UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 12, 2013

Mr. David A. Heacock
President and Chief Nuclear Officer
Dominion Nuclear
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION UNIT NO. 2 - CORRECTION LETTER TO LICENSE AMENDMENT NO. 316 (TAC NO. MF1364)

Dear Mr. Heacock:

On November 14, 2013, the Nuclear Regulatory Commission (NRC) issued Amendment No. 316 to Renewed Facility Operating License No. DPR-65 for the Millstone Power Station, Unit No. 2, in response to your application dated April 3, 2013. Subsequently, by electronic Mail dated December 5, 2013, you clarified that control room ventilation flow of 1000 cubic feet per minute (cfm) consists of normal unfiltered intake flow of 800 cfm and assumed unfiltered inleakage of 200 cfm in the safety evaluation (SE) Section 3.1, "Cask Tip Accident Radiological Analysis," and Table 1, "Data and Assumptions for the Cask Tip Accident."

The NRC staff has reviewed your clarification and is in agreement. As a result, the staff has prepared the enclosed corrected pages 3 and 5 for replacement in Enclosure 2 (SE) to Amendment No. 316.

Please contact me at 301-415-4125 if you have any questions.

Sincerely,

James Kim

James Kim, Project Manager
Plant Licensing Branch 1-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosure:
As stated

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The most limiting CLB cask tip accident analysis analyzed CR dose assuming the CR ventilation system isolates 20 seconds after the accident from a signal from the CR ventilation radiation monitor, and that the CR emergency ventilation (CREV) system is manually placed into the filtered recirculation mode one hour after isolation. The CLB cask tip accident assumes 800 cubic feet per minute (cfm) of normal unfiltered intake into the CR prior to CR isolation, 200 cfm of unfiltered inleakage after CR isolation until the CREV system is placed in filtered recirculation, and 2250 cfm of filtered flow and 200 cfm of unfiltered inleakage after the CREV system is placed in the filtered recirculation mode. The revised cask tip accident analysis was performed considering both isolated and unisolated CR ventilation scenarios. The unisolated CR ventilation scenario was the most limiting for the revised cask tip accident analyses. The most limiting revised cask tip accident analysis assumes 1000 cfm of normal unfiltered intake plus unfiltered inleakage into the CR for the duration of the accident.

The licensee evaluated the radiological consequences resulting from the postulated cask tip accident and concluded that the radiological consequences at the EAB, LPZ, and CR are within the dose requirements provided in 10 CFR 50.67 and accident dose criteria specified in SRP 15.0.1 and RG 1.183. The NRC staff finds that the licensee used analysis assumptions and inputs consistent with applicable regulatory guidance, as identified in Section 2.0 of this SE. These assumptions are presented in Table 1 and the licensee's calculated dose results are in Table 2 opposite the applicable acceptance criteria. Each calculated dose is below the applicable acceptance criteria. The NRC staff concludes that the EAB, LPZ, and CR doses estimated by the licensee for the cask tip accident meet the applicable accident dose criteria and are, therefore, acceptable.

3.2 Changes to TS 3.19.16 and TS 4.19.16

The TS 3.9.16 limits placing a shielded cask on the refueling floor whenever fuel assemblies without sufficient decay time are within striking distance of the spent fuel pool cask laydown area. The TS 4.9.16 requires verification that all fuel assemblies within striking distance of a shielded cask have sufficient decay time prior to moving a shielded cask onto the refueling floor and every 72 hours thereafter. The proposed amendment to TS 3.9.16 and TS 4.9.16 would revise the decay time for fuel assemblies within striking distance of a shielded cask in the spent fuel pool cask laydown area from one year to 90 days. The licensee also proposes to renumber the TS 3. 9.16.1 and TS 4. 9.16.1 to remove the subsection number (i.e., ".1 ") because TS 3.9.16.2 and TS 4.9.16.2 were deleted by Amendment 274 dated April 1, 2003 (ML030910485).

As discussed in Section 3.1 above, the licensee evaluated the radiological consequences resulting from the postulated cask tip accident using a full core offload with a decay time of 90 days and concluded that the radiological consequences at the EAB, LPZ, and CR are within the dose requirements provided in 10 CFR 50.67 and accident dose criteria specified in SRP 15.0.1 and RG 1.183. The NRC staff reviewed the licensee's assumptions and inputs and found that the doses estimated by the licensee for the cask tip accident meet the applicable accident dose criteria. Therefore, the staff concludes these TS 3.9.16 and TS 4.9.16 changes are acceptable with respect to the radiological consequences of DBAs. In addition, the proposed changes to renumber TS 3.9.16.1 and TS 4.9.16.1 to remove the subsection .1 are minor corrective changes to reflect that each TS contains only one item consistent with a previous amendment that deleted TS 3.9.16.2 and TS 4.9.16.2

# Table 1

## Data and Assumptions for the Cask Tip Accident

| | |
|---|---|
| Number of Fuel Assemblies Damaged: | 1593 assemblies |
| Decay Time for Damaged Assemblies: | 217 assemblies decayed for 90 days<br>1376 assemblies decayed for 5 years |
| Unisolated Control Room Ventilation Flow: | Normal unfiltered intake flow = 800 cfm<br>Assumed unfiltered inleakage = 200 cfm |
| Isolated Control Room Ventilation Flow: | |
| Time = 0 seconds | Normal unfiltered intake flow = 800 cfm<br>Assumed unfiltered inleakage = 200 cfm |
| Time = 20 seconds | Control room ventilation isolates<br>Intake flow = 0 cfm<br>Assumed unfiltered inleakage = 200 cfm |
| Time = 1 hour 20 seconds | Control room emergency ventilation (CREV) starts<br>CREV filtered recirculation flow = 2250 cfm<br>Assumed unfiltered inleakage = 200 cfm |
| Gap Fractions: | |
| I-131 | 12 percent |
| Kr-85 | 30 percent |
| Other noble gases | 10 percent |
| Other halogens | 10 percent |
| Pool Decontamination Factor (DF): | |
| Noble gases | 1 |
| Iodines (effective DF) | 200 |
| Release Point: | Enclosure Building / Containment Ground |
| Radial Peaking Factor: | 1.0 |
| Duration of Release: | 2 hours |

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