

**NUCLEAR REGULATORY COMMISSION**

**[Docket Nos. 50-295 and 50-304; NRC-2015-0168]**

**ZionSolutions, LLC, Zion Nuclear Power Station, Units 1 and 2**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Exemption; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing an exemption from certain emergency planning requirements in response to a May 27, 2014, request from ZionSolutions, LLC. The exemptions remove requirements that are no longer applicable since all the fuel has been transferred from the spent fuel pool to an independent spent fuel storage installation (ISFSI).

**ADDRESSES:** Please refer to Docket ID **NRC-2015-0168** when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2015-0168**. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: [Carol.Gallagher@nrc.gov](mailto:Carol.Gallagher@nrc.gov). For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):**  
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- **NRC’s PDR:** You may examine and purchase copies of public documents at the NRC’s PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

**FOR FURTHER INFORMATION CONTACT:** John B. Hickman, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-3017, e-mail: [John.Hickman@nrc.gov](mailto:John.Hickman@nrc.gov).

## I. **BACKGROUND**

In section 50.47 of Title 10 of the *Code of Federal Regulations* (10 CFR), “Emergency plans,” provides in part, “...no initial operating license for a nuclear power reactor will be issued unless a finding is made by the NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.”

Appendix E to 10 CFR part 50, “Emergency Planning and Preparedness for Production and Utilization Facilities,” provides in part, “This appendix establishes minimum requirements for emergency plans for use in attaining an acceptable state of emergency preparedness.”

Zion Nuclear Power Station (ZNPS), Units 1 and 2 were permanently shut down in February 1998, for economic reasons. The licensee placed the plant in SAFSTOR, which means that the licensee deferred dismantling and decontamination of the facility while

maintaining and monitoring the facility in a condition that allowed radioactivity to decay. The licensee isolated the spent fuel pool (SFP) within its Fuel Building and established a spent fuel pool nuclear island with SFP-dedicated support systems. In 1999, the NRC issued an exemption from certain requirements of 10 CFR part 50 for the ZNPS licensee to discontinue offsite emergency planning activities and to reduce the scope of onsite emergency planning. In September 2010, the licensed ownership, management authorities, and decommissioning trust fund of the permanently shutdown facility was transferred to ZionSolutions (ZS), a subsidiary of EnergySolutions, for the purpose of completing all decommissioning activities with the end goal of full site restoration. Active decommissioning is currently underway. As of January 12, 2015, all of the spent fuel at the ZNPS had been transferred to the ZNPS ISFSI.

## **II. REQUEST/ACTION**

By letter dated May 27, 2014, (ADAMS Accession No. ML14148A295), ZS submitted a "License Amendment Request for Proposed Revision to Zion Nuclear Power Station Defueled Station Emergency Plan and Request for Exemption from Certain Requirements of 10 CFR 50.47, and 10 CFR part 50, appendix E." The amendment request was addressed separately by the NRC in a letter dated May 14, 2015 (ADAMS Accession No. ML15092A380).

## **III. DISCUSSION**

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR part 50 when (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) when special circumstances are present.

The NRC staff reviewed the licensee's request and determined that exemptions should be granted, or continue to be granted, from the following requirements: the requirements of 10 CFR 50.47(b)(10); the requirement: "By June 20, 2012, nuclear power reactor," and "within 15 minutes," and to protect public health and safety provided that any delay in declaration does not deny the State and local authorities the opportunity to implement measures necessary to protect the public health and safety," of 10 CFR part 50, appendix E, section IV.C.2; the requirement: "and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, should they become necessary," and "of the appropriate officials, by title and agency," and "within the EPZs," of 10 CFR part 50, appendix E, section IV.D.1; the requirement: "onsite technical support center and an emergency operations," of 10 CFR part 50, appendix E, section IV.E.8.a.(i); the requirements of 10 CFR part 50, appendix E, section IV.E.9.c; the requirement: "from the nuclear power reactor control room, the onsite technical support center, and the emergency operations facility," of 10 CFR part 50, appendix E, section IV.E.9.d; the requirement: "including control room shift personnel," of 10 CFR part 50, appendix E, section IV.F.1.ii; the requirements of 10 CFR part 50, appendix E, section IV.F.1.viii; the requirement: "/Civil Defense," and "local news media persons," of 10 CFR part 50, appendix E, section IV.F.1; the requirements of 10 CFR part 50, appendix E, section IV.F.2.a; including subsections IV.F.2.a.(i), IV.F.2.a.(ii), and IV.F.2.a.(iii); the requirement: "Nuclear power reactor licensees shall submit exercise scenarios under 10 CFR 50.4 at least 60 days before use in an exercise required by this paragraph 2.b. The exercise may be included in the full participation biennial exercise required by paragraph 2.c. of this section," and "and offsite," and "protective action recommendation development, protective action decision making, plant," and "(Technical Support Center (TSC), Operations Support Center (OSC), and the Emergency Operations Facility (EOF))," of 10 CFR part 50, appendix E, section IV.F.2.b.

The exemption request was reviewed against the acceptance criteria included in 10 CFR 50.47, appendix E to 10 CFR part 50, 10 CFR 72.32 and Spent Fuel Project Office Interim Staff Guidance – 16, “Emergency Planning” (ADAMS Accession No. ML003724570). The review considered the permanently shutdown and defueled status of the reactor with all fuel transferred to the ISFSI, and the low likelihood of any credible accident resulting in radiological releases requiring offsite protective measures. These evaluations are documented in the NRC staff Safety Evaluation Report (ADAMS Accession No. ML15140A563). The staff concludes that the Defueled Station Emergency Plan for ZNPS provides: (1) an adequate basis for an acceptable state of emergency preparedness, and (2) in conjunction with arrangements made with offsite response agencies, provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the ZNPS Site.

The Commission has concluded that the licensee’s request for an exemption from certain requirements of 10 CFR 50.47(b) and 10 CFR part 50, appendix E, section IV as specified above are acceptable in view of the greatly reduced offsite radiological consequences associated with the current plant status as permanently shutdown with all spent fuel in the ISFSI.

The NRC has determined that other requirements from which ZS requested exemptions were not applicable to the ZNPS or are being met by the ZNPS Defueled Station Emergency Plan, or that an exemption was not appropriate. Therefore, an exemption was not necessary or was denied for those requirements.

A. *Exemption is Authorized by Law*

The NRC has found that ZS meets the criteria for an exemption in 10 CFR 50.12. The NRC has determined that granting the exemption will not result in a violation of the Atomic

Energy Act of 1954, as amended, or the Commission's regulations. Therefore, the exemption is authorized by law.

*B. The Exemption Presents No Undue Risk to Public Health and Safety and is Consistent with the Common Defense and Security*

In the Safety Evaluation Report, the NRC staff explains that ZS's implementation of the ZNPS Defueled Station Emergency Plan, with the exemptions, will continue to provide this reasonable assurance of adequate protection. In addition, the requested exemptions only involve EP requirements under 10 CFR part 50. Physical security measures at ZNPS will not be affected by the requested EP exemptions, and granting the exemptions will not adversely affect ZS's ability to physically secure the site or protect special nuclear material. Thus, granting the exemptions will not present an undue risk to public health or safety and is not inconsistent with the common defense and security.

*C. Special Circumstances Are Present*

For the Commission to grant an exemption, special circumstances must exist. Under 10 CFR 50.12(a)(2)(ii), special circumstances are present when "[a]pplication of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule." These special circumstances exist here, given the current plant status as permanently shutdown with all spent fuel in the ISFSI. The NRC has determined that ZS's compliance with the regulations listed above is not necessary for the licensee to demonstrate that, under its emergency plan, there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Consequently, special circumstances are present because requiring

ZS to comply with the regulations listed above is not necessary to achieve the underlying purpose of the EP regulations.

*D. Environmental Considerations*

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact related to this exemption was published in the *Federal Register* on July 16, 2015 (80 FR 42129). Based upon the environmental assessment, the Commission has determined that issuance of this exemption will not have a significant effect on the quality of the human environment.

**IV. CONCLUSION**

The NRC staff reviewed the licensee's submittals and concludes that the licensee's request for an exemption from certain requirements of 10 CFR 50.47(b) and appendix E to 10 CFR part 50 as specified above are acceptable in view of the greatly reduced offsite radiological consequences associated with the current plant status as permanently shut down.

The Commission has determined that, pursuant to 10 CFR 50.12, the exemptions are authorized by law, will not present an undue risk to the public health and safety, are consistent with the common defense and security, and special circumstances are present in that compliance with the specified regulations is not necessary for reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the ZNPS facility based on its permanently shut-down condition.

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 20<sup>th</sup> day of July, 2015.

For the Nuclear Regulatory Commission.

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