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April 14, 2005

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

Zion Nuclear Power Station, Unit 1 and 2  
Facility Operating License Nos. DPR-39 and DPR-48  
NRC Docket Nos. 50-295 and 50-304

Subject: Radioactive Effluent Release Report for 2004 and  
Offsite Dose Calculation Manual for 2004

In accordance with 10 CFR 50.36a, "Technical specifications on effluents from nuclear power plants," and pursuant to Technical Specification 5.7.3, "Radioactive Effluent Release Report," for Zion Nuclear Station, Units 1 and 2, this is the submittal of a Radioactive Effluent Release Report for the year 2004. The report is required to be submitted by April 30, 2005, and is provided as 1<sup>st</sup> Attachment to this letter. A listing of commitments contained in this submittal is provided as 2<sup>nd</sup> Attachment.

Pursuant to 10 CFR 50.4, there were changes made to the Exelon Nuclear Offsite Dose Calculation Manual (ODCM) during the period of January through December 2004. The 3<sup>rd</sup> Attachment provides the changes made to the ODCM during the calendar year of 2004.

Technical Specification 5.6.1 for the Zion Nuclear power station requires a copy of the entire ODCM be submitted to the NRC as part of, or concurrent with, the Radioactive Effluent Release Report. This must be submitted prior to May 1. A copy of the entire Exelon ODCM, current as of December 31, 2004, is provided as an Attachment.

If you have any questions about this submittal please contact Mr. Ron Schuster at (847) 746-2084 extension 2700.

Respectfully,



Artice Daniels Jr.

Zion Nuclear Station  
Decommissioning Plant Manager

IE48  
A009

Attachments

1. Radioactive Effluent Release Report
2. List of Regulatory Commitments
3. Summary of Changes to the ODCM
4. Exelon ODCM

Copy to: Regional Administrator- NRC Region III