

# Evaluation of Seismic Hazard and Risk Under the Process for Ongoing Assessment of Natural Hazard Information (POANHl)

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# POANHI Process for Seismic Evaluations

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To date, five POANHI seismic hazard and risk evaluations have been completed

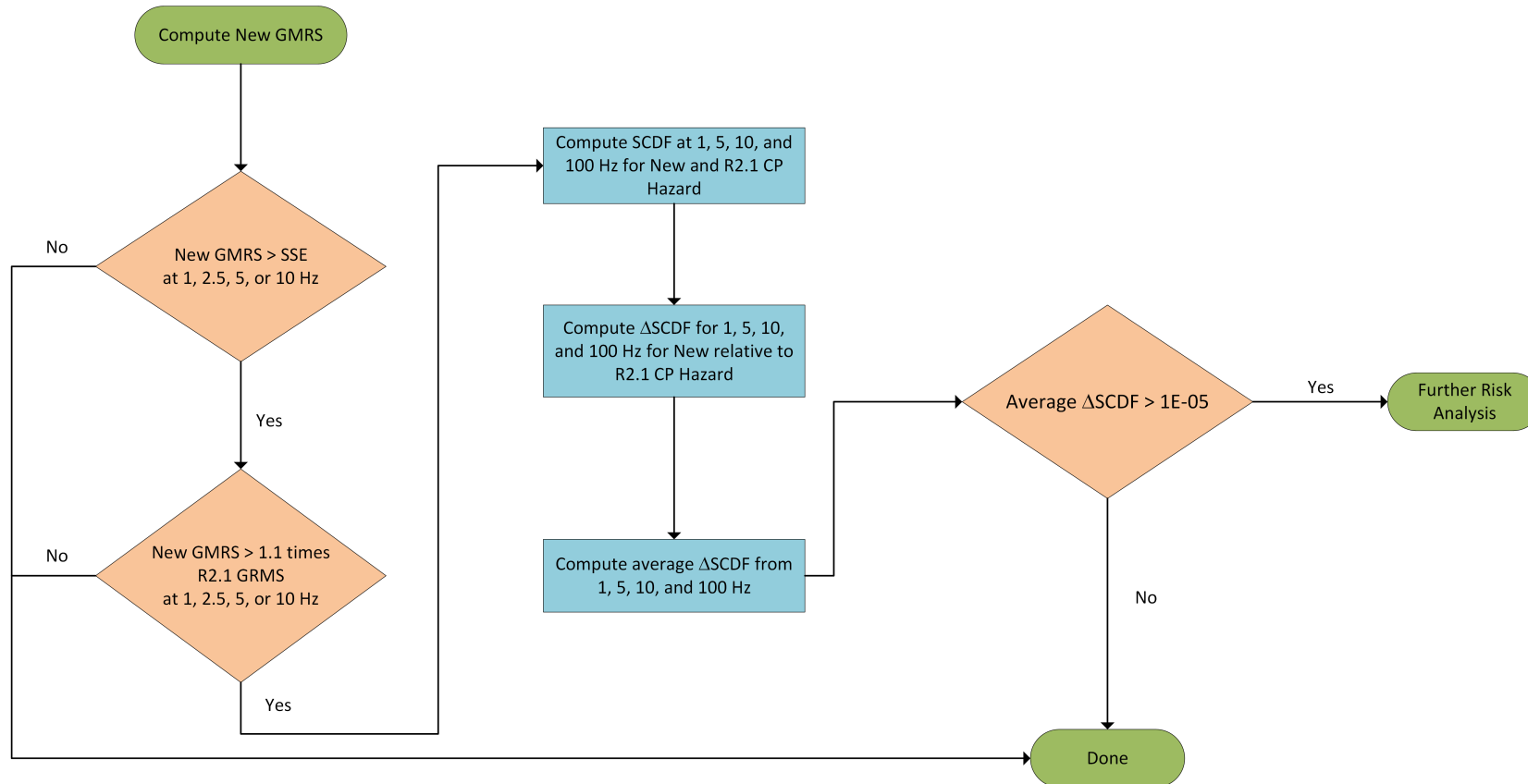
- Implemented hazard and risk screening process for each plant
- Plants have screened out
- POANHI seismic hazard reports for each plant site have been made publicly available in ADAMS
  - Reports provide:
    - Description of seismic hazard reevaluation
    - Multiple tables of site geologic profile, GMRS, and hazard curves

POANHI seismic evaluations are ongoing for remaining NTTF Recommendation 2.1 Group 1 plants

Previous public meetings have provided a forum for discussion of seismic hazard reevaluations and screening process

Today's meeting will revisit screening process in response to questions sent to POANHI Seismic email account.

# POANHI Decision-Making Flowchart



# Seismic Risk Evaluation Using POANHI Hazard – General Approach

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- Use **latest available information to obtain a key input** (termed plant-level fragility) for risk evaluation.
  - SPRA results, if licensee submitted a SPRA report in response to post-Fukushima actions
  - Risk-informed LARs or GI-191 information, if licensee did not submit a SPRA report in response to post-Fukushima actions
  - This is consistent with approach discussed in previous public meetings.
- Use convolution approach as discussed in previous public meetings.
- Use **average of 1, 5, 10, and 100 Hz** results consistent with approach in flowchart and discussions in previous public meetings.

# Additional Risk Evaluation

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- Utilize available plant-specific seismic risk insights; examples:
  - Dominant risk contributors
  - Frequencies of interest based on differences between NTTF 2.1 and POANH GMRS
  - Safety enhancements performed by licensee via permanent plant modifications
- If issues resolved, staff will issue final letter and hazard report
- If issues remain, staff will:
  - Engage Senior Management Review Panel (SMRP)
  - Enter formal regulatory process, if approved by SMRP

# Approach

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- DORL PM will issue final letter with the hazard report to licensee, documenting results of NRC staff evaluation
- Any outcome other than “no further regulatory action” will have licensee engagement before letter is issued
  - NRC is internally considering methods of licensee engagement
- As with normal ListServ process, letter and hazard report will be made publicly available in ADAMS about 5 days following issuance
- Licensees can engage through their assigned PM if they have any technical questions about the letter or report

# POANHI Seismic Email Account

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- Members of the public and external stakeholders can submit any comments or feedback to the staff by emailing [POANHI.Seismic@nrc.gov](mailto:POANHI.Seismic@nrc.gov)
- A total of 7 comments received to date
  - First comment addressed during the November 2022 public meeting
  - Delayed responses to remaining comments were provided in July 2023 (due to technical issues with email inbox)
  - Most recent comment received in August (response in progress)
- Summary of comments and responses will be provided in the POANHI periodic report (expected publication date is CY23 Q4)
- Future comments should continue to be sent to email address above

# POANHI Seismic Email Account (Cont'd)

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- Summary of Select Comments:
  - NRC's reference rock definition; incorporation of epistemic uncertainty in depth to reference rock and weighting of shear wave velocity profiles
  - Explanation of control point elevation used in the site response analysis to ensure consistency between the "prior" and "new" seismic hazard calculation
  - Clarification of NRC's screening process and computation of the average delta SCDF for two screened out plants (response in progress)



# Schedule

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- **Complete**

- Vogtle (ML23006A091)
- Sequoyah (ML23192A447)
- Watts Bar (ML23192A447)
- Browns Ferry (ML23192A447)
- North Anna (ML23214A177)

- **Upcoming (Estimated dates)**

- Summer (Q4 2023)
- Peach Bottom (Q4 2023)
- DC Cook (Q4 2023)
- Robinson (Q1 2024)
- Dresden (Q1 2024)
- Oconee (Q1 2024)
- Callaway (Q2 2024)
- Beaver Valley (Q2 2024)