



Long Mott Energy, LLC
221 H. H. Dow Way
Midland, MI 48674

17 September 2026

2026-PLM-NRC-015

Docket No. 50-614

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Confirmatory Information Regarding 95th Percentile Consequences for the Long Mott Generating Station Construction Permit Application

References:

- 1) Long Mott Energy, LLC, 2025, "Long Mott Generating Station Construction Permit Application," 2025-PLM-NRC-003, March 31, 2025 (ML25090A057)
- 2) U.S. Nuclear Regulatory Commission, 2025, "Acceptance for Docketing of the Long Mott Generating Station Construction Permit Application", May 12, 2025 (ML25115A247)
- 3) U.S. Nuclear Regulatory Commission, 2025, "Plan for an Audit of the Probabilistic Risk Assessment and Associated Information for the Long Mott Generating Station Construction Permit Application", June 11, 2025 (ML25156A350)
- 4) U.S. Nuclear Regulatory Commission, 2026, "Request for Confirmation of Information (RCI-2)", September 10, 2026 (ML26258A017)

During the ongoing audit being conducted in accordance with Reference 3, the NRC staff identified a specific instance of information contained within the LMGS Preliminary Safety Analysis Report (PSAR) (Enclosure 2 to Reference 1) requiring confirmation by Long Mott Energy, LLC. The NRC provided this request for confirmation via an email on September 14, 2026 from R. Rivera to M. Feltner. LME confirms the following:

NEI 18-04, as endorsed by Regulatory Guide (RG) 1.233, states that a licensing basis event (LBE) is considered within the F-C target when a point defined by the upper 95th percentile uncertainty on both the LBE frequency and dose, is within the F-C target. This comparison of the 95th percentile consequence to the F-C target is used for identifying risk-significant LBEs and identifying risk-significant non-safety-related with special treatment (NSRST) probabilistic risk assessment (PRA) safety functions (PSFs). PSAR chapter 3 presents the mean and 95th percentile frequencies and consequences for each LBE that are used to identify the risk-significant LBEs and NSRST PSFs. To develop the offsite dose consequences reported in PSAR chapter 3, LME applied a generic atmospheric dispersion factor (χ/Q) of 1.89×10^{-4} s/m³ to all mean anticipated operational occurrences (AOOs),



Long Mott Energy, LLC
221 H. H. Dow Way
Midland, MI 48674

design basis events (DBEs), and beyond design basis events (BDBEs). A generic design basis accident (DBA) dispersion factor (χ/Q) of $3.57 \times 10^{-4} \text{ s/m}^3$ was used in the calculation of the standard deviation of consequence profiles for similar LBEs sharing a common long-term end state, which was then used to calculate the 95th percentile dose values for the long-term dose constituent of the consequence results. Other portions of the dose consequence (e.g., helium circulating inventory, liftoff, steam-off) did not have uncertainty applied to them based on LME's assessment of the conservatism in the calculations and their contribution to the total consequence results relative to the long-term dose constituent. However, by not applying the standard deviation to all constituents, the variability associated with atmospheric dispersion was not fully accounted for which could impact the safety classification of SSCs.

As documented in Xe-100 Licensing Topical Report "Atmospheric Dispersion and Dose Calculation Methodology," revision 2, this generic value ($1.89 \times 10^{-4} \text{ s/m}^3$) is derived using the RG 1.145 methodology with conservative meteorological assumptions and characterized as a best-estimate dispersion factor intended to reflect mean estimates of consequences consistent with the NEI 18-04 approach. The corresponding generic DBA value of $3.57 \times 10^{-4} \text{ s/m}^3$ is characterized as conservative. These generic values are intended to be bounding for the LMGS site.

To assess whether the generic non-DBA χ/Q remains conservative when used for the 95th percentile consequence values, LME performed a preliminary site-specific atmospheric dispersion factor calculation for LMGS using the ARCON96 code in accordance with RG 1.249, RG 1.194, and RG 1.145. That calculation determined the preliminary site-specific 95th percentile χ/Q at the exclusion area boundary (EAB) to be $7.09 \times 10^{-5} \text{ s/m}^3$.

While this calculation is intended to be specific to the LMGS site, the meteorological data used is from nearby weather monitoring observation sites and the atmospheric stability is determined using this data and software available through the Environmental Protection Agency (EPA). This calculation was performed after the submittal of the construction permit (CP) application and is not within the scope of the CP review. As a result, NRC staff did not perform a detailed review of the inputs or methods used. However, the NRC understands that the preliminary site-specific atmospheric dispersion factor calculation was performed in accordance with LME quality assurance (QA) program procedures including those governing software QA, personnel qualification and training, and independent verification for calculations.

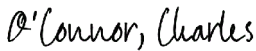


Long Mott Energy, LLC
221 H. H. Dow Way
Midland, MI 48674

LME has installed meteorological instrumentation at 10 m and 60 m above grade and is collecting site-specific meteorological data in accordance with RG 1.23 and will perform site-specific atmospheric dispersion analysis to support the operating license (OL) application. The preliminary site-representative ARCON96 value presented above is therefore provided to demonstrate that the generic non-DBA χ/Q of 1.89×10^{-4} bounds the expected site-specific 95th percentile value computed in accordance with RG 1.249, preliminarily calculated to be 7.09×10^{-5} s/m³. Accordingly, LME asserts that the 95th percentile consequence values reported on the F-C chart are conservative with respect to the consequence values that would be calculated with a site-specific 95th percentile dispersion factor.

I declare under penalty of perjury that the foregoing is true and accurate. Executed on this 17th day of September 2026.

Sincerely,

Signed by:

7DB1A2114768476...

Charles O'Connor

Sr. Director, Engineering and Projects

Long Mott Energy, LLC



Long Mott Energy, LLC
221 H. H. Dow Way
Midland, MI 48674

cc:

Long Mott Energy, LLC:

Kreshka Young
Charles O'Connor
Mark Feltner
Wayne Blaylock
Edward Stones
Evan Blankenau
Andrew Switalski

U.S. Department of Energy:

Mark Natale
David Yarwood

X Energy, LLC:

David Bannister
Dragan Popovic
Steve Miller
Rob Taylor
David Royer
Steve Vaughn
Jessica Maddocks

U.S. Nuclear Regulatory Commission:

Alissa Neuhausen
Travis Tate
Adrian Muñiz
Ondra Dukes
Richard Rivera
Stephanie Devlin-Gill
Kristen McElwee
John Monninger, NRC Region IV