

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

**In re: Nuclear Cost Recovery
Clause**

DOCKET NO. 110009-EI
Submitted for filing:
July 25, 2011

REBUTTAL TESTIMONY OF JON FRANKE

**ON BEHALF OF
PROGRESS ENERGY FLORIDA**

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FPSC-COMMISSION CLERK

IN RE: NUCLEAR COST RECOVERY CLAUSE

BY PROGRESS ENERGY FLORIDA

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REBUTTAL TESTIMONY OF JON FRANKE

1 **I. INTRODUCTION.**

2 **Q. Please state your name and business address.**

3 **A.** My name is Jon Franke. My business address is Crystal River Nuclear Plant, 15760
4 W. Powerline St., Crystal River, FL 34442.

5
6 **Q. By whom are you employed and in what capacity?**

7 **A.** I am employed by Progress Energy Florida, Inc. ("PEF" or the "Company") in the
8 Nuclear Generation Group and serve as Vice President – Crystal River Nuclear Plant
9 ("CR3").

10

11 **Q. Have you previously filed direct testimony in this docket?**

12 **A.** Yes, I filed Direct Testimony on March 1, 2011 and May 2, 2011.

13

14 **Q. Have you reviewed the Intervenor testimony filed in this docket?**

15 **A.** Yes, I have reviewed the testimony of William R. Jacobs, Jr., Ph.D. ("Jacobs")
16 regarding the CR3 Extended Power Uprate Project ("CR3 Uprate") filed on behalf of
17 the Office of Public Counsel ("OPC"). I also reviewed the direct joint testimony of
18 Mr. William Coston and Mr. Kevin Carpenter ("Audit Staff"), filed on behalf of the

1 Florida Public Service Commission (“FPSC” or the “Commission”), including
2 portions of the July 2011 Review of Progress Energy Florida, Inc.’s Project
3 Management Internal Controls for Nuclear Plant Uprate and Construction Projects,
4 PA-11-01-001, identified as Exhibit CC-1 to Audit Staff testimony (“Staff Audit
5 Report”), with respect to the CR3 Uprate project.
6

7 **II. PURPOSE AND SUMMARY OF REBUTTAL TESTIMONY.**

8 **Q. What is the purpose and summary of your rebuttal testimony?**

9 **A.** The purpose of my rebuttal testimony is to respond to the recommendations or
10 conclusions in OPC witness Jacobs’ testimony. I also respond to certain conclusions
11 in the Staff Audit Report attached as an exhibit to the Audit Staff witness testimony
12 regarding the CR3 Uprate project.

13 Jacobs’ testimony regarding the CR3 Uprate project is limited to PEF’s 2009
14 and 2010 costs for the project because the Company filed a motion with the
15 Commission to defer the approval of the 2011 long-term feasibility analysis for the
16 CR3 Uprate project, and the reasonableness of projected construction expenditures
17 and associated carrying costs in 2011 and 2012, that the Company filed with the
18 Commission on May 2, 2011 for the CR3 Uprate project consistent with the
19 requirements of Rule 25-6.0423, F.A.C. This motion is presently pending before the
20 Commission.

21 Audit Staff’s Audit Report for PEF contains a conclusion with respect to the
22 Company’s actual costs associated with the management of the 2009 License
23 Amendment Request (“LAR”) work for the extended power uprate (“EPU”) for the

1 CR3 Uprate project that PEF takes issue with. Therefore, based on the scope of
2 Jacobs' and Audit Staff's testimony and PEF's aforementioned motion, my rebuttal
3 testimony only addresses the prudence of PEF's 2009 and 2010 CR3 Uprate project
4 costs.

5 PEF established the prudence of the 2009 and 2010 CR3 Uprate project costs
6 in my March 1, 2011 Direct Testimony and exhibits and the March 1, 2011 Direct
7 Testimony and exhibits of Mr. Will Garrett in the 2011 nuclear cost recovery clause
8 ("NCRC") proceeding. Jacobs does not take issue with the prudence of any 2009 or
9 2010 CR3 Uprate project cost identified in PEF's testimony and exhibits. Jacobs
10 testifies that he reviewed and evaluated PEF's request for authority to collect
11 historical costs associated with the CR3 Uprate project. (Jacobs Test., p. 3, L. 17-
12 22). Subsequent to that review and evaluation, however, Jacobs does not opine that
13 PEF incurred any 2009 or 2010 cost for the CR3 Uprate project that PEF should not
14 have incurred because it was unnecessary for the project or excessive in amount
15 because of some failure by PEF to properly manage the project. Jacobs also does not
16 conclude that any 2009 or 2010 CR3 Uprate project cost is imprudent in his
17 testimony.

18 In fact, the only thing that Jacobs does recommend in his testimony regarding
19 CR3 Uprate 2009 and 2010 costs is that the Commission defer the determination of
20 the prudence of 2009 CR3 Uprate costs incurred after October 2, 2009 and 2010 CR3
21 Uprate costs because of his speculation that some of these costs may be impacted by
22 the determination of the prudence of PEF's activities related to the delamination of
23 the CR3 containment building during the steam generator replacement ("SGR")

1 project. He fails to explain any reason for his speculation other than his personal
2 belief that repairing the CR3 containment building is uncertain. However, that repair
3 will take place in the future and, therefore, has nothing to do with the historical costs
4 incurred in 2009 and 2010 on the CR3 Uprate project.

5 Audit Staff expresses the belief in the Staff Audit Report that the AREVA
6 Change Order Number 23 costs that PEF incurred to produce an EPU LAR
7 document that met Nuclear Regulatory Commission (“NRC”) LAR acceptance
8 review requirements were avoidable. As I explain in detail below, I disagree with
9 Audit Staff. The costs incurred to produce a high quality CR3 EPU LAR document
10 that met NRC acceptance review requirements were necessary and, therefore,
11 unavoidable. PEF is entitled to recover the costs it incurred to prepare the CR3 EPU
12 LAR document for acceptance review by the NRC.

13
14 **Q. Do you have any exhibits to your rebuttal testimony?**

15 **A.** Yes, I am sponsoring the following exhibits:

- 16 • Exhibit No. ___ (JF-12), excerpts of Jacobs’ deposition testimony in this docket;
17 • Exhibit No. ___ (JF-13), excerpts of Jacobs’ deposition and hearing testimony in
18 Docket No. 100009-EI; and
19 • Exhibit No. ___ (JF-14), the CR3 EPU Expert Panel Management Debrief dated
20 July 14, 2009.

21 Exhibit No. ___ (JF-14) was prepared at the Company’s request and under its
22 direction and control, it is a document that is regularly used by the Company in the
23 normal course of business, and it is true and correct. Exhibit Nos. ___ (JF-12) and

1 ___ (JF-13) are excerpts of the sworn deposition or hearing testimony of Jacobs. I
2 have numbered my rebuttal exhibits as if the exhibits filed with my March 1, 2011
3 Direct Testimony (seven exhibits, numbered JF-1 through JF-7) and May 2, 2011
4 Direct Testimony (four exhibits, numbered JF-1 through JF-4), were numbered
5 sequentially, which means my first rebuttal exhibit would be Exhibit No. ___ (JF-12),
6 as indicated above.

7
8 **III. PRUDENCE OF PEF CR3 UPRATE 2009 AND 2010 COSTS.**

9 **A. BACKGROUND ON ISSUES IN 2011 NCRC DOCKET.**

10 **Q. As a result of the Company's motion to defer some issues in this docket, what**
11 **issues will the Commission decide in this 2011 proceeding?**

12 A. My understanding is that, if the Commission grants PEF's motion to defer, the
13 Commission will determine, pursuant to Section 366.93, Florida Statutes, and Rule
14 25-6.0423, F.A.C., (1) the prudence of PEF's actual 2009 costs for the CR3 Uprate
15 project; (2) the prudence of PEF's actual 2010 CR3 Uprate project costs; (3) the
16 prudence of PEF's project management, contracting, and oversight controls for 2010
17 for the CR3 Uprate project; and (4) the prudence of PEF's accounting and cost
18 oversight controls for the CR3 Uprate project for 2010. PEF has moved the
19 Commission to defer all other issues that would normally be decided by the
20 Commission in this docket.

21
22 **Q. Has Jacobs asserted that any PEF actual CR3 Uprate project cost incurred in**
23 **2009 and 2010 is not prudent?**

1 A. No. Jacobs specifically says in his testimony that he was asked by OPC to conduct a
2 review and evaluation of PEF's requests for authority to collect historical costs
3 associated with the CR3 Uprate project. (Jacobs Test., p. 3, L. 17-22). Jacobs does
4 not contend that any cost incurred for the CR3 Uprate project in 2009 and 2010 was
5 unnecessary for the project or excessive in amount. Nowhere in his testimony does
6 Jacobs identify any historical 2009 or 2010 CR3 Uprate project cost that PEF seeks
7 to collect that he finds was imprudently incurred by PEF.

8
9 **Q. Does Jacobs assert that PEF's CR3 Uprate project 2010 project management,**
10 **contracting, and oversight controls or its 2010 CR3 Uprate project accounting**
11 **and cost oversight controls are unreasonable or imprudent?**

12 A. No.

13
14 **Q. Do the Audit Staff witnesses assert that PEF's CR3 Uprate project 2010 project**
15 **management, contracting, and oversight controls or its 2010 CR3 Uprate**
16 **project accounting and cost oversight controls are unreasonable or imprudent?**

17 A. No.

18
19 **B. JACOBS' RECOMMENDATION THAT THE COMMISSION DEFER THE**
20 **DETERMINATION OF THE PRUDENCE OF PEF'S 2009 AND 2010 CR3**
21 **UPRATE PROJECT COSTS SHOULD BE REJECTED.**

22 **Q. What does Jacobs recommend with respect to CR3 Uprate actual costs incurred**
23 **in 2009 and 2010 by the Company?**

24 A. As I previously explained, Jacobs does not assert that any specific 2009 or 2010 CR3
25 Uprate project cost was imprudently incurred. Instead, Jacobs recommends that the

1 Commission should not approve the prudence of PEF's 2009 and 2010 EPU costs
2 this year because of the alleged "uncertainty of the impact of other prudence
3 determinations of PEF's activities related to the delamination of the Containment
4 Building." (Jacobs Test., p. 5, L. 8-12). In other words, Jacobs recommends that the
5 Commission defer the determination of the prudence of PEF's 2009 and 2010 EPU
6 costs until some later, undefined point in time, but presumably after the CR3
7 containment building is repaired.

8
9 **Q. What is the claimed "uncertainty" that Jacobs identifies?**

10 A. All of the uncertainties that Jacobs specifically identifies in his testimony relate to
11 the repair of the CR3 containment structure following the second delamination event
12 on March 14, 2011. (Jacobs Test., p. 8, L. 8-25). Jacobs claims there is uncertainty
13 regarding the ability to repair the CR3 containment structure, the cost and time to
14 repair it, and NRC approval of the repair and the license extension for the continued
15 CR3 nuclear operations. (Id.). All of the alleged uncertainties that Jacobs identifies
16 in his testimony arose after the second delamination event at CR3 on March 14,
17 2011. None of these alleged uncertainties, then, have anything to do with the
18 prudence of PEF's incurred historical costs for the CR3 Uprate project in 2009 and
19 2010.

20 Additionally, Jacobs' concern that the CR3 containment structure can
21 successfully be repaired and return to commercial operation with the NRC's
22 approval will be resolved in the future, in another docket, when the unit is repaired
23 and returns to service. The determination of the prudence of the actual costs PEF has

1 already incurred on the EPU in 2009 and 2010, however, does not and cannot depend
2 on the ultimate outcome of these future events. It is improper hindsight to determine
3 the prudence of costs incurred in 2009 and 2010 on the CR3 Uprate project based on
4 whether CR3 is repaired and returns to service at some future point in time,
5 especially when those facts have nothing to do with each other aside from the fact
6 that they both relate to CR3.

7
8 **Q. What about Jacobs' claim that there are potential legal implications if a**
9 **prudence determination is made for the 2009 and 2010 CR3 Uprate project**
10 **costs in this docket before there are prudence determinations in Docket No.**
11 **100347-EI?**

12 A. Jacobs admittedly is not a lawyer, nor am I, so neither one of us should be making
13 legal arguments in this docket. See Exhibit No. ___ (JF-12) to my rebuttal testimony.
14 What I can say is that the issues in Docket No. 100347-EI arose as a result of the
15 delaminations that occurred at CR3 on October 2, 2009 and March 14, 2011 during
16 the course of the SGR project. The SGR project is a separate and distinct project
17 from the CR3 Uprate project. The only shared fact is that both projects are at CR3.
18 None of the activities associated with the CR3 Uprate project have anything to do
19 with the activities associated with the SGR project. Jacobs agreed in his deposition,
20 admitting that the SGR project is not part of the EPU work, and admitting that he is
21 not aware of any activities in 2009 and 2010 on the EPU project that are at issue in
22 Docket No. 100347-EI. See Exhibit No. ___ (JF-12) to my rebuttal testimony. There
23 is no factual reason that I can see then to delay the determination of the prudence of

1 PEF's actual costs incurred in 2009 and 2010 on the CR3 Uprate project because of
2 any determination that will later be made in Docket No. 100347-EI.

3 It bears emphasis too, that even Jacobs concedes that the prudence of PEF's
4 costs incurred prior to October 2, 2009 on the CR3 Uprate project can be determined
5 by the Commission at this time. (Jacobs Test., p. 9, L. 19). As far as the costs PEF
6 incurred after October 2, 2009 on the CR3 Uprate project, Jacobs notably did not
7 claim last year in the 2010 NCRC proceeding that these costs were imprudent or
8 unreasonable or that they should be deferred until the CR3 containment building is
9 repaired, even though he was well aware of the first delamination and had visited the
10 CR3 site. See Exhibit No. ____ (JF-13) to my rebuttal testimony. He also did not
11 challenge the Company's long-term feasibility analysis for the CR3 Uprate project
12 last year. He admitted that he did not raise any of the uncertainties he is concerned
13 with now last year, and he admitted that he had no issue with PEF proceeding with
14 the CR3 Uprate project last year other than the EPU LAR approval by the NRC. See
15 Exhibit No. ____ (JF-12) and Exhibit No. ____ (JF-13) attached to my rebuttal
16 testimony. Jacobs further agrees that PEF should not have cancelled the EPU work
17 on October 2, 2009 when the initial delamination occurred. See Exhibit No. ____ (JF-
18 12) to my rebuttal testimony. Based on these facts, there is no reason for the
19 Commission to defer the determination of the prudence of PEF's CR3 Uprate project
20 costs in 2009 and 2010. The Commission should determine that PEF's 2009 and
21 2010 CR3 Uprate project costs were prudently incurred.

1 **C. PEF'S COSTS UNDER AREVA CHANGE ORDER NUMBER 23 WERE**
2 **UNAVOIDABLE COSTS NECESSARY TO PREPARE AN EPU LAR**
3 **DOCUMENT THAT MET NRC ACCEPTANCE REVIEW**
4 **REQUIREMENTS.**

5 **Q. Now, turning to the Staff Audit report conclusion with respect to the CR3**
6 **Uprate project, do the Audit Staff witnesses address the prudence of PEF's 2009**
7 **and 2010 CR3 Uprate project costs unrelated to the LAR management and**
8 **development costs?**

9 A. No. The only CR3 Uprate project costs addressed in the Audit Staff witness
10 testimony and attached Staff Audit Report are the LAR management and
11 development costs. These LAR management and development costs represent a
12 small fraction of the total CR3 Uprate project costs in 2009 and 2010. The bulk of
13 those costs were incurred for the work that was performed during the CR3 refueling
14 outage in 2009, for engineering analyses that supported the LAR, for engineering
15 analyses for the engineering change packages for the EPU phase work, and for long
16 lead item payments for the EPU phase. As I explained in my March 1, 2011 Direct
17 Testimony, these costs were necessary for the CR3 Uprate project and they were
18 reasonably and prudently incurred. In fact, the Commission determined that the
19 2009 and 2010 CR3 Uprate project costs were reasonably incurred in the 2010
20 NCRC docket. The Commission should now determine that these 2009 and 2010
21 CR3 Uprate project costs were prudently incurred.

22
23 **Q. Why are the LAR management and development costs at issue in this docket?**

24 A. The LAR management and development costs are at issue in the 2011 NCRC docket
25 because the Commission deferred a decision on the prudence of the CR3 Uprate

1 2009 costs in the 2010 NCRC docket to allow the parties “the opportunity to fully
2 investigate and present the facts and circumstances surrounding the management of
3 the CR3 Uprate LAR development process.” The reason the Commission decided to
4 provide this opportunity to the parties was to “ascertain the impacts [the CR3 Uprate
5 LAR development process] had on actual 2009 costs, if any.” See Order No. PSC-
6 11-0095-FOF-EI, Docket No. 100009-EI, p. 39. Several parties, including OPC,
7 complained that they had an inadequate opportunity to investigate and address the
8 LAR development process and costs in 2009 and, as a result, the Commission
9 deferred the determination of the prudence of the 2009 CR3 Uprate project costs
10 from the 2010 NCRC docket to the 2011 NCRC docket. Interestingly, despite being
11 provided this opportunity at their request, I was deposed in the 2011 NCRC docket
12 for approximately eight hours and I was not asked a single question that I recall
13 about the Company’s 2009 CR3 Uprate project costs, much less any questions about
14 the 2009 LAR management and development costs.

15
16 **Q. Why were the LAR management and development costs at issue in the 2010**
17 **NCRC proceeding?**

18 A. As I explained in my testimony in the 2010 NCRC proceeding and in detail in my
19 March 1, 2011 Direct Testimony in this NCRC proceeding, the issue was PEF’s
20 management of the preparation of the initial draft CR3 EPU LAR document in 2009.
21 This document was prepared by AREVA and PEF and submitted to an expert panel
22 for review in June-July 2009 to determine if the draft CR3 EPU LAR document met
23 NRC acceptance review requirements. PEF established the expert panel review

1 process as part of its project management and contractor oversight controls on the
2 CR3 Uprate project.

3 The expert panel concluded that the initial draft CR3 EPU LAR document
4 did not meet the quality standards required for NRC acceptance review, that it was
5 incomplete, and that it did not meet evolving NRC standards for EPU LAR
6 submittals. As I explained last year to the Commission, we agree that inadequate
7 management oversight of the CR3 EPU LAR development work prior to June-July
8 2009 contributed to the submittal of an inadequate and incomplete draft CR3 EPU
9 LAR document to the expert panel for review. The most significant reason with
10 respect to our need for additional work and cost arising from the expert panel review,
11 however, was the expert panel's conclusion that the draft CR3 EPU LAR document
12 was incomplete and failed to meet NRC acceptance review requirements because of
13 evolving NRC standards and expectations for information to be included in an EPU
14 LAR document at that time.

15 This is the reason for AREVA Change Order Number 23. The expert panel
16 did not address the costs to produce an EPU LAR document that met these evolving
17 NRC expectations. They were charged with reviewing the draft EPU LAR document
18 for compliance with NRC acceptance review requirements. They were not charged
19 with reviewing the Company's contract with AREVA to determine if the work
20 required to meet the NRC requirements was existing or additional work under that
21 contract. The expert panel did not review PEF's Work Authorization ("WA") No. 84
22 with AREVA for the EPU LAR development work and they did not review AREVA
23 Change Order Number 23.

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Q. Can you more clearly explain what the expert panel issues were with the initial draft EPU LAR document that AREVA and PEF submitted to them for review in June-July 2009?

A. Yes. I will explain what these issues were, how we resolved them, what additional work was necessary to resolve them, and what additional costs, if any, were required to resolve them. In sum, we did not pay AREVA for any work that we should not have paid them for. We did not pay for any duplicative work. All work and the costs for the work we incurred were necessary to prepare an EPU LAR document that met NRC acceptance review requirements. These costs were unavoidable.

The expert panel issues with the draft CR3 EPU LAR document and our resolution of them are as follows:

(1). Quality Issues. The expert panel identified quality issues with the draft CR3 EPU LAR document that had to be corrected. One example was the cutting and pasting from the Ginna EPU LAR document to the draft CR3 EPU LAR document. These quality issues with the draft CR3 EPU LAR document were corrected by AREVA at AREVA's cost. PEF's customers did not incur any additional costs to correct the quality issues with the draft CR3 EPU LAR document. We understand that the Audit Staff witnesses agree that AREVA corrected the quality issues with the draft CR3 EPU LAR document at AREVA's cost. (Staff Audit Report, p. 24).

(2). Existing technical data and information that was not included in the draft CR3 EPU LAR document. The expert panel identified proprietary technical

1 data and information that the expert panel believed AREVA should have included in
2 the draft CR3 EPU LAR document to be consistent with the Ginna EPU LAR
3 document that AREVA and PEF were using as a model for the draft CR3 EPU LAR
4 document. Audit Staff witnesses refer to this expert panel comment when they assert
5 in the Audit Staff Report that “sections of the single, non-proprietary version lacked
6 sufficient data [that] significantly impacted the need to restructure the” document.
7 (Staff Audit Report, p. 24). This proprietary technical data was created under PEF
8 WA No. 84 with AREVA for the CR3 EPU LAR document, but it was not included
9 in the draft EPU LAR document submitted to the expert panel for review because
10 AREVA and PEF believed it did not need to be included in the CR3 EPU LAR
11 document. This existing, proprietary technical data was included in the CR3 EPU
12 LAR document at AREVA’s cost under WA No. 84. PEF’s customers did not incur
13 any additional costs to add this existing, proprietary technical data to the CR3 EPU
14 LAR document.

15 (3). Non-existing technical data and information that was not included in
16 the draft CR3 EPU LAR document. The expert panel also identified certain
17 technical data or information that should have been included in the draft CR3 EPU
18 LAR document that did not exist at the time the draft CR3 EPU LAR document was
19 submitted to the expert panel for review. Simply put, AREVA or PEF had not yet
20 performed the work necessary to include this technical data or information in the
21 CR3 EPU LAR document. AREVA performed its work to generate this technical
22 data or information to include it in the CR3 EPU LAR document under WA No. 84.
23 There were no additional costs to PEF’s customers for this work. To the extent PEF

1 performed additional engineering work to generate this missing technical data or
2 information and include it in the CR3 EPU LAR document that work was obviously
3 necessary and the costs were reasonably and prudently incurred. Additional work
4 requires additional costs. There is no free work.

5 (4). Technical data and information required to meet evolving NRC
6 standards or expectations for EPU LAR documents. The final substantive expert
7 panel comment regarding their issues with the draft CR3 EPU LAR document is the
8 most significant in terms of the additional work and costs required to prepare an EPU
9 LAR document that met NRC acceptance review requirements. The expert panel
10 recognized that NRC standards or expectations for EPU LAR documents were
11 evolving at the time the expert panel was reviewing the draft CR3 EPU LAR
12 document. In particular, the expert panel relied on the Point Beach EPU LAR
13 submittal to the NRC in April 2009 and the subsequent Point Beach NRC requests
14 for additional information (“RAIs”) in the summer of 2009 as a review standard for
15 the draft CR3 EPU LAR document. See CR3 EPU Expert Panel Management
16 Debrief dated July 14, 2009, p. 3, “Scope and Review Standards,” Exhibit No. (JF-
17 14) to my rebuttal testimony. Complying with these evolving NRC standards and
18 expectations for EPU LAR documents represented by the Point Beach EPU LAR
19 NRC review required additional technical work and LAR document formatting work
20 beyond what was contemplated under WA No. 84. The work under AREVA Change
21 Order Number 23 was for this additional technical work and LAR document
22 formatting work to ensure that the CR3 EPU LAR document complied with the
23 evolving NRC standards and expectations for EPU LAR documents. PEF had to

1 perform additional work and incur additional costs to meet the evolving NRC
2 standards and expectations.

3
4 **Q. Were the expert panel issues with the draft CR3 EPU LAR document in June-**
5 **July 2009 resolved to the expert panel's satisfaction?**

6 A. Yes. The problems with the draft CR3 EPU LAR document identified by the expert
7 panel were included in a LAR recovery plan that was created and implemented to
8 correct them pursuant to our Quality Assurance and Project Controls Programs. This
9 LAR recovery plan was successfully implemented. The quality issues with the initial
10 CR3 EPU LAR document related to the original work authorization with AREVA
11 were corrected without additional costs, complete information was added to the CR3
12 EPU LAR document, and work was performed to meet the evolving NRC standards
13 for EPU LAR document submittals. The expert panel confirmed that the problems
14 with the initial draft CR3 EPU LAR document were corrected by the Company. See,
15 e.g., Exhibit No. __ (JF-4) to my March 1, 2011 Direct Testimony. PEF filed the
16 EPU LAR document for the CR3 Uprate project with the NRC in June 2011.

17
18 **Q. Do the Audit Staff witnesses disagree that the problems associated with the**
19 **initial draft CR3 EPU LAR document were corrected by the Company?**

20 A. No, they do not. They agree that PEF successfully implemented its LAR recovery
21 plan and corrected the problems with the initial draft CR3 EPU LAR document.
22 Additionally, the Commission did not question last year the quality of the
23 Company's project management and oversight controls mechanisms. The

1 Commission acknowledged that PEF's management, contracting, and oversight
2 controls policies and procedures on the CR3 Uprate project, including the expert
3 panel review of the draft CR3 EPU LAR document, provided the mechanisms for
4 PEF to identify issues with respect to the draft CR3 EPU LAR document and correct
5 them.

6
7 **Q. What do the Audit Staff witnesses conclude in the Staff Audit Report with**
8 **respect to the Company's CR3 LAR management and development costs?**

9 A. Audit Staff witnesses conclude in the Staff Audit Report that the amount the
10 Company incurred with AREVA under Change Order Number 23 to re-write the
11 original CR3 EPU LAR document in 2009 was avoidable. (Staff Audit Report, p. 7).
12 The Audit Staff witnesses claim incorrectly that the need for this additional AREVA
13 work was due to the lack of management oversight prior to submittal of the initial
14 CR3 EPU LAR draft document to the expert panel for review in June-July 2009.
15 (Id.). Audit Staff explains in the Staff Audit Report that "while the Company
16 identified this work [AREVA Change Order Number 23] as additional scope, audit
17 staff believes that portions, if not all, of this work scope should have been seen as
18 necessary in the original LAR development." (Staff Audit Report, p. 24). Audit
19 Staff apparently believes the AREVA Change Order Number 23 work scope should
20 have been included in the original LAR development because of their mistaken
21 belief that this work scope was required to provide some or all of the information
22 necessary to comply with the Ginna EPU LAR document model.

1 Q. Can you explain where the Audit Staff witnesses form this mistaken belief in the
2 Staff Audit Report?

3 A. Yes. Audit Staff witnesses specifically identify the “lack of quality content,” and
4 refer to the initial CR3 EPU LAR document as a “single, non-proprietary version
5 [that] lacked sufficient data.” (Staff Audit Report, p. 24) (emphasis added). They
6 misconstrue the expert panel comments about the CR3 EPU LAR draft document
7 and claim that PEF “‘got off on the wrong path’ by choosing to limit specific
8 technical details in the application.” (Id.). These problems with the initial CR3 EPU
9 LAR draft document, in Audit Staff’s view, were the reason for AREVA Change
10 Order Number 23. (Id.).

11 Audit Staff witnesses assert that a “major factor” influencing the deficiencies
12 in the initial CR3 EPU LAR document was PEF’s arrangement with AREVA at the
13 onset of the EPU LAR development process that allowed “AREVA to reduce the
14 amount of technical detail in the draft application.” (Id.) (emphasis added). They
15 conclude that, “overall, the LAR draft presented to the panel contained less detail
16 that the standard suggested by the NRC – the Ginna LAR application.” (Id.)
17 (emphasis added). In sum, Audit Staff believes that AREVA Change Order Number
18 23 was required to add technical detail and information to comply with the Ginna
19 EPU LAR document that should have been included in AREVA WA No. 84 because
20 the Ginna LAR application was the model for the CR3 EPU LAR document under
21 WA No. 84.
22

1 **Q. Even if the AREVA Change Order Number 23 work scope should have been**
2 **included but was not included in the WA No. 84 work scope, does that mean**
3 **that the costs of this work scope were avoidable or imprudently incurred?**

4 **A.** No, it does not. Audit Staff apparently believes that work scope could be added to
5 WA No. 84 at no additional cost to PEF simply because Audit Staff believes this
6 work scope should have been but was not included in the original LAR development
7 under WA No. 84. That is not correct. If work scope to meet the Ginna EPU LAR
8 document model should have been included but was not included in WA No. 84,
9 PEF still must pay AREVA for this additional work. It is not free, as Audit Staff
10 illogically concludes, simply because they believe it was left out of WA No. 84. If
11 the work scope that Audit Staff believes was necessary to comply with the Ginna
12 EPU LAR model had been included in WA No. 84, the WA No. 84 contract price
13 would have been higher. PEF would not have received this additional work from
14 AREVA without paying AREVA for it. PEF had to pay AREVA for any additional,
15 required work scope on the project.

16 I want to be clear, however, that the AREVA Change Order Number 23 work
17 scope was required to include new template information to meet the evolving NRC
18 standards and expectations in the CR3 EPU LAR document. It was not required to
19 include information in the CR3 EPU LAR document to comply with the Ginna EPU
20 LAR document model. Audit Staff is mistaken if Audit Staff believes the work
21 scope under Change Order Number 23 was required to meet the Ginna EPU LAR
22 document model.

1 In any event, all of PEF's post-expert panel costs, in particular the AREVA
2 Change Order Number 23 costs, were, necessary, then, to produce an EPU LAR
3 document that met NRC acceptance review requirements. These costs were
4 unavoidable and prudently incurred.

5
6 **Q. Why were these costs unavoidable and prudently incurred regardless of the**
7 **contractual arrangement for the work represented by these costs?**

8 **A.** PEF had to pay AREVA for this work, whether it was included in WA No. 84 or
9 Change Order Number 23 work scope, to obtain an EPU LAR document that met
10 NRC acceptance review requirements. I described above the four problems that the
11 expert panel had with the initial draft CR3 EPU LAR document that the Company
12 resolved. As I previously indicated, Audit Staff apparently agrees that AREVA
13 corrected the quality issues with the draft document at AREVA's cost. Audit Staff
14 witnesses believe, however, that the remaining problems were resolved by AREVA
15 Change Order Number 23 when two of the three problems should have been resolved
16 under WA No. 84 with AREVA. These problems were (1) the technical data or
17 information that existed but was not included in the draft EPU LAR document, and
18 (2) the technical data or information that was not prepared yet when the draft
19 document was submitted to the expert panel. Because all of this work was necessary
20 to prepare an EPU LAR document that met NRC acceptance review requirements,
21 however, PEF had to pay for this work, regardless whether it was included in the
22 work scope for AREVA WA No. 84 or Change Order Number 23.

1 In fact, the existing technical data or information that was already developed,
2 but merely left out of the draft document because of some early proprietary concerns
3 by AREVA, was added to the document at AREVA's expense under WA No. 84.
4 Likewise, to the extent that technical data or information was not included in the
5 draft EPU LAR document because AREVA had not yet done the engineering work
6 necessary to develop that information, that work was performed subsequent to the
7 expert panel review by AREVA at AREVA's expense under WA No. 84.

8 To the extent PEF had not performed the engineering work to develop
9 missing technical data or information at the time of the expert panel review, the costs
10 that PEF later incurred to perform that work were necessary to include the
11 information in the document regardless of when that work was performed. Finally,
12 the technical data or information that was added due to new expectations by the NRC
13 required additional engineering development costs and EPU LAR template work
14 considerably beyond simple word processing costs for the EPU LAR document.
15 These costs were necessarily incurred subsequent to the expert panel review to
16 prepare an EPU LAR document that met the evolving NRC standards and
17 expectations at that time. As a result, all costs necessary to prepare an EPU LAR
18 document that met NRC acceptance review requirements were always required on
19 the CR3 Uprate project, regardless of the contractual arrangement for this work
20 scope or the timing of when these costs were incurred.

21 By way of a simple comparison, assume that 50 logs are initially needed to
22 build a log cabin. The builder erroneously concludes at the outset of the project,
23 however, that only 40 logs are needed and he budgets for and purchases only 40 logs.

1 While building the cabin, his partner points out the error and shows that 50 logs are
2 needed instead of 40. As the builder recognizes the need for 50 logs, the applicable
3 building codes are updated and now require 100 logs to be used. The fact that the
4 builder's initial assumption of 40 logs was in error does not make the cost of
5 obtaining the extra 10 logs to correct his error imprudent. Likewise, the fact that the
6 building codes changed and now 100 logs instead of 50 are required does not make
7 the cost of obtaining the extra 50 logs needed to build the cabin imprudent.

8 It is this very similar erroneous assumption, however, that drives the mistake
9 that Audit Staff has made. The missing technical data and information in the initial
10 CR3 EPU LAR document could not have been provided without additional effort
11 and cost. Similarly, in late summer 2009, the NRC significantly changed the
12 expectations for the CR3 EPU LAR submittal with the review of the Point Beach
13 power uprate submittal. No longer was the Ginna model acceptable, but a much
14 more extensive effort was required. The expert panel caught this change within
15 weeks of the new information being available. Obviously, the previous contract with
16 AREVA did not include the very extensive changes required to meet these new
17 requirements. The submittal of the Point Beach EPU LAR did not occur until April
18 2009 and it was a few months before the industry understood the full reaction of the
19 NRC to that submittal and the substantive changes it represented. Change Order
20 Number 23 was written to ensure that AREVA absorbed the costs of providing the
21 initially required information to meet the Ginna model as defined under WA No. 84,
22 but authorized expenditures for the additional information required by the new set of
23 rules only established in the summer of 2009. The Company is entitled to recover

1 the costs the Company incurred to add the missing and additional, required technical
2 data and information to the CR3 EPU LAR document. Referring back to the
3 analogy, the extra 10 logs required to correct the builder's erroneous assumption and
4 the extra 50 logs required by the new building codes are not free.

5
6 **Q. Have the Audit Staff witnesses recognized the work and effort required to**
7 **produce an EPU LAR document that met NRC acceptance review**
8 **requirements?**

9 **A.** Yes. Audit Staff witnesses recognized that this work effort was necessary to produce
10 a quality EPU LAR document for submittal to the NRC in their Staff Audit Report
11 last year. They agreed that the additional work effort that was performed after the
12 expert panel review to prepare a quality EPU LAR document was likely necessary
13 before the expert panel review. They stated that “while significant resources are
14 necessary to complete the LAR application and the company's extensive efforts post-
15 expert panel to revise its application may have [been] [sic] necessary to develop a
16 sound application from the onset, significant resources were spent prior to develop
17 the final draft.” See Exhibit No. ___ (JF-3), p. 41, to my March 1, 2011 Direct
18 Testimony (emphasis added). Audit Staff witnesses were correct in their Staff Audit
19 Report last year. Significant work and resources were necessary to prepare an EPU
20 LAR document that met NRC acceptance review requirements, regardless of the
21 timing of that work effort in relation to the June-July 2009 expert panel review.

22 As I have explained, all the problems with the initial draft CR3 EPU LAR
23 document submitted to the expert panel in June-July 2009 that are identified in the

1 Staff Audit Report reflect information that had to be provided and work that had to
2 be done regardless of when that work was performed. Audit Staff witnesses
3 specifically point to the lack of technical data and information in the initial draft CR3
4 EPU LAR document as the major deficiency. Obviously, the way to correct this
5 deficiency is to add the required technical data and information to the CR3 EPU
6 LAR document. Adding technical data and information to the CR3 EPU LAR
7 document required further work and, therefore, further LAR development and
8 management costs. This work and management effort had to be undertaken to
9 prepare a quality EPU LAR document for NRC submittal regardless of the timing of
10 this work. As a result, the costs of this additional work and management were
11 necessary to prepare the CR3 EPU LAR document for submittal to the NRC and,
12 accordingly, they were therefore unavoidable costs on the CR3 Uprate project.

13
14 **Q. Does the difference in the timing of these costs cause customers to bear more**
15 **costs than they otherwise would have if the costs were incurred before rather**
16 **than after the expert panel review of the initial CR3 EPU LAR draft document?**

17 **A.** No. As I explained in my March 1, 2011 Direct Testimony, the timing difference
18 was a matter of months – from early 2009 to mid-to-late 2009 and early 2010 – and
19 the costs for engineering work that might have been performed at the beginning of
20 this period compared to the costs of the same work that was performed at the end of
21 this relatively short period of time did not change. PEF moved quickly to perform
22 the additional, required engineering and other work in response to the
23 recommendations of the expert panel and, as a result, there were no delays in

1 performing this additional work that resulted in additional costs to customers. In
2 fact, the information from the Point Beach application was not available to the
3 Company until the summer of 2009 so the delay may have actually reduced
4 misdirected costs before the shift in NRC expectations, as I also explained in my
5 March 1, 2011 Direct Testimony.

6
7 **Q. What costs were incurred by the Company to prepare the initial CR3 EPU LAR**
8 **draft document reviewed by the expert panel in June-July 2009?**

9 A. The Company incurred \$21,798 in actual labor costs on the draft CR3 EPU LAR
10 document and an estimated \$110,261 in EPU LAR management costs prior to
11 submittal of the draft CR3 EPU LAR document to the expert panel for review in
12 June 2009. See Exhibit No. ____ (JF-5) to my March 1, 2011 Direct Testimony. The
13 Company, therefore, incurred about \$131K for its work to prepare and manage the
14 initial draft CR3 EPU LAR document. As I explained in my March 1, 2001 Direct
15 Testimony, these costs confirm that PEF had not devoted sufficient management and
16 other resources to the development of the CR3 EPU LAR document prior to the
17 submittal of the draft CR3 EPU LAR document to the expert panel for review in
18 June-July 2009. This is the reason for the lack of sufficient technical data and
19 information in the initial draft CR3 EPU LAR document reviewed by the expert
20 panel relative to the original contract expectations under the Ginna EPU LAR
21 document model. PEF simply had not devoted enough resources to the work and
22 management of the CR3 EPU LAR document prior to June-July 2009.

1 As Audit Staff acknowledged in the Staff Audit Report, the EPU LAR
2 document “was an evolving document to which critiques and modifications would be
3 expected.” Staff Audit Report, p. 24. Accordingly, the costs PEF incurred for the
4 CR3 EPU LAR development prior the expert panel review in June 2009 were simply
5 part of the necessary process to develop and prepare an engineering document as
6 complicated as an EPU LAR document.

7
8 **Q. Did PEF incur costs with AREVA to prepare the initial draft CR3 EPU LAR**
9 **document reviewed by the expert panel in June-July 2009?**

10 A. Yes. Pursuant to WA Number 84 attached as Exhibit No. ____ (JF-1) to my March 1,
11 2011 Direct Testimony, AREVA was paid a flat fee amount to draft the CR3 EPU
12 LAR document. This is the only cost PEF incurred prior to June-July 2009 with
13 AREVA to develop the initial CR3 EPU LAR document. As I have explained in my
14 prior testimony in the 2010 NCRC proceeding, in my March 1, 2011 Direct
15 Testimony, and above, the work required by AREVA to correct the quality issues
16 with the CR3 EPU LAR draft document identified by the expert panel was
17 performed at AREVA’s cost. No additional funds to re-do or re-write unchanged
18 CR3 EPU LAR document sections to improve the quality of those sections were paid
19 to AREVA. The fact that PEF paid AREVA no additional funds to improve the
20 quality of the unchanged CR3 EPU LAR document sections in the CR3 EPU LAR
21 document is undisputed.

22 Likewise, there were CR3 EPU LAR document sections that the expert panel
23 concluded were incomplete because they did not contain sufficient technical data or

1 information consistent with the Ginna EPU LAR document used by PEF and
2 AREVA as a model for the CR3 EPU LAR document. This is what the expert panel
3 meant when they informed the Audit Staff witnesses that PEF “got off on the wrong
4 path” by choosing to limit the technical data included in the draft CR3 EPU LAR
5 document. (Staff Audit Report, p. 24). They were referencing the failure to include
6 technical data or information in the CR3 EPU LAR draft document to make it
7 consistent with the Ginna EPU LAR model that was used as a guide for the CR3
8 EPU LAR draft document.

9 As I explained in my March 1, 2011 Direct Testimony and above, the
10 exclusion of this information from the draft CR3 EPU LAR document submitted to
11 the expert panel for review did not mean the information did not exist. Most if not
12 all of the engineering analysis was done or the engineering information was already
13 developed by AREVA. AREVA simply did not include it in the draft CR3 EPU
14 LAR document reviewed by the expert panel because it was proprietary information
15 and AREVA and PEF did not believe it needed to be included in the CR3 EPU LAR
16 document. The expert panel members referenced the failure to include this
17 proprietary information in the draft CR3 EPU LAR document when they told the
18 Audit Staff witnesses that “sections of the single, non-proprietary version lacked
19 sufficient data [that] significantly impacted the need to restructure the report.” (Staff
20 Audit Report, p. 24). This does not mean and the expert panel members did not say
21 that this missing technical data or information did not exist. The expert panel
22 members simply said it should have been but was not included in the draft CR3 EPU
23 LAR document that they reviewed.

1 As I have explained, AREVA included the initially excluded proprietary
2 technical data and information in the CR3 EPU LAR document at AREVA's cost.
3 PEF paid AREVA no additional funds beyond those included in the flat fee for
4 AREVA's work on the LAR document under WA No. 84 to include proprietary
5 technical data and information in the CR3 EPU LAR document. This flat fee
6 arrangement included adding the additional engineering information or analysis that
7 had already been performed or that needed to be performed to make the CR3 EPU
8 LAR document consistent with the Ginna EPU LAR submittal model guidelines. As
9 I testified last year and this year, PEF addressed the expert panel recommendations
10 concerning the quality and completeness of the draft CR3 EPU LAR document
11 submitted to the expert panel for review in June-July 2009 at no additional cost to
12 customers.

13 Audit Staff agrees in the Staff Audit Report that AREVA corrected
14 deficiencies in the draft CR3 EPU LAR document at AREVA's own cost. Audit
15 Staff, nevertheless, erroneously attributes the work and costs under AREVA Change
16 Order Number 23 to the effort to re-structure the CR3 EPU LAR document to
17 incorporate the missing technical data and information required for the CR3 EPU
18 LAR document to be consistent with the Ginna EPU LAR application model despite
19 evolving NRC expectations at the time. They assert that "[w]hile Audit Staff
20 confirms that AREVA did correct portions of its work product at no cost, the
21 company was required to re-structure its application format to incorporate the
22 recommendations of the panel and post-review LAR Recovery team." (Staff Audit
23 Report, p. 24). (emphasis in original). Audit Staff's attribution of the AREVA

1 Change Order Number 23 costs to the re-structuring of the EPU LAR document to
2 comply with the Ginna EPU LAR model document is incorrect. Audit Staff is
3 incorrect because Audit Staff fundamentally misunderstands the scope of the expert
4 panel review and the relationship between the pre- and post-expert panel EPU LAR
5 document models and AREVA Change Order Number 23. These changes in format
6 and content which required additional funds are directly related to the evolving
7 standards and expectations of the NRC realized after the initial agreement with
8 AREVA under WA No. 84.

9
10 **Q. What is the fundamental misunderstanding that Audit Staff has of the scope of**
11 **the expert panel review and the relationship between the CR3 EPU LAR**
12 **document models and the work under AREVA Change Order Number 23?**

13 A. Audit Staff erroneously believes the work scope under AREVA Change Order
14 Number 23 was required to conform the initial draft CR3 EPU LAR document to the
15 Ginna EPU LAR application model consistent with the expert panel
16 recommendations. To illustrate, Audit Staff sums up its assessment of the initial
17 development of the CR3 EPU LAR document that “the [expert] panel members
18 asserted that while the NRC’s expectations may have evolved during this timeframe,
19 overall, the LAR draft presented to the panel contained less detail than the standard
20 suggested by the NRC – the Ginna LAR application.” Audit Staff then concludes
21 that the AREVA Change Order Number 23 costs “spent to re-write the LAR
22 constituted the re-structuring of a poorly-initiated application.” (Staff Audit Report,
23 p. 24). Audit Staff believes, therefore, that the Company incurred the costs under

1 AREVA Change Order Number 23 to re-write the CR3 EPU LAR document to
2 include the missing technical data and information that was necessary for the CR3
3 EPU LAR document to comply with the Ginna EPU LAR application model
4 consistent with the expert panel recommendations.

5 Audit Staff is incorrect because Audit Staff fundamentally misunderstands
6 the scope of the expert panel review and draws erroneous conclusions about the
7 relationship between the expert panel recommendations and the contractual
8 arrangements between PEF and AREVA for the CR3 EPU LAR development work.
9 The expert panel was formed to review the draft CR3 EPU LAR document to
10 determine if it met the NRC acceptance review requirements consistent with the
11 standards represented by (1) the NRC RS-001 NRC Review Standard for Extended
12 Power Uprates, (2) the Ginna EPU LAR application, request for additional
13 information (“RAI”) responses, and the NRC approval document for the Ginna EPU,
14 and (3) the evolving NRC requirements for EPU LAR applications represented by
15 the Point Beach EPU LAR submittal and RAIs. See CR3 EPU Expert Panel
16 Management Debrief dated July 14, 2009, p. 3, “Scope and Review Standards,”
17 Exhibit No. ___ (JF-14) to my rebuttal testimony. The expert panel was not asked to
18 review and did not review the contractual arrangements between PEF and AREVA
19 for the CR3 EPU LAR development work.

20 As a result, the expert panel never reviewed WA No. 84 or AREVA Change
21 Order Number 23. The expert panel recommendations, therefore, were not
22 comments on the appropriate scope of work under WA No. 84 or AREVA Change
23 Order Number 23. They were not asked to determine and did not determine whether

1 the scope of work under AREVA Change Order Number 23 involved re-writing the
2 CR3 EPU LAR document to include missing technical data and information
3 necessary to conform the draft CR3 EPU LAR document to the Ginna EPU LAR
4 application model. The expert panel review was limited to determining if the draft
5 CR3 EPU LAR document met the NRC acceptance review requirements based on
6 the Ginna EPU LAR application model and the evolving NRC EPU LAR
7 requirements at the time represented by the NRC's then-pending review of the Point
8 Beach EPU LAR application.

9
10 **Q. Did the scope of work under AREVA Change Order Number 23 include re-**
11 **writing the CR3 EPU LAR document to include technical data and information**
12 **required under the Ginna EPU LAR application model?**

13 A. No, it did not. As I explained in my March 1, 2011 Direct Testimony, AREVA
14 Change Order Number 23 was required to re-write the original EPU LAR document
15 to comply with a revised EPU LAR template that met evolving industry standards
16 and NRC expectations. The evolving industry standards and NRC expectations were
17 reflected in the NRC EPU LAR review requirements for the Point Beach EPU LAR
18 submittal that I explain in detail in my March 1, 2011 Direct Testimony. By
19 definition, any work required to meet evolving industry standards and NRC
20 expectations represented new work on the CR3 Uprate project. New, additional
21 work on the project requires a change order to the existing contract work scope to
22 incorporate that work into the project under PEF's project management and
23 contracting processes and procedures. The additional work required to incorporate

1 the evolving industry standards and NRC expectations into a new LAR document
2 template for the CR3 EPU LAR application was, therefore, a change in the scope of
3 work for the CR3 EPU LAR document between PEF and AREVA. As I explained in
4 my March 1, 2011 Direct Testimony, AREVA was entitled to more compensation
5 for more work to conform the CR3 EPU LAR to meet the additional EPU LAR
6 document requirements based on evolving industry standards and NRC expectations.
7 AREVA Change Order Number 23 encompasses this new, additional work on the
8 CR3 Uprate project.

9
10 **Q. Does AREVA Change Order Number 23 reflect this new, additional work for**
11 **the CR3 Uprate project?**

12 **A.** Yes, it does. AREVA Change Order Number 23 expressly states on its face that the
13 CR3 EPU LAR re-write activities under AREVA Change Order Number 23 are new
14 scope activities for a “revised template.” The “work scope” section of AREVA
15 Change Order Number 23 identifies three phase of work that all involve re-writing
16 LAR document sections to comply with the revised template. The revised template
17 work under AREVA Change Order Number 23 was required to incorporate the
18 evolving standards and NRC expectations for EPU LAR applications into the CR3
19 EPU LAR document. It did not involve any work to incorporate information in the
20 CR3 EPU LAR document that complied with the expert panel comments and
21 recommendations. Indeed, AREVA Change Order Number 23 expressly states that
22 the expert panel “comment incorporation is considered part of the original scope of
23 activities and is not included in this scope of work.” See Exhibit No. ____ (JF-6) to

1 my March 1, 2011 Direct Testimony, p. 2 of 10 (emphasis added). The Company
2 made clear in AREVA Change Order Number 23 that the work required to comply
3 with the expert panel recommendations that additional technical data and
4 information should be included in the CR3 EPU LAR document to make that
5 document consistent with the Ginna EPU LAR application model was not included
6 in the scope of work under AREVA Change Order Number 23.

7 AREVA Change Order Number 23, therefore, did not include the work
8 required to include in the CR3 EPU LAR document the missing technical data and
9 information required to conform the CR3 EPU LAR document to the Ginna EPU
10 LAR application model. This work, as I explained above, was existing work under
11 the flat fee arrangement between PEF and AREVA for the EPU LAR development
12 work under WA No. 84. This work was performed by AREVA at AREVA's cost.
13 PEF paid AREVA no additional costs to include in the CR3 EPU LAR document the
14 technical data and information that conformed the CR3 EPU LAR document to the
15 Ginna EPU LAR application model.

16
17 **IV. CONCLUSION.**

18 **Q. In conclusion, should the Commission determine that PEF's 2009 and 2010 CR3**
19 **Uprate project costs are prudent based on the evidence in this proceeding?**

20 **A.** Yes. PEF has demonstrated that PEF's 2009 and 2010 CR3 Uprate project costs
21 were prudently incurred and that PEF is entitled to recover them from customers.
22 Jacobs does not dispute this evidence. He nowhere testifies that any specific cost
23 that PEF incurred in 2009 and 2010 on the CR3 Uprate project is imprudent. He

1 recommends only that the Commission defer the prudence determination of these
2 costs because of his mistaken belief that the recovery of these costs is affected by the
3 Company's activities on a separate and distinct project from the CR3 Uprate project.
4 He agrees, however, that PEF was reasonable in continuing with the CR3 Uprate
5 activities in 2009 and 2010 and that as far as he is aware of these activities are not at
6 issue in that separate proceeding. There is, therefore, no reasonable basis for the
7 Commission to defer the prudence determination of the Company's 2009 and 2010
8 CR3 Uprate project.

9 Audit Staff in the Staff Audit Report conclude that the costs PEF incurred
10 under AREVA Change Order Number 23 were avoidable. They do not conclude that
11 any other 2009 or 2010 CR3 Uprate project cost was avoidable or imprudently
12 incurred on the project. The evidence in this proceeding, including the Staff Audit
13 Report, demonstrates that the AREVA Change Order Number 23 costs were
14 necessary to prepare an EPU LAR document that met NRC acceptance review
15 requirements and, therefore, they were unavoidable CR3 Uprate project costs. PEF's
16 costs for the CR3 EPU LAR document development under AREVA Change Order
17 Number 23 were necessary, unavoidable, and, therefore, prudent. PEF is entitled to
18 recover all of its 2009 and 2010 CR3 Uprate project costs from customers.

19
20 **Q. Does this conclude your rebuttal testimony?**

21 **A.** Yes, it does.
22
23

**In Re: Nuclear Power Plant Cost Recovery Clause
William R. Jacobs, Jr., Ph.D., P.E.**

**110009-EI
July 15, 2011**

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Nuclear Power Plant
Cost Recovery Clause

Docket No. 110009-EI

Submitted for Filing: July 7, 2011

DEPOSITION OF
WILLIAM R. JACOBS, JR., Ph.D., P.E.

July 15, 2011

9:04 a.m.

1850 Parkway Place

Suite 800

Marietta, Georgia

Jennifer D. Hamon, CCR-B-2287, RPR

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1 A. Let me take a quick review here.

2 That's correct. Just the LAR,
3 uncertainty regarding the LAR.

4 Q. So to confirm, you didn't express or
5 reference any of the uncertainties you mention
6 in your 2011 testimony on page 8 and 9 in your
7 2010 NCRC testimony?

8 A. That's correct.

9 Q. The first delamination of the CR3
10 containment building occurred on October 2nd
11 of 2009; is that correct?

12 A. Yes, that's correct.

13 Q. You were aware of the delamination
14 at CR3 on October 2nd, 2009, prior to filing
15 your July 2010 testimony in the 2010 NCRC
16 docket; correct?

17 A. Yes.

18 Q. And you did not include any opinion
19 regarding uncertainties regarding the first
20 delamination in your 2010 NCRC testimony, did
21 you?

22 A. That's correct.

23 Q. Didn't you testify in deposition
24 last year that you and Mr. Rehwinkel visited
25 the CR3 site to look at the delamination of

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1 the containment building at CR3 in 2009, I
2 believe?

3 A. We did visit the site. I'm not sure
4 if it was 2009 or early -- I was thinking more
5 early 2010, but we did.

6 Q. Just to refresh your recollection,
7 I'm going to turn to your 2010 deposition,
8 starting at line 23.

9 A. What page?

10 Q. Sorry. Page 16 of the deposition,
11 starting at line 23.

12 A. No. I wasn't arguing that we didn't
13 go. I just didn't remember whether it was
14 2009 or 2010.

15 Q. So it was either late 2009 or early
16 2010?

17 A. Yes. That was my only uncertainty.

18 Q. Was it prior to the March 2011
19 second delamination?

20 A. Yes.

21 Q. In your 2010 NCRC testimony, did you
22 raise any issue with the EPU project moving
23 forward other than the EPU LAR approval by the
24 NRC?

25 A. No.

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1 Q. Do you agree that PEF should not
2 have canceled the EPU project on October 2nd,
3 2009?

4 A. Yes, I agree they should not have
5 canceled it.

6 Q. Isn't it true that as of
7 August 2010, in last year's NCRC hearing --
8 testimony in front of the commission, your
9 opinion was that PEF should continue work on
10 the CR3 Uprate Project?

11 A. Yes.

12 Q. Turning back to your 2011 testimony
13 to page 9, you say, starting on line 17, "Due
14 to the uncertainty surrounding the prudence of
15 PEF's activities related to the delamination
16 of the CR3 Containment Building, the
17 Commission should not make any final prudence
18 determination related to EPU costs incurred
19 after October 2, 2009" --

20 A. Yes.

21 Q. -- would that be accurate?

22 A. Yes.

23 Q. And just to confirm, in the 2010
24 NCRC proceeding, you didn't hold the opinion
25 that there was too much uncertainty

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1 surrounding the EPU project to continue it or
2 approve prudence of costs, did you?

3 A. I certainly had the opinion that the
4 project -- there was not too much uncertainty
5 to continue the project. I don't believe I
6 addressed the approval of prudence of costs --
7 prudence at that time.

8 Q. In your 2010 NCRC testimony, did you
9 raise any issues regarding the prudence of CR3
10 Uprate costs?

11 A. No.

12 Q. What has changed between the end of
13 August 2010, when you provided testimony
14 before the commission in the 2010 NCRC docket,
15 and present to make you say there's too much
16 uncertainty now to approve prudence of costs
17 for 2009 and 2010 for the CR3 Uprate Project?

18 A. There has been some amount of
19 preliminary research done in the
20 decision-making related to PEF's decision to
21 cut a hole in the CR3 containment building
22 during the steam generator exchange project.

23 And those early determinations --
24 early investigations have brought to light I
25 believe a number of questions of prudence of

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1 Q. Certainly.

2 Are there any other legal
3 implications, as you reference in your
4 testimony on page 10, line 1, other than the
5 legal implication you stated that a finding of
6 prudence in 2009 and 2010 could have legal
7 implications in the delamination docket?

8 A. Not that I'm aware of.

9 Q. Are there any other legal
10 implications referenced in your testimony?

11 A. I don't believe there are.

12 Q. Is that a no?

13 A. I said I don't believe there are.

14 Q. Should we review your testimony to
15 confirm that?

16 A. I would say no.

17 Q. So the only legal implication is the
18 one that you have stated to me?

19 A. That's the only one I'm aware of,
20 yes.

21 Q. How does this legal implication
22 affect 2009 and 2010 EPU costs -- a prudence
23 determination -- excuse me -- on 2009 and 2010
24 EPU costs?

25 A. As I understand, the concern is that

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1 that could have an impact on the prudence --
2 commission's prudence finding in the
3 delamination docket.

4 Q. And so I understand you, this is not
5 your concern as Dr. Jacobs.

6 A. It's a legal concern, and it was one
7 of the issues that was brought up as we
8 discussed the CR3 project.

9 Q. Are you a lawyer, Dr. Jacobs?

10 A. No, I'm not.

11 Q. And you wouldn't propose to be
12 expressing a legal opinion in your testimony,
13 would you?

14 A. That's correct.

15 (Deposition in recess, 10:16 a.m. to
16 10:22 a.m.)

17 Q. (By Ms. Huhta) Turning to the LNP,
18 Dr. Jacobs, did you read Mr. Elnitsky's and
19 Ms. Hardison's direct testimony filed in the
20 2011 NCRC?

21 A. Yes, I did.

22 Q. Is it your opinion, Dr. Jacobs, that
23 Progress Energy Florida should cancel the Levy
24 Nuclear Project?

25 A. No, it's not.

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1 Q. And are these uncertainties
2 different from the uncertainty associated with
3 repairing the containment building?

4 A. I'm sorry. Could you repeat that.

5 Q. Are these uncertainties different
6 from the uncertainties associated with the
7 repair of the containment building?

8 A. Well, they're related. The
9 uncertainty of the economic benefit is again
10 related to the uncertainty on the schedule of
11 the repair of the building.

12 Q. Still focusing on the CR3 uprate, do
13 you know if at any time during 2009, 2010, was
14 the replacement of the CR3 steam generator a
15 part of the CR3 Uprate Project?

16 A. It's my understanding it was not
17 part of the EPU project.

18 Q. On page 10 of your testimony,
19 lines 3 and 4 --

20 A. Okay.

21 Q. And this is to follow up on an
22 earlier discussion during the course of this
23 deposition.

24 Okay?

25 A. Yes.

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1 Q. You say that -- and I quote -- no
2 EPU costs incurred after October 2nd, 2009
3 should receive final approval or be determined
4 to be prudent.

5 Do you see that?

6 A. Yes.

7 Q. And the commission made the
8 determination in the delamination docket,
9 which is Docket No. 100347 -- or 437, I think
10 it is; is that correct?

11 Is that a correct statement --

12 A. Yes.

13 Q. -- and reading of your testimony?

14 A. Yes.

15 Q. Pardon me? Dr. Jacobs, if you can
16 speak into the phone, because we have a hard
17 time hearing you on our end.

18 A. Is this better?

19 Q. Yes.

20 A. Okay.

21 Q. Your response to my previous
22 question would be yes? Is that an accurate
23 reading of your testimony?

24 A. Yes.

25 Q. Is your position the same for 2009

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1 costs incurred before October 2nd, 2009?

2 A. Strictly speaking, it's after the
3 October 2nd, 2009 costs.

4 Q. One second, Dr. Jacobs.

5 Dr. Jacobs, when I say
6 "delamination," I'm talking about the Docket
7 No. 100437.

8 Okay?

9 A. Yes.

10 Q. You got it?

11 A. Got it.

12 Q. Let me ask you two brief questions
13 on that.

14 Do you know what CR3 Uprate Project
15 2009 activity, if any, will be at issue in the
16 delamination docket?

17 A. No, I don't.

18 Q. What about what CR3 Uprate Project
19 2010 will be at issue in the delamination
20 docket?

21 A. No. I'm not aware of specific
22 activities.

23 Q. Can you turn to page 18 of your
24 prefiled testimony, specifically lines 13 and
25 14.

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8 Submitted for Filing: July 15, 2010

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DEPOSITION OF

13

WILLIAM R. JACOBS, JR., Ph.D., P.E.

14

15

July 27, 2010

16

9:01 a.m.

17

18

1850 Parkway Place

19

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20

Marietta, Georgia

21

22

Jennifer D. Hamon, CCR-B-2287, RPR

23

24

25

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1 Florida requests in this docket for recovery
2 is imprudent or unreasonable?

3 A. That's correct.

4 Q. And what did Mr. McGaughy --

5 A. McGaughy is the way you pronounce
6 it.

7 Q. Oh, I'm sorry.

8 A. McGaughy.

9 He assisted me in the evaluation
10 analysis of the technical issues, and
11 primarily he assisted in reviewing a number of
12 the data responses that were provided to us.

13 They were very numerous, and in some
14 cases, he would do an initial review of the
15 data responses and then identify any that were
16 of significance that he thought I should look
17 at.

18 Q. Did you meet with anyone regarding
19 the Levy nuclear project?

20 A. No, we did not.

21 Q. Did you meet with anyone regarding
22 the Crystal River unit 3 uprate project?

23 A. We did go to -- Mr. Rehwinkel and I
24 went to Crystal River, primarily to look at
25 the delamination of the containment building,

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1 and we met Mr. Frank at that time.

2 And I believe he briefed us somewhat
3 on the uprate -- on the status of the uprate
4 and the shifting of some of the scope from
5 phase 2 to phase 3 down at the plant.

6 This wasn't a face-to-face meeting,
7 but Mr. McGaughy also had a couple of
8 conversations with NRC personnel primarily --
9 well, related to the Crystal River uprate and
10 the license amendment request.

11 Really, the main purpose was to
12 determine the status of whether or not the
13 company had filed that LAR.

14 Q. Were there any other discussions.
15 between yourself and the NRC or Mr. McGaughy
16 and the NRC?

17 A. The other topic that he raised with
18 them was whether the phase 3 work could
19 proceed before the LAR was approved. And the
20 NRC gentleman's name was Jason Paige. He
21 wasn't sure -- he said he hadn't seen the LAR,
22 so he wasn't sure.

23 And as far as I know, it has not yet
24 been filed as of about a week ago.

25 Q. Was there anything else about the

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1 project costs for 2009 are imprudent?

2 A. That's correct.

3 Q. Would you agree at page 3, lines 18
4 to 21 of your testimony, that you indicate
5 your assignment included review and evaluation
6 of Progress Energy Florida requests to collect
7 historical costs for the Crystal River unit 3
8 uprate project?

9 A. Yes.

10 Q. And would you also agree that in
11 this proceeding before the commission -- that
12 an issue is the prudence of Progress Energy
13 Florida's CR3 uprate costs for 2009?

14 A. Yes.

15 Q. Would you agree within your
16 testimony there is no expression of an opinion
17 by you that Progress Energy Florida's CR3
18 uprate costs for 2009 are imprudent?

19 A. Yes.

20 Q. If we could turn to page 4, lines 18
21 to 21 of your direct testimony --

22 A. Yes.

23 Q. -- it indicates there that you
24 reviewed Progress Energy Florida's documents,
25 status reports, and correspondence with

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1 Q. And you actually expressed an
2 opinion last year, in the 2009 docket,
3 regarding the feasibility of the Levy nuclear
4 project; correct?

5 A. I had expressed an opinion on the
6 feasibility analysis that the company
7 provided, yes.

8 Q. You don't include any opinion in
9 your testimony in the 2010 docket, in your
10 testimony in front of you, regarding the
11 feasibility of the nuclear project -- the Levy
12 nuclear project; correct?

13 A. That's correct.

14 Q. Is the reason you didn't include an
15 opinion regarding the feasibility of the Levy
16 nuclear project because you found no reason to
17 believe that Progress Energy Florida has not
18 demonstrated that the Levy nuclear project is
19 feasible?

20 A. Yeah. I believe the analysis that
21 they provided this year was sufficient to
22 demonstrate the feasibility.

23 Q. You also don't include an opinion in
24 your testimony in this docket regarding the
25 feasibility of the Crystal River unit 3 uprate

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1 project; correct?

2 A. That's correct.

3 Q. Is the reason you didn't include an
4 opinion regarding the feasibility of the
5 Levy -- I'm sorry -- of the CR3 unit power
6 uprate project because you found no reason to
7 believe that Progress Energy Florida has not
8 demonstrated that the CR3 uprate project is
9 feasible?

10 A. That's correct.

11 Q. Dr. Jacobs, did you read
12 Mr. Elnitsky's and Mr. Lyash's direct
13 testimony in this proceeding?

14 A. Yes.

15 Q. Is it your opinion, Dr. Jacobs, that
16 Progress Energy Florida should cancel the Levy
17 nuclear project?

18 A. No, that's not my opinion.

19 Q. Is it your opinion, Dr. Jacobs, that
20 Progress Energy Florida should terminate the
21 EPC agreement and cancel the Levy nuclear
22 project?

23 A. No, that's not.

24 Q. On page 6 of your direct
25 testimony --

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1 Q. Is it your opinion, Dr. Jacobs, that
2 Progress Energy Florida should stop work on
3 the Crystal River unit 3 uprate project?

4 A. No.

5 Q. Is it your opinion, Dr. Jacobs, that
6 Progress Energy Florida should stop work on
7 the extended power uprate for the CR3 uprate
8 project until the Nuclear Regulatory
9 Commission approves the license amendment
10 request for that EPU?

11 A. No. Not at this time. They're
12 pretty well committed to the schedule that
13 they're on at this point in time.

14 Q. And you're not expressing any
15 opinion that they should depart from that
16 schedule and not do this work; correct?

17 A. That's correct.

18 Q. In fact, at page 21 of your
19 testimony, you provide your recommendation
20 regarding the Crystal River unit 3 uprate
21 project --

22 A. Yes.

23 Q. -- is that correct?

24 A. That's correct.

25 Q. And as I read it, your opinion today

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1 is that the license amendment request could in
2 fact be approved for the project; correct?

3 A. It could be.

4 Q. So is it fair to say that you're not
5 testifying that Progress Energy Florida's
6 schedule for this project is imprudent today?

7 A. Well, I would say that that is
8 correct. But, again, as I stated in my
9 testimony, I believe it would have been
10 certainly more conservative to assure approval
11 of the LAR prior to spending significant
12 amounts of money for phase three. But as it
13 stands right now, they need to proceed and
14 finish it.

15 Q. And as I read your recommendation on
16 page 21 of your direct testimony, is it fair
17 to say that what you're saying is that
18 Progress Energy Florida's schedule for the
19 uprate project should be determined to be
20 prudent or imprudent based on the NRC's future
21 decision regarding the license amendment
22 request?

23 A. If the NRC decides that the project
24 can operate at the full additional 140
25 megawatts, then there's no damage. There's no

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1 harm. Whether they were prudent or imprudent
2 is sort of immaterial at that point.

3 Q. And if they don't approve the full
4 power uprate?

5 A. Then, as I say here, I think the
6 company -- the commission should review the
7 schedule that the project was implemented
8 under and determine if they believe it was
9 prudent.

10 Q. What's imprudent about the project
11 schedule today?

12 A. It was certainly less -- not
13 conservative in the approach that they took.
14 You could argue that it was imprudent to not
15 proceed with the LAR in the early stages of
16 the project. But, again, if the NRC grants
17 the full amount, then there's no harm, no
18 damages.

19 Q. You're not expressing the opinion
20 today that it's imprudent -- that their
21 schedule is imprudent; correct?

22 A. That's correct. And there may be
23 no -- as I said, there may be no harm from --
24 in the way they did it.

25 But if there is harm, at that point

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DOCKET NO. 100009-EI

In the Matter of:
NUCLEAR COST RECOVERY CLAUSE.

VOLUME 3

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PROCEEDINGS: HEARING

COMMISSIONERS
PARTICIPATING: CHAIRMAN NANCY ARGENZIANO
COMMISSIONER LISA POLAK EDGAR
COMMISSIONER NATHAN A. SKOP
COMMISSIONER ART GRAHAM
COMMISSIONER RONALD A. BRISÉ

DATE: Wednesday, August 25, 2010

TIME: Commenced at 9:39 a.m.

PLACE: Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: LINDA BOLES, RPR, CRR
Official FPSC Reporter
(850) 413-6734

APPEARANCES: (As heretofore noted.)

DOCUMENT NUMBER: CAE

07395 SEP-2e

FLORIDA PUBLIC SERVICE COMMISSION

1 impact, then the prudence of the company's decisions
2 should be reviewed in detail.

3 That concludes my statement.

4 **MR. REHWINKEL:** Dr. Jacobs is tendered for
5 cross-examination.

6 **COMMISSIONER SKOP:** Very well.

7 Mr. Walls, you're recognized for
8 cross-examination.

9 **CROSS EXAMINATION**

10 **BY MR. WALLS:**

11 **Q.** Good afternoon, Dr. Jacobs.

12 **A.** Good afternoon.

13 **Q.** Dr. Jacobs, is it your opinion that Progress
14 Energy Florida should cancel the Levy nuclear project?

15 **A.** No, that's not my opinion at this time.

16 **Q.** And is it your opinion, Dr. Jacobs, that
17 Progress Energy Florida should terminate the EPC
18 agreement and cancel the Levy nuclear project?

19 **A.** No, it is not.

20 **Q.** And, Dr. Jacobs, you would agree that the
21 feasibility analysis that Progress Energy Florida
22 provided this year was sufficient to demonstrate the
23 feasibility of the Levy nuclear project; correct?

24 **A.** Yes, it does, given the assumptions that are
25 in here and in that analysis.

1 A. That's correct.

2 Q. And you would also agree with me that nowhere
3 in your testimony do you express the opinion that
4 Progress Energy Florida's 2009 accounting and cost
5 oversight controls for the Levy nuclear project are
6 unreasonable or imprudent.

7 A. That's correct.

8 Q. I want to turn to the CR3 uprate project. And
9 again at page 3, lines 18 to 21 of your direct testimony
10 you indicate your assignment included review and
11 evaluation of Progress Energy Florida's request to
12 collect historical costs for the Crystal River 3 unit
13 uprate project; correct?

14 A. Yes.

15 Q. And would you agree with me within your
16 testimony there is no expression of an opinion by you
17 that Progress Energy Florida's CR3 uprate costs for 2009
18 are imprudent?

19 A. Yes, I agree.

20 Q. You also indicate at page 3, lines 18 to 21 of
21 your testimony that your assignment included reviewing
22 and evaluating Progress Energy Florida's request for
23 authority to collect projected costs associated with the
24 CR3 uprate or EPU extended power uprate; correct?

25 A. Yes.

1 Q. And by projected costs, you mean Progress
2 Energy Florida's estimated 2010 and projected 2011 costs
3 associated with the uprate project; correct?

4 A. That's correct.

5 Q. And would you agree with me that in your
6 testimony there is no opinion that any specific
7 estimated 2010 or projected 2011 CR3 uprate cost is
8 unreasonable?

9 A. Yes.

10 Q. And you would also agree with me that nowhere
11 in your testimony do you express an opinion that
12 Progress Energy Florida's 2009 accounting and cost
13 oversight controls for the CR3 uprate project were
14 unreasonable or imprudent?

15 A. Yes, I agree.

16 Q. And it's true, Dr. Jacobs, that with respect
17 to the CR3 uprate schedule, you're not expressing an
18 opinion today that that uprate project schedule was
19 imprudent; correct?

20 A. That's correct. I have not done a detailed
21 prudence analysis of the schedule. If the NRC grants
22 the, the full requested power uprate for the reactor and
23 the full 180 power megawatts is achieved, then that
24 topic is, is moot and doesn't need to be evaluated.

25 Q. Okay. As you said, you're not expressing an

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CR3 EPU Expert Panel

Management Debrief
July 14, 2009



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Team Members

- Bryan Miller, Lead Licensing Engineer – Nuclear Regulatory Affairs
 - 27 years nuclear experience
 - Licensing Lead for Waterford EPU
- Mark Turkal, Lead Licensing Engineer - Brunswick
 - 28 years nuclear experience
 - Licensing Lead for Brunswick EPU
 - Licensing Lead for Brunswick ITS
- Paul Bunker, WorleyParsons
 - 35 years nuclear experience
 - Accident Analysis and EPU for multiple BWRs
- Gregg Ellis, Excel Services
 - 20 years nuclear experience
 - Consultant for multiple ITS conversions
 - Licensing support for UniStar COLAs



Scope and Review Standards

Scope

- ◆ Final Draft – CR3 EPU Licensing Report (51-9076487-00), dated June 15, 2009
 - ◆ The Expert Panel will not complete review of the 100% of LR. As of July 13, 2009, at least 77 of the 116 sections have been reviewed.

Purpose

- ◆ Assess LR from an NRC Acceptance Review perspective (LIC-109)
- ◆ Is sufficient detail provided to allow NRC to independently conclude acceptability of CR-3 EPU?

Review Standards

- ◆ RS-001, NRC Review Standard for Extended Power Uprates, dated December 2003
- ◆ Ginna EPU submittal, dated July 7, 2005
 - ◆ Including various RAI responses
- ◆ NRC SE for Ginna EPU, dated July 11, 2006
- ◆ Point Beach EPU submittal, dated April 7, 2009



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Observations

License Report (LR) Quality

Portions of many LR sections have been cut/paste from Ginna submittal without a thorough review

- ◆ Ginna specifics remained in text that were not applicable to CR-3

Excessive system description information without presenting adequate justification for EPU operation

- ◆ Primarily affects system evaluation sections, accident analyses were better

It appears that RAIs and the NRC SE for the Ginna EPU were not considered or addressed in the CR-3 LR

LR Quality was an issue in sections prepared both by AREVA and CR-3

Observations

- Many CR-3 LR sections lack sufficient data. It is preferable, where possible, to provide data showing Pre-EPU Conditions, Post-EPU Conditions, and Acceptance Criteria
 - A single, non-proprietary version of the LR was provided
 - ◆ Reference to results versus providing results
 - ◆ For AREVA prepared sections, the information is likely available in the referenced calculations. However, the effort to properly incorporate the information into the LAR could be substantial.
 - Based on the LR reviewed, technical work has not progressed far enough to support the submittal. Absent this information, the LR cannot be submitted to the NRC.
 - ◆ EC development for replacement ADVs
 - ◆ Adequacy of feedwater pumps at EPU conditions
 - ◆ Main Steam, ECCS, and Turbine Auxiliary System support evaluations
 - ◆ New Fuel Storage and Spent Fuel Storage
 - ◆ Spent Fuel Cooling Water System adequacy
 - ◆ Health Physics analysis not completed for EPU
 - ◆ Identify changes to Operator actions required for EPU
 - ◆ Impact of EPU related modifications on electrical buses
 - ◆ Power Ascension Testing

Conclusion

- The current EPU LR will not pass NRC acceptance review.
- Extensive technical work is necessary to complete the LR for submittal.
- Submittal in 2009 is unlikely absent significant effort.

Recommendations

- In order to provide a high quality LR, the following actions are recommended:

- Establish a dedicated CR-3 review team consisting of Engineering, Operations, and Licensing

Purpose

Provide high quality reviews of each LR Section to:

- Ensure technical adequacy of LR
- Ensure information regarding EPU required modifications is available to support LR and is properly incorporated

Maintain a "big picture" understanding of entire EPU project and EPU application to facilitate interactions with the NRC and RAI responses

- Establish dedicated Licensing Leads for LR development at CR-3 and AREVA

Work in conjunction to establish deliverable schedule and ensure a quality product for CR-3 review

Ensure format and content consistency throughout the LR



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