PCAQR 96-0551 was requested by the PCAQR Review Board, ROGERS, on October 28, 1998, with the concurrence of McINTYRE and JOHNSON, determined that "a full blown Root Cause will not change the corrective actions," i.e., to put in the access ports. Thus, the root cause evaluation was never completed and the access ports requested under PCAQR 96-0551 were not scheduled to be implemented until the Spring of 2002 (Exhibit 5, p. 20).

PCAQR 98-0767 also noted that white streaks on the outside diameter of the CRDM housing indicated flange leakage (Exhibit 21, p. 3).

Agent's Note: As noted in PCAQR 96-0551, the last time the RVH was washed was during 8RFO (1993). It was specifically documented that the effectiveness of the cleaning performed in 8RFO was not determined. Without as-left videotapes, it could not be confirmed that all boric acid streaks from all nozzles were removed. According to Davis-Besse records, no 8RFO as-left videotape exists. During 9RFO (1994), eight flanges were noted as leaking; however, no documentation was found regarding the extent of boron deposits on the RVH or if the RVH was cleaned at that time. During 10RFO (1996), the head was cleaned using a vacuum cleaner and was not washed down. Because the boric acid deposits were manually cleaned with a vacuum and not removed with water, any white streaks observed during 11RFO could have been caused by flange leakage from previous outages (Exhibit 120, p. 15; Exhibit 121, pp. 1-2; Exhibit 5, p. 11)

Draft Responses to the Bulletin

The final version of Serial 2731 stated that white streaks provided "evidence of downward flow." In the first August 9, 2001, draft, sent from GOYAL to SIEMASZKO and CUNNINGS, the sentence regarding white streaks that provided "evidence of downward flow" was initially two sentences: "Outside diameter of the motor tubes also showed white streaks indicative of leaking CRDM flanges. The boron deposits were attributed to the leaking CRDM flanges." In this initial version, the white streaks were "indicative" of leaking flanges instead of "evidence" of downward flow. These words remained constant for the next several days with e-mailed versions either being sent or received by KENNEDY, COOK, and SWIM (Exhibit 91, pp. 1, 3; Exhibit 94, pp. 1, 3; Exhibit 95, pp. 1-2).

In an August 16, 2001, version of the document from COOK's files, the sentences are consolidated into one and state, "The outside diameter of the CRDM tubes showed white streaks, providing evidence of downward flow and indicative of CRDM flange leakage." In the August 20, 2001, draft of this letter, the questioned sentence appears in its final version, stating

the "evidence" is "attributable" to flange leakage. COOK sent it to GOYAL, KENNEDY, McLAUGHLIN, WUOKKO, MILLER, and LOCKWOOD (Exhibit 93, p. 6; Exhibit 96, pp. 1, 6).

Testimony

Interview of COOK

COOK said that GOYAL provided the input for the 1998 inspection results. COOK said GOYAL told him that in 1998, Davis-Besse "had difficulty getting up to the top of the head and that there was boron on the head that made it difficult and that he had not been able to clean all that boron off" (Exhibit 108, pp. 41-43).

Interview of GOYAL

GOYAL stated that he conducted the head inspection during the 1996 outage and reviewed the videotapes of the 1998 head inspection during that outage. GOYAL said he saw "slightly more" and some rust colored boric acid in 1998 as compared to 1996. GOYAL acknowledged that he wrote the assessment for PCAQR 98-0767. He also acknowledged that he never inspected the flanges at that time. GOYAL said the "white streaks" he saw on the outside diameter of the CRDM housing were below the insulation, but he never looked at specific flanges to correlate these marks, nor did he know how many flanges were supposedly leaking at that time. Also, GOYAL never determined whether the streaks he saw were from the 1998 outage or a prior outage (Exhibit 26, pp. 8-9, 16-19, 30-31, 34-35, 39-42, 59).

GOYAL stated that the 1998 inspection was supposed to include looking for nozzle leakage and that boric acid deposits could be a sign of either flange leakage or nozzle leakage. GOYAL stated that in 1998 no U.S. plant had identified nozzle leakage. He thought that he based the determination that the boric acid deposits he was seeing were from flange leakage on industry experience with nozzle cracking. He acknowledged that he was making an "engineering judgement based on industry results." He also said it was based upon historical flange leakage at Davis-Besse (Exhibit 26, pp. 56-63; Exhibit 27, pp. 108-109).

Agent's Analysis III-1B

[redacted]

[redacted]

C. 2000 Inspections Results

The next two paragraphs of Davis-Besse's response to Request Item 1.d. stated the following, with the passages in question in bold italics (Exhibit 86, p. 6):

> "***In April 2000, Framatome Nuclear Power Services performed a 100% video inspection of CRDM flanges above the RPV insulation. Five leaking CRDM flanges were identified at locations F10, D10, C11, F8, and G9.*** The main source of leakage was associated with the D10 CRDM flange. ***Positive evidence (boron deposits on the vertical faces of the CRDM flanges and nozzle) existed that drives F8, F10 and C11 had limited gasket leakage.*** CRDM G9 had boron deposits under the CRDM flange between the flange and insulation, providing confidence that this leakage was associated with flange leakage. All five CRDM gaskets were replaced and the D10 CRDM flange was machined. Visual inspection of the flanges was performed. ***Some boric acid crystals had accumulated on the RPV head insulation beneath the leaking flanges.*** These deposits were cleaned (vacuumed). After cleaning, the area above the insulation was videotaped for future reference..
>
> "***Inspection of the RPV head/nozzles area indicated some accumulation of boric acid deposits. The boric acid deposits were located beneath the leaking flanges with clear evidence of downward flow. No visible evidence of nozzle leakage was detected.*** The RPV head area was cleaned with demineralized water to the greatest extent possible while maintaining the principles of As-Low-As-Reasonably-Achievable (ALARA) regarding the dose. Subsequent

video inspection of the cleaned RPV head areas and nozzles was performed for future reference" (emphasis added by OI).

These statements will be considered together because they refer to Davis-Besse's claim that boric acid deposits on the head were the result of leaking flanges, and they failed to identify the actual cause of the deposits - leaking VHP nozzles.

Evidence

Document Review

Memorandum to Outage Management/Outage Control dated April 17, 1998

A memorandum written by CHIMAHUSKY during the outage reported that only one flange (D10) had indications of a boric acid leak. He stated, "on a scale of 1 to 10, I would rate this leak on the order of a 2 or 3." He said there was some boric acid "on the head insulation below drive D-10, but again it did not appear to be significant" (Exhibit 122).

Pre-1999 Mid-Cycle Outage Paperwork

Documentation provided by CHIMAHUSKY stated, "a plan for CRDM inspection and maintenance has been directed due to increasing unidentified leakage from the RCS coupled with the buildup of boric acid on the CAC coils." A document titled "Containment Entry" identifies the two major reasons for no containment entry as cost differential and risk. The risk category discussed that "this issue is based on not knowing what we would find if performed the inspection." It states that if leaks, particularly major ones, were found then Davis-Besse would need to be prepared to shut down and fix them or justify continuing operation with them. It further notes that with the current concern "of higher boric acid control scrutiny, it may not be politically correct to say we are not going to fix it." "Right now we would not be prepared to fix leaks on any of the sources listed above without cooling down. What it boils down to is, if you don't want to know the answer - don't ask the question" (Exhibit 123, pp. 38, 53).

From the meeting records, those in attendance at various times and who also played a role in the prior flange and/or head inspections and/or the Bulletin were CHIMAHUSKY, GOYAL, Andrew S. WILSON, Maintenance Support Superintendent, Bradley J. BAUMGARDNER, Radiation Protection Health Physicist, HALEY, and Craig HENGGE, System Engineer. There is also reference to a presentation, hand-dated February 8, 1999, for an Outage Directors Meeting at which the "Proposed Mode 3 Shutdown (Leakage) and Mid-cycle Outage (CRD Maintenance)" were scheduled to be discussed (Exhibit 123, pp. 53, 51, 43, 40-41, 38, 35-36).

WO 99-00356-000 (Mid-Cycle)

The "Problem Description" section of this document identified that "CRD motor flanges need inspection and possible repair during the May mini-outage." This WO was "generated as an administrative document to track the work associated with FTI [Framatome], CRDM maintenance activities." This WO was voided on April 26, 1999, after "WO# 99-000356-001 found no leaking CRD's, therefore this work not required." WO 99-000356-001 was for the actual videotaping of the inspections (Exhibit 56; Exhibit 124).

CR 2000-0782

This CR was initiated on April 6, 2000, by MAINHARDT. It identified boric acid leakage from the RVH flange weep holes, most notably from the east side, and referenced that photographs and an inspection record were included. The leakage was identified as "red/brown in color" and appeared "to be a dried steam." MAINHARDT also wrote that an initial "inspection of the head through the weep holes indicates clumps of Boric Acid are present on the east and south sides." In the attached "Inspection Checklist," MAINHARDT circled "yes" that corrosion was present as evidenced by the red/brown deposits and noted that there was "heavy leakage from the weepholes." He also recommended that a detailed inspection be conducted based on the fact that this was "new leakage from head which was not evident during 11RFO" (Exhibit 44, pp. 1, 5).

Agent's Note: MAINHARDT conducted the RVH inspection during 11RFO.

The Management Review Committee (MRC) noted that the owner of this CR was System Engineering, categorized the CR as "routine," and asked to "evaluate if an Operating Experience (OE) Report is appropriate and provide a justification/response either way." On April 14, 2000, SIEMASZKO, the System Engineer, signed as the preparer of the response to the MRC. The "Event Description" of the "Cause/Actions" page described the boric acid deposits as "lava like." SIEMASZKO stated that "five leaking Control Rod Drives were identified at locations F10, D10, C11, F8, and G9." He recommended "replacement of the gaskets or repairs for Control Rod Drives located at F10, D10, C11, F8, and G9." Framatome was to do the work. McINTYRE provided input into SIEMASZKO's recommendation and signed as the approving supervisor on April 27, 2000 (Exhibit 44, pp. 2, 3).

The Outage Insider, Davis-Besse's Latest Update on 12RFO dated April 12, 2000

An article on CRD maintenance stated that a video inspection of the flanges had been "completed, and showed there was some minor leakage evident on five of the CRD flanges." It was planned that those drives would be removed, cleaned, inspected, and the bolting hardware and gaskets would be replaced. It was noted in the article that this work was not considered "an

unusual activity, although it is one that we didn't have to perform during the last outage because no leakage was found when the video was performed. It is considered emergent work that was not expected because we had done a video during the Mid-Cycle Outage and didn't see any evidence of leakage at the time" (Exhibit 125, p. 1).

> Agent's Note: Most of the Davis-Besse personnel interviewed claimed they were unaware of the results of the CRD flange inspections conducted during the 1999 mid-cycle outage and believed that leaking flanges were a constant source of boric acid on the RVH over the years. According to correspondence from Davis-Besse's legal counsel, The Outage Insider was distributed daily by "Site Communications...through e-mail, as well as in paper form" (Exhibit 126, p. 4).

Framatome's Inspection Report for CRDM Flanges dated April 15, 2000

Framatome disassembled the five flanges for inspection. Flanges C11, F8, and G9 were all indicated to be "acceptable to set motortube" and marked "accept" by the inspector. Flanges F10 and D10 were rejected by the inspector for pitting marks. Flange D10 also identified a "steam cut on radial," but it was further noted to be an "old indication" (Exhibit 127, pp. 2-3).

> Agent's Note: Because these five flanges were disassembled for inspection, the gaskets were replaced as part of standard practice, not because they were deficient.

CR 2000-1037

This CR was initiated on April 17, 2000, by SIEMASZKO and dealt with the accumulation of boron around the CRD nozzle penetrations. McINTYRE signed on April 18, 2000, as the supervisor and wrote in the supervisor comments section that CR 2000-1037 "will address the effects of the boron on the head, CR 2000-0782 will address the hardware issue of leaking flanges." The MRC reviewed this CR and placed it on a "Mode 4 Restraint" until all necessary actions to restore equipment were completed. On April 27, 2000, GEISEN signed the "Removal from Mode Restraint." In his write-up, GEISEN stated that CR 2000-1037 "was written for boron on the head, but the review performed under CR 2000-0782 encompassed this area. No separate review or evaluation is necessary." GEISEN went on to explain that the cleaning of the RVH was scheduled and would be completed prior to being removed from the head stand (Exhibit 22).

> Agent's Note: GEISEN removed the restraint based upon work that was scheduled but not completed and, as subsequently learned, was never completed.

The Outage Insider Davis-Besse's Latest Update on 12RFO dated April 29, 2000

In this edition of the daily communication, kudos were given to SIEMASZKO for his perseverance in cleaning the RVH of boric acid buildup. "This is the first time in Davis-Besse history that the reactor head has been cleaned" (Exhibit 79, p. 1).

Readiness Restart Review Notes

These notes were forwarded via e-mail on May 10, 2000, to, among others, CAMPBELL, GEISEN, WORLEY, ESHELMAN, COAD, LASH, and COAKLEY. From a Plant Engineering presentation by ESHELMAN, it was noted that the RVH had been cleaned "to get a good base line" (Exhibit 128, pp. 1-2).

> Agent's Note: "A good base line" was made for the next outage inspection, therefore the 12RFO (2000) inspection was inconclusive.

E-mail from FYFITCH dated May 10, 2000

Steve FYFITCH, Metallurgist/Advisory Engineer, Framatome, e-mailed that Ronald PILLOW, CRDM Component Engineer, Framatome, felt Davis-Besse's CRDM flange leakage in 2000 was "only a single leaker...but Davis-Besse still maintains that there were 5 leaking flanges." According to FYFITCH, GOYAL told him that they found D10 to be the worst leaking flange and also found it to be "out of plumb." GOYAL also reported that based upon what he observed, "it was probably bad from day one." FYFITCH also mentioned that Davis-Besse still planned to add access holes during the next outage if the budget was approved (Exhibit 129, p. 1).

B&WOG Executive Committee Meeting Minutes, June 6, 2001

Minutes dated June 21, 2001, were forwarded to the Executive Committee on June 22, 2001. Regarding the Plant Status, Charlie ZIMMERMAN from ANO reported to the Committee, "a significant head cleaning was conducted in 1R14 [Spring 1998] so the inspection in 1R15 [Fall 1999] showed the accumulation of boric acid around the nozzle." CAMPBELL reported for Davis-Besse that an "extensive head cleaning" was conducted "during the last outage, so inspection of head should reveal leakage from any CRDMs." He also noted that Davis-Besse's next outage was scheduled for March 2002. Kenneth BYRD, Nuclear Engineering and a member of the Task Force and Working Group, also received a copy of the minutes (Exhibit 130, pp. 1-5).

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Agent's Note: Like ESHELMAN's statement in the "Readiness Restart Review Notes," while the cleaning done during 12RFO would allow for a better inspection during the next outage, the 12RFO inspection was inconclusive.

Memorandum dated June 27, 2001

GOYAL wrote this memorandum "to provide an engineering evaluation for responding to the question 'Should Davis-Besse perform a visual head inspection if the plant shutsdown (sic) to Mode 5 conditions?' Currently, the visual head inspection is planned in 13RFO." In his report, GOYAL stated that large deposits of boron from a CRDM flange leak were observed which "did not permit the detailed inspection of the CRDM nozzles." This memorandum was distributed to CAMPBELL, COAKLEY, ESHELMAN, MOFFITT, and SWIM (Exhibit 131).

E-mail from GOYAL dated July 10, 2001

GOYAL e-mailed SIEMASZKO, CUNNINGS, SWIM, GEISEN, and ESHELMAN about "plant-specific data verification" for information to be used by the Materials Reliability Program (MRP) as part of the industry-wide response to NRC's expected request for information on reactor head nozzle cracking. GOYAL noted that the MRP table showed that Davis-Besse's prior inspection "shows **100% inspection which is not correct** because of the large boric acid deposits on the head very few CRDMs could be inspected" (emphasis added by OI) (Exhibit 132).

NRC Bulletin 2001-01

This Bulletin was issued on August 3, 2001, regarding "Circumferential Cracking of Reactor Pressure Vessel Head Penetration (VHP) Nozzles" (Exhibit 85).

E-mail from KENNEDY dated August 8, 2001

KENNEDY forwarded to COOK an e-mail that he received from GOYAL earlier that same day. GOYAL had concerns that the information the MRP had for the industry-wide response to NRC was incorrect. GOYAL stated, "the last inspection was partial and detected boric acid accumulation which was attributable to a CRDM flange leak." GOYAL also sent his original e-mail to SIEMASZKO, McLAUGHLIN, SWIM, CUNNINGS and Charles T. DAFT, Staff Nuclear Engineer (Exhibit 133, p. 1).

E-mail from GOYAL dated August 13, 2001

GOYAL pointed out in an e-mail to SIEMASZKO, McLAUGHLIN, CUNNINGS and WUOKKO regarding Davis-Besse's justification for continuing operations, that his "concern is that all these people may focus on our lack of complete or limited inspection of CRDM's" (Exhibit 134).

E-mail from HUNT dated August 14, 2001

Steve HUNT, Principal Officer, Dominion Engineering, an industry consultant, e-mailed GOYAL with his concerns that Davis-Besse would not be in compliance with the Bulletin's request to perform a "qualified visual inspection" by December 31, 2001, and that therefore, a justification would be required "as to how D-B is in compliance with applicable regulations if this inspection is not performed." HUNT included a draft applicable to Davis-Besse that said the March 2000 inspection "sensitivity was affected by a significant amount of boric acid on the vessel head resulting from a CRDM flange gasket leak" (Exhibit 135).

E-mail from GOYAL dated August 14, 2001

GOYAL e-mailed FYFITCH to advise that a meeting with the directors, i.e., MOFFITT, MESSINA, and WORLEY, was held the day before to discuss inspection plans for the upcoming 13RFO. GOYAL said the inspection would "be 100% qualified visual exam and where we can not perform 100% visual exam of a nozzle(s) a volumetric examination (most likely ECT) will be performed" (Exhibit 136).

Agent's Note: ECT refers to eddy current testing, a form of NDE.

GOYAL also asked FYFITCH if it was "possible to go back to 1998 that is when a good head exam was done with no nozzle leakage. (meaning not taking credit for 2000 inspection)." GOYAL also sent this e-mail to WUOKKO, GEISEN, SWIM, and KENNEDY (Exhibit 136).

Agent's Note: Of significance, GOYAL used the term "nozzle leakage" apparently referring to the cause of the boric acid on the RVH in 2000, which prevented the good head exam. By using "nozzle leakage" instead of "flange leakage," GOYAL appears to be acknowledging that the RVH inspections in 12RFO identified cracked nozzles resulting in leakage. OI attempted to clarify this point during a telephone interview with GOYAL on March 5, 2003. GOYAL explained he did not intend to infer he had knowledge of a nozzle leak occurring during the 2000 inspection. Beyond that he was not able to recall any other specific details regarding the sentence in question (Exhibit 137).

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E-mail from COOK dated August 20, 2001

COOK e-mailed WUOKKO that Davis-Besse's draft of Serial 2731 had changed from the one he sent out "last week" because he found out that "other utilities were not following the [MRP] draft but, rather, were writing plant specific responses" (Exhibit 138).

E-mail from COOK dated August 22, 2001

COOK e-mailed WUOKKO, MILLER, GOYAL, McLAUGHLIN, SIEMASZKO, and copied LOCKWOOD, and KENNEDY about the definition of "majority of the nozzles" that were inspected during 12RFO. He wrote that SIEMASZKO said approximately 90 percent were inspected and this was what would be used in the response to the Bulletin. GOYAL e-mailed COOK back, questioned "what 90% inspected means," and asked SIEMASZKO to clarify whether this meant before or after the RVH cleaning. GOYAL speculated that this was "prior to head cleaning." GOYAL also sent this e-mail to SIEMASZKO, McLAUGHLIN and KENNEDY (Exhibit 139).

Draft Responses to the Bulletin

Davis-Besse consistently stated from the first draft that "100% video inspection of the CRDM flanges" had been performed. However, there were changes made throughout the drafting of the response regarding how many of the nozzles were inspected. In the first known draft of the past inspection results dated August 9, 2001, there is a reference that "95% of the nozzles were inspected" during the 2000 inspection. GOYAL, in this same document, questioned the accuracy of this number. This document was sent by GOYAL to SIEMASZKO and CUNNINGS (Exhibit 91, p. 3).

The next version of this document, dated less than an hour later, stated, "Majority of nozzles were inspected." This verbiage remained consistent until August 16, 2001, when this reference was removed from the 2000 inspection results and placed in the 1998 inspection results. These documents were either received or sent by GOYAL, SIEMASZKO, KENNEDY, CUNNINGS, SWIM, and COOK (Exhibit 95, p. 3; Exhibit 93, p. 6).

On August 20, 2000, the sentence was removed from the 1998 inspection results and returned to the 2000 inspection results. COOK sent this document to GOYAL, KENNEDY, McLAUGHLIN, WUOKKO, MILLER, and LOCKWOOD. COOK also mentioned that he still needed "a review of the 2000 inspection result description" (Exhibit 96, pp. 1, 6).

On August 22, 2001, another draft incorporated "newer figures" and stated, "approximately 90% of the nozzles were inspected" during the 2000 inspection. COOK sent this to McLAUGHLIN,

GOYAL, WUOKKO, MILLER, SIEMASZKO, and KENNEDY. The sentence stayed unchanged for the next few drafts, which were also sent to LOCKWOOD, CAMPBELL, WORLEY, MOFFITT, and MESSINA (Exhibit 97, pp. 1, 7; Exhibit 99, p. 8; Exhibit 110, p. 8; Exhibit 98, p. 8).

On August 24, 2001, a new draft, "version 1a," was e-mailed from COOK to MILLER, LOCKWOOD, and WUOKKO. There was no longer a reference to how many nozzles were reviewed in 1998 or in 2000. COOK noted in his e-mail that he had incorporated changes based upon "the phone meeting yesterday afternoon." He specifically stated that one change "deletes the reference to 90% of the nozzles being inspected during the 200 (sic) outage." COOK sent version 1b with this same change to McLAUGHLIN, GOYAL, SIEMASZKO, KENNEDY, MILLER, WUOKKO, and LOCKWOOD. In his cover e-mail, COOK explained, "It deleted the reference to 90% of the nozzles being inspected during the 2000 inspection...." This change, in part, was done "to ensure that we state that not all of the head was accessible or inspected for inspection for whatever reason" (Exhibit 100, pp. 1, 7, 8; Exhibit 92, pp. 1, 8).

The statements which described the condition of the "five leaking CRDM flanges" remained relatively unchanged from the first draft to the final version. The sentence in the first known draft, dated August 9, 2001, read, "No evidence of nozzle leakage was detected." GOYAL's comment to SIEMASZKO and CUNNINGS about this particular sentence was "how do you know when there was so much boron on top of the head?" The next version of this document, which "incorporates comments from J. CUNNINGS and P. GOYAL," read, "no **visible** evidence of nozzle leakage was detected." SIEMASZKO sent this document on August 9, 2001, to CUNNINGS, GOYAL, and KENNEDY, who forwarded it to COOK (Exhibit 94, pp. 1, 4; Exhibit 97, p. 8; Exhibit 91, p. 4).

Inspection Media Review

OI's technical review of the flange inspection focused on flanges C11 (correlating to nozzle 51), D10 (nozzle 31), F8 (nozzle 6), F10 (nozzle 11), and G9 (nozzle 3), which were identified by FENOC as the "five leaking control rod drives...." The review specifically focused on inspections of flanges D10 and F10, because these were noted as the main source of leakage in Serial 2731 and CR 2000-1037, respectively. Although a certain amount of boric acid deposits were seen on the pictures from the flange inspection, the estimated quantity of boric acid was relatively limited. However, when viewing the pictures from the RVH inspection, the quantity of boric acid deposits around nozzles 12, 13, 23, and 40, which did not have leaking flanges above them, greatly exceeded the quantity of deposits seen on the flanges. In addition to the nozzles that could be seen on the video, there were several weep holes where the boric acid deposits were so great that no nozzles were able to be viewed. There was too much boric acid on the head to

have reasonably concluded that all of it had come from leaking flanges, if the flanges had been leaking at all (Exhibit 22, p. 4; Exhibit 85, p. 6; Exhibit 140, pp. 4-29).

Testimony

Interview of ESHELMAN

ESHELMAN, Plant Engineering Manager at the time, thought that several flanges had been identified as leaking during 12RFO. He said that historically Davis-Besse had flange leakage, but he did not have any "special knowledge" about leaking flanges leaving boric acid deposits on the head in 12RFO. ESHELMAN said, "it's unfortunate, you know, but boric acid on the head from flange leakage kind of is an automatic default response." ESHELMAN did not verify that boric acid on the head correlated to flange leakage. He said he relied on his "folks." He identified SIEMASZKO, GEISEN, MOFFITT, probably GOYAL, "and others" that were on "the team" and doing outage work in 12RFO (Exhibit 31; pp. 7, 85-87).

Interview of COOK

COOK said SIEMASZKO provided the 2000 inspection results and COOK said he spoke with him "extensively." According to COOK, questions arose when SIEMASZKO made the reference that "a majority of the nozzles were inspected during 2000. And the question was, what does majority mean?" COOK said he asked SIEMASZKO how many nozzles could he see and SIEMASZKO told him 90 percent. COOK asked if SIEMASZKO could show that, and SIEMASZKO then responded, "maybe it was 80 percent." When COOK asked SIEMASZKO this again, SIEMASZKO said, "maybe it was 70 percent" depending upon what they were looking for. COOK said he told SIEMASZKO to just leave it as a "majority." COOK said he did not pursue the point that SIEMASZKO had difficulty giving a more definitive answer (Exhibit 108, pp. 38-40).

It was pointed out to COOK by OI that the final version of Serial 2731 did not reference that a "majority of nozzles" were inspected and that the drafts were more descriptive than the final. COOK said that he could not recall who made that change and that he did not make any changes unless he was asked by someone. He acknowledged that the draft had more "raw information" (Exhibit 108, pp. 123-125).

> Agent's Note: As previously discussed, the draft responses show that COOK removed the reference to 90 percent of the nozzles being inspected in 2000 from Serial 2731 after a telephone meeting.

COOK said that while developing Davis-Besse's initial response to the Bulletin, he was told that as-found boric acid on the RVH was from flange leakage during 12RFO. He said that was what people believed and what he had been told. He mentioned that Davis-Besse "had a history of CRDM flange leakage, and that's where the boric acid was coming from." COOK said he received this information from "engineering." COOK said he had no reason not to believe what he was being told (Exhibit 108, pp. 46-47, 77, 146).

COOK also recalled that there were discussions in late August 2001 regarding the sentence: "No visible evidence of nozzle leakage was detected." COOK said he talked with SIEMASZKO and he thought McLAUGHLIN and MILLER also participated. He said SIEMASZKO told him he had viewed the videos and had not seen any "popcorn" boric acid deposits. SIEMASZKO told him there was no evidence of a nozzle leak, "they had seen clear evidence of downward flow" and "they had evidence of flange leakage." COOK added, "that's probably the rationale for that statement in 2731 that we reviewed the past result. There's no evidence of any nozzle leakage." He recalled GOYAL asking, "are we sure we can say this?" COOK said he told GOYAL that they could because he had asked SIEMASZKO about it and "everybody told me that they looked at it" (Exhibit 108, pp. 154-155).

Interview of CAMPBELL

CAMPBELL said he was briefed in April 2000 by then Plant Manager Jim LASH, that Davis-Besse had CRDM flange leakage. CAMPBELL said that Davis-Besse had a history of flange leakage. He said "several suspect" flanges were planned to be repaired in 12RFO and this was typical in the past. He said that five were repaired during 12RFO. CAMPBELL recalled seeing a picture with a "cut" on a flange that had been disassembled. CAMPBELL said that during the same time frame he also saw approximately 30 seconds of the RVH inspection video. CAMPBELL said that as they "dug deeper into the information for plant-specific data, we were getting a better understanding of the condition of the head. The mindset, though, was that it was coming -- at least explaining it to me -- was it was coming from the CRDM flange leaks" (Exhibit 111, pp. 19-23, 61).

> Agent's Note: Despite claims by CAMPBELL and others that flange repair work was scheduled for 12RFO, *The Outage Insider*, dated April 12, 2000, stated that work done on the flanges was considered "emergent" because "we had done a video during the Mid-Cycle Outage and didn't see any evidence of leakage at the time" (Exhibit 125, p. 1).

CAMPBELL did not recall the specific sentence from the draft version of Serial 2731 that referenced 90 percent of the nozzles being inspected, but did remember the subject. He thought he might have commented, "what does 90 percent mean? ...ninety percent of what? You have to have a base" (Exhibit 111, p. 83).

Agent's Note: 90 percent of 69 nozzles is 62.1 nozzles.

Interview of COAKLEY

COAKLEY said it was his job as the Outage Director during 12RFO to ensure that contingency activities were included in the outage schedule. He said that typically four or five contingent flange repairs were included in the schedule. COAKLEY could not recall what the results of flange inspections were from 12RFO. COAKLEY said he got "suckered" into believing the boric acid on top of the RVH was from leaking flanges based upon Davis-Besse's history. He said he got this understanding because "at every outage, we would put contingency activities in to repair flanges, because they're very expensive." COAKLEY said he could not remember an outage when flanges were not fixed (Exhibit 51, pp. 14, 20-21, 80-81).

Agent's Note: COAKLEY was the Outage Manager during 11RFO when only one minor leaking flange was recorded and it was not repaired at the time. He was either the Outage Manager or Director during the 1999 mid-cycle outage when no leaking flanges were identified.

Interview of GOYAL

GOYAL said he reviewed the 2000 RVH inspection tape with SIEMASZKO either during 12RFO or right afterwards. GOYAL said he thought in 2000 that there might be nozzle leakage, but he was told by SIEMASZKO that what they were seeing was the result of flange leakage. SIEMASZKO told him there were five leaking flanges and one had a steam cut. GOYAL said based upon his experience with a steam generator leak, he knew that a lot of boric acid could be emitted from a steam cut. GOYAL acknowledged that the assumption was made that it was flange leakage and it was never verified that it was not nozzle leakage. GOYAL acknowledged that he asked about the sentence "no evidence of nozzle leakage" because "we don't know the source, and we have boric acid on it." He said another influence for disregarding a possible nozzle crack was that industry information had ranked Davis-Besse lower than some other plants for their susceptibility to PWSCC (Exhibit 26, pp. 19-20, 24-25, 37, 56-57; Exhibit 27, p. 61).

Agent's Note: During his review of a draft of Serial 2731, DAFT noted in the section related to "Criterion XVI of Appendix B to 10 CFR Part 50" that these "paragraphs assume we have PWSCC, which we probably do, but we don't know for sure until we evaluate any cracking we might have" (Exhibit 141, pp. 15-16).

Interview of SIEMASZKO

SIEMASZKO stated that Davis-Besse's first response to the Bulletin was "very generic...we are telling NRC that the facts - that we haven't seen all." SIEMASZKO did not recall that the first response from Davis-Besse did not include information that 24 nozzles could not be seen. He said that maybe the "licensing people didn't feel that you need this information at that time" (Exhibit 49, pp. 121-124).

> Agent's Note: Although it is not clearly identified in the transcript, the only response that did not identify a number for nozzles that could not be seen was Serial 2731.

Regarding one of the first meetings held on the Bulletin response, SIEMASZKO said LOCKWOOD or MOFFITT spoke to the group involved and said, "Mr. BYRD and Mr. SAUNDERS is [sic] personally interested in us doing a good job here so we can continue our operations with the next outage." SIEMASZKO said his impression of the general atmosphere in the room was that they wanted to give NRC limited information, not the wrong information, but "to gain the advantage of NRC not being able to fully understand the situation." He said that his first feeling from management was, "Don't give them anything which would make us vulnerable. The biggest problem was that they wanted to write it in such a way that it would be vague." "We cannot tell you the truth.... There was an atmosphere of 'Let's win this war.'" In SIEMASZKO's opinion, LOCKWOOD, BYRD, MOFFITT, and MILLER were at the core of this action and were the policy-makers (Exhibit 116, pp. 119-121).

SIEMASZKO said the source of the boric acid found on the RVH and obscuring the nozzle penetrations during 12RFO was from "a small leak" discovered during 11RFO but not repaired at that time. SIEMASZKO said he reviewed a videotape, which was not further identified, from 11RFO before starting 12RFO. From that videotape, SIEMASZKO claimed there was a "snow-like deposit" on top of the insulation which increased from 1 inch in 1998 to 1½ feet by 2000. SIEMASZKO said there were also streaks coming down the nozzle in the same direction but "a little bit darker" in 2000 as compared to 1998. SIEMASZKO said he sat for 3 days with HARRIS and Fred CURRENCE, Framatome Refueling Services Field Service Engineer, and reviewed 12RFO videos of the flanges. He said they "reasoned out five nozzles which could contribute to this mess which we found on top of the insulation." SIEMASZKO said he had no records, including videos, to compare to what he was seeing in 2000 (Exhibit 49, pp. 34-39, 50).

> Agent's Note: SIEMASZKO's testimony is very confusing regarding what information he saw or knew about flange leakage going into 12RFO. It is uncertain from the descriptions he provides whether he saw previous head and/or flange inspections.

SIEMASZKO acknowledged that some deposits were not located beneath flanges and said this was a "result of cascading flow." He said he determined this from reviewing the 12RFO videos which showed boric acid coming from the top of the insulation and going down between crevices. SIEMASZKO said it was "very hard to make the source" and "that's why we have replaced five nozzles knowing that only one could be a problem because we took the conservative approach." SIEMASZKO acknowledged that the streaks he saw on the nozzles could have come from past outages. He acknowledged that "there was clear evidence of downward flow" because "there was no evidence of upward flow." SIEMASZKO said there was little belief that C11, F8 and G9 were the sources of the leak, "but we wanted to clean them because they could be the source...when we took the faces off, there was no evidence of problem, and then they looked clean in the first place, so why to worry about that. When we took delta 10, it was a [steam] cut." SIEMASZKO said that for flange G9 he could not see all of it to see if it was leaking, therefore, because he could not prove that it was not leaking, he fixed it. SIEMASZKO said that looking at the videotapes was "inconclusive," but he had to support why he was repairing it. He said the bottom line was that he fixed G9 "because I don't know" (Exhibit 49, pp. 102-111, 113-114, 128-137, 141-142).

SIEMASZKO went on to explain that he was confident that the leakage he saw "could have come from a flange." SIEMASZKO said that at that time no one was concentrating on the nozzle cracking issue and he was "fooled" into thinking it was the D10 flange that was not repaired in 1998 that was causing the problems in 2000. SIEMASZKO said that during the 2000 outage "there was a complete ignorance of the issue of nozzle cracking. Therefore, I had a clear indication of my problem." SIEMASZKO was asked why he could then state with such confidence in the Bulletin responses that the boric acid seen in 2000 was coming from the flanges. SIEMASZKO's response discussed gap and propagation rate analyses, but did not directly answer the question (Exhibit 49, pp. 138-141, 165-166).

SIEMASZKO said that "no visible evidence of nozzle leakage" meant there was "no popcorn" like Oconee had, and they "did not see any leakage which would constitute nozzle leakage." SIEMASZKO said he could make this statement because he used the word "visible." He said "that means what we could see" and he was stating clearly that they could not see all the nozzles. He said, "it doesn't take a genius to figure out that if you cannot see the nozzle, you cannot see the popcorn." He went on to say that "this was a group effort. I think this is a very dangerous area, because -- because very few words were used with the understanding that we clearly told everybody that we couldn't see all the nozzles." SIEMASZKO said MILLER and COOK produced Serial 2731. SIEMASZKO was asked to identify where in this document it clarified that not all the nozzles could be seen. SIEMASZKO stated that the document said that 24 of the 69 nozzles could not be viewed; however, it was pointed out to SIEMASZKO that those words did not appear in the final version of Serial 2731. They did not show up until Davis-Besse's October 17, 2001, response to the NRC's request for additional information. SIEMASZKO said

that maybe "our licensing people didn't feel you need this information at that time." SIEMASZKO was asked by OI why he did not report for the 2000 inspection results that there was "lava-like" flow coming from the weep holes or the rust colored boric acid and he replied that he "was not deciding how severe the response would be" (Exhibit 49, pp. 102, 117-125, 172-175).

Interview of McINTYRE

McINTYRE was the supervisor for the individuals doing the head and flange inspections during the 11 and 12RFOs. He said he did not actually participate in the inspections. McINTYRE said that because of an ongoing elevated leakage issue, Davis-Besse went into 12RFO expecting to see flange leakage. He said, "We knew what was wrong before the outage started." McINTYRE could not recall if he had ever seen a videotape from any of the flange inspections done at Davis-Besse. He did state that the head had never been cleaned before the 2000 outage though, and that 2000 was the only "as-left video" that Davis-Besse had (Exhibit 33, pp. 84-90, 96-97).

In discussing the cleaning of the RVH during the 2000 refuel outage, McINTYRE stated, "No one ever said gosh, we're doing this because we've got nozzle leaks, yeah. Maybe that's surprising to you, but all the discussions were, we wanted to get this all off so that next outage we know where the stuff is coming from" (Exhibit 33, p. 118).

Interview of McLAUGHLIN

McLAUGHLIN said he helped Framatome repair flanges during the 8, 9 and 12RFOs. He was doing pump work during the 10 and 11RFOs. He was not aware that flanges were inspected during the 1999 mid-cycle outage. He said he was not involved in the head or flange inspections. These, he said, were the responsibility of the system engineer. McLAUGHLIN said that Davis-Besse wanted to keep a consistent person doing the flange inspections so comparisons could be made to past outages. McLAUGHLIN said CHIMAHUSKY was the person in charge of the flange inspections he worked. McLAUGHLIN said he did not know who was responsible for the head inspections (Exhibit 117, pp. 22-32).

McLAUGHLIN thought that the flange that needed to be machined during 12RFO, i.e., D10, "must have been a pretty good leaker because it had a steam cutting across the sealing surface." He said he saw the flange only after it had been disassembled, and "if you looked at it through binoculars, you could tell that it was a steam cut." He could not, however, recall how deep the "impression" was or whether it went through both gaskets. He said he looked at it "because this was going to be a heck of an effort. I wanted to make sure that I agreed that we needed to do it, and I did." McLAUGHLIN said the cut "didn't meet the procedure acceptance requirements" and that this was what distinguished it from the other flanges, not that there was an extraordinary

amount of boric acid around it. McLAUGHLIN did not know what the acceptance criteria were. He said he did not compare the condition of D10, or any of the CRD flanges, to any outages prior to 12RFO. McLAUGHLIN said that SIEMASZKO, as the System Engineer, would have been responsible for any "technical judgements," but he did not know if he was present during the flange inspection (Exhibit 117, pp. 35-56).

McLAUGHLIN said, after reviewing Serial 2731, that besides D10, four other flanges were thought to be leaking during 12RFO. McLAUGHLIN said that typically you could not see evidence of a leaking flange. He said the System Engineer would recommend what flanges needed to be replaced. He did not know what evidence existed that identified these other four flanges as leaking during 12RFO. McLAUGHLIN said it was "an assumption" on his part that the boron on the RVH was from the leaking flanges (Exhibit 117, pp. 112-114, 123).

McLAUGHLIN thought that the phrase "no visible evidence" meant that for those "nozzles that they could see" there was no evidence of nozzle leakage. However, McLAUGHLIN acknowledged that the sentence in Serial 2731 did not include the words "that they could see" (Exhibit 117, pp. 109-110).

Interview of MILLER

MILLER was asked during his interview with OI why the reference that only 90 percent, or any percentage, of the nozzles were inspected in 2000 was removed before the final response was sent to the NRC. MILLER was aware of the statement and explained that SIEMASZKO had originally written it, "and it was taken out because we didn't know how we could prove it at that time. At the time frame of this Bulletin, 90 percent, that's a number, okay. What does 90 percent mean?" He also said that SIEMASZKO was vacillating about what he saw and what he inspected, "sometimes he said...he could see them all." MILLER said that SIEMASZKO was challenged about the 90 percent number, but he could not remember by whom (Exhibit 113, pp. 78-82).

MILLER recalled discussing the "no visible evidence" sentence and how to detect and define nozzle leakage. He thought that during the course of discussions, the task came up to discuss with Oconee how they had found their cracks. He thought that "what was being stated there was that they didn't see anything that, you know, constituted, you know, popcorn boron." He said he did not know at that time that some nozzles were covered with boron (Exhibit 113, pp. 100-101).

Interview of MOFFITT

MOFFITT was present for Davis-Besse's 12RFO. MOFFITT said there had been a "long-standing assumption that flange leakage was the cause" of the boric acid on the RVH. MOFFITT

said that in retrospect, Davis-Besse had inappropriately determined that the problem was flange leakage. He said he reviewed the "as-found" head inspection videotape with SIEMASZKO and CAMPBELL during 12RFO. MOFFITT said that COAKLEY spoke to him during 12RFO about Davis-Besse's history of flange leakage. He could not recall who specifically told him that boric acid on the head in 12RFO was from flange leakage. MOFFITT said he never looked at the flanges or the head to correlate leakage above the insulation to what was on top of the reactor head. MOFFITT acknowledged that flange leakage would not make sense if all the boric acid was seen below the insulation and not above it (Exhibit 118, pp. 61-62, 66-68, 70, 74-76, 109-110).

Interview of HARRIS

HARRIS was a Principal Engineer with Framatome who specialized in CRDMs. Since 1989, he has been involved in the replacement of the original asbestos flange gaskets with an improved material gasket at the B&W plants. HARRIS worked part-time at Davis-Besse during 12RFO. HARRIS said that before any disassembly work took place, Framatome would identify where any flange leak was and review that information with the applicable System Engineer. During 12RFO, HARRIS said the System Engineer position transitioned from CHIMAHUSKY to SIEMASZKO. HARRIS said he has never been involved in the RVH inspection activities below the insulation and he could not determine from above if there was a contributing nozzle leak (Exhibit 50, pp. 6, 9-12, 24, 26, 33-34).

HARRIS said that during 12RFO the focus was on the D10 flange, which correlated to nozzle 31. He said this flange had been identified as damaged in prior years and had been recommended for machining "as a potential leaker," and in his mind it was the worst leaker. He said four other flanges were also identified as potential leakers. Regarding the other four flanges, HARRIS explained they were taking "a conservative route and said we really don't suspect these are leaking." They replaced all five gaskets to "make sure that we get the leak." HARRIS reviewed the "as-found" flange inspections with SIEMASZKO at the time. He said they noted boron on the D10 flange interface and the bottom of the split ring. HARRIS said they never removed the streaks from below the flange interface because there was no effective way to do so. Therefore, the only way to tell what had changed from outage to outage was to compare videotapes. HARRIS said he did not do this comparison for 12RFO, but rather left it for SIEMASZKO to do with CHIMAHUSKY. HARRIS said he did not examine the D10 flange after it had been disassembled because he had to go to another site. HARRIS said that he did hear from his counterparts who were still at Davis-Besse about the condition of D10 after it was disassembled, and "that it didn't appear to be that bad" (Exhibit 50, pp. 37-42, 45-53).

Interview of CHIMAHUSKY

CHIMAHUSKY had been involved in flange and head inspections since 1991. CHIMAHUSKY said that during 10RFO and 11RFO he was only involved with the flange inspections. CHIMAHUSKY recalled inspecting the D10 flange in 11RFO. He did not remember seeing any boric acid on the flange at the interface and only saw a small amount underneath it that he thought could have come from a past outage. Based on that inspection, CHIMAHUSKY said there was nothing wrong with the flange and it did not need to be repaired in 1998. During the 1999 mid-cycle outage, CHIMAHUSKY said it was determined that there were no leaking flanges and he would have given the results to either McINTYRE and/or MATRANGA (Exhibit 25, pp. 7-8, 20-21, 29-31; Exhibit 142, pp. 47-50, 54).

During 12RFO CHIMAHUSKY said he was only involved with videotaping the flange inspection above the insulation, but not the head inspection. CHIMAHUSKY said there were "a couple of flanges" that leaked during 12RFO. CHIMAHUSKY said that there had been more leakage from the flanges in the past than what he saw in 12RFO. He said 12RFO flange leakage was "not major." CHIMAHUSKY said he did not provide any input during the preparation of the responses to the Bulletin on his past inspections of the flanges, nor was he involved with reviewing the videotapes for the responses (Exhibit 25, pp. 34-42).

Interview of MAINHARDT

MAINHARDT assisted in conducting the head inspection in 1998. He also made an initial inspection of the RVH in 2000. He said he had concerns about the boric acid coming out of the weep holes during this inspection and the corrosion, but was told by ROGERS that it was from flange leakage. He said he was concerned because the change in condition from 1998 to 2000 "was a night and day difference." MAINHARDT said he tried to tell his concerns to SIEMASZKO, but "he did not want to hear anything that I had to say about that." MAINHARDT said he accepted the explanation about flange leakage because he was not involved in the flange inspection. He was never privy to nor made contributions to Davis-Besse's responses to the Bulletin (Exhibit 143, pp. 18-19, 25-26, 46-49, 72-73, 131-133).

Interview of GEISEN

GEISEN was asked why the reference to 90 percent of the nozzles being inspected in 2000 was not included in the final version of Serial 2731. GEISEN guessed that the "reg [regulatory] affairs group doesn't like to put any numbers into submittals unless you've got some sort of substantiation behind it, even if you do put 'approximately' in front of it." GEISEN did not believe that this omission was intentional, but added that was "just a guess" (Exhibit 115, pp. 118-120).

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Interview of CUNNINGS

CUNNINGS said he did not provide input to Davis-Besse's response to the Bulletin. However, he did recall discussing with SIEMASZKO how to quantify the number of nozzles he had inspected during 12RFO with a percentage. CUNNINGS said he advised SIEMASZKO that if he did not have a sufficient basis then he should not specify a number (Exhibit 144).

Agent's Analysis III-1C

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Draft Responses to the Bulletin

This section of the response was not included in the first several drafts. It was incorporated in the same draft that eliminated the reference to what portion/percentage of the nozzles were inspected/cleaned. It first appeared in an August 24, 2001, draft further identified as "version 1a" (Exhibit 100, p. 1, 8).

Testimony

Interview of COOK

COOK said that at the time of the drafting of the Bulletin response, he was informed that GEISEN and SIEMASZKO had re-reviewed the videotapes from 1998 and 2000 and had seen no indications of nozzle leakage. COOK said he listened to what he was told because he was "new at this." Regarding the August 27, 2001, e-mail from GOYAL in which he questioned whether or not to reword the subsequent review of the videotapes section, COOK said he spoke to GEISEN and SIEMASZKO about the subject. He asked them if this was an accurate statement and they said yes because they had reviewed the videos and what they saw was indicative of flange leakage, not nozzle leakage. COOK clarified that he probably spoke only to SIEMASZKO on the matter, but SIEMASZKO told him that the videos had been reviewed by both SIEMASZKO and GEISEN. COOK said that by stating the boron indications seen at Davis-Besse were not similar to what was seen at Oconee, they were saying they did not see "popcorn leakage," what they were seeing was indicative of flange leakage. COOK said that during the preparation of the letter, he never got the appreciation that the boron "was so caked around the nozzles you couldn't see the nozzle" (Exhibit 108, pp. 54-55, 63-68, 74).

Interview of CAMPBELL

CAMPBELL said that when FENOC "started to rely on videotapes," which he indicated was after the initial Bulletin response was sent, he asked both MOFFITT and GEISEN whether they "specifically looked at any pictures or tapes in person so that you know what we are telling folks?" CAMPBELL said, "they hadn't specifically looked at all of them," at which time he directed them to do so (Exhibit 111, pp. 55-58).

Interview of GEISEN

GEISEN stated that "we" did a review of the videotapes, some determination based on those video inspections was made, "and that information was put in the initial bulletin response."

GEISEN acknowledged that he only reviewed portions of the "as-found" head inspections for 1996, 1998, and 2000 during the Fall of 2001. He said it would have been during October (Exhibit 115, pp. 30, 144-145).

> Agent's Note: During the interviews with Davis-Besse personnel the terms "as-found," i.e, pre-cleaning, and "as-left," i.e, post-cleaning, were constantly used when referring to the review of past inspection videos and boric acid inspections. For the purpose of identifying boric acid during inspections, the "as-found" condition of the head is the crucial factor. However, it must be further noted that in order to distinguish the condition of the head from one outage to the next, a comparison of the "as-left" inspection from the previous outage to the "as-found" condition of the current outage is necessary. Without knowing how much of the head was cleaned in the previous outage there would be no way to determine new deposits or indications. In addition, if the head were not completely cleaned at the end of an outage then, again, it would be extremely difficult to distinguish new deposits/indications from previous leakage.

Interview of SIEMASZKO

SIEMASZKO said that he re-reviewed videos in responding to NRC Bulletin 2001-01; however, he never indicated that he reviewed these videos specifically for the September 4, 2001, response. He also mentioned that GOYAL, CHIMAHUSKY, GEISEN, MILLER, COOK, and MOFFITT reviewed the videos to various degrees. He said, "GOYAL saw a lot of it, and GEISEN saw a lot of those." SIEMASZKO thought that CHIMAHUSKY reviewed some of the videos because he provided them to SIEMASZKO. SIEMASZKO said because McLAUGHLIN helped SIEMASZKO duplicate the tapes to a compact disk (CD) format, he felt McLAUGHLIN had seen the tapes as well. He said that while reviewing the videos he kept seeing streaks coming down the nozzle, and what boric acid he saw around the nozzle was not "popcorn." He acknowledged that this further meant that of the nozzles that he could see, he did not see what he thought would be indications of a nozzle crack. SIEMASZKO described "popcorn" as that found on the bottom portion of the nozzle and has the characteristic of coming "from below up" rather than a downward flow. He said it is "like the stuff which you use to insulate the spray which hardens" (Exhibit 49, pp. 115-116, 159-160, 169; Exhibit 116, pp. 87-88).

> Agent's Note: SIEMASZKO said that while preparing Table 2 for Davis-Besse's second response to the Bulletin, he thought he only reviewed the "as-found" videos of the head inspections for 1996, 1998, and 2000. He said he looked at every tape there was and thought one might have been an "as-left." If he could not determine a pre-cleaning video from a post-cleaning video then the extent of the cleaning and/or the quality of the video would have to be questioned, especially when being used as a reference in responding to the Bulletin. (Exhibit 49, pp. 99-101)

During an April 17, 2003, interview with OI, SIEMASZKO stated he was the FENOC representative who was reviewing the past inspection videotapes. SIEMASZKO said he did not review anything for the September 4th response because he had previously reviewed the tapes. When asked by OI when did he review the videotapes for the NRC Bulletin response, SIEMASZKO stated, "Between response of 2-21 (sic) [i.e., 2731] and 35 [i.e., 2735]." He said the request to review the tape(s) came between the first and second Bulletin responses, i.e., between September 4 and October 17, 2001. SIEMASZKO said he reviewed the 1996 and 1998 inspection videotapes during November or December 1999 in preparation for the 12RFO. During this review, SIEMASZKO said he could not determine whether he viewed the "as-found" or "as-left" videos "but in either case, there was boric acid left on the head and a large quantity of it." The second time SIEMASZKO may have reviewed the RVH videotape was around April 2000 during the 12RFO time frame. The next time was when GEISEN requested he review the tape to produce the table for Serial response 2735. SIEMASZKO remembered this review came after the September 4th submittal, "Because I specifically remember that the first submittal of IB [Bulletin] was calling only for two outages, '98 and 2000, and those numbers [percentages] I had already assigned at that point from previous viewing that I have 25 percent [obscured]." He said this review lasted "two weeks continuously reviewing the tapes" (Exhibit 116, pp. 87, 97-102, 106, 110).

Interview of ESHELMAN

ESHELMAN said he was not involved in reviewing the videotapes for responding to NRC's Bulletin 2001-01. ESHELMAN said he was asked to make SIEMASZKO available to review the videotapes as a result of NRC Bulletin 2001-01. He also thought that GEISEN and MOFFITT reviewed the videos, but he did not know specifics about what they reviewed (Exhibit 31, pp. 78-79).

Interview of MILLER

MILLER reviewed the paragraph in the Bulletin response containing the subsequent review of videotapes from 1998 and 2000 during his interview with OI. He put that paragraph in context with what was written in the sections that dealt with the 1998 and 2000 inspection results individually. MILLER said that it was his understanding, "at that time they were able to look at them [nozzles] to a degree, but because there was boron, you know, on the head in some areas, it couldn't be credited as a qualified visual inspection." He thought they were looking for "popcorn boron." He said that he did not know how to interpret the word "reword" as used by in GOYAL's August 27th e-mail. He was in Licensing, working with Engineering, and thought they would be the ones to decide if rewording of the subsequent review of the 1998 and 2000 videos section was needed (Exhibit 113, pp. 65-69).

Interview of MOFFITT

MOFFITT could not recall reviewing any videos during the Fall of 2001 in regards to responding to NRC Bulletin 2001-01. He said he tried to review a video, which he thought would have been the as-left from 12RFO, with CAMPBELL, but could not get the tape to work. He thought that occurred in August or September 2001. MOFFITT said he did see the "as-found" 12RFO tape during that outage (Exhibit 118, pp. 66-70).

Interview of WUOKKO

WUOKKO said that back in the August 2001 time frame he believed that this section of the response letter was true based upon the information that COOK received from the System Engineering group. WUOKKO did not review the videotapes, nor did he know who did (Exhibit 114, pp. 43, 62).

Interview of SWIM

SWIM was asked why, given the various e-mails he received from GOYAL on the condition of the RVH after 12RFO, and his first hand knowledge of the failure to implement Mod 94-0025, he did not correct the response before it was issued. He stated, "I didn't put -- didn't put all the other information from the past together at the time I was reading that." SWIM was asked specifically about the re-review of the 1998 and 2000 videos and the statement that no indication of nozzle leakage existed. He was also asked why this statement was not corrected, since he knew that there were areas of the head that were covered in boric acid and the source could not have been determined. He responded, "I did not make the linkage, and I did not catch it." SWIM did not recall any discussions on this issue. At the time the Bulletin was issued, SWIM said he and GOYAL focused their discussion on, "okay, there are cracks, we have a plant with cracks, what does that mean for us. And the concern was the circumferential cracks, you know, the actual [axial] cracks will give you a leak, but the circumferential cracks are the ones that would allow, if they grew far enough, to allow a nozzle to eject" (Exhibit 34, pp. 84-97).

> Agent's Note: Davis-Besse's lack of focus and concern for axial cracks, a tech spec violation regarding pressure boundary leakage, was prevalent throughout various testimonies and is discussed in greater detail under Allegation III-2.

Agent's Analysis III-1D

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E. Future Inspections

Davis-Besse's Response Item 3.a. regarding plans for future inspections, with the portion in question in bold italics, stated, in part (Exhibit 86, pp. 7-8):

> "1. A qualified visual examination of the RPV head will be performed during 13RFO, which is currently scheduled for April 2002.
>
> "Visual examinations have been performed during each refueling outage and reviewed by the engineering staff. For the 13RFO, a qualified visual examination will be performed. Personnel performing this task will be instructed on the type of unacceptable conditions using ONS3 as the basis. ***Inspections*** will be performed in accordance with a procedure developed specifically for these examinations that will meet the basic requirements of an ASME VT-2 inspection, and ***will not be compromised due to any pre-existing boric acid***

crystal deposits. The previous inspection video of the cleaned head and flanges will be used to help determine any unacceptable conditions. The RPV head will be cleaned (as necessary) and videotaped prior to return to service to re-establish a baseline for future inspections" (emphasis added by OI).

Evidence

Document Review

CAMPBELL's Notes from B&WOG Executive Committee Meeting, June 6, 2001

CAMPBELL attended this meeting in Lynchburg, Virginia, on June 6, 2001. From the handout book CAMPBELL received, one of the topics discussed was "CRDM Nozzle Weld Issues," which included "Industry/NRC Issues." In his handwritten notes, CAMPBELL wrote, apparently after taking notes during an Oconee presentation, "after cleaning had residue - have we looked at film inspection." Later in the same booklet, he wrote, "If CR [Crystal River] finds a leak, what will be our JCO [justification for continued operation]" (Exhibit 146, pp. 1, 5, 7, 95).

E-mail dated August 11, 2001, from GOYAL

GOYAL forwarded information to GEISEN, SWIM, and WUOKKO about a meeting held that day. GOYAL was in attendance at that meeting along with LOCKWOOD, KENNEDY, WUOKKO, WORLEY, MOFFITT, ESHELMAN, and MESSINA. GOYAL recorded in his e-mail, "it was pointed out that we can not clean our head thru the mouse holes and Andrew SIEMASZKO is requesting that 3 large holes be cut in the Service Structure for viewing and cleaning" (Exhibit 88).

E-mail from GOYAL dated August 17, 2001

GOYAL e-mailed FYFITCH to advise that a meeting with the directors, i.e., MOFFITT, MESSINA, and WORLEY, was held the day before to discuss inspection plans for the upcoming 13RFO. GOYAL said the inspection would "be 100% qualified visual exam and where we can not perform 100% visual exam of a nozzle(s) a volumetric examination (most likely ECT) will be performed" (Exhibit 136).

Draft Responses to the Bulletin

On August 21, 2001, FYFITCH sent the first somewhat comprehensive version of Response Item 3. He asked GOYAL to look at it and advised that he would make any modifications requested. In this draft, FYFITCH, while discussing the upcoming 13RFO, did not make any

reference to "pre-existing" deposits; he did, however, mention that "the previous inspection video of the cleaned head will be used to help determine any unacceptable conditions." GOYAL, later that same day, e-mailed FYFITCH back with his comments as well as DAFT's. GOYAL mentioned in his e-mail that he thought Response Item 3.a. was "good." The only changes noted in Item 3.a. were not related to this particular statement. GOYAL sent his original comments to FYFITCH with copies to McLAUGHLIN, DAFT, KENNEDY, COOK, and SWIM (Exhibit 147, pp. 1-2; Exhibit 148, pp. 1-2).

The next few drafts of this section remained relatively unchanged and continued to make no reference regarding "pre-existing boric acid crystals." Finally, in "version 1k-GGC [i.e., Guy G. CAMPBELL] comments" dated September 4, 2001, the words "and will not be compromised due to any pre-existing boric acid crystal deposits," are noted as an addition to the document and are seen in the final version. A version of this response identifying that CAMPBELL's comments had been incorporated was forwarded for final review to McLAUGHLIN and MOFFITT by COOK under separate e-mails (Exhibit 106, pp. 1, 10; Exhibit 107, pp. 1, 10; Exhibit 105, pp. 1, 9).

Testimony

Interview of COOK

COOK remembered that CAMPBELL added the comment about "pre-existing" deposits. He thought that CAMPBELL may have been under the impression that the head had been completely cleaned. COOK said that it was his understanding that when Serial 2731 went out, the RVH was thought to have been clean after 12RFO (Exhibit 108, pp. 24, 58-59).

Interview of CAMPBELL

CAMPBELL was asked during his interview with OI about his June 6, 2001, B&WOG Executive Meeting notes to clarify his understanding of whether or not the RVH had been cleaned after 12RFO. He said he was not aware that boric acid was left on the head until late in the drafting of Serial 2731 (late August 2001). CAMPBELL claimed he was not aware at that time that the nozzles were obscured by the boric acid. CAMPBELL, as previously mentioned, did not review CRs as part of Davis-Besse's response to the Bulletin. Also, he said he did not review any inspection videotapes for the responses until late October or November 2001 (Exhibit 146, p. 7; Exhibit 111, pp. 19-20, 52-54; 67-70).

> Agent's Note: During CAMPBELL's interview, these notes were incorrectly referred to as being dated August 10, 2001, when they were, in fact, dated June 6, 2001.

CAMPBELL was also asked by OI about the note regarding Crystal River and Davis-Besse's JCO. Specifically, CAMPBELL was asked if continuing operation was his only concern and not that they may have a safety issue to address. CAMPBELL talked about "what a JCO does for you" and said, "based on anything new, does it change our direction or does it change which way we should go. To me, that's just what that note says. It's just asking the question" (Exhibit 146, p. 95; Exhibit 111, pp. 70-72).

> Agent's Note: Crystal River was ranked No. 12 for being susceptible to nozzle cracking by the industry, i.e., Electric Power Research Institute (EPRI).

Interview of MOFFITT

MOFFITT did not have any specific recollection about the August 11, 2001, e-mail or the meeting. MOFFITT did think that it was common knowledge by August 11, 2001, that the RVH had not been completely cleaned during the last refueling outage. MOFFITT based that upon an investigation conducted by FENOC personnel during the Spring of 2002. MOFFITT believed that SIEMASZKO told him during the August 2001 time frame that approximately 80 percent of the head had been cleaned during 12RFO (Exhibit 118, pp. 27-39, 44-45).

Interview of SIEMASZKO

SIEMASZKO initiated the WO in 2000 for cleaning the RVH as "an administrative means of cleaning." He said that besides the men that worked on the head and videotaped it, it was "common knowledge to the entire plant" that the head had not been completely cleaned at that time. SIEMASZKO specifically mentioned that he told COAKLEY, MOFFITT, and McINTYRE (Exhibit 49, pp. 11-12, 55-59, 65-70).

Agent's Analysis III-1E

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Conclusion

Based on the evidence developed, this investigation did substantiate that [redacted] GEISEN, GOYAL, [redacted] MILLER, MOFFITT, SIEMASZKO [redacted] deliberately provided inaccurate and incomplete information to the NRC in response to NRC Bulletin 2001-01 in writing by letter dated September 4, 2001.

Allegation III-2: Deliberate Failure to Provide Complete and Accurate Information to the NRC in the October 17, 2001, Response (Serial 2735) to NRC Bulletin 2001-01

Background

After Serial 2731 was reviewed by the NRC staff, a telephone call was placed by Brian SHERON, NRC's Associate Director of Project Licensing and Technical Analysis to Robert SAUNDERS, Chief Nuclear Officer of FENOC. According to documentation, SHERON advised SAUNDERS on September 28, 2001, that Davis-Besse's inspection history "may not be sufficient to provide reasonable assurance of nozzle integrity" until their next planned outage. SHERON communicated that the past inspections were not "qualified." He "strongly" suggested to SAUNDERS that Davis-Besse reconsider their response to the Bulletin and consider shutting down by the end of the year to perform an inspection of the CRDM nozzles (Exhibit 150; Exhibit 151; Exhibit 152).

In response to this phone call, additional conference calls and meetings were held between the NRC staff and Davis-Besse management. Eventually, Davis-Besse provided another formal response to the NRC that consisted of supplemental information in a letter dated October 17, 2001 (Serial 2735). According to this letter, Davis-Besse was to provide "updated and additional information" in support of their continued safe operation until the next scheduled outage in March 2002. COOK, MILLER, GEISEN, GOYAL, MOFFITT, SIEMASZKO, McLAUGHLIN, WUOKKO, and LOCKWOOD, among others, reviewed and approved Serial 2735 (Exhibit 87, p. 6).

To help organize this information, this allegation will be broken into the following two sections: Serial 2735 (Letter), and Serial 2735 Attachments 2 and 3.

A. Serial 2735 (Letter)

Evidence

Document Review

E-mail dated September 4, 2001

WUOKKO forwarded an e-mail he received from Roger HUSTON, Licensing Support Services contractor, on August 27, 2001, to COOK, KENNEDY, LOCKWOOD, GOYAL, GEISEN, and McLAUGHLIN. HUSTON reported on a meeting he attended that same day between Combustion Engineering Owners Group (CEOG) and the NRC. According to HUSTON's message, CEOG was trying to get a deferral by one cycle for their plants' inspections. None of the CEOG plants were rated "high susceptibility" (unlike Davis-Besse). HUSTON said that the NRC was not particularly receptive to the CEOG presentation which "emphasized the difficulty of doing the requested inspections on CE plants." HUSTON wrote that STROSNIDER and SHERON from the NRC's staff explained "that this was a safety issue, and that they need safety arguments to justify doing anything different...and they are not as convinced as EPRI/MRI/NEI (industry organizations) that Oconee is the worst plant or that the susceptibility model accurately establishes relative standing, much less time to a problem." HUSTON also said it was noted that a sampling of a few penetrations "doesn't have much validity as proof that there isn't a problem where there have not been inspections." HUSTON warned WUOKKO that if Davis-Besse was "contemplating asking for a delay in performing inspections that are requested by the Bulletin, be advised that a strong safety argument will be needed. Simply demonstrating difficulty or hardship is not going to get a very warm reception" (Exhibit 153).

HUSTON's Notes and Summary E-mail

HUSTON attended the NRC/Duke Energy meeting on September 7, 2001, and provided a copy of his handwritten notes from that meeting to OI during his interview on November 6, 2002. HUSTON noted that Oconee was "surprised by the small amount of boron from the leak." He went on to further note that this "shifted [the] thinking on inspections" (Exhibit 154, pp. 2-4).

> Agent's Note: The Bulletin noted the previous industry approach, in part, as "the expected large amount of leakage would be detected during visual exams...before significant damage to the RPV head occurred."

On September 7, 2001, HUSTON forwarded his summary of the NRC/Duke meeting to WUOKKO. WUOKKO, in turn, forwarded HUSTON's summary to MILLER, LOCKWOOD and COOK on September 10, 2001. WUOKKO commented in his forwarding e-mail to

MILLER and LOCKWOOD that the last paragraph needed to be read and possibly removed before forwarding this summary to anyone else. The last paragraph of HUSTON's summary mentions that SIEMASZKO was at this meeting and asked the lone question from the "public." HUSTON said SIEMASZKO asked "whether Duke planned to clean the head at the upcoming outages, since they knew they were going to replace it at the next." Even though Duke said they would clean the head, SIEMASZKO "asked again as though they hadn't understood the question.... [HUSTON commented] one way to read that is that D-B is not planning to clean the head in their circumstances." During his interview with OI, HUSTON said he could offer no more information about the exchange between SIEMASZKO and Duke Energy other than what he had already recorded in his e-mail and notes (Exhibit 155, pp. 62-66; Exhibit 156; Exhibit 157; Exhibit 158).

COOK's Notes dated September 7, 2001

COOK e-mailed his notes to GOYAL on the same day as the NRC/Duke meeting and asked that GOYAL comment and return them. COOK, like HUSTON, said that it was commented "that inspection of the Oconee units found much smaller amounts of boric acid crystals than anticipated being attributed to a leaking nozzle." COOK further noted this meant square inches rather than pounds. On September 11, 2001, GOYAL replied that he had no comment to COOK's notes (Exhibit 159; Exhibit 160).

> Agent's Note: It was determined from a subsequent e-mail that COOK and GOYAL listened to the Oconee meeting via telephone (Exhibit 161).

E-mails dated September 10, 2001

On September 10, 2001, McLAUGHLIN e-mailed COOK with a question about the above mentioned NRC/Duke meeting. McLAUGHLIN told COOK that SIEMASZKO had attended this meeting where he said Oconee got asked about their Probabilistic Risk Assessment (PRA) "and they got the Tech Spec question." McLAUGHLIN said that Oconee did not answer when asked what if there was already a crack but it was not through-wall during the outage, and then opened up during the cycle. He thought that NRC asked this to force the "utilities into performing 100% inspection with NDE." McLAUGHLIN also asked COOK if Davis-Besse had a defensible response to this question. COOK responded to McLAUGHLIN that same day and said he did not know if there was a defensible response to this question and that he would have to discuss the matter further "with some other people." COOK acknowledged in this e-mail that if a leak developed during a cycle and it was not known, then there would be a Tech Spec violation because there is no pressure boundary leakage allowed. COOK further questioned, "How can you be sure that you are not operating in violation of your Tech Specs? ...but there is no safety issue with this" (Exhibit 161).

Agent's Note: COOK stated in his testimony to OI that this e-mail was looking forward to 13RFO and the need to perform NDEs. He said it was not questioning whether or not Davis-Besse currently had a pressure boundary leak. However, on November 15, 2001, COOK e-mailed WUOKKO for comment, a document he had written titled, "Technical Specification Compliance Related to NRC Bulletin 2001-01." It discussed unidentified leakage, a known problem at Davis-Besse; the statistical probability that Davis-Besse had RPV leakage on the head "based on the plants that have inspected their RPV heads and found leakage;" and how these two relate to tech specs. COOK stated in that document, "classification of this [i.e., unidentified leakage within tech spec limits] as pressure boundary leakage does not need to be considered unless there is compelling evidence that pressure boundary leakage is occurring. The implication that leakage is statistically probable from the RPV head CRDM nozzle penetrations does not provide this compelling evidence by itself." COOK said he thought he wrote this document because the NRC had asked, "if you have a leak up there now, why aren't you shut down?" (Exhibit 108, pp. 102-104, 144-145; Exhibit 162).

Piedmont letter dated September 14, 2001

Gregory A. GIBBS, Piedmont Management & Technical Services, Inc. (Piedmont) contractor and former Director of Engineering at Davis-Besse, was asked by MOFFITT to review Davis-Besse's response to the Bulletin and the station's plans for the upcoming 13RFO. GIBBS was asked to comment on improving Davis-Besse's preparations. This September 14 letter was his response (Exhibit 163, pp. 5, 9-10).

GIBBS noted that boric acid deposits "of considerable depth" were left in the center of the head after 12RFO partly because of limited access. GIBBS also noted that Davis-Besse's response to the Bulletin stated "that the top head visual inspections would not be compromised due to any pre-existing boric acid crystal deposits." GIBBS went on to explain that in part, given Davis-Besse's past experience with not being able to remove boric acid and the "severely" restricted access through the mouse holes, adding the access ports as early as possible in 13RFO would be the most prudent course of action. This letter was addressed to McLAUGHLIN with copies going to MOFFITT, COAKLEY, GEISEN, and WILSON (Exhibit 164).

Also in his letter, GIBBS pointed out the need for contingency planning should any elements be identified that would change the scope of the planned outage. "For example, mandated inspection expansion requirements from unfavorable results in upcoming inspections at TMI and Crystal River, inspection equipment failures, difficulty in weld repair or preheat and a greater number of penetrations requiring NDE as a result of unfavorable initial visual inspection results are a few of the elements that should be considered" (Exhibit 164, p. 2).

Agent's Note: According to GIBBS, he emphasized to MOFFITT shortly after he wrote the report that, in part, Davis-Besse needed contingency planning, including determining the availability of NDE and repair equipment due to a potential shortage (Exhibit 163, pp. 13, 20-23).

E-mail dated September 18, 2001

Allen HISER, NRR Senior Materials Engineer, e-mailed to the "CRDM Reviewers [NRC staff]" the staff's "Preliminary Evaluation of Bulletin 2001-01 Responses for High Susceptibility Plants." Staff comments for Davis-Besse stated, "Issues with inspection timing. Technical basis is inadequate. Employed regulatory argument" (Exhibit 165).

Telephone Call Between NRC and FENOC on September 28, 2001

On September 28, SHERON contacted SAUNDERS with regards to Davis-Besse's response to the Bulletin. HISER documented this in an e-mail dated that same day. According to the e-mail, during the review of the responses to the Bulletin, the NRC staff focused on those plants with a history of nozzle cracking or leakage "and those plants with a high susceptibility to cracking." The e-mail further stated that the inspection plan and history for Davis-Besse and other plants might "not be sufficient to provide reasonable assurance of nozzle integrity until those licensees conduct their next inspections of their CRDM nozzles." The "talking points" used for the telephone calls to the utilities, including Davis-Besse, was attached (Exhibit 150).

E-mail dated September 28, 2001

An e-mail later that same day went from MILLER to other utility contacts as well as being copied to LOCKWOOD, COOK, McLAUGHLIN, GOYAL, GEISEN, WUOKKO, SWIM, and SIEMASZKO. MILLER discussed how SHERON had called, "strongly suggesting that Davis-Besse reconsider" their response to the Bulletin and consider shutting down by the end of the year to perform an inspection. He said that Davis-Besse was planning a conference call for all high susceptibility plants on the afternoon of October 1, 2001, "to share any information available to similar contacts and progress on plants performing inspections this fall" (Exhibit 151).

MILLER's Notes dated September 28, 2001

MILLER had notes from FENOC meetings that took place on September 28 to discuss SHERON's phone call and attendees were LOCKWOOD, SAUNDERS, CAMPBELL, and GEISEN. LOCKWOOD apparently talked about SHERON's phone call and MILLER noted that it was "strongly suggested you [Davis-Besse] reconsider your response." From GEISEN,

MILLER noted that the Davis-Besse response had been sent to Structural Integrity Associates (SIA) to determine if anything was missing. It was also noted that LOCKWOOD was contacting other utilities for information (Exhibit 152, pp. 1-2).

September 28, 2001, Framatome RVH Nozzle and Weld Safety Assessment

This Framatome report provided an assessment demonstrating safe operation of B&W-design RVH nozzles and welds that were potentially susceptible to PWSCC. The report incorporated information observed at ONS-2, and concluded that when "taken together with the results of the deterministic analyses, the risk analysis demonstrates that visual inspections of the reactor vessel head will be sufficient to minimize public risk." In the section, "All B&WOG Plants," the report stated "walk-down inspections have been implemented in response to NRC Generic Letter 88-05...at each of the B&WOG plants. The walk-down inspections include an enhanced visual inspection of the gasket area and RV head during every refueling outage...." In the section, "Stress Analysis Efforts," the report established that by using conservative crack growth rate assumptions, once it is initiated, a circumferential crack would take 3.5 years to grow through-wall, and after 4 more years this crack would not have grown enough to cause a CRDM nozzle ejection (Exhibit 166, pp. 7, 14, 36).

> Agent's Note: This report was included as Attachment 4 in FENOC's October 17, 2001, supplemental response to the Bulletin, and was used as the basis for the allowable interval of 7.5 years between a postulated initial leak due to an axial crack until a consequent circumferential crack would reach ASME Code limits.

MILLER's Notes dated October 1, 2001

On October 1, 2001, MILLER noted that he met with LOCKWOOD again. He noted that GEISEN was "relooking [into] calcs. for susc. ranking." He also listed "March. orders [assumed to be marching orders]" as "SPM [MOFFITT] in charge; exch. info → No committment (sic); No SAUNDERS/No GGC [CAMPBELL]." Because he mentioned SAUNDERS' and CAMPBELL's names in this section, it is unclear who gave these marching orders (Exhibit 152, pp. 2-3).

E-mail dated October 1, 2001, to NRC

WUOKKO e-mailed SPS1 (Steve SANDS) and DVP1(Douglas PICKETT) at the NRC looking for information that he was to provide at a meeting he was to attend later that afternoon. MILLER wanted to know what the NRC's technical basis was for categorizing plants with "less than 5 EFPY [effective full power years] as plants considered as having a high susceptibility to PWSCC rather [than] utilizing the MRP-44 group of less than 3 EFPY?" WUOKKO also

wanted to know what the NRC's basis was for using December 31, 2001, as the date for plants to complete the inspections (Exhibit 167).

E-mail dated October 1, 2001

WUOKKO e-mailed HUSTON about the phone call between SHERON and SAUNDERS. He also sent this e-mail to WORLEY, MOFFITT, LOCKWOOD, MILLER, COOK, and KENNEDY. WUOKKO told HUSTON that Davis-Besse conducted visual inspections in the past "and found no cracks." WUOKKO asked HUSTON to attend the upcoming Advisory Committee on Reactor Safeguards and Commissioners' briefing on the Bulletin and provide a written summary to Davis-Besse. He also asked HUSTON for any insight he might have regarding the likelihood that NRC would issue shutdown orders for plants to perform the inspections by December 31, 2001 (Exhibit 168).

MILLER's Notes from 4:00 p.m. Meeting on October 1, 2001

A meeting was held in MOFFITT's office at this time and from the initials in MILLER's notes the others in attendance were CAMPBELL, COOK, WORLEY, McLAUGHLIN, GOYAL, GEISEN, BERGENDAHL, COAKLEY, and WUOKKO. WUOKKO reported there was no technical basis for the 5 years EFPY and also advised that HISER from the NRC would participate in a phone call on Wednesday, i.e., October 3. It appeared as if COAKLEY was charged with identifying the "financial impact,"of a shutdown by December 31, 2001. There was also a notation that indicated CAMPBELL was making a Board presentation on October 16. Further on there was another note about CAMPBELL that said, "call to Bob S. ([Chairman] MESERVE, [Senator] VOINOVICH)" (Exhibit 169).

E-mail dated October 2, 2001

HUSTON e-mailed WUOKKO a summary after having a conversation with the Jake ZIMMERMAN, NRC Project Manager that was assigned to the Bulletin. WUOKKO, in turn, forwarded HUSTON's e-mail to CAMPBELL, MOFFITT, WORLEY, LOCKWOOD, McLAUGHLIN, COOK, MILLER, and GOYAL and noted that HUSTON did not identify to ZIMMERMAN that Davis-Besse was "seeking this information.... This provides some insight into the current NRC thoughts on this issue from one of the primary NRC players" (Exhibit 170).

HUSTON wrote to WUOKKO that ZIMMERMAN said the NRC was "looking at high [susceptibility] plants.". ZIMMERMAN told HUSTON there was concern "with plants that haven't looked." HUSTON told WUOKKO that he thought Davis-Besse had a "good case. If you have inspected at previous outages and feel comfortable that those were thorough, then you have a good baseline." HUSTON went on to suggest "that you go into tomorrow's call with at

least an initial attempt to describe further your justification for waiting until March." He added that Davis-Besse should emphasize their earlier inspections and offer any documentation, including photographs. HUSTON offered that SHERON would probably be less pleased with a March 2002 inspection, but he guessed that the NRC would not order an inspection in 2001 (Exhibit 170).

MILLER's Notes from Various October 2, 2001, Meetings

There was a meeting held at 7:00 a.m. in LOCKWOOD's office with MILLER, LOCKWOOD, GEISEN, GOYAL, and COOK. One of the notes stated, "Mike Dowling - Gov't. Affairs, SAUNDERS will call Commissioners." A side note stated, "Numerous Reports - 'This is what we believe is true'" (Exhibit 171).

> Agent's Note: It is difficult to determine from MILLER's notes why this last particular quotation was noted or if these "numerous reports" were industry reports, reports from other utilities, or something specific to Davis-Besse.

Also noted was a report that seemed to have come from McLAUGHLIN about a potentially leaking drive discovered "last night," i.e., October 1, that showed "No Popcorn." Later notes pertaining to Crystal River stated, "1 suspected indication, others are clean...see boron → Potential." Crystal River also reported that they were "in [the] process of pulling head" and would do ultrasonic testing once the head was off. There were notes from other plants as well which identified that MILLER was trying to collect more data on what these plants were finding and how they responded to NRC (Exhibit 171; Exhibit 172).

> Agent's Note: Even though McLAUGHLIN's report did not indicate which plant, it is assumed to be Crystal River based upon a licensee event report they submitted for October 1, 2001, which identified a nozzle crack.

E-mail dated October 2, 2001

GOYAL e-mailed COOK and MILLER a matrix that showed the nozzle heat numbers that Davis-Besse shared with known cracked nozzles identified at other U.S. plants. The matrix identified that Oconee 3 had nine cracks for heat #M3935. These included axial and axial plus circumferential cracks. The same chart identified that Davis-Besse nozzles 3 and 4 shared this heat number (Exhibit 173).

> Agent's Note: On March 26, 2001, GOYAL e-mailed SIEMASZKO, SWIM, GEISEN, McLAUGHLIN, and CUNNINGS this same information about the Oconee cracks. However, GOYAL stated that Davis-Besse nozzles 1-5 shared this heat number and that

"special attention should be paid to the nozzles during the next visual examination of the RV head." These five nozzles are located in the top center of the head (Exhibit 174).

Fax Cover Sheet dated October 2, 2001

This cover sheet identified that LOCKWOOD e-mailed Davis-Besse's Bulletin response Serial 2731 to attorney LESSY (Exhibit 175).

> Agent's Note: The document sent was not identified but had 43 pages and an "Attachment 1" with 19 pages, both which correlate to what was contained in Serial 2731. Other subsequent communications between Davis-Besse and LESSY were also provided. LESSY's comments were redacted as "attorney-client privilege."

MILLER's Notes from October 2, 2001, "Telecon Prep Mtg."

The following Davis-Besse personnel met to prepare for a conference call with the NRC the next day; WORLEY, WUOKKO, LOCKWOOD, MILLER, GOYAL, GEISEN, COOK, MOFFITT, CAMPBELL, and COAKLEY. In his notes, MILLER mentioned there were two "hard questions: 1) Are we safe to operate?...2) How can you predict acceptability of uninspected top head penetrations until 13RFO?" Under Question 1, GEISEN was shown as having stated, "videotapes 1996, 1998, and 2000 (cleaned in 2000) [next line] shows migration of boric acid from flange leaks [next line] boron trails show leakage from above" (Exhibit 176).

Under question 2, MILLER noted that approximately 80 percent had been inspected, which "includes areas most susceptible." Further on it is also noted that Davis-Besse "has conducted visual inspection of head as found condition and video tape - not complete" (Exhibit 176).

> Agent's Note: It is uncertain as to what they considered that had not been completed since Davis-Besse reported in Serial 2731 that re-reviews of 1998 and 2000 inspections had been conducted and confirmed that there was no leakage.

Another item of discussion at this meeting was COOK's "handout for fax to NRC." There was an agenda that was obtained from this meeting as well as drafts of that same agenda. MILLER noted on an early draft of the agenda under the section titled, "SIA Fracture Mechanics on Growth Rate," that Davis-Besse needed "a baseline/'0' point." Another section in some drafts of the agenda but removed from the version faxed to the NRC was titled, "For FENOC Eyes Only." According to that section, COAKLEY was to prepare and/or discuss the expected economic impact of an early shutdown. The bullets under this section read, "Direct Costs of early

shutdown by 12/31/01 versus 3/30/02," and "Outage Length and replacement power costs." Also, 10RFO was referenced in both the notes and the draft agenda (Exhibit 176, p.2; Exhibit 177, pp. 1, 2-4).

> Agent's Note: On October 3, 2001, McLAUGHLIN e-mailed COOK regarding the "Revised Agenda for NRC Conference Call," and commented, "Agenda looks good, the top portion will be sent back at us due to the CR [Crystal River] news." The top portion of the agenda discussed Davis-Besse's EFPY relative to Oconee, and noted that a margin of 2 EFPY remained after considering Davis-Besse's shutdown for 13RFO in March 2002. Since Crystal River with an EFPY of 5.9 identified cracking on October 1, 2001, Davis-Besse's EFPY argument was shown to be invalid (Exhibit 178, p. 5; Exhibit 179, p. 7).

E-mail dated October 2, 2001

MATTSON, from SIA, e-mailed GOYAL and McLAUGHLIN late on this day with the information that a review of the gap calculations indicated that two of Davis-Besse's nozzles may not have had gaps. MATTSON advised that SIA would continue checking. GOYAL forwarded the information to GEISEN, LOCKWOOD, COOK, WUOKKO, and MILLER early the next day and noted that this was not good news because Duke Energy also had a nozzle without the gap and he recalled they committed to performing an NDE. McLAUGHLIN forwarded the same information to COOK with the same comment that this was not good news (Exhibit 180; Exhibit 80).

October 3, 2001, Conference Call

Various notes have been collected from both Davis-Besse and NRC that document this conference call. From that documentation the attendees were: NRR's BATEMAN, SANDERS, Andrea D. LEE, Senior Materials Engineer, HISER, and ZIMMERMAN; RIII's JACOBSON, HOLMBERG, and COLLINS; Davis-Besse's CAMPBELL, MOFFITT, GEISEN, LOCKWOOD, COAKLEY, McLAUGHLIN, GOYAL, COOK, WUOKKO and MILLER; and Framatome's Alvin D. McKIM, FYFITCH, and Douglas E. KILLIAN, Advisory Engineer. The documents included a summary identified as HOLMBERG's and handwritten notes from LEE, HISER, and MILLER (Exhibit 181; Exhibit 182).

From various meeting notes, NRR questioned Davis-Besse about the scope of the April 2000 head examinations. GEISEN explained that except for five to six nozzles in the center of the head, 100 percent of the head had been inspected, including the CRD housing to head interfaces. These center nozzles, he stated, were precluded from inspection because of boric acid build up due to CRDM flange leakage and not because of insufficient gaps. GEISEN said that videotapes

from the 10, 11 and 12RFOs had been reviewed and there had been no signs of nozzle leakage. HISER then asked for a nozzle by nozzle summary, which Davis-Besse agreed to provide by October 25, 2001 (Exhibit 181; Exhibit 182).

> Agent's Note: By the time Serial 2735 was issued on October 17, 2001, these 5-6 center nozzles, which could not be viewed at the time of the October 3, 2001, meeting, had expanded to 24 nozzles which were obscured from view because of boric acid crystal deposits. Furthermore, it was identified in MILLER's October 2 "Telecon Prep Mtg" notes that 20 percent of the head had not been inspected in 2000 which would be 13-14 nozzles. Davis-Besse was only stating that 5-6 nozzles were not inspected. MILLER's notes identified GEISEN as having made that statement and also being present at the October 2 meeting.

MILLER's Notes from Contacts Between October 3 and 22, 2001

MILLER provided notes from his various contacts regarding the Bulletin. He gathered information on what the NRC was asking of other plants, how those utilities responded to the NRC and how they were proceeding with their inspections. He also gathered information about Davis-Besse contacts with the NRC (Exhibit 183).

Notations included (Exhibit 183, pp. 1-5, 7-8, 12):

- 10/3 conversation with Steve Sarver from Dominion noted that Surrey 2 told NRC that because of cost and difficulty it was unrealistic to make inspection plans by the end of the year, but "that argument didn't go anywhere."

- 10/04 MILLER noted that Alexander MARION, Nuclear Energy Institute (NEI) Director of Engineering, talked to SHERON and reported:

  - Info-Req. Basis to mandate action is weak.
  - Enough motivation due to political flack.
  - NRC will probably make something up to issue an order.

- 10/08 During group teleconference of various plants he noted that Craig MILLER. from Crystal River had identified "one suspected leaker, UT [ultrasonic testing, form of NDE]- NOW" and that Crystal River's "head was fairly clean."

- 10/11 MILLER appeared to be getting a report from LOCKWOOD on meeting with the Commissioners' Technical Assistants (TAs) that day. MILLER noted that the TAs were "very open minded, real interested - suggested where to push

back on NRC staff." It is also noted that LESSY is "talking to OGC [NRC Office of General Counsel]."

- 10/11 MILLER reported that WUOKKO called PICKETT from the NRC. PICKETT told WUOKKO that he did not attend the Commissioners' TA meeting, but he found out at a later meeting that the NRC's position was to shut down the plant by December 31, 2001, and only wanted new and relevant information.

E-mail dated October 3, 2001, with Photo of Crystal River VHP Indication

GOYAL received a photograph of Crystal River's cracked nozzle discovered October 1, 2001. A small build up of boric acid could be seen around the annulus of the VHP nozzle. Other than some specks and a few small pieces of boric acid, the rest of the head in the photograph was clean. GOYAL forwarded this picture to McLAUGHLIN, GEISEN, SWIM, and COAKLEY. McLAUGHLIN also on that same day, forwarded this picture to several others at Davis-Besse including SIEMASZKO, DAFT, KENNEDY, and COOK (Exhibit 184).

> Agent's Note: In February 2001, McLAUGHLIN, SIEMASZKO, WUOKKO, and COAKLEY had previously seen pictures of Oconee Unit 3 showing a similar small amount of boric acid which was caused by cracked nozzles (Exhibit 185).

E-mail dated October 3, 2001

Less than an hour after the photograph of Crystal River was sent, GOYAL e-mailed a summary of a conversation he had with Duke Energy's David E. WHITAKER about why Oconee missed the leakage detection on nozzle #56 during the Spring 2000 outage. WHITAKER told him, "there were two reasons 1) they did not know what they were looking for (they were looking for large quantities of boron sitting on the head) and 2) the head was not clean" (Exhibit 186).

Meeting Notes dated October 5, 2001

According to an e-mail dated October 4, 2001, LESSY arranged a teleconference with Commissioner DYCUS' TA, Tom HILTZ, for the following day. From notes taken by LOCKWOOD during that October 5 teleconference call, others in attendance besides HILTZ and LESSY were CAMPBELL, MOFFITT, and GEISEN. One note stated, "Summary Safe to Run 3 Months," and between the words "Summary" and "Safe" the word "Believe" had been inserted (Exhibit 187; Exhibit 188).

Agent's Note: It is not known if LOCKWOOD added this word to his notes regarding the summary or if it was suggested that this word be added by someone else on the phone call.

SIA Finite Element Gap Analysis dated October 8, 2001

SIA prepared this analysis to determine whether the CRDM penetrations at Davis-Besse had sufficient gaps between the CRDM "tubes and the hemispherical head during normal operating conditions" to allow the visual detection of boric acid leakage. The results of this analysis determined that nozzles "1, 2, 3, and 4 provide no gap through which leakage may occur during normal operating conditions" (Exhibit 189, pp. 2, 36).

E-mail dated October 9, 2001

COOK sent MILLER a copy of the "USRB Circ Cracking Issue Presentation Revised." In his note, COOK said the presentation had been reviewed per MILLER's comments. The document discussed the recent discovery of circumferential cracking at nuclear power plants within the U.S. and how that related to Davis-Besse. Within the presentation itself it stated, "Axial cracking (along the length) of these nozzles has previously been observed but has not been considered a safety concern requiring immediate attention." The document further noted that "this issue was addressed in NRC's Generic Letter 97-01" (Exhibit 190).

Agent's Note: Historically, axial cracking had not been considered an immediate safety concern as documented in GL 97-01. However, on August 3, 2001, this concept changed when the Bulleting stated, "the recent identification of circumferential cracking in CRDM nozzles at ONS2 and ONS3, along with axial cracking in the J-groove welds at these two units and at ONS1 and ANO1, has resulted in the staff reassessing its conclusion in GL 97-01 that cracking of VHP nozzles is not an immediate safety concern" (Exhibit 85, p. 4).

October 10 and 11, 2001, Presentations

Within these 2 days, Davis-Besse personnel made presentations to Senator VOINOVICH's staff and the Commissioners' TAs. According to slides presented at each gathering, Davis-Besse attendees at both presentations were CAMPBELL, MOFFITT, GEISEN, and LOCKWOOD. Also present at the Commissioners' TAs meeting were BATEMAN and HISER from NRR. While these presentations included information about leaking nozzles found at ANO and Oconee, they did not include information that Crystal River 3, considered less susceptible to

nozzle cracking than Davis-Besse, had found a cracked nozzle on October 1, 2001. However, the Crystal River incident was referenced in draft slides (Exhibit 191; Exhibit 192; Exhibit 193; Exhibit 194, pp. 1, 4).

These draft slides were discussed with KILLIAN from Framatome during his interview with OI. He said he was part of a group reviewing what he thought were the slides to be presented to the Commissioners' TAs, but he also mentioned that a presentation to the Senator's staff was scheduled for later that same night. He only reviewed the slides and did not participate in either presentation. Page 5 of the presentation to the Senator's staff stated, "Only Circumferential (sic) cracks are a concern although axial cracks are a precursor to circumferential cracks." This statement and other similar references were not included in Commissioners' TAs presentation (Exhibit 195, pp. 8-14; Exhibit 192, p. 6).

After first discussing re-reviewed videotapes, both presentations identified that, "No head penetration leakage was identified." There is no mention that the "past 3 outages of inspection video tapes of area **masked** by boron in 12RFO did not have previous leakage," as there was in the draft slides (emphasis added by OI). Also, in the Senator's and Commissioners' TAs presentations, only the past two outages were discussed. According to those two presentations, Davis-Besse had verified that all the penetrations were free from "popcorn" type boron deposits in either 11RFO or 12RFO (Exhibit 191, p. 22; Exhibit 192, p. 18-19; Exhibit 193, pp. 7-8).

Draft of Serial 2735 dated October 11, 2001

COOK e-mailed WUOKKO what appeared to be the first attempt at a supplemental response to the Bulletin. The cover letter stated that this information was to provide "amplification of previous inspection results at the DBNPS, the Structural Integrity Associates Reactor Vessel Head Penetration gap analysis, and describes the on-going activities which have occurred and are taking place subsequent to submittal of the NRC Bulletin response." The letter also noted that this information was discussed with some NRC staff on October 3, 2001 (Exhibit 196, pp. 1, 3).

Reference was made to the previous RVH inspections, including 10RFO. The document stated that these inspections were done in accordance with Davis-Besse's BACC program and consisted of a visual inspection of the RPV head. Furthermore, these inspections were videotaped and subsequently "reviewed with specific focus upon boric acid crystals deposits which could be indicative of CRDM nozzle penetration leakage" like that seen at Oconee and ANO. The draft went on to state that these videos had been further reviewed and supported the statements previously made in Serial 2731, that the results of the review showed that the deposits were not from nozzle leakage but "indicative of CRDM flange leakage." The draft stated that the results for each nozzle from 12RFO were provided in an attachment with supplemented results from 11RFO as necessary (Exhibit 196, p. 5).

The last paragraph in this draft discussed the finite gap analysis that Davis-Besse asked SIA to perform. The results of that analysis stated that all the nozzles, with the exception of four center nozzles, had sufficient gaps to allow for leakage from "cracks to be observed via boric acid crystal deposits." However, Davis-Besse pointed out that no other utility had observed leakage from circumferential cracking in this area "and is not considered to be **the most likely source for leakage** at the DBNPS" (emphasis added by OI). According to this and later drafts, these center nozzles had been planned to be examined by supplemental exams during 13RFO because of the "**masking** boric acid crystals" around the interface area (emphasis added by OI) (Exhibit 196, pp. 5-6).

> Agent's Note: Serial 2731 stated that the boric acid deposits were located beneath leaking flanges with "clear evidence of downward flow" and there was "no visible evidence of nozzle leakage." Also, while circumferential cracking had not been observed in the center nozzles at this point, axial through-wall cracks had been recorded at Oconee in the center nozzles (Exhibit 86, p. 5-6; Exhibit 173).

Draft of Serial 2735 dated October 12, 2001

COOK e-mailed this draft to WUOKKO late in the morning. COOK stated in his transmittal e-mail that Attachments 2 and 3, which the draft stated were the individual results of each nozzle inspected during 11 and 12RFO, "may go away" since COOK had yet to receive anything from Engineering. COOK also noted in his e-mail that he had not mentioned anything about the head replacement because it had not been approved yet (Exhibit 197, pp. 1, 5).

Much of the rest of the information from the first draft was relatively unchanged. However, a new paragraph was added at the end. It began with "DBNPS recognizes that it is susceptible to the Alloy 600 cracking phenomena" and went on to discuss that Davis-Besse had been following industry "activities and planning site-specific activities to assure that the Reactor Coolant System pressure boundary is maintained" (Exhibit 197, pp. 5, 6).

> Agent's Note: In the final version of Serial 2735, Davis-Besse noted that Alloy 600 cracking had occurred at other plants, but no longer stated that they recognize their susceptibility to this problem (Exhibit 198, p. 7).

E-mail dated October 12, 2001

LOCKWOOD e-mailed LESSY, CAMPBELL, DOWLING, WUOKKO, and MOFFITT about a recent contact with the ZWOLINSKI. LOCKWOOD advised that Davis-Besse would be sending supplemental information to the NRC by October 18, 2001, and also requested a meeting between the two entities during the week of October 22. LOCKWOOD said he told

"ZWOLINSKI that my direction from senior management was to provide him with accurate relevant information and communication to support his submittal of the staff technical basis for action by 10/19/01" (Exhibit 199).

Draft of Serial 2735 dated October 15, 2001

COOK e-mailed WUOKKO, MILLER, McLAUGHLIN, and GOYAL at 8:14 a.m., and asked addressees to "critically review" and provide comments as soon as possible. This version had sections titled, "Previous Inspection Results," "Analytical Work Performed," and "Industry Efforts." Most of the language was very similar to the draft sent October 12. An addition to the analytical work section referenced Framatome's "RV Head Nozzle and Weld Safety Assessment" document. In this draft, it stated that based upon this Framatome document, "there is a sufficient basis for concluding that it is acceptable for the DBNPS to continue to operate;" however, in the final version of 2735 it stated that there was "reasonable assurance that DBNPS will continue to operate safely" (Exhibit 200; Exhibit 198, pp. 6-7).

Serial 2735 "rev b" dated October 15, 2001

COOK sent "rev b" to WUOKKO at 12:17 p.m. The introductory paragraph of this draft referenced the October 11, 2001, meeting with the NRR staff. There are a few changes from the previous document. In the "Previous Results" section, it stated that "approximately 80% of the nozzles were viewed during 12RFO" (Exhibit 201).

> Agent's Note: This is the first draft to reference the percentage nozzles inspected in 2000, yet there is no reference to how many nozzles were seen in 1998.

E-mail dated October 15, 2001, with Attached Evaluation

Robert RISHEL, FENOC, sent a draft version of Davis-Besse's "Risk Assessment for CRDM Nozzle Cracks" to BYRD, MOFFITT, and GEISEN. According to this e-mail, the document was still a draft, but "the numerical calculations have been verified correct." This document provided a calculation "to evaluate the risk significance of possible undetected CRDM nozzle cracks that could lead to a loss of coolant (LOCA) events." It is based upon the method documented in Framatome document 51-501267-01, "RV Head and Nozzle Weld Safety Assembly;" however, this document incorporated differences which made this calculation plant-specific to Davis-Besse (Exhibit 202, pp. 1, 5; Exhibit 166).

There was a section in this document titled, "Probability of Leak Detection." Verbiage, much like that found in Davis-Besse's initial response to the Bulletin, stated that the review of videotapes from the 1998 and 2000 inspections "re-confirm that any indications of boron leakage

were not indicative of nozzle leakage." This document stated, "not all CRDM nozzles were inspected because some nozzles have had boron deposits from flange leaks that may have masked indications of CRDM nozzle leakage." There was no reference to a review of the 1996 video. It also stated that approximately 80 percent of the CRDMs were inspected in 2000 and 90 percent in 1998. This document stated, "it is assumed that any CRDM nozzle leaks were initiated in the past two operating cycles, with two opportunities two (sic) detect the leaks in the spring 1998 and spring 2000 refueling outages" (Exhibit 202, pp. 6. 7).

> Agent's Note: Serial 2731 stated that the boric acid deposits were located beneath leaking flanges with "clear evidence of downward flow" and there was "no visible evidence of nozzle leakage" (Exhibit 86, pp. 5-6)

Serial 2735 "rev c" dated October 16, 2001

COOK forwarded this document to LESSY for input into the cover letter about Davis-Besse's "willingness to participate in further meetings with the NRR staff, etc. to ensure their understanding of our positions." COOK also copied LOCKWOOD, MILLER, and WUOKKO on the e-mail. It stated that the boric acid crystal deposits in the center area obscured "approximately 20% of the head." Information had been added to the "Previous Inspections" section, and for 12RFO, it noted that "the center of the RPV head was obscured by boric acid crystal deposits that were **clearly** the result of leaking motor tube flanges from the center CRDMs" (emphasis added by OI) (Exhibit 203).

> Agent's Note: "Rev b," from less than 24 hours earlier, stated that the boron deposits found on the head, "which could be indicative of CRDM nozzle penetration leakage," were determined after review of videotapes to be "indicative of CRDM flange leakage." Of the five flanges identified by Davis-Besse as leaking during 12RFO, only two were located within the center nine nozzles. Furthermore, Serial 2731 ascribed the main source of leakage to flange D10, which is located one row from the outside edge of the head.

Serial 2735 "rev d" dated October 16, 2001

COOK sent a document to WUOKKO and MILLER and stated that it "incorporates some other information on the visual inspections (not the lack of viseo (sic) on the good nozzles yet, though.)" This draft added a paragraph to the Analytical Work section about a fracture mechanics evaluation currently in process by SIA (Exhibit 204, pp. 1, 6).

Later, in this same section, the portion of the sentence where Davis-Besse discussed that no other utility had observed leakage from circumferential cracking in the center area of the RPV

head, the statement "and is not considered to be the most likely source for leakage at the DBNPS" was removed. It is not known who removed this reference (Exhibit 204, p. 7).

E-mail dated October 16, 2001

SIEMASZKO sent this e-mail shortly before 1:00 p.m. to COOK with a copy to Gerald M. WOLF, Regulatory Affairs. SIEMASZKO noted in his e-mail that this was "a new description of the past inspections that Gerry [WOLF] wrote with my input" and asked that it be included with "the letter." Presumably, "the letter" is Serial 2735. COOK forwarded this e-mail to GOYAL about 45 minutes later (Exhibit 205, p. 1).

According to this document, videotapes from the 1996, 1998, and 2000 inspections were reviewed after the receipt of the Bulletin, with specific attention to "popcorn like" deposits. This document stated that in 1996 "although the nozzles are not individually identified on the video, it is clearly visible that none of the nozzles in the inspection showed any leakage from the CRDM nozzle penetrations." It further stated that "initial leakage from the CRDM flanges above the insulation is starting to occur." There is a reference that approximately 70 percent of the nozzle inspections were recorded on video in 1998, but System Engineering conducted a visual and said there were no leaking CRDM nozzle penetrations at the time. For the 2000 inspection, it stated that approximately 75 percent of the reactor head surface was viewed and only those areas of the head where boric acid was present were videotaped (Exhibit 205).

> Agent's Note: Since there was already draft versions of the "Previous Inspection Results," it is unclear what was purpose of this document.

Serial 2735 "rev f" dated October 16, 2001

COOK sent this to McLAUGHLIN, GOYAL, SIEMASZKO, WUOKKO, MILLER, BYRD, LESSY, and WOLF. COOK asked the readers to "take a good look at all statements for validity (case in point: during 11 and 12RFO we only video taped the nozzles were affected by boric acid leakage)." The document stated in "Previous Inspection Results" that only 75 percent of the nozzles were viewed during 12RFO and mentioned that "the affected areas of accumulated boric acid" were videotaped. Another change was the removal of the phrase "which could be indicative of CRDM nozzle penetration leakage" (Exhibit 206, pp. 1, 5).

A paragraph was added to "Analytical Work Performed" about Davis-Besse's plant-specific Probabilistic Risk Assessment. This was a reference to the evaluation provided by RISHEL on October 15. This paragraph stated, in part, that several CRDM nozzle penetrations were masked by boron deposits from flange leakage and postulated "an initial crack initiation time of as early as 10RFO in 1996" (Exhibit 206, p. 6; Exhibit 202, pp. 6-7).

E-mail dated October 16..2001

A second version of the Davis-Besse plant-specific "Risk Assessment for CRDM Nozzle Cracks" was provided by BYRD to COOK, with an "updated" calculation to reflect "late breaking changes to the inspection results." The "Probability of Leakage Detection" section referred to flange leakage "that may have masked indications of CRDM leakage." A reference was added to this section that during 10RFO "the entire head was visible so 100% of the CRDM nozzles were inspected." This version of the calculation claimed that 75 percent of the CRDMs were inspected in 2000 instead of 80 percent as it stated in the October 15 version. It still mentioned that the 1998 and 2000 videotapes were reviewed, but there was no reference to the 1996 video. It did, however, state in the "Calculation" section that all the nozzles were visually inspected in 1996 (Exhibit 207, pp. 1, 6, 8).

The "Initial Crack Initiation" section stated that this analysis assumed "that the postulated CRDM nozzle leaks were initiated in 10th, 11th, 12th, or 13th operating cycles, with up to three opportunities to detect the leaks during 10RFO, 11RFO, and 12RFO. Therefore, this analysis includes cracks that could have initiated as early as November 1994" (Exhibit 207, p. 7).

> Agent's Note: Davis-Besse reported in 2735 in "Analytical Work Performed" that based upon the Framatome assessment, "the worst case scenario [is] that a visible nozzle axial crack leak developed immediately after start-up from 10RFO" (Exhibit 198, p. 6).

Draft of Serial 2735 with MILLER's Comments

This document had no date and no "rev" number, but there were some subtle changes from "rev f." More importantly, there were handwritten comments from MILLER regarding the draft. Under "Previous Inspection Results," he added by notation that the visual inspection consisted of the "whole head." He also changed the percentages of the head viewed during the 11 and 12RFOs to actual numbers of nozzles viewed "boron free." For 10RFO, he added that the head was cleaned with no evidence of boric acid on any nozzles. Under the "Analytical Work Performed" section, MILLER made a note to "move" the sentence that referred to a supplemental examination in 13RFO of nozzles "masked" by boric acid deposits; however, there was no reference to this phrase in any later drafts or the final (Exhibit 208, pp. 4-7).

E-mail dated October 17, 2001

PICKETT sent an e-mail to WUOKKO identifying that he had not heard any word from the NRC's technical staff "regarding the bulletin response." PICKETT added that he has not heard "from the tech staff regarding the bulletin response. I've heard encouraging words about your 100% inspection from your last outage" (Exhibit 209).

Agent's Note: In his documentation of telephone records, WUOKKO referred to this e-mail in an October 17 note at 1029 hours and stated that "DVPICKETT incorrectly referred to the 12RFO inspection as 100%." In six separate notes taken later that day and then again on October 18 when WUOKKO made contact with or had been contacted by PICKETT, there was no reference that WUOKKO attempted to correct PICKETT on this error. However, on October 19, 2001, WUOKKO forwarded a copy of the October 17 e-mail from PICKETT to LOCKWOOD, McLAUGHLIN, GEISEN, COOK, LEISURE, GOYAL, MOFFITT, WORLEY, MILLER, and BYRD and told them that the "letter sent on Wed. 10/17/01 will correct their misunderstanding" (Exhibit 210; Exhibit 211).

Draft of "Summary" Section of Serial 2735 dated October 17, 2001

WUOKKO sent an e-mail to COOK that contained only the "Summary." This was the first time this section was seen. This seemed to be the basis for the "Summary" section found in the final version of Serial 2735 (Exhibit 212; Exhibit 198).

This document stated that in 1996, the "entire" RVH was inspected, including the nozzle to head penetration areas. It also noted that "no cracking (axial or circumferential) or leaks in these areas were identified, and this conclusion has been recently verified by a re-review of the video obtained from that inspection." The document went on to state that no cracking or leaking was identified during the next two outages either, and those videotapes had also been re-reviewed. It was also pointed out that not all nozzle to head areas could be inspected during those outages (Exhibit 212).

Agent's Note: As previously noted, any references to "cracking (axial or circumferential)" were removed before the final version of Serial 2735.

The next topic of the summary was the "postulated worst-case" scenario. It stated that if an axial crack went through-wall at the end of the 1996 outage, then it would take approximately 7.5 years, or November 2003, for that crack to reach "the worst-case critical crack size" (Exhibit 212).

Draft of Serial 2735 dated October 17, 2001

Although this version was not dated, the October 17 date is used because the "Summary" section had been incorporated into the letter. Portions of the "Summary" were also included in the cover letter. This draft from MILLER's files contained his edits and comments as well. It is the last draft that has differences from the final version (Exhibit 213).

MILLER removed all references that stated "no cracking" was identified, be it axial or circumferential, and changed the number of nozzles viewed in 1996 from 64 to 65. MILLER added a section addressing ALARA issues (Exhibit 213, pp. 1, 4-5).

Serial 2735

Davis-Besse issued Serial 2731 on October 17, 2001 (Exhibit 198).

Testimony

Interview of GIBBS

During his interview with OI, GIBBS stated that as a former employee of Davis-Besse, he was surprised to find during his review that the access ports had never been cut into the service structure. He said he knew that during the early 90's there had been a lot of discussion on this matter at the plant. He knew that the lack of access ports caused difficulty with cleaning the head. GIBBS said he spoke with people at the plant, including the System Engineer, SIEMASZKO, and got the impression that they were not successful in cleaning the head. He asked to see the video of the head after cleaning and saw on the videos that boric acid had been left on the center of the head. He said he wanted to make sure that people were aware of this condition and that was why he documented it in his letter (Exhibit 163, pp. 13-17).

Interview of COOK

COOK testified that he thought that the percentages of the nozzles identified as inspected during the past outages referred to the "as-found" of the head. COOK made no mention of the word "axial" in his testimony. Regarding a possible "tech spec" violation (which would include axial cracks), COOK understood that if there was a nozzle leak that would be a pressure boundary leak and therefore, a tech spec violation. Referring to the question he posed to McLAUGHLIN in his September 10, 2001, e-mail about how you start up without a leak but then develop one during the cycle, COOK said that Davis-Besse had tried to identify their unidentified leakage, but could not pinpoint the problem. He added, "You don't shut down in the middle of a cycle to go look for it as long as you are within your unidentified leakage." COOK said he was working on a paper at the time to justify how Davis-Besse could still operate within the tech specs under these circumstances. COOK again said he had been told that the boric acid deposits seen on the head were from flange leakage (Exhibit 108, pp. 47-49, 54-57, 75-78).

> Agent's Note: COOK did not say when he learned that the head had not been cleaned, but in several drafts of 2735, it was noted that some nozzles were masked by boric acid deposits that were planned to be NDE'd during 13RFO.

COOK was asked during his interview how there could have been "clear evidence" of flange leakage in 2000 since 24 of 69 nozzles were obscured by boric acid deposits as identified in Serial 2735. COOK explained that this was the logic he heard from Engineering and Engineering management. When then asked how it could have been determined, given these circumstances, that the sole source of the leakage was the flanges, COOK thought that the logic at that time was that Davis-Besse "was still 3.1 years away from Oconee. We did not anticipate seeing a leak" (Exhibit 108, pp. 77-79).

> Agent's Note: By October 12, 2001, Crystal River and Three Mile Island had identified nozzle cracks and both had been ranked as less susceptible to this phenomenon than Davis-Besse. Records indicated that the photos of Crystal River's VHP indication were e-mailed to McLAUGHLIN, SIEMASZKO, DAFT, KENNEDY, GOYAL, COOK, GEISEN, SWIM, and COAKLEY by October 3, 2001 (Exhibit 184).

COOK stated that he reviewed a CD with a copy of the 10 and 12RFO "as-found" videotapes. He said he did not have the video for 11RFO, nor any "as-left" videos. COOK thought that he reviewed that CD around October 24, 2001. COOK thought that McLAUGHLIN may have had a copy of the videos at that same time because he recalled McLAUGHLIN saying that he had seen them. COOK thought that he got his copy of the CD on the same day that Davis-Besse planned to show the videos in Washington, DC. He remembered that GEISEN had secured the videos from SIEMASZKO with the intent of having them converted to a CD. COOK said he contacted GEISEN's secretary at that time and asked her to make a copy for him (Exhibit 108, pp. 79-82).

> Agent's Note: A CD containing the 10 and 12RFO RVH video inspections obtained from FENOC via subpoena was dated September 27, 2001. Another CD containing the 11 and 12RFO RVH video inspections was dated October 11, 2001. There was no known meeting between Davis-Besse and the NRC in Washington, DC, around the time of September 27, 2001. Davis-Besse did meet with Senator VOINOVICH's staff on October 10, 2001, and with the NRC Commissioners' Technical Assistants on October 11, 2001. According to available records and testimony, Davis-Besse did not show the videos at either of these meetings. The October 24 meeting that COOK referred to did not have a video presentation and it was not until November 8, 2001, that GEISEN showed any video(s) to the NRC. McLAUGHLIN, during his interview with OI, stated that he reviewed the videos shortly after SHERON contacted SAUNDERS on September 28, 2001. It is believed based on this information that COOK probably saw the videos sometime after SHERON's phone call to SAUNDERS but no later than October 11, 2001 (Exhibit 117, pp. 113).

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COOK said that when he saw the video from 12RFO, he thought there was a lot more boric acid on the head than what he was being told. He said he thought a lot of people were surprised by what the videos showed, including WUOKKO. COOK said that WUOKKO heard the reaction from the NRC after, presumably, the November 8, 2001, presentation was, "How could you see anything?" COOK said that it was still the belief after the videos were reviewed at Davis-Besse that the cause of the boric acid was flange leakage. He said he only discussed the results of the 10 and 11RFO flange inspections with SIEMASZKO and GOYAL in trying to explain the source of the boric acid leak on the RVH. He did not review any documentation. He said that BYRD was also tasked by MOFFITT to do a PRA. He also acknowledged that they were shifting from using the past inspections to using the PRA to justify continued operations. Again, he said this was all taking place at the end of October (Exhibit 108, pp. 82-88, 138-139).

COOK said it was through conversations he had with SIEMASZKO and GOYAL that he based his understanding of the extent of the past flange inspections. He said he did not review any documentation related to past flange inspections. He said he was not aware that there were no flanges reported to be leaking in 1996, nor did he know that approximately 40-50 percent of the head could not be seen at that time. He acknowledged that this could have been relevant information (Exhibit 108, pp. 87-92).

COOK thought, based upon information he received, that one leaking flange "when it make[s] it to the head, it could run down and obscure several nozzles." COOK said he was not aware that the one leaking flange in 1998 was characterized as minor. He said he got his information from SIEMASZKO while SIEMASZKO was preparing the table which eventually became Attachment 2 to Serial 2735. COOK also thought that GEISEN, MOFFITT, CUNNINGS, and GOYAL may have helped prepare the table. COOK was not aware that any source document review of the flange inspections had been conducted. COOK said he did recall seeing PCAQR 96-0551 sometime in October or November and that it included a justification for why it was okay to leave boric acid on the head. He also said he saw CRs from 1998 and 2000, but probably not until the Spring of 2002 (Exhibit 108, pp. 97-100, 138-139).

> Agent's Note: The justification for leaving boric acid on the head is on Page 7 of PCAQR 96-0551. On the top of this same page is the statement, "the existing boron deposits make it very difficult to draw any conclusions from the inspections." Furthermore, the preceding pages of PCAQR 96-0551 identified "several patches of boric acid," rust around a nozzle "where it meets the head," no indications of flange leakage, and difficulty in distinguishing whether the deposits were from past "leaking flanges or the leaking CRDM" (Exhibit 5, pp. 1-7).

COOK said that despite the information provided in Serial 2735, that 65 of 69 nozzles were viewed in 1996, this did not mean that there was boron causing an obstruction of those four

remaining nozzles. He said it meant that Davis-Besse decided not to "take credit for even looking at them" because there was no possibility of leakage based on the SIA analysis. COOK was asked why Davis-Besse did not simply state that they had seen all the nozzles; but because of the SIA analysis they could not take credit for those four nozzles. COOK acknowledged that this statement in Serial 2735 seemed inconsistent (Exhibit 108, pp. 109-114).

COOK said he was not aware of any contingency plan for Davis-Besse to shut down. Nor was he aware if any consultants or industry experts encouraged Davis-Besse to shut down by the end of the year. COOK thought that there was a fuel cycle concern tied to a dose consideration because of a possible double shut down which motivated the continuing operation of the plant. He also did not know whether the NDE equipment would have been available to Davis-Besse if they had to shut down before the end of the year. He thought that the decision to pursue continued operation would have from CAMPBELL (Exhibit 108, pp.115-118).

During his interview with OI, COOK was asked about the comments from the first draft, "the most likely source for leakage at the DBNPS" and the need for NDE because of "the masking boric acid crystals." COOK said that SIEMASZKO told him about boron being left on the head, but he did not know who called it "masking" in the draft; however, at this point only COOK and WUOKKO exchanged this draft. He said he did not know why it did not state "masking" in the final version. He said he did not make the change unless someone asked him to do so. He could not recall who might have asked this of him. Since the term "masking" stayed in the drafts until October 16, COOK thought that either LESSY, LOCKWOOD, MILLER, or WUOKKO would have removed it (Exhibit 108, pp. 127-131).

Interview of CAMPBELL

CAMPBELL stated that he did not review any documentation from the past head and/or flange inspections at Davis-Besse. CAMPBELL said that after the short video of the RVH inspection he saw during 12RFO, he did not do any subsequent review of videos from past outages until probably late October 2001 when he saw an approximately 30-second clip. CAMPBELL said MOFFITT wanted him to see the first video during the outage because of concerns about cleaning the head. He assumed this was the as-found head inspection. CAMPBELL recalled that MOFFITT wanted to show him the quality of the videos during the review in October. He could not recall what outage video he saw at that time, but assumed it was an "as-found" of the RVH inspection because he thought it was "their original inspection" (Exhibit 111, pp. 19-25).

CAMPBELL said that after a phone call with the NRC staff, he had concerns about an early shutdown. He said that what he understood from this call was that Davis-Besse would have to perform a minimum of three outages in one operating cycle if they shut down early. He said that he did not want to be limited to an 18-month cycle because Davis-Besse operated on a 24-month

cycle. He also said he was concerned about a potentially significant dose associated with three outages (Exhibit 111, pp. 30-31).

CAMPBELL acknowledged that Davis-Besse could not obtain new fuel by the end of 2001. When asked if this played a role in Davis-Besse's determination to continue operating beyond the end of the year, CAMPBELL responded that he thought the primary concern was the number of shutdowns. He stated that he was concerned about dose rates. CAMPBELL said he did not know if the NDE equipment would have been available to Davis-Besse by the end of the year. CAMPBELL said he did not know the "exact numbers" of the economic impact of an early shutdown (Exhibit 111, pp. 37-39).

> Agent's Note: On the drafts of the agenda for the October 3, 2001, meeting with the NRC, there was a section titled "For FENOC Eyes Only." The bullets under this section read, "Direct Costs of early shutdown by 12/31/01 versus 3/30/02" and "Outage Length and replacement power costs." According to the drafts, COAKLEY was to prepare and/or discuss the expected economic impact of an early shutdown. CAMPBELL attended the meeting on October 3 and the pre-meeting on October 2. MOFFITT also mentioned in his testimony that COAKLEY provided this financial impact information directly to CAMPBELL (Exhibit 177; Exhibit 118, pp. 118).

After SHERON called SAUNDERS on September 28, 2001, SAUNDERS called CAMPBELL. According to CAMPBELL, SAUNDERS recommended that he call FENOC's Vice President of Governmental Affairs (believed to be DOWLING), who in turn, obtained legal counsel for FENOC. CAMPBELL stated that he kept SAUNDERS briefed and received his input and direction at all times and in all phases. He said that SAUNDERS was the one who established the parameters that would keep Davis-Besse running until mid-February. By that time, CAMPBELL said, he was told to go to the Perry Plant on November 1, 2001, and was then "out of the loop" (Exhibit 111, pp. 45-47).

Based upon what he knew during the Fall of 2001, CAMPBELL was asked if he ever questioned whether Davis-Besse had sufficient assurance to continue operating beyond the end of 2001. CAMPBELL responded, "From a circumferential cracking perspective, with everything that I had read, been told, you know, world renowned experts, our understanding was we would not reach a critical circumferential crack size until later down the road in terms of operation; and so from that perspective, the answer is, yes, I felt like, from a circumferential cracking perspective, that was correct." CAMPBELL never discussed with OI axial through-wall cracks or pressure boundary leakage specifically relating to the Bulletin responses. His only comment about axial cracks was that he had learned a lot about them and circumferential cracks during the Fall of 2001 (Exhibit 111, p. 34-35, 54-56).

CAMPBELL stated several times that he was not at Davis-Besse for most of October. He said that WORLEY concurred for him on Serial 2735. CAMPBELL knew of phone conversations with the NRC during the October time frame in which Davis-Besse promised to provide "things." For example, CAMPBELL said that he knew that a plant-specific risk analysis and finite element analysis had been promised but not yet provided. CAMPBELL said that Davis-Besse was beginning to learn more about the reactor head and was also relying more on the videos. CAMPBELL said he asked both GEISEN and MOFFITT about what was seen on the videotapes. According to CAMPBELL, neither of them said they specifically saw the videos and CAMPBELL then directed GEISEN to do so. CAMPBELL said he did "not necessarily [get] a briefing," but recalled that it was reported to him that the videos were not as good a quality as they should have been. CAMPBELL said he was not interested in whether boric acid was "masking other symptoms," he was concerned with the quality of the video that was to be provided to the NRC staff (Exhibit 111, pp. 47, 51, 56-59).

> Agent's Note: CAMPBELL participated in the October 3rd teleconference call and the pre-meeting for that call on October 2nd. On October 10 and 11, 2001, CAMPBELL was listed as a presenter at both the Senator's staff and the Commissioners' TAs briefings on Davis-Besse's response to the Bulletin. GEISEN testified that he reviewed the as-found RVH videos with SIEMASZKO in early October 2001 (Exhibit 181; Exhibit 182; Exhibit 176; Exhibit 192, p. 4; Exhibit 193, p. 2; Exhibit 115, pp. 144-145).

CAMPBELL said that he did not sign Serial 2735 and indicated that he was not familiar with its contents. It was pointed out to CAMPBELL that the verbiage in 2735 was reiterated in Serials 2741 and 2744, which he did sign on October 30, 2001. He said he recalled from those letters that he became aware of obscured nozzles but continued to think that boric acid on the RPV head was from CRDM flange leaks. CAMPBELL was asked if upon learning this he had concerns that he provided inaccurate information during the Commissioners' TAs briefing, specifically, on the slide that stated "All CRDM penetrations were verified to be free of popcorn-type boron deposits using video recordings from 11RFO or 12RFO." CAMPBELL recalled, "No. I was interested in that we had better, more complete information, more accurate information" (Exhibit 111, pp. 59-62).

> Agent's Note: In their effort to justify continued operations, Davis-Besse chose to provide probabilistic estimates based upon projections and empirical data rather than present actual documentation/data from past flange and head inspections.

Interview of GEISEN

GEISEN said that, historically, axial cracking at the CRDMs was not considered by the industry to be a safety issue from the standpoint that it would not cause a rod ejection. However, he said

the industry and the NRC increased their concerns about cracking when Oconee 3 found a 165° circumferential crack in January or February 2001. It was the first plant to find a circumferential crack (Exhibit 115, pp. 23-24).

GEISEN said he became aware of GIBBS' September 14, 2001, letter during the Fall 2001. GEISEN said it was because of this letter that he found out that boric acid had been left on the head after 12RFO. GEISEN claimed Serial 2735 then added a lot more detail, including the nozzle by nozzle table, than Serial 2731. GEISEN said that when he found out there was boric acid left on the head, "I was really focusing on what was my crack propagation rate and when did I have to start that from?" GEISEN said he was looking at the as-found videos of the RVH. GEISEN said he did not go back to the "verbiage of the Bulletin that said, if you don't know where it's from, you have to assume this [nozzle leak]." GEISEN was asked if he had any uncertainty about the source of the boric acid deposits during the Fall of 2001 and he acknowledged, "We probably did." He said he really had not thought about it from that standpoint (Exhibit 115, pp. 72-76, 81-82).

GEISEN said the "worst case scenario: crack propagation...I was looking at it from a standpoint of an axial crack won't shut me down." GEISEN went on to explain that if an axial crack could have shut Davis-Besse down, then a "bulletin would have been written on the first Oconee plant." He further explained that Oconee 1 was the first plant to have through-weld axial cracking. GEISEN said that Davis-Besse started to focus on axial cracking at this point until Oconee 3 found the circumferential crack and then their focus shifted. GEISEN said that axial cracking was a problem in that it was a precursor to circumferential cracking. GEISEN knew that a through-wall axial crack would be a pressure boundary leak. He said he also knew that a pressure boundary leak would be a tech spec violation and a cause for a shutdown, although he did not know the time frame for that shut down. GEISEN acknowledged that an August 17, 2001, e-mail that he received from GOYAL was talking about axial cracks where it noted, "Most of the Oconee cracks were on the top section of the head." GEISEN said he did not remember the Bulletin requesting information about tech spec compliance (Exhibit 115, pp. 82-89, 177-178; Exhibit 136).

> Agent's Note: The Bulletin specifically identified under the "Reasons for Information Request" that "through-wall cracking of VHP nozzles violates NRC regulations and plant technical specifications. Circumferential cracking of VHP nozzles can pose a safety risk if permitted to progress to the point that nozzle integrity is in question and the risk of a loss of coolant accident or probability of a VHP nozzle ejection increases. This information request is necessary to permit the assessment of plant-specific compliance with NRC regulations" (Exhibit 85).

GEISEN was not asked specifically if the availability of fuel or NDE and repair equipment played a role in Davis-Besse's efforts to continue operations beyond the end of the year 2001. However, GEISEN said after reading GIBBS' letter identifying that the pre-existing deposits of boric acid would interfere with a visual inspection, "we knew at that point that we would probably be into an NDE, nondestructive-type examine inspection for those nozzles that we could not see visually." GEISEN also said an NDE would be necessary on the nozzles identified by the SIA gap analysis that did not have sufficient gaps to show leakage. GEISEN was speaking specifically about the October 30th response letter, Serial 2741, when he said, "we were going to use NDE techniques, and one of the commitments we had made was that we were going to submit another letter in January of 2002 specifying exactly what our techniques were going to be because we knew those were still being developed" (Exhibit 115, pp. 78-81).

> Agent's Note: Despite GIBBS' recommendation on September 14, 2001, Davis-Besse was still developing their NDE techniques as late as October 30, 2001.

GEISEN said he sat with SIEMASZKO and did a "spot check" of the work he had done with regards to generating the nozzle-by-nozzle Table in Serial 2735. GEISEN said he asked SIEMASZKO to walk him through the process and he agreed with the methodology and thought processes SIEMASZKO used. GEISEN acknowledged that he reviewed some of the videotapes from 1998 while validating the information in the table. GEISEN said he was not aware of PCAQR 96-0551 during the Fall 2001. He stated that he became familiar with all the past CRs during "this past Fall -- or past Spring [2002]" (Exhibit 115, pp. 106-109, 124-125).

GEISEN said that McLAUGHLIN worked with Framatome in the past doing flange gasket replacement. He thought that SIEMASZKO, along with McLAUGHLIN and other people working on the flange inspections, generated the statement that said the boric acid on the head was clearly attributable to flange leakage. GEISEN also thought that GOYAL, CHIMAHUSKY, and MAINHARDT were involved in these past inspections. GEISEN did not know if anyone reviewed the past flanges inspection videos while working on the Bulletin responses. He thought that McLAUGHLIN may have reviewed the inspections, although McLAUGHLIN never told him this. GEISEN said he did not review any flange inspections in the Fall of 2001. He stated that he saw portions of the "as-found" head inspections for 1996, 1998, and 2000 in early October (Exhibit 115, pp. 128-130, 134-135, 138, 144-145).

> Agent's Note: Based on MILLER's October 2, 2001 notes, GEISEN stated at that meeting that the 1996, 1998, and 2000 inspections had already been reviewed (Exhibit 176).

GEISEN said that the meeting with the Commissioners TAs on October 11, 2001, was for "damage control" in response to SHERON's call to SAUNDERS on September 28, 2001. He

said he was not privy to that phone call, but he knew that SHERON was pushing to shut Davis-Besse down. He said, "based on as hot as Mr. CAMPBELL was when he came in to talk to us, I'm sure that conversation didn't go well." GEISEN stated he probably wrote the bullet presented to the Commissioners' TAs that stated "All CRDM penetrations were verified to be free of popcorn-type boron deposits using video recordings from 11RFO or 12RFO." He acknowledged that it was probably known at that time that there were areas of the RPV head that could not be viewed during those outages and that was why he used "11RFO or 12RFO." GEISEN stated, "we really need to go all the way back into 1996, which is beyond what the Bulletin asked for." He was asked if this verbiage portrayed that the inspections verified more than they actually did. GEISEN said, "I think once we finished with all of our analyses and reviews, that was true. That was the case, but I don't think it was a deliberate intent at this point to mislead" (Exhibit 115, pp. 162-163, 165-169).

> Agent's Note: A statement attributed to GEISEN in MILLER's notes from the October 3, 2001, teleconference call identified that the video reviews were done going back to 1996 (Exhibit 182).

Interview of GOYAL

GOYAL stated that he would have read Serial 2735, but did not verify any information in it. Later, however, GOYAL stated that he was responsible for reviewing some areas for accuracy. GOYAL stated that he was not the person who re-reviewed the videotapes from 1996. He said he did not know who did that re-review (Exhibit 26, pp. 44-46, 97-99).

Regarding "Previous Inspection Results," GOYAL said he did not know how the number of obscured nozzles during each outage was determined. GOYAL said he did not know how it was determined that 65 of 69 nozzles were viewed in 1996 as the section reported. GOYAL, who conducted the 1996 head inspection said that the central portion of the head could not be reached. He explained that it was a "general inspection" then and they were not counting nozzles at that time. He said they were only looking for boric acid. He said the concerns that drove the inspections were nozzle and flange leakage and corrosion. GOYAL said he wrote PCAQR 96-0551 because he was concerned about boric acid corrosion on the areas of the head that he could not see (Exhibit 26, pp. 46-51).

During a follow-up interview with OI, GOYAL said SIEMASZKO was assigned to review the videotapes for 10, 11, and 12RFOs for responding to the Bulletin. GOYAL said he did not participate in those reviews. GOYAL said SIEMASZKO indicated to him that he could see the entire head from the videos of 10RFO with the exception of the very top. GOYAL also mentioned that COOK was involved in this discussion. It was pointed out to GOYAL that this was contrary to his statement in PCAQR 96-0551 that he could only see 50-60 percent of the

head. GOYAL was asked how SIEMASZKO could have seen more than he (GOYAL) did on the video. GOYAL responded he thought SIEMASZKO may have looked in more detail at each area. GOYAL said he did not challenge this because he was relying on SIEMASZKO's judgement. GOYAL said he did not think he ever told anyone that he had seen the entire head in 1996. He said he did not perform a whole head visual examination during 1996 (Exhibit 27, pp. 28-37, 128-132).

GOYAL believed that it was the use of industry experience that determined there were no cracked nozzles at Davis-Besse. He said other U.S. plants were not experiencing cracking. From his involvement in the 1996 inspection and because of the same technique used during the 1998 inspection, GOYAL knew that boric acid had been left on the head after each outage (Exhibit 26, pp. 61-64).

GOYAL said he knew a nozzle leak would be a pressure boundary leak. GOYAL said based upon his knowledge, it was not acceptable to operate the plant with pressure boundary leakage. GOYAL acknowledged that it would not be acceptable to continue running if a previously undetermined source of boric acid was identified to be from a nozzle leak. He also acknowledged that in 1996 it was an assumption that boric acid on the head was from flange leakage. GOYAL said it was never verified that it was not from nozzle leakage. He said similar reasoning was in place when he made his evaluation during the 1998 inspection. GOYAL said he discussed the possibility of nozzle leakage with his supervisor, HARTIGAN, during the time of PCAQR 96-0551. He also thought he spoke at that time with SWIM and McINTYRE about it and the need to implement the modification for the access ports (Exhibit 26, pp. 85-91; Exhibit 27, pp. 17-22).

GOYAL was asked if he knew what the basis was for using 10RFO as the start of the "worst-case scenario" portion under "Analytical Work Performed." GOYAL said, "all I know is that's what they thought;" however, it was pointed out to him that there were multiple nozzles that were not able to be inspected in 1996. GOYAL again stated that based upon industry experience, Davis-Besse did not expect to find cracked nozzles, and he said, "decisions were made based upon the information available to you at that time" (Exhibit 27, pp. 111-116).

GOYAL could not recall any one specific meeting where it was stated that Davis-Besse would continue to run beyond the end of the year 2001. GOYAL did remember that the availability, or lack thereof, of fuel and NDE equipment were ongoing issues during the Fall 2001 time frame. GOYAL acknowledged that he had concerns, as referenced in his e-mails during the preparation of the response letters, and he wanted to make sure that those concerns and the industry information he was receiving was "disbursed to the people who -- who are more knowledgeable or who are more decision making process" (Exhibit 27, pp. 133-135, 138-139).

Interview of SIEMASZKO

SIEMASZKO stated regarding the response letters, he was asked to make a "general statement first [2731]. Then, I was asked to name the number of them [i.e., nozzles], which I did, and then to produce a very detailed number [for 2735]" (Exhibit 49, p. 124).

SIEMASZKO said he was tasked with looking for "popcorn." SIEMASZKO said he was never asked to state that he was confident that the nozzles that he could not see were not leaking. SIEMASZKO said that he provided information for the responses but it was MILLER "and company" who determined how much of the information would be given to the NRC. SIEMASZKO stated that the re-review of videotapes for 1996 to verify that there was no nozzle leakage identified meant the review of nozzles ***that could be seen***. It was pointed out to SIEMASZKO that the statement in Serial 2735 stated that May 1996 head inspection "results have been recently verified," not "partially verified." SIEMASZKO stated, "from what tapes I have, I have reassured myself that there is no leakage on my portion of the review. I had to rely on Prasoon GOYAL and his visual that he did not see the boric acid [during the 1996 visual]." SIEMASZKO said he was asked by MILLER and COOK to include the statement about re-verifying the results with the videotapes. SIEMASZKO said his confidence of flange leakage was based on reviewing the streaks on the nozzles from the head inspections, not the flange inspections (Exhibit 49, pp. 154-159, 169-176, 179-183, 185-186).

SIEMASZKO said COOK requested that he approve that 100 percent of the nozzles were inspected in 1996 and 90 percent were inspected in 1998, but SIEMASZKO did not agree with those numbers. SIEMASZKO said it was COOK who changed those numbers in the final version of Serial 2735. SIEMASZKO said he was in a room with other people when he was told to sign the green sheets for Serial 2735. He said the green sheets, i.e., concurrence sheets, were signed at approximately 12:00 or 1:00 p.m., but the last FedEx packages went out at 4:00 p.m. SIEMASZKO said between those times, the document went "through a number of changes, I think, because at 3:00 o'clock, they had a meeting with top management to approve." He thought that LOCKWOOD would have been the one who told him to sign-off on the green sheet (Exhibit 116, pp. 33-35, 137-139, 312-313).

> Agent's Note: There are two documents from SIEMASZKO dated October 16 and 17, 2001, indicating the entire head was inspected in 1996 (Exhibit 205; Exhibit 214).

According to SIEMASZKO, a meeting took place in which either MOFFITT or LOCKWOOD stated that BYRD and SAUNDERS were interested in Davis-Besse doing a good job in order to continue operations. In his interview, SIEMASZKO said that he thought this meeting was one of the first meetings on the response. He said it was his impression that the intent was to give the NRC limited information, although SIEMASZKO said he did not want to say "wrong

information." SIEMASZKO said this was done so that the NRC would not fully understand the situation. SIEMASZKO said that BYRD played a key role because he wanted to establish 1996 as the base year for zero leakage "in order to make PRA function" (Exhibit 116, pp. 119-122).

> Agent's Note: Because the PRA information was not included until Serial 2735, it is believed that this meeting took place between September 4 and October 17, 2001.

SIEMASZKO stated that Davis-Besse wanted to continue operating because neither fuel nor repair/examination equipment would be available for an early shutdown. There were also concerns regarding the amount of dose associated with the nozzle repairs. SIEMASZKO said the concern was that the plant would shut down to do the inspections, find a crack or a flaw, and not be able to get the tools needed to fix it. SIEMASZKO said he heard these concerns from BYRD, MOFFITT, LOCKWOOD, and McLAUGHLIN. He said GOYAL wrote a document stating that the plant was good to run until the planned outage. "It was a fear of going down and staying down." He described it as "a very, very strong demand not to shut down." SIEMASZKO said the issue was not about the problems identified in the past, "the issue was not to shut down." SIEMASZKO said that MOFFITT thanked him and a group of men for their work on the response letter and not letting the plant "go down and up." According to SIEMASZKO, MOFFITT said that would have cost the company $23 million (Exhibit 116, pp. 129-137).

> Agent's Note: During his interview with OI on August 29, 2002, BERGENDAHL, Vice President, identified that an early shut down would probably cost FENOC "tens of millions of dollars." He added that a typical outage costs $20-30 million (Exhibit 76, p. 31).

SIEMASZKO claimed that Licensing made the statements that the videotapes had been re-reviewed and that there was evidence of flange leakage, indicating no evidence of nozzle leakage. He also said it was Licensing who requested and pursued that 100 percent of the head had been inspected in 1996 (Exhibit 116, pp. 275, 323).

In addition to SIEMASZKO's testimony to OI, he was interviewed on April 30, 2003, by U.S. Department of Labor investigators relating to his employment discrimination complaint. During that interview, SIEMASZKO acknowledged that the information provided to the NRC was inaccurate and misleading. He indicated this was not an oversight, but rather an intentional effort to misinform the NRC on the part of Davis-Besse management. SIEMASZKO said he knew this was wrong. According to SIEMASZKO, this effort to deceive the NRC was not a unilateral action on the part of any employee or single supervisor. Rather, this was an orchestrated effort that involved SIEMASZKO, GEISEN, GOYAL, LOCKWOOD, CAMPBELL, MOFFITT, WORLEY, and others. SIEMASZKO described pressure coming from supervisors to carry out this misinformation campaign (Exhibit 215, p. 2).

Interview of McLAUGHLIN

Regarding the Bulletin, McLAUGHLIN thought that the NRC and the industry placed the emphasis on circumferential cracking because it could lead to a rod ejection. He stated that if you knew of a through-wall axial nozzle crack, then it would be cause for an immediate shut down because it was a pressure boundary leak. He added that he thought the Bulletin said "that axial cracks were really not that big of an issue." However, he did acknowledge that an axial crack could not be distinguished from a circumferential crack through a visual inspection alone. "All you would know is you had boron there." Later, McLAUGHLIN again asserted, "our tech specs at Davis-Besse required you to shut down if you had pressure boundary leakage, but you would have to know that you had pressure boundary leakage before you would shut down" (Exhibit 117, pp. 70-75, 104).

McLAUGHLIN said that he did not become aware that boric acid was left on the RPV head after 12RFO until sometime between the September 4 and the October 17, 2001, letters. McLAUGHLIN thought that he found out about the boron when he read the GIBBS letter dated September 14, 2001. He acknowledged that GIBBS referred to the access to the head for cleaning and inspections as being "severely restricted" by the mouse holes. McLAUGHLIN then acknowledged that since the area could not be cleaned, you could not determine the source of the leakage "100 percent." McLAUGHLIN went on to point out that he thought that by mid-November 2001, Davis-Besse had provided all the information the NRC needed to determine whether the plant needed to shut down. He said that by this time the NRC "had the accurate and complete story" (Exhibit 117, pp. 87, 116-127).

McLAUGHLIN said he reviewed less than a minute of a 12RFO head inspection video after the SHERON phone call on September 28, 2001. He said he also saw a couple of minutes of the 12RFO post-cleaning video at that time. He could not recall if this tape showed the entire head. He said he looked at it and thought, "that's going to be good because then we'll be able to do a qualified visual inspection of the nozzles around that clean area." McLAUGHLIN said he did not review the flange inspection videos to verify that the boric acid on the RVH correlated to allegedly leaking flanges. MCLAUGHLIN was shown a draft agenda, dated October 2, 2001, for the October 3, 2001, teleconference call between the NRC and Davis-Besse. It was pointed out to him that his name was listed after the bullet "video inspection review and examination statistics." McLAUGHLIN said he did not review any videotapes pursuant to the October 3, 2001, meeting. McLAUGHLIN assumed that he participated in the teleconference with the NRC on October 3, 2001, based upon his review of the attendees list (Exhibit 117, pp. 112-115, 143-145,164).

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Agent's Note: McLAUGHLIN denied reviewing videos in preparation for the October 3, 2001, teleconference, although he looked at the 12RFO RVH videos after SHERON's phone call on September 28, 2001.

McLAUGHLIN was asked about a document he turned over pursuant to an OI subpoena. It was a PowerPoint presentation he used at various engineering support training sessions throughout the Fall of 2001. McLAUGHLIN could not remember dates but said he gave an approximately 1 hour long presentation to the Engineering staff, as well as Licensing and Regulatory Affairs. He also gave a short presentation, 10-15 minutes, to supervisors and above at a management communications meeting. Page 30 of his presentation noted that there were "several suspected locations that will require NDE." McLAUGHLIN said that based upon the findings from the SIA gap analysis that four center nozzles would not have a sufficient gap to show leakage, at least these four nozzles would have to be NDE'd. He said he did not think that there were cracked nozzles when he gave this presentation, but he was preparing for that possibility. He was then asked why he was preparing for this possibility if he truly believed the leakage was from the flanges. He responded this was because the other plants that had done NDE had found cracks. He said that because these other plants had identified nozzle leakage with very little boron deposits, he thought that if Davis-Besse had nozzle leaks, "you would not expect to see very much boron." He acknowledged that it was a possibility that because there was so much boron at Davis-Besse, any small indications of nozzle leakage were masked, but he believed at the time "it was clearly indicated that we had flange leakage" (Exhibit 117, pp. 150-157; Exhibit 216).

Agent's Note: From McLAUGHLIN's subpoena information, an undated document related to 13RFO (2002) defined suspect as, "these nozzles showed evidence of possible leakage" (Exhibit 217).

McLAUGHLIN said that after SHERON's phone call to SAUNDERS on September 28, 2001, he contacted Framatome to revise their schedule for "equipment, procedures, et cetera" in anticipation of a shutdown by December 31, 2001. He said he had to "get some additional budget for 2001" to get ready. He thought that outage management only planned for an inspection to be done if the plant had to come down by December 31, 2001. He also said that because of the SIA gap analysis, it was known that a visual inspection would not be enough for those center four nozzles. Therefore, the head would have to be placed on the head stand for an NDE inspection and any necessary repairs. When asked if the NDE equipment would have been ready at that time, McLAUGHLIN said, "it was still kind of up in the air in our original planning on what tooling was going to be used." McLAUGHLIN said that in October, when Davis-Besse determined which equipment they planned to use, Framatome said they would be able to support Davis-Besse, but McLAUGHLIN did not think this was stated in writing (Exhibit 117, pp. 157-160).

Agent's Note: In a November 16, 2001, e-mail marked "CONFIDENTIAL FOR YOUR EYES ONLY," LOCKWOOD forwarded information about the upcoming scheduled 13RFO to MILLER and WUOKKO. LOCKWOOD attached a November 15 e-mail from WORLEY to DOWLING and also copied CAMPBELL, MOFFITT, BERGENDAHL, LOCKWOOD, GEISEN, and LESSY. These e-mails stated that one of the "bargaining points" to be used to "initiate a settlement" with the NRC "at the Commission level" was "in order to procure nuclear fuel, schedule test personnel, and stage the latest test equipment, Davis-Besse's last day of operation for this fuel cycle will be February 28, 2002 (originally scheduled for March 30, 2002)" (Exhibit 218).

Interview of MILLER

MILLER said that after the first Bulletin response, the idea of popcorn deposits came out "and so we had a lot of discussion about, you know, did we have popcorn boron on the head." MILLER said it was his impression that Davis-Besse could potentially have deposits on the head, but Engineering was responsible for formulating those responses to the Bulletin. He said he learned that the head had not been completely cleaned during the development of Serial 2735. He said he learned this during development of additional information related to the SHERON phone call to SAUNDERS and the meetings with the NRC that followed that call. MILLER said that at the October 3 meeting SIEMASZKO and GEISEN were tasked with putting together a nozzle-by-nozzle summary of the past inspections (Exhibit 113, pp. 35-41)

MILLER was asked if it was ever discussed during the development of Serial 2735 that Davis-Besse had provided inaccurate or incomplete information in the first response. MILLER did not think inaccuracy was discussed and incomplete was only discussed "in that we were being asked for more." He said, "I think the discussion we had was that we thought that information that was provided initially answered questions to the bulletin and it was just in the context of a request for additional information." He did not identify who participated in these discussions (Exhibit 113, p. 49).

MILLER initially stated that he was not involved in the review of the videos. He said he did not review any of the flange or RVH inspection videos until late October 2001. He said COOK showed him "a short portion of one of the CDs that was produced" as Davis-Besse was preparing for the presentations to the NRC staff in Washington, DC. He could not recall which outage he saw, but remembered that the CD was of poor quality. He thought these reviews were done in preparation for the presentation scheduled late in October 2001 (Exhibit 113, pp. 87-90).

MILLER said that after SHERON's phone call, the focus was "what information do we need to provide, or what can we provide to assure that Davis-Besse is okay." He acknowledged that there was some concern about when the fuel would be ready and said that economically it would

not make sense to shut the plant down and then remain idle waiting for the fuel. MILLER could not recall being present at any meetings which discussed the availability of fuel. MILLER thought that CAMPBELL would have been the force pursuing continuation of operations beyond the end of the year (Exhibit 113, pp. 91-96).

> Agent's Note: Although MILLER could not recall attending any meetings where discussions involved the availability of fuel before the end of 2001, LOCKWOOD's November 16, 2001, e-mail regarding the conditions that precluded Davis-Besse from shutting down prior to February 28, 2002, was obtained from MILLER's response to the OI subpoena (Exhibit 218).

MILLER thought that going into 13RFO there was a probability that an axial crack would be found, but he did not think a circumferential crack would be found. He said he did not know why he was not more concerned about the condition of the uninspected portions of the RPV head at the time of Davis-Besse's subsequent Bulletin responses. He said that this information had been relayed to the NRC and he did not have any safety concerns about Davis-Besse at the time. MILLER said that Engineering people were responsible for discerning the condition of the head. He said the boric acid on the head was portrayed to have come from flange leakage and the head was cleaned after 12RFO (Exhibit 113, pp. 108-116).

Interview of LOCKWOOD

LOCKWOOD said he accepted the input from the Engineering people that concluded that leakage seen on the RPV head was from the flanges. LOCKWOOD was asked if the number of obscured nozzles documented in Serial 2735 was new information, he responded, "I don't recall anybody being really surprised." LOCKWOOD said his job was to "facilitate the response," but he was not doing engineering work (Exhibit 112, pp. 42-44, 47, 55, 61-62).

LOCKWOOD said that if the source of the leakage could not be determined "and we can't justify operation...I guess I would say we have to assume it's pressure boundary leakage," which he acknowledged would lead to a shut down. Along these lines, LOCKWOOD recalled that after Serial 2731 was issued, CAMPBELL frequently asked if there were any safety concerns that Davis-Besse should shut down. He said the only responses he remembered CAMPBELL receiving were "no." He did not know the basis for these responses, but said presentations about crack growth rates and probability risk assessment were made to the staff for continued operation. LOCKWOOD thought that CAMPBELL was asking about safety issues as they related to a possible rod ejection, but he also recalled that MOFFITT had some discussions with BATEMAN about tech spec compliance. LOCKWOOD based this belief on questioning he received from CAMPBELL (Exhibit 112, pp. 47-53).

LOCKWOOD said that after the first response, his understanding of the condition of the RPV head changed. He said he had a better understanding of the amount of boron found on the head and how many nozzles had been obscured from inspection. He said he continued to believe that the boron came from the flanges and that the head had been cleaned at the end of each outage. LOCKWOOD said he did not find out that the head had not been cleaned until "pretty late...might have been even after we had an agreement for the February 15 shutdown. It was pretty late" (Exhibit 112, pp. 18, 53-54, 59-61).

> Agent's Note: Davis-Besse was notified via NRC letter on December 4, 2001, that they had provided sufficient information to continue to operate until February 16, 2002. LOCKWOOD was sent the October 16 draft of 2735 that asked the recipients to look at all statements for validity. Page 3 of Attachment 1 identified that "these [4] particular nozzles, and others in the vicinity, had been planned to be examined by supplemental examination during 13RFO because of the masking boric acid crystal deposits that are present around the nozzle/penetration interfaces" (Exhibit 206, pp. 1, 7; Exhibit 219).

LOCKWOOD said he was only aware of the past RVH and flange inspection results from what he reviewed in the response letters. He said he did not view the videotapes as part of his review of the responses. LOCKWOOD said that in his mind, Davis- Besse was asked by the NRC staff, "how do you know you don't have axial cracks?" He said the October 17, 2001, letter was to explain that the majority of nozzles were seen and no signs of popcorn leakage were noted (Exhibit 112, pp. 57-61).

Interview of WUOKKO

WUOKKO identified himself as "the NRC primary interface if they had questions on what the letter said or if they had needed some additional information, just like I had done on the other licensing action." WUOKKO said that sometime during the Fall of 2001 he learned that Davis-Besse shared heat numbers with nozzles at other plants that had cracks. WUOKKO said that when he forwarded HUSTON's e-mail on October 2, 2001, it was his understanding that inspections of the top of the head had been performed (Exhibit 114, pp. 14, 32-36).

> Agent's Note: WUOKKO was sent e-mails on August 11, 13, 17, and 22, 2001, as well as an August 22 draft of Serial 2731 that each referenced that less than 100 percent of the nozzles were inspected in 2000 (Exhibit 88; Exhibit 134; Exhibit 136; Exhibit 139; Exhibit 97, pp. 1, 7).

WUOKKO said it was his understanding from COOK that the boric aid crystal deposits were from leaking flanges. He also mentioned that GOYAL, as the technical reviewer for the letters, should have corrected any errors in the letters. WUOKKO said he did not review the head or

flange inspections at anytime, nor did he know who had. WUOKKO did not recall any specific meetings regarding what it would take for Davis-Besse to shut down prior to the end of the year. WUOKKO said it was the responsibility of the technical staff to review the response letters for accuracy and completeness (Exhibit 114, pp. 53, 55, 62-65, 70-71).

> Agent's Note: The first two drafts of 2735 were only exchanged between WUOKKO and COOK.

WUOKKO said he viewed the November 15th Technical Specification Compliance document, which was e-mailed to him by COOK for his comments, as looking towards a potential pressure boundary leak being found in 13RFO. He acknowledged that there were discussions about whether the resources, such as fuel, would be available in December 2001. "If you were to shut down at that time of the year, it would be unlikely to start up again and operate until the schedule of March." He thought that LOCKWOOD and/or COOK may have discussed this concern (Exhibit 114, pp. 76-83).

Interview of MOFFITT

MOFFITT said he brought GIBBS in to assist McLAUGHLIN in preparing for the upcoming outage. MOFFITT said he did not get GIBBS' report, dated September 14, 2001, right away, because after the INPO conference, he was stranded in Atlanta because of the 9/11 attacks. MOFFITT added, "I'm sure I didn't study exact words in this report from Gregg just because that wasn't what I was working on" (Exhibit 118, pp. 41-44).

> Agent's Note: GIBBS told OI that he knew MOFFITT was at INPO. GIBBS said he left a copy of his report for MOFFITT along with a letter asking MOFFITT to call him. GIBBS said that approximately a week had gone by when MOFFITT called. GIBBS said he verified with MOFFITT that he had read the report in its entirety and then he emphasized three things with him: (1) cutting in the access ports, partly to clean the boron left on the head; (2) contingency planning, e.g., NDE and repair "equipment availability;" and (3) suggested looking at the work Dominion Engineering was doing in this area (Exhibit 163, pp. 20-23).

MOFFITT said he did not know at the time of the preparation of the responses that no flanges were reported to be leaking in 1996. He thought that 1996 had been a "good inspection" and that was why it was used as the basis for the probabilistic safety analysis. He only recently found out that only 50-60 percent of the head had been inspected in 1996. He did not review PCAQR 96-0551 until after the cavity was found in the head. He did not recall viewing any of the flange or head inspections from past outages during the Fall of 2001, but he did look at the "picture

representations last fall [presumably the photos of the nozzles sent with the October 30, 2001, response]." He said he was assembling this information through his staff (Exhibit 118, pp. 62-67).

> Agent's Note: The September 17, 1998, PRC meeting minutes showed that less than 50 percent of the head was able to be inspected during the 1996 inspection. MOFFITT was on the distribution list for these minutes (Exhibit 15).

MOFFITT said that one of the key issues during the Fall of 2001 was deciding whether or not to shut down before the end of the year. MOFFITT said he believed that if Davis-Besse had identified a safety issue, they would have shut down. He said many meetings started with the staff being asked if they thought the plant should shut down. He added that he thought they had known that the flanges were not the source of the deposits, or that they had known about the potential corrosion issue then the plant would have shut down. MOFFITT said he had been told during 12RFO that boric acid had been left on the head, and in August 2001, he discussed how much had been left with SIEMASZKO. MOFFITT believed that SIEMASZKO told him that approximately 80 percent of the head had been cleaned. MOFFITT acknowledged that the source of the historical leakage had inappropriately been determined to be the flanges. MOFFITT also referred to the term "popcorn" when explaining what the evidence of a nozzle leakage would have been (Exhibit 118, pp. 30-32, 39, 70-74, 108).

> Agent's Note: MOFFITT admitted to knowing in August 2001 that 20 percent of the RVH was unable to be inspected during 12RFO, yet on October 3 and 11, 2001, he was present when the NRC was told 100 percent inspection was done during the 2000 inspection and that no head penetration leakage was identified.

MOFFITT did not know if the fuel or NDE equipment would have been ready if an early shutdown occurred. He said he knew early on there was a concern because there was "a very limited amount of that equipment." He said COAKLEY gave the financial impact information for an early shut down directly to CAMPBELL. MOFFITT could not recall writing the information relayed in the November 16, 2001, e-mail that said Davis- Besse would continue operating until February 28, 2002 (Exhibit 118, pp. 117-119, 123-125; Exhibit 218).

> Agent's Note: According to WORLEY's e-mail, the attached note (from "Steve") was authored by MOFFITT (Exhibit 218).

At the time of the responses, MOFFITT said everyone was "jumping" on the circumferential crack issue. He said his "perspective was one of potential for a loss of coolant related to a circumferential crack growth, a growth greater than 270 percent of the circumference, causing the ejection of the rod. That's where we were all focused at that time in a lot of detail and that's

where a lot of the spirited discussions were and the staff focused on." MOFFITT said he knew that if pressure boundary leakage was detected then it would have to be fixed. He did not recall much discussion during the Fall of 2001 about axial cracking because it was "not a safety significant issue." He acknowledged that when he "defined a safety significant problem, that was with respect to a nozzle ejection versus compliance with tech specs." He said that at the time, "regulatory affairs thought we were in compliance with tech specs, so we didn't pursue it, and that was going back to Day 1 when we saw this bulletin.... We never thought it was a tech spec document compliance issue to discuss as far as the axial cracking." MOFFITT explained that it was the nuclear industry that was looking to identify a potential rod ejection and anything less, such as a potential through-wall crack, was not an issue (Exhibit 118, pp. 81-89).

Agent's Analysis III-2A

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B. Serial 2735 (Attachments 2 and 3)

Background

Based on discussions with the NRC in early October 2001, the Davis-Besse staff provided additional information in Serial 2735 regarding the previous RVH inspections. The letter stated:

> "Included as Attachments 2 and 3 are the inspection results for 10RFO, 11RFO and 12RFO, and a figure representing these nozzle locations, respectively" (Exhibit 198, p. 6).

Attachment 2 in Serial 2735 contained a table (Table) which provided a nozzle-by-nozzle summary of the visual examinations performed during 10RFO (1996), 11RFO (1998), and 12RFO (2000). In addition, the information for the 1998 and 2000 refueling outages was diagrammatically portrayed in Attachment 3 (11RFO Diagram, 12RFO Diagram, respectively) (Exhibit 198, pp. 9-10, 12-13).

The letter had the following general discussions regarding the previous head inspections:

> "In May 1996, during a refueling outage, the RPV head was inspected. No leakage was identified, and these results have been recently verified by a re-review of the video tapes obtained from that inspection" (Exhibit 198, p. 1).

> "The visual inspections were conducted by remote camera and included below insulation inspections of the RPV bare head such that the Control Rod Drive Mechanism (CRDM) nozzle penetrations were viewed. During 10RFO, 65 of 69 nozzles were viewed, during 11RFO, 50 of 69 nozzles were viewed, and during 12RFO, 45 of 69 nozzles were viewed" (Exhibit 198, p. 5).

> "...the four nozzle/penetration interfaces where it could not be assured that leakage would be visible are nozzle numbers 1, 2, 3, and 4, which are in the center of the RPV head" (Exhibit 198, p. 7).

To help organize the following discussion, the information will be broken into three sections: 1996 Inspection Results, 1998 Inspection Results, 2000 Inspection Results. Within these sections it will be shown that Davis-Besse's response inaccurately described the extent and the results of these prior head inspections.

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Evidence

(1) 1996 Inspection Results

In the Table, the column for the 1996 inspection results did not provide specific information for each nozzle, but instead referred to Note 1, which stated:

> "In 1996 during 10RFO, the entire RPV head was inspected. Since the video was void of head orientation narration, each specific nozzle view could not be correlated by nozzle number" (Exhibit 198, p. 10).

Document Review

Review of Videotape 96-07 dated April 19, 1996

During 10RFO, FENOC personnel videotaped the inspection of the RPV head through the weep holes in the service structure. The videotape clearly showed that the entire head was not inspected during the 1996 head inspection. In general, the videotape showed detailed views of the outer nozzle rows, with correspondingly less detail for each row of nozzles toward the center of the head. The camera was not inserted much beyond the outer row of nozzles. As a result, the curvature of the RPV head and camera optics caused the view of at least the center nine nozzles to be of insufficient detail to determine if boric acid residue existed at the nozzle to head interface. In addition, several nozzles were substantially obscured by boric acid deposits, and therefore could not be adequately inspected. This can be seen in the following clips from the 1996 head inspection videotape (Exhibit 140, pp. 1, 30-36):

Time 4:01 This view is from weep hole 3. The picture shows nozzle 56 in the foreground on the right, nozzle 36 in center with boric acid deposits piled up behind it, nozzle 20 in the background on the left, and nozzle 13 just to the right of nozzle 36. Boric acid deposits obscure the nozzle-to-head interface for nozzles 20 and 13, which did not allow a complete inspection (Exhibit 140, pp. 30, 33).

Time 16:18 This view from weep hole No.13. The picture shows nozzle 47 on the left edge, nozzle 27 behind and to the right of nozzle 47, nozzle 11 behind and to the right of nozzle 27, nozzle 31 toward the right side of the frame, and nozzle 15 behind and to the left of nozzle 31. Boric acid deposits obscure the nozzle-to-head interface for nozzles 11 and 15, which did not allow a complete inspection (Exhibit 140, p. 34).

Time 23:25 This view is from weep hole 17. The picture shows nozzle 46 in the center, nozzle 37 on the right edge, nozzle 21 behind and to the left of nozzle 37, and nozzle 9 behind and to the left of nozzle 21. The pile of boric acid to the left of nozzle 21 obscures the view of the lower portion of nozzle 9, which did not allow a complete inspection (Exhibit 140, pp. 32, 35).

Time 23:27 This view is from weep hole 17. The picture shows nozzle 50 on the left, nozzle 30 behind and to the right of nozzle 50, nozzle 14 behind and to the right of nozzle 30, and nozzle 6 behind and to the right of nozzle 14. Boric acid accumulation obscures the view of the nozzle to vessel interface for nozzle 14 and blocks the view of the lower portion of nozzle 6, which did not allow a complete inspection (Exhibit 140, pp. 32, 36).

The videotape was not void of head orientation narration, contrary to the statement in Note 1 of the Table. The videotape provided clearly audible and easily identifiable location information such as stud hole numbers for 13 out of the 18 weep holes. Specific audio narration with head orientation are given at approximately the following times (Exhibit 140, pp. 1, 30):

Time	Orientation Narration
0:38	"Recording through hole 2."
2:31	"Looking through hole 2."
7:36	"Stud hole 46, 48."
8:30	"Stud hole 44, 45."
9:40	"Stud hole 37, 38."
11:07	"Hole 33, 34."
11:42	"Stud hole 31, 32."
13:01	"Stud hole 29, 30."
13:47	"Stud hole 24, 25."
14:41	"Traveling Y to X axis."
16:01	"Stud hole 19, 20."
17:09	"Stud hole 16, 17."
19:14	"Traveling X axis to W."

In addition, the inspection was methodical, in that it started on the north side of the head and proceeded counterclockwise around the RVH. Based on the orientation narration, specific nozzles could be correlated. Although in some instances the stud holes numbers were offset by 3 to 4 stud holes relative to the apparent weep hole, the critical aspect was that the stud holes established in which quadrant the inspections were being performed. This allowed specific nozzles to be identified by using its relative head location and general orientation information from inside the service structure. In addition, since the head was not very clean, in some cases

the relative head orientation could be determined based on the notable piles of boric acid or streaks on nozzles (Exhibit 140, p. 1).

> Agent's Note: According to FENOC, because the 1996 video was void of head orientation narration, the pictures from the 1996 inspection provided in Serial 2744 on October 30, 2001, did not have nozzle designations. However, five of the pictures provided in Serial 2744 had weep hole or stud hole designations which came from the narration on the videotape (Exhibit 220, pp. 13, 17, 18, 19, 21).

PCAQR 96-0551

GOYAL initiated PCAQR 96-0551 because steps in the BACC procedure could not be fully implemented. In documenting the results of the RVH inspections, GOYAL stated in the PCAQR that the "...extent of the inspection was limited to approximately 50 to 60% of the head area because of the restrictions imposed by the location of the mouse holes" (Exhibit 5, pp. 2, 11).

PRC and WSC Meeting Minutes dated September 1 and 17, 1998

The corrective action to resolve PCAQR 96-0551 was Modification 94-0025, which was to cut access ports in the RPV service structure. GOYAL attended the September 1, 1998, PRC meeting where this modification was discussed. The meeting minutes associated with the modification stated, "there is less than 50% accessibility to the reactor vessel head, which does not allow for complete inspection or cleaning of potential boric acid deposits." GOYAL also attended the September 17, 1998, WSC meeting where this modification was also discussed. The meeting minutes associated with the modification stated, "...there is less than 50% accessibility to the reactor vessel head, which does not allow for complete inspection or cleaning" (Exhibit 14, p. 6; Exhibit 15, p. 9).

E-mail from GOYAL dated August 11, 2001

The lack of accessibility to the RPV head continued into 2002 because the modification to cut the access ports was never implemented. This continuing limitation was discussed during the preparations for 13RFO. GOYAL's e-mail to GEISEN, et al., stated, "it was pointed out that we can not clean our head thru the mouse holes and Andrew SIEMASZKO is requesting 3 large holes be cut in the service structure for viewing and cleaning" (Exhibit 88).

E-mail from GOYAL dated August 30, 2001

The lack of a complete head inspection was also specifically discussed during the licensee's activities in responding to the Bulletin. GOYAL's e-mail to SIEMASZKO, COOK, and

MILLER stated, "we do not say anywhere in our response to the bulletin that inspection thru the mouse holes creates an impediment for 100% visual inspection. (management need[s] to know this)" (Exhibit 89).

HOLMBERG's Notes from Conference Call with NRC on October 3, 2001

HOLMBERG noted that during the conference call, NRC headquarters personnel questioned the scope of Davis-Besse's April 2000 head examination. They requested the videotapes of the head examinations and a nozzle by nozzle listing of the inspection results and conclusions. Licensee personnel were to provide this information to the NRC by October 25, 2001 (Exhibit 181).

MILLER's Notes from Conference Call with NRC on October 3, 2001

MILLER noted that during the October 3rd conference call, the NRC requested a copy of the reports of past head inspections with a nozzle by nozzle summary for each inspection (Exhibit 182).

Telephone Call Documentation by WUOKKO dated October 15, 2001

On October 15, 2001, WUOKKO documented his conversations with PICKETT regarding an upcoming meeting to discuss the response to the Bulletin. During this conversation, "...PICKETT asked if Davis-Besse would be providing the photos last taken of the CRDM penetrations, WUOKKO stated that these were planned to be included with the submittal." This document was copied to COOK, GEISEN, GOYAL, McLAUGHLIN, WOLF, and others (Exhibit 221).

E-mail from SIEMASZKO to COOK dated October 16, 2001

SIEMASZKO provided a new writeup to COOK for the past inspections section of FENOC's Serial 2735. The first paragraph of the writeup stated, "in the 1996 videotape, although the nozzles are not individually identified on the video, it is clearly visible that none of the nozzles in the inspection showed any leakage from the CRDM nozzle penetration through the reactor head." In the third paragraph it continued by stating, "the remaining 25 percent of the reactor head surface was not inspected due to the presence of boric acid that resulted from the leakage of the CRDM flanges above the insulation. However, these nozzles were fully inspected during 1996 and with limited success in 1998, with no evidence of CRDM nozzle penetration leakage" (Exhibit 205).

E-mail from SIEMASZKO to GOYAL dated October 17, 2001

SIEMASZKO sent the table with the past inspection results to GOYAL. Except for a small change to Note 1, this table appeared in Serial 2735 as Attachment 2 (Exhibit 214).

> Agent's Note: A comparison of SIEMASZKO's original version of Note 1 to the version that was submitted to the NRC in Serial 2735 is as follows (~~deleted text~~ / added text): In 1996 during 10RFO, ~~100% of nozzles were inspected by visual examination~~ the entire RPV head was inspected. Since the video was void of head orientation narration, each specific nozzle view could not be correlated ~~by nozzle number. Nozzles 1, 2, 3, and 4 which do not have sufficient interference gap were excluded. The remaining 65 nozzles did not show any evidence of leakage~~ (Exhibit 214; Exhibit 198, p. 10).

Testimony

Interview of GOYAL

GOYAL conducted the 10RFO (1996) RVH inspection. He testified that there were some interferences they encountered during the inspection. He also stated that the inspection was limited due to the weep hole locations and the use of a camera attached to a rigid pole, because they could only go so high on the RVH (Exhibit 26, pp. 9-10, 12-13, 49).

With regard to the statements in Serial 2735, GOYAL stated that he had made comments on the draft letters that the entire head could not be seen. However, GOYAL stated SIEMASZKO and COOK disagreed with him, telling him that they could see the entire head during reviews of the videotapes. GOYAL denied telling SIEMASZKO he could see all of the nozzles. When asked to explain how SIEMASZKO could claim to have seen all of the nozzles, GOYAL stated that SIEMASZKO might have been able to look in more detail because the videotapes had been converted to digital images (Exhibit 27, pp. 29-34).

Interview of SIEMASZKO

SIEMASZKO stated that he was responsible for reviewing the videotapes of the past inspections and providing the information in the Table. He also stated that some of the videos were reviewed by GEISEN, COOK, MILLER and, to a certain extent, MOFFITT. Regarding the 1996 head inspection, SIEMASZKO stated that he had to rely on GOYAL's visual inspection of the nozzles because the videotapes did not show 100 percent of the head. He continued by stating that the table provided to the NRC "never said that we had 100 percent of the head on tape, because we

don't." In his later interview, SIEMASZKO stated that the videotape of the 1996 head inspection did not have any orientation information, and that he was the source of Note 1 in the Table (Exhibit 49, pp. 99-100, 159, 182-183; Exhibit 116, pp. 102-103).

Interview of COOK

COOK worked in the Regulatory Assurance Department and was tasked with collecting the inputs for each of the response letters from the FENOC staff and finalizing the information as directed. As such, COOK had several discussions concerning the information in Serial 2735. According to COOK, "Prasoon told me that he could not see all the nozzles on the head with that technique. Andrew had told me that he could.... He said that it was difficult but he could get to the nozzles" (Exhibit 108, p. 21).

Interview of CAMPBELL

According to CAMPBELL, "I asked both Steve MOFFITT and Dave GEISEN, have you all specifically looked at any pictures or tapes in person so that you know what we are telling folks?" "Well, the answer is they hadn't specifically looked at all of them. I said, this is something we ought to be able to put our eagle eye on it and said we have looked at it and someone other than an engineer or first-line supervisor should have done that." At that point CAMPBELL directed both individuals to do what he had said (Exhibit 111, pp. 56-57).

Interview of GEISEN

GEISEN stated that he had assigned SIEMASZKO the task of generating the Table for Serial 2735, "and I told him I wanted a nozzle by nozzle versus just a visual of the whole head." GEISEN stated the he had reviewed portions of the 1996 tape with SIEMASZKO "to see how he looked at each one." According to GEISEN, the table in Serial 2735 started out as two columns and there was not going to be any 1996 data in it. As they started going nozzle-by-nozzle, they found that they really needed to go all the way back to 1996. According to GEISEN, "as we started delving more and more into that, we found that this is probably not an accurate portrayal anymore and that we really need to go back further, but we had already made this presentation" (Exhibit 115, pp. 106, 145, 167-168).

Interview of MILLER

MILLER stated, "...in October when we were preparing for taking information to Washington, Rod showed me a short portion of one of the CDs that was produced" (Exhibit 113, p. 87).

Agent's Note: The videotapes from the RVH inspections from 1996, 1998, and 2000 were copied from a VHS format onto two CDs.

Interview of MOFFITT

MOFFITT stated that he did not view any of the videotapes during the Fall of 2001 (Exhibit 118, pp. 66-67).

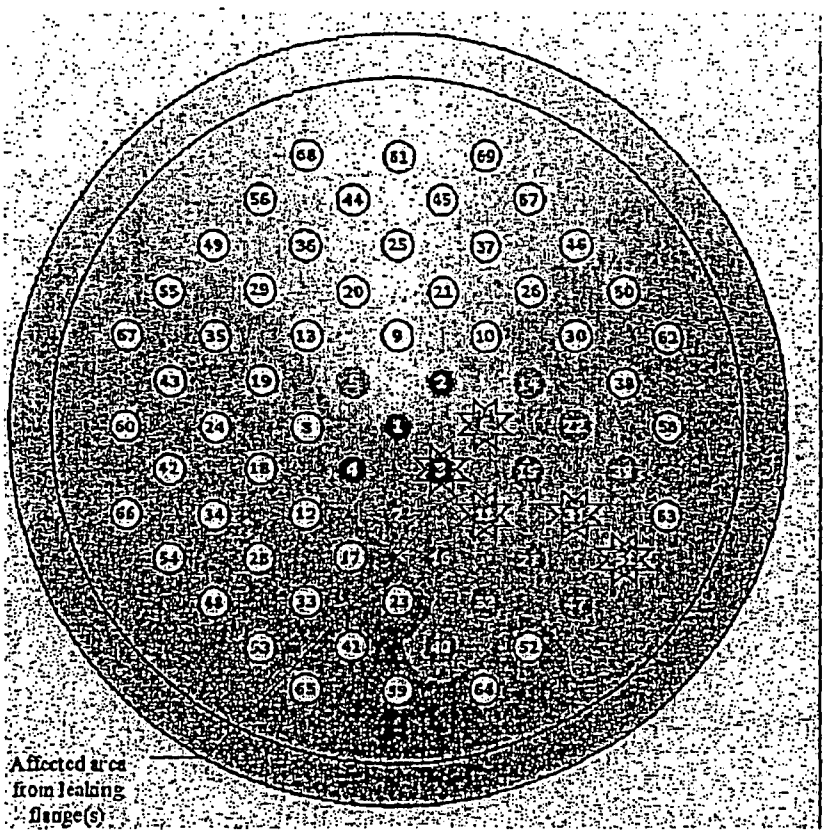
Agent's Analysis III-2B(1)

[redacted]

[redacted]

(2) 1998 Inspection Results

For the 1998 inspection, the Table listed 19 nozzles as "Flange Leak Evident." The locations of these 19 nozzles were shown in the 11RFO Diagram entitled, "RPV Head 11 RFO Inspection Results." The diagram (see below) has a note, "Affected area from leaking flange(s)," with a line to a highlighted area containing 19 nozzles centered in the lower right quadrant of the head. Also, there are five nozzles (Nos. 3, 6, 11, 31, and 51) that are shown with octagonal stars, which the legend designates as leaking flanges (Exhibit 198, p. 12).



Serial No. 2735, Attachment 3, Page 1
Diagram Showing Location of Boric Acid in 1998

Document Review

Memorandum from CHIMAHUSKY to Outage Management dated April 17, 1998

CHIMAHUSKY wrote to Outage Management that during the CRDM flange inspections, D10 was observed as having a boric acid leak. He went on to explain that the leakage was not considered significant, based on no large clumps of boric acid hanging from the control rod drive nor bridging to other drives, no boric acid present on the motor flange to nozzle flange joint, and the gasketed joint being clean (Exhibit 122).

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Review of Flange Inspection Videotape 98-01 dated April 17, 1998

This was an inspection of the CRDM flanges during 11RFO. Some indications of boric acid leakage were found on flange D10. It appeared to be unclear to the Framatome personnel performing the inspection whether the boric acid they were seeing on D10 was a new indication of leakage or if it was from old leakage. After completing the inspection of all the other flanges, a second look at D10 was performed from various angles. There was no boric acid at the flange interface or on the vertical surface of the flanges. The only boric acid was on the underside of the flange and down the nozzle in one area, with the rest of the nozzle being clean. While viewing D10, the Framatome personnel stated, "nothing coming out of the gasket, could be old stuff that never got cleaned" (Exhibit 140, p. 39)

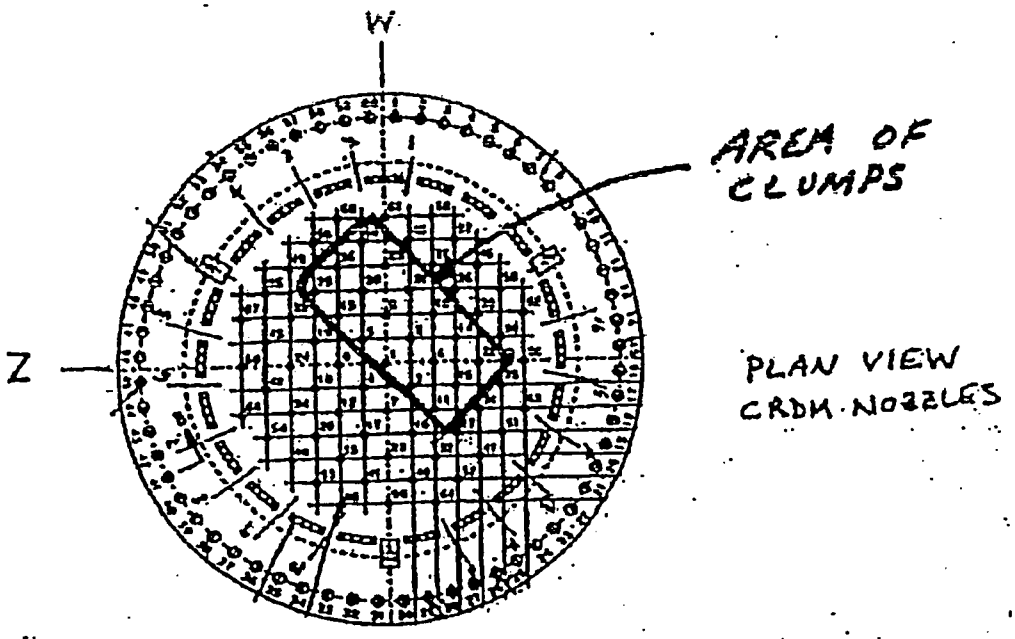
> Agent's Note: Additional reviews of the flange inspections from the 1999 mid-cycle outage and the 2000 refueling outage were examined to evaluate the leakage from D10 over the course of several years. Videotapes 99-01 and 00-02 showed comparable views of D10 to the view from the 1998 flange inspection. Based on a comparison of these pictures, the boric acid on D10 is, for all practical purposes, identical during 1998, 1999, and 2000 (Exhibit 140, p. 39).

PCAQR 1998-0649 dated April 18, 1998

McINTYRE initiated PCAQR 1998-0649 to document and evaluate the indications of past leakage from the flange on D10, which is for nozzle 31. There were no other flanges identified during the flange inspection as having any indications of leakage. In evaluating this condition as part of the PCAQR, CHIMAHUSKY described the leak as being "minor" (Exhibit 20, pp. 1-2).

PCAQR 1998-0767 dated April 25, 1998

MAINHARDT initiated PCAQR 1998-0767 to document the results of the 1998 RVH inspection. The report indicated that the inspection identified several fist-size clumps of boric acid within an area shown on a sketch (see below) incorporated into the PCAQR. It went on to state that where clumps were not present, a light dusting of boric acid was found covering the surface area of the vessel head. The initial assessment for the PCAQR, performed by GOYAL on July 16, 1998, stated that the videotape was reviewed and showed that most of the head area was covered with an uneven layer of boric acid along with some larger clumps (Exhibit 21, pp. 1-2).



PCAQR 1998-0767
Sketch Showing Location of Boric Acid on RPV Head.

Review of Head Inspection Videotape 98-06 dated April 24, 1998

The videotape from the 1998 RVH inspection showed that the boric acid deposit locations indicated in PCAQR 1998-0767 were relatively accurate and that the portrayal of these locations in Serial 2735 was inaccurate. In that regard, the audio narration accompanying the inspection included the following statements when looking at nozzles located in the upper right and upper left quadrant (Exhibit 140, p. 40):

Time 5:00 Weep hole 16..."That looks like a little bit." "That doesn't look so bad though." "That's not too bad." "Nah."

Time 45:08 Weep hole 2..."That's the big one he's talkin' 'bout." "This is the large boron concentration, which we saw before. Just wanted to pinpoint it so you would know...you can see it better in hole 2, than you can in 1."

This is to be contrasted with the following statements from the audio narration accompanying the inspection when looking at nozzles located in the lower right quadrant (Exhibit 140, p. 40):

Time 41:32 Weep hole 12..."That looks real good, doesn't it? Looks real good."

Time 0:25 Weep hole 13..."It looks beautiful."

Although there were some scattered deposits visible around the nozzles in the lower left quadrant, these deposits are not as extensive as the deposits seen in the upper left quadrant. This can be seen by comparing the following two clips from the head inspection videotape for nozzles 9, 20, and 21, which are located in the upper left quadrant, to the five clips for nozzles 27, 32, 40, 47, and 51, which are located in the lower right quadrant. In addition, a review of the first two clips showed that the visual inspection for nozzles 9, 20 and 21 did not allow a complete inspection, contrary to the designation given in the Table, "No leak observed" (Exhibit 140, pp. 41-47; Exhibit 198, pp. 9-10).

Time 43:14 This is a view from weep hole 1. The picture shows nozzle 21 in the center with nozzle 9, barely visible behind and to the right of nozzle 21. Although the boric acid residue does not completely obscure the nozzle to head interface of nozzle 21, the existing deposits did not allow a complete inspection for this nozzle. Boric acid deposits obscure the nozzle to head interface for nozzle 9, not allowing a complete inspection for that nozzle as well (Exhibit 140, p. 41).

Time 45:51 This view is from weep hole 2. The picture shows nozzle 20 on the left and nozzle 36 on the right edge. Boric acid residue obscures the nozzle to head interface for nozzle 20, not allowing a complete inspection (Exhibit 140, p. 42).

Time 39:25 This view is from weep hole 11. The picture shows nozzle 51 in the center left portion of the frame, with nozzle 47 at the left edge of the frame and nozzle 63 behind and to the right of nozzle 51. Nozzle 51 is one of the five nozzles designated in the 11RFO Diagram as being "*obscured by boron with a leaking flange.*" Although there is some scattered boric acid in the vicinity of nozzle 51, there is no significant accumulation obscuring the view of nozzle 51, and the deposits are not as extensive as those seen near nozzles 9, 20 and 21 (Exhibit 140, p. 43).

Time 39:47 This is a view from weep hole 11. The picture shows nozzle 47 with nozzle 51 immediately behind and to the right of nozzle 47. Although some scattered boric acid deposits are visible in the vicinity of nozzle 47, there is no significant accumulation obscuring the view of nozzle 47, unlike the views for nozzles 9, 20 and 21 (Exhibit 140, p. 44).

Time 40:02 This is a view from weep hole 11. The picture shows nozzle 32 with nozzle 27 on the left. Although some scattered boric acid deposits are seen in the vicinity of nozzle 32, there is no significant accumulation obscuring the base of nozzle 32, unlike the deposits obscuring the bases of nozzles 9, 20 and 21 (Exhibit 140, p. 45).

Time 41:27 This is a view from weep hole 12. The picture shows nozzle 64 on the left side of the frame, with nozzle 40 behind and to the right of nozzle 64, nozzle 23 behind and to the right of nozzle 40, and upper portion of nozzle 32 in the upper right corner of the frame. Although some scattered boric acid deposits are seen in the vicinity of nozzle 40, there is no significant accumulation obscuring the base of nozzle 40, unlike the accumulation obscuring the bases of nozzles 9, 20, and 21 (Exhibit 140, p. 46).

Time 41:46 This is a view from weep hole 12. The picture shows nozzle 27 on the right and nozzle 52 on the left. The upper portion of nozzle 47 is visible in the upper right corner of the frame. The picture shows some scattered boric acid deposits around the base on nozzle 27 that do not significantly obscure the base of the nozzle, unlike the boric acid deposits that obscure the bases of nozzles 9, 20, and 21 (Exhibit 140, p. 47).

Agent's Note: A comparison was made between the contents of Videotape 98-06 and the corresponding video file on the CD labeled as S14P-02810. These were provided by FENOC in responses dated July 3 and September 11, 2002, respectively, to an OI subpoena. It was determined that the CD did not contain any of the information from the last 5 minutes of videotape, which included the inspection results from weep holes 1 and 2.

Testimony

Interview of GOYAL

GOYAL acknowledged that he had provided the response to PCAQR 1998-0767, but at that time he did not know which flanges were leaking (Exhibit 26, pp. 30, 41).

Interview of SIEMASZKO

SIEMASZKO stated that he became aware of CHIMAHUSKY's April 17, 1998, letter to Outage Management regarding a small leak from the flange on D10 during his system turnover prior to 12RFO in 2000. SIEMASZKO also stated that he was given the task of reviewing all of the

videotapes from the 1996, 1998, and 2000 head inspections for the Bulletin response. He said he spent weeks reviewing the videos to determine which nozzles were inspected, based on the mouse hole and entry point given on the videotapes. Later, he was tasked with providing a picture of each nozzle to produce evidence that they had been inspected and to show there were no deposits typical of a nozzle crack. He stated that he produced the Serial 2731 Table in which each nozzle was discussed. With regard to the Table, which indicated that flanges C11, F10, F8, and G9 were leaking in 1998, he responded that he was viewing the head inspection videotape, not the flange inspection videotape (Exhibit 49, pp. 34, 98-99, 152-154).

When asked who else reviewed the videotapes with him, SIEMASZKO stated that some of the videotapes were reviewed by GEISEN, COOK, MILLER and, to a certain extent, MOFFITT. When asked who he had talked with in order to designate certain nozzles in 1998 as "No Leak Observed," SIEMASZKO thought that maybe it was MAINHARDT, but he said he could not specifically recall talking to him (Exhibit 49, p. 159; Exhibit 116, p. 232).

Interview of GEISEN

GEISEN stated the he had reviewed portions of the 1998 tape with SIEMASZKO "to see how he [SIEMASZKO] looked at each one." When asked if anyone had reviewed the flange inspection videotapes during the 2001 time frame, GEISEN responded that he was under the impression that McLAUGHLIN had reviewed them. He had this impression because McLAUGHLIN had generated the head maps in Serial 2735 designating the five leaking flanges, and McLAUGHLIN was the person during those outages that would have been overseeing the repair of the flanges (Exhibit 115, pp. 126, 134, 145).

Interview of McLAUGHLIN

McLAUGHLIN stated he was involved in writing the portions of the Bulletin responses involving Davis-Besse's future inspections. With regard to the 11 and 12RFO Diagrams in Serial 2735, McLAUGHLIN acknowledged that he had them prepared based on the information from the Table in Serial 2735. He said he could not understand "...what the table was telling me. So, I suggested that we come up with some kind of a picture or drawing or something that shows the results of where the boron was, where the leak in flanges were, et cetera" (Exhibit 117, pp. 79-80, 146-147).

Interview of MAINHARDT

MAINHARDT was asked by OI whether he had been contacted during the Fall of 2001 regarding his inspection of the RVH in 1998. MAINHARDT responded that no one had contacted him

during that time frame to discuss his RVH inspection activities in 1998. MAINHARDT specifically stated that SIEMASZKO had not contacted him in that regard during that time frame (Exhibit 222).

Agent's Analysis III-2B(2)

[redacted]

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[redacted]

(3) 2000 Inspection Results

For the 2000 inspection, the Table Serial 2735 listed 24 nozzles as "Flange Leak Evident." The locations of these 24 nozzles were shown in the 12RFO Diagram entitled, "RPV Head 12 RFO Inspection Results." The Diagram has a note stating, "affected area from leaking flange(s)," with a line to a highlighted area containing 24 nozzles centered in the lower right quadrant of the head. In addition, the Table, under the column for the 2000 Inspection Results, designated 9 nozzles as "no leak recorded=nozzle inspection recorded on tape" and "no leak observed," and 36 nozzles as "no leak observed=visual inspection satisfactory, no video record required" (Exhibit 198, pp. 9-10, 13).

Document Review

CR 2000-0782 dated April 6, 2000

This CR was initiated by MAINHARDT to document boric acid leakage from the weep holes in the reactor pressure vessel service structure onto the reactor head flange. The evaluation of this CR was performed by SIEMASZKO on April 14, 2000, and stated that there was an accumulation of boric acid on the reactor head flange between the head and the studs in the southeast part of the head (Exhibit 44, pp. 1-3).

Letter from Morgan Lewis to J. Ulie dated September 11, 2002

According to the licensee's legal counselors, "Mr. Charles DAFT assisted Mr. SIEMASZKO in his review of digitized videos and identification of individual nozzles used in the development of the table of inspection results docketed as Attachment 2 to Ser. 2735, dated October 17, 2001. A floppy disk containing a collection of digital images...provided by Mr. Daft to Mr. SIEMASZKO is enclosed...." The pictures provided by DAFT identified seven different nozzles, Nos. 28, 33, 35, 41, 55, 59, and 65. Of these seven nozzles, only nozzles 35 and 55 were designated in the Table as "nozzle inspection recorded on videotape." The other five nozzles were designated in the Table as "visual examination satisfactory, no video record required." However, the pictures

DAFT provided for three of these nozzles, Nos. 28, 41, and 65, showed boric acid deposits adjacent to the nozzles (Exhibit 223, p. 2; Exhibit 198, pp. 9-10; Exhibit 224).

Agent's Note: The same set of pictures for the seven nozzles was obtained from SIEMASZKO in response to an OI subpoena (Exhibit 225, p. 3).

Review of Head Inspection Videotape 00-X1. Undated

This videotape showed that the major boric acid deposits were located in the southeast quadrant (or lower right quadrant when looking at a diagram) of the head. However, there were additional deposits located in the upper left quadrant of the head as seen in the inspection videotape (Exhibit 140, pp. 22, 27):

Time 2:21. This is a view from weep hole 6 showing nozzle 35 in the center. This weep hole is on the left side of the head and the view is looking toward the upper-right. There is a large mound of boric acid behind nozzle 35. This mound extends from the top of the RVH to the bottom of the insulation and obscures nozzle 29. This is in the upper-left quadrant of the RVH, where no deposits of boric acid were noted by the licensee. During this portion of the videotape, the following conversation took place between what sounded like SIEMASZKO and a Framatome technician:

SIEMASZKO: Go to the left...more...more to the left...all the way...back toward the left...down by the pile, the big pile.

Technician: By the big pile?

SIEMASZKO: Down there, see it?

Technician: Yeah.

Agent's Note: There were no other views from other weep holes to better define the extent of the accumulation behind nozzle 35 on the upper-left quadrant of the head. The reason for this lack of video inspection was explained in SIEMASZKO's System Engineer's notes labeled Day 13, Thursday April 11, 2000, which stated, "large deposits of soft boron were noted on the South and East sides. North side is not accessible from any direction due to boron buildup and lack of scaffold on the North side" (Exhibit 48, p. 16).

With regard to the information in the Table, beyond the three nozzles discussed above in the Morgan Lewis letter, nozzles 12, 13, 23, and 33 were also designated as "visual inspection

satisfactory, no video record required." Contrary to the licensee's designation, the following clips from the head inspection videotape show that this information was inaccurate, in that a video record was, in fact, made for these nozzles and the visual inspection was not satisfactory (Exhibit 140, pp. 23-25, 28):

Time 1:25. This is a view from weep hole 5 which shows nozzle 19 on the right and nozzle 13 on the left. The base of nozzle 13 is completely engulfed with boric acid residue, and did not allow a complete inspection.

Time 2:50. This is a view from weep hole 10, which shows nozzle 33 on the right, nozzle 28 on the upper left, and the top of nozzle 12 in the center. The boric acid accumulation at the base of nozzle 33 did not allow a complete inspection.

Time 2:58. This is a view from weep hole 10, which shows nozzle 12 in the center-right, nozzle 28 at the left edge, and the top of nozzle 18 just to the right of nozzle 28. The bottom of nozzle 12 is completely obscured with boric acid residue, which did not allow a complete inspection.

Time 8:10. This is a view from weep hole 9. The picture shows nozzle 23 with significant amount of boric acid residue in front of, to the left of, and behind the nozzle. Since boric acid obscures the nozzle to head interface, this did not allow a complete inspection.

Testimony

Interview of DAFT

DAFT stated he had worked independently of SIEMASZKO to identify nozzles on the head inspection videotape. He only generated one sheet of pictures identifying seven different nozzles, and provided the pictures to SIEMASZKO. After providing these pictures, DAFT "saw nothing else or heard nothing else" regarding his work (Exhibit 226, pp. 7-12).

Interview of SIEMASZKO

SIEMASZKO stated he was unaware DAFT had reviewed the RVH videotapes to identify nozzles. He believed he had seen the sheet of pictures generated by DAFT, and either did not like the quality or thought DAFT had taken pictures of the same nozzles that he had. When asked why he had not incorporated this information into his pictures, SIEMASZKO did not know what happened. When asked whether DAFT's pictures had not been provided in Serial 2744 because they showed boric acid deposits around the nozzles, SIEMASZKO stated, "those

pictures are no different than the other pictures." When asked again why the pictures had not been provided in Serial 2744, SIEMASZKO responded, "I don't have the explanation other than the quality of the pictures that he produced to me must have been unacceptable, or I have a suspicion that he has given me the same nozzles and come up with different numbers." SIEMASZKO later stated, "if I was in possession of them [the pictures], then I must have turned them in to GEISEN." When it was pointed out that "there was a lot more video shot than what you documented," SIEMASZKO responded, "this must have been an error in my action to produce the document." He later clarified that it was a clerical error (Exhibit 116, pp. 258-265).

Agent's Analysis III-2B(3)

[redacted]

Conclusion

Based on the evidence developed, this investigation did substantiate that GEISEN, GOYAL, [redacted] MILLER, MOFFITT, SIEMASZKO, [redacted] deliberately failed to provide complete and accurate information to the NRC in response to NRC Bulletin 2001-01 in writing by letter dated October 17, 2001.

Allegation III-3: Deliberate Failure to Provide Complete and Accurate Information to the NRC in the October 30, 2001, Responses (Serials 2741 and 2744) to NRC Bulletin 2001-01

Background

Based on discussions with the NRC in late October 2001, the Davis-Besse staff provided additional responses to the Bulletin by two letters dated October 30, 2001 (Serials 2741 and 2744). These letters contained the same inaccurate and incomplete information as Serial 2735 (as reported in Allegation III-2). COOK, GOYAL, BYRD, GEISEN, McLAUGHLIN, MOFFITT, WUOKKO, MILLER, LOCKWOOD, and CAMPBELL reviewed and approved Serial 2741. COOK, GEISEN, MOFFITT, WUOKKO, MILLER, LOCKWOOD and CAMPBELL reviewed and approved Serial 2744 (Exhibit 87, pp. 8, 10).

This section will only address the inaccuracies contained in the pictorial documentation of the visual examinations performed on the RVH during the 1998, and 2000 refueling outages. As established above, in Report Section III-2B(1), the pictures from the 1996 RVH inspection were not representative, in that they did not show the nozzles obscured by boric acid deposits. As such, further substantiation of the inaccuracies in the 1996 pictorial documentation was not pursued in this allegation. The information provided by FENOC consisted of pictures from the videotaped nozzle inspections during each of the three refueling outages. These pictures were an attachment to Serial 2744 (Exhibit 227; Exhibit 220).

Evidence

Document Review

Review of Head Inspection Videotape 98-06 dated April 24, 1998

As previously noted above, in Report Section III-2B(2), a significant amount of boric acid was identified during the RVH inspection through weep hole 2. Based on OI's technical review of the videotapes from the 1998 head inspection, the majority of the pictures provided in Serial 2744 were inaccurately labeled. Although some confusion might be expected, such that an adjacent nozzle could be mislabeled or misidentified, in a number of cases the mislabeled nozzles were from the opposite side of the reactor vessel head.

Pictures of nozzle 66 were labeled as 49, 61, 68, and 69. Pictures of nozzle 60 were also labeled as 24, 36, 44, 56, and 67. The picture of nozzle 24 was identical to one labeled as nozzle 60, and the pictures for nozzles 56 and 67 were identical pictures. Pictures of nozzle 54 were also labeled as 33, 55, 61, 65, and 68. Nozzles in the southwest quadrant of the head were labeled as

nozzles from the northwest quadrant. Weep hole 2 was located in the northwest quadrant and was specifically called out on the tape as where the significant pile of boric acid was found. A total of 56 pictures were supplied with 4 having no nozzle designation listed and 2 having no time stamp. Out of the 50 pictures which could then be verified, only 9 had the correct nozzle designations. Out of the 41 nozzles for which pictures were to have been included, as designated by the Serial 2735 Table, pictures from only 23 different nozzles were actually provided. One of the nozzle pictures provided by the licensee was labeled as 59, but was actually nozzle 32. According to the 11RFO Diagram, nozzle 32 was within the area they identified as obscured by boric acid due to allegedly leaking flanges, yet it was included as an example of a clean nozzle (Exhibit 220, pp. 22-44; Exhibit 140, pp. 48-49).

Review of Computer File

In response to an OI subpoena, FENOC provided a CD-ROM with files prepared by SIEMASZKO, "containing digital images used in connection with the development of the table of inspection results docketed as Attachment 2 to Ser. 2735, dated October 17, 2001. These digital images were also used by Mr. GEISEN in connection with the development of Attachment 1 to Ser. 2744, dated October 30, 2001." The CD-ROM contained seven files, of which four files were labeled as the 1998 inspection results, with one of these designated as "98 insp No. 7.doc." OI's technical review of this file determined that the pictures were taken from weep holes 6 and 7, which closely corresponded to the file designation "No. 7." These weep holes are on the southwest quadrant of the head; however, the pictures from this file were labeled as nozzles from the northwest quadrant of the head (Exhibit 223, p. 1; Exhibit 140, pp. 48-50).

Review of Videotape 00-X1

Based on OI's technical review of the videotapes, several nozzles were mislabeled in Serial 2744. Specifically the pictures for nozzles 42, 19, 24, 35, and 60 were incorrect. Copies of the pictures from the transmittal were found in the system engineer's notebook with penciled-in corrections. These corrections corresponded to the same corrections determined by OI's technical review (Exhibit 140, p. 51; Exhibit 220, pp. 45-50; Exhibit 225).

Testimony

Interview of MAINHARDT

MAINHARDT recounted a discussion with SIEMASZKO, after the RVH degradation was discovered in March 2002. MAINHARDT questioned how SIEMASZKO had determined that the entire head had been inspected during 12RFO. According to MAINHARDT, SIEMASZKO

responded, "Well, I got hold of all of the videotapes, and I spent about two weeks looking at them. And I made a map out, and I plotted it all out, and I figured, well, I could see all the way around the head in all the spots, and it was free of corrosion." In MAINHARDT words, when he pointed out that "you can't possibly make that determination because our camera equipment doesn't allow you to look 360 degrees around those nozzles," SIEMASZKO responded, "Well, I just hope the NRC doesn't count up all the nozzles in those movies...they might not see them all" (Exhibit 45, pp. 85-87).

Interview of SIEMASZKO

In reviewing the method used to generate the pictures, SIEMASZKO acknowledged that he "set up the [computer] files somewhat corresponding to weep hole numbers," to the best of his ability. According to SIEMASZKO, he provided his pictures of nozzles to SHEPHERD, who was to verify the accuracy of the nozzle numbers. SIEMASZKO said he gave the pictures to SHEPHERD as soon as he finished the pictures and continued by stating, "I want to make sure that I am not fooling anybody, and I gave him the pictures for corrections." Initially when asked if he had to correct any of the pictures, SIEMASZKO stated, "Yes...on most I agree, but on one I disagree with him." SIEMASZKO then said SHEPHERD made some corrections and "in some cases I am surprised, because I accepted his numbers as corrections." When it was pointed out that SHEPHERD's corrections were not incorporated into the pictures in Serial 2744, and that OI's review concluded that SHEPHERD was correct, SIEMASZKO responded, "Shepherd was doing better..." (Exhibit 116, pp. 247, 252-256).

Agent's Analysis III-3

[redacted]

[redacted]

Conclusion

Based on the evidence developed, this investigation did substantiate that GOYAL, GEISEN, [redacted] MOFFITT, [redacted] MILLER, [redacted] SIEMASZKO, and [redacted] deliberately failed to provide complete and accurate information to the NRC in the October 30, 2001, responses (Serials 2741 and 2744) to NRC Bulletin 2001-01.

[redacted]

[redacted]

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Conclusion

[redacted]

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Allegation IV: Deliberate Failure to Provide Complete and Accurate Information in Response to an NRC Subpoena

Evidence

Document Review

Letter from Morgan Lewis dated March 7, 2003

In a March 7, 2003, letter to OI:RIII, GUTIERREZ advised OI:RIII of a concern that [redacted] withheld a videotape and possibly documentation which may have been responsive to an NRC subpoena dated June 17, 2002. GUTIERREZ explained that the basis for this concern was that several Ohio media outlets began broadcasting a videotape purporting to show attempts to remove boric acid from the RVH (Exhibit 228).

> Agent's Note: OI obtained a copy of the videotape through NRC's Public Affairs Office that was believed to have aired on or about February 19-20, 2003, on Toledo and/or Cleveland, Ohio, television stations.

Another concern raised in GUTIERREZ's March 7, 2003, letter regarded whether [redacted] withheld a copy of the RCS Engineers Notebook, System Performance Book No. 2, which included photographs of boric acid corrosion on the RVH.

> Agent's Note: Although this information was not provided as part of the response to the June 17, 2002, subpoena, it had been previously provided to the NRC during the Spring 2002 AIT inspection and no further investigation into this matter was deemed necessary.

NRC Subpoena dated June 17, 2002

On June 17, 2002, OI:RIII issued an NRC subpoena to FENOC, requesting "all records, documents or electronic media in your custody," including, in part: (1) the as-left or post-cleaning inspection of the RVH for 12RFO; (2) In-House Closed Circuit "WebTV" videotapes for April 28 and 29, 2000; and (3) all documents, including e-mails, CRs, and any Inspection Checklist attachments to 12 RFO and Davis-Besse's responses to NRC Bulletin 2001-01 for 17 named individuals [redacted].

Testimony

Interview of FEHR

Kathryn N. FEHR, Administrative Support, FENOC, was interviewed by OI:RIII and recalled that on July 3, 2002, [redacted] provided a videotape to her (understood to be the tape of the 12RFO as-left under the insulation RVH cleaning). According to FEHR, [redacted] had another video with [redacted] that [redacted] told her was "private," but she did not get a good look at the tape nor did she recall a name or date on it (Exhibit 233).

[redacted]

SUPPLEMENTAL INFORMATION

The U.S. Attorney's Office in Toledo, Ohio, was appraised of the status of this investigation during a meeting on January 17, 2003. Before a decision is made on whether prosecution of these matters are warranted, OI was requested to provide the Report of Investigation to DOJ for review after compilation and analysis of the evidence was completed.

By memorandum dated May 8, 2002, from Richard C. Paul, Director, OI:RIII Field Office, to H. Brent CLAYTON, Enforcement/Investigations Officer, RIII, a new potential allegation was transmitted that was developed from the interview of [redacted] This allegation involved [redacted]

As documented in a memorandum dated March 25, 2003, from Paul to CLAYTON, testimony from four interviewees indicated they had hesitation with raising issues to plant management or to the Ombudsman Program due to mistrust because of a past bad experience or due to already raising an issue to management and no action occurring. One of the interviewees was a QA supervisor who indicated others have come to QA with their concerns because they did not wish to go to plant management.

Also documented in the March 25, 2003, memorandum, an oral request was made to OI:RIII by GROBE, Chairman, 0350 Panel, regarding what action, if any, was taken by the Davis-Besse Ombudsman Program Coordinator following receipt of a concern by a Concerned Individual [redacted] including not recording receipt of the concern. Allan J. VANDENABEELE, Ombudsman/Employee Concerns Program Owner, Davis-Besse, acknowledged that sometime during the summer of 2002, [redacted] spoke to him for about 20-30 minutes in VANDENABEELE's office about SIEMASZKO's integrity. VANDENABEELE categorized [redacted] coming to him as [redacted] and said he was not asked by [redacted] "to proceed with any kind of a concerned investigation of any kind. [redacted] VANDENABEELE said during this conversation he made [redacted] aware that SIEMASZKO was being investigated for his activities. VANDENABEELE stated he spoke with then Vice President BERGENDAHL about

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[redacted] concern, but contended he had no further obligation to pursue it since there already was a [redacted] VANDENABEELE said he did not document his discussion with [redacted] because in his opinion, no action was required. VANDENABEELE said he records contacts in his contact log, primarily when he ends up doing something. BERGENDAHL recalled a false statement issue (not further identified) involving SIEMASZKO being investigated by a Perry investigator.

Framatome Issues

In addition to the culpability of the FENOC personnel described in this Report of Investigation, evidence was developed that certain Framatome personnel had some culpability regarding their inadequate evaluations and reviews involving the flange and RVH activities, especially when potential violations of NRC requirements existed that could have involved nuclear safety issues. For example, FYFITCH, Materials and Metallurgical Engineer, Framatome, while viewing a video clip in October/November 2001 during a break at a FENOC/NRC meeting, discovered the RVH at Davis-Besse had a lot more deposits than he previously knew and was amazed at the amount he saw on the clip. With an additional concern on the color of the boric acid, this caused him to suspect there was a good chance Davis-Besse had nozzle leakage. He said up to that point, believed to be approximately October 2001, he assumed what FENOC was telling the NRC was correct, but once he saw the video clip he changed his opinion, because with all that boric acid on the head, the nozzles could not be inspected and the "popcorn" leakage would be masked. He claimed he informed his supervisor and a licensing individual (believed to be WOLF, FENOC) at the time of the meeting, but WOLF denied recalling any such discussion. McKIM, Manager of Materials and Structural Analysis Unit, Framatome, recalled FYFITCH discussing this concern with him, but felt once FYFITCH reviewed some documents, it was no longer alarming to him.

FYFITCH said after he reviewed information from a 1993 B&W report, that if the crack initiated in 2000 and the next outage was scheduled for 2002, he no longer felt a safety concern existed. He rationalized this was because the 1993 report indicated it would take 6 years before ASME Code limits would be exceeded. FYFITCH said he was not aware that these deposits had been on the RVH since at least 1996 or before, and if he had been, then this would have escalated his level of concern. FYFITCH said the NRC did not view this clip during the meeting, but thought the NRC was given the various video clips subsequently. According to HISER, NRC was never given any video clips to view by FENOC. Of particular concern is the fact that the amount and color of the leakage caused FYFITCH to suspect there was a good chance Davis-Besse had nozzle leakage. If FYFITCH had known these deposits were from 1996 or before, this would have affected the outcome of the FENOC/NRC discussions. Further, without an NDE or other appropriate examination, it was not possible to determine whether the leakage was a critical through-wall circumferential size crack. The fact that a critical barrier that guards against the

uncontrolled release of radioactivity may have been violated and was never brought forward by any of the individuals involved would be of concern the NRC (Exhibit 234, pp. 40-41, 43-45, 48-50; Exhibit 235; Exhibit 236, pp. 4, 17-18; Exhibit 237, p. 75).

Another example was that HARRIS, Principal Engineer, Framatome, understood that the amount of leakage from the mouse holes during 12RFO was more extensive than he had seen in the past, and that the boric acid leakage was significant enough that it caused delays. This should have raised a concern to him at the time (Exhibit 50, pp. 34-36).

The final example involves David R. SCHROEDER, Equipment Lead for the Refuel and Video Equipment (formerly Field Service Technician), Framatome, who felt the amount of boric acid leakage on the RVH he observed during the 12RFO was the most he had ever seen. SCHROEDER explained that the leakage was so great that he could not get the camera into a couple of weep holes. This should have raised a concern to him at the time and action should have been taken (Exhibit 238, pp. 22, 32, 34).

However, based on a review of the contractual agreements between FENOC and Framatome, it was concluded that FENOC had ultimate responsibility. Based on the extent of the evidence developed during this investigation, there were no specific indications of wrongdoing that were identified with respect to Framatome.

The following people were interviewed by OI during the course of this investigation, but during these interviews did not provide any material information:

Charles ACKERMAN, Supervisor, QA Engineering, FENOC (Exhibit 263)

John AMBROZY, Carpenter, Day-Zimmerman Nuclear Power Systems Contractor (Exhibit 239)

Bradley J. BAUMGARDNER, Radiation Protection Health Physicist, FENOC (Exhibit 264)

Philip A. BUNKER, Master Mechanic, FENOC (Exhibit 240)

Fred CURRENCE, Field Service Engineer, Refueling Services, Framatome (Exhibit 265)

Gary V. EISCHEN, Senior Health Physics Serviceman, FENOC (Exhibit 241)

Rodney K. EMORY, Engineer, Duke Power (Exhibit 242)

Greg W. GILLESPIE, Acting Supervisor, Radiation Protection Chemistry, FENOC (Exhibit 243)

Dave GUDGER, Performance Improvement Manager (Corrective Action Owner), FENOC (Exhibit 244)

Bill HILKENS, Quality Control Inspector, FENOC (Exhibit 245)

Steve HUNT, Principal Officer, Dominion Engineering (Exhibit 246)

Lee D. KLETT, Senior Reactor Operator License Training, FENOC (Exhibit 247)

Alex KURASZ, Regional Account Manager, Framatome (Exhibit 248)

Andrea LEE, Senior Materials Engineer, NRC:NRR (Exhibit 266)

Arthur J. LEWIS, Shift Manager, Shift 5, FENOC (Exhibit 249)

Peter MAINHARDT, System Engineer, FENOC (Exhibit 267)

Alexander MARION, Director of Engineering, Nuclear Generation Division, NEI (Exhibit 268)

John MARTIN, Consultant, Martin, Sigmund Consulting Services, Inc. (Exhibit 250)

Neil MORRISON, System Engineer, Beaver Valley, FENOC (Exhibit 251)

Ronald PILLOW, CRDM Component Engineer, Framatome (Exhibit 269)

Donald R. PHILLIPS, Supervisor, ANO (Exhibit 252)

Randall L. ROSSOMME, Supervisor of Nuclear Quality Assessment, Beaver Valley, FENOC (Exhibit 253)

Robert F. SAUNDERS, President, FENOC (Exhibit 270)

Peter J. SENIUK, Inservice Inspection Engineer, FENOC (Exhibit 254)

Michael D. SHEPHERD, Senior Staff Nuclear Advisor (former Inservice Inspector), FENOC (Exhibit 271)

Joseph P. SIMON, Lead Radiation Technician, FENOC (Exhibit 255)

Virgil ST. CLAIR, Health Physics Serviceperson, FENOC (Exhibit 256)

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Terry A. TABBERT, Senior Health Physics Serviceman, FENOC (Exhibit 257)

Carl A. TIPTON, Nuclear Qualifications Instructor, FENOC (Exhibit 258)

Allan J. VANDENABEELE, Ombudsman/Employee Concerns Program Owner, FENOC (Exhibit 272)

Bobbie G. VILLINES, Jr., Component Engineer, FENOC (Exhibit 259)

Chris WAGGONER, Graphic Services Formatter, Communications Department, FENOC (Exhibit 260)

Dennis WEAKLAND, Nuclear Consultant/Engineer, Beaver Valley, FENOC (Exhibit 261)

Davis E. WHITAKER, Engineer, Piping Materials Group, Duke Energy Corporation (Exhibit 273)

Andrew S. WILSON, Superintendent, Maintenance Support, FENOC (Exhibit 149)

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LIST OF EXHIBITS

Exhibit No.	Description
1	Investigation Status Record, dated April 22, 2002 (2 pages).
2	PCAQR 94-0295, NG-NL-00802 Commitment Closeout, dated March 17, 1994 (46 pages).
3	Mod 94-0025, Request to Install Service Structure to Facilitate Cleaning and Inspections, dated May 27, 1994 (13 pages).
4	BACC Procedure, Revision 1/C1, dated March 16, 1994 (18 pages).
5	PCAQR 96-0551, Boric Acid on Rx Vessel Head, dated April 21, 1996 (36 pages).
6	PCAQR Reporting Procedure, Revision 1/C1, dated April 3, 1996 (68 pages).
7	Transcript of Interview of HALEY, dated October 23, 2002 (42 pages).
8	Licensee Notes of Interview of HALEY, dated May 21, 2002 (3 pages).
9	E-mail from JACOBSON to ULIE re: Proposed Violations, August 22, 2002 (3 pages).
10	Memorandum from DONNELLON re: Control Rod Drive Nozzle Cracking, dated May 8, 1996 (36 pages).
11	PRC Meeting History , Mod 94-0025, dated March 15, 2002 (12 pages).
12	PRG Meeting Minutes, dated April 4, 1995 (19 pages).
13	PRG Meeting Minutes, dated September 3, 1997 (29 pages).
14	PRG Meeting Minutes, dated September 1, 1998 (13 pages).
15	WSC Meeting Minutes, dated September 17, 1998 (16 pages).

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16 PRG Meeting Minutes, dated September 7, 2000 (14 pages).

17 GL 97-01, Degradation of Control Rod Drive Mechanism Nozzle and Other Vessel Closure Head Penetrations, dated April 1, 1997 (11 pages).

18 Letter from WORLEY to NRC re: additional information in response to GL 97-01, dated January 14, 1999 (67 pages).

19 B&WOG Integrated Response to GL 97-01, dated July 1, 1997 (90 pages).

20 PCAQR 1998-0649, RPV Head Boric Acid Residue, dated April 18, 1998 (5 pages).

21 PCAQR 1998-0767, Video Inspection, dated April 25, 1998, (5 pages).

22 CR 2000-1037, Accumulation of Boron in the Area of the CRD Nozzle Penetrations, dated April 17, 2000 (8 pages).

23 E-mail from GOYAL re: Oconee Feedback, dated December 13, 2000 (1 page).

24 Memorandum from SWIM to GOYAL re: Trip Report - BWOG Materials Committee Meeting, dated January 30, 2001 (3 pages).

25 Transcript of Interview of CHIMAHUSKY, dated May 20, 2002 (60 pages).

26 Transcript of Interview of GOYAL, dated May 20, 2002 (101 pages).

27 Transcript of Interview of GOYAL, dated November 21, 2002 (166 pages).

28 Transcript of Interview of HARTIGAN, dated November 20, 2002 (46 pages).

29 Licensee Notes of Interview of HARTIGAN, undated (6 pages).

30 Transcript of Interview of DONNELLON, dated October 23, 2002 (72 pages).

31 Transcript of Interview of ESHELMAN, dated October 9, 2002 (96 pages).

32 Licensee Notes of Interview of ESHELMAN, undated (5 pages).

33 Transcript of Interview of McINTYRE, dated November 20, 2002 (139 pages).

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34 Transcript of Interview of SWIM, dated October 22, 2002, (133 pages).

35 Transcript of Interview of HALEY, dated May 20, 2002 (23 pages).

36 Transcript of Interview of ROGERS, dated October 9, 2002 (62 pages).

37 Transcript of Interview of JOHNSON, dated October 23, 2002 (70 pages).

38 Licensee Notes of Interview of JOHNSON, dated May 14, 2002 (2pages).

39 Transcript of Interview of COAD, dated October 24, 2002 (78 pages).

40 Root Cause Analysis, RC-2 Packing Leak Management Issues, dated December 17, 1998 (256 pages).

41 Effectiveness Review of CR 1998-0020, dated October 27, 2000 (10 pages).

42 BACC Procedure, Revision 2, dated October 1, 1999 (23 pages).

43 BACC Training Records, dated November 18, 1999 (120 pages).

44 CR 2000-0782, Boric Acid Leakage from Weep Holes, dated April 6, 2000 (9 pages).

45 Transcript of Interview o MAINHARDT, dated May 5, 2002 (154 pages).

46 Transcript of Interview of MOLPUS, dated May 5, 2002 (70 pages).

47 12RFO Outage Log, dated March 27, 2000 (91 pages).

48 RCS Engineer's Notebook (28 pages).

49 Transcript of Interview of SIEMASZKO, dated May 19, 2002 (208 pages).

50 Transcript of Interview of HARRIS, dated July 2, 2002 (95 pages).

51 Transcript of Interview of COAKLEY, dated October 23, 2002 (93 pages).

52 Computerized Outage Log for March 28 through April 7, 2000, dated March 28, 2000 (10 pages).

53 RE Filter Change-Out History and Cause, undated (3 pages).

54 CR 1999-0510, Both REs Inoperable, dated March 30, 1999 (3 pages).

55 Mode 3/5 Walkdown Results, dated April 24, 1999 (1 page).

56 WO 99-000356-001, CRD Motor Flanges Need Inspection During May Mini-Outage, dated February 16, 1999 (6 pages).

57 Post Job Critique, Cleaning of Containment Air Coolers 1 and 2, dated July 1, 1999 (2 pages).

58 Request for Assistance, Temporary Installation of Portable Air Samplers in Containment, dated July 13, 1999 (2 pages).

59 Troubleshooting Plan for RE4597AA Low Flow, dated July 14, 1999 (6 pages).

60 CR 1999-1300, Analysis of Filter Deposits, dated July 30, 1999 (18 pages).

61 Memorandum from HOVLAND re: High Particulate Concentrations in Containment, dated September 21, 1999 (4 pages).

62 E-mail from HOVLAND re: Conversation with Rust Expert, dated September 23, 1999 (1 page).

63 Telephone Call Documentation by WUOKKO re: License Amendment Request, dated November 2, 1999 (1 page).

64 Letter from DILLE re: Review of Analysis of Particulates in Containment, dated November 2, 1999 (5 pages).

65 Memorandum from DILLE re: Particulates in Containment, dated November 5, 1999 (4 pages).

66 Davis-Besse Plant Issues, Radiation Element Action Plan, dated October 28, 1999 (3 pages).

67 Memorandum from BROUWER, Cycle 12 Periodic Assessment for SUS 079-01 Radiation Monitoring System, dated August 31, 2000 (7 pages).

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68 E-mail from PLUENE, Boric Acid Corrosion Equation, dated March 15, 2002 (1 page).

69 E-mail from DAVIS, Boric Acid Corrosion Equation, dated March 17, 2002 (1 page).

70 Transcript of Interview of CHUNG, dated October 18, 2002 (46 pages).

71 Report of Interview of HENGGE, dated July 1, 2002 (2 pages).

72 Transcript of Interview of HENGGE, dated October 16, 2002 (61 pages).

73 Transcript of Interview of HOVLAND, dated October 17, 2002 (59 pages).

74 Transcript of Interview of OTERMAT, dated October 17, 2002 (66 pages).

75 Transcript of Interview of COBBLEDICK, dated July 16, 2002 (79 pages).

76 Transcript of Interview of BERGENDAHL, dated August 29, 2002 (96 pages).

77 RWP 2000-5132, Clean Boric Acid from Rx Head, dated April 6, 2000 (24 pages).

78 WO 00-001846-000, Clean Boron Accumulation, dated April 25, 2000 (25 pages).

79 *Outage Insider*, dated April 29, 2000 (2 pages).

80 Forwarded e-mail from McLAUGHLIN with forwarded message from MATTSON, dated October 3, 2001 (1 page).

81 AR-00-OUTAG-01, QA Audit, dated July 7, 2000 (214 pages).

82 Transcript of Interview of ACKERMAN, dated May 5, 2002 (113 pages).

83 Transcript of Interview of WILLOUGHBY, dated May 14, 2002 (35 pages).

84 Report of Interview of WILLOUGHBY, dated May 16, 2002 (1 page).

85 NRC Bulletin 2001-01, Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles, dated August 3, 2001 (15 pages).

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FIELD OFFICE DIRECTOR, OFFICE OF INVESTIGATIONS, REGION III

86 Serial 2731, dated September 4, 2001 (26 pages).

87 Review and Approval Report for Serials 2731, 2735, 2741, and 2744 (12 pages).

88 E-mail from GOYAL re: meeting, dated August 11, 2001 (1 page).

89 E-mail from GOYAL re: Head Inspection, dated August 30, 2001 (1 page).

90 EWR for Service Structure Openings in 13RFO, dated August 30, 2001 (1 page).

91 E-mail from GOYAL with draft of Serial 2731, dated August 9, 2001 (4 pages).

92 E-mail from COOK with Serial 2731 version 1b, dated August 27, 2001 (26 pages).

93 Note from COOK dated August 16, 2001, with August 14, 2001, draft of Serial 2731 (9 pages).

94 E-mail from KENNEDY to COOK re: SYME Response to NRC Bulletin 2001-01 paragraph 1.d, dated August 9, 2001 (4 pages).

95 E-mail from GOYAL re: Bulletin Response, dated August 9, 2001 (3 pages).

96 E-mail from COOK re: New Draft on CRDM Cracking, dated August 20, 2001 (18 pages).

97 E-mail from COOK re: Serial 2731 Revisited, dated August 22, 2001 (25 pages).

98 E-mail from COOK with Advanced Copy of Serial 2731, dated August 23, 2001 (25 pages).

99 E-mail from COOK re: GOYAL's and DAFT's Comments Incorporated, dated August 23, 2001 (22 pages).

100 E-mails with Drafts of Serial 2731, dated August 24, 2001 (26 pages).

101 E-mail from COOK re: Serial 2731 Version 1e, dated August 28, 2001 (27 pages).

102 E-mail from COOK re: Serial 2731 Bulletin 2001-01 Response (New Expansion discussion), dated August 29, 2001 (27 pages).

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103 E-mail from COOK, re: Draft 2731 Version 1g-ANO.pdf, dated August 29, 2001 (26 pages).

104 Draft Serial 2731, dated September 4, 2001 (25 pages).

105 Draft 2731 version 1k, dated September 4, 2001 (26 pages).

106 E-mail from COOK re: Revised Response Incorporating Guy's Comments, version 1j, dated September 4, 2001 (27 pages).

107 E-mail from COOK re: Serial 2731 Final for Review, dated September 4, 2001 (27 pages).

108 Transcript of Interview of COOK, dated October 4, 2002 (157 pages).

109 Letter from Entergy to NRC, ANO Response to NRC Bulletin 2001-01, dated September 4, 2001 (31 pages).

110 August 23, 2001, e-mail from COOK re: August 22, 2001, draft of Serial 2731 with GOYAL's comments (26 pages).

111 Transcript of Interview of CAMPBELL, dated October 29, 2002 (86 pages).

112 Transcript of Interview of LOCKWOOD, dated October 10, 2002 (112 pages).

113 Transcript of Interview of MILLER, dated October 22, 2002 (120 pages).

114 Transcript of Interview of WUOKKO, dated October 10, 2002 (89 pages).

115 Transcript of Interview of GEISEN, dated October 29, 2002 (186 pages).

116 Transcript of Interview of SIEMASZKO, dated April 17, 2003 (330 pages).

117 Transcript of Interview of McLAUGHLIN, dated October 31, 2002 (166 pages).

118 Transcript of Interview of MOFFITT, dated October 29, 2002 (127 pages).

119 BACC Procedure, Revision 1/C2, dated October 18, 1996 (21 pages).

120 PCAQR 93-0132, 8RFO Flange Inspection, dated March 13, 1993 (46 pages).

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FIELD OFFICE DIRECTOR, OFFICE OF INVESTIGATIONS, REGION III

121 PCAQR 94-0912, Results of CRDM Leakage Video Inspection, dated October 10, 1994 (8 pages).

122 Memorandum from CHIMAHUSKY to Outage Management/Outage Control, CRD Video Inspection, dated April 17, 1998 (1 page).

123 Mid-Cycle Outage Preparation Documents, dated April 25, 1999 (58 pages).

124 WO 99-000356-000, CRD Motor Flanges Need Inspection and Possible Repair During May Mini-Outage (Voided), dated April 23, 1999 (7 pages).

125 *Outage Insider*, CRD Maintenance, dated April 12, 2000 (1 pages).

126 July 3, 2002, Letter from FENOC, Initial Response to June 17, 2002, Subpoena (8 pages).

127 Letter from GUZA, Work Repair Documents for Flange Repair in 12RFO, dated August 27, 2002 (3 pages).

128 E-mail with Restart Readiness Review Notes, dated May 10, 2000 (3 pages).

129 E-mail from FYFITCH, CRDM Operability Discussions with PILLOW, dated May 10, 2000 (2 pages).

130 E-mail dated June 22, 2001, with Executive Meeting Minutes for June 6, 2001, B&WOG Meeting (12 pages).

131 Memorandum from GOYAL re: Mode 5 RVH Inspection Recommendations, dated June 27, 2001 (4 pages).

132 E-mail from GOYAL, Plant-Specific Data Verification, dated July 10, 2001 (6 pages).

133 E-mail from KENNEDY re: MRP Draft Response, dated August 8, 2001 (6 pages).

134 E-mail from GOYAL re: Mode 5 JCO, dated August 13, 2001 (1 page).

135 E-mail from HUNT re: Memorandum on Davis-Besse Head Inspection, dated August 14, 2001 (2 pages).

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FIELD OFFICE DIRECTOR, OFFICE OF INVESTIGATIONS, REGION III

136 E-mail from GOYAL re: NRC 2001-01, dated August 17, 2001 (1 page).

137 Report of Interview of GOYAL, dated March 5, 2003 (1 page).

138 E-mail from COOK with Draft Response to Bulletin 2001-01, August 20, 2001 (1 page).

139 E-mail from GOYAL re: 12RFO RV Head Inspection - Bulletin 2001-01 Response, dated August 22, 2001 (1 page).

140 Inspection Media Review, dated August 13, 2003 (51 pages).

141 Draft Serial 2731, dated August 22, 2001 (24 pages).

142 Transcript of Interview of CHIMAHUSKY, dated October 23, 2002 (64 pages).

143 Report of Interview of MAINHARDT, dated June 5, 2002 (2 pages).

144 Report of Interview of CUNNINGS, dated September 19, 2002 (2 pages).

145 E-mail from GOYAL re: Serial 2731 Version 1b, dated August 27, 2001 (1 page).

146 Handout from B&WOG Executive Committee Meeting, Head Replacement, dated June 6, 2001 (5 pages).

147 E-mail from FYFITCH re: NRC Bulletin 2001-01 Responses, dated August 21, 2001 (34 pages).

148 E-mail from GOYAL re: Framatome Response for NRC Bulletin, dated August 21, 2001 (31 pages).

149 Transcript of Interview of WILSON, dated October 17, 2002 (47 pages).

150 E-mail from HISER re: Staff Assessment of NRC 2001-01 Responses, dated September 28, 2001 (3 pages).

151 E-mail from MILLER re: NRC Bulletin and Inspection, dated September 28, 2001 (1 page).

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FIELD OFFICE DIRECTOR, OFFICE OF INVESTIGATIONS, REGION III

152 MILLER Handwritten Notes on SHERON Contact, dated September 28, 2001 (3 pages).

153 E-mail from WUOKKO re: CEOG Meeting on Bulletin, dated September 4, 2001 (2 pages).

154 List of meetings attended by HUSTON with some notes attached, dated November 6, 2002 (18 pages).

155 Transcript of Interview of HUSTON, dated November 6, 2002 (68 pages).

156 E-mail from WUOKKO re: Oconee Meeting Notes, dated September 8, 2001 (1 page).

157 E-mail from WUOKKO re: Oconee Meeting, dated September 10, 2001 (2 pages).

158 E-mail from WUOKKO re: Oconee Meeting Notes, dated September 10, 2001 (4 pages).

159 Notes from NRC-Duke Meeting, dated September 7, 2001 (4 pages).

160 E-mail from GOYAL re: Notes from NRC/Duke Meeting, dated September 11, 2001 (4 pages).

161 E-mail from COOK re: Oconee NRC Meeting, dated September 10, 2001 (1 page).

162 Tech Spec White Paper on Pressure Boundary Leakage, dated November 15, 2001 (4 pages).

163 Transcript of Interview of GIBBS, dated June 18, 2002 (79 pages).

164 Letter from GIBBS re: CRDM Nozzle Cracking Issues and NRC Bulletin 2001-001, dated September 14, 2001 (5 pages).

165 E-mail from HISER re: Summary of Staff Review of Bulletin Responses, dated September 18, 2001 (5 pages).

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FIELD OFFICE DIRECTOR, OFFICE OF INVESTIGATIONS, REGION III

166 Framatome Engineering Information Record re: RVH Nozzle and Weld Safety Assessment, dated September 28, 2001 (56 pages).

167 E-mail from WUOKKO to NRC re: Bulletin 2001-01, dated October 1, 2001 (1 page).

168 E-mail from WUOKKO re: Bulletin 2001-01, dated October 1, 2001 (1 page).

169 MILLER's Handwritten Notes, dated October 1, 2001 (1 page).

170 E-mail from WUOKKO re: Insights into NRC's Position, dated October 2, 2001 (2 pages).

171 MILLER's Handwritten Notes re: Meeting in LOCKWOOD's Office, dated October 2, 2001 (1 page).

172 MILLER's Handwritten Notes re: Various Industry/Plant Talks, dated October 2, 2001 (2 pages).

173 E-mail from GOYAL re: Table Showing Heat# and Location for Cracked Nozzles, dated October 2, 2001 (3 pages).

174 E-mail from GOYAL re: Oconee 3 CRDM Nozzle Cracking, dated March 26, 2001 (1 page).

175 Fax Cover Sheet from LOCKWOOD re: NRC Bulletin 2001-01, dated October 2, 2001 (1 page).

176 MILLER's Handwritten Notes re: Telecon Prep Mtg, dated October 2, 2001 (2 pages).

177 Drafts of Discussion Agenda, dated October 3, 2001 (6 pages).

178 E-mail from COOK re: Revised Agenda for NRC Conference Call, dated October 3, 2001 (5 pages).

179 August 8, 2001, E-mail from GOYAL re: Table of Key Plant RPV Head Nozzle Parameters Submitted to NRC on July 16, 2001 (6 pages).

180 E-mail from GOYAL re: Nozzle Gaps, dated October 3, 2001 (1 page).

NOT FOR PUBLIC DISCLOSURE WITHOUT APPROVAL OF
FIELD OFFICE DIRECTOR, OFFICE OF INVESTIGATIONS, REGION III

181 Conference Call Notes, dated October 3, 2001 (5 pages).

182 MILLER's Handwritten Notes from NRC Telecon, dated October 3, 2001 (4 pages).

183 MILLER's Handwritten Notes, dated October 3 to 22, 2001 (18 pages).

184 E-mail from McLAUGHLIN re: Photo of the Crystal River VHP indication, dated October 3, 2001 (4 pages).

185 E-mail from SLOCUM re: CRDM Photos, dated February 20, 2001 (4 pages).

186 E-mail from GOYAL re: Oconee 3 Inspection, dated October 3, 2001 (1 page).

187 E-mail from LESSY re: Contact with Commissioner DYCUS' Office (LESSY's Comments Privileged and Redacted), dated October 4, 2001 (1 page).

188 Notes of Conference Call, dated October 5, 2001 (3 pages).

189 SIA Calculation Package - Finite Element Gap Analysis of CRDM Penetrations, dated October 8, 2001 (36 pages).

190 E-mail from COOK re: USRB Circ Cracking Issue Presentation Revised, dated October 9, 2001 (5 pages).

191 List of Attendees from Meeting to Finalize Presentation for Commissioners' TAS, dated October 10, 2001 (23 pages).

192 Final Version of Slides Provided to Senator VOINOVICH's Staff, dated October 10, 2001 (35 pages).

193 Final Version of Slides Provided to the Commissioners' TAs, dated October 11, 2001 (18 pages).

194 Commissioners' TAs Briefing Notes, dated October 11, 2001 (4 pages).

195 Transcript of Interview of KILLIAN, dated July 23, 2002 (44 pages).

196 E-mail from COOK re: Serial 2735, Supplemental Info, dated October 11, 2001 (6 pages).

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FIELD OFFICE DIRECTOR, OFFICE OF INVESTIGATIONS, REGION III

197 E-mail from COOK re: Serial 2735 Additions, dated October 12, 2001 (6 pages).

198 Letter from WORLEY, Serial 2735, dated October 17, 2001 (111 pages).

199 E-mail from LOCKWOOD re: Contact with ZWOLINSKI, dated October 12, 2001 (1 page).

200 E-mail from COOK re: Serial 2735, dated October 15, 2001 (7 pages).

201 E-mail from COOK re: Serial 2735, Rev. b, dated October 15, 2001 (7 pages).

202 E-mail from RISHEL with Risk Assessment for CRDM Nozzle Cracks, dated October 15, 2001 (26 pages).

203 E-mail from COOK re: Draft Supplemental Response, dated October 16, 2001 (7 pages).

204 E-mail from COOK re: Latest Draft of Serial 2735, dated October 16, 2001 (7 pages).

205 E-mail from COOK re: New Description of Past Inspections, dated October 16, 2001 (2 pages).

206 E-mail from COOK re: Serial 2735 Supplemental Response, dated October 16, 2001 (8 pages).

207 E-mail from BYRD re: Risk Assessment of CRDM Nozzle Cracks, dated October 16, 2001 (27 pages).

208 Draft of 2735, dated October 17, 2001 (19 pages).

209 E-mail from PICKETT re: WUOKKO's e-mails, dated October 17, 2001 (1 page).

210 Documentation of Telephone Calls and e-mails between PICKETT and WUOKKO, dated October 16-18, 2001 (7 pages).

211 October 19, 2001, e-mail from WUOKKO forwarding PICKETT's October 17, 2001, e-mail (1 page).

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212 E-mail from WUOKKO re: Summary, dated October 17, 2001 (3 pages).

213 Draft of 2735, dated October 17, 2001 (21 pages).

214 E-mail from SIEMASZKO re: Nozzle Inspection Table, dated October 17, 2001 (4 pages).

215 Report of Interview of SIEMASZKO, dated April 30, 2003 (12 pages).

216 PowerPoint Slide Presentation on PWSCC, dated October 28, 2001 (46 pages).

217 Bare Head Visual Examination Results, from McLAUGHLIN's files, undated (2 pages).

218 E-mail from LOCKWOOD re: Procurement of Nuclear Fuel, dated November 16, 2001 (2 pages).

219 Letter from ZWOLINSKI re: DB Response to NRC Bulletin, dated December 4, 2001 (4 pages).

220 Letter from FENOC, Serial 2744, dated October 30, 2001 (53 pages).

221 WUOKKO's Documentation of Telephone Call re: Mtg re: NRC 2001-01, RVHP CRDM Nozzle Circumferential Cracking and Obtaining NRC Crack Growth Rate, dated October 15, 2001 (3 pages).

222 Report of Interview of MAINHARDT, dated March 20, 2003 (3 pages).

223 Letter from Morgan Lewis, dated September 11, 2002 (4 pages).

224 Pictures of Nozzles from 12RFO from DAFT, dated October 17, 2001 (1 page).

225 Pictures from System Engineer's Notebook with pencilled-in corrections, plus DAFT's pictures (3 pages).

226 Transcript of Interview of DAFT, dated September 18, 2002 (27 pages).

227 Serial 2741, dated October 30, 2001 (30 pages).

228 Letter from Morgan Lewis, dated March 7, 2003 (4 pages).

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229 NRC Subpoena, dated June 17, 2002 (4 pages).

230 NRC Subpoena, dated March 18, 2003 (2 pages).

231 Letter from GARDE, dated April 1, 2003 (3 pages).

232 Letter from Morgan Lewis, dated May 1, 2003 (10 pages).

233 Report of Interview of FEHR, dated March 26, 2003 (1 page).

234 Transcript of Interview of FYFITCH, dated July 10, 2002 (83 pages).

235 Report of Interview of HISER, dated November 7, 2002 (3 pages).

236 Transcript of Interview of McKIM, dated July 24, 2002 (31 pages).

237 Transcript of Interview of WOLF, dated October 17, 2002 (121 pages).

238 Transcript of Interview of SCHROEDER, dated July 23, 2002 (88 pages).

239 Transcript of Interview of AMBROZY, dated October 15, 2002 (48 pages).

240 Transcript of Interview of BUNKER, dated October 16, 2002 (26 pages).

241 Transcript of Interview of EISCHEN, dated September 18, 2002 (24 pages).

242 Transcript of Interview of EMORY, dated June 13, 2002 (91 pages).

243 Transcript of Interview of GILLESPIE, dated October 15, 2002 (63 pages).

244 Report of Interview of GUDGER, dated September 18, 2002 (2 pages).

245 Report of Interview of HILKENS, dated September 17, 2002 (1 page).

246 Report of Interview of HUNT, dated September 12, 2002 (2 pages).

247 Transcript of Interview of KLETT, dated October 16, 2002 (34 pages).

248 Report of Interview of KURASZ, dated August 1, 2002 (3 pages).

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FIELD OFFICE DIRECTOR, OFFICE OF INVESTIGATIONS, REGION III

229 NRC Subpoena, dated June 17, 2002 (4 pages).

230 NRC Subpoena, dated March 18, 2003 (2 pages).

231 Letter from GARDE, dated April 1, 2003 (3 pages).

232 Letter from Morgan Lewis, dated May 1, 2003 (10 pages).

233 Report of Interview of FEHR, dated March 26, 2003 (1 page).

234 Transcript of Interview of FYFITCH, dated July 10, 2002 (83 pages).

235 Report of Interview of HISER, dated November 7, 2002 (3 pages).

236 Transcript of Interview of McKIM, dated July 24, 2002 (31 pages).

237 Transcript of Interview of WOLF, dated October 17, 2002 (121 pages).

238 Transcript of Interview of SCHROEDER, dated July 23, 2002 (88 pages).

239 Transcript of Interview of AMBROZY, dated October 15, 2002 (48 pages).

240 Transcript of Interview of BUNKER, dated October 16, 2002 (26 pages).

241 Transcript of Interview of EISCHEN, dated September 18, 2002 (24 pages).

242 Transcript of Interview of EMORY, dated June 13, 2002 (91 pages).

243 Transcript of Interview of GILLESPIE, dated October 15, 2002 (63 pages).

244 Report of Interview of GUDGER, dated September 18, 2002 (2 pages).

245 Report of Interview of HILKENS, dated September 17, 2002 (1 page).

246 Report of Interview of HUNT, dated September 12, 2002 (2 pages).

247 Transcript of Interview of KLETT, dated October 16, 2002 (34 pages).

248 Report of Interview of KURASZ, dated August 1, 2002 (3 pages).

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FIELD OFFICE DIRECTOR, OFFICE OF INVESTIGATIONS, REGION III

249 Transcript of Interview of LEWIS, dated July 16, 2002 (73 pages).

250 Transcript of Interview of MARTIN, dated October 15, 2002 (57 pages).

251 Transcript of Interview of MORRISON, dated October 18, 2002 (49 pages).

252 Transcript of Interview of PHILLIPS, dated June 27, 2002 (58 pages).

253 Transcript of Interview of ROSSOMME, dated October 9, 2002 (79 pages).

254 Transcript of Interview of SENIUK, dated October 18, 2002 (70 pages).

255 Transcript of Interview of SIMON, dated September 18, 2002 (27 pages).

256 Transcript of Interview of ST. CLAIR, dated October 16, 2002 (43 pages).

257 Transcript of Interview of TABBERT, dated September 18, 2002 (34 pages).

258 Transcript of Interview of TIPTON, dated September 18, 2002 (61 page).

259 Transcript of Interview of VILLINES, dated May 6, 2002 (36 pages).

260 Report of Interview of WAGGONER, dated September 17, 2002 (1 page).

261 Transcript of Interview of WEAKLAND, dated April 21, 2003 (49 pages).

262 Transcript of Interview of LISKA, dated September 18, 2002 (22 pages).

263 Report of Interview of ACKERMAN, dated May 5, 2002 (1 page).

264 Transcript of Interview of BAUMGARDNER, dated October 16, 2002 (44 pages).

265 Report of Interview of CURRENCE, dated August 1, 2002 (1 page).

266 Report of Interview of LEE, dated November 7, 2002 (3 pages).

267 Report of Interview of MAINHARDT, dated July 5, 2002 (1 page).

268 Transcript of Interview of MARION, dated November 5, 2002 (51 pages).

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269 Transcript of Interview of PILLOW, dated July 2, 2002 (43 pages).

270 Transcript of Interview of SAUNDERS, dated November 12, 2002 (50 pages).

271 Transcript of Interview of SHEPHERD, dated October 24, 2002 (63 pages).

272 Transcript of Interview of VANDENABEELE, dated October 16, 2002 (45 pages).

273 Transcript of Interview of WHITAKER, dated July 1, 2002 (66 pages).

274 Allegation Summary Table (1 page).

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EXHIBIT 2

(To David Geisen's Motion To Compel
The Production, Or Alternatively The In Camera
Inspection, Of An Unredacted Copy Of The Office
Of Investigation's Report Dated August 22, 2003)

10 C.F.R. 2.336(b)(5) DELIBERATIVE PROCESS PRIVILEGE LOG

Date	Bates Begin	Bates End	Full Name	Author(s)	Description
To Be Determined	00159	00160	Memo: Review of Two Emails from a Concerned Individual: (AITS S02-2252) (RIII-2002-A-0107 Davis-Besse) UNREDACTED		
To Be Determined	01649	01665	Draft Receipt of New Allegation RIII-2003-A-0005UNREDACTED		Contains preliminary discussion of allegations
??/??/2001	19998	20001	Risk Informed Evaluation with Handwritten Notes UNREDACTED		Hand-written notes withheld.
10/12/2001	19946	19946	Email: CRAM's	Roberts	Email from OCM to EDO
10/14/2001	19808	19864	Commissioners' Technical Assistants Brief with Handwritten NotesUNREDACTED	Nuclear Regulatory Commission	Handwritten notes withheld
10/24/2001	19963	19982	FENOC Slides- with Handwritten Notes	First Energy Nuclear Operating Company	Handwritten notes withheld
11/??/2001	20002	20027-1	FENOC Slides with Handwritten Notes UNREDACTED	First Energy Nuclear Operating Company	Handwritten notes withheld

Date	Bates Begin	Bates End	Full Name	Author(s)	Description
11/14/2001	19983	19997	FENOC Slides- with Handwritten Notes UNREDACTED	First Energy Nuclear Operating Company	Handwritten notes withheld
11/21/2001	19875	19895	Issuance of Order Regarding Response to NRC Bulletin 2001-01 with Handwritten Notes	Nuclear Regulatory Commission	Notes withheld
11/21/2001	19896	19916	Issuance of Order Regarding Response to NRC Bulletin 2001-01	Nuclear Regulatory Commission	Notes withheld
06/25/2002	NRC029-1076	NRC029-1078	LLTF Record of Interview Pete MainhardtUNREDACTED		Portions redacted--Deliberative Process Privilege
06/26/2002	NRC029-1118	NRC029-1121	LLTF Record of Interview Kevin ZellersUNREDACTED		Portions redacted--Deliberative Process Privilege
07/01/2002	NRC029-1088	NRC029-1089	LLTF Record of Interview Steve Moffitt		Portions redacted--Deliberative Process Privilege
10/02/2002	02055	02056	Review of Documents from Davis-Besse 0350 Meeting (Davis-Besse) (AMS RIII-2002-A-0060), (AITS S02-2344)	J. Gavula	Discusses proposals for disposition of allegations

Date	Bates Begin	Bates End	Full Name	Author(s)	Description
01/30/2003	01629	01648	Receipt of New Allegation RIII-2003-A-0005UNREDACTED	A. Kock	Contains preliminary discussion of allegations
01/31/2003	01528	01548	Revisions to Package RIII-2003-A-0005UNREDACTED		Contains editing for write-up of concerns associated with this allegation
02/14/2003	00024	00028	Memo from J. Heller to C. Lipa Re Review of Congressional Document Submitted by Congress as Part of 2.206 Petition for AMS Case File No. RIII-2003-A-0014 (Davis-Besse) UNREDACTED	J. Heller	
03/17/2003	01459	01460	Email from AKock to CLipa, MPhillips	A. Kock	Discusses personal opinions of how to close out concerns
03/21/2003	01467	01467	Email from Phillips M to AKock, JHeller	M. Phillips	Discusses results of 0350 panel and how to proceed
04/07/2003	02027	02031	Follow-Up Allegation Plan UNREDACTED	C. Pederson	
06/10/2003	00870	008701	Memo from M. Phillips to A. Kock and J. Heller Re: Closure of Concern 3 in RIII-2002-A-0072 (Davis-Besse) UNREDACTED	M. Phillips	

Date	Bates Begin	Bates End	Full Name	Author(s)	Description
06/11/2003	00460	00462	Memo to J. Heller from D. Hills Subj: Review of OI Report for Allegation No. RAII-2003-A-0030 UNREDACTED	D. Hills	
07/10/2003	02520	02537	Davis-Besse Preliminary Investigation Findings Review for Immediate Enforcement Action	B. Clayton	Discusses Review process and Charter for Review Team-schedule for deliberation
07/21/2003	02485	02508	Results of Davis Besse Enforcement Briefing	J. Grobe	Email Summary of task force presentation that provided advice to senior agency management on whether each individual represents a concern to the Nuclear Regulatory Commission. Also included as an Attachment to the email is the power point presentation

Date	Bates Begin	Bates End	Full Name	Author(s)	Description
07/23/2003	02453	02484	Davis-Besse Investigation Results Review Team Report on Charter Phase 1 Tasks	B. Clayton, L. Clark	Report of task force that provided advice to senior agency management on whether each individual represents a concern to the Nuclear Regulatory Commission
07/23/2003	32037	32072	Memorandum; Subject: Davis-Besse Investigation Results Review Team: Report on Charter 1 Tasks	B. Clayton	Provides a status report of Phase I of the investigation along with enforcement action recommendations
08/22/2003	30235	30468	OI Report of Investigation (ROI): Davis-Besse Nuclear Power Plant	Nuclear Regulatory Commission	Agent's Analysis Withheld
09/08/2003	00695	00702	Attachment to 00693: Memo to J. Dyer from R. Paul "Davis-Besse Nuclear Power Plant: NRR and Allegation Issues"		Discussion of Merits of Several Allegations
09/08/2003	00852	00860	Memo to J. Dyer from R. Paul "Davis-Besse Nuclear Power Plant: NRR and Allegation Issues"		Discussion of Merits of Several Allegations
11/03/2003	00684	00689	Memo to A. Kock from C. Lipa "Review of September 8, 2003 Memorandum from OI; Davis Besse Nuclear Power Plant"	A. Kock	Discussion of Merits of Several Allegations

Date	Bates Begin	Bates End	Full Name	Author(s)	Description
11/03/2003	00843	00848	Memo to A. Kock from C. Lipa "Review of September 8, 2003 Memorandum from OI; Davis Besse Nuclear Power Plant"		Discussion of Merits of Several Allegations
11/03/2003	02178	02183	Memo from C. Lipa to A. Kock: Review of September 8, 2003 Memo from OI UNREDACTED	C. Lipa	
11/03/2003	02419	02426	Review of September 8, 2003 Memorandum from OI -02419	A. Kock	Discusses merits of allegations
11/14/2003	02442	02452	Davis-Besse Investigation Results Review Team Phase 2 (Power POINT Presentation)	B. Clayton, M. Zobler	PowerPoint slide show presentation of task force that provided advice to senior agency management on legal/policy ramifications of going forward with individual actions
12/10/2003	02429	02438	Davis-Besse Investigation Results Review Team: Report on Charter Phase 2 Tasks	B. Clayton, M. Zobler	Recommendations of task force that provided advice to senior agency management on legal/policy ramifications of going forward with individual actions

Date	Bates Begin	Bates End	Full Name	Author(s)	Description
12/10/2003	32073	32081	Memorandum; Subject: Davis-Besse Investigation Results Review Team: Report on Charter Phase 2 Tasks	B. Clayton	Provides a status report of the investigation along with enforcement action recommendations
06/09/2004	00217	0220	Allegation Action Plan RI-2004-A-0058 UNREDACTED		
??/??/2005	02512	02519	Preliminary Notes on Individual Enforcement Actions		Discusses names of individuals possibly subject to individual actions and merits of the case against each
??/??/2005	04821	04821	Notes of Potential Individual Actions	Office of Enforcement	Preliminary notes regarding individual enforcement actions
04/13/2005	04726	04766	SECY-05-0060 for the Commissioners; Subject: Proposed $5,450,000 Civil Penalty to FENOC Concerning Violations at DBNPS	L. Reyes	Consultation with the Commission regarding proposed Notice of Violation and issuance of a civil penalty

Date	Bates Begin	Bates End	Full Name	Author(s)	Description
04/13/2005	31911	31916	Memorandum for the Commissioners Subject: Proposed $5,450.000 Civil Penalty to FirstEnergy Nuclear Operating Company Concerning Violations at Davis-Besse Nuclear Power Station	Luis A. Reyes, Executive Director for Operations (signed by Ellis W. Merschoff, Acting For)	Consultation with the Commission prior to issuance of civil penalty
04/19/2005	31897	31910	Presentation: Enforcement Action, Davis-Besse Nuclear Power Plant Degraded Reactor Vessel Head at Commission Meeting	Office of Enforcement	Briefing the Commission regarding proposed civil penalty
06/14/2005	04767	04769	Memorandum; Subject Supplemental SRM-discussion of Enforcement Issue	A. Vietti-Cook	Provides Commission recommendations regarding DBNPS enforcement issues
06/14/2005	31923	31925	Supplemental Staff Requirements--discussion of Enforcement Issue	A. Vietti-Cook	Suggestions to Staff regarding implementation of enforcement action

Date	Bates Begin	Bates End	Full Name	Author(s)	Description
08/18/2005	04839	04872	SDP/Enforcement Panel Worksheet (Draft)	Office of Enforcement	Outlines internal Nuclear Regulatory Commission deliberations regarding potential enforcement actions
08/26/2005	00827	00828	Email from M. Phillips to Oac3 Closure of Concern 1 to Case File RAII-2002-A-0072 (Closes All Concerns)UNREDACTED		Contains handwritten note Comments/Questions on closure language
09/09/2005	04873	04937	Commission Paper (Draft); Subject: Proposed Severity Level I Notices and Violation Orders Banning Involvement in NRC-Licensed Activities for Former Davis-Besse Employees for Deliberate Failure to Provide Complete and Accurate Information	L. Reyes	Consultation with the Commission regarding the imposition of Severity Level I violations
10/03/2005	04960	04961	Meeting Notes from Discussion of Davis-Besse Enforcement Actions Against Individuals	Nuclear Regulatory Commission Staff	Discusses and provides recommendations regarding subpoenaed documents and enforcement actions

Date	Bates Begin	Bates End	Full Name	Author(s)	Description
10/07/2005	04962	04966	Summary Regarding Updated Davis-Besse for Individual	Nuclear Regulatory Commission Staff	Provides, and discusses pros and cons of enforcement schedule
10/24/2005	04773	04775	Memorandum; Subject Need for Additional Time to Complete DBNPS Enforcement Actions	L. Reyes	Advises Commission on need for additional time for enforcement actions
11/07/2005	31926	31928	Staff Requirements Memorandum COMSECY-05-0050	A.. Vietti-Cook	Suggestions to Staff regarding steps to be taken in case enforcement action is delayed
11/16/2005	04776	04776	Memorandum; Subject Staff Requirements--COMSECY-05-0050- Need for Additional Time to Complete Davis-Besse Enforcement Actions	A. Vietti-Cook	Disapproval of Staff request for additional time and request for additional information if circumstances change
12/08/2005	31929	31930	SDP/EA Request & Strategy Form	Region III Enforcement Panel	Provides Enforcement Panel's recommendations regarding action against a DBNPS employee

Date	Bates Begin	Bates End	Full Name	Author(s)	Description
01/17/2006	05010	05011	SDP/EA Request and Strategy Form, EA 05-182, Number 2	Nuclear Regulatory Commission Staff	Provides recommendations regarding future enforcement action

EXHIBIT 3

(To David Geisen's Motion To Compel
The Production, Or Alternatively The In Camera
Inspection, Of An Unredacted Copy Of The Office
Of Investigation's Report Dated August 22, 2003)

10 C.F.R. 2.336(b)(5) PERSONAL PRIVACY PRIVILEGE LOG

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
To Be Determined	00180	00181	Concerns/Closure Information for RIII-2004-A-0058 (Davis-Besse)		
To Be Determined	03847	03849	Tracking Sheet and Summaries Re: Allegation AMS No. RAII-02-A-0105		
To Be Determined	NRC026-0001	NRC026-0103	Personnel File		
To Be Determined	NRC027-2611	NRC027-2622	Report of Investigation Concerning Condition Report #2000-1037		
To Be Determined	NRC032-2900	NRC032-2900	Personnel Record		
To Be Determined	NRC032-2904	NRC032-2904	Personnel Action		
To Be Determined	NRC032-2908	NRC032-2908	Personnel Action		
To Be Determined	NRC032-2912	NRC032-2912	Personnel Action		
To Be Determined	NRC032-2916	NRC032-2916	Personnel Action		
To Be Determined	NRC032-2920	NRC032-2920	Personnel Action		
To Be Determined	NRC032-2924	NRC032-2924	Personnel Action		
To Be Determined	NRC032-2928	NRC032-2928	Personnel Action		

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
To Be Determined	NRC032-2932	NRC032-2932	Personnel Action		
To Be Determined	NRC032-2933	NRC032-2933	Employee Performance		
To Be Determined	NRC032-2936	NRC032-2936	Personnel Action		
To Be Determined	NRC032-2940	NRC032-2940	Personnel Action		
To Be Determined	NRC032-2944	NRC032-2944	Personnel Action		
To Be Determined	NRC032-2948	NRC032-2948	Personnel Action		
To Be Determined	NRC032-2950	NRC032-2950	Personnel Record		
To Be Determined	NRC032-2952	NRC032-2952	Personnel Action		
To Be Determined	NRC032-2957	NRC032-2958	Personnel Action		
Not Applicable	15131	15145	Various DB Work Résumés		
04/01/1996	NRC028-1340	NRC028-1722	Andrew Siemaszko Personnel File ANO		
03/01/1998 to 03/01/2002	NRC032-2901	NRC032-2901	Employee Performance		

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
03/09/1998	NRC032-0014	NRC032-0027	Training Workshop Completion Record Course Name RSC Mis 98-01 (RP Servicemen 1st Trimester 1998xxxx Continuing Training)		
06/22/1998 to 03/01/2002	NRC032-2899	NRC032-2899	Personnel Records		
08/27/1998	NRC032-0297	NRC032-0297	Training/Workshop Completion Record Course Name Title TSM-b5-6 Chemistry Fundamentals		
06/25/1999	NRC032-0296	NRC032-0296	Training/Workshop Completion Record Course Name Title Chemistry Fundamentals		
07/23/1999	NRC032-0295	NRC032-0295	Training/Workshop Completion Record Course Name Title Chemistry Fundamentals		
09/20/1999	NRC032-0294	NRC032-0294	Training/Workshop Completion Record Activity Code (Program Course) TSM-b55/TSM-856		
11/18/1999	NRC032-0260	NRC032-0260	Training/Workshop Completion Record Course Name: Est General Continuing Training Cycle 99-04		
11/23/1999	NRC032-0261	NRC032-0261	Training/Workshop Completion Record Course Name: Est Cycle 99-04 Pilot		
12/06/1999	NRC032-0262	NRC032-0264	Scheduling Training Information Management Systems Attendance Sheet from 19991206 to 19991206 0800-1500		

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
12/07/1999	NRC032-0289	NRC032-0289	Training/Workshop Completion Record Course Name: Est Cycle 99-04		
12/09/1999	NRC032-0265	NRC032-0267	Scheduling Training Information Management Systems Attendance Sheet from 19991209 to 19991209 0800 - 1500		
12/10/1999	NRC032-0268	NRC032-0269	Est Cycle 99-04 Continuing Training		
12/10/1999	NRC032-0271	NRC032-0271	Scheduling Training Information Management Systems Attendance Sheet from 19991210 to 19991210 0800 - 1500		
12/10/1999	NRC032-0288	NRC032-0288	Training/Workshop Completion Record Course Name: Est Cycle 99-04		
12/13/1999	NRC032-0277	NRC032-0279	Est Cycle 99-04 Continuing Training		
12/13/1999	NRC032-0287	NRC032-0287	Training/Workshop Completion Record Course Name: Est Cycles 99-04 General Continuing Training		
12/15/1999	NRC032-0270	NRC032-0270	Scheduling Training Information Management Systems Attendance Sheet from 19991209 to 19991209 0800 - 1500		
12/15/1999	NRC032-0272	NRC032-0273	Scheduling Training Information Management Systems Attendance Sheet from 19991214 to 19991214 0800 - 1500		
12/15/1999	NRC032-0274	NRC032-0275	Scheduling Training Information Management Systems Attendance Sheet from 19991215 to 19991215 0800 - 1500		

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
12/15/1999	NRC032-0276	NRC032-0276	Scheduling Training Information Management Systems Attendance Sheet from 19991215 to 1991215 0800 - 1500		
12/15/1999	NRC032-0286	NRC032-0286	Training/Workshop Completion Record Course Name: Est General Continuing Training Cycles 99-04		
12/16/1999	NRC032-0284	NRC032-0284	Training/Workshop Completion Record Course Name: Est General Continuing Training Cycles 99-04		
12/16/1999	NRC032-0285	NRC032-0285	Training/Workshop Completion Record Course Name: Est General Continuing Training Cycles 99-04		
01/18/2000	NRC032-0028	NRC032-0028	Training Workshop Completion Record Course Name: License Operator Requalification Cycle 001	First Energy Nuclear Operating Company	
01/27/2000	NRC032-0280	NRC032-0280	Scheduling Training Information Management Systems Attendance Sheet from 20000127 to 20000127 0800 - 1400		
01/27/2000	NRC032-0290	NRC032-0290	Training/Workshop Completion Record Course Name: Est 99-04 General Continuing Training		
01/28/2000	NRC032-0282	NRC032-0282	Training/Workshop Completion Record Course Name: Est General Continuing Training Cycles 99-04		

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
02/14/2000	NRC032-0029	NRC032-0033	Training/Workshop Completion Record Course Name: Non-license Operating Requalification Cycle 00-01 Crew 6		
02/14/2000	NRC032-0281	NRC032-0281	Training/Workshop Completion Record Course Name: Est General Continuing Training Cycles 99-04		
05/04/2000	NRC032-0283	NRC032-0283	Est Cycle 99-04 Continuing Training		
07/10/2000	NRC032-0157	NRC032-0162	TSM-101 System Expert Requirements		
08/28/2000	NRC032-0057	NRC032-0060	Scheduling Training Information Management Systems Attendance Sheet from 20010418 to 20010418 08:00 - 15:00		
03/01/2001	NRC032-2921	NRC032-2921	Employee Performance		
05/30/2001	NRC032-0292	NRC032-0292	Scheduling Training Information Management Systems Attendance Sheet from 20010529 to 20010530 07:30 - 15:30		
10/19/2001	NRC032-0293	NRC032-0293	Scheduling Training Information Management Systems Attendance Sheet from 20000928 to 20000929 08:00 - 16:00		
11/01/2001	NRC032-0291	NRC032-0291	Scheduling Training Information Management Systems Attendance Sheet from 20010701 to 20010711 07:00 - 16:00		
11/23/2001	NRC032-2918	NRC032-2918	Employee Maintenance		
11/23/2001	NRC032-2919	NRC032-2919	Personnel Record		
??/??/2002	03638	03649	Correspondence with Alleger		

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
??/??/2002	03650	03665	Correspondence with Alleger		
??/??/2002	03707	03714	Correspondence with Alleger		
??/??/2002	30750	30750	Personnel Actions Resulting from Investigations	First Energy Nuclear Operating Company	
03/01/2002	NRC032-2905	NRC032-2905	Employee Performance		
03/01/2002	NRC032-2909	NRC032-2909	Employee Performance		
03/01/2002	NRC032-2913	NRC032-2913	Employee Performance		
03/01/2002	NRC032-2914	NRC032-2914	Employee Maintenance		
03/01/2002	NRC032-2915	NRC032-2915	Personnel Record		
03/01/2002	NRC032-2917	NRC032-2917	Employee Performance		
03/01/2002	NRC032-2925	NRC032-2925	Employee Performance		
03/01/2002	NRC032-2926	NRC032-2926	Employee Maintenance		
03/01/2002	NRC032-2927	NRC032-2927	Personnel Record		
03/01/2002	NRC032-2929	NRC032-2929	Employee Performance		
03/01/2002	NRC032-2930	NRC032-2930	Employee Maintenance		
03/01/2002	NRC032-2931	NRC032-2931	Personnel Record		
03/01/2002	NRC032-2934	NRC032-2934	Employee Maintenance		
03/01/2002	NRC032-2935	NRC032-2935	Personnel Record		

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
03/01/2002	NRC032-2937	NRC032-2937	Employee Performance		
03/01/2002	NRC032-2941	NRC032-2941	Employee Performance		
03/01/2002	NRC032-2942	NRC032-2942	Employee Maintenance		
03/01/2002	NRC032-2943	NRC032-2943	Personnel Record		
03/01/2002	NRC032-2945	NRC032-2945	Employee Performances		
03/01/2002	NRC032-2946	NRC032-2946	Employee Maintenance		
03/01/2002	NRC032-2947	NRC032-2947	Personnel Record		
03/01/2002	NRC032-2949	NRC032-2949	Employee Performance		
03/01/2002	NRC032-2951	NRC032-2951	Personnel Record		
03/01/2002	NRC032-2955	NRC032-2955	Employee Maintenance		
03/01/2002	NRC032-2956	NRC032-2956	Personnel Record		
03/01/2002	NRC032-2959	NRC032-2959	Employee Performance		
05/01/2002	01042	01045	RIII-2002-A-0072 Allegation Receipt Form		Identifies Alleger
05/05/2002	02202	02207	OI Interview 05/05/2002		
05/05/2002	02208	02211	OI Interview 05/05/2002		
05/13/2002	04213	04215	AMS No. RIII-02-A-0127-Confidential Response to NRC Letter of 04/05/02 - Contains Personal Info	Howard Bergendahl	

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
05/13/2002	04216	04216	Attachment to 04213: AMS No. RIII-02-A-0127-Confidential Response to NRC Letter of 04/05/02 -Contains Personal Info (Unredacted Version)		
05/13/2002	04271	04273	AMS No. RIII-02-A-0127-Confidential Response to NRC Letter of 04/05/02 - Contains Personal Info	Howard Bergendahl	
05/13/2002	04274	04274	Attachment to 04271: AMS No. RIII-02-A-0127-Confidential Response to NRC Letter of 04/05/02 -Contains Personal Info (Unredacted)		
05/31/2002	01033	01040	RIII-2002-A-0072 Allegation Action Plan		
05/31/2002	04225	04240	AMS No. RIII-02-A-0127-Response to NRC Letter Dated 05/01/02 Concerning Activities at Davis Besse (RIII-02-A-0039); Includes Supporting Documents	Howard Bergendahl	
05/31/2002	04249	04264	AMS No. RIII-02-A-0127-Response to NRC Letter Dated 05/01/02 Concerning Activities at Davis Besse (RIII-02-A-0039); Includes Supporting Documents	Howard Bergendahl	
06/05/2002	01553	01628	Davis-Besse Operational Readiness/Comprehensive Assurance Reviews		
06/16/2002	03927	03933	E-mail Re: 00-001846-000, with Attached E-mails from Confidential Informant	Confidential Informant	

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
06/16/2002	03937	03938	E-mail Re: Your 06/16/02 Message, and Allegation Tracking Sheet	Andrea Kock	
06/20/2002	00167	00167	Allegation Data Receipt Form RIII-2002-A-0107		
06/20/2002	00170	00170	Email from Alleger RIII-2002-A-0107		
06/20/2002	00171	00175	Email from Alleger RIII-2002-A-0107 with Attached Briefing Paper on NRC's Handling of Employee Protection Issues at the Perry Nuclear Power Plant		
06/24/2002	03936	03936	E-mail Re: Your 06/16/02 Message	Confidential Informant	
06/29/2002	04207	04212	AMS No. RIII-02-A-0127 - Note Re: Violation of 10 CFR 50.9 by Davis Besse Station Management, With Supporting Documents (Unredacted)	Confidential Informant (name redacted)	Also contains medical and other privacy info
06/29/2002	04217	04224	AMS No. RIII-02-A-0127 - Note Re: Violation of 10 CFR 50.9 by Davis Besse Station Management (Unredacted)	Confidential Informant (name redacted)	Also contains personal or privacy info
06/29/2002	04241	04248	AMS No. RIII-02-A-0127-note Re: Violation of 10 CFR 50.9 by Davis Besse Station Management (Unredacted)	Confidential Informant	Also contains personal or privacy info
06/29/2002	04265	04270	AMS No. RIII-02-A-0127-note Re: Violation of 10 CFR 50.9 by Davis Besse Station Management (Unredacted)	Confidential Informant	Also contains personal or privacy info

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
07/11/2002	00161	00164	Memo: Record of Conversation With, and Email From, a Concerned Individual, RIII-2002-A-0107 (Davis-Besse)		
07/11/2002	00807	00810	Memo from A. Kock to D. Hills: Review of Conversation with a Concerned Individual RIII-2002-A-0119		Identifies Alleger
07/12/2002	00741	00742	Memo to RIII-2002-A-0116 from A. Kock Subj: Contact with a CI		Identifies Alleger and His/Her Address
07/19/2002	03934	03935	E-mail Re: Format of Attachment, with Attached E-mail Chain	Confidential Informant	
07/24/2002	04098	04202	AMS No. RIII-02-A-0127-Transcript of Interview ofCI by OI (Mary Kay Fahey)		
07/25/2002	04081	04085	AMS No. RIII-02-A-0127-Summary of Interview, Related to AMS RIII-2002-A-0039; Incorporates Other Memos from Other NRC Personnel, with Other Dates (Unredacted)	M. K. Fahey	
07/25/2002	04206	04206	AMS No. RIII-02-A-0127 E-mail Re: AMS RIII-2002-A-0039 Davis Besse - re Interview Conducted	M. K. Fahey	
07/25/2002	04276	04276	Attachment to 04275: AMS No. RIII-02-A-0127 E-mail Re: AMS RIII-2002-A-0039 Davis Besse - re Interview Conducted (Unredacted)		

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
07/31/2002	04097	04097	AMS No. RIII-02-A-0127-Memo Re: Additional Concerns Regarding Davis Besse (OI Case No. 3-2002-007 (AMS No. RIII-2002-A-0039) - Attaches Transcript of Interview withCI	Richard Paul	transcript is @ Nuclear Regulatory Commission Bates Stamp 04098 et seq.
08/15/2002	04058	04058	AMS No. RIII-02-A-0127-Memo Presenting the Concerned Individual's Allegations (Unredacted)	Confidential Informant (name redacted)	
08/16/2002	04070	04071	AMS No. RIII-02-A-0127-Memo Re: Review of Document from the Concerned Individual (Ci) (Attaches Memo from theCI, Dated 08/15/02) (Unredacted)	Jim Heller	
08/16/2002	04086	04093	AMS No. RIII-02-A-0127-Memo Resending Allegation File-incorporates Memos from Other NRC Personnel, with Other Dates (Unredacted)	K. Riemer	
08/22/2002	04066	04069	AMS No. RIII-02-A-0127-letter re NRC Evaluation of Concerns Raised in the Allegation (Unredacted)	Jim Heller	
08/30/2002	04056	04057	AMS No. RIII-02-A-0127-Memo Re: Review of Document from a Concerned Individual (AITS S02-2302) (Attached to Previous Listed Document) (Unredacted)	K. Riemer	

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
08/30/2002	04063	04065	AMS No. Raii-02-A-0127-Memo Re: Review of Document from a Concerned Individual (AITS S02-2302) (Unredacted)	K. Riemer	
09/09/2002	02080	02084	Review of Documents from Davis-Besse Discussion Group Allegation No. RIII-2002-A-0060 (Davis-Besse)	Jim Heller	
09/10/2002	NRC032-2566	NRC032-2566	Attachment, NRC032-2516 Principal Reports and Reviews Concerning Davis-Besse RPV Head Degradation		
09/11/2002	NRC004-0998	NRC004-1034	Memo from Jay Gutierrez Assessing Culpability of FENOC Employees Is Attached		
09/11/2002	NRC004-0999	NRC004-1034	Attachment, NRC004-0998		
09/11/2002	NRC032-2751	NRC032-2751	Attachment, Email, NRC032-2750	Jay Gutierrez	
09/11/2002	NRC032-2752	NRC032-2785	Attachment, Email, NRC032-2750	Jay Gutierrez	
09/11/2002	NRC032-2787	NRC032-2787	Memo from Jay Gutierrez Assessing Culpability of FENOC Employees Is Attached	Jay Gutierrez	
09/11/2002	NRC032-2788	NRC032-2821	Attachment, NRC032-2787	Jay Gutierrez	
09/11/2002	NRC032-2823	NRC032-2823	Email: Memo from Jay Gutierrez Assessing Culpability of FENOC Employees Is Attached	Jay Gutierrez	
09/11/2002	NRC032-2824	NRC032-2824	Attachment, Email, NRC032-2823		
09/11/2002	NRC032-2825	NRC032-2858	Attachment, Email, NRC032-2823		
09/11/2002	NRC032-2861	NRC032-2861	Memo from Jay Gutlerrez Assessing Culpability of FENOC Employees Is Attached	Jay Gutlerrez	

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
09/11/2002	NRC032-2862	NRC032-2895	Attachment, NRC032-2861		
09/11/2002	NRC032-2896	NRC032-2896	Attachment, NRC032-2861		
09/11/2002	NRC032-2897	NRC032-2897	Attachment, NRC032-2861	Jay Gutierrez	
09/18/2002	02216	02219	OI Interview 09/18/2002		
09/18/2002	02216	02219	OI Interview 09/18/2002		
09/24/2002	NRC026-2760	NRC026-2760	Personnel Action		
09/24/2002	NRC026-2761	NRC026-2761	Personnel Action		
09/24/2002	NRC026-2762	NRC026-2762	Personnel Action	Myers	
09/24/2002	NRC026-2763	NRC026-2763	Personnel Action		
09/24/2002	NRC026-2764	NRC026-2764	Personnel Action		
09/24/2002	NRC026-2765	NRC026-2765	Personnel Action		
09/24/2002	NRC026-2766	NRC026-2766	Personnel Action		
09/24/2002	NRC026-2767	NRC026-2767	Personnel Action		
09/24/2002	NRC026-2768	NRC026-2768	Personnel Action		
09/24/2002	NRC026-2769	NRC026-2769	Personnel Action		
09/24/2002	NRC026-2770	NRC026-2770	Personnel Action		
09/24/2002	NRC026-2771	NRC026-2771	Personnel Action	Lou Myers	
09/24/2002	NRC026-2772	NRC026-2772	Personnel Action		
09/24/2002	NRC026-2773	NRC026-2773	Personnel Action		

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
09/24/2002	NRC026-2774	NRC026-2774	Personnel Action	Lou Myers	
09/24/2002	NRC026-2775	NRC026-2775	Personnel Action		
09/25/2002	02057	02073	Review of Documents from Davis-Besse 0350 Meeting (Davis-Besse) (AMS RIII-2002-A-0060),	Jim Heller	
10/08/2002	04048	04052	AMS No. RIII-02-A-0127-Letter from Licensee in Response to NRC Letter Dated Sept. 9, 2002	Robert Saunders	
10/08/2002	NRC029-1128	NRC029-1129	Attachment 2, Current Employment Status of Nine Listed Individuals, NRC029-1125	Mathews	
10/15/2002	NRC032-2910	NRC032-2910	Employee Maintenance		
10/15/2002	NRC032-2911	NRC032-2911	Personnel Record		
10/17/2002	04043	04046	AMS No. RIII-02-A-0127-Letter re Concerns Raised (Unredacted)	Jim Heller	
10/25/2002	03874	03884	Closure Letter Re: Allegation No. RIII-02-A-0105	C. Lipa for John Grobe	
11/04/2002	03871	03873	E-mail Re: Closure Letter Unacceptable	Jim Heller	
11/07/2002	03744	03795	Letter Summarizing and Enclosing Unsigned, Undated Position Paper Re: NRC Investigation No. 3-2002-006	Jay Gutierrez	
11/07/2002	31931	31980	Letter from Jay Gutierrez: in the Matter of NRC Investigation Case No. 3-2002-006	Jay Gutierrez	

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
11/07/2002	NRC030-0663	NRC030-0709	The Roles of Individuals Relative to the Prevention or Earlier Detection of RV Head Wastage	Jay Gutierrez	
11/07/2002	NRC032-2516	NRC032-2518	Letter from Jay M. Gutierrez Re: Position Paper Addressing Roles of Individuals Related to Missed Opportunities to Prevent or Detect RPV Head Wastage.	Jay Gutierrez	
11/07/2002	NRC032-2519	NRC032-2565	Attachment, NRC032-2516		
11/26/2002	NRC029-0600	NRC029-0603	In the Matter of NRC Investigation	Thornhill, Angela	Contains Personal Privacy Information regarding former First Energy Nuclear Operating Company employee(s)
12/02/2002	NRC032-2938	NRC032-2938	Employee Maintenance		
12/02/2002	NRC032-2939	NRC032-2939	Personnel Record		
12/09/2002	04036	04039	AMS No. RIII-02-A-0127-Letter Closing Concern 1 (Unredacted Version)	John Grobe	
??/??/2003	01277	01309	A _____ DOL Complaint (Redacted)	Garde	
??/??/2003	01310	01341	A DOL Complaint (Unredacted)		
??/??/2003	02554	02571	Corrections to Exhibit List to OI Report 3-2002-006	Richard Paul	New Exhibit List to Office of Investigations Report- Includes names of those inteRViewed

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
01/14/2003	01516	01517	Email from B. Clayton Subj: Fwd: Safety Concerns from a D-b CI	Clayton	
01/15/2003	01666	01684	Allegation Receipt Form RIII-2003-A-0005		
01/17/2003	01686	01688	Review of Documents from NRR Allegation Coordinator RIII-2003-A-0005	Jim Heller	
01/31/2003	NRC032-2902	NRC032-2902	Employee Maintenance		
01/31/2003	NRC032-2903	NRC032-2903	Personnel Record		
01/31/2003	NRC032-2922	NRC032-2922	Employee Maintenance		
01/31/2003	NRC032-2923	NRC032-2923	Personnel Record		
02/01/2003	NRC032-2906	NRC032-2906	Employee Maintenance		
02/01/2003	NRC032-2907	NRC032-2907	Personnel Record		
02/13/2003	01518	01527	Letter from NRC to _____ RIII-2003-A-0005	Jim Heller	
02/15/2003	01217	01244	DOL Complaint	Garde	
02/19/2003	01273	01274	Fax from B Garde to J Heller Re: _____	Garde	
02/24/2003	01495	01496	Letter from B Garde to J Heller Subj: RIII-2003-A-0005	Garde	
02/25/2003	NRC032-2953	NRC032-2953	Employee Performance		
02/25/2003	NRC032-2954	NRC032-2954	Employee Performance		
02/28/2003	01481	01484	Email from Sandy Shepherd W/ Attached Memo from _____	Shepherd	

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
02/28/2003	31680	31770	FENOC Response to Subpoena, Which Contains Enclosed Employment Actions, Offers, and Agreements, with Related Documents, Notes, and Notes of InteRViews.		
02/28/2003	NRC030-1671	NRC030-1674	In the Matter of NRC Investigation, Case No. 3-2003-002, Response	Jay Gutierrez	
03/03/2003	00644	00644	Email from C Thomas to J Heller Subj: Potential Allegation Material	Christopher Thomas	Identifies Alleger
03/12/2003	02038	02040	Concern Regarding Failure to Respond to OI Subpoena W/ Attached Letter from Jay Gutierrez	R Paul	Discusses Possible Theft of Proprietary Videotape
03/20/2003	01462	01463	Memo from _____To AKock and JHeller		
03/20/2003	01487	01488	Memo from _____ to AKock and JHeller re Allegation RIII-2003-A-0005		
03/21/2003	01360	01362	3-21-03 Concerns for RIII-2003-A-005 Davis-Besse		Identifies Alleger
03/26/2003	00887	01015	OI Report OI Case No.3-2002-006 AMS No. RIII-02-A-0072		Identifies Alleger, Contains Office of Investigations InteRView Transcripts
03/27/2003	01469	01479	Email from _____ Subj: Davis-Besse's Degraded Pumps		

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
03/31/2003	01839	01956	Transcription of Wave File in re Davis-Besse Allegation File #2003-A-005teleconference ASiemaszko, Garde, JHeller, Lougheed, Bilik, Petrosino, Richards		
04/01/2003	01455	01458	Letter from B Garde re Allegation No Rii-03-A-005	Garde	
04/02/2003	00387	00393	Review of DOL Complaint Allegation No. RIII-2003-A-0057		Identifies an alleger
04/08/2003	NRC030-2094	NRC030-2094	Re: Allegations of Discriminations by Andrew Siemaszko	Timothy Mathews	
04/21/2003	00872	00872	Conversation Record -Potential Discrimination Claim		Identifies Alleger
04/21/2003	30471	30472	Allegation 2002-A-0203 Discrimination Against Systems Engineer for Raising Concerns to the NRC	Nuclear Regulatory Commission	
05/14/2003	00879	00881	Memo from J. Heller to C. Lipa "Review of Region III Office of Investigations Memo from R. Paul to H.B. Clayton Dated March 25, 2003"		Contains Alleger Name and also Deliberative Process- discusses merits of concerns
05/19/2003	00273	00274	Letter from Alleger to J. Heller, Subject: NRC Letter Dated April 24, 2003 Regarding Allegation No. RIII-2003-A-0057 (Davis-Besse)		This document identifies an alleger

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
05/19/2003	00359	00360	Letter to J Heller Re: NRC Letter Dated April 24, 2003 Regarding Allegation No. RIII-2003-A-0057		
05/28/2003	00463	00638	OI Report of InteRView AMS No. RIII-2003-A-0030		Identifies Alleger
06/06/2003	00345	00349	Department of Labor Final Investigative Report Case # 5-8120-03-028		Identifies Alleger
06/06/2003	01201	01210	DOL Findings	OSHA	
06/06/2003	02851	02974	Unredacted Attachment to 6/6/03 Saunders Letter (Redacted Version Bates Stamp 02975-03097)	Robert Saunders	
06/06/2003	32082	32100	Letter Providing an Update of Corrective Actions at the DBNPS	Robert Saunders	Provides personal, employment related information regarding individual plant employees
06/06/2003	NRC030-2129	NRC030-2143	Attachment, NRC030-2124, FENOC Positions 1/96 Through Present	Robert Saunders	
06/06/2003	NRC030-2144	NRC030-2154	Attachment, NRC030-2124, Summary of Individual Involvement and Resulting Personnel Actions		
06/06/2003	NRC030-2155	NRC030-2187	Attachments, NRC030-2124 Which List Several Individuals and FENOC's Assessment of Their Involvement		

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
06/06/2003	NRC030-2188	NRC030-2233	Attachment, NRC030-2124 Assessment of Personnel Involvement		
06/06/2003	NRC030-2234	NRC030-2252	Attachment, NRC030-2124 Extent of Condition (EOC) Reviews		
07/01/2003	01979	02021	Review of Press Release Allegation No. RIII-2002-A-0060 (Davis-Besse)		
07/10/2003	01409	01435	Closure Information from Concerns 1-6 and 8-14		
07/25/2003	00279	00339	OI Report of InteRView Davis-Besse Nuclear Power Plant 4-2003-037 RIII-2003-A-0057		Transcript of Office of Investigations InteRView Identifies Alleger
07/25/2003	01381	01406	Concern Closeout Letter from NRC to _____		
07/31/2003	01373	01380	Fax from B. Garde W/ Letter from _____		
08/22/2003	30235	30468	OI Report Investigation of (ROI): Davis-Besse Nuclear Power Plant: Unsubstantiated Allegations Withheld to Protect Personnel Privacy	Nuclear Regulatory Commission	
09/08/2003	02195	02201	Memo from Richard Paul to J Dyer Subj: Davis-Besse Nuclear Power Plant: NRR and Allegation Issues (Attachment 1)	Richard Paul	
09/08/2003	02330	02390	Memo from Richard Paul to J Dyer Subj: Davis-Besse Nuclear Power Plant: NRR and Allegation Issues (Attachment 2)	Richard Paul	

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
10/03/2003	00121	00125	Letter from J. A. Grobe to Alleger 10-3-03		Identifies an Alleger
10/03/2003	30473	30474	Allegation 2003-A-0030 Deliberated Falsification of a Aq Record Related to the Lower Reactor Vessel Head	Nuclear Regulatory Commission	
07/29/2004	00194	00209	Letter from Mark Bezilla, Fenoc VP - Nuclear, to H.B. Clayton- Response to Us NRC Letter Dated June 29, 2004 Concerning Activities at Davis-Besse Nuclear Power Station		
08/25/2005	01067	01068	8/25/2005 Ltr. To ____ from J Heller re Allegation No RIII-03-A-0024		
01/04/2006	03242	03242	E-mail Re: NRC Order to Mr. Prasoon Goyal	Kenneth O'Brien	Provides home address information for an individual named in a Nuclear Regulatory Commission order
01/04/2006	31895	31895	Email Re: NRC Order to Mr. Geisen	Kenneth O'Brien	Contains the present place of employment of an individual implicated in the action
01/04/2006	32132	32132	Email Re: NRC Order to Mr. Geisen	Kenneth O'Brien	Contains personal email address
01/04/2006	32133	32133	Email: NRC Order to Mr. Geisen	David Geisen	Contains personal email address

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
01/04/2006	32134	32134	Email Re: NRC Order to Mr. Dale Miller	Kenneth O'Brien	Contains the current place of employment of an individual implicated in the action
01/04/2006	32135	32135	E-mail Re: NRC Order to Mr. Prasoon Goyal	Maureen Hunemuller	Provides current place of employment information for an individual named in an Nuclear Regulatory Commission Order
01/04/2006	32136	32138	E-mail Re: NRC Order to Mr. Prasoon Goyal	Gary Lucke	Provides current place of employment information for an individual named
01/04/2006	32139	32139	E-mail Re: NRC Order to Mr. Prasoon Goyal	Gary Lucke	Provides current place of employment information for an individual named in a Nuclear Regulatory Commission order
01/04/2006	32140	32140	E-mail Re: NRC Order to Mr. Prasoon Goyal	Kenneth O'Brien	Provides current place of employment information for an individual named in a Nuclear Regulatory Commission order

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
01/04/2006	32141	32141	E-mail Re: NRC Order to Mr. Prasoon Goyal	Kenneth O'Brien	Provides current place of employment information for an individual named in a Nuclear Regulatory Commission order
01/04/2006	32142	32142	E-mail Re: NRC Order to Mr. Moffitt	Kenneth O'Brien	Provides current place of employment information for a person named in a Nuclear Regulatory Commission order and a private email address
01/04/2006	32143	32143	E-mail Re: NRC Order to Mr. Prasoon Goyal	Prasoon Goyal	Provides e-mail address information for an individual named in a Nuclear Regulatory Commission order
01/04/2006	32144	32144	E-mail: NRC Order to Mr. Moffitt	Kenneth O'Brien	
01/04/2006	32145	32145	E-mail Re: NRC Order to Mr. Prasoon Goyal	Kenneth O'Brien	Provides home address information for an individual named in a Nuclear Regulatory Commission order

Date	Bates - Begin	Bates - End	Full Name	Author(s)	Description
01/05/2006	32126	32127	Email Re: NRC Order to Mr. Miller	Jane Penny	Contains personal information including home address and current place of employment for an individual implicated in the case
01/05/2006	32128	32129	Email Re: NRC Order to Mr. Miller	Jane Penny	Contains personal information including home address and current place of current employment for an individual implicated in the case
01/05/2006	32130	32131	Email Re: NRC Order to Mr. David Geisen	Kyle A. Hoops	Contains the current place of employment for an individual implicated in the case

EXHIBIT 4

(To David Geisen's Motion To Compel
The Production, Or Alternatively The In Camera
Inspection, Of An Unredacted Copy Of The Office
Of Investigation's Report Dated August 22, 2003)

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RICHARD A. HIBEY
202.626.5888
rhibey@milchev.com

June 20, 2006

BY E-MAIL
AND REGULAR MAIL

Sara E. Brock, Esquire
Michael A. Spencer, Esquire
Office of General Counsel
U.S. Nuclear Regulatory Commission
Mail Stop: O-15 D21
Washington, D.C. 20555-0001

Re: *In The Matter Of David Geisen*
IA-05-052, ASLBP No. 05-839-02-EA
Before the Atomic Safety and Licensing Board

Dear Ms. Brock and Mr. Spencer:

I am writing regarding your e-mail dated June 5, 2006 (at 4:50 p.m.) to which you attached NRC Staff's Mandatory Disclosures in the above-referenced matter, including its various privilege logs and proprietary document list.

We are in the process of reviewing your Mandatory Disclosures and will address any issues we have regarding those materials as our review progresses. In the meantime, we want to bring one set of issues to your attention in the hope that we can resolve them on a priority basis. They pertain to your disclosure of the Office of Investigations Report dated August 22, 2003 ("August 2003 OI Report").

1. It appears that you have withheld a significant portion of the August 2003 OI Report on the grounds of the "deliberative process" and "personal privacy" privileges. Specifically, in your "Deliberative Process Privilege Log," you indicate that you have withheld from production pages 30235-30468 of the August 2003 Report, which you describe simply as containing "Agent's Analysis." *See* NRC Staff's 10 C.F.R. 2.336(b)(5) Deliberative Process Privilege Log at p. 5 (June 5, 2006). In your "Personal Privacy Privilege Log," you reference those same pages, provide no information in the "description" column and simply include in the "full name" column the phrase, "unsubstantiated allegations withheld to protect personnel privacy." *See* NRC Staff's 10 C.F.R. 2.336(b)(5) Personal Privacy Privilege Log at p. 21 (June 5, 2006).

Regarding your assertion of the deliberative process privilege, if the substance of the 235 withheld pages is similar to the substance of the portions of the August 2003 OI Report that you

have produced (see pages 30000-30125 and 30127-30232 discussed in paragraph 3 below), I would be surprised if all 235 pages may be properly withheld on the basis of deliberative process privilege. Moreover, in the portion of the August 2003 OI Report that you produced, there were at least 109 paragraphs titled "Agent's Notes" that were not withheld or redacted on the basis of any alleged privilege or protection. I would be interested in learning the basis for the distinction that was apparently made between "Agent's Notes" and "Agent's Analysis" when preparing the privilege logs. In any event, the description that you have provided in the "Deliberative Process Privilege Log" for pages 30235-30468 of the August 2003 OI Report does not provide us with sufficient information on which to assess the validity of your assertion of the deliberative process privilege, and we would request that you supplement your log with additional descriptive information accordingly, including the name, title and job description of the person(s) who made the determination that the withheld documents were allegedly entitled to privilege protection.

Regarding your assertion of a personal privacy privilege, please identify what specific portion(s) of the 235 withheld pages you believe are protected from production on that basis. Additionally, please let us know whether you are intending to produce those withheld pages upon entry of an appropriate protective order. Finally, like your Deliberative Process Privilege Log, your Personal Privacy Privilege Log does not provide us with sufficient information on which to assess the validity of your privilege assertion and should be supplemented in the manner described above.

2. It appears that the copy of the August 2003 OI Report that you produced to us did not include pages 30126 or 30233-234. None of those pages is listed on any of your privilege logs; so we assume that the omission was simply a copying oversight. We would appreciate receiving production copies of those pages at your earliest opportunity.

3. With respect to the portion of the August 2003 OI Report that you produced (i.e., pages 30000-30125, 30127-300232), we have noticed that there are significant redactions appearing on the following pages:

PAGE	DESCRIPTION OF REDACTION
30003-30005	In eight places, selectively redacting some, but not all, names and/or allegations allegedly "substantiated" by the investigation.
30004	Redaction of name of person as to whom the investigation did not "substantiate" that he allegedly "deliberately failed to accurately and/or completely document his 12 RFO Quality Assurance audit activities relative to the BACC Program."
30007-10, 30017	Several redactions

30030	Several redactions
30031	Four redactions
30042-53	Entire section redacted (presumably including "Agent's Analysis" section). Conclusion section appears to redact name(s) but does not redact conclusion itself, which was presumably based in part on the redacted portions of evidence summarized in pages 30033-53.
30063-64	"Agent's Analysis" (Allegation I-2) and Conclusion sections entirely redacted.
30064-74	Entire section redacted (presumably including "Agent's Analysis" section). Conclusion section on page 30075 is not redacted: "Based on the evidence developed, this investigation did not substantiate that FENOC personnel willfully failed to take adequate corrective action to determine the cause of rust particles on the RE filters or that FENOC personnel willfully failed to take adequate corrective actions to determine the cause of the rust-colored boric acid deposits found on the CACs."
30080	"Agent's Analysis" section (Allegation II-1) entirely redacted. Conclusion section on page 30081 is not redacted.
30081-82	Entire sections redacted (presumably including "Agent's Analysis" section). Conclusion section appears to redact name(s) but does not redact conclusion itself, which was presumably based in part on the redacted portions of evidence summarized in pages 30081-82.
30101-102	"Agent's Analysis" section (Allegation III-1A) entirely redacted.
30105-106	"Agent's Analysis" section (Allegation III-1B) entirely redacted.
30124-125 (Page 30126 is missing)	"Agent's Analysis" section (Allegation III-1C) entirely redacted.
30130-131	"Agent's Analysis" section (Allegation III-1D) entirely redacted.
30134-135	"Agent's Analysis" section (Allegation III-1E) entirely redacted.
30135	Conclusion section appears to redact certain names but does not redact conclusion itself, which was presumably based in part on the redacted portions of evidence summarized in pages 30083-30135.
30174-178	"Agent's Analysis" section (Allegation III-2A) entirely redacted.
30185-186	"Agent's Analysis" section (Allegation III-2B(1) entirely redacted.
30193, 30195	"Agent's Analysis" section (Allegation III-2B(2) entirely redacted.
30197	"Agent's Analysis" section (Allegation III-2B(3) entirely redacted.
30197	Conclusion section appears to redact certain names but does not redact conclusion itself, which was presumably based in part on the redacted portions of evidence summarized in pages 30135-30197.
30200-201	"Agent's Analysis" section (Allegation III-3) entirely redacted.

30201	Conclusion section appears to redact certain names but does not redact conclusion itself, which was presumably based in part on the redacted portions of evidence summarized in pages 30198-30201.
30201-205	Entire section(s) redacted (presumably including "Agent's Analysis" section).
30205	Conclusion entirely redacted.
30206	Names redacted (Allegation IV).
30207-208	Entire section(s) redacted (Allegation IV) (presumably including "Agent's Analysis" and Conclusion sections). Names redacted.
30209-210	Names redacted. Other text redacted.

Unless we have somehow overlooked them, the redactions on the pages listed in the foregoing table do not appear on any of the privilege logs that you produced with your Mandatory Disclosures. Accordingly, we request that you produce as soon as possible unredacted copies of each of the listed pages. Furthermore, for each redacted portion of the August 2003 OI Report, we request that you identify by name, title, and job description the individual(s) who decided to make the redaction.

4. We noticed that, in your Proprietary Document List, you listed the following pages of documents that are dated August 22, 2003 and that presumably relate to the August 2003 OI Report: NRC001-1715 to 1750; NRC002-192 to 199; NRC003-0900 to 902; and NRC025-719 to 735. *See* NRC Staff's 10 C.F.R. 2.336(b) Proprietary Document List at p. 172-173 (June 5, 2006). The list does not provide us with sufficient information to assess whether those documents are indeed proprietary and properly withheld. Please let us know if you intend to continue withholding those materials from disclosure and whether you will provide us with further descriptive information that would enable us to assess your asserted basis for withholding them.

I intend to discuss the foregoing with you at your convenience in an effort to resolve these issues. I know I owe you a call to discuss discovery issues in general. Our time has been spent trying to get a handle on particular issues we need to discuss. This one stands out. I will call you this week in any event.

Sincerely yours,

Richard A. Hibey

cc: Andrew T. Wise
Matthew T. Reinhard

EXHIBIT 5

(To David Geisen's Motion To Compel
The Production, Or Alternatively The In Camera
Inspection, Of An Unredacted Copy Of The Office
Of Investigation's Report Dated August 22, 2003)

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Richard A. Hibey, Esq.
(202) 626-5888

July 11, 2006

BY FACSIMILE
AND REGULAR MAIL

Sara E. Brock, Esq.
Office of General Counsel
U.S. Nuclear Regulatory Commission
Mail Stop: O-15 D21
Washington, D.C. 20555-0001

Re: *In The Matter Of David Geisen*
IA-05-052, ASLBP No. 05-839-02-EA
Before the Atomic Safety and Licensing Board

Dear Sara:

As you know, we had a telephone conversation on June 21, 2006 regarding a letter that I sent you and Michael Spencer on June 20 concerning NRC Staff's June 5 Initial Disclosures in the above-referenced matter. During the telephone conversation, you addressed and explained the document numbering confusion relating to your production of the August 22, 2003 Office of Investigations Report ("August 2003 OI Report"), the omission of page 30126 from the produced copy of the August 2003 OI Report and the withholding of documents on your Proprietary Document List. However, with respect to other issues I raised in my letter, including the sufficiency of privilege log descriptions, the redaction of the August 2003 OI Report, the assertion of deliberative process privilege protection for the August 2003 OI Report and the assertion of personal privacy privilege for various documents, you indicated that you would have to consult with others in your office before you could respond substantively to me.

Please let me know at your earliest opportunity when you will be responding to the remaining issues in my June 20 letter. If we are unable to reach agreement with you on those issues, then we will need to take appropriate actions as soon as possible in order to avoid unnecessary delay of other discovery efforts. I look forward to hearing from you.

Sincerely yours,

Dick Hibey

Richard A. Hibey

cc: Andrew T. Wise, Esq.
Matthew T. Reinhard, Esq.
Charles F. B. McAleer, Jr., Esq.

EXHIBIT 6

(To David Geisen's Motion To Compel
The Production, Or Alternatively The In Camera
Inspection, Of An Unredacted Copy Of The Office
Of Investigation's Report Dated August 22, 2003)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

OFFICE OF THE
GENERAL COUNSEL

July 12, 2006

Richard A. Hibey, Esq.
Miller & Chevalier
655 Fifteenth Street, N.W., Suite 900
Washington, D.C. 20005-5701

SUBJECT: Response to letter regarding discovery *In the Matter of David Geisen*, Docket No. IA-05-052, ASLBP No. 06-845-01-EA

Dear Mr. Hibey:

This letter is being sent in response to your letter of June 20, 2006, regarding issues related to redactions made to the August 22, 2003, Office of Investigations (OI) Report that was disclosed to Mr. Geisen by the NRC Staff in its initial disclosures sent on June 2, 2006. You had several questions and requests, which we will answer in the order they were asked.

Your first numbered request references Bates pages 30235-30468 of the OI Report, which we listed under both our deliberative process privilege log and our personal privacy privilege log. The pages you referenced are the unredacted version of the report we have already provided to you. That is, we provided a redacted version of the report on Bates pages 30000-30232, and pages 30235-30468 constitute the same report, without the redactions. You ask other questions concerning the unredacted OI Report, but these overlap with the questions that you ask later in your letter concerning the redacted version. Our answers to the redacted OI Report questions, *infra*, will serve to respond to both sets of questions.

Your second numbered request asks for missing pages from the redacted OI Report, Bates pages 30126 and 30233-34. Bates page 30126 was faxed to you on the week of June 18. Bates pages 30233-34 have no content, but simply represent a gap between the redacted and unredacted OI Reports.

Your third numbered request concerns the redacted version of the OI Report. You are correct that no Bates pages in the redacted OI Report appear in our privilege logs, but that is because the redacted report we released is not privileged (it was in fact released). Only the unredacted version that was not released appears on our privilege logs, as explained above.

You also ask us to disclose unredacted copies of certain pages of the OI Report. We decline this request. We continue to assert the deliberative process and personal privacy privileges for the redactions made to the OI Report. In your first numbered request, you broach the possibility of our disclosing information withheld under the personal privacy privilege if an appropriate protective order were entered. We decline this request as well. We regard as both irrelevant and an unwarranted invasion of personal privacy the disclosure of either unsubstantiated allegations or substantiated allegations involving individuals against whom the

NRC Staff did not issue an order. Only the culpability of Mr. Geisen is at issue in this proceeding.

Concerning your request that we identify which officials made which redactions to the OI Report, the staff of the Office of Investigations decided which redactions should be made, and Guy Caputo, Director of OI, signed an affidavit asserting the deliberative process privilege. This affidavit was filed with the initial disclosures in the Moffitt and Miller proceedings on April 25, 2006, and a copy is attached to this letter.

Your fourth numbered request concerns items on our proprietary document list. After you signed the proprietary document protection agreement, those documents were sent to you on July 3, 2006.

Finally, as Ms. Brock discussed with you on the telephone several weeks ago, we have yet to receive your initial documents which you are required to disclose pursuant to 10 C.F.R. § 2.704. We have not yet discussed a discovery schedule, but as we previously stated, we will require at least three weeks from when we receive your initial documents until we are ready to begin discovery.

Sincerely,

Michael A. Spencer
Sara E. Brock
Counsel for the NRC Staff

Enclosure: Affidavit of Guy Caputo

cc: Andrew T. Wise
Mathew T. Reinhard

April , 2006

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
STEVEN P. MOFFITT	)	Docket No. IA-05-054
	)	
	)	ASLBP No. 06-847-03-EA
	)	

AFFIDAVIT OF GUY P. CAPUTO

I, Guy P. Caputo, being first duly sworn, do hereby state as follows:

1. I am employed as Director of the Office of Investigations (OI) of the Office of the Executive Director for Operations (EDO). My supervisory responsibilities include oversight of the NRC staff's investigation of allegations of wrongdoing by employees of FirstEnergy Nuclear Operating Company (FENOC) at the Davis-Besse Nuclear Power Plant.

2. I am aware that the Staff must make all disclosures required by 10 C.F.R. § 2.336 in the above captioned proceeding no later than April 26, 2006.

3. Among the documents subject to disclosure under 10 C.F.R. § 2.336 is the Report of Investigation Davis-Besse Nuclear Power Plant produced by the Region III OI Field Office.

4. I have personally reviewed the Report of Investigation and have determined, in accordance with the guidance in Management Directive 3.4, that it contains pre-decisional information concerning the Staff's investigation of wrongdoing by FENOC employees at the Davis-Besse Nuclear Power Plant. The Report of Investigation contains the Staff's analyses, recommendations, opinions, or evaluations, and may not necessarily reflect the final agency position with respect to matters discussed therein. This material is concentrated in portions of the Report entitled "Agent's Analysis:" These portions of the report in particular comprised part

of the deliberative process necessary to the Staff's review of the allegations of wrongdoing by FENOC employees at Davis-Besse Nuclear Power Plant.

5. Further, I have determined that disclosure of the "Agent's Analysis" portions of Report of Investigation could result in harm to the agency, in that it would (a) disclose the preliminary views of individual Staff members and/ or the Staff prior to reaching a final agency decision, and could thus create confusion as to the actual policy or views of the NRC staff; (b) hinder the efficiency of the Staff, in that forced disclosure of their internal discussion could serve to chill future deliberations and could interfere with its ability to engage in free exchange of opinions and analyses prior to publishing our final decisions; and (c) imply or suggest incorrectly that the opinions of Staff members involved in these communications were actually final decisions of the agency.

6. Accordingly, I formally invoke the deliberative process privilege with respect to the portions of the Report of Investigation entitled "Agent's Analysis."

7. I hereby certify that the foregoing is true and complete to the best of my knowledge, information, and belief.

/RA/

Guy P. Caputo

Subscribed and sworn to before me
this _25_ day of _April____, 20_06

Circe E. Martin
Notary Public

My Commission Expires: March 1, 2007

EXHIBIT 7

(To David Geisen's Motion To Compel
The Production, Or Alternatively The In Camera
Inspection, Of An Unredacted Copy Of The Office
Of Investigation's Report Dated August 22, 2003)

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July 19, 2006

BY E-MAIL
AND REGULAR MAIL

Michael A. Spencer, Esq.
Office of General Counsel
U.S. Nuclear Regulatory Commission
Mail Stop: O-15 D21
Washington, D.C. 20555-0001

Re: *In The Matter Of David Geisen*
IA-05-052, ASLBP No. 05-839-02-EA
Before the Atomic Safety and Licensing Board

Dear Mr. Spencer:

Thank you for your letter dated July 12, 2006 responding to my letters dated June 20, 2006 and July 11, 2006, in which I addressed, among other things, NRC Staff's assertion of the deliberative process and "personal privacy" privileges regarding the August 22, 2003 Office of Investigations Report in the above-referenced matter.

Based on the clarification that Sara Brock gave me by telephone on June 21 and the representations in your letter, I believe that we have resolved the issues I raised in my June 20 letter regarding the physical production of pages 30126, 30233-34 and 30235-468 in NRC Staff's Initial Disclosures, as well as the documents designated by NRC Staff as proprietary. The latter issue is subject, of course, to Mr. Geisen's continuing right under the June 1, 2006 Protective Order to challenge the confidentiality designation of any documents.

As for NRC Staff's assertion of the deliberative process and "personal privacy" privileges, I believe that several issues remain unresolved.[1]

First, as a practical matter, we are unable to distinguish between the portions of the August 22, 2003 OI Report you redacted on the basis of "personal privacy" privilege and those

[1] Of course, I am sending this letter subject to, and without waiving, any rights Mr. Geisen may have to contest NRC Staff's assertion of those privileges on any procedural or substantive grounds.

you redacted on the basis of deliberative process privilege. Neither your privilege logs nor your letter makes that distinction. *See* NRC Staff's June 5, 2006 Personal Privacy Privilege Log at p. 21 (referencing the entire report in a single entry); NRC Staff's June 5, 2006 Deliberative Process Privilege Log at 5 (also referencing the entire report in a single entry). Without waiving any contention that we may have regarding the lack of detail in NRC Staff's privilege logs, it will be impossible to make any significant progress on these issues without a particularized listing (by paragraph, page, section, and subject matter) of the redactions attributable to each privilege assertion.

Second, assuming for the sake of discussion that a privilege based on "personal privacy" exists and survives entry of the June 1, 2006 Protective Order, we do not think that such a privilege could or should shield from discovery any portions of the August 22, 2003 OI Report, especially those you describe generally as relating to "unsubstantiated allegations" and "substantiated allegations involving individuals against whom the NRC Staff did not issue and order." Moreover, your contention that "[o]nly the culpability of Mr. Geisen is at issue in this proceeding" does not address whether, and to what extent, the information you have redacted from the August 22, 2003 OI Report on "personal privacy" grounds is "reasonably calculated to lead to the discovery of admissible evidence." *See* 10 C.F.R. § 2.705(b)(1). Given the comprehensive and consolidated investigation that led to the issuance of the August 22, 2003 OI Report, each and every determination that the Office of Investigations made regarding the credibility of any allegations or witnesses could lead to the discovery of admissible evidence regarding the credibility of and basis for the allegations and evidence against Mr. Geisen, including any biases that certain witnesses may have. Those witnesses could include, for example, the signatories to the August 22, 2003 OI Report. By attempting to shield such evidence from discovery through a "personal privacy" privilege, NRC Staff is effectively ruling on the admissibility of evidence, which we believe is improper. Only the panel may make such determinations, based on a complete and fair record following discovery. We continue to believe that the June 1, 2006 Protective Order provides the proper vehicle for protecting the disclosure and use of any highly sensitive, personal information contained in the August 22, 2003 OI Report.

Third, assuming again for the sake of discussion that NRC Staff has invoked the deliberative process privilege in a timely and procedurally proper manner,[2] I do not believe that

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[2] You enclosed with your letter an affidavit apparently submitted by Mr. Guy Caputo, the Director of the Office of Investigations, in *In the Matter of Steven P. Moffitt*, IA-05-054, ASLBP No. 06-847-03-EA and *In the Matter of Dale L. Miller*, IA-05-053, ASLBP No. 06-846-02-EA ("*Miller* and *Moffitt* matters"). I am unaware of NRC Staff filing or serving an affidavit from Mr. Caputo or anyone else with NRC Staff's assertion of the deliberative process privilege in its June 5, 2006 Initial Disclosures in Mr. Geisen's matter. If one was filed or served, please let me know. If one was not filed or served, I would appreciate any authority you have for the proposition that NRC Staff's filing of an affidavit as to a document in one

(footnote continued on next page)

NRC Staff can or will meet its burden of proving the applicability or enforceability of the deliberative process privilege to the redacted portions of August 22, 2003 OI Report for several reasons, including the following:

- Neither the deliberative process privilege log that you served nor your letter provides me with sufficient information on which to accept, without challenge, NRC Staff's invocation of the privilege. The only description contained in NRC Staff's deliberative process privilege log regarding the information redacted from the August 22, 2003 OI Report is "Agent's Analysis Withheld."

- I find no specific, detailed support in the log, your letter or Mr. Caputo's affidavit for the notion that "Staff's analyses, recommendations, opinions, or evaluations" are entitled to absolute protection and, if disclosed, "*could* result in harm to the agency" (emphasis added). While those words may appear in Mr. Caputo's affidavit, he has not articulated any particular basis for such protection in this case, nor demonstrated how disclosure of such information under a Protective Order in this proceeding would, in fact, cause harm to the NRC.

- I do not consider Mr. Caputo's broad assertion that protected material is "contained" or "concentrated" in the redacted portions of the August 22, 2003 OI Report as a sufficient representation by Mr. Caputo, under oath, that the redactions are limited exclusively to allegedly protected material and do not reflect *any* factual information or witness statements that are not subject to protection under the deliberative process privilege. In fact, his choice of language implies to the contrary.

- A review of the Table of Contents and headings in the August 22, 2003 OI Report suggests that sections other than those entitled "Agent's Analysis" were redacted. *See, e.g.,* pages 30042-51 (prior to section entitled "Agent's Analysis"; a partially redacted heading on page 42 appears to state "Interview of GOYAL"); 30064-73 (appears to precede any section entitled "Agent's Analysis"); 30081-82 (same); 30201-204 (same); 30206-207 (same); and 30209-210 (same). Perhaps those redacted sections are ones as to which NRC Staff is only asserting "personal privacy," rather than deliberative process, privilege, but you have given us no basis for making that distinction.

- In my June 20 letter, I asked you to provide "the basis for the distinction that was apparently made between 'Agent's Notes' and 'Agent's Analysis' when preparing the

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(footnote continued from previous page)
matter obviates its need to file an affidavit as to the same document in a second matter and precludes a finding of waiver in the second matter.

deliberative process privilege log and making the redactions." Your letter does not contain that explanation. Under the circumstances, I must conclude that there is no meaningful distinction between the two, and the decision not to redact the "Agent's Notes" sections means either that the disclosure of such information does not, contrary to Mr. Caputo's affidavits in the *Moffitt* and *Miller* matters, "harm the agency" or that any privilege protection that might have attached to the "Agent's Analysis" sections has been waived.

- In the final analysis, I believe it is unfair for the NRC Staff to use privilege assertions, which are disfavored in the law and to be narrowly construed, as a sword to limit Mr. Geisen's access to information that may be necessary for a fair and complete review of the NRC's debarment decision. The panel is fully capable of according the August 22, 2003 OI Report the weight to which it is entitled, and, in my view, the panel's consideration of the entire, unredacted version would enhance, rather than harm, the integrity of the NRC's process.

I would welcome an opportunity to discuss the foregoing with you in a continuing effort to resolve these issues. If, for whatever reason, you are unwilling or unable to address these issues in a substantive and detailed manner, please let me know. In that event, we will seek relief from the panel, which will obviously delay further discovery proceedings in this matter.[3]

Sincerely yours,

Richard A. Hibey

cc: Andrew T. Wise, Esq.
Matthew T. Reinhard, Esq.
Charles F. B. McAleer, Jr., Esq.

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[3] In your July 12 letter, you also inquired about an initial document production by Mr. Geisen pursuant to 10 C.F.R. § 2.704. Mr. Geisen will file and serve his Initial Disclosure in this matter as soon as possible and in no event later than Friday, July 28. In the meantime, please be advised that documents which Mr. Geisen may be required to disclose pursuant to 10 C.F.R. § 2.704(a)(2) (i.e., documents "in the possession, custody, or control of the party that are relevant to disputed issues alleged with particularity in the pleadings") may consist entirely, or almost entirely, of documents that he received from the NRC and that you already have. Other documents include grand jury minutes that we received from the Government in the criminal proceeding under a protective order. If you have any position on, or authority regarding, the NRC Staff's entitlement in a debarment proceeding to receive grand jury minutes governed by a protective order, please let me know.

EXHIBIT 8

(To David Geisen's Motion To Compel
The Production, Or Alternatively The In Camera
Inspection, Of An Unredacted Copy Of The Office
Of Investigation's Report Dated August 22, 2003)

McAleer, Chas

From: Mary Baty [MCB1@nrc.gov]
Sent: Monday, July 31, 2006 5:12 PM
To: McAleer, Chas
Cc: Sara Brock
Subject: OI Report Redactions

Attachments: OIRedactionSummaryforGeisen.pdf

OIRedactionSummaryforGeisen.pd...

Chas,

Attached is an excerpt from our answers to Mr. Moffitt's discovery requests filed on June 30, 2006.

Mary

II. NRC Staff Responses to Mr. Moffitt's Specific Document Requests

DOCUMENT REQUEST 1

An unredacted copy of the OI Report Case No. 3-2002-006 dated August 22, 2003, (30000-30232), including the redacted parts of or entire pages labeled: 30003-30005, 30007-30010, 30017, 30030-30031, 30042-30053, 30063-30074, 30080-30082, 30101-30102, 30105-30106, 30124-30126, 30130-30131, 30134-30135, 30174-30178, 30185-30186, 30193-30195, 30197, and 30200-30210. Please include OI Report pages 17 and 18.

RESPONSE

The NRC Staff has asserted the deliberative process privilege for portions of the OI Report. The report was included on the deliberative process privilege log served on April 25, 2006. The Staff's assertion of the deliberative process privilege is supported by the Affidavit of Guy Caputo, Director of the Office of Investigations, that the Staff filed with the Board on April 25, 2006. Of the pages requested in Document Request No. 1, the Staff has asserted the deliberative process privilege on the following pages: 30063, 30074, 30080, 30082, 30101-30102, 30105-30106, 30124-30126, 30130-30131, 30134-30135, 30174-30178, 30185-30186, 30193-30195, 30193, 30195, 30197, 30200-30201, and 30208.

The NRC Staff redacted, in part or in whole, the pages listed below on the basis of relevance and personal privacy–disclosure would constitute an unwarranted invasion of personal privacy. In general, these pages are devoted to unsubstantiated allegations and/or allegations that do not involve Messrs. Moffitt and Miller. The unredacted version of the report was included on the personal privacy privilege log served on April 25, 2006 (30235-30468). Of the pages requested, the NRC Staff has asserted the personal privacy privilege on the following pages of the redacted copy (30000-30232): 30003-30005, 30007-300010, 300017, 3030-3031, 30042-30053, 30064-30073, 30081-30082, 30135, 30197, 30201, 30202-30208, 30209-30210.

Pages 17 and 18 of the OI Report were inadvertently left out during the Staff's production process and are enclosed.

MILLER & CHEVALIER
CHARTERED

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August 11, 2006

VIA REGULAR MAIL

Office of the Secretary
Attn: Rulemaking and Adjudications Staff
U.S. Nuclear Regulatory Commission
Mail Stop: 0-16 C1
Washington, D.C. 20005

Re: In the Matter of DAVID GEISEN,
Docket No. IA-05-052, ASLBP No. 06-845-01-EA

Dear Sir/Madam:

Enclosed please find an original and two copies of David Geisen's **Motion To Compel Production, Or In The Alternative *In Camera* Inspection, Of An Unredacted Copy Of The Office Of Investigations Report Dated August 22, 2003," along with the Memorandum of Points and Authorities In Support Thereof, the Proposed Order and the Exhibits to the Memorandum in Support of Motion to Compel.** One addition copy of the Motion to Compel along with the Memorandum of Points and Authorities in Support Thereof and the Proposed Order is included; please date-stamp and return it in the accompanying self-addressed stamped envelope.

Thank you for your assistance in this matter.

Sincerely,

Lisa Butler
Legal Assistant

Enclosure (5)