

**Statement**  
**by the Honorable Fred C. Iklé**  
**before the Committee on Homeland Security**  
**Subcommittee on the Prevention of Nuclear and Biological Attack**  
**House of Representatives\***  
**April 19, 2005**

**The Domestic Nuclear Detection Office**

Thank you, Mr. Chairman, for inviting me to address the Domestic Nuclear Detection Office. This new organization, located within the Homeland Security Department, has been proposed in the President's budget request for FY 06.

DNDO properly has the word "detection" in its name. It is focused on the last line of defense to protect the United States from a terrorist use of nuclear weapons that is directed against our national territory. The possibility of a clandestine use of a nuclear weapon against our homeland is not a new idea; it has been mentioned since the beginning of the nuclear age. But as a serious threat it has emerged only during the last decade or so, and in particular since 9/11.

It is the global proliferation of nuclear weapons technology that has made this threat increasingly serious. And since the break-up of the Soviet Union we have faced a growing danger that nuclear bombs and materials might be acquired by terrorist organization. The initial US response has been the Nunn-Lugar program which has now been restructured as the Cooperative Threat Reduction program. These efforts, and other measures to curb nuclear proliferation, have accomplished a great deal. But none could give full assurance against a clandestine delivery of a nuclear bomb for a terrorist attack.

The seriousness of this cataclysmic possibility has become increasingly apparent. Hence, the need for a last-line of defense – the mission of DNDO. Defense experts have proposed better detection measures for some time. Already in 1997, the Defense Science Board spelled out the need for a serious R&D program to improve our technical detection capabilities. Unfortunately, there was no follow-up; and now, eight years later we are still unprepared. The establishment of DNDO is a statement of good intentions, but without vigorous follow-up, competent management, and – Mr. Chairman – strong Congressional support, I fear we will encounter more delays.

DNDO is a unique organization with few parallels. I cannot think of another executive branch organization that seeks to pull together so many government departments and agencies in a cooperative effort for so complex a mission. Keep in mind that the cooperation required will be essentially voluntary. Short of an appeal to the President, the person who will head DNDO cannot order the other components to carry out their tasks.

Such an endeavor has to overcome several hurdles. It can deteriorate into an endless series of interagency meetings. Differences about priorities might not be resolved. Budget requests might be delayed. The most competent people might become discouraged and move on to more promising jobs.

---

\* Fred C. Iklé is a Distinguished Scholar at the Center for Strategic and International Studies, Washington, D.C. He was Undersecretary of Defense for Policy in the Reagan Administration.

All these setbacks have already been experienced during the Administration's deliberations that led up to DNDO. I mentioned the 1997 Defense Science Board study which lacked follow up. Four years ago, a new Task Force of the Defense Science Board addressed the problem of clandestine nuclear attack again. Chaired by Dr. Wagner, this Task Force prepared a thorough guide for the actions that ought to be taken.<sup>†</sup> During the last couple of years, the findings of this report were briefed to all departments and agencies that have some responsibility in this area. The bureaucratic obstructions were appalling. Bureaucrats called for more grand studies, more interagency meetings, and some even argued that better detection instruments were impossible since our technology for radiation sensors had reached the limits of physics.

After all these attempts to get a serious effort underway, it is fortunate that we have now a well thought-out organizational structure set down in DNDO's charter. With the President's endorsement, and with the full backing and monitoring by Congress, we might -- at last -- succeed.

Now let me turn to a major part of the DNDO structure which, for the long term, is the most important part: the R&D program for the "transformational" development of sensors and other essential technology. Without better instruments to detect smuggled nuclear weapons, all the operational DNDO components will be unable to do their job. Without Better knowledge and techniques to identify the source of the smuggled nuclear weapon, the deterrent effect of our defenses will be greatly diminished. Indeed, these techniques of identification -- called "forensics" -- are crucial to avert a mistaken retaliatory strike that would get the United States into a war with a nation that did neither attack us, nor lend any support to the terrorists who attacked us.

Better sensors and forensics are the heart of the matter. And the inter-agency effort that produced the proposed structure for DNDO is very clear on this. Yet, the way in which it describes the management of this "transformational" R&R will not get the job done. It says:

"Nuclear detection R&D will be coordinated via interagency representation on the DNDO R&D Coordinating Council with budget authority remaining in departments/agencies."

This approach will at best produce fractured and fragmented research efforts, greatly slowed down by innumerable interagency meetings.

Chairman Linder, your Subcommittee is concerned both with nuclear and biological attack. To limit the impact of biological attacks, great scientific progress has been made with vaccines and other medical interventions. And much of this research was done in different research centers, at universities, and by the pharmaceutical industry. This was appropriate given the multifaceted nature of biological threats and the seamless connection between health care and biological warfare defense.

But for nuclear sensors and forensics, the scientific research on will not succeed with small research grants, parceled out hither and yon to every applying think tank or university. These sensors and forensics deal with two elements: plutonium and enriched uranium, not with dozens of diseases. And they must be focused on the ways

---

<sup>†</sup> Report of the Defense Science Board Task Force on Preventing and Defending Against Clandestine Nuclear Attack (June 2004).

either or both of these elements can be used to cause a nuclear detonation. Only the government weapons laboratories have the experience, the classified data, and sixty years of historic knowledge to work effectively on this problem.

The management of “transformational” R&D effort must be inspired by the way we managed the Manhattan Project or the Apollo Project. These successful programs were not run by endless interagency meetings in Washington that presided over budget constraints and bureaucratic deadlines for dozens of little contracts. Last summer, the Homeland Security Department’s research sponsorship on nuclear sensors was done through 135 contracts – one hundred and thirty five! (Some of these, to be sure, produced useful results.)

The country needs a superbly qualified single manager for this work (as was the case for the Manhattan Project), a generous long term budget with flexibility, all to support an integrated team effort bringing together the professional strengths and the scientific assets of Livermore, Los Alamos, Sandia, Oak Ridge, Argonne, and reaching out to specialists at universities and support for prototype production by industry.

This Laboratory-centered program, of course, needs to be in continuing contact with the many potential users of the sensors. (The use of the forensic capacity must remain centralized for the US government.) The physicists at the laboratory will have to tailor their effort to the needs of the Coast Guard, border control, DOD’s Special Forces, the Navy’s work for the Proliferation Security Initiative (PSI), special needs of the FBI and CIA, and so on.

Your Subcommittee, Chairman Linder, will have to play a strong supportive and guiding role to ensure success for the “transformational” R&D envisaged by the DNDO proposal. Without much better sensors and forensics, DNDO cannot succeed, it will just remain a bureaucratic artifact. This is why I put so much stress on a laboratory-centered R&D program, run by a manager in the style of the Apollo or Manhattan Project. To this end, the legal, administrative and budgetary details still have to be worked out, a job that your able staff (in cooperation perhaps with OMB could accomplish in a couple of days.

To sum it up, the Domestic Nuclear DETECTION Office is a great step forward in America’s struggle against nuclear terrorism. But without an “Apollo Project” on sensors, there won’t be much hope for detection and DNDO will become the Domestic Nuclear DISCUSSION Office.

Forgive me, Mr. Chairman, for pressing this point so hard. Witnessing ten years of fumbled and failed effort have diminished my sense of patience, a little.