Section 7. Fukushima Issues

On March 11, 2011, a 9.0-magnitude earthquake, followed by a 45-foot tsunami, heavily damaged the nuclear power reactors at Japan's Fukushima Dai-ichi facility. Shortly after the accident, the NRC issued NRC Order EA-12-049, "Order Modifying Licenses With Regard to Requirements for Mitigation Strategies for Beyond- Design-Basis Events," and Order EA-12-051, "Order Modifying Licenses With Regard to Reliable Spent Fuel Pool Instrumentation." In August, 2019, the NRC amended its regulations to establish regulatory requirements for nuclear power reactor applicants and licensees to mitigate beyond-design-basis events. The new rule, 10 CFR 50.155, "Mitigation of beyond design basis events," makes generically applicable; establishes regulatory requirements for documentation of changes; and addresses several Petitions for Rulemaking that were

submitted to the NRC following the March 2011 Fukushima Dai-ichi event. The NRC staff also issued Regulatory Guide 1.226, "Flexible Mitigation Strategies for Beyond-Design-Basis Events" and Regulatory Guide 1.227, "Wide-Range Spent Fuel Pool Level Instrumentation." In July 2011, the NRC issued SECY-11-0093, “Near- Term Report and Recommendations for Agency Actions Following the Events in Japan.” The Near-Term Task Force was established in response to Commission direction to conduct a systematic and methodical review of

U.S. Nuclear Regulatory Commission processes and regulations to determine whether the agency should make additional improvements to its regulatory system. In examining the Fukushima Dai-ichi accident for insights

for reactors in the United States, the Task Force addressed protecting against accidents resulting from natural phenomena, mitigating the consequences of such accidents, and ensuring emergency preparedness.

This section includes the evaluation and results of two generic issues, GI-199, “Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States on Existing Plants,” and GI-204, “Flooding of Nuclear Sites Due to Upstream Dam Failure,” associated with the mitigation of seismic and flooding concerns, respectively.