




UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 29, 2025

MEMORANDUM TO: Daniel Barnhurst, Chief
Environmental Project Management Branch 3
Division of Rulemaking, Environmental,
and Financial Support
Office of Nuclear Material Safety
and Safeguards

FROM: Mary C. Richmond  Signed by Richmond, Mary
on 07/29/25
Environmental Project Manager
Environmental Project Management Branch 3
Division of Rulemaking, Environmental,
and Financial Support
Office of Nuclear Material Safety
and Safeguards

SUBJECT: SUMMARY OF THE FEBRUARY 13, 2025, PUBLIC MEETING WITH
SMR, LLC (A HOLTEC INTERNATIONAL COMPANY) TO DISCUSS
THE ENVIRONMENTAL IMPACTS OF POSTULATED ACCIDENTS

Meeting Information:

Vendor: SMR, LLC (A Holtec International Company)

Docket No.: 99902049

Meeting Title: Environmental Report: Environmental Impacts of Postulated Accidents

Meeting Date: February 13, 2025

Meeting Type: Open Observation

Public Meeting Notice Agencywide Documents Access and Management System (ADAMS)
Accession No.: ML25043A082

Meeting Attendees: See Enclosure for a list of the meeting attendees.

CONTACT: Mary Richmond, NMSS/REFS
(301) 415-7218

Meeting Summary:

The U.S. Nuclear Regulatory Commission (NRC) staff conducted the meeting in accordance with NRC Management Directive 3.5, "Attendance at NRC Staff-Sponsored Meetings" (SMR) (ML21180A271). During the meeting, SMR, LLC, a Holtec International Company (Holtec), discussed preapplication information related to the environmental impacts of postulated accidents for the limited work authorization (LWA)/construction permit (CP) application environmental report (ER). Preapplication engagements, including this meeting, provide an opportunity for the NRC staff to engage in early discussions with a prospective applicant to offer licensing guidance and to identify potential licensing issues early in the licensing process.

During the meeting, SMR (Holtec) provided a summary of the agenda and described the purpose of the meeting as providing an overview of the licensing plan and timing of the completion of the postulated accidents analyses design basis accidents, severe accidents, and severe accident mitigation alternatives (SAMAs). Holtec also discussed the guidance applicable to the accident analyses (ML25022A056).

Holtec discussed the proposed timing of submittal of the LWA with respect to the CP application, stating that it anticipates 18 months between the two submittals. Holtec stated that it understands that the NRC staff would not need to issue a supplemental Environmental Impact Statement (EIS). Holtec further added that it had previously submitted a white paper on this issue and its understanding of the NRC staff's feedback was that just one EIS (through LWA and CP) would be required. Holtec also indicated that it expected that a supplemental ER would be submitted with the staff issuing a supplemental EIS at the operating license (OL) stage.

The NRC staff commented that it would depend on the timing: if the LWA and CP are submitted close enough together there could be just one EIS. The NRC staff noted that Holtec's initial white paper, and assumptions in the NRC response, was an approximate 6-month gap between the two submittals (ML24074A292). The NRC staff provided, from recollection, that the 6-month timeframe allowed for one initial EIS based on this timeframe as stated in Holtec's initial white paper submittal. The NRC staff commented that, given a 6-month gap, the staff would be in the initial drafting phase of the EIS based on the comprehensive ER received with the LWA/CP Part One, therefore, the 6-month gap would allow the staff to review any new and significant findings that may be submitted with the CP application Part Two and include corresponding updates in the EIS.

Holtec asked if there is a time limit on spacing of submittals. Holtec asked about the 6-month gap—there is a provision to allow the applicant to submit CP application in two parts, no more than 6 months apart (the safety and the environmental portions). Holtec added that it has not identified any requirements that would require Holtec to submit any supplemental information on the docket with the CP application Part Two stage if it's not new and significant. Holtec also stated that if new and significant information is not identified, it would not be docketed for the CP Part Two application, but it would be made available via audit. Otherwise, if new and significant information is identified, it would be docketed.

Holtec commented that the plans are still to submit the LWA at the end of 2025 or early 2026. Therefore, Holtec would like to get information as soon as possible to make sure that corrections on the approach can be made now, if needed.

The NRC staff responded that the staff would take this question back for further discussion based on the revised timeline. The NRC has prepared an attached Addendum addressing the proposed timing of submittals under the Phased LWA/CP approach.

The NRC staff asked about how the information in the ER would relate to the preliminary safety analysis report (PSAR) submitted with the CP application. Holtec responded that the intent would be to provide bounding assumptions for the consequences of events in the ER so that the conclusions in the ER remain valid with the submittal of the CP application PSAR.

In reference to slide three, Holtec discussed that the LWA PSAR will be limited to the information that would be covered under the LWA and exclude many major structures and components, such as the reactor vessel, etc., so it would be challenging to address these issues in a plant-specific way at the LWA stage.

In reference to slide four, appendix A to RG 4.2 recommends that the applicant use preliminary design information. However, preliminary design information would not yet be docketed at the LWA/CP Part One stage. Holtec is proposing an alternative approach that is similar to what is expected for an early site permit. That is, Holtec would develop a surrogate plant with bounding key parameters for the plant expected to be built and would evaluate consequences on those bounding parameters. The CP application Part Two will demonstrate that the bounding estimates selected are within the parameters of the design. Holtec anticipates that the environmental review would not need to be re-performed as long as the design is within the bounding estimates. If there is anything outside the bounds, Holtec would need to re-perform the analysis and submit a supplemental ER.

The NRC staff asked about plans for future analysis. Holtec responded that the understanding is that Holtec would only need to verify that results are within the bounds of the previously submitted ER. Holtec further commented that an additional evaluation would also be performed to determine that nothing new and significant was identified.

In reference to slide eight, Holtec stated the plans are to use an approach similar to that taken by TerraPower for the Kemmerer site, which is to complete steps one and two in NEI 05-01, which includes estimating severe accident risk using bounding assumptions for key parameters. Later, Holtec would identify SAMAs and determine if design changes are needed based on the evaluation. This supplemental information would be submitted during the OL application.

Holtec said that, ideally, no design changes would be identified during the OL stage. Holtec also remarked that in some cases, some of the requirements may be able to be relaxed if overly conservative assumptions had been made; in such case, it would be discussed in the supplemental ER. The site-specific information would be based on actual site-specific work. The bounding assumptions would be based on known design information and intended to be as accurate as possible.

There were no questions or comments from members of the public.

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DATED: July 29, 2025

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***Via email**

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**Public Meeting with SMR, LLC (A Holtec International Company) to Discuss the
Environmental Impacts of Postulated Accidents**

MEETING ATTENDEES

FEBRUARY 13, 2025

| <u>Name</u> | <u>Organization</u> |
|--------------------------|----------------------------|
| Victoria Huckabay | NRC |
| Mary Richmond | NRC |
| Donald Palmrose | NRC |
| Daniel Barnhurst | NRC |
| William Burris | NRC |
| Laura Willingham | NRC |
| Clark Shurtleff | SMR (Holtec) |
| Andrew Brenner | SMR (Holtec) |
| Steven Mitchell | SMR (Holtec) |
| Sarah Horacek | SMR (Holtec) |
| Sean McCloskey | SMR (Holtec) |
| Jean-Philippe Ohanessian | SMR (Holtec) |
| Erin Williams | SMR (Holtec) |
| Tim Basham | Enercon |
| Ricky Summitt | Enercon |
| Rachel Turney | Enercon |
| Amy Moon | EFSEC |
| Joy Jiang | The Breakthrough Institute |
| Leah Hare | PNNL |
| Alonzo McSwain | |

Addendum: Proposed Timing of Submittals Under the Phased LWA/CP Approach

Holtec plans to submit a comprehensive environmental report (ER) with the limited work authorization (LWA)—containing LWA and construction permit (CP) Part One information—and then submit CP Part Two 18 months later. The timeframe is different than originally presented in the Holtec’s white paper. Applicable regulations include:

- 10 CFR 2.101(a)(9), 51.49(f), and 51.76(b) & (f) provide that the U.S. Nuclear Regulatory Commission (NRC) staff will prepare a single comprehensive environmental impact statement (EIS) for the LWA and CP as long as the applicant submits a comprehensive ER that covers the environmental impacts of the LWA and CP as described in 10 CFR 51.49(f) with Part One of the application, and Part Two of the application is submitted no later than 18 months after the submission of Part One.
- Since the phased LWA/CP approach allows Part Two of the application to be submitted within 18 months under 10 CFR 2.101(a)(9), Holtec would not need an exemption to submit Part Two of the application within 18 months of the submission of Part One of the application.

The table below describes the anticipated submittals under the Phased LWA/CP approach along with the anticipated NRC National Environmental Policy Act document and applicable hearing notices.

| Phase | Submittal | NEPA Document | Hearing Requirement |
|-------------------|---|------------------------------------|---|
| LWA/CP Part One | Comprehensive ER (Design Basis Accidents (DBA), Severe Accidents, and Severe Accident Mitigation Alternative (SAMA) Analyses will use bounding values/site-specific information) | EIS | First hearing notice issued after NRC receives LWA/CP Part 1 (10 CFR 2.645(a)) |
| CP Part Two | New and Significant Information, if applicable. If New and Significant information, a supplemental ER will be provided. For DBA, Severe Accidents, and SAMA validate plant is bounded by EIS. | ROD, if no significant information | Supplementary hearing notice is issued after NRC receives CP Part 2 (10 CFR 2.645(b)) The supplementary hearing notice would cover the remaining unresolved issues in the proceeding. |
| Operating License | New and Significant Evaluation including SAMA. | SEIS | |