## NuScaleDCDocsPEm Resource

**From:** Franovich, Rani
**Sent:** Thursday, March 02, 2017 5:28 PM
**To:** Mirsky, Steven
**Cc:** Unikewicz, Steve; Pope, Steven; Lee, Samuel; Monninger, John; Franovich, Mike; Karas, Rebecca; Chowdhury, Prosanta; Schmidt, Jeffrey; Bergman, Tom; Bradford, Anna; Akstulewicz, Frank
**Subject:** FW: Information and data requests to support LOCA non-LOCA rod ejection and VIPRE TR reviews based on 3_2_2017 telecon .docx

**Importance:** High

Good afternoon, Steve.
First and foremost, many thanks to NuScale's Rockville office and Corvallis team for their flexibility and availability to support a public teleconference this afternoon. Because of the unique design features of the NuScale Power Module (NPM), the staff needs to understand the non-traditional, high-ranked physical phenomena resulting from postulated accidents and how they are mitigated. Additional information from NuScale will enable the staff to accomplish this and complete its acceptance review.

As we indicated during the conference call, the requested information is divided into two categories: (1) information to be made available for audit via the electronic reading room (eRR), (2) and data/information to be submitted on the docket, preferably in electronic form. The requested information was identified during the call and is listed below for your convenient reference:

***Category 1: Information to be made available for audit in eRR to support the LOCA topical report (TR-0516-49422) review***

- *EE-T080-13757, "NuScale Integral System Test (NIST-1) Facility Scaling Analysis"*
- *EC-0000-3853, "Calculations to support NIST-1 Distortion Analysis and Modeling of Containment and Pool Heat Transfer"*
- *SDR-0615-15509, latest Revision, "NIST-1 Facility Description Report"*

***Category 2: Information to be submitted, preferably in electronic form***

*1. Supporting the LOCA TR (TR-0516-49422) review*

- *NPM input model deck for the limiting LOCA core coverage and containment pressure cases. Provide both steady-state and transient model decks*
- *NPM model documentation which describes the input deck entries*
- *NIST-1 input model deck for HP-06 (or HP-09). Provide both steady-state and transient model decks*
- *NIST-1 model documentation which describes the input deck entries*
- *NRELAP5 code executable and/or source code*
- *NRELAP5 Change Implementation (NCI) reports that describe changes made to NRELAP5*
- *KAIST data and the procedure (method) used to develop NRELAP5 condensation correlation*
- *SIET test data and procedure (method) used to develop the steam generator heat transfer model*

*2. Supporting Sub-channel Methods TR (TR-0915-17564) review*

- *VIPRE -01 24-channel "basemodel" input model for both the steady-state MCHFR analysis and the transient analyses presented in the TR. The input models for the transient analyses would then contain*

*the appropriate transient boundary conditions (inlet flow and temperature, outlet pressure, core power level, shape and peaking factors)*

- *The dynamic linked library that contains the NSP2 DNBR model*
- *To supplement the justification in the TR that the boundary condutions calculated by N-RELAP5 are adequate for use in VIPRE-01, for the limiting transient described in the TR, provide the N-RELAP5 calculated values of the core pressure drop as a function of time (in addition to the core inlet flow and temperature given that are included in the VIPRE-01 input model). Also, provide the axial locations for which the core pressure drop is defined, specified in relation to the axial noding of the VIPRE-01 input model.*

*3. Supporting Rod Ejection TR (TR-0716-50350) review*

- *CASMO-5, SIMULATE-5 and SIMULATE-3K input decks and documentation that describes the input deck entries*

*4. Supporting the Non-LOCA TR (TR-0516-49416) review**

- *NuScale Power Module (NPM) input model deck for the limiting cases for DCD Section 15.1.5, Steam Piping Failures Inside and Outside of Containment. Provide both steady-state and transient model decks*
- *NPM model documentation that describes the above input deck entries*
- *NIST-1 input model decks for HP-03, HP-04, NLT-2a, and NLT-2b. Provide both steady-state and transient model decks*
- *NIST-1 model documentation that describes the input deck entries for the above model decks*

**Please note that the Non-LOCA TR data request assumes the LOCA TR information will be provided.*

We understood during the call that NuScale can accommodate these information requests, and we greatly appreciate your expressed willingness to do so as soon as practicable. We also understand that the information is proprietary and will be labeled as such.
Kind regards,

Rani

Rani Franovich
NuScale Design Certification Project, NRO

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

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**From:** Schmidt, Jeffrey
**Sent:** Thursday, March 02, 2017 4:29 PM
**To:** Franovich, Rani <Rani.Franovich@nrc.gov>
**Cc:** Monninger, John <John.Monninger@nrc.gov>; Karas, Rebecca <Rebecca.Karas@nrc.gov>; Lee, Samuel <Samuel.Lee@nrc.gov>; Cranston, Gregory <Gregory.Cranston@nrc.gov>
**Subject:** Information and data requests to support LOCA non-LOCA rod ejection and VIPRE TR reviews based on 3_2_2017 telecon .docx

Rani,

Attached is the SRSB list of information/data requested to support the LOCA, non-LOCA, Rod Ejection and VIPRE TR reviews.

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**From:** Franovich, Rani

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**Post Office:**

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**Return Notification:** No
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