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June 20, 2003

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704 Davidson Street
Raleigh, NC 27609-5543

Re: Dominion Nuclear Connecticut, Inc.
Millstone Nuclear Power Station, Unit 2
Docket No. 50-336-OLA-2

Administrative Judges:

At the June 5, 2003, prehearing conference, Dominion Nuclear Connecticut, Inc. ("DNC") committed to provide certain additional dose calculations in connection with the application at issue in this proceeding. These calculations are being provided herein, with the supporting affidavit of William J. Eakin. DNC has performed the calculations at the request of the Licensing Board and is providing this information to increase the Board's understanding of the application. As stated in the record, however, DNC would object to the use of the attached document as a basis for a contention in this proceeding.

Sincerely,

David A. Repka

David A. Repka
Counsel for Dominion Nuclear Connecticut, Inc.

Enclosures

cc: Nancy Burton, Esq. (w/enclosure)
Ann P. Hodgdon, Esq. (w/enclosure)
NRC Office of the Secretary (w/enclosure)

DC:311391.1

Template=SECY-018

SECY-02

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	
Dominion Nuclear Connecticut, Inc.	)	Docket No. 50-336-OLA-2
	)	
(Millstone Power Station,	)	ASLBP No. 03-808-02-OLA
Unit No. 2)	)	

Affidavit of William J. Eakin

I, William J. Eakin, being duly sworn, state as follows:

1. I am employed by Dominion Resources Services, Inc. as Supervisor of Radiological Engineering, in the Nuclear Fuel Engineering group of the Nuclear Analysis and Fuel department. In this capacity, I oversee all activities related to offsite dose consequence analyses for Dominion Nuclear Connecticut, Inc. ("DNC"), the licensed owner and operator of Millstone Power Station ("Millstone"). I also supervise preparation of design basis analyses and effluent dose calculations for Millstone.

2. On June 5, 2003, during the prehearing conference for this proceeding, counsel for DNC agreed to provide, at the request of the Atomic Safety and Licensing Board ("Licensing Board") in this proceeding, certain dose calculations related to the application at issue in this proceeding ("Application").

3. The Attachment to this Affidavit summarizes the results of a calculation of dose consequences comparing four cases of a postulated design basis fuel handling accident inside containment at Millstone Unit 2, utilizing an Alternative Source Term ("AST"). The postulated doses are calculated for the Exclusion Area Boundary ("EAB") and Low Population Zone

("LPZ"). The four cases are:

- Case 1 assumes (1) the AST, (2) the *current* Technical Specifications ("TS"), and (3) 150 hours of fuel decay prior to fuel movement (consistent with current and proposed Technical Specifications).
- Case 2 assumes (1) the AST, (2) 150 hours of fuel decay prior to fuel movement, and (3) *no credit* for the administrative controls included in the proposed TS.
- Case 3 assumes (1) the AST, (2) the administrative controls in the *proposed* TS, and (3) 150 hours of fuel decay prior to fuel movement consistent with current and proposed TS.
- Case 4, which is the analysis submitted in the Application, assumes (1) the AST, (2) only 72 hours of fuel decay prior to fuel movement, and (3) *no credit* for the administrative controls included in the proposed TS.

4. A comparison of Case 1 and Case 3 best demonstrates the change associated with the Application. For the purpose of compliance with NRC regulations, however, the most relevant comparison is a comparison of the proposal (Case 4) to the regulatory limits established by 10 C.F.R. § 50.67 and Regulatory Guide 1.183.

5. The information presented above and in the Attachment was prepared under my supervision. It is true and correct to the best of my knowledge and belief.

William J. Eakin

Sworn and subscribed to before me this 19th day of June 2003.

Notary Public

My Commission expires:_____

DIANE M. PHILLIPO
NOTARY PUBLIC
MY COMMISSION EXPIRES 12/31/2005

June 19, 2003

Dominion Nuclear Connecticut, Inc.
Supplemental Dose Calculations — Alternative Source Term
Millstone Unit 2

The following summarizes the results of a calculation of dose consequences comparing four cases of a postulated design basis fuel handling accident (FHA) inside containment at Millstone Unit 2. All cases utilize an Alternative Source Term (AST), consistent with NUREG-1465.

Since the focus of the proposed contention is on postulated offsite doses, the doses are calculated for the Exclusion Area Boundary (EAB) and Low Population Zone (LPZ). Cases 1, 2, and 3 are new cases. Case 4 is the Application Analysis.

All doses, and the regulatory limit, are expressed in terms of Total Effective Dose Equivalent (TEDE), in units of Rem.

Case	Description	EAB	LPZ	Reg. Guide 1.183 Dose Criterion
1.	AST — assuming current Technical Specifications (personnel hatch open under administrative control and closed at 10 minutes) and 150 hour fuel decay	0.3483	0.04567	6.3
2.	AST — assuming no credit for the administrative controls in the proposed Technical Specifications (entire FHA source term released over 2 hours) and 150 hour fuel decay	0.7942	0.1042	6.3
3.	AST — assuming proposed Technical Specifications (containment penetrations open under administrative control and closed at 30 minutes) and 150 hour fuel decay	0.6539	0.08576	6.3
4.	AST — assuming no credit for the administrative controls in the proposed Technical Specifications (all activity released over two hours) and 72 hour fuel decay for conservatism (Application Analysis)	1.132	0.1485	6.3

Notes on Cases and Calculations

1. Both the current and proposed Technical Specifications do not allow fuel movement prior to 150 hours of decay. Therefore, to reflect both the current and proposed Technical Specifications, the new Cases 1, 2, and 3 all assume 150 hours of fuel decay prior to fuel movement and a FHA inside containment.

2. Case 1 assumes current Technical Specifications. The personnel hatch may be open during fuel movement under administrative control, and will be closed within 10 minutes following a FHA.

3. Case 2 is an alternative approach to the licensing analysis included in the Application. It reflects 150 hour fuel decay prior to fuel movement and any possible FHA, consistent with both current and proposed Technical Specifications. The entire FHA source term is assumed to be released over 2 hours.

4. Case 3 utilizes the AST and the administrative controls in the proposed Technical Specifications to limit the FHA release to 30 minutes.

5. Case 4 represents the analysis in the AST Application. As in Case 2, the entire FHA source term is assumed to be released over 2 hours. Case 4 also conservatively assumes a 72 hour decayed fuel assembly is damaged in the FHA resulting in dose more than 40% greater than what actually could occur. (Note: the Application also rounds the results in Case 4 and lists the EAB an LPZ TEDE as 1.2 Rem and 0.15 Rem, respectively.)

6. Neither Case 2 nor the Case 4 licensing analysis take any credit for the administrative controls proposed in the Application to limit the release to 30 minutes. Both cases follow the guidance of Regulatory Guide 1.183 which defines the assumptions to be used for FHA analyses utilizing the AST. The guidance specifies a FHA as a 2 hour release with no credit to be taken for administrative controls or manual isolation of containment penetrations within 30 minutes. Case 4 exactly follows this guidance.

7. The best "apples with apples" comparison of what will be changing, with old Technical Specifications versus proposed Technical Specifications, would be Case 1 (current) versus Case 3 (proposed). The difference in doses is less than a factor of 2. Further, the doses in both cases are a small fraction of the regulatory limit of 25 Rem TEDE. 10 C.F.R. 50.67 sets a limit of 25 Rem TEDE for analysis of design basis reactor accidents. This limit is established at a level to assure that protection of the public health and safety is maintained.

8. The FHA accident dose criterion of 6.3 Rem is established by Regulatory Guide 1.183 as a small fraction of the regulatory limit.

9. Comparing Cases 2 and 3 shows the effect of adopting the proposed Technical Specifications/administrative controls as defense-in-depth to further mitigate postulated releases below the regulatory limit.