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Mr. Chairman and distinguished members of the committee, thank you for the opportunity to come before you on behalf of Secretary Abraham to testify on the important role the Department of Energy (DOE) plays in combating terrorism both here at home and around the globe.

First, let me say how much the Secretary wanted to be here with you today, but in fact was testifying before another Senate Committee and thus could not be here. However, as the Administrator of the National Nuclear Security Administration (NNSA), I am deeply involved in the Department's effort to address terrorism against a wide spectrum of threats.

Over the years, DOE has dedicated a substantial amount of time, money, and manpower to address the serious threat of a terrorist event, as well as working with other government agencies on developing better tools to combat terrorism world wide. However, there is always room for improvement and the Department supports increasing communication among all appropriate Agencies.

Therefore, I believe this hearing's review of the coordination among all the agencies involved in this critical government function is timely.

In fact, President Bush just recently spoke at the National Defense University about the enormous challenges we as a Nation face in addressing new threats to our security. The President said, "Unlike the Cold War, today's most urgent threat stems not from thousands of ballistic missiles in Soviet hands, but from a small number of missiles in the hands of these states, states for whom terror and blackmail are a way of life. They seek weapons of mass destruction to intimidate their neighbors, and to keep the United States and other responsible nations from helping allies and friends in strategic parts of the world."

The Department of Energy has played and continues to play a unique and vital role in the Nation's fight against terrorism. The National Nuclear Security Administration is responsible for ensuring the safety, security and reliability of this Nation's nuclear deterrent. This requires the Department to deal with the control of nuclear weapons, nuclear materials, and nuclear components. These items are high value terrorist targets. Over the last 20 years, the Department has expended a great deal of effort to protect and defend these materials. Our National Laboratories have been at the forefront of this effort. They have developed a high level of expertise in protection methodologies and strategies. The knowledge and capability of these Laboratories are available to other Agencies to help them address their own protection programs. We will continue to maintain these resources, and they will continue to be valuable national assets in protecting against terrorist threats.

The Department continues to work with other agencies in sharing the knowledge that has been developed to address the unique requirements that exist in the DOE. There has always been a close relationship between the DOE and the Nuclear Regulatory Commission because both entities came from the Atomic Energy Commission (AEC). Our efforts to address terrorist threats have

been coordinated over the years to ensure that there was, and is today, a consistency in the level of protection provided to nuclear materials. The Department has also worked with the Department of Defense since they are the customer for the Department's products. There is on going effort to improve this interaction.

A successful counter-terrorism program requires a clear understanding of the fundamental principles of protection. We have followed a clearly defined path in determining the level of protection to be provided to the resources for which we are responsible. This path includes:

- Identify the potential terrorist targets
- Define the threat against these targets
- Apply Basic Protection Principles
- Develop Protection Strategies
- Conduct Vulnerability Assessments
- Apply Risk Management

These steps are applicable to all agencies. The first step of identifying potential targets involves not just listing the targets, but placing these in priority. Not all targets can be provided the same level of protection. The most important targets will require the most protection. For the Department of Energy, the Nuclear Weapons complex contains a number of these most important targets. This is the concept of a graded level of protection. The most important targets are provided with the highest level of protection. This is similar to the concept used to protect information where we have formally identified the importance of information with the terms: Top Secret, Secret and Confidential information.

One of the results of these hearings may be the need to provide a graded level of protection not just within an agency, but across the government.

DOE's Approach to Combating Terrorism

The highest level of protection provided in the DOE is associated with protection of nuclear materials. The materials in the Department range from complete nuclear weapons to the raw materials used to create the nuclear weapon. The protection provided for this material is an example of how the protection strategy can be tailored to meet the unique needs of an Agency. In the DOE this protection is called Nuclear Safeguards and Security.

Nuclear Safeguards and Security

The Department of Energy's nuclear material safeguards and security program is focused on the protection of the most critical nuclear assets and protection of classified information. From a terrorism perspective, the protection program is geared towards the prevention of the theft or unauthorized use of nuclear weapons and materials and the prevention of radiological sabotage acts. A majority of the long established security programs provides protection from acts of terrorism. A significant focus of the Department's security program is geared to addressing a potential terrorist attack against a DOE nuclear facility. Over 7,000 dedicated security personnel, including 3,500-armed officers, are involved in our protection efforts. Additionally, more than 550 counter-terrorism-trained personnel at 11 separate locations are part of our Special Response Teams.

In developing its protection strategy for Nuclear Material, the Department followed the process identified above. This strategy is implemented by the individual National Laboratories and production facilities.

- The first step was to 'Identify the potential terrorist targets'. The Department has reviewed the Nuclear Material in its possession and determined the material that is an attractive target

- The second step is to 'Define the threat against these targets.' The Department has included terrorists in the adversary threat to Special Nuclear Materials. Terrorists are a major driver in this threat description.
- The third step is to apply Basic Protection Principles. This involves systems, which detect and assess adversary action, followed by delay and response to the adversary with neutralization of the adversary.
- The fourth step is to develop protection strategies for a facility, which are site specific. These include a combination of technology and specially trained personnel. The National Laboratories use their expertise in technology to leverage the use of security personnel.
- The fifth step is to conduct vulnerability assessments of the protection strategies to determine which combination of protection is the most cost-effective. This approach also includes understanding the level of system effectiveness in protection.

The last step is for senior management to apply risk management to the protection of assets. This is accomplished by documenting protection and understanding the consequences of failure.

Emergency Operations and Contingency Response

DOE's emergency response assets, which are unique in the U.S. Government, are ready to respond to any type of radiological accident or incident worldwide. Their mission is to protect people and the environment during a radiological contingency. DOE has a well-exercised system of emergency response including initial notification, monitoring and assessment of the situation, and working with other agencies to resolve the emergency.

An effective defense against the malevolent nuclear threat rests on the U.S. Government's ability to field an integrated response combining the right mix of infrastructure, technology, and operational capabilities. Because of DOE's unique expertise in nuclear development, materials, reactors, and weapons, it is

both logical and reasonable that DOE provide technical assets for supporting the resolution of both nuclear accidents and malevolent nuclear incidents.

DOE's Emergency Response Program sustains several unique deployable assets that provide a full range of specialized capabilities tailored to respond to either a nuclear accident or incident. Each asset possesses individual technical capabilities and equipment that contribute to an overall mutually supportive emergency response mission that specifically deals with accidents involving nuclear materials and nuclear weapons, or terrorist incidents involving improvised nuclear devices and radiation dispersal devices. Their assets are composed of an all-volunteer group of scientists, engineers, and technical support specialists resident at our laboratories. These assets include:

- The Accident Response Group and Nuclear Emergency Search Team.
- The Aerial Measuring Systems; a sophisticated aggregate of state-of-the-art remote sensing and specially equipped non-military aircraft used to perform aerial surveys.
- Atmospheric Release Advisory Capability; a computer based emergency preparedness and response radioactivity predictive capability.
- Federal Radiological Monitoring and Assessment Center; for coordinating Federal joint/interagency radioactive contingency monitoring and assessment activities.
- Radiological Assistance Program; to provide nation-wide radiological technical assistance to Federal, State and local government agencies.
- Radiation Emergency Assistance Center/Training Site; a medical or health physics response capability for radiological incidents.

The mainstay of the Emergency Response Program is focused on the Accident Response Group for U.S. nuclear weapon accidents and the Nuclear Emergency Search Team, better known as NEST, for incidents involving

malevolent nuclear devices. NEST consists of many specialized and tailored teams:

- NEST search components, the Search Response Team (SRT) and Search Augmentation Team (SAT), are based at the Remote Sensing Laboratory in Las Vegas, Nevada. These teams deploy with advanced handheld and vehicle mounted radiological sensors that can covertly search for a suspected terrorist device or material.
- NEST Joint Technical Operations Teams (JTOTs) components support DoD and Federal Bureau of Investigation (FBI) explosive ordinance disposal (EOD) personnel, in rendering safe a nuclear or radiological WMD. These operations may be conducted worldwide and in a non-permissive or hostile environment.
- The final piece of NEST, the Nuclear/Radiological Advisory Team (NRAT) is the command and control element that supervises the actions of all DOE personnel while deployed. The senior energy official (SEO) on this deployable team answers to both the Department of Energy and to the designated Lead Federal Agency (LFA) for that particular crisis.

Continuity of Operations (COOP) and Continuity of Government (COG) programs at DOE are coordinated with other crisis and consequence management elements within and without DOE to ensure the succession of Constitutional government in the event of a major crisis. The office of Emergency Response is responsible for COOP and COG for the entire Department of Energy regardless of the nature of the event (radiological, chemical, terrorism, natural disaster, etc.)

Critical Energy Infrastructure Protection

The threats facing the Department and the Nation's critical energy infrastructure continue to evolve and present many challenges. The intricate nature of the Nation's electrical grid, especially in the Western U.S. and

particularly in the State of California, is becoming readily apparent with rolling blackouts and the potential for further disruptions this summer. The interdependencies of the oil, natural gas, and electric infrastructures are increasingly complex and not easily understood. The impact of a major terrorist attack directed against this fragile and interdependent infrastructure could have drastic consequences. The Department of Energy has a mandate to help ensure the security and reliability of the Nation's energy infrastructure. In light of this responsibility, as well as the related challenges posed by the new economy, DOE created the Office of Critical Infrastructure Protection (OCIP) to focus solely on the infrastructure assurance and protection needs of the energy industry and the development of a related R&D program. The primary mission of the Office is to work with the national energy sector in developing the capability required for protecting the nation's energy infrastructures from attack and disruption. This mission encompasses the physical and cyber components of the electric power, oil, and gas infrastructures; the interdependencies among those components; and the interdependencies with the other critical national infrastructures. In response to growing U.S. concerns over the threat to the nation's infrastructures from physical and cyber disruptions, the Department is engaged in the study of threats, infrastructure vulnerabilities, and ways to protect against, mitigate, respond to and recover from significant disruptions.

Counter-terrorism Technology Development and Enhancements

DOE maintains a small but effective safeguards and security Technology Development Office. Its four key program elements include nuclear material control and accounting, physical security, information protection, and counter-terrorism. The Department is also fully involved and committed as a co-chair and funding provider to the Technical Support Working Group, the interagency counter-terrorism research and development team.

In addition to the Department's counter-terrorism development projects, a key function of our Technology Development Program is providing a source of

access and leveraging for the counter-terrorism community to the resources of the DOE National laboratories. In addition to our more recognized nuclear and radiological counter-terrorist capabilities, DOE labs have contributed to chemical and biological counter-terrorist capabilities. Our labs have also developed specialized detectors for explosives and narcotics and have contributed to the development of advanced forensic regimes for law enforcement. Many Federal agencies, include the Central Intelligence Agency, the Defense Intelligence Agency, Customs Service, Secret Service, DoD, FBI, and FEMA rely on DOE labs and DOE personnel to help them with their counter-terrorist missions.

Our technology development program has provided meaningful results. The seizure of 10 containers of highly radioactive material by Uzbekistan Custom officers last year was extensively reported in the media. The material was thought by some to be the makings of a "radiation dispersal" bomb. The contraband was detected by a $ 1,600 "radiation pager" supplied by the U.S. and developed through a DOE counter-terrorism technology development program.

To meet the domestic threats posed by chemical and biological agents, the NNSA draws upon the diverse and extensive expertise of its national laboratories. The goal of this effort, which is carried out under the Office of Defense Nuclear Nonproliferation's Research and Engineering Program, is to develop, demonstrate, and deliver technologies and systems that will lead to major improvements in U.S. capability to prepare for, and respond to, chemical or biological attacks against civilian populations. This program will continue to focus emerging science and technology on the threat of chemical and biological attack against U.S. civilian populations. The NNSA is the primary agency developing non-medical technical solutions for this challenge. Our experts are involved in a broad interagency program to develop sensors that could detect the terrorist use of a biological agent at a large outdoor event, such as the Super Bowl or the Olympics. While we do not have the lead on this activity, NNSA brings to the table superb technical experience in this field. The NNSA is

providing the underpinning biological information necessary for biological detection that would support analyses for attribution and event reconstruction purposes, and would aid other agencies in the development of medical and public health countermeasures. The goals of this program are to develop and demonstrate

- chemical and biological detection, identification, and warning systems for domestic, high-risk areas or conditions,
- hand-portable chemical and biological detectors, to provide real-time detection to increase situational awareness during crises, and
- modeling and simulation capabilities, to enable accurate prediction of the effects from chemical and biological attacks in urban areas, to guide preparation and response efforts, chemical and biological decontamination, and restoration techniques for use in civilian settings.

Nuclear Assessment Program

An area where the DOE supports the rest of the government is in assessment of potential WMD devices. The Nuclear Assessment Program was founded in 1977 to provide a national capability to accurately and swiftly assess the credibility of communicated nuclear threats. Selected elements of the Nuclear Assessment Program are routinely used to provide rapid technical support to advise the appropriate headquarters offices within the FBI, DOE, NRC, and others in the law enforcement, diplomatic, and intelligence communities. Major support activities include real-time assessments of nuclear black market transactions, ranging from attempted sales and buys of nuclear materials to reported thefts and seizures of material.

This operational capability currently consists of a small group of professionals who are collectively knowledgeable in nuclear explosive design and fabrication, nuclear reactor operations and safeguards, radioactive materials and hazards, linguistics analysis, behavioral analysis and profiling, as well as terrorist tactics

and operations. Selected elements of the Nuclear Assessment Program are routinely used to provide real-time assessments of alleged nuclear black market transactions and field support for seizures of illicit nuclear materials, and to identify linkages between seemingly unrelated cases in countering this serious national security and nonproliferation concern. Like its companion nuclear threat assessment activity, this DOE program provides accurate and rapid analytical products, field support, technical advice and assistance, and laboratory forensic help to various US Government consumers.

Since September 1978, when first operationally activated for assessing a nuclear extortion threat, the Nuclear Assessment Program has evaluated the credibility of over 60 nuclear extortion threats, 25 nuclear reactor threats, 20 non-nuclear extortion threats, and approximately 800 cases involving the reported or attempted illicit sale of nuclear materials.

Cyber Security

In 1999, DOE accelerated its Department-wide cyber security program to integrate risk management processes and physical, technical, and administrative controls for ensuring confidentiality, integrity, and availability of DOE's information assets. Cyber security policies are continually revised to address new technology and current threats and vulnerabilities.

DOE's cyber security research and development capability is designed to investigate new, innovative cyber security protection capabilities with the goal of improving the Department's information and cyber security systems. DOE will identify, evaluate, and, if needed, develop cyber security tools to protect against current and future cyber-related threats and vulnerabilities. DOE is performing need-based analysis to identify new threats and desired protection capabilities. These vulnerabilities have been highlighted in a number of attacks against unclassified systems across the complex. During one week in April, our cyber

security investigative group detected 725 incidents directed against DOE systems.

NONPROLIFERATION

Finally, there is one other significant mission the Department's NNSA has that is ultimately geared toward preventing acts of terrorism against the United States, and that is our weapons of mass destruction nonproliferation activities. While these activities are internationally focused, the ultimate goal of our nonproliferation mission is the same as the other U.S. domestic anti-terrorism missions, which is to protect the United States from acts of terrorism. The one difference is that the nonproliferation mission is focused on preventing the spread of weapons of mass destruction, primarily nuclear, at its source and thus denying such terrorists and other rogue actors from gaining what would be the ultimate terror weapon to be used against the United States. In Russia alone, where the world's largest stocks of weapons-usable nuclear material resides, approximately 603 metric tons (equivalent to approximately 41,000 nuclear weapons) weapons-usable nuclear materials and approximately 3,000 plus nuclear weapons, have been deemed at-risk to illicit diversion or theft due to poor or even decrepit security conditions. To address this threat, the Department has a significant effort in Russia and will have completed by the end of FY2001 important security upgrades to an estimated 37% of the 603 metric tons targeted and 91% of the estimated 4,000 nuclear weapons. A second effort that we have ongoing in Russia, which we call the Second Line of Defense, involves ongoing work with the Russian Customs Agency in order to improve security and detection capabilities at Russia's borders in order to prevent illicit trafficking of this material. This cooperative work encompasses security improvements at the full spectrum of border crossings, ranging from vehicle border crossings to ports and airports. These important efforts, therefore, compliment in a significant and pro-active manner other US domestic anti-terrorism efforts.

HOW DOES DOE INTERACT IN COMBATING TERRORISM?

During an operational response, DOE answers to the Lead Federal Agency, generally the FBI, the Department of State (DOS), or FEMA, and in certain cases directly supports DoD. Concerning a terrorist incident at a DOE site, the Department's armed protective forces would provide the first response to any such incident. At the onset of a terrorist incident, the Department will notify the FBI and transition crisis management responsibility to the FBI as soon as they have adequate resources in place and are ready to assume control of the incident. DOE coordinates well with other agencies with respect to counter-terrorism activities, especially in the areas of:

- security standards and protection policy;
- terrorism incident response planning, operations, and exercises;
- and technology development.

With respect to terrorism protection policy and security standards, DOE coordinates regularly with the NRC and DoD. To that end, the Department maintains Memorandums of Understanding (MOUs) with both agencies, which commit the parties to coordinate on terrorism protection policy and maintain comparable protection for comparable nuclear facilities. We regularly conduct informal liaison with the NRC and DOD and periodically conduct formal nuclear security reviews, through the Nuclear Security Steering Group with both DOD and NRC on protecting nuclear facilities from terrorist attack.

Additionally, DOE is a signatory and full participant in several National level counter-terrorism plans including:

- The "Federal Response Plan" and the "Terrorism Annex".
- The "United States Government Interagency Domestic Terrorism Concept of Operations Plan."
- The FBI "Weapons of Mass Destruction Incident Contingency Plan."
- Department of Justice "Five-Year Interagency Counter-terrorism and

Technology Crime Plan"

The Department also has MOUs in place with local law enforcement and emergency response agencies to provide emergency response for those instances that require short term response assistance. These MOUs are designed to supplement the capability provided by the Department's Protective Force. The Department does not rely on local law enforcement for its first response.

DOE'S COMBATING TERRORISM PROGRAM IS SUCCESSFUL

The Department's mission for providing protection of nuclear weapons and nuclear weapons components has been extremely effective in preventing acts of terrorism. The multiple layers of security that are designed to protect critical nuclear assets provide an effective deterrence against terrorist acts. The Department's nuclear facilities are viewed as "hard" targets, thus causing potential adversaries to seek "softer" targets.

Liaison activities between the DOE and the FBI Hostage Rescue Team (HRT) and Regional FBI Special Weapons and Tactics (SWAT) Teams have included the distribution of site-specific Special Response Team information to the Regional SWAT Teams to investigate the possibilities of training at the sites and conducting site tours. Regional SWAT is particularly interested in the Special Response Team facilities at the Idaho Environmental and Engineering Laboratory at Idaho Falls, Idaho, due to the close proximity to Salt Lake City and the upcoming 2002 Olympics. Both HRT and Regional SWAT representatives recognize the need for FBI tactical personnel to visit DOE sites to gain general knowledge on the sites' missions and the unique difference in operating in a nuclear-related environment.

The Office of Critical Infrastructure Protection is working with industry and state and local government in genuine, mutual, and cooperative partnerships to address the critical infrastructure protection challenges of assessment response, mitigation and recovery.

Furthermore, the Department held a first-of-a-kind infrastructure interdependencies tabletop exercise called "Black Ice" this past November, in Salt Lake City. This exercise was the first in a series of CIP activities designed to help ensure the reliability and security of critical infrastructures—energy, telecommunications, transportation, water systems, banking and finance, emergency services, and government services—before, during, and after the 2002 Winter Olympics. This exercise had over 200 representatives from 65 Federal, State and local agencies participating.

In 2000, DOE sponsored, hosted, or participated in over 20 counter-terrorist related exercises and several real world contingencies. Exercises ranged from Domestic Emergency Support Team alerts and loadouts, tabletop exercises, command post exercises, to full participation field-training exercises. Real world events included both domestic and foreign activities including deployed assets supporting the 2000 Sydney Olympic Games.

The Department's Central Training Academy, in Albuquerque, has a 17-year history of providing antiterrorist training to a variety of groups including Federal, contractor, State and Local counter-terrorist forces. The Department of State has contracted with the Academy to provide training for their foreign national Antiterrorism Assistance Program. The FBI Critical Incident Response Group with DOE is conducting hazardous material tactical operations courses for the Hostage Rescue Team.

DOE PROVIDES MEANINGFUL ASSISTANCE TO STATE AND LOCAL FIRST RESPONDERS

The Department of Energy provides State and Local Law Enforcement Agencies with opportunities to visit sites for familiarization purposes and to conduct training at protective force facilities. DOE also conducts annual training exercises with agencies to ensure that adequate support for first responders is in place. Finally, DOE Directives require those sites that have Federal, State, and other Local Law Enforcement Agencies response capabilities written into their site-specific response plans to conduct validation exercises to ensure the expected response support is current and viable. DOE sites have provided agencies with first responder training to Weapons of Mass Destruction incidents via inter-active television systems on various sites.

The Department is sponsoring, with the FBI Weapons of Mass Destruction Unit, the highly successful Silent Thunder Table Top Exercises series. The purpose of SILENT THUNDER is to familiarize Federal, State, and local senior management personnel with the U.S. Government interagency emergency response to a domestic terrorist incident involving nuclear materials or WMD at a DOE site. SILENT THUNDERs have been conducted at 7 DOE sites, training 540 first responders including 144 FBI senior managers and 331 State and local officials. Funding is in place to continue and expand the series.

As a participant in the Domestic Preparedness Program, DOE provided technical instruction to first responders in 105 cities. Approximately 28,500 state and local first responders were trained as part of this program. Our Search Response Teams participate in a city visit program to FBI field offices. These visits familiarize the field office and other regional agencies with the entire NEST program and provide hands-on training with our search equipment. The RAP teams also participate in this program, which helps to establish a nationwide network of informed response personnel.

DOE also supports the FBI's Hazardous Devices School (HDS) in Alabama to ensure a standardized knowledge base for all federal, State, and local certified bomb squads. We also distribute standardized radiation pagers that alert bomb technicians and other first responders to radiological material. We are working on a standardized equipment suite for all FBI field offices to help further diagnose a suspicious device before national assets such as NEST can arrive. We are also designing a 24-hour call center to support federal, State, and local responders who need advanced and immediate analysis of a suspicious device.

Additionally, DOE cooperates with the interagency to support regional exercises and conferences that deal with radiological issues. Most recently, we have started to reach out to domestic military installations to ensure that they know how to tap into our expertise. Two years ago, we participated with NEST and other assets in a radiological exercise that was designed and sponsored by the Pennsylvania Emergency Management Agency. We expect regional exercises of this type will proliferate as State and local agencies seek to cope with the threat of WMDs.

To ensure that DOE is prepared to work effectively with FEMA to respond quickly and appropriately to any energy emergency that may occur this summer, including terrorism, the Secretary has directed the formation of an Energy Emergency Task Force within DOE. The Task Force recently participated in an interactive workshop–"Red Heat"–in Sacramento with the California Utility Emergency Association and over 125 players. The workshop focused on infrastructure interdependencies and included participants from infrastructures and State and local governments throughout the Western region.