

A Less-Than-Lethal Projectile  
For the Delivery of Chemical Agents

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## Comments on Less-Than-Lethal (LTL) Programs

- Develop Tactics Based on Performance Characteristics of Specialized (Less-Than-Lethal) Weapon Systems (e.g., Ring Airfoil Projectile).
- Programs and Progress in Less-Than-Lethal (LTL) Are Affected By Lack of Innovative and Practical Thinking. Otherwise Known as a Conventional (Traditional) Paradigm.
- Must Have a Real Product (Hardware) to Evaluate—Law of 3<sup>rd</sup> Best in Practice.



## DESIRED CHARACTERISTICS

- Will Need to Operate in an Unsettled Society
- Minimize Intrusion (in Societal Structure)
- Use of a Less-Than-Lethal System
  - Selective
  - Nominal Range Insensitive (0-50 Meters)
  - Immediate (and Post-Impact) Identification
    - Through Marking and Olfactory Tagging

## Conclusion

- If the Less-Than-Lethal (LTL) Ring Airfoil Projectile (RAP) is Unique and Useful, Why Not Develop Tactics, Techniques, Training and Procedures Needed to Operate in the Urban Environment with this LTL Chemical Delivery System?

## **Briefing Summary—The Ring Airfoil Projectile**

The less-than-lethal (LTL) Ring Airfoil Projectile (rap) system is intended to be an effective chemical delivery system. The RAP was eventually designed to carry the chemical agent CS in powder form, and to disseminate the CS upon target impact, thus combining both a kinetic energy and a limited but effective cloud of chemical agent.

The principal advantage of the RAP is that it is designed to be less-than-lethal at point blank range, or at the muzzle. Further by having low aerodynamic drag, combined with aerodynamic lift, and launched spinning to achieve gyroscopic stability, a relatively flat, non-ballistic trajectory results. These characteristics allow for versatile usage; from point-blank range to more than 50 meters.

Although RAP as initially developed for use by the US Army as a CS carrier, other chemical payloads are now being investigated. Another current development is a low-weight compact launcher unit, which can be readily used.

This brief presentation describes the RAP System comparing its performance characteristics with other configurations that are based on conventional ballistics.

The National Institute of Justice is presently supporting this project.