New York State
Adirondack
Park Agency

KATHY HOCHUL
Governor

BARBARA RICE
Executive Director

FIFTH NOTICE OF INCOMPLETE PERMIT APPLICATION
APA Project No. 2021-0276

Project Sponsor:	**Authorized Representative:**
Michael Hopmeier 620 Herndon Parkway, Suite 120A Herndon, VA 20170	Matthew D. Norfolk, Esq. 1936 Saranac Ave, Suite 106 Lake Placid, NY 12946

Date Permit Application Received: November 19, 2021
Type of Project: Commercial Use – Munitions testing facility
Location of Project: Town of Lewis, Essex County
Land Use Area: Rural Use
Tax Map No.: 38.1-1-31.000 & 38.1-1-29.000

Dear Matthew Norfolk:

Thank you for the recent submission in relation to APA Project No. 2021-0276, received by the Agency on December 15, 2023.

Based upon staff review of your proposal and the information submitted in response to the Agency's March 16, 2023 Fourth Notice of Incomplete Permit Application (NIPA), the following questions must be addressed in order to review your application. Also, as outlined below, some of the information requested in the March 16, 2023 Fourth Notice of Incomplete Permit Application was not submitted and is required to review the application.

You will receive a notice in writing informing you when staff has received the information necessary to complete the application. At the time the application is deemed complete, the required time period for Agency action on your proposed project will begin.

The proposal may not be undertaken until a permit has been issued by the Agency. "Undertake" means any commencement of a material disturbance of land preparatory to the proposed project, including but not limited to road construction, grading, installation of utilities, excavation, clearing of building sites, or other landscaping, or in the case of subdivision, the conveyance of any lots.

If you have any questions regarding this Notice or the project review process, please contact APA Environmental Program Specialist 1 (EPS1) **Fritz Aldinger**, who is assigned to review your project.

January 2, 2024
Date

/s/ David J. Plante
David J. Plante, AICP CEP
Deputy Director, Regulatory Programs

Attachment: List of Requested Information

REQUESTED INFORMATION
APA Project No. 2021-0276

Please submit your response to this Notice by email to frederick.aldinger@apa.ny.gov
All application submissions should be in PDF or similar format and be legible.
Electronic copies of plans must be fully scalable.

1. The provided materials include a revised sound study prepared by H2H Geoscience Engineering PLLC (referred to herein as the Revised Noise Analysis). The noise modeling included in the Revised Noise Analysis utilizes receptor distance measurements from the proposed gravel pad, but does not clarify which portion of the 100-foot by 100-foot pad the measurements are made from, e.g. at the nearest edge or corner of the gravel pad, the center, or the furthest edge. Varying the location of the howitzer assembly on the gravel pad and the corresponding receptor distance could result in a discrepancy of 141-feet (hypotenuse of pad), which could skew or reduce the estimated sound pressure level in inverse proportion to the square of the distance or 6 dB at 100 feet. As stated in UCI's February 28, 2023, response to the Agency's Third NIPA, "…the specific placement of instrumentation and test articles will vary within a general range based on test requirements. All instrumentation and test articles are portable and will be emplaced before and after each test. As no permanent structures will be deployed, exact position of placement may vary each time."

Please provide cross-section sheet(s) depicting the proposed typical M109 155 mm howitzer and assembly set up to be utilized on site, including all proposed instrumentation and test articles, that is drawn to scale and depicts howitzer barrel and assembly dimensions and muzzle location. Please label the location of the noise source and its associated sound pressure level source height as measured from the finished grade of the pad.

To allow for review of worst-case scenario noise impacts, please provide scaled cross-section plan sheet(s) depicting the distance between the closest point of the proposed gravel pad or the noise source, whichever is closer, to each of M1-M5, and between the closest point of the proposed gravel pad and the receptor located at the southwest corner of the nearest state land parcel. Please depict the proposed berm on each of these plan sheets.

2. Please clarify what materials the berm will be constructed with, and any associated stabilization measures and other erosion and sediment controls.

3. Please provide an evaluation of other potential noise mitigation measures, including enclosures and/or silencers (schalldampfer). Please explain why none of these other noise mitigation measures are included as part of the proposal.

4. Please explain why there are separate tables, calculations and conclusions made in the UCI written response received on December 7, 2023, that are not included in the Revised Noise Analysis. For example, as indicated in the Appendix D, Model Data, the noise analysis model input of atmospheric absorption utilizes

20ºC (68ºF), and 70% humidity, and does not include an evaluation of varying weather conditions. However, UCI's written response does include information on varying weather conditions and provides separate tables, including Table 1 that references the modeled sound levels and states that "testing is not anticipated to take place under these conditions" referencing temperature 41ºF/humidity 0%. Another example of this discrepancy is that the UCI response states "(T)he modeled sound pressure level is 130 dB/107 dB(A) at M-5, and 132 dB and 111 dB(A)at State Land classified as Wild Forest property corner;" however this is not discussed or presented in the Revised Noise Analysis. In addition, the UCI response section references the July 2023 Sound Study and not the Revised Noise Analysis.

5. If testing will not be performed in late fall, winter, or spring conditions when the temperature of 41ºF/humidity 0% scenario is a seasonal possibility, please explain why the Revised Noise Analysis included noise monitoring conducted on December 21 and 22, 2022, but model inputs included summer conditions of 20ºC (68ºF), and 70% humidity. Please clarify the proposed months of operation and any other proposed atmospheric operating restrictions.

Additionally, application materials previously stated that there would be a maximum of two shots fired per day fired for a maximum of three consecutive days, with an average of 30 shots per year, and that shots would occur for a period of five years. The UCI Response received December 15, 2023, states that testing was not anticipated to take place at conditions of 41 degrees Fahrenheit and 0% humidity, and that conditions in the first column of Table 1 are typical for the project site during summer months. Please provide the proposed maximum number of firings per week, month, and year of the testing period.

6. Please revise Image 1 to depict the location of the 100-foot by 100-foot pad, all state land boundaries, the southwest corner of the nearest state land parcel located approximately 300 feet from the northeast corner of the firing pad, the nearest dwellings (including the Pulsifer residence), receptor locations M1 – M4, and the closest point of the proposed gravel pad or the noise source, whichever is closer, to each receptor.

7. A Norwegian study titled "Noise emission data for M109, 155 mm field howitzer", prepared by the Norwegian Defense Research Establishment (FFI), and dated 5 December 2007 (the Norwegian study), is the only source of information included in the application providing noise level data from howitzers. This study includes a noise level of 130.5 dB measured at 803 feet from a howitzer. The Revised Noise Analysis appears to use this 130.5 dB measurement from the Norwegian study to calculate a modeled source noise level for an M109 155 mm howitzer of 180.8 dB. The Revised Noise Analysis then uses 180.8 dB to model noise levels at the M5 receptor on State land as 127 dB, and noise levels at the nearest residence as 100 dB. The Noise Analysis then determines that the 3.5-dB difference between the noise level data in the Norwegian Study and the modeled noise levels at the project site show "correlation within ISO standards."

Please provide an explanation of these ISO standards and the asserted correlation, including a clarification of whether the ISO standards are appropriately used in this context. Please also provide any other available documentation confirming that 3.5 dB is appropriately cited as the maximum limit of error for this proposal.

Please confirm through field-verification at an authorized location and through independent third party verifications that 180.8 dB is the noise level produced by M109 155 mm howitzers.

Please note that NYSDEC's Program Policy "Assessing and Mitigating Noise Impacts" dated October 6, 2000 last revised February 2, 2001 states that "In determining the potential for an adverse noise impact, consider not only ambient noise levels, but also the existing land use, and whether or not an increased noise level or the introduction of a discernable sound, that is out of character with existing sounds, will be considered annoying or obtrusive." The approximate noise level of 127 dB does not appear to be in character with the recorded ambient noise level of approximately 37.2 dBA, which per NYSDEC's noise policy, is most similar to wilderness noise levels at approximately 35 dBA.

8. The "Noise emission data for M109, 155 mm field howitzer" study referenced in the Revised Noise Analysis references a maximum charge of 5 modules DM72 with each module containing 2.44 kilograms propelling charge, while USACHPPM materials referenced in the UCI response received by the Agency July 18, 2022 reference the sound level for a M4A2 zone 7 charge. Please confirm that this will be the maximum charge used. Please also explain how the two charges compare and the effect will have on the level of sound produced.

9. Please provide an updated noise analysis that accounts for the confirmed height of the noise source from the gravel pad and the location of the noise source at the closest point of the gravel pad to each receptor. This updated noise analysis must include all tabular, calculated, and conclusory information included in the latest UCI response, Modal Data in Appendix D, and barrier attenuation calculations that account for the most conservative/worst case scenario height and location of the noise source in relation to each receptor. The updated noise analysis must also account for all proposed months of operation and any proposed atmospheric operating restrictions. In addition, the analysis must include revised tabular information, Modal Data in Appendix D, and barrier attenuation calculations that account for the height and location of the noise source in relation to each receptor, and must include sound pressure levels expressed as both dB and dBA. This updated analysis must include a cover sheet with the seal of a NYS licensed professional engineer.

cc: Michael Polacco, Project Geologist H2H Geoscience Engineering, PLLC
William H. Kissel, Esq.
Les Howard, Town of Lewis Code Enforcement Officer
Erin Burns, Acting Regional Permit Administrator NYS DEC Region 5
James Pulsifer, landowner