



Near-Term Task Force Recommendations 2.1 and 2.3: Flooding – NRC’s Perspective

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Session TH28 – March 14, 2013



Outline

- Background
- Guidance for the Recommendations
- Flood Protection Walkdowns
- Flooding Hazard Reevaluation
- Integrated Assessment

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Background

- NRC established Near-Term Task Force (NTTF) in response to Fukushima Dai-ichi events in March 2011
- NTTF Recommendation 2.3 - Flooding
 - Develop flood protection walkdown procedures
 - Perform walkdowns using NRC-endorsed walkdown methodology
 - Identify and address degraded, non-conforming or unanalyzed conditions
- NTTF Recommendation 2.1 - Flooding
 - Reevaluate all potential external flooding hazards
 - Collect information to facilitate NRC’s determination if there is a need for additional regulatory actions
 - Subsume ‘Generic Issue’ on potential for NPP site flooding following failure of upstream dam(s)

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Guidance for Performing the Recommendations

- **Flood Protection Walkdowns**
 - NEI 12-07, “Guidelines for Performing Verification Walkdowns of Plant Protective Features” (May 2012)
 - NRC endorsement letter of flood protection walkdowns performed and reported in accordance with NEI 12-07 [May 2012; ML12144A142].
- **Hazard Reevaluations**
 - NRC Interim Staff Guidance, JLD-ISG-2012-06, “Guidance for Performing a Tsunami, Surge, or Seiche Hazard Assessment,” Final Issued in January, 2013 [ML12314A412].
 - NRC Interim Staff Guidance, JLD-ISG-2013-01, “Guidance for Estimating Flooding Hazards Due to Dam Failure,” Draft Available for Public Comment in March 2013.

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Guidance for Performing the Recommendations

- **Integrated Assessment**
 - NRC Interim Staff Guidance, JLD-ISG-2012-05, “Guidance for Performing the Integrated Assessment for External Flooding,” Final Issued in November, 2012 [ML12311A214].
- **All guidance documents (NEI 12-07 and three ISGs) are the product of significant interactions between the NRC, NEI, and other stakeholders at numerous public meetings and submitted written comments.**

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Walkdowns: General Considerations

- **Flood protection walkdowns gathered information while the longer-term flood hazard reevaluations are being completed (March 2013-March 2015).**
- **Deficiency:** a flood protection feature unable to perform its intended flood protection function when subject to a design basis flooding hazard
 - Walkdown observations that may be potential deficiencies were evaluated by each licensee in accordance with station processes and entered into the licensee’s Corrective Action Program (CAP).
 - Observations determined by the CAP to be deficiencies were reported to the NRC in the Walkdown Report.
- **Walkdown reports were submitted to the NRC by November 27, 2012 [publically available].**

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Walkdown Report Reviews

- Staff review of licensee reports are underway
- Observations:
 - All licensees committed to using NEI 12-07 guidance
 - Licensee reports identify:
 - Plant-specific degraded, nonconforming, or analyzed conditions
 - Actions taken or planned to further enhance site flood protection
 - Described the adequacy of programs, monitoring, and maintenance for the flood protection features
- Next Steps for NRC Staff - Assessment Reports to Verify if:
 - licensee responded appropriately
 - licensee followed NEI 12-07 guidance
 - no outstanding information is expected
 - staff have no immediate safety concerns

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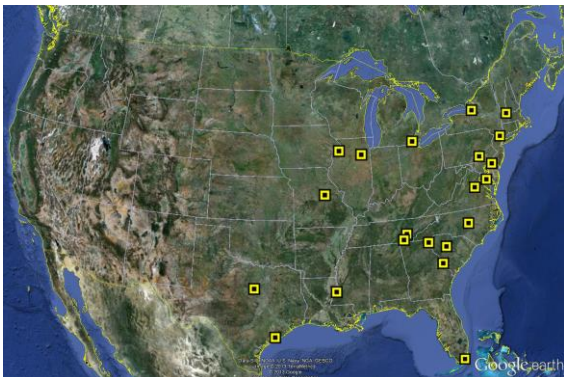


Flood Hazard Reevaluations

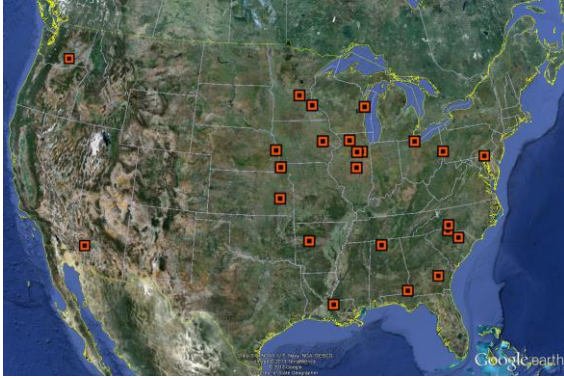
- Hazard Reevaluation is due from each licensee on an NRC-assigned due date [May 2012 letter; ML12097A509].
- Due date is either: March 2013, 2014, or 2015
- NRC staff used the following criteria to assign the schedule for completing the reevaluations:
 - What is the potential that an integrated assessment will have to be conducted based upon the reevaluated hazard?
 - How quickly can the flooding hazard reevaluation be completed?
 - How can industry and NRC staff resources be most effectively and efficiently applied?

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22 Year-1 (March 2013) Sites



24 Year-2 (March 2014) Sites



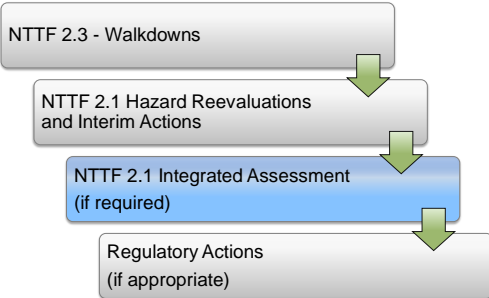
20 Year-3 (March 2015) Sites





Integrated Assessment: When is it performed?

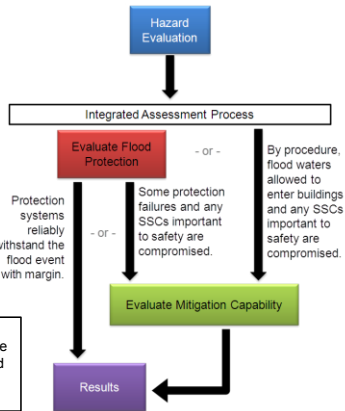
- Not all licensees will perform an Integrated Assessment:



Integrated Assessment: Purpose

- **The integrated assessment:**
 - evaluates the total plant response to external flood hazards
 - considers both the protection and mitigation capabilities of the plant
 - may use all available resources with appropriate justification
- **The purpose of the integrated assessment is to:**
 - evaluate the effectiveness of the current licensing basis against the new hazard based on current regulatory guidance
 - identify plant-specific vulnerabilities due to external flood hazards and other important insights
 - assess the effectiveness of existing or planned protection for flood conditions and mitigation of flood consequences for the entire duration of a flooding event

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Conclusions

- **Significant quantity of guidance produced in last year.**
 - Guidance is the product of numerous interactions between the NRC, NEI, and other stakeholders at numerous public meetings and submitted written comments.
- **Licensees have completed all walkdown reports**
 - NRC staff review is underway
- **Year-1 Hazard Reviews**
 - 22 sites scheduled to submit this month
- **Integrated Assessments**
 - Assessments will likely begin for a few Year-1 sites
 - Assessments are expected to take up to two years.
 - NRC will hold public meetings during initial application Integrated Assessment guidance to facilitate lessons-learned.

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