

Judge Greenwood:

I respectfully submit the following information for your consideration regarding the UCI application. The volume of inaccurate, speculative, and, at times, misleading statements surrounding this matter makes it difficult to focus on the relevant facts. As such, you are placed in the challenging yet critical position of separating substantiated information from distraction.

By way of background, I was both the technical director, and later Director, of the US Army Benet laboratory, the original sponsor of this research. I bring over forty years of experience with the U.S. Army, serving both as a commissioned officer and as a civilian in the design, development, testing, and manufacture of large-caliber cannon systems. I have led research and published innumerable papers and presented at many symposia and conferences on these subjects. My specialty is in ballistics and impulse noise propagation and mitigation, one of the key aspects of the current debate on the UCI test effort. During my time at Benet--the Army's research and development organization responsible for large-caliber weapons systems, and in fact prior to that as a serving US Army officer -- I had extensive firsthand knowledge of the technical, operational, and safety aspects of this type of work. I have also participated in numerous review boards and lectured widely in this field.

I was actually Director at Benet Labs several years ago when this project was first discussed. At the time it was initiated there were several driving factors causing us to consider setting up a new capability;

- the oversubscription of existing facilities (for example Yuma and Aberdeen, and even Ft. Drum) causing extensive delays in testing,
- Excessive cost
- Aging infrastructure

These same issues, to the best of my knowledge, still exist.

Knowing of the UCI facility we asked Mr. Hopmeier, under an existing effort, to work with us in developing an alternative to existing capabilities. Not as a replacement, but rather as an augmentation for specialized testing and research.

In following the debate on the project I am disconcerted and frustrated to see the amount of inaccurate, false or misleading technical information that is being promulgated.

Like most of the commenters I am not from inside or near the park, so I will refrain from commenting on the political issues. I will, however, address the physical and scientific points as an expert in the field. I would like to highlight several key points directly relevant to this case: the nature of the proposed activity, government oversight, safety considerations, noise impacts, and site selection.

Nature of the Activity

This effort is a controlled test program, not an “artillery range.” That characterization is both inaccurate and unnecessarily inflammatory. The purpose of the testing is to evaluate recoil characteristics and barrel wear of new concepts under development by the U.S. Army. The focus is on what is known as “interior ballistics” where the performance and environment of the projectile *in the gun tube* is studied. The focus is on the effects of the projectile on barrel wear and recoil. Once the projectile exits the tube data collection ends and the projectile is then caught at a short distance from the tube. There is NO high explosive, nor long free-flight of the projectile as many have suggested. Suggestions that the projectile will fly miles or that the park will be blown up are simply false. The whole focus is on the gun, not the projectile.

Government Oversight and Safety

The testing will be conducted under a government contract administered by the Defense Contract Management Agency (DCMA). All procedures, safety protocols, and operations are subject to government approval and oversight, with government personnel present during all firing activities.

No high explosives are involved. The propellant used is approximately 20 pounds of single-base propellant—similar in composition to that used in common sporting ammunition. Chamber pressures for this test configuration are less than half those of a standard .308 Winchester cartridge, and, if the maximum charge is used (unlikely, or at most in a small number of tests) the total charge would be less than 20 lbs. To put that in perspective, many reloaders have MORE than 20 lbs. of propellant for reloading, and even more than 20 lbs. of Tannerite, a binary explosive often used by sport shooters to indicate hitting a target, or blowing up beaver dams. Assertions suggesting otherwise are not supported by the technical facts.

Noise Considerations

Much of the concern expressed publicly relates to noise; however, these concerns are often based on misunderstanding. The relevant metric is not the noise at the test site, but the sound levels experienced at nearby residences.

These propellant systems have been extensively evaluated and certified by Department of Defense and government health authorities. At a distance of approximately 300 meters from the firing location, hearing protection is not required. At the nearest residence, the expected sound level is comparable to that of a .308 Winchester rifle fired at a distance of approximately 180 feet.

Site Selection

Alternative testing at government facilities has been suggested. In practice, this is not feasible due to several constraints, including lack of availability, long scheduling delays (often months to years), insufficient specialized instrumentation, and significantly higher costs associated with transportation and testing.

Facilities such as Yuma Proving Ground have been considered; however, their scheduling limitations, lack of specific on-site expertise for this type of testing, and overall cost structure make them impractical for timely program execution. Others have suggested use of Ft. Drum for testing. While logical on the surface the reality is it would not work. We evaluated Ft. Drum while I was Director, and a number of issues arose including it has an operational and training mission that did not provide sufficient support for our research. While it is true that a random test could be done every now and then at Ft. Drum, the schedule could not be made reliable enough to support our mission without interfering in Ft. Drum's.

UCI provides unique capabilities, including specialized expertise and instrumentation, as well as proximity to Watervliet Arsenal and Benét Laboratories. This proximity allows for rapid iteration, reduced transportation costs, and efficient collaboration with the system design authority.

Conclusion

In summary, the proposed activity involves:

No high explosives

No long range free-flight projectiles

Strict government oversight and safety controls

Noise levels at nearby residences comparable to common hunting activity

Based on my professional experience and technical expertise, this project presents no material risk to the surrounding community. Furthermore, its successful execution contributes directly to the safety and effectiveness of equipment used by U.S. service members and has the potential to directly save lives of our service men and women.

I hope this information is helpful to your review. I would be glad to provide any additional clarification if needed.

Respectfully,

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Senior Consultant
Former Chief Scientist and Director, Benét Laboratories

Enclosures

Resume - Robert Dillon

Letter - Dr. Plostins

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Letter - Dr. Moss

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