

United States Government

Department of Energy

memorandum

Albuquerque Operations Office

DATE: APR 05 1995

REPLY TO: WFOMD/STTD/Alvarez, 845-5685
ATTN OF:

SUBJECT: Freedom of Information Requests 94-241T-A, 93-312-A, 93-313-A, and 93-314-A

[REDACTED]

The four subject requests were provided to us by on March 7, 1995. A review of our files indicates that only one project falls under the subject requests. The project started in September 1991, and it was transferred to the Los Alamos Area Office (LAAO) for their administration in October 1992. Therefore, for current information pertaining to the project, personnel from LAAO should provide the response.

The following response is based on the file that we kept which includes a classified proposal package which we got from LANL in FY91:

1. FOIA 94-241T-A (Jane Affleck): Attached are two papers prepared by ^{ble} ;
(1) Executive Summary, Potential Non-Lethal Policy Issues (12 pages), and (2) Non-Lethal Technology Overlap-Draft (3 pages).
2. FOIA 93-312-A (A. Victorian): As discussed above, the project described above was transferred to LAAO in October 1992; therefore, our response to this FOIA request is negative as we do not have any current information on the project.
3. FOIA 93-313-A (A. Victorian): The proposal which we endorsed to the DOD in August 1991 was sent to a Captain David Carroll, USN, OJCS, J-33, The Pentagon, Room 2C865, Washington, DC 20318-3000. Funding was received in August 1991 from the DOD Washington Headquarters Services, Installation Accounting Division, Room 3B269, The Pentagon, Washington, DC 20301-1155, L. R. Hottot, Cert. Off. Our contacts at LANL included ^{ble}
4. FOIA 93-314-A (A. Victorian): Again, because of 2. above, our response is negative.

The amount of time was minimal, as follows: 3 hrs. @ \$32/hr = \$96.00.


James R. AndersonDirector, Science and Technology Transfer
Division

Attachments



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EXECUTIVE SUMMARY

POTENTIAL NON-LETHAL POLICY ISSUES

Los Alamos National Laboratory

As a strawman I have divided the potential policy issues surrounding a Non-Lethal Initiative into three groups and the placed a prioritized listing of subelements below each. Some are clearly much more important than others but I have extended the list to be more, rather than less, inclusive.

A. The Changing Nature of Conflict (Things will be different in the future and how we define conflict may/will change)

1. The definition of "Threat" and what constitutes provocation
2. Definition of an act of "force"
3. Political benefits of announcing a "non-lethal" policy
4. Nomenclature (Non-lethal vs other title)
5. Interagency support/ implementation requirements
6. Use/interdiction of international assets (space)
7. Control of Executive Branch use/abuse of power

B. Doctrine for Non-Lethal Policy

1. Strategic focus (degradation of threat war-making capacity vs defeat of military forces)
2. Development of strategy, doctrine, and training
3. Authorization for use of force (Who does this)
4. Credibility of non-lethal systems as deterrence
5. New emphasis on reconstruction after conflict
6. Ability to intervene w/o troops in third party conflicts
7. Establishment of new rules of engagement
8. Use of antimateriel biological agents
9. Limits on chemical systems employment
10. Preventing unwanted treaty restrictions
11. Strategic view of regional conflict

C. Research, Development, and Acquisition Issues

1. Defining the initiative limits (what is included/excluded)
2. Integration with other systems (C³I, precision lethal,etc)
3. Integrated intelligence (RSTA vs RSTA+Assessment)
4. Research of countermeasures regardless of our intentions
5. Management structure
6. Establishment of funding & how it is controlled

7. Requirements definition
8. Delivery mechanisms (Munitions vs new platforms)
9. Use of simulation to evaluate non-lethal options
10. Security (unclass vs white vs black)
11. Foreign Military Sales considerations

POTENTIAL POLICY ISSUE OF NON-LETHAL DEFENSE

Los Alamos National Laboratory

The following is provided in response to the question, "What are the policy issues that need to be addressed?" I have divided the policy issues into three categories and prioritized the subelements. The categories I chose were the following:

- The Changing Nature of Conflict
- Doctrine
- Research, Development, and Acquisition

They may or may not be the right set. While the breakdown seemed useful I often debated the category in which to assign a given subelement.

THE CHANGING NATURE OF CONFLICT:

It is my contention that conflict in the future will be very different from our past experience. Clearly, the Persian Gulf War was a historic event and unlikely to be repeated. The major threat to national security in the future will probably be from economic entities that may or may not have the status of national states.

1. What is the Definition of "Threat to National Security"?
(1a) What Constitutes a Provocation?

If future threats are other than from physical force, then a wide range of options will be required. It is likely that some of the threats will be hard to articulate to the American or international populace. Therefore, the dilemma is likely to arise: the demand to be able to respond to a threat, counterbalanced with a reluctance to use lethal force or risk American troops' lives. For instance, how far do we let an off-shore computer incursion go before it is labeled a "threat." Suppose that rather than observing our databases, skilled teams of hackers began to manipulate data of government, or key financial institutions (bank, stock market, etc). Consider that the hackers might be employing a well designed, and resourced plan initiated to produce economic instability at a specified time. A threat? A provocation? What if they were backed by a foreign government or powerful multinational conglomerate? Non-lethal weapons will provide many options that will raise such questions.

2. What Constitutes Use of Force?

When the U.S. tried to pressure Japan over the Toshiba-Soviet submarine technology, it was reported that a threat was made that our stock market would drop markedly. If acted on, would that constitute force? Non-lethal weapons offer a wide range of technological capabilities including the manipulation of information. The low kinetic impact end of the spectrum, information, biological and some chemical technologies will press our definition of "force."

3. Are There Benefits to Advocacy of a Non-Lethal Policy? &
4. Importance of Nomenclature (Non-Lethality, Non-Lethal Defense, Mission Kill, Strategic Immobility, other).

It is postulated that major political benefit can be accrued by being the first nation to announce a policy advocating projection of force in a manner that does not result in killing people. Having been through a number of names, I can say that nothing has had the impact of "Non-Lethal."

Arguments do emerge about the accuracy of the statement. Counter statements say that "some people will inevitably be killed" as evidenced by experience with rubber bullets. It is true that nothing, even marshmallows, is totally Non-Lethal. However, it is the intent of the policy that is important.

A second argument goes that "Non-Lethal" would infer a position of weakness. Nothing is further from the truth and recent Persian Gulf activities have adequately demonstrated our lethal capabilities. We are advocating an integrated approach including lethal force when necessary. The focus is on expanding options for commanders, not in reducing capabilities.

5. Interagency Relationships may be Changed.

If the nature of conflict changes, interagency relationships will have to change as well. The experience of the "Drug War" serves as an example of the interdependency that will be required in the future. Narcoterrorism will continue to be a major problem for some time to come. We must be prepared to counter that problem both inside and outside our borders. The edicts of "Posse Comitatus" are already being tested severely. The

future dictates that DoD will work much more closely with other national, state, and even local agencies. Non-lethal systems will be a piece of that new working environment. Systems developed by DoD will enhance the capabilities of many other agencies. DoD is one of the few Government agencies able to focus advanced R&D on a requirement.

6. Use/Interdiction of International Assets During Conflicts

How do we deal with international assets when an adversary is using them for intelligence or command and control functions? Satellites are the most visible example of this issue. If Saddam Hussein had been able to get information from commercial satellites, would they have been considered acceptable targets to ensure the security of "Left Hook"? While many countries will be able to own satellites, many communications birds have multiple users who may range from friendly to adversarial. How do we deal with these assets if they are part of the threat C³I?

7. Control of Executive Branch Use/Abuse of Power.

It has been hypothesized that Non-lethal weapons might make a president, or others, more adventuresome when it came to employing force. The argument goes that since the consequences of their use are less, those weapons may be employed more freely. While that potential exists, it falls clearly within the existing checks and balances system under which our country works.

DOCTRINE:

The availability of Non-Lethal weapons could have significant impact on doctrine. While a key feature of non-lethal defense has always focused on expanding force options available to commanders, some of those systems represent major new capabilities requiring/allowing new doctrine and tactics. Time permitting, I will add an alternative scenario for Desert Storm.

1. Strategy: To Destroy or Degrade a Threat Warming Structure or Attack and Defeat his Fielded Military Forces

I give this issue the highest priority. I also agree with the Air Force position and believe you target the leadership and infrastructure as the focus of the strategy and relegate attacking armed forces to a much lower

level. Attached is a diagram provided by Col John Warden, U.S. Air Force (AF-XOX-W).

In this area, Non-Lethal weapons could play a dramatic role. Several of the biological, chemical, and information technologies are well suited for degradation of strategic warmaking capabilities. They offer a means to take action prior to the onset of open hostilities. If a country learns that their ability to mobilize or prosecute protracted conflict has been seriously degraded, they are not likely to behave aggressively.

2. Development of Doctrine, Strategy and Training.

The issue arises as to who will develop doctrine, strategy, and training. Arguments are made for approaches that are either driven top down or bottom up. While both are necessary, I feel there is a need for a centralized focus while a comprehensive OSD/JCS-level effort develops the umbrella policy upon which the services can build. Some organizations are ahead of others, but significant learning and thinking remains to be done.

3. Authorization for use of Non-Lethal Force.

4. Establishment of New Rules of Engagement (ROE).

There are questions about who will give authorization for employment of these systems. For some technologies it seems likely that a Presidential Finding would be required. On a larger scale, Congress could enforce the War Powers Act. However, there are a host of politically sensitive situations around the world for which non-lethal weapons provide new freedom to project defensive force. For those situations, new ROE must be established.

5. Is Non-Lethal Defense a Credible Deterrent?

It is postulated that the development of non-lethal weapons systems would be a deterrent in some situations. For example, currently drug smugglers are 100% convinced that the U.S. will never employ lethal force against them if they do not shoot first. Many air interdictions have ended with the smugglers turning tail and running, confident they will not be shot down. A non-lethal means of controlling flight would serve as a deterrent in that situation. The basic premise is that we would have a means to project force and would be willing to use it. The counter argument goes that since the force applied would not be lethal, the threat

RESEARCH, DEVELOPMENT, AND ACQUISITION

There are a number of issues related to research, development, and acquisition of non-lethal systems. The early issues will probably be definitional followed by funding and management. Early analysis with advanced computer simulations should help resolve some of the questions.

1. Defining the Limits. (What is included and excluded?)

Discussion of this issue has already emerged. If there is pressure to field a non-lethal capability quickly, then more items currently in development will be included in the definition. If the approach is to consider only non-lethal unique weapons, then a different list will be generated. How to consider present electronic warfare systems along with other counter-sensor weapons will be a key point. Since a non-lethal strategy must be tied closely with precision lethal weapons and enhanced C³I systems, the amount of overlap should be considered. In a time of constrained resources, there will be competing agendas vying for inclusion. Some form of oversight team will be required to establish and maintain definitional control.

2. Integration of Intelligence, C³I, and Precision Lethal Weapons.

To optimize effectiveness, development of all these systems must be coordinated. This means development of a comprehensive master plan and a management structure capable of coordinating the efforts.

3. Integrated Intelligence (RSTA vs RSTA+Assessment).

A prime concern with many of the proposed non-lethal systems is our ability to assess effectiveness in near real time with a high degree of assurance. There are some who still advocate the "burning cinder" approach. In the Gulf War, BDA was one of the more hotly contested issues between agencies. The proposed systems will generate a new set of unique signatures. To be effective, an "Assessment" phase must be included in Reconnaissance, Surveillance, and Target Acquisition. This capability should be planned for from the start. It may mean that new sensors, or suites of sensors, be deployed to support non-lethal applications. Ways to accurately assess power levels, production capability, infrastructure effectiveness, and command and control

capability will be high on the needs list. These make good sense with, or without, non-lethal defense.

4. Research and Development of Countermeasures Regardless of Offensive Intentions.

If it is determined that certain capabilities will not be employed offensively, research should still be conducted on countermeasures. The classic example is biological agents. As bioremediation moves forward as a global response to waste management, development of agents that can be used militarily is inevitable. We must thoroughly understand the possibilities and prepare for adequate defense.

5. Establishment of Funding.

Again this will be contentious and tied directly to the definitions of non-lethal limits. There are indications that Congress could become involved in the conceptualization of an initiative. Therefore, DoD would be well served to develop and propose a funding scheme suitable for a major initiative.

6. Requirements Definition.

To inculcate non-lethal weapons into the main stream, hard requirements must be generated. The policy issue involved will be the level at which those requirements are written and the guidance and oversight provided by OSD/JCS and the services. At present, there is a substantial amount of learning necessary before the requirements process can be decentralized for non-lethal weapons.

7. Management Structure.

For all of the reasons already listed a sound management structure must be drafted and proposed. Initially, top-level intervention and guidance may be best. Still there will be a need to obtain substantial service buy-in.

8. Delivery Mechanisms.

Part of the integration effort will include the delivery mechanisms. Given an austere budget, we have advocated that, whenever possible, munitions

and submunitions be developed rather than the far more expensive new platforms. It should be remembered that if we are to use non-lethal weapons strategically for degradation of national capabilities, integration with major systems will be required. Interest already exists in industry to modify some existing systems.

9. Use Of Simulation to Evaluate Non-Lethal Options

To be cost effective it would be best to use advanced simulations technology to evaluate non-lethal options. This approach would allow both system trade-off decisions and help develop doctrine and training requirements prior to fielding new systems.

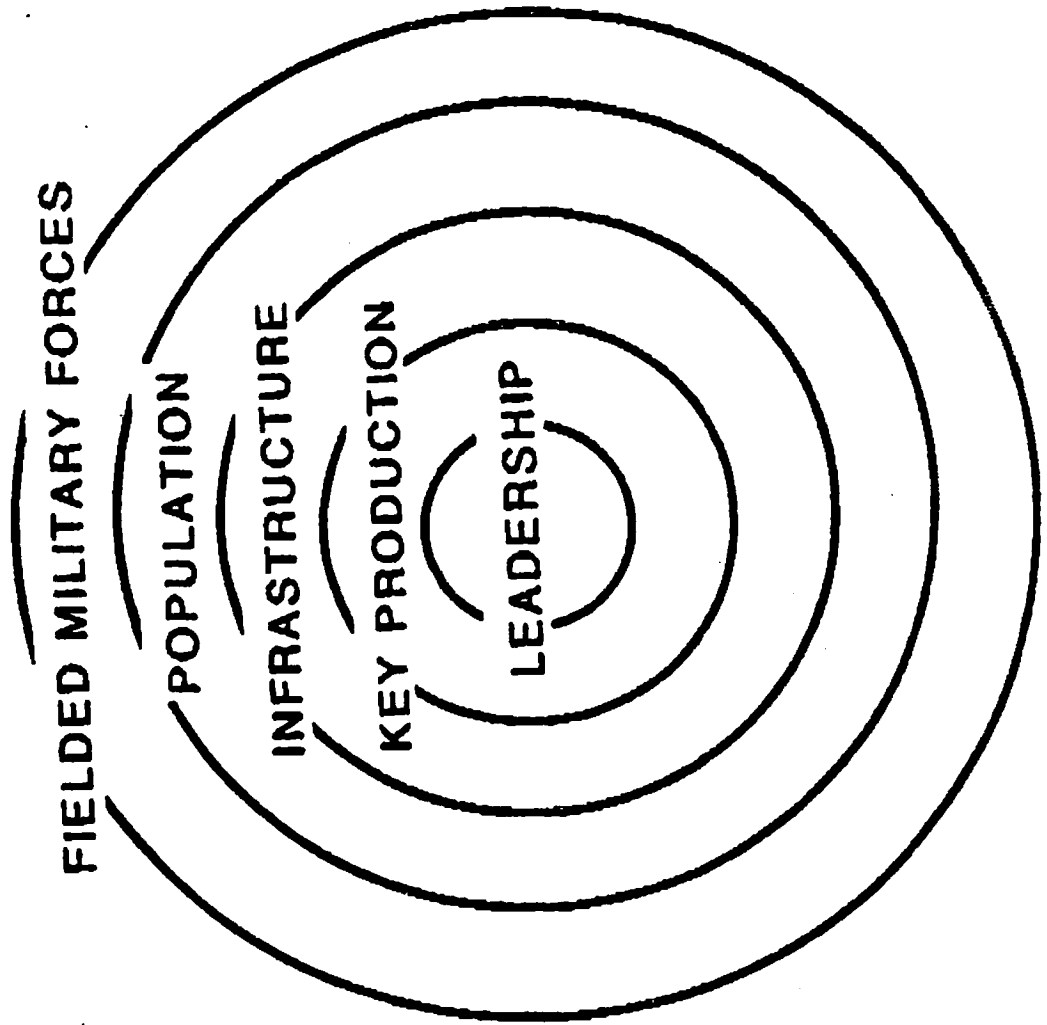
10. Security (Unclassified vs classified vs black)

There are several views on this issue. Some argue that to be a credible deterrent, most work should be done in the open. Others suggest that some of the technologies are fragile and that open development would diminish effectiveness. Still others want selected capabilities to remain black so that they may be employed without "fingerprints". Most people feel strongly about their position, whatever that might be.

11. Foreign Military Sales Considerations.

Some of the technologies proposed would allow for time or operation dependent weapons. These mechanisms would reduce the endemic problem of migration of munitions and materiel provided to countries to handle a specific situation. Had the mines we provided Iraq for their war with Iran had a designated life-time, the problem of breaching the mine fields might not have been so serious.

THE FIVE STRATEGIC RINGS



COL John Warden
U.S. AIR FORCE
AF-XOXN