From: Ed Miller
To: david.distel@exeloncorp.com
Date: 02/09/2007 3:36:25 PM
Subject: Question from Telecon

Dave,
Attached is a write up of the verbal question that Michelle had from the Telecon this morning.

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Subject: Question from Telecon
Creation Date 02/09/2007 3:36:25 PM
From: Ed Miller

Created By: GXM@nrc.gov

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OC RAI MSIV leakage source_1.wpd	8934	02/09/2007 11:51:37 AM

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RAI - MSIV Leakage Pathway Activity Modeling:

In looking at the responses to RAI Nos. 2 and 5, provided in licensee letters dated January 24 and February 2, 2007, and considering the potential dose impact of assumption made in the dose analysis, the staff has further questions about the modeling of aerosol and iodine removal in the main steam line piping.

With respect to the modeling of the MSIV leakage pathway, Appendix A to RG 1.183 states that the activity available for release via MSIV leakage should be assumed to be that activity determined to be in the drywell for evaluating containment leakage. The guidance intends to give a reasonable proxy for the radionuclide concentration in the steam that is flowing from the reactor vessel and/or from the drywell, depending on the location of the break that is assumed for the LOCA analysis. In the licensee's analysis of the MSIV leakage pathway, this guidance has been interpreted such that the flow is modeled from the drywell into the MSIV, and includes the effect of drywell sprays, containment leakage and mixing with the wetwell airspace (when assumed) to reduce the aerosol and iodine concentration in the source volume.

The staff's concern is that this modeling of the source concentration would underestimate the concentration of radionuclides that are in the steam leaking past the MSIVs into the environment and that the spray removal in the drywell would change the aerosol size distribution so that the model for deposition in the main steam lines is not applicable. Please address the appropriateness and conservatism of your of modeling the MSIV leakage activity source in this manner.