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PRESENTATION TO THE

HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY  
SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT

UNITED STATES HOUSE OF REPRESENTATIVES

SUBJECT: The Environmental Measurements Laboratory (EML): Bumps in the Road  
Transitioning to the Department of Homeland Security

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Mr. Chairman, distinguished members of the committee, I appreciate this opportunity to represent the Air Force Technical Applications Center (AFTAC) at this hearing on the transition of the Environmental Measurements Laboratory (EML) to the Department of Homeland Security (DHS). The mission of AFTAC is to provide national authorities quality technical measurements to monitor nuclear treaty compliance and develops advanced proliferation monitoring technologies to preserve our nation's security. In terms of this committee's inquiry, AFTAC had a long and valued association with the Environmental Measurements Laboratory going back over three decades. During that period, EML provided services to AFTAC through the Department of Energy (DOE) "Work of Others Program." These efforts consisted of task-order based, technical support and consulting services associated with the area of their expertise, the measurement of radioactivity in the environment. EML also provided AFTAC with assistance on other national security projects that we will not be able to discuss in today's open hearing.

### **EML Program Support to AFTAC**

At the time the EML was transferred to the DHS, we were maintaining a relatively small effort (on the order of \$200K-\$300K per year) with the laboratory. The focus of that work was largely for trace radionuclide analysis of specific samples collected by the United States Atomic Energy Detection System (USAEDS) operated by AFTAC. EML performed this analysis on gas samples collected by AFTAC's Nuclear Debris Collection and Analysis (NDC&A) program to monitor provisions of the Limited Nuclear Test Ban Treaty of 1963.

In addition, AFTAC made good use of EML's scientific expertise and excellent connections/reputation in the International Community. We routinely asked their advice, support, and assistance in tasks associated with the enhancement of the USAEDS, innovative

sampler design and development, and consulted closely on matters of common interest with regard to the Comprehensive Test Ban Treaty (CTBT).

During development of CTBT protocols in the mid 1990's AFTAC, strongly recommended that EML be designated as the U.S. "States Party" radionuclide analysis laboratory. They were subsequently so designated.

Dr. John Clarke of the DHS notified AFTAC in September 2005 that, "Our year-long review has now concluded and the programmatic decision has been made to close the EML." He also informed EML and AFTAC that the DHS would no longer accept funding for this work. Dr. Clarke noted in that email that he had contacted both Mr. Scott Smith, the AFTAC Project Officer, and I and stated, "They both understand and accept that the nature of future radiation measurement work at EML is still under review in DHS and that DHS can not commit to a new contract with their organization at this time." AFTAC worked with EML over the next seven months to relocate the government furnished equipment needed to perform our nuclear treaty monitoring mission to Los Alamos National Laboratory. AFTAC also assisted EML in relocating their sample inventory to qualified sample management facilities at AFTAC and AFTAC-sponsored laboratory facilities at Los Alamos National Laboratory and Pacific Northwest National Laboratory.

### **Value of EML Activities to AFTAC and Support to National Security**

We highly valued the work of EML. Not only was the laboratory a reputable and highly respected analytical facility from whom we could always count on quality and cost effective work, they were unmatched in their understanding of the operational realities of sample collection operations. The culture that had evolved at the laboratory was, in my view, one of seeking practical, rugged and sustainable collection systems and collection concepts.

Again, we cannot go into the details of the national security work performed by EML in this environment. While we had significantly reduced the amount of national security work being performed by EML under this portion of the effort, some aspects were quite valuable to the USAEDS treaty monitoring efforts.

The engineering and nuclear debris sampling and radiometric technology evaluation support was of high value to AFTAC. The EML scientists, as Federal employees, were noted for impartial and independent judgment on nuclear measurement related issues.

The radiometric measurements on gas samples collected by AFTAC's NDC&A program were of very high value to AFTAC. Many of the national laboratories could perform these types of radiometric measurements, but EML was unique in its proximity to our gas sample processing laboratory in New Providence, NJ. Samples could be driven to EML in less than an hour if required and time is often of the essence for measuring the short lived isotopes associated with nuclear weapons testing.

### **AFTAC's Efforts to Persuade DHS to Maintain EML Programs**

I was initially quite pleased to learn that a decision had been made to transfer EML to the DHS. My organization and I highly regarded the expertise and competence of EML in the field of trace radionuclide detection, and I believed those same capabilities that were of such value to AFTAC could also be of great help to the new Department. EML's excellent national and international reputation in a field of critical need by DHS (trace radioactive materials detection and expertise in sample collection, data analysis and quality control) were, in my mind, extremely valuable assets.

I was surprised when I learned that closure of the laboratory was being considered. When we received clear indication from the new program office in DHS that closure was

planned, I made a special trip to Washington to discuss the issue, its implications for my programs, and expressed my opinion of the inherent value EML capabilities represented to DHS.

During this visit in September 2005, I meet with Dr. John Clarke and discussed these topics. Dr. Clarke indicated that actions were underway to close the lab and that unless we wanted to pick up the tab for the operation, (a sum of about \$10M per year as I recall), we should plan on moving our work elsewhere. I expressed my surprise at the proposed decision and emphasized my view that a credible, unbiased resource for testing, reviewing, and quality control of the plethora of radiation detection concepts being pushed by numerous commercial enterprises as well as the National Laboratories themselves ... capabilities I believed resided in EML ... was critically needed.

DHS's response to my points was that "EML was quite costly and did not fit into their 'Business Model'."

### **AFTAC's Response to DHS's Decision to Halt EML Support to AFTAC**

After being notified of the DHS programmatic decision to close EML, AFTAC considered a number of possible alternatives to continue the national security portion of the effort. Dr. Clarke offered to assist AFTAC in finding an organization within the Federal Government that could take over this effort. Based upon the new capabilities, either already in place or scheduled for being operational with the next two years, AFTAC decided to terminate the national security effort rather than attempting to transition that effort to another organization.

The majority of the remaining engineering and nuclear debris sampling and radiometric technology evaluation support transitioned to Pacific Northwest National Laboratory, another long-term USAEDS mission partner for AFTAC. This work is sponsored by both AFTAC and the DOE Office of Nonproliferation Research and Development. AFTAC particularly valued the

ability to consult with EML as an honest broker for engineering advice and technical evaluation. AFTAC successfully transitioned the gas sample radiometric measurement effort to Los Alamos National Laboratory, a long-term USAEDS mission partner for AFTAC, in the spring of 2006. EML requested permission to discontinue operating and maintaining these systems, and AFTAC approved this request on 14 March 2006. Personnel from EML and Los Alamos packed up the detectors and other Air Force government-furnished equipment and shipped them to Los Alamos in late April 2006.

**Conclusion:**

AFTAC had maintained an outstanding relationship with the Environmental Measurements Laboratory for four decades. When Dr. John Clarke, DHS, informed AFTAC that DHS would be closing EML, I traveled to DHS to personally discuss the matter with him. The DHS decision did not change as a result of that meeting, so AFTAC proceeded to transfer its nuclear treaty monitoring support functions to Los Alamos National Laboratory and its engineering and nuclear debris sampling and radiometric technology evaluation support functions to Pacific Northwest National Laboratory. AFTAC terminated its support for the national security work due to increased capabilities elsewhere and other priorities.

The termination of AFTAC efforts at EML created short-term impact on our program during the transfer of analysis work to other laboratories. Based on the DHS decisions, we adjusted our operations and today are generally comfortable with the new arrangements. Because of this decision (or threat of it), key EML scientific staff have moved-on or retired and specialized equipment has been transferred. Thus, the core of the capability of value to AFTAC no longer exists at EML.

From my position as a customer of EML's, I believe the intangible worth of EML's excellent technical experience and contacts within the international radiation measurements community was not fully appreciated. From AFTAC's perspective, this was important, and in my view was, in many ways, a unique national asset representing an experience base unlike any other laboratory in the DOE complex. However, in the larger picture, DHS as the parent agency, the primary designated customer of EML's output and the agency which was funding the bulk of EML's activities was better positioned than we, as occasional users, were to make the final funding decision. Ultimately, we—AFTAC—made our own decision as to whether or not to support a wider range of activities than we had historically supported in order to keep EML together, and we, too, decided that we couldn't provide that level of support.

Thank you for your attention. If you have any questions, I would be happy to address them.