

## OVERVIEW

The March 2011 Fukushima accident underscored how important prior planning is when it comes to safely handling extreme events at a nuclear reactor. The NRC continues to conclude U.S. plants can survive many scenarios, such as loss of offsite power or flooding. After Fukushima, however, the NRC ordered every U.S. commercial reactor to have strategies for dealing with the long-term loss of normal safety systems. Instead of figuring out which events might happen, the order focused on significantly improving the plants' flexibility and diversity in responding to extreme natural phenomena, such as severe flooding and earthquakes.

The plants' strategies must protect or restore key safety functions indefinitely in the case of an accident. The strategies focus on keeping the reactor core cool, preserving the containment's barrier that prevents or controls radiation releases, and cooling the spent fuel pool. Plants with more than one reactor must be able to do this for every reactor on the site at the same time.

The strategies must protect the plant indefinitely, so plants may need to bring in additional equipment or resources. The order reflects this by having three phases with different requirements.

The plants have all submitted a plan for what they intend to do and use in each of these phases. The plans must also explain how the plants will have everything in place by the end of 2016. The NRC reviewed those plans and has issued interim staff evaluations, which let the licensee know whether the NRC thinks the plants are on the right track. The NRC will inspect the plants throughout this process to ensure the strategies will get the job done. The agency website's Japan Lessons Learned section has more information about the mitigating strategy requirements and related guidance.

## MITIGATING STRATEGIES RESOURCES

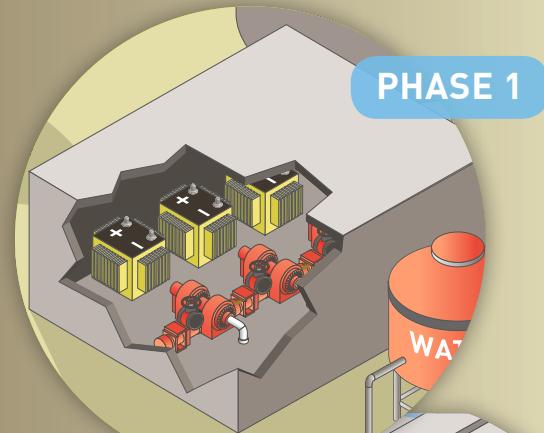
You can find more information on mitigating strategies and related guidance at the NRC website ([www.nrc.gov](http://www.nrc.gov)) in the Japan Lessons Learned section.

[www.nrc.gov/reactors/operating/  
ops-experience/japan-dashboard/  
mitigating-strategies.html](http://www.nrc.gov/reactors/operating/ops-experience/japan-dashboard/mitigating-strategies.html)



# Mitigating Strategies: Safely Responding to Extreme Events

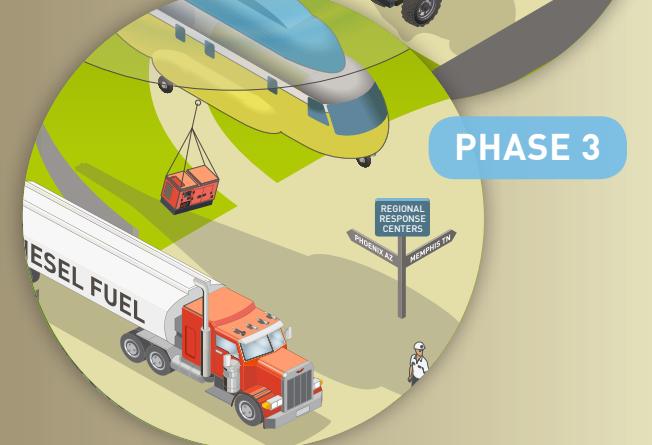
PHASE 1



PHASE 2



PHASE 3



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