

Agenda Items for January 22, 2026 Public Meeting: “Strategy for Establishing Defense in Depth for the IMSR” Topical Report

1. Section V of the topical report (TR) simply states that “TE will use a five-level concept approach similar in approach to that described in the IAEA and” The staff’s prior involvement in developing the IAEA guidance referenced in the TR provides familiarity with the IAEA approach. However, it is unclear whether TE intends to implement the IAEA approach without modification or with enhancements or deviations. The TR should explicitly clarify this and, if so, describe any changes.
2. Item 4 in Section V.1 states that “The concept of defense-in-depth shall be applied to all organizations, behavioral, and design-related safety and security activities to ensure they are subject to overlapping provisions.” Please confirm whether the scope of this TR includes security activities. In addition, clarify whether the strategy employed by TE to establish the DID described in the TR also applies to other areas, such as non-reactor facilities, spent fuel storage. If so, the TR should describe any revisions to or departures from the approach.
3. The TR should clarify whether the proposed approach and principles apply to all modes of plant operation.
4. Section V.2 states, “See Appendix 1 for a table of the objectives and essential means at each level of defense-in-depth.” However, the appendix is not included in the submittal.
5. In NUREG/KM-0009, “Historical Review and Observations of Defense-in Depth,” Section 3.6, “Overall Observation on Characterization of Defense-in Depth,” the sixth bullet states that “There is almost no guidance on criteria for determining adequacy of defense-in-depth. The literature does suggest that the elements (e.g., layer of defense) should be quantified, that risk is used to assess each defense system (e.g., safety measure), that compensatory measures can be graded to reduce risk, that any sequence (given all defense layers have failed) remain under a frequency consequence curve, that redundancy and diversity is sufficient to ensure risk guidelines are met, and that the adequacy could be assessed via a process using measures of risk.” The proposed approach does not address the suggested quantification of the layers of defense. This omission should be clarified.
6. In Section 9.2.3, “Approach for Achieving Defense-in-Depth,” of NUREG/KM-009, the bullet on Page 9-9 states that “Defense-in-depth should consist of two parts: fundamental elements that should be provided in all cases, and implementation elements that may vary depending on uncertainty and reliability and risk goals.” The TR does not appear to address the implementation elements. The TR should clarify how and when these elements will be implemented.