

Observations for Terrestrial Energy’s consideration for revising the Integral Molten Salt Reactor (IMSR) – core unit white paper:

- Feedback that should be considered for future submittals, including Standard Design Approval (SDA) application:**

- ~~OFFICIAL USE ONLY PROPRIETARY INFORMATION~~

off work done at Oak Ridge National Laboratory (ORNL) for the Molten Salt Reactor Experiment (MSRE). In future submittals, it would be helpful to indicate where ORNL work was considered. In addition, any differences between the MSRE and the IMSR design should be identified

5. The white paper mentions using the Canadian definition of a guaranteed shutdown state. Future submittals should clearly define how the NRC rules/regulations are met.
6. Typically, the NRC wants to understand what components are important to safety and which are designed to seismic Category I criteria. Once this is determined, the staff wants to understand what design and fabrication code will be used for the construction and installation of the component.
 - For components important to safety, appropriate in-service inspection requirements should be identified to ensure the component will be able to meet the design requirements for the life of the component.
 - For active components which are important to safety, specifically, pumps and valves, appropriate in-service testing requirements should be established, along with initial qualification testing requirements. Typically, the American Society of Mechanical Engineers QME-1, "Qualification of Active Mechanical Equipment Used in Nuclear Power Plants," as endorsed by NRC's Regulatory Guide 1.100, "Seismic Qualification of Electric and Mechanical Equipment for Nuclear Power Plants," is the standard for initial qualification testing for pumps and valves.