Dominion Nuclear Connecticut, Inc.
Millstone Power Station
Rope Ferry Road
Waterford, CT 06385

Dominion

NOV 26 2002

Docket No. 50-245
B18803

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Millstone Power Station, Unit No. 1
Errata to Inadvertent Intruder Analysis

On May 15, 2002[2], Dominion Nuclear Connecticut, Inc. (DNC) forwarded the, "Evaluation of the Presence of Two Spent Fuel Rods on the Inadvertent Intruder, A Supplement to Safety Analysis of Millstone Fuel Rods Potentially Disposed in Either the Barnwell, South Carolina or Hanford, Washington Commercial LLRW Disposal Sites," obtained from Northeast Nuclear Energy Company (NNECO), the former licensee and operator of Millstone Unit No. 1.

The enclosure to this letter contains, "Errata to Inadvertent Intruder Analysis," forwarded to DNC from NNECO. It is requested that the appropriate section of the Safety Analysis of Millstone Unit No.1 Missing Fuel Rods, i.e., the appendix of the inadvertent intruder analysis, be supplemented with the enclosure. Please note that the minor changes made to the inadvertent intruder analysis do not affect the results of the evaluation.

There are no regulatory commitments contained within this letter.

(2) J. A. Price letter to U.S. Nuclear Regulatory Commission, "Response to a Request for Additional Information Regarding the Safety Analysis of Millstone Unit No.1 Missing Fuel Rods," dated May 15, 2002.

A001

Should there be any questions regarding this submittal, please contact Mr. Paul R. Willoughby at (860) 447-1791, extension 3655.

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.

J. Alan Price
Site Vice President - Millstone

Enclosure (1)

cc: H. J. Miller, Region I Administrator
J. B. Hickman, NRC Project Manager, Millstone Unit No. 1
J. R. Wray, NRC Inspector, Region I, Millstone Unit No. 1

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Enclosure

Millstone Power Station, Unit No. 1

Errata to Inadvertent Intruder Analysis

Northeast
Utilities System

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141-0270
(860) 665-5000

October 4, 2002

Mr. J. Alan Price
Site Vice President - Millstone
Dominion Nuclear Connecticut, Inc.
Rope Ferry Road
Waterford, CT 06385

Subject: Errata to Inadvertent Intruder Analysis

Dear Mr. Price:

You will recall that on 5/10/02 we provided to you the "Evaluation of the Presence of Two Spent Fuel Rods on the Inadvertent Intruder - A Supplement to Safety Analysis of Millstone Fuel Rods Potentially Disposed in Either the Barnwell, South Carolina or Hanford, Washington Commercial LLRW Disposal Sites" for subsequent transmittal to the NRC. Attached is an errata sheet to the Millstone Unit 1 Fuel Rod Inadvertent Intruder Analysis that was prepared by Mike Ryan, based on comments received from Vernon Ichimura of Chem Nuclear. Please note that the minor changes that were made to the Appendix of the Inadvertent Intruder Analysis do not effect the results of the evaluation. We are sending you this errata sheet with the recommendation that it be docketed with the NRC.

If you have any questions regarding this submittal, please contact me at (860) 665-3141.

Very truly yours,

Richard M. Kacich
Director, Special Projects

cc: M. T. Ryan
W. J. Quinlan

Attachment

Errata to:

"Evaluation of the Presence of Two Spent Fuel Rods on the Inadvertent Intruder - A Supplement to Safety Analysis of Millstone Fuel Rods Potentially Disposed in Either the Barnwell, South Carolina or Hanford, Washington Commercial LLRW Disposal Sites"

The errata described below correct minor errors in the report entitled "Evaluation of the Presence of Two Spent Fuel Rods on the Inadvertent Intruder - A Supplement to Safety Analysis of Millstone Fuel Rods Potentially Disposed in Either the Barnwell, South Carolina or Hanford, Washington Commercial LLRW Disposal Sites." Specifically, the errata arise out of the Appendix entitled, "Data and Calculations in Support of Evaluation of the Presence of Two Spent Fuel Rods on the Inadvertent Intruder." The corrections are in bold.

Line one of Table 1 in Exhibit A-1 should be corrected as follows:

Table 1 (Fission Products)

Nuclide Fission Products	Half-life (years)	Activity (Curies) Single Rod at 33 years	Activity (Curies) Two Rods at 33 years	Activity (Curies) Two Rods at 500 years
ZR-93	1.530E+06	2.192E+00	4.384E+00	4.383E+00
ZR-93	1.530E+06	**2.192E-03**	**4.383E-03**	**4.383E-03**
		Sums	3.929E+02	**4.463E+00**
		Sums	**3.885E+02**	**8.475E-02**

The exponent for the amount of ^{93}Zr was incorrectly transposed. The exponent should read E-03 not E+00. This correction results in lower hypothetical internal dose estimates (CEDE) to the driller's helper from ^{93}Zr and the fission products in total. As noted below, the total hypothetical internal dose to the driller's helper (CEDE) from the fission products is reduced from 0.002 to 0.00002 in Table 4, of Exhibit A-3.

Table 4 (Internal Exposure to Driller's Helper)

Fission Products	Activity in 2 Fuel Rods Ci	uCi in 1 (4-in) Segment	Concentration in exhumed dirt uCi/gm	Concentration (respirable) (uCi/cm3)	Derived Air Concentrations (DAC uCi/cm3)	DAC Hours of Exposure	CEDE (mrem)
ZR-93	4.383E+00	5.548E+04	5.548E+01	2.119E-11	2.00E-08	6.358E-04	1.589E-03
ZR-93	**4.383E-03**	**5.548E+01**	**5.548E-02**	**2.119E-14**	2.00E-08	**6.358E-07**	**1.589E-06**
				Subtotal CEDE (mrem)			**0.00002**

Second, the half-life for ^{235}U (Table 2 line 2 and Table 4 line 12) was incorrectly listed as 7.038E+06 years. The exponent is incorrect. The number should be 7.038E+08. The corrected values are shown below. While this lowers the estimated contribution to the hypothetical internal dose (CEDE) to the driller's helper from ^{235}U, it does not change the total estimated hypothetical internal dose (CEDE) dose to the driller's helper since the contribution from ^{235}U was not significant. The total remains 11.3 mrem (CEDE). As noted in the report on page 10, this amount is a small fraction of the natural background exposure and would not pose any

increased impact to the health and safety of a driller's helper. And as noted in the report, this dose falls far below the general dose limitation adopted by the NRC for an inadvertent intruder.

The corrected entries for Table 2 of Exhibit A-1 and Table 4 of Exhibit A-3 are:

Table 2 (Actinides)

Nuclide Actinides	Half-life (years)	Quantity (Grams) Single Rod at 33 Years	Quantity (Grams) Two Rods at 33 years	Quantity (Grams) Two Rods at 500 years
U-235	7.04E+06	6.592E+01	1.318E+02	1.318E+02
U-235	7.04E+08	6.592E+01	1.318E+02	1.318E+02

Table 4 (Internal Exposure to Driller's Helper)

Actinides	Grams in 2 Fuel Rods	Half life (years)	Activity in 2 Fuel Rods uCi	uCi in 1 (4-in) Segment	Concentration in exhumed dirt uCi/gm	Concentration (respirable) (uCi/cm3)	Derived Air Concentrations (DAC uCi/cm3)	DAC Hours of Exposure	CEDE (mrem)
U-235	1.318E+02	7.038E+06	2.850E+04	3.608E+02	3.608E-01	1.378E-13	2.00E-11	4.134E-03	1.034E-02
U-235	1.318E+02	7.038E+08	2.850E+02	3.608E+00	3.608E-03	1.378E-15	2.00E-11	4.134E-05	1.034E-04

These two errata lower the hypothetical doses estimated for the driller's helper used to evaluate the intruder scenario and further confirm all the conclusions in the report especially the final conclusion that states:

"Accordingly, whether considered from the point of view of any specific intruder scenario or whether considered from the perspective of the sites as a whole, the Millstone fuel rods, if present, would not create any unexpected or additional risk to inadvertent intruders or to members of the general public that are not already well managed by the plans and programs in place at both the Barnwell and Hanford disposal facilities."