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February 29, 2024

Via Email and Hand Delivery

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Re: Project Sponsor: Michael Hopmeier, Unconventional Concepts, Inc.
APA Project No. 2021-0276

Dear Sirs:

Please find enclosed the Project Sponsor's appeal of the Fifth Notice of Incomplete Permit Application in connection with the above-referenced matter. The appeal is being filed pursuant to 9 N.Y.C.R.R. §572.22.

If you have any comments or questions please do not hesitate to contact me.

Sincerely,

Norfolk Beier PLLC

By:
Matthew D. Norfolk, Esq.
MDN:klm
Enc.

cc: Mr. Michael Hopmeier (Via Email Only)
Lori Settle (Via Email Only)
Erin Burns, Deputy Regional Permit Administrator NYDEC (Via First Class Mail Only)

NEW YORK STATE ADIRONDACK PARK AGENCY

In the Matter of APA Project No. 2021-0276,
Commercial Use – Ballistics Testing Facility
Project Sponsor: Michael Hopmeier of Unconventional Concepts, Inc.

APPEAL OF FIFTH NOTICE OF INCOMPLETE APPLICATION

Please take notice that, pursuant to 9 NYCRR §572.22(a), Project Sponsor Michael Hopmeier of Unconventional Concepts, Inc. (hereinafter referred to as "UCI") appeals, in part, *Fifth Notice of Incomplete Application*, dated January 2, 2024 (hereinafter referred to as the 5th NIPA), an action taken by David J. Plante, Deputy Director of Regulatory Programs of New York State Adirondack Park Agency (hereinafter referred to as the "Agency"); and

Please take further notice that this appeal is being filed on behalf of UCI by the law firm of Norfolk Beier PLLC, with Matthew D. Norfolk, Esq. being of counsel and UCI's Authorized Representative herein; and

Please take further notice that this appeal seeks a determination finding that: (1) all requests for information contained in the 5th NIPA are duplicative, unnecessary or moot as all information required for the project application to be complete has been submitted by UCI; (2) certain requests for information contained in the 5th NIPA are lacking relevancy to attaining a determination of application completion; (3) certain comments contained in the 5th NIPA must be stricken from the administrative record as they are based upon factual errors; (4) certain comments contained in the 5th NIPA must be stricken from the administrative record as they were made by Agency Staff in an unlawful attempt to issue a *de facto* denial of the application; (5) certain comments contained in the 5th NIPA must be stricken from the administrative record as they were made by Agency Staff in an unlawful attempt to alter or change the proposed project or use,

contrary to the intentions of UCI or prejudicial to UCI; (6) UCI's project application is complete; and, (7) pursuant to 9 NYCRR §572.22(h), providing notice of the completeness of the application as required by law and thereafter granting the permit application.

BACKGROUND FACTS AND PROJECT REVIEW HISTORY

Mr. Hopmeier is the President of UCI. UCI is a professional engineering and technical consulting firm specializing in issues related to national security. Typical projects involve high value, time critical programs which do not necessarily fall under the purview of conventional consulting firms or government agencies. Areas of expertise encompass development and transitioning of technologies from and to civilian, commercial, military, and government sectors. UCI does comprehensive strategy and policy reviews to validate concepts of application and operations. UCI has been instrumental in transitioning technologies through cooperative research and development agreements, cooperative agreements and commercial licensing agreements to support university and commercial sector research and development. UCI has also been instrumental in new business development and has supported the transition of explosive ordnance disposal training devices, medical testing equipment and antimicrobial solutions into commercial applications. UCI is a registered vendor in the United Nations Global Marketplace as a supplier to the United Nations.

The United States Army awarded UCI a contract to test and evaluate internal ballistics and kinetic and kinematic effects of various kinetic systems used by the United States military. In 2015, UCI purchased the decommissioned thermonuclear Atlas F missile launch facility located at 87 Hale Hill Lane in the Town of Lewis, New York (Tax Map Parcel No. 38.1-1-29.000).

Neighboring land at 195 Hale Hill Lane (Tax Map No. 38.1-1-31.000) was selected as the test site for its ideal physical attributes suited for kinetic system testing, requirements for minimal

environmental development, noise mitigation and site security. The terrain will act as a natural mitigator of sound. The site's isolation and controlled access also enhances safety and security.

On August 26, 2021, UCI submitted a Jurisdictional Inquiry Form to the Agency regarding development of a ballistic testing range at 195 Hale Hill Lane for purposes of performing under said contract with the United States Army. The Agency issued Jurisdictional Determination J2021-0870 on September 22, 2021, asserting jurisdiction "for any new commercial use on Rural Use lands in the Adirondack Park."

On November 12, 2021, more than two years ago, UCI submitted an application for the ballistics testing project. The project is described in paragraph 8 of the "Detailed Project Description," at pages 25-26 of the project application. Excerpts of the description are the following:

- **The range will have very limited access, be used sporadically throughout the year, and will only be used during daylight hours.**

- **All test equipment and instrumentation will be portable; equipment will be deployed as needed to the site for a test and will then be completely removed at the end of the test. No more than three tests per month are anticipated. Each test will consist of 1-3 shots, and each series of shots will last no more than 2 days. Local property owners who may be impacted (by noise) will be notified a minimum of one week in advance of the anticipated test. Testing will only occur on weekdays, between the hours of 10:00 AM and 4:00 PM local time.**

- **To minimize the impact on the local community and area, we plan to notify all interested parties (a list will be provided by the local town supervisor, consistent with the list used by the local mining operation), and each party will be notified a minimum of one week in advance prior to any firing. In addition, 24 hours prior to any firing, local law enforcement and 911 will also be notified in the event that anyone from the local community expresses concern. Further, we will invite local officials, to include elected representatives and law enforcement, to attend and observe operations as they occur. However, operations will not be open to the public; observation will be limited due to safety and security concerns.**

- **At the completion of each test series, all equipment, residue, and debris will be cleaned up and transported or managed on site appropriately. Debris will principally consist of the steel projectiles and any rubble created from impact with the ground.**

- **Continuous noise, primarily from the generator, is not expected to exceed 65 dB. Impulse noise with durations of less than one half of one second is not expected to exceed 180 dB.** (UCI's Application, "34. Operating Profile: Machinery" p. 29).

First Notice of Incomplete Permit Application

Agency Staff's *First Notice of Incomplete Permit Application* (hereinafter referred to as the "1st NIPA") was issued on December 6, 2021. A copy of the 1st NIPA is annexed hereto as **Attachment A**. In the 1st NIPA, Agency Staff requested "a thorough noise evaluation for all proposed munitions to be fired on site, including an evaluation of the nearest receptors utilizing the NYS DEC's Program Policy for Assessing and Mitigating Noise Impacts." In particular Agency Staff requested "a noise mitigation plan as necessary." (*See* Attachment A, p. 2).

On December 22, 2021, UCI submitted responsive documents (hereinafter referred to as "UCI's Response to 1st NIPA"). UCI explained in its response that "[t]he noise generated during testing is considered to be impulse noise rather than constant noise. It is vital to note that impulse noise affects people and the environment very differently than continuous noise, and is generally considered less annoying and impactful." (*See* UCI's Response to 1st NIPA, p. 3). UCI provided a noise map report based on non-linear topographical multi-variant inverse-square law modeling for the attenuation of the intensity of noise and provided an explanation of the selected values. (*See id.*, pp. 3-4 and Appendix B). This method was chosen as representing existing best practices and state-of-the-art analysis performed by audio engineer experts.

In compliance with New York State Department of Environmental Conservation (hereinafter referred to as the "DEC") *Program Policy for Assessing and Mitigating Noise Impacts*, Section V.B.1.b, the nearest inhabited receptor location of differing use than the proposed noise source was selected, being the Pulsifer residence, 1.22 miles away. (*See id.*, p. 4). In support of the selected 183 dB value for the noise source, UCI cited a reliable and recognized study published in the *Scandinavian Audiology* journal, as well as a list of noise levels of common military

equipment promulgated by the US Army Center for Health Promotion and Preventative Medicine Hearing Conservation Program. (*See DEC Program Policy*, pp. 3-4). UCI also provided comparison values for hunting firearms commonly used in the Adirondack Park and noted "noise at the receptor site is still projected to be at or below a wide array of existing and approved noise sources." (*See* UCI's Response to 1st NIPA, p. 4). In other words, the sound to be made from the ballistics testing, at the testing receptors, was equal to or less than that produced by the firing of a legal big game hunting rifle.

For noise impact mitigation, UCI proposed a procedure similar to that used and approved by the Agency for local mining operations. Furthermore, the result of UCI's studies and research found that "[b]ased on existing data and assessment, noise levels are not anticipated to exceed those produced by blast operations currently occurring one mile from the proposed site of the firing range." (*See* UCI's Response to 1st NIPA, p. 5).

Second Notice of Incomplete Permit Application

The Agency's *Second Notice of Incomplete Permit Application* (hereinafter referred to as the "2nd NIPA") was issued on January 13, 2022. A copy of the 2nd NIPA is annexed hereto as **Attachment B**. Without a coherent, scientific, or factually based rationale, Agency Staff disputed UCI's calculated noise pressure level for the noise source and requested "a more complete noise assessment report" to include all potential noise receptors within a minimum 2.0-mile radius from the munition firing source of 185 dBa. Agency Staff opined that the revised assessment report "should provide a detailed evaluation of the potential noise impacts to these receptors with respect to ambient sound pressure level." (*See* Attachment B, p. 2). In response, on February 11, 2022, UCI submitted a comprehensive response to the 2nd NIPA (hereinafter referred to as "UCI's

Response to 2nd NIPA"). Therein, UCI provided a revised sound map with an increased impulse noise value of 185 dB(A). (*See* UCI's Response to 2nd NIPA, Attachment A).

On March 1, 2022, by letter, Agency Staff requested supplemental information. A copy of this letter is annexed hereto as **Attachment C**. On May 12, 2022, UCI provided supplemental responses to Agency Staff's March 1, 2022 request (hereinafter referred to as "UCI's Supplemental Response"). UCI's Supplemental Response included an updated noise assessment indicating an ambient noise level at the Pulsifer residence of 80 dB based on that receptor's proximity to a sawmill and diesel truck refueling site. (*See* UCI's Supplemental Response, p. 3, Appendix D). The updated noise assessment included a detailed paragraph-by-paragraph breakdown of the computations, reasons for their selection, and explanation of the methodology used to conclude the impulse noise from the ballistic testing will not exceed the ambient noise level at the nearest off-site residence. (*See id.*, pp. 12-33, Appendix D). The supplemental response also provided Agency Staff with UCI's *Sound Mitigation and Control Annex of the Security and Safety Plan* concerning the proposed project. (*See id.*, pp. 4-6).

Third Notice of Incomplete Permit Application

Agency Staff's *Third Notice of Incomplete Permit Application* (hereinafter referred to as the "3rd NIPA") was issued on June 6, 2022. A copy of the 3rd NIPA is annexed hereto as **Attachment D**. Alarmingly, in the 3rd NIPA, Agency Staff expressly stated, with emphasis, that "based on potential noise impacts alone, absent revisions to the project proposal, the project *does not meet the criteria for issuance of a permit under Agency law.*" (*See* Attachment D, p.4.).

First, as a matter of law, Agency Staff lacks the power to decide whether a permit application should be granted or denied. Agency Staff's duty is to review the project application and determine when it is complete and, if appropriate, provide recommendations to the regulatory

committee based on a complete application. Second, Agency Staff made this conclusion before it had even deemed the application complete for review. In contradictory fashion, Agency Staff asserted its disapproval of the project while at the same time taking the position that UCI had not provided enough information to have the application ready for review. Notably, Agency Staff offered no reasoned basis for its conclusion that the "potential noise impacts alone" warrant a denial of the application.

Agency Staff's adverse perception of the project suggested what UCI has long suspected—that Agency Staff has a predisposition toward the proposed ballistic testing that it will produce noise that will cause unacceptable adverse impacts on the environment and neighboring properties. With the issuance of the 3rd NIPA, UCI became increasingly concerned that Agency Staff tended to notice only certain aspects of the project while ignoring other details (details that support approval of the project application) or that Agency Staff did not fully comprehend the science of sound and sound acoustics being presented and relied upon by UCI. In effect, Agency Staff was capriciously and arbitrarily disregarding information provided by UCI, or drawing conclusions divorced from both science and reality.

In response to Agency Staff's inappropriate and premature finding, UCI replied "[t]here is no basis at this stage of the application process for Agency Staff to come to the underscored conclusion that the project does not meet the criteria for issuance of a permit 'based on the potential noise impacts alone' or otherwise. It is apparent from the Third Notice of Incomplete Application that Agency Staff members, themselves, believe more information is needed to properly review and assess UCI's project application. The precipitous conclusion that the application will be denied is a cause for concern that Agency Staff may be straying from the rational and logical model of decision making embodied in Agency regulations to a predisposed decision-making model

where decisions are made based on personal preferences and opinions regardless of the data and whether or not the decision is actually right." (*See* UCI's Response to 3rd NIPA).

In line with Agency Staff's expressed disposition, Agency Staff once again disagreed with UCI's estimation of the sound pressure level for the noise source in the 3rd NIPA. No rationale was provided for this disagreement. In spite of UCI supplying external documents recognized by qualified engineers and scientists supporting the sound pressure level estimations, Agency Staff provided no coherent reason for its rejection of UCI's estimations. Agency Staff again requested a revised sound assessment and noise mitigation plan. (*See* Attachment D, Comment 2.)

On February 28, 2023, UCI supplied responsive documents to the 3rd NIPA (hereinafter referred to as "UCI's Response to 3rd NIPA"). Included in UCI's response was a sound study prepared by H2H Geoscience Engineering, PLLC (hereinafter referred to as "H2H") in accordance with the requirements set forth by Agency Staff and the DEC. H2H is a recognized and respected engineering firm that has regularly presented information to the Agency and other State agencies and has extensive scientific and technical expertise in the science of sound, well in excess of that residing within the Agency. Agency Staff nonetheless was provided the opportunity to review and accept the proposed test plan prepared by H2H. Agency Staff, with minor and irrelevant modifications, approved this plan prior to its implementation. H2H then conducted sound level monitoring on December 20, 2022, and December 21, 2022, at five Agency-approved sound level monitoring locations surrounding the project site to best determine ambient sound level conditions in the area.

H2H's February 2023 Sound Study determined the modeled impulse sound level produced by two test shots per day from the Sound Source (M109, 155mm Field Howitzer) would produce a modeled change in ambient sound level below 3 dB at monitoring locations M-1, M-2, M-3, and

M-4, indicating no appreciable change to ambient sound levels at all identity residential receptors. There were no appreciable changes to the ambient sound levels at four of the five State Land parcels classified as Wild Forest. (*See* February 2023 Sound Study, p. 8). Receptor R-43 in State Wild Forest land, which has no identified public trails or other means of public access and is adjacent to the firing pad, showed a modeled impulse sound level of 107 dB(a). (*See id.*). H2H noted this is 26 dB less than the 133 dB limit for rock mining air blasts measured at the closest structure outside permitted areas that applies to the nearby mining operations during blasting, which are adjacent to lands classified as Wilderness – the most protected and restrictive State land classification. (*See id.*, p. 10). In its February 2023 report, H2H concluded "the proposed project does not pose a potentially significant environmental impact due to an increase in sound levels at receptors in the area." (*See id.*). Agency Staff offered no recognized studies nor technical papers accepted by the science and engineering communities to challenge H2H's conclusion.

Fourth Notice of Incomplete Permit Application

Agency Staff's *Fourth Notice of Incomplete Permit Application* (hereinafter referred to as the "4th NIPA") was issued on March 16, 2023. A copy of the 4th NIPA is annexed hereto as **Attachment E**. Agency Staff again disagreed with UCI's supplied documents and calculations and irrationally, and without explanation, characterized H2H's February 2023 sound study as "unacceptable." (*See* Attachment E, Comment 2). At this juncture, UCI and its project team determined that Agency Staff was requesting immaterial information or repeating its numerous requests for pertinent information simply to make more requests and perhaps prolong the application process, or Agency Staff was making such requests because it did not comprehend the science and did not know what questions to ask.

On July 31, 2023, UCI submitted responsive documents to the 4th NIPA (hereinafter referred to as "UCI's Response to 4th NIPA"). UCI noted that there was a transcription error in H2H's report concerning sound power levels between dB and dB(A) and further explained how the Norwegian Defense Research Establishments study is one of the only detailed sources of information available concerning sound pressure levels from howitzers. (*See* UCI's Response to 4th NIPA, p. 4).

On August 16, 2023, by letter, Agency Staff requested further information concerning noise mitigation measures and sound pressure level calculations. A copy of this letter is annexed hereto as **Attachment F**. On December 15, 2023, UCI submitted responsive documents (hereinafter referred to as "UCI's Second Supplemental Response"). UCI's Second Supplemental Response contained H2H's September 2023 Sound Study.

Although further noise mitigation efforts were not and are not necessary, as explained to Agency Staff by UCI in prior submissions, UCI proposed installation of a semi-permanent 13-feet tall berm along the firing pad and provided H2H's revised sound study to include the effect of the mitigation feature on sound levels at the receptors. (*See* UCI's Second Supplemental Response, p. 1, H2H's September 2023 Sound Study). The purpose of the implementation of a berm in the project design was simply to appease Agency Staff. Agency Staff continued to demand more mitigation without specifying why or the objective. In effect, Agency Staff demanded a burdensome task of making the berm higher without ever stating why or how high, creating a situation where no answer would ever be acceptable, seemingly designed to extend the application process, to delay final review and discourage further action by UCI.

Notwithstanding the foregoing, the modeled change in ambient sound levels at all identified residential receptors (M-1, M-2, M-3 and M-4) with the sound mitigation berm are

below 3 dB(A). (*See* September 2023 Sound Study, pp. 9-10). There were no appreciable changes to the ambient sound levels at four of the five State Land parcels identified as Wild Forest. (*See* September 2023 Sound Study, pp. 9-10). Receptor M-5 at parcel R-45 (State Land identified as Wild Forest) adjacent to the firing pad showed a modeled impulse sound level of 100 dB(A) with the sound mitigation berm. (*See id.*). Based on the information presented in the report, H2H again concluded "the proposed project does not pose a potentially significant environmental impact due to an increase in sound levels at receptors in the area." (*See id.*, p. 12).

UCI also explained in its supplemental response that temperature and humidity create minimal fluctuations on modeled sound levels at the receptors. UCI included a table prepared by H2H which evaluated five different weather condition testing scenarios: the lowest being 41°F at 0% humidity and the highest being 95°F at 95% humidity. Based on the evaluations, 3 dB(A) is the greatest sound pressure variance. The average weather conditions of 68°F at 70% humidity was, thus, used in the Sound Study. (*See* UCI's Second Supplemental Response, pp. 1-2). UCI further explained in the supplemental response, using H2H tables and calculations, how the data supplied was uncorrected and provides worst-case scenario results. UCI also clarified to Agency Staff the DEC Mine Land Reclamation Permit dB pressure level requirements. (*See id.*, pp. 2-6).

On January 2, 2024, Agency Staff issued the *Fifth Notice of Incomplete Permit Application* (hereinafter referred to as the "5th NIPA"). A copy of the 5th NIPA is annexed hereto as **Attachment G**.

ANALYSIS

Below, those portions labeled "Comment" are taken directly from the 5th NIPA (Attachment G). The "Objection" that follows each Comment provides justification for the Agency Board to render a determination that the particular Comment is unnecessary and no response is needed.

A. Comment No. 1 (p. 2):

- Comment: 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.'

  Objection: **With this comment, Agency Staff ignores previously submitted information and things and wrongfully concludes more information is needed. As put forth in previous submissions, the 155 mm howitzer barrel assembly will be located in the center of the 100-foot by 100-foot firing pad. The center of the 100-foot by 100-foot firing pad was used as the sound source in the sound propagation model. However, moving the sound source to the end of the gravel pad (a maximum of 70 feet toward a receptor) has negligible effects on the projected sound level due to the distance from the sound source to each monitoring location.**

- Comment: 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."

  Objection: **This request is redundant as UCI has provided the information sought in response to previous NIPAs. For example, UCI has already provided information concerning the height of the sound source, on page 8 of Appendix D to H2H's September 2023 Sound Study. This Study specifies "a Sound Source height of 6.5 feet." Additionally, the request, in part, seeks irrelevant or immaterial information. The sound created by the firing of a howitzer has been established by UCI. A depiction of a 155 mm howitzer and assembly dimensions of its barrel do not need to be known to consider and accept UCI's sound studies. UCI and its Project Team do not understand how having cross-section sheets depicting a "typical howitzer and assembly set up" will assist Agency Staff and the Agency Board in reviewing the application. Again, UCI has repeatedly provided the location of the sound source. The timing of this**

request is also troubling. This application has been pending for years. Agency Staff never requested such information about howitzers. Notwithstanding the foregoing, the information Agency Staff seeks regarding the instrumentation and test articles to be used and the howitzer assembly is information proprietary to UCI as well as sensitive national security information which UCI is not at liberty to release. This had been made known to Agency Staff in previous discussions. Agency Staff noted that they could not protect sensitive information and, therefore, it should not be provided.

Comment: 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.

Objection: **For the first time, Agency Staff is requesting cross-section plan sheets requiring measurements from five (5) different locations on the firing pad in relation to each receptor. UCI has said over and over again that the sound source (*i.e.*, the howitzer) will be placed in the center of the firing pad. It will not be placed on different locations of the firing pad. Nonetheless, such requested documents, if supplied, would provide negligible new information for Staff Agency to consider. The studies and science UCI has already provided to Agency Staff demonstrate this.**

Without waiving this objection, to demonstrate the negligible effect the location of the sound source on the firing pad has on calculated sound levels at receptors, please see Tables 1 and 2 below reflecting sound pressure levels as calculated from the center and edge (70 feet closer to source) of the firing pad using the following formula (previously used in UCI's Second Supplemental Response):

$$L_p = L_W - \left|10 \cdot \log\left(\frac{Q}{4\pi \cdot r^2}\right)\right|$$

Lp = Sound Pressure Level
Lw = Sound Power level = 163.2 dB(A) (barrel of the M109, 155mm howitzer)
Q = Directivity factor = 2 (Hemispherical Sound Propagation)
r = Distance to source (meters)

Table 1: Sound Source Center of Firing Pad

Calculated Sound Pressure Level at Monitoring Locations

Monitoring Location	Distance From center of grave pad to Monitoring Location (ft.)	Calculated Sound Pressure Level dB(A)
M-1	5,955	90.0
M-2	9,925	85.6
M-3	7,726	87.8
M-4	4,908	91.7
M-5	554	110.7
State Land Corner	350	114.7

Table 2: Sound Source Edge of Firing Pad

Calculated Sound Pressure Level at Monitoring Locations

Monitoring Location	Distance From Closest Edge of gravel pad to Monitoring Location (ft.)	Calculated Sound Pressure Level dB(A)
M-1	5,905	90.1
M-2	9,875	85.6
M-3	7,676	87.8
M-4	4,858	91.8
M-5	504	111.5
State Land Corner	400	113.5

Based on the above, moving the sound source 70 feet to the edge of the firing pad has a maximum increase of 1.2 dB(A) at the Wild Forest Property Corner, 0.8 dB(A) at M-5, and less than 0.1 dB(A) at the remaining monitoring locations. Thus, moving the sound source to the edge of the firing pad "to provide a worst-case scenario," does not have a significant effect on results and producing a revised study is trivial.

Finally, the location of the proposed sound mitigation berm is shown on Figure 2 of H2H's September 2023 Sound Study and the height of said berm is 13 feet as indicated on page 8 of the same study. The information requested was previously provided. A request for the information again will not lead to a different response.

B. Comment No. 2 (p. 2):

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

  Objection: The proposal for providing a berm to mitigate noise was only provided to appease Agency Staff and is proposed without technical necessity or requirement. Lacking specific technical criteria, this question cannot be

answered. Pending the APA providing specific technical data this question is considered irrelevant.

C. Comment No. 3 (p. 2):

- Comment: Please provide an evaluation of other potential noise mitigation measures, including enclosures and/or silencers ([S]challdampfer). Please explain why none of these other noise mitigation measures are included as part of the proposal.

  Objection: **Agency Staff is effectively dictating the design of the project; a design in which UCI has no intention of adopting. Firing of the 155 mm howitzer assembly within an enclosed structure defeats the purpose of testing the equipment in simulated real-use conditions. Furthermore, installation of a silencer is not only cost prohibitive, but such modification will render test results unusable. Agency Staff's request suggests that Agency Staff does not understand the objective of the ballistic testing UCI intends to conduct, which UCI has repeatedly stated in the application and the applicable responses to the first four NIPAs.**

  Agency Staff is also directing an open-ended unanswerable challenge, that being more mitigation, yet will not identify how much more mitigation is needed or when there is enough, nor explain the reasons why more mitigation is needed. Agency Staff has consistently refused to provide any boundaries to its requirements and repeatedly demonstrated its lack of understanding of the underlying science. In one interaction, an Agency Staff member (reputed to be a technical expert) demonstrated their lack of understanding by attempting to compare the impulse noise of the howitzer with the takeoff noise associated with an F-35 aircraft. When an attempt was made to explain that these were two different and unrelated issues, the Staff member treated the response with contempt and blithely moved on to another topic.

  Furthermore, mitigation measures currently proposed include the remote location of the site, the natural topographic rise between the sound source and all residential receptors, and the construction of a sound mitigation berm. No additional mitigative measures are proposed nor are necessary due to the findings on page 12 of H2H's September 2023 Sound Study wherein "the proposed project does not pose a potential significant environmental impact due to an increase in sound levels at receptors in the area." Agency Staff is making a bald assumption that additional mitigation measures are needed without explanation and fails to realize UCI has already met all regulatory requirements. There is no need to implement additional mitigation measures to achieve already extant standards.

D. Comment No. 4 (pp. 2-3):

- **Comment**: 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 [sic] Appendix D, Model Data, the noise analysis model input of atmospheric absorption utilizes 20°C (68°F), 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 41°F/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.

  Objection: This is a redundant request. UCI has already provided information to Agency Staff on this matter (*see* UCI's Second Supplemental Response). The information is not included in the September 2023 Sound Study because the analysis in UCI's Second Supplemental Response demonstrates that temperature and humidity do not make a significant impact on results and do not change the study's findings. The July 2023 Sound Study is referenced in the written response only to indicate where information requested by Agency Staff had already been provided.

E. Comment No. 5 (p. 3):

- **Comment**: If testing will not be performed in late fall, winter, or spring conditions when the temperature of 41°F/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 20°C (68°F), and 70% humidity.

  Objection: Ambient sound monitoring was conducted December of 2022 to avoid delaying the ambient sound study until spring of 2023. Ambient sound levels will be lower during winter months due to the absence of insects and less animal activity. Snow further dampens sound attenuation. Thus, the ambient sound levels collected during December provide a conservative ambient sound assessment for the tests. Using these more conservative ambient sound levels with modeled summer conditions for the sound study results in more pronounced sound levels in "worst-case" scenario conditions since ambient sound levels will be higher in the summer.

- **Comment:** Please clarify the proposed months of operation and any other proposed atmospheric operating restrictions.

Objection: **Asked and answered. UCI has already provided this information to Agency Staff. Agency Staff's request is attempting to unlawfully dictate the design of the project. Testing will occur year-round to simulate real-use scenarios and conditions. In UCI's Second Supplemental Response, UCI stated that "testing is not anticipated to take place" (emphasis added) when temperatures are 41°F with 0% humidity; however testing could occur. Whether or not a test may occur in specific atmospheric conditions is highly dependent on the parameters of the specific experiment to be undertaken. Thus, UCI is unable to provide Agency Staff with any further proposed testing parameters beyond the information already submitted.**

- **Comment**: 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.

  Objection: Agency Staff's request is attempting to unlawfully design the project. The nature of the testing and design of experiments make it impossible to predict months in advance the exact day, week or month when a shot may be fired. As included in prior submissions, the average number shots in a year will be 30; the anticipated maximum number of shots per month will be 10; firings will not occur on weekends, holidays or between the hours of 4:00pm and 10:00am. UCI will provide neighbors and local officials with a minimum seven (7) day advanced notice of any testing. Any other schedule will prevent UCI from effectively operating the tests to conduct research.

F. **Comment No. 6 (p. 3)**:

- **Comment**: 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.

  Objection: Asked and answered. UCI has already supplied Agency Staff with the requested information in Figure 1, "Site Overview Map," provided in H2H's September 2023 Sound Study.

G. **Comment No. 7 (pp. 3-4)**:

- **Comment**: 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."

Objection: Asked and answered. Agency Staff is mischaracterizing or misrepresenting data supplied by UCI in prior responses, as well as conflating sound pressure levels measured in dB as falsely equivalent with dB(A). As previously explained, the human ear is not equally sensitive to sounds of all frequencies. Human hearing is much more sensitive to medium pitches (from 500 Hz to 4,000 Hz) than to very low or very high pitches. A tone measuring 80 dB at 500 Hz (medium pitch) sounds louder to humans than a tone measuring 80 dB at 200 HZ (low pitch). To adjust measured sound pressure levels to mimic human hearing response a frequency weighting is applied to measured/calculated sound pressure levels. A-weighting is the standard frequency weighting used in environmental sound assessments. A-weighting attenuates sound with frequencies below 1000 Hz and above 4000 Hz while amplifying sound between 1000 Hz and 4000 Hz where the human ear is most sensitive.

In prior discussions this issue was raised by UCI and explained to Agency Staff. Unfortunately, Agency Staff fails to understand these nuances, nor even the grosser points of sound propagation and energy transfer. Agency Staff stated these issues were irrelevant and to "follow DEC guidelines" which they acknowledged on several occasions they did not understand in the entirety.

Agency Staff is choosing to focus on sound pressure levels without A-weighting which is misleading when referencing measured/calculated sound pressure levels at receptors. Agency Staff has directed UCI to review and provide a noise impact study based upon the DEC's *Program Policy for Assessing and Mitigating Noise Impacts*. According to this policy "noise is likely to be a matter of concern to residents or users of adjacent lands." (*See* p. 2 "II. Background") (Emphasis added.) Only when "a sound level evaluation indicates that receptors may experience sound levels or characteristics that produce significant noise impacts or impairment of property use" will the DEC require mitigation measures. (*See* p. 4, "III. Policy") (Emphasis added.) Crucially, the noise analysis shall be prepared using an A-weighted decibel scale to determine the "environmental effects of sound and human perceptions of sound." (*See* p. 7, "V. Procedure") (Emphasis added.) Thus, analysis of sound pressure levels from the proposed project should be based upon dB(A).

Agency Staff is characterizing noise levels at the M-5 receptor on State Land as 127 dB and 100 dB at the nearest residence. This is incorrect. The modeled impulse sound pressure level at M-5 is 130 dB/107 dB(A). The modeled impulse sound pressure level at State Land classified as Wild Forest, at its relevant corner, is 132 dB and 111 dB(A). With the additional mitigative effects of the Sound Mitigation Bern, the sound pressure level at M-5 is 124 dB / 100 dB(A) and 127 dB / 102 dB(a) at the State Land classified as Wild Forest, at its relevant corner. The closest inhabited structure to the noise source is the Pulsifer residence (R-1), 5,200 feet to the northeast, and has a modeled impulse sound level of 101 dB / 69 dB(A) with the Sound Mitigation Berm.

Crucially, the debate herein between Agency Staff and UCI on estimated impulse sound pressure levels is for a combined noise event that will be less than 7,500 milliseconds (0.45 seconds) in length over a five-year period. *To repeat, the length of time of sound for all anticipated firings combined to occur within a five-year period will be less than 7,500 milliseconds or 7.5 seconds.*

- Comment: 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.

  Objection: **Agency Staff is requesting UCI to explain the standards of the International Organization of Standardization (ISO). An applicant's role is not to educate Agency Staff on the scientific or analytical standards Agency Staff is to employ when reviewing an application. With all due respect, it is expected, indeed, imperative that Agency Staff possess the expertise needed when evaluating a project application. Without an understanding of the standardization of the science being utilized and, in turn, reviewed, Agency Staff cannot be relied upon to perform a true, accurate and legitimate review of a project application.**

  Notwithstanding, Agency Staff is directed to page 6 of H2H's September 2023 Sound Study that explains International Standards Organization ISO 9613-1,2,3 standards are applied. UCI also directs Agency Staff to page 13 of the DEC's *Program Policy for Assessing and Mitigating Noise Impacts* concerning thresholds for significant sound pressure level increase. Therein, "increases ranging from 0-3 dB should have no appreciable effect on receptors. Increases from 3-6 dB may have potential for adverse noise impact only in cases where the most sensitive of receptors are present." (Emphasis added.) Accordingly, a sound pressure level variance of 3.5 dB has no or minimally appreciable effect on receptors.

- Comment: 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.

Objection: Overly burdensome, an untimely request, and seeks immaterial information. For the first time Agency Staff is requesting this test. Based on three years of Agency Staff's disputation of the asserted noise level of M109 155 mm howitzers from a respected scientific study, as well as official US Government materials, and taking into considering the effect atmospheric and environmental conditions have on sound pressure levels, any data provided by UCI from an independent test at a different locale is anticipated to be rejected by Agency Staff. Moreover, the cost to perform such a test is prohibitively high and inappropriate.

- Comment: 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.

  Objection: Agency Staff's conclusory comment fails to include or consider impulse noise levels from presently authorized noise sources. In UCI's Response to the First NIPA, UCI noted that impulse noise levels from standard hunting weapons ranges from 160 dB (12-gauge shotgun with an 18.5-inch barrel) to 164 dB (.357 Magnum). Additionally, chainsaws produce continuous noise levels between 105 dB and 120 dB. Naturally occurring lightning strikes and thunder produce an approximate noise level of 120 dB. Thus, the approximate impulse noise level of 127 dB from the proposed tests at State Land classified as Wild Forest, at its relevant corner, is 70-80 dB less than common hunting rifles and only 7 dB louder than a lightning strike (thunder). Agency Staff's current position implies that any impulse noise greater than 35 dB(A) in a wilderness area should not be allowed. If Agency Staff's view was adopted that would result in hunting with firearms being prohibited as an impulse noise source greater than acceptable wilderness ambient noise levels.

H. Comment No. 8 (p. 4):

- Comment: 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.

Objection: Agency Staff is attempting to dictate the design of the project. The design Agency Staff seemingly seeks to be implemented is a design in which UCI has no intention of adopting. Agency Staff is also requesting proprietary and sensitive information UCI is not at liberty to release.

I. Comment No. 9 (p. 4):

- **Comment**: 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.

  Objection: This is an unduly burdensome and untimely request which seeks immaterial information. Agency Staff requests new information not before requested although having ample time and opportunities. Furthermore, if UCI were to comply with this request, any new information provided by such revised noise analysis will be nominal or immaterial (*see* responses to Comment 1, *supra*).

CONCLUSION

In summary, UCI has supplied to Agency Staff extensive scientific data supporting a finding that UCI's proposed project (i) will be quieter on surrounding environments than noise generated by the nearby mining operations during blasting, (ii) will create a combined impulse noise event of *7.5 seconds over a five-year period*, and (iii) does not pose a potentially significant environmental impact due to an increase in sound levels in surrounding land, including those designated Wild Forest. Furthermore, if the Agency were to adopt Agency Staff's present opinion that any impulse noise from a ballistic source near Wild Forest land above 35 dB(A) is

impermissible, such position means all hunting firearms, as an impulse noise source greater than the Agency Staff's acceptable wilderness ambient noise level, are also prohibited.

Based upon the foregoing, UCI respectfully requests that the Agency issue a determination finding that: (1) all requests for information contained in the 5th NIPA are duplicative, unnecessary or moot as all information required for the project application to be complete has been submitted by UCI; (2) certain requests for information contained in the 5th NIPA are lacking relevancy or materiality for purposes of completing the application and therefore must be stricken; (3) certain comments contained in the 5th NIPA must be stricken from the administrative record as they are based upon factual errors; (4) certain comments contained in the 5th NIPA must be stricken from the administrative record as they were made by Agency Staff in an unlawful attempt to issue a *de facto* denial of the application; (5) certain comments contained in the 5th NIPA must be stricken from the administrative record as they were made by Agency Staff in an unlawful attempt to alter or change the proposed project or use, contrary to the intentions of UCI or prejudicial to UCI; (6) UCI's project application is complete; and, (7) pursuant to 9 NYCRR §572.22(h), providing notice of the completeness of the application as required by law and thereafter granting the permit application.

Dated: February 29, 2024

Norfolk Beier PLLC

By: _____
Matthew D. Norfolk, Esq.
Authorized Representative

To: Chairman John Ernst
Dan Wilt, Chair – Committee on Regulatory Programs
Barbara Rice, Executive Director
Sarah Reynolds, Esq., General Counsel
David Plant, Deputy Director for Regulatory Programs

ATTACHMENT A

NEW YORK STATE OF OPPORTUNITY. Adirondack Park Agency

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

Project Sponsor:	**Authorized Representative:**
Michael Hopmeier 620 Herndon Parkway, Suite 120A Herndon, VA 20170	n/a

Date Permit Application Received: November 19, 2021
Type of Project: Commercial Use – shooting range
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 Michael Hopmeier:

Thank you for your permit application, received by the Agency on November 19, 2021. The application provided important information on the proposed project. As listed below, initial evaluation by Agency staff indicates that additional information is necessary to review the project and complete the application.

Please submit your response to this notice by e-mail to frederick.aldinger@apa.ny.gov and reference Project Number 2021-0276 in the subject line.

A site visit by Agency staff is required before your application can be determined complete. During site visits, staff review the soils and slopes on a project site, as well as any wetlands, waterbodies, and other resources. Please contact Environmental Program Specialist 1 (EPS1) **Fritz Aldinger** to schedule the site visit; the application will remain incomplete until the site visit has occurred.

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 the 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 of Incomplete Permit Application or the project review process, please contact EPS Aldinger.

December 6, 2021
Date

/s/ John M. Burth
John M. Burth
Environmental Program Specialist 3 (EPS3)

Attachment: List of Requested Information

REQUESTED INFORMATION
APA Project No. 2021-0276

Please submit your response to this notice by e-mail 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. **Item 4 Project Site Location**: Please clarify if the lease area for the commercial use consists of a limited area or the entire tax map parcel. If the lease area is only a portion of the property, please provide a site plan depicting the boundaries of the lease area.

2. **Item 8 Detailed Project Description**:
   - Please provide additional details to describe the commercial use that occurs on Tax Map Parcel 38.1-1-29.000 (The missile silo site) including the frequency of use, hours of operation, number of employees, and number of customers expected.
   - The submission states that the use of a container for catching projectiles is not expected to be necessary. Will the fired projectiles be removed from the site if they are not being retained by a container?
   - Please clarify whether any lead or other potential contaminants may be used in the proposed testing area.
   - Please provide a thorough noise evaluation for all proposed munitions to be fired on site, including an evaluation of the nearest receptors utilizing the NYS DEC's Program Policy for Assessing and Mitigating Noise Impacts. Please provide a noise mitigation plan as necessary.
   - Please provide a design report that complies with the USACE Range Design Guide to confirm the proposed range is adequately sized to ensure safety to human health and the environment and meets all applicable standards for range design.
   - Please provide an unexploded ordnance (UXO) plan.
   - Please clarify what the proposed targets will be for testing and if the targets will be mobile or stationary.
   - Please provide a range decommissioning plan and please clarify the proposed methods for disposing of debris and residues.
   - The proposal indicates that the purpose of the commercial use is to support research for Benet Laboratories, a US Department of Army research and development facility. Please explain why this testing cannot be performed on site at the Watervliet Arsenal, or one of the Army's existing testing facilities or other existing facility with infrastructure already in place.

3. **Item 14 Project Employment and other Benefits:** The submission indicates this proposal will allow for the hiring of more personnel. Please provide details regarding the additional personnel, including the number of employees, if these personnel will be employed full time, if they will be working onsite at Tax Map Parcel 38.1-1-29.000 or 38.1-1-31.000, and the time period of employment.

4. **Item 17 – Site Plan:** Utilizing the US Army Corps of Engineers (USACOE) range design guide, please provide a thorough design plan that includes all design requirements including but not limited to the following:
   - A topographic survey of the entire lease area with firing and target locations and elevations depicted;
   - Siting considerations, including the range support facilities and noise impulse contours from each firing position;
   - Target protect design curves;
   - All proposed signage for safety and other purposes;
   - Proposed berms and walls if applicable;
   - Existing and proposed roads;
   - Parking areas; and
   - Range line of sight.

   Please also identify the surface danger zone (SDZ) per Department of Army's PAM 385-63.

5. **Item 19 Proposed Site Access:** Please clarify if any improvements to the existing logging roads are proposed.

6. **Item 46 Stormwater Management Plan:** Please provide a stormwater plan for the proposed 100-foot by 100-foot area of disturbance and the blasting area.

7. **Item 49 Other Regulatory Permits and Approvals**:
   - Please have the Local Government Notice Form completed, signed by the appropriate town official and submitted to the Agency.
   - Please contact the New York State Department of Environmental Conservation regarding your proposal. Please copy the Agency on all correspondence and provide any comments or other response received.
   - Please contact the NYS Police and US Department of Justice regarding the proposed militarized and/or demilitarized firearms and weapons testing facility. Please copy the Agency on all correspondence and provide any comments or other response received.

Enc: Local Government Notice Form

cc: Mike Flynn, Town of Lewis Code Enforcement Officer
Erin Burns, Acting Regional Permit Administrator NYS DEC Region 5
James Pulsifer, Landowner

ATTACHMENT B

NEW YORK STATE OF OPPORTUNITY. | Adirondack Park Agency

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

Project Sponsor:	**Authorized Representative:**
Michael Hopmeier 620 Herndon Parkway, Suite 120A Herndon, VA 20170	n/a

Date Permit Application Received: November 19, 2021
Type of Project: Commercial use shooting range
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 Mr. Hopmeier:

Thank you for the recent submission in relation to APA Project No. 2021-0276, received by the Agency on December 22, 2021. The submission provided important information in response to the Agency's December 6, 2021 Notice of Incomplete Permit Application (NIPA).

Based upon staff review of your proposal and the information submitted in response to the Agency's December 6, 2021 NIPA, the following questions must be addressed in order to review your 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 13, 2022
Date

/s/ John M. Burth
John M. Burth
Environmental Program Specialist 3 (EPS3)

Attachment: List of Requested Information

REQUESTED INFORMATION
APA Project No. 2021-0276

Please submit your response to this notice by e-mail 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 response to the Agency's December 6, 2021 NIPA indicates the proposed lease area will be a portion of tax map parcel 38.1-1-31, and shows this lease area only as a red rectangle on an unscaled map. Please provide a scaled site plan prepared by a NYS licensed professional showing all of the following:
   - All waterbodies, including permanent and intermittent streams, and all natural swales and drainage features, within 200 feet of proposed development;
   - Boundaries of existing cover types (forested, clearing, etc.);
   - Topographic contours at 2-foot intervals within the leased parcel;
   - Existing and proposed access roadways, trails, and parking areas;
   - All property lines;
   - Proposed construction limits;
   - Safety signage;
   - Proposed control/operations area;
   - Proposed firing pad;
   - Proposed firing range; and
   - Proposed target area.

2. Please confirm the status and use of the road/trail that traverses the northwestern portion of the project site. Do other landowners hold easement or other rights to use this feature?

3. The provided response regarding alternate locations is inadequate. Please provide an explanation as to why the proposed munitions testing cannot be performed outside the Adirondack Park, e.g. at the Watervliet Arsenal, or at one of the Army's existing testing facilities or other existing facility with infrastructure already in place.

4. The provided noise assessment indicates that up to two noise events are to occur per day and are not expected to exceed 185 dBa at the source. However, the noise assessment uses a model with inputs including 183 dBa at the source. In addition, the noise assessment results indicate that an anticipated sound of 82 dBa at the nearest off-site residential receptor dwelling, which is the Pulsifer residence located 1.22 miles away, but provide no discussion with respect to ambient sound levels and characteristics at this receptor location or the sound pressure increase that represents a significant noise effect at this receptor location.

   Please provide a more complete noise assessment report. This report should include a scaled site plan that clearly identifies all potential adjacent and nearby noise receptors within a minimum 2.0 mile radius from the munition firing noise source of 185 dBa as measured from the adjacent property lines as a conservative measure. This should include the residences along Pulsifer Rd and

State Land classified as Wild Forest. The revised assessment report should utilize a noise source of 185 dBa, not 183 dBa, to provide for a worst-case scenario condition, and should provide a detailed evaluation of the potential noise impacts to these receptors with respect to ambient sound pressure level.

5. The provided noise mitigation plan is only a public notification plan provided in narrative comparison to a blasting plan at a local mine with details to be included in the "site security and safety operations plan". Accordingly, please provide the site security and safety operations plan for Agency review. Please also provide a noise mitigation plan that includes sound pressure level reduction methods and accompanies the revised noise assessment report.

6. The provided narrative response states that the US Army Corps of Engineers (USACOE) range design guide is not applicable to a munitions testing range, and that a safety plan cannot be provided, but then states that the applicant will be working closely with the US Army Development Command, which will provide guidance and approval for the range design and operating procedures prior to allowing operations to occur. As such, to allow the Agency to provide for a coordinated review, please copy this Agency on the range design and operating procedures application to the US Army Development Command, and copy this Agency on any comments, approvals and/or correspondence received.

7. Please provide the Agency with a copy of all correspondence submitted to the New York State Department of Environmental Conservation (NYSDEC) regarding your proposal. Please also submit any response or other correspondence received from the NYSDEC. Please note that submission of an application to the NYSDEC or written confirmation from the NYSDEC documenting that no approval is necessary will be required to allow for coordinated review of your proposal.

8. The "Explosive License- Dealer Manufacture" submitted to the Agency on December 22, 2021, expired in September 2021. Please provide confirmation from the New York State Police and United States Department of Justice (DOJ) that all approvals have been received for your proposal. Alternatively, please copy the Agency on an application to the State Police and DOJ for all necessary approvals. Please note that submission of application to the State Police and DOJ or written confirmation from these agencies documenting that no approval is necessary will be required to allow for coordinated review of your proposal.

cc: Mike Flynn, Town of Lewis Code Enforcement Officer
Erin Burns, Acting Regional Permit Administrator NYS DEC Region 5
James Pulsifer, landowner

ATTACHMENT C

NEW YORK STATE OF OPPORTUNITY. | Adirondack Park Agency

March 1, 2022

Michael Hopmeier
620 Herndon Parkway, Suite 120A
Herndon, VA 20170

Re: APA Project 2021-0276
Town of Lewis, Essex County
Land Use Area: Rural Use
Tax Map No.: 38.1-1-31.000 & 38.1-1-29.000

Dear Michael Hopmeier:

Thank you for the recent submission in relation to APA Project No. 2021-0276, received on February 11, 2022. The submission provided important information in response to the Agency's January 13, 2022 Notice of Incomplete Permit Application (NIPA). As a result, items 2, 3, and 7 of the January 13, 2022 NIPA are either satisfied or no longer required.

As discussed during the February 25, 2022 WebEx meeting, the remaining information required by the Agency's January 13, 2022 NIPA is still required to review the application. A copy is enclosed for your convenience. 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 the proposed project will begin.

If you have any questions regarding this letter or the project review process, please contact me at (518) 304-6149.

Sincerely,

/s/ Fritz Aldinger

Fritz Aldinger
Environmental Program Specialist 1 (EPS1)

Attachment: January 13, 2022 NIPA

ATTACHMENT D

NEW YORK STATE OF OPPORTUNITY. | Adirondack Park Agency

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

Project Sponsor:	**Authorized Representative:**
Michael Hopmeier	Matthew D. Norfolk
620 Herndon Parkway, Suite 120A	1936 Saranac Ave, Suite 106
Herndon, VA 20170	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 May 12, 2022. The submission provided important information in response to the Agency's January 13, 2033 Notice of Incomplete Permit Application (NIPA).

Based upon staff review of your proposal and the information submitted in response to the Agency's December 6, 2021 and January 13, 2022 NIPAs, the following questions must be addressed in order to review your application. Also, as outlined below, some of the information requested in the NIPAs 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.

June 6, 2022
Date

/s/ John M. Burth
John M. Burth
Environmental Program Specialist 3 (EPS3)

Attachment: List of Requested Information

Cc: Mike Flynn, Town of Lewis Code Enforcement Officer
Erin Burns, Acting Regional Permit Administrator NYS DEC Region 5
James Pulsifer

REQUESTED INFORMATION
APA Project No. 2021-0276

Please submit your response to this notice by e-mail 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. **January 13, 2022 NIPA Item 1:** The submitted site plan titled, "Map of Survey Showing Certain Features of Lands of Pulsifer Logging LLC to be leased to "Diversified Upstate Enterprises LLC," prepared by John Deming, PLS and dated April 14, 2022, does not indicate the proposed boundaries of the lot to be leased and does not indicate the proposed size, just a cleared area labeled as "Shooting Range". Utilizing the scale provided within the PDF, the cleared area as measured along the limits of clearing is approximately 2.75 acres in size. Please confirm whether this is the proposed lease area size. In addition, an "edited copy of certified map" was provided that indicates a purple oval, not labeled, a yellow box labeled as "firing pad", and a green box labeled as "target area." Utilizing the scale provided with the PDF, the yellow box labeled "firing pad" is approximately 38 feet by 60 feet and the target area is located approximately 571 feet away and is approximately 52 feet by 61 feet in size. The original application materials indicated that the firing pad was to be constructed of a 100-foot by 100-foot crushed stone pad. Please clarify if the proposal has been revised to reduce the lease area and firing pad area with no crushed stone imported to the site. Please clarify and revise the professionally prepared site plan map to indicate the lease area boundaries, the location of any proposed safety signage, and the size and the location and dimensions of the firing pad and target area accordingly. In addition, please clarify what the purple oval represents.

   In addition, the site plan indicates that the proposed lease is to Diversified Upstate Enterprises, LLC. The application and prior responses have come from Michael Hopmeier and Unconventional Concepts, Inc. Please clarify the relationship between Diversified Upstate Enterprises and Unconventional Concepts Inc. and provide signatures from the principals involved with Diversified Upstate Enterprises, LLC as necessary.

2. **January 13, 2022 NIPA Item 4**: Noise assessment details included in the submission received May 12, 2022 conflict with what was previously submitted and further clarification is necessary. For instance, the provided response materials state that "(B)ased on recommendation from the APA, further research on the noise source was performed. Based on that research, the actual noise source is assumed to be 166.1 dB." The provided response materials do not clarify how this revised noise source estimate of 166.1 dB was determined, how the previously presented noise source of 185 dB was in error, or, for example, whether a different cannon or munition is being proposed to be tested resulting in different source noise levels. Absent a detailed explanation regarding this significant reduction of 19 dB in noise source, the provided noise assessment is unsupported. Most notably, the provided noise assessment indicates that the equipment being tested is a M109A5/6; Paladin, 155mm self-propelled Howitzer firing M4A2 zone 7 charges, however the provided footnote reference to a link of a PDF of 2006 Noise Levels of Common Army Equipment by USACHHPM indicates that the location of the 166.1 dB noise measurement is from "in fighting compartment with hatches open except drivers," which is not

representative of a worst case scenario of a maximum noise intensity emitted open air with no armored tank walls or other sound mitigation barriers in place. Please address these discrepancies.

The materials received May 12, 2022 do not adequately address the January 13, 2022 NIPA Item 4 with respect to providing a more complete noise assessment report, including a scaled site plan that clearly identifies all potential adjacent and nearby noise receptors within a minimum 2.0 mile radius from the munition firing noise source of 185 dBa as measured from the adjacent property lines as a conservative measure. This should include the residences along Pulsifer Road and State Land classified as Wild Forest.

The provided noise assessment only evaluates the nearest off-site residential receptor dwelling as the Pulsifer residence near the sawmill, but this submission indicates that the dwelling is located 0.96 miles east of the noise source, where the previous submission materials indicated that it's located 1.22 miles from the source. Please clarify whether the firing pad location has changed and provide an accompanying street address for this nearest receptor. Please also provide the distance of the noise receptor from the existing enclosed sawmill and include an estimate of vegetated buffer from the sawmill to this receptor and any other nearby receptors of the sawmill as further discussed below.

The provided noise assessment indicates that "the estimated background/ambient noise level during the day at the proposed test site is 80 dB(A)," but also indicates that the proposed firing pad is to be located approximately 1 mile (0.96 mi) from the sawmill as detailed above. Please reconcile. The provided noise assessment indicates that the estimated background/ambient noise level during the day at the nearest receptor of the Pulsifer Residence is also 80 dBa. Please note that the referenced commercial use site is subject to Agency Permit 1991-0170, which authorized the expansion of an existing sawmill and wood using facility. As described in project description 6h and project impact 17a of 1991-0170, the facility design was intended to control and reduce noise, including concrete block/sand fitted walls, roofed structure with hanging commercial noise absorbing baffles for the debarker, with bark blown directly into a closed box trailer; full enclosure of the main sawmill with a semi-permanent solid wall on the east end removed only for equipment installation and repair; sawdust will be blown directly into a closed box trailer; chipper installed inside a concrete block, roofed structure with chips blown directly into a closed box trailer; dowel mill machinery to be fully enclosed in mill building with baffles and log barriers used to reduce noise. Without accounting for the noise mitigation measures in place at the enclosed sawmill, in addition to the distance from the residential dwelling to the enclosed sawmill, and absent noise meter readings, the estimated ambient noise level of 80 dBa is unsupported.

Please clarify whether there are tanks or other armored machinery now proposed to be utilized on-site and provide and evaluate the corresponding sound pressure levels in a revised noise assessment.

The noise assessment materials received by the Agency on May 12, 2022, appear to be prepared by Unconventional Concepts, Inc. and do not include a professional stamp on the submission materials. The preparer of any revisions submitted to address the items above must be a NYS licensed professional familiar with NYSDEC's Program policy Assessing and Mitigating Noise Impacts (ny.gov).

3. **January 13, 2022 NIPA Item 5**: The provided response states that no additional sound pressure level reduction methods are proposed. Based on the information provided regarding potential sound impacts, this is inadequate. As detailed in NYSDEC's noise policy, the addition of any noise source, in a non-industrial setting, should not raise the ambient noise level above a maximum of 65dB(A). As the provided ambient noise level of 80 dBa is unsupported and needs to be revised per NYSDEC's noise policy, please provide an accompanying noise mitigation plan that includes sound pressure level reduction methods and also addresses the following:

   - The materials indicate that for personnel within proximity to the site, hearing protection will be provided. Please specify what this minimum specific hearing protection safety distance is from the firing pad location.
   - The materials indicate the Town Supervisor of the Town of Lewis will coordinate with local Emergency Management Services to notify any citizens in close proximity to the test range of the test schedule, by phone or e-mail, 72 hours prior to the testing and again 24 hours prior to testing. Please provide documentation of the agreement with the Town of Lewis that they are responsible for notification. Additionally, please define "close proximity" to the test range.

Please note that, based upon the application materials submitted to date, the proposal as presented consists of testing munitions year-round up to 120 times per year with an estimated munitions firing noise source of 185 dB with no noise source mitigation measures proposed. The U.S. Department of the Army considers any impulse noise greater than 140 dB hazardous and requires their employees to wear hearing protection. In addition, the US Bureau of Mining research has documented damage to residential dwelling window glass from over air pressure blasts of greater than 133 dB with the federal standard 30 CFR § 816.67 set at 133 dB on over air blasts associated with mining activities. Accordingly, based on potential noise impacts alone, absent revisions to the project proposal, the project does not meet the criteria for issuance of a permit under Agency law.

ATTACHMENT E

New York State
Adirondack
Park Agency

KATHY HOCHUL
Governor

BARBARA RICE
Executive Director

FOURTH 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 submissions in relation to APA Project No. 2021-0276, received by the Agency on February 28 and March 1, 2023. The submissions provided important information in response to the Agency's June 6, 2022 Third Notice of Incomplete Permit Application (NIPA).

Based upon staff review of your proposal and the information submitted in response to the Agency's June 6, 2022 Third NIPA, the following questions must be addressed in order to review your application. Also, as outlined below, some of the information requested in the June 6, 2022 Third 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.

March 16, 2023
Date

/s/John M. Burth
John M. Burth
Environmental Program Specialist 3 (EPS3

Attachment: List of Requested Information

REQUESTED INFORMATION
APA Project No. 2021-0276

Please submit your response to this notice by e-mail 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. **January 13, 2022 Notice of Incomplete Permit Application (NIPA) Item 1:** Please clarify if safety signage will be placed on the property and update the Site Plan accordingly.

2. **January 13, 2022 NIPA Item 4:** The proposed maximum noise source in the Sound Study prepared by H2H Geoscience Engineering is a howitzer M109A3GN (155 mm), with a corresponding maximum sound level of 176 dBA measured at 820 feet. The provided noise source information is from a 45-page report titled "Noise emission data for M109, 155 mm field howitzer", prepared by the Norwegian Defense Research Establishment (FFI), dated 5 December 2007. The introduction of the report states that "M109 is one of the noisiest weapons in the Norwegian defense, and as such represents a limiting factor for activity at firing ranges and training fields." The study is based upon utilizing a detonation of 1 kg of TNT 35 meters (114 feet) from the source location of a howitzer with calculations for ground correction, meteorological variances and other factors. The author of the report repeatedly admits that, to their knowledge, there is no consensus or commonly accepted method to produce free field emission data for firing large weapons close to the ground.

   The provided noise source for this proposal is therefore questionable absent other supporting noise data, and the sound pressure level utilized in the provided model input is 176 dBA, which is a corrected measurement from 250 meters or 820 feet away. The actual noise level in proximity to the source, i.e. at the howitzer muzzle, is unknown, but presumably significantly louder. Therefore, the provided noise assessment is based upon a model input of 176 dBA which is 820 feet away from the noise source, skewing or significantly reducing the model output results.

   The provided noise assessment and model need to account for this major discrepancy. For instance, the noise monitoring location M-5, which is state land classified as Wild Forest, is located 510 feet from the 100 foot by 100 foot gravel firing pad noise source, which is less than 820 feet away, but the modeled output sound level is 107 dBA. Utilizing the same 176 dBA at 820 feet, the estimated noise level at M-5 located at 510 feet, which is 310 feet closer, would be greater than 176 dBA, not less.

   Given these discrepancies and absent additional supporting information, the provided noise assessment is unacceptable. Please also refer to the previous Agency correspondence requests for significant revisions to the proposal. Please address the following:

   - The provided response regarding the use of tanks or armored machinery for transport or testing is inadequate. The provided noise assessment report states that all test equipment and instrumentation will be portable and will be removed from the site at the end of test, with no more than 3 tests per month, and each test will consist of 4 – 5 shots. The provided Norwegian noise source study states that M109 is a 155 mm howitzer that is placed on an armored tracked vehicle. Per NYSDEC's Program Policy of Assessing and Mitigating Noise Impacts, please

provide a more complete noise assessment that includes all sources of noise generation, including fixed and mobile equipment (armored and unarmored) and transport movements of materials including testing and instrumentation.

- In order to support the provided sound propagation model outputs, please revise the noise source level for a sound pressure level at or in proximity to the howitzer muzzle noise source (not 820 feet away) and also provide empirical sound pressure level calculations for each of the receptor locations, M-1 through M-5, and provide an impact assessment utilizing these calculations in comparison to each monitoring locations provided measured ambient sound level.

- The provided noise assessment does not include or factor in varying weather conditions, changes in wind direction and speed, temperature and humidity and atmospheric inversions. Please revise to evaluate changes in weather as per NYSDEC's Program Policy of Assessing and Mitigating Noise Impacts.

3. **January 13, 2022 NIPA Item 5:** The provided response and Sound Study from H2H does not address additional sound mitigation measures. Until an acceptable full noise assessment has been provided, the Agency cannot assess whether the currently proposed public notification and mitigation is adequate.

4. **Project discrepancies:** There are several discrepancies regarding the proposal in the materials submitted to date, including but not limited to:

   - In the initial project proposal, received by the Agency November 19, 2021, the project is described as "...No more than three tests per month are anticipated. Each test will consist of 1 – 3 shots, and each series of shots will last no more than 2 days. These tests are anticipated to continue for a period of 5 years, with an average of no more than 30 shots per year." The Sound Study prepared by H2H Geoscience Engineering, received by the Agency March 1, 2023, describes the project as "No more than three tests per month are anticipated. Each test will consist of four-five shots, and each series of shots will last no more than two days...". Please clarify the maximum number of shots proposed per day.

   - The "Noise emission data for M109, 155 mm field howitzer" study referenced in the Sound Study prepared by H2H 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. How do the two charges compare and what effect will they have on the level of sound produced? What is the maximum charge proposed to be used during testing?

Please provide an updated, consolidated project description and plan that accurately reflects the current project proposal and eliminates these and all other changes and discrepancies. Please also revise the Site Plan so that the size and scale of the Firing Pad is accurately depicted.

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

ATTACHMENT F

New York State
Adirondack
Park Agency

KATHY HOCHUL
Governor

BARBARA RICE
Executive Director

August 16, 2023

Matthew D. Norfolk, Esq.
1936 Saranac Ave, Suite 106
Lake Placid, NY 12946

Re: APA Project 2021-0276
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 on August 1, 2023. The submission provided important information in response to the Agency's March 16, 2023 Fourth Notice of Incomplete Permit Application (NIPA). As a result, Item 1 of the March 16, 2023 NIPA is either satisfied or no longer required.

As further outlined below, the remaining information required by the Agency's March 16, 2023 NIPA is still required to review the application. A copy is enclosed for your convenience. 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 the proposed project will begin.

Specifically, the provided response does not address the following:

- Noise mitigation measures are not proposed or evaluated. The submission states that "(T)here are no other practicable means to mitigate noise from a noise source such as the one being tested." This statement is un-supported given that berms, enclosures, and/or silencers (schalldampfer), or any other potential noise mitigation measures are not discussed or evaluated, and no documentation has been provided supporting the assertion that noise mitigation measures are not practicable.

- The provided response does not evaluate varying weather conditions, changes in wind direction and speed, temperature and humidity and atmospheric inversions as requested. The submission only states that the noise model accounted for appropriate weather conditions per ISO specifications with no further details.

- Only the noise model outputs were provided for receptor locations M-1 through M-5, and not the previously requested empirical sound pressure level calculations for each of the receptor locations. Absent these calculations, the model results are unsupported. In addition, the modeled noise results as depicted in Figure 5 of the response appears to be depicted at an inaccurate scale. As previously requested in the June 6, 2022 Third NIPA and March 16, 2023 Fourth NIPA and as discussed during our July 25, 2022 and June 26, 2023 meetings, provide all empirical sound pressure level calculations for each of the receptor locations.

- The Norwegian study, a 45-page report titled "Noise emission data for M109, 155 mm field howitzer", prepared by the Norwegian Defence Research Establishment (FFI), dated 5 December 2007, is the sole source of data inputs for the provided noise assessment which is based upon a simulated and modeled study utilizing a detonation of 1 kg of TNT 35 m (114 ft) from the source location of a howitzer. The provided revised noise assessment is based upon further modeling of the Norwegian study findings, stating that "(T)he Test Point has a modeled sound level of 127 dB; the recorded sound level from Table E.2 of Appendix E is 130.5 dB showing correlation within ISO standards." In effect, the provided revised noise assessment asserts that a 3.5 dB modeled discrepancy is tolerable for estimating noise impacts from firing military grade weapons within proximity to State Land and residential receptors. The provided noise assessment also utilizes a revised calculated noise source of 180.8 dB at the howitzer barrel. However, as previously requested, the calculations were not provided to support this component. The closest receptor location of M-5, which represents a receptor on State Land classified as Wild Forest has a modeled estimated noise level of 130 dB. However, as previously acknowledged, the model has an at least 3.5 dB discrepancy from the Norwegian study results, therefore it can be reasonably assumed based on the limited information provided that the M-5 receptor location can exhibit up to 133.5 dB, which exceeds the US Bureau of Mining's Report 8507 standard of 133 dB for over air blasts associated with mining activities as referenced in NYSDEC mining permit conditions. Also, please note that this location is approximately 510 feet from the firing pad, and not at the worst-case scenario location of the southwest corner of the same state land parcel approximately 300 feet from the northeast corner of the firing pad. Therefore, based on the information provided to date, the weapons firing activity proposal as presented has the potential to create an undue adverse impact for howitzer impulse noise levels greater than 133 dB on State Land classified as Wild Forest. The assertion that this parcel is landlocked State land with no public means of access is irrelevant to the Agency's evaluation of potential for adverse impact upon the park's natural resources, specifically § 805.4.a(4) of the Adirondack Park Agency Act. The necessary information has not been provided to indicate that there will not be an undue adverse impact from the proposal to fire a M109A3GN 155mm field howitzer up to 2 times per day up to 3 days in a row, for an average of 30 times per year for 5 years, as close as approximately 300 ft as measured from the corner of the proposed 100-foot by 100-foot gravel firing pad to the corner of State Land Classified as Wild Forest.

- The response "The level of sound for all charge sizes employed will not exceed those acceptable levels determined by H2H's assessments and testing." does not provide the requested comparison between previously referenced charges used in testing or what the maximum charge to be used in the proposed testing will be.

  Therefore, based on the provided information regarding potential noise impacts to date, this project does not meet the criteria for issuance of a permit under Agency law and staff cannot recommend approval to the Agency board.

If you have any questions regarding this letter or the project review process, please contact me at (518) 304-6149.

Sincerely,

/s/ Fritz Aldinger

Fritz Aldinger
Environmental Program Specialist 1 (EPS1)

Attachment: March 16, 2023 NIPA

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

ATTACHMENT G

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

20°C (68°F), 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 41°F/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 41°F/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 20°C (68°F), 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