Attachment C

NRC STAFF FEEDBACK ON NUSCALE'S RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION NO. 9185

Design Certification Application, Final Safety Analysis Report Tier 2, Section 2.3.4, "Short-Term Atmospheric Dispersion Estimates for Accident Releases"

1. Request for Additional Information (RAI) 9185 - Offsite χ/ Q Values Information Request Responses

   a) The applicant's response references "LO-1117-57037 (ML17317B546)" as the basis for their response. The staff is not familiar with this document and the ADAMS accession number listed in the response for this document is in error.

      NuScale Response:

      NuScale confirmed it should have been "ML17317B54**8**.

   b) Ibid

      NuScale Response:

      NuScale confirmed it should have been "ML17317B54**8**.

2. RAI 9185 - Onsite χ/Q Value Information Request Responses

   a) Table 15.0-20, "Assumptions for Accident Airborne Effluent Release Point Characteristics for Offsite Receptors," was added to the NuScale final safety analysis report (FSAR) in response to this Information Request. The staff found the applicant did not provide the requested information, which was to revise the FSAR to include all the NuScale nuclear plant configuration data required by Combined License (COL) applicants to perform atmospheric dispersion modeling to determine the main control room X/Q values (e.g., release heights, intake heights, building area).

      NuScale Response:

      NuScale will take this feedback under advisement.

   b) NuScale chose to delete the "source to receptor" directions in FSAR Figure 2.3-2, "Source to Control Building Door Distances," and Figure 2.3-3, "Source to Control Building HVAC Intake Distance," in response to this Information Request. NuScale explains that this decision was made because the layout of the buildings in the FSAR are in relation to an arbitrary "site north" whereas the input to the NARCON atmospheric model is based on the angle between the source and the receptor in relation to the true north (which is what the weather data are typically based on). However, providing the requested "receptor to source" directions for plant north will allow COL applicants to still use this information in their dispersion modeling by implementing a correction for plant north versus true north.

NuScale Response:

Nu Scale provided explanation of why degrees were removed from the figure. They felt that providing this information could result in misuse by COL applicants as described above and using measurements from as-built configuration would be more accurate.

3. Response to RAI 9185 - Impact on DCA

   - DCA FSAR Tier 2, Section 2.3.4, “Short-Term Atmospheric Dispersion Estimates for Accident Releases,” should reference the latest Revision of Topical Report TR-0915-17565-P, ““Accident Source Term Methodology,” instead of Revision 0.

   NuScale Response:

   NuScale will take this feedback under advisement.

4. Response to RAI 9185 - Resulting Revised Offsite Accident Release X/Q Values

   - The response to RAI 9179, Question 02.03.01-2, contains FSAR markups for Tier 1, Table 5.0-1, “Site Design Parameters,” and Tier 2, Table 2.0-1, “Site Design Parameters,” which show revised accident release X/Q site parameter values at the security owner controlled area fence. The staff assumes that these revised X/Q values reflect the more conservative atmospheric dispersion methodology incorporated into Revision 2 of Topical Report TR-0915-17565-P, “Accident Source Term Methodology.”

     The staff compared these NuScale revised accident release X/Q site parameter values with other X/Q values that the staff calculated using the more conservative TR atmospheric dispersion methodology and actual meteorological data from six nuclear power plant (NPP) sites assuming Exclusion Area Boundary and outer boundary of the Low Population Zone (LPZ) distances of 122 meters (m) (400 feet (ft)). The staff’s comparison showed that none of the six NPP sites have X/Q values that are bounded by all of the NuScale site parameter values.

     NuScale Response:

     NuScale will take this feedback under advisement.