



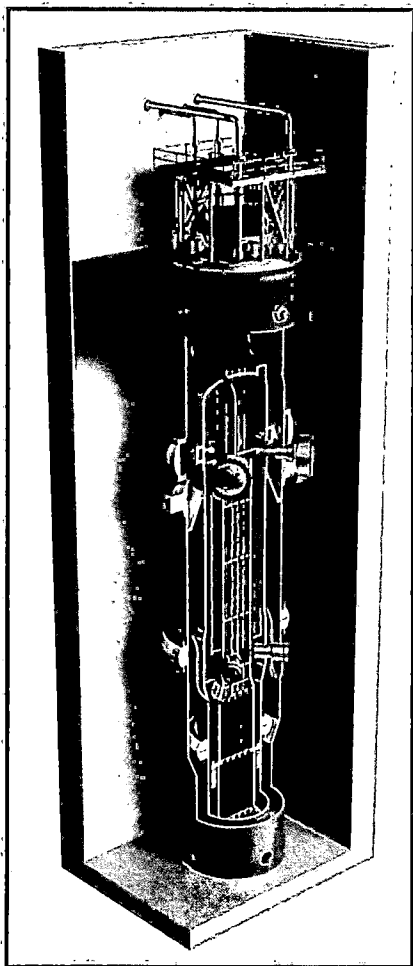
LO-1218-63893

**Enclosure 2:**

"Basis for an RFT Stand COL Item," PM-1218-63892-NP, Revision 0, nonproprietary version

NuScale Nonproprietary

# Basis for and RFT Stand COL



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Revision: 0

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# Acknowledgement & Disclaimer

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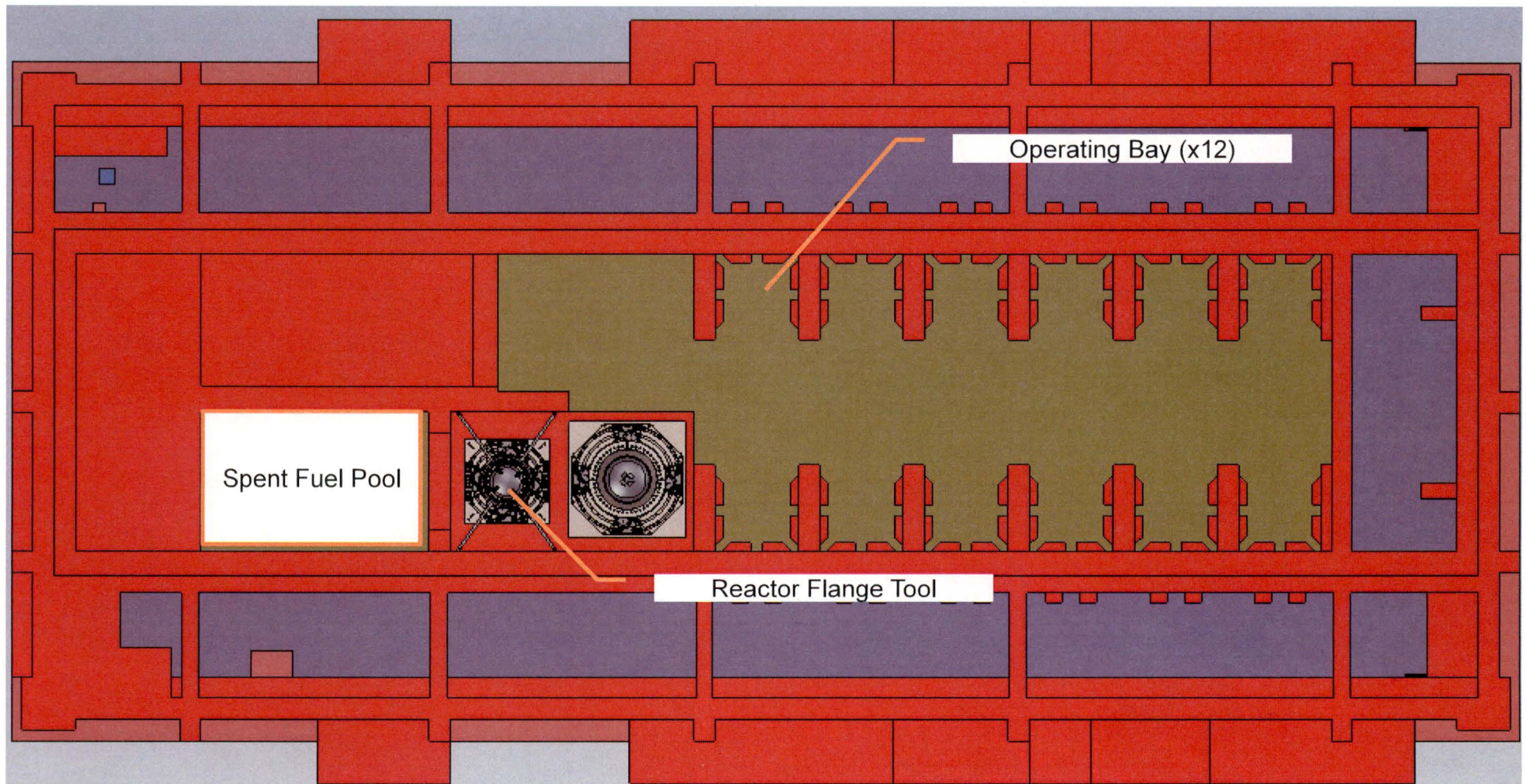
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# RAI 8838, 8911, and 9225

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- Agenda: To provide a basis for reclassifying the completion of final design of the reactor flange tool stand (RFT stand) as a COL item.
  - Review of fuel locations where qualification is required.
  - Review of fuel design inputs, core plate motions, and fuel analysis performed by Framatome.
  - Potential RFT stand design capable of meeting seismic requirements:
  - Description of bounding seismic analysis performed on the RFT design.
  - Core Plate motions for conceptual RFT designs and bay locations ISRS.
  - COL Implementation

# Fuel Locations



# Fuel Design Inputs

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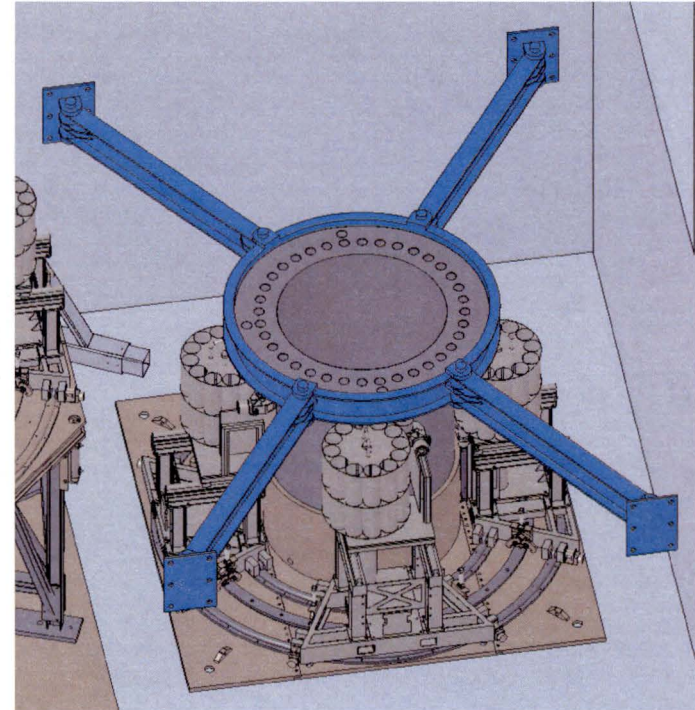
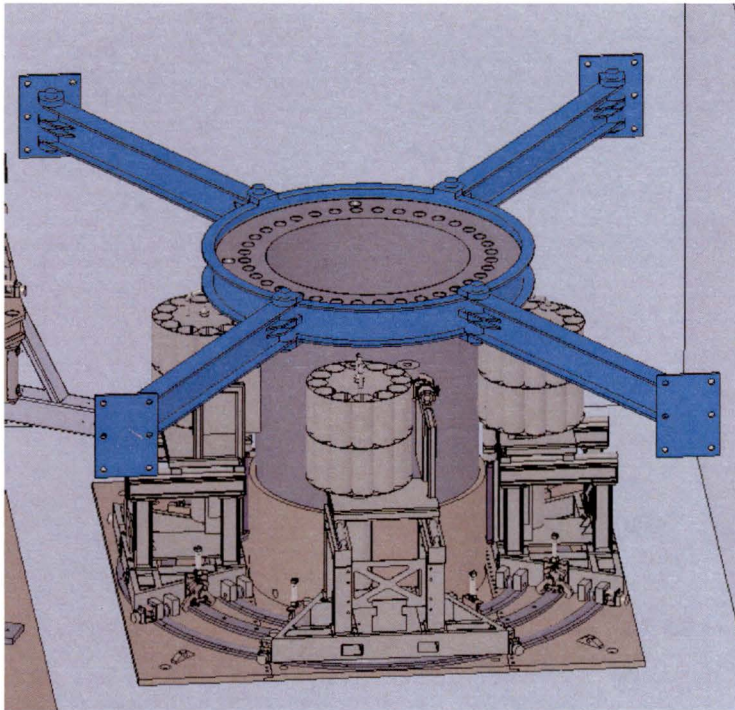
}}2(a).(c)



# RFT Redesign Concept – Upper Support

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- Upper Support shown in blue. (Note near wall removed to illustrate concept, all 4 corners anchor to the wall.)
- Braces upper flange of lower RPV to the walls of the refueling pool.



# Core Plate Motions for RFT and Operating Bays

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# Remaining Design Activities

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- Refueling Pool
  - Hose & Cable Management
  - Crane (wet hook) access
  - Operations personnel access
- Potential design/technology upgrades.
- Maintenance and Repair Philosophy Development

# COL Implementation – Applicant Actions

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- Complete design
- Perform a site specific analysis that demonstrates during an SSE:
  - The seismic category 1 RFT stand is retained in position in the refueling pool.
  - The lower RPV is retained in the RFT stand.
  - The RFT stand is structurally qualified in accordance with SC 1 criteria.

(continued next slide)

## COL Implementation – Applicant Actions (cont)

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- Fuel margins to limits are established using the more demanding of the following two scenarios:
  - site specific core plate motions in the RFT are enveloped by the design basis core plate motions for the RPV in the RFT stand,

OR

- the core plate motions for the assembled NPM in the operating bays at the site are enveloped by the design basis core plate motions with the assembled NPM installed in the operating bays

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