

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50-295, 50-304, and 72-1037; NRC-2015-0190]

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

Independent Spent Fuel Storage Installation

AGENCY: Nuclear Regulatory Commission.

ACTION: Exemption; issuance.

DATES: Notice of issuance of exemption given on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing an exemption in response to a request submitted by ZionSolutions on August 25, 2014, to its general license to operate an independent spent fuel storage installation (ISFSI) at the Zion Nuclear Power Station (ZNPS). The exemption permits ZionSolutions to deviate from the requirements in Certificate of Compliance No. 1031, Amendment No. 3, Appendix A, Technical Specifications and Design Features for the Modular Advanced Generation Nuclear All-purpose STORage (MAGNASTOR®) System, Section 5.7, Training Program. ZionSolutions is currently loading MAGNASTOR® storage casks and maintains that relief from certain training requirements will reduce costs associated with applying a more complex and labor intensive training process than required by regulation.

ADDRESSES: Please refer to Docket ID NRC-2015-0190 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-2015-0190. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: 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):** You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. For the convenience of the reader, the ADAMS accession numbers are provided in a table in the "Availability of Documents" section of this document. Some documents referenced are located in the NRC's ADAMS Legacy Library. To obtain these documents, contact the NRC's PDR for assistance.

- **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 Vera, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-5790; e-mail: John.Vera@nrc.gov.

I. Background.

In February 1998, ZNPS, Units 1 and 2, were permanently shut down. On February 13, 1998, Commonwealth Edison Company, the ZNPS licensee at that time, submitted a letter certifying the permanent cessation of operations at ZNPS, Units 1 and 2. On March 9, 1998, Commonwealth Edison Company submitted a letter certifying the permanent removal of fuel from the reactor vessels at ZNPS. On May 4, 2009, the NRC issued the order to transfer the ownership of the permanently shut down ZNPS facility and responsibility for its decommissioning to *ZionSolutions*. This transfer was effectuated on September 1, 2010. *ZionSolutions* was established solely for the purpose of acquiring and decommissioning the ZNPS facility for release for unrestricted use, while transferring the spent nuclear fuel and Greater-Than-Class C radioactive waste to the ZNPS ISFSI. *ZionSolutions* holds Facility Operating License Nos. DPR-39 and DPR-48, which authorize possession of spent fuel from the operation of ZNPS, Units 1 and 2, in Zion, Illinois, pursuant to part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Domestic Licensing of Production and Utilization Facilities." The licenses provide, among other things, that the facility must comply with all applicable NRC requirements.

Consistent with 10 CFR part 72, subpart K, "General License for Storage of Spent Fuel at Power Reactor Sites," a general license is issued for the storage of spent fuel in an ISFSI at power reactor sites to persons authorized to possess or operate nuclear power reactors under 10 CFR part 50. *ZionSolutions* is currently authorized to store spent fuel at the ZNPS ISFSI under the 10 CFR part 72 general license provisions.

The conditions of the 10 CFR part 72 general license, specifically 10 CFR 72.212(a)(2), 72.212(b)(3), 72.212(b)(5)(i), and 72.212(b)(11), require a general licensee to store spent fuel in

an approved spent fuel storage cask listed in 10 CFR 72.214, and to comply with the conditions specified in the cask's CoC. The ZNPS ISFSI is currently loading and storing spent fuel in MAGNASTOR[®] storage casks, approved by the NRC under CoC No. 1031, Amendment No. 3.

The MAGNASTOR[®] system provides for the vertical dry storage of spent fuel assemblies in a welded transportable storage canister (TSC). The storage system components for the MAGNASTOR[®] system consist of a vertical concrete cask (VCC), a TSC with an internal basket assembly that holds the spent fuel assemblies, and a transfer cask, which contains the TSC during loading, transfer, and unloading operations. The VCC is constructed of reinforced concrete designed to withstand all normal condition loads, as well as abnormal condition loads created by natural phenomena such as earthquakes and tornados. The storage system is also designed to withstand design-basis accident conditions.

II. Request/Action.

By letter dated August 25, 2014, *ZionSolutions* submitted a request for exemptions from specific portions of the requirements of 10 CFR 72.212, "Conditions of general license issued under § 72.210," specifically 10 CFR 72.212(a)(2), 72.212(b)(5), 72.212(b)(11), and 10 CFR 72.214, "List of approved spent fuel storage casks." Specifically, *ZionSolutions* has requested an exemption from the requirements of Certificate of Compliance No. 1031, Amendment 3, Appendix A, Technical Specifications and Design Features for the MAGNASTOR[®] System, Section 5.7 "Training Program."

Section 5.7 in Appendix A requires the following: "A training program for the MAGNASTOR[®] system shall be developed under the general licensee's systematic approach to training (SAT). Training modules shall include comprehensive instructions for the operation and

maintenance of the MAGNASTOR[®] system and the independent spent fuel storage installation (ISFSI).” *ZionSolutions* has stated that the training program for the MAGNASTOR[®] system was developed using the SAT methods. The training modules included comprehensive instructions for the operation and maintenance of the MAGNASTOR[®] system. The exemption request applies only to developing a training program under SAT for operation and maintenance of ISFSI Structures, Systems and Components (SSCs), which are not important to safety as defined in 10 CFR 72.3. If granted, *ZionSolutions* will provide training/instructions for such SSCs in accordance with manufacturer’s instructions and *ZionSolutions* approved procedures, instead of developing such training and instructions using the SAT methods.

The NRC has the authority under 10 CFR 72.7 to grant specific exemptions from 10 CFR part 72 requirements if it determines that the exemption is authorized by law and will not endanger life or property or the common defense and security and the exemption is otherwise in the public interest. For the reasons described below, the NRC is granting an exemption to *ZionSolutions*.

III. Discussion.

Pursuant to 10 CFR 72.7, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR part 72 when it determines that the exemptions are authorized by law, will not endanger life or property or the common defense and security, and are otherwise in the public interest.

A. Authorized by Law

Under 10 CFR 72.7, the NRC may grant exemptions from the requirements of 10 CFR part 72 if the exemption is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest. As explained below, the proposed exemption will not endanger life or property, or the common defense and security, and is otherwise in the public interest. The ISFSI regulations cited in this exemption request are 10 CFR 72.212(a)(2), 72.212(b)(5)(i), 72.212(b)(11), and 10 CFR 72.214, which, in general, provide that the licensee shall comply with the terms, conditions, and specifications of the CoC. The Commission has the legal authority to issue exemptions from the requirements of 10 CFR part 72 pursuant to 10 CFR 72.7. Issuance of this exemption is consistent with the Atomic Energy Act of 1954, as amended, and is not otherwise inconsistent with NRC regulations or other applicable laws. Therefore, issuance of the exemption is authorized by law.

B. The Exemption Will Not Endanger Life or Property or the Common Defense and Security

Approval of this exemption request will only allow *ZionSolutions* to provide training that has not been developed under a SAT program for non-safety related ISFSI SSCs. There are no changes to design or operations of the ISFSI, and no changes whatsoever to safety or security-related components. If granted, *ZionSolutions* will provide training/instructions for such SSCs in accordance with manufacturer's instructions and *ZionSolutions* approved procedures, instead of developing such training and instructions using the SAT methods. Therefore, issuance of the exemption will not endanger life or property or the common defense and security.

C. The Exemption is Otherwise in the Public Interest

Approval of this exemption request will only allow *ZionSolutions* to provide training that was not developed under a SAT program for non-safety-related ISFSI SSCs. The costs associated with these activities are paid from the decommissioning trust fund for ZNPS. Decommissioning trust funds are funds set aside during plant operation and do not belong to the utility but are retained in the public interest solely to pay for eventual decommissioning of the plant. ZNPS is currently in a decommissioning process. As such, there is a finite amount of funds which exists to complete decommissioning activities. With regard to the subject request, exemption from implementation of this training process relieves an economic burden. *ZionSolutions* stated in their exemption request that the exemption “is in the public interest in that it will reduce costs associated with applying a more complex and labor intensive training process than required by regulation with no commensurate safety benefit.” Furthermore, NRC staff finds the exemption in the public interest, because the resources saved from developing training activities under SAT can be utilized for other decommissioning activities including, for example, reducing the time to complete decommissioning and thus reducing risk of radiological effects to workers and the public and ameliorating an unexpected event, such as an accident.

D. Environmental Considerations

In reviewing this exemption request, the staff also considered whether there would be any significant environmental impacts associated with the exemption. For this proposed action, the staff reviewed the categorical exclusion criteria in 10 CFR 51.22(c)(25). The regulations in 10 CFR 51.22(c)(25) provide a categorical exclusion for the granting of licensee exemption

requests. In order for the 10 CFR 51.22(c)(25) categorical exclusions to apply, the proposed action must meet the criteria listed in 10 CFR 51.22(c)(25)(i)-(vi). An analysis of these provisions is provided below.

i. 10 CFR 51.22(c)(25)(i) – There is no significant hazards consideration (NSHC)

The elements of a NSHC are set forth in 10 CFR 50.92(c)(1)-(3). The proposed action involves NSHC if approval of the proposed action would not: 1) involve a significant increase in the probability or consequences of an accident previously evaluated; 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety. As the requested exemption does not involve changes to the design or operation of the safety systems for the MAGNASTOR[®] system or ISFSI, the above elements are not affected; therefore, no significant hazards will result from issuance of this exemption.

ii. 10 CFR 51.22(c)(25)(ii) – There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite

The proposed exemption, which applies only to developing a training program not under SAT for operation and maintenance of ISFSI SSCs that are not defined in 10 CFR 72.3 as important to safety, would not involve any changes to effluents. Therefore, there is no significant change in the types or increase in the amounts of effluents that may be released offsite.

- iii. 10 CFR 51.22(c)(25)(iii) – There is no significant increase in individual or cumulative public or occupational radiation exposure

The proposed exemption, which applies only to developing a training program not under SAT for operation and maintenance of ISFSI SSCs that are not defined in 10 CFR 72.3 as important to safety, would not involve any changes to public or occupational radiation exposures. Therefore, there is no significant increase in individual or cumulative public or occupational radiation exposure.

- iv. 10 CFR 51.22(c)(25)(iv) – There is no significant construction impact

The proposed exemption, which applies only to developing a training program not under SAT for operation and maintenance of ISFSI SSCs that are not defined in 10 CFR 72.3 as important to safety, would not involve any construction activities. Therefore, there is no significant construction impact.

- v. 10 CFR 51.22(c)(25)(v) – There is no significant increase in the potential for or consequences from radiological accidents

The proposed exemption, which applies only to developing a training program not under SAT for operation and maintenance of ISFSI SSCs that are not defined in 10 CFR 72.3 as important to safety, would not involve any changes to the design, safety limits, or safety analysis assumptions associated with the cask system and would not create any new accident

precursors. Therefore, there is no significant increase in the potential for or consequences from radiological accidents.

vi. 10 CFR 51.22(c)(25)(vi) – The requirements from which an exemption is sought involve:

(A) Recordkeeping requirements;

(B) Reporting requirements;

(C) Inspection or surveillance requirements;

(D) Equipment servicing or maintenance scheduling requirements;

(E) Education, training, experience, qualification, requalification or other employment suitability requirements;

(F) Safeguard plans, and materials control and accounting inventory scheduling requirements;

(G) Scheduling requirements;

(H) Surety, insurance or indemnity requirements; or

(I) Other requirements of an administrative, managerial, or organizational nature.

The proposed exemption applies only to developing a training program not under SAT for operation and maintenance of ISFSI SSCs that are not defined in 10 CFR 72.3 as important to safety. The requirements from which an exemption is sought involve only training, and the exemption is thus applicable for a categorical exclusion under 10 CFR 51.22(c)(25)(vi)(E).

Based on the above considerations, the NRC staff concludes that the proposed exemption meets the eligibility criteria for categorical conclusion set forth in 10 CFR 51.22(c)(25). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or

environmental assessment is required to be prepared in connection with the proposed issuance of the exemption.

IV. Conclusions.

Based on the above considerations, the NRC has determined, pursuant to 10 CFR 72.7, that this exemption is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest. Therefore, the Commission hereby grants *ZionSolutions* an exemption from 10 CFR parts 72.212(a)(2), 72.212(b)(5)(i), 72.212(b)(11) and 72.214, which state that the licensee shall comply with the terms, conditions, and specifications of the CoC, only with regard to the requirements of Certificate of Compliance No. 1031, Amendment No. 3, Appendix A, Technical Specifications and Design Features for the MAGNASTOR[®] System, Section 5.7 “Training Program.” The exemption only exempts *ZionSolutions* from the requirement to develop training modules under the SAT that include comprehensive instructions for the operation and maintenance of the ISFSI SSCs that are not important to safety. The SAT training requirements are still applicable to all important to safety components, as required by the CoC.

V. Availability of Documents.

The documents identified in the following table are publicly available to interested persons in ADAMS. For information on accessing ADAMS see the ADDRESSES section of this document.

Document	ADAMS Accession No.
Commonwealth Edison Company letter certifying the permanent cessation of operations at ZNPS, Units 1 and 2	ML15232A492
Commonwealth Edison Company letter certifying the permanent removal of fuel from the reactor vessels at ZNPS	ML15232A487
NRC order and conforming amendments transferring ownership of ZNPS facility	ML090930037
Letter issuing conforming amendments relating to transfer of licenses for ZNPS	ML102290437
Zion exemption request	ML14241A424

The exemption is effective upon issuance.

Dated at Rockville, Maryland, this 21st day of August, 2015.

For the Nuclear Regulatory Commission.

DRAFT

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