

August 22, 2011

Mr. John A. Christian, President  
ZionSolutions, LLC,  
and Commercial Services, EnergySolutions  
900 17<sup>th</sup> Street NW, Suite 1050  
Washington, DC 20006

SUBJECT: ZION NUCLEAR POWER STATION UNITS 1 AND 2 - REVISED RESPONSE  
TO ORDERS IMPOSING INCREASED CONTROLS AND FINGERPRINTING  
AND CRIMINAL HISTORY RECORDS CHECK REQUIREMENTS  
(EA-09-204 AND EA-09-205)

Dear Mr. Christian:

On November 23, 2009, the NRC issued Orders EA-09-204 and EA-09-205 to Exelon Generation Company, LLC (Exelon) imposing increased controls and fingerprinting and criminal history records check requirements for Zion Nuclear Power Station (ZNPS), Units 1 and 2. The Orders impose requirements on licensees possessing radioactive material quantities of concern (RAM QC).

Exelon responded on December 18, 2009, stating that ZNPS would comply with the requirements of EA-09-204 and EA-09-205 with one exception and one future action. The exception was to request relief for implementing the increased controls for contamination in each reactor pressure vessel and distributed in-situ contamination in piping systems and building structures. The justification for relief was based on the fact that an intact reactor vessel was in a form that did not pose a risk of removal and that the contamination in piping and building structures was well dispersed and not easily aggregated into quantities that meet or exceed the RAM QC values provided with the Orders. The future action was to commit to relocate the Sheppard calibration source to the Fuel Building. A supplemental response on February 18, 2010, indicated the Sheppard calibration source had been relocated to the Fuel Building to enhance the source storage configuration for the facility.

The NRC granted the relief request on June 7, 2010, and noted that the orders also applied to spent resins, reactor vessel internal components and debris generated during decommissioning that meet or exceed the RAM QC values. The NRC also noted that meeting the additional transportation security requirements for NRC Order EA-05-007 issued to power reactors did not meet the requirement of EA-09-204, IC 3.a because the RAM QC quantities were different. Exelon responded on August 23, 2010 that enhanced measures were in place to meet the increased transportation control requirements identified in NRC Order EA-09-204, IC 3.a.

On September 1, 2010, the NRC issued License Amendment 185 for the Zion Nuclear Power Station, Unit 1 and License Amendment 172 for the Zion Nuclear Power Station, Unit 2. These amendments implemented the May 4, 2009, NRC Order approving the License Transfer of the ZNPS from Exelon Generation Company, LLC (Exelon) to ZionSolutions, LLC (ZionSolutions).

On January 31, 2011, you submitted a revised response to the orders imposing increased controls and fingerprinting and criminal history records check requirements on power reactor licensees undergoing decommissioning. The revisions were proposed to the prior Exelon response to NRC Order EA-09-204 in order to accommodate the active decommissioning status of the facility. In particular, the response regarding a radioactive source location and contamination in each reactor vessel, piping systems, and building structures were changed. We have reviewed the proposed changes and determined that your controls are consistent with the requirements of EA-09-204. Implementation of these controls may be inspected as they are implemented.

Sincerely,

**/RA/**

John B. Hickman, Project Manager  
Reactor Decommissioning Branch  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

Docket Nos.: 50-295 and 50-304  
License Nos.: DPR-39 and DPR-49

cc: Zion Service List

J. A. Christian

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John B. Hickman, Project Manager  
Reactor Decommissioning Branch  
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and Environmental Protection  
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