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DEPARTMENT OF
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Key Factors Underlying
Security Problems at DOE
Facilities

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Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss our past work involving security at the Department of Energy's (DOE) facilities. These facilities, particularly its nuclear weapons design laboratories and its nuclear material and weapons production facilities, have long been viewed by DOE and the FBI as targets of espionage and other threats. Recent revelations of the possible loss of nuclear weapons design and other classified information to foreign countries have focused renewed attention on the effectiveness of security at DOE's facilities and have prompted concerns at high levels in the government, including the Administration and the Congress.

To protect its facilities from security threats, DOE created a multifaceted, defense-in-depth security strategy. Under such a strategy, various lines of defense are used to protect classified and sensitive information, nuclear materials, and equipment. Over the last 20 years, we have performed numerous reviews of security that, unfortunately, Mr. Chairman, show serious weaknesses in many of these lines of defense that have led to losses of classified or sensitive information and technology.

In summary, Mr. Chairman, our work has identified security-related problems with controlling foreign visitors, protecting classified and sensitive information, maintaining physical security over facilities and property, ensuring the trustworthiness of employees, and accounting for nuclear materials. These problems include:

- Ineffective controls over foreign visitors to DOE's most sensitive facilities. We found in 1988, and again in 1997, that foreign visitors are allowed into DOE's nuclear weapons design laboratories with few background checks and inadequate controls over the topics discussed, and that other security procedures, such as access controls, to mitigate the risks from these visits may not be fully effective. In addition, counterintelligence programs to guard against foreign and industrial espionage activities received little priority and attention.
- Weaknesses in efforts to control and protect classified and sensitive information. We found one instance where a facility could not account for 10,000 classified documents. In 1987, 1989, and 1991, we reported that foreign countries routinely obtained unclassified but sensitive information that could assist their nuclear weapons capability. Earlier this year, we reported that under its program with Russia to prevent proliferation, DOE

may have provided Russian scientists with dual-use defense-related information that could negatively affect national security.

- Lax physical security controls, such as security personnel and fences, to protect facilities and property. Our reviews of security personnel have shown that these personnel have been unable to demonstrate basic skills such as arresting intruders or shooting accurately; at one facility, 78 percent of the security personnel failed a test of required skills. Furthermore, we found that equipment and property worth millions of dollars was missing at some facilities.
- Ineffective management of personnel security clearance programs has been a problem since the early 1980s. Backlogs were occurring in conducting security investigations, and later when the backlogs were reduced, we found some contractors were not verifying information on prospective employees.
- Weaknesses in DOE's ability to track and control nuclear materials. We reported in 1980 and again in 1991 that, at some facilities, DOE was not properly measuring, storing, and verifying quantities of nuclear materials. Also, DOE was not able to track all nuclear material sent overseas for research and other purposes.

The recent revelations about espionage bring to light how ingrained security problems are at DOE. Although each individual security problem is a concern, when these problems are looked at collectively over time, a more serious situation becomes apparent. While a number of investigations are currently underway to determine the status of these security problems, we have found that DOE has often agreed to take corrective action but the implementation has not been successful and the problems reoccur. In our view, there are two overall systemic causes for this situation. First, DOE managers and contractors have shown a lack of attention and/or priority to security matters. Second, and probably most importantly, there is a serious lack of accountability at DOE. Efforts to address security problems have languished for years without resolution or repercussions to those organizations responsible.

Security in today's environment is even more challenging, given the greater openness that now exists at DOE's facilities and the international cooperation associated with some of DOE's research. Even when more stringent security measures were in place than there are today, such as those in effect during the development of the first atomic bombs, problems have arisen and secrets can be, and were, lost. Consequently, continual vigilance, as well as more sophisticated security strategies, will be needed to meet the threats that exist today. Mr. Chairman, we are concerned that,

given DOE's past record, it may not be up to the challenge without congressional oversight to hold it accountable for achieving specific goals and objectives for security reform. Therefore, we are pleased that the Committee has taken a special interest in DOE's security problems and we have already begun to work on the Committee's request to have us assess the current status of these security problems.

Background

DOE has numerous contractor-operated facilities that carry out the programs and missions of the Department. Much of the work conducted at these facilities is unclassified and nonsensitive and can be, and is, openly discussed and shared with researchers and others throughout the world. However, DOE's facilities also conduct some of the nation's most sensitive activities, including designing, producing, and maintaining the nation's nuclear weapons; conducting efforts for other military or national security applications; and performing research and development in advanced technologies for potential defense and commercial applications.

Security concerns and problems have existed since these facilities were created. The Los Alamos National Laboratory in New Mexico developed the first nuclear weapons during the Manhattan Project in the 1940s; however, it was also the target of espionage during that decade as the then Soviet Union obtained key nuclear weapons information from the laboratory. In the 1960s, significant amounts of highly enriched uranium—a key nuclear weapons material—was discovered to be missing from a private facility under the jurisdiction of the Atomic Energy Commission, a predecessor to DOE. It is widely believed that in the early 1980s, China obtained information on neutron bomb design from the Lawrence Livermore National Laboratory in California.

Most recently, two incidents have occurred at Los Alamos in which laboratory employees are believed to have provided classified information to China. In one situation, a laboratory employee admitted to providing China classified information on a technology used to conduct nuclear weapons development and testing. In the other situation, which occurred earlier this year, DOE disclosed that it had evidence that indicated China obtained information on this nation's most advanced nuclear warhead and had used that information to develop its own smaller, more deliverable nuclear weapons. A laboratory employee has been fired as a result of recent investigations into how this information was obtained by China; however, no charges have yet been filed.

Problems Noted in Critical Security Areas

While the recent incidents at Los Alamos have been receiving national attention, these are only the most recent examples of problems with DOE's security systems. For nearly 20 years, we have issued numerous reports on a wide range of DOE security programs designed to protect nuclear weapons-related and other sensitive information and material. These reports have included nearly 50 recommendations for improving programs for controlling foreign visitor access, protecting classified and sensitive information, maintaining physical security over facilities and property, ensuring the trustworthiness of employees, and accounting for nuclear materials. While DOE has often agreed to take corrective actions, we have found that the implementation has often not been successful and that problems recur over the years. I would like to highlight some of the security problems identified in these reports.

Inadequate Controls Over Foreign Visitors

Thousands of foreign nationals visit DOE facilities each year, including the three laboratories—Lawrence Livermore National Laboratory in California and the Los Alamos National Laboratory and the Sandia National Laboratories in New Mexico¹—that are responsible for designing and maintaining the nation's nuclear weapons. These visits occur to stimulate the exchange of ideas, promote cooperation, and enhance research efforts in unclassified areas and subjects. However, allowing foreign nationals into the weapons laboratories is not without risk, as this allows foreign nationals direct and possibly long-term access to employees with knowledge of nuclear weapons and other sensitive information. Consequently, DOE has had procedures to control these visits as well as other lines of defense—such as access controls and counterintelligence programs—to protect its information and technology from loss to foreign visitors.

In 1988, we reported that significant weaknesses exist in DOE's controls over foreign visitors to these laboratories.² First, required background checks were performed for fewer than 10 percent of the visitors from sensitive countries prior to their visit.³ As a result, visitors with questionable backgrounds—including connections with foreign intelligence services—obtained access to the laboratories without DOE's

¹Sandia also has a facility adjacent to the Lawrence Livermore facility in California.

²Nuclear Nonproliferation: Major Weaknesses in Foreign Visitor Controls at Weapons Laboratories (GAO/RCED-89-31, Oct. 11, 1988).

³DOE's definition of sensitive countries has changed over time. Currently, DOE views certain countries as sensitive because of concerns about national security, nuclear nonproliferation, regional instability, or support of terrorism.

knowledge. Second, DOE and the laboratories were not always aware of visits that involved topics, such as isotope separation and inertial confinement fusion, that DOE considers sensitive because they have the potential to enhance nuclear weapons capability, lead to proliferation, or reveal other advanced technologies. Third, internal controls over the foreign visitor program were ineffective. Visits were occurring without authorized approvals, security plans detailing how the visits would be controlled were not prepared, and DOE was not notified of visits. Because DOE was not notified of the visits, it was unaware of the extent of foreign visitors to the laboratories.

At that time, DOE acknowledged problems with its controls over foreign visitors and subsequently set out to resolve these problems. Among other things, DOE revised its foreign visitor controls, expanded background check requirements, established an Office of Counterintelligence at DOE headquarters, and created an integrated computer network for obtaining and disseminating data on foreign visitors. However, at the same time the number of foreign visitors continued to grow. Between the period of the late-1980s to the mid-1990s, the annual number of foreign visitors increased from about 3,800 to 6,400 per year—nearly 70 percent—and those from sensitive countries increased from about 500 to over 1,800 per year—more than 250 percent.

We again examined the controls over foreign visitors and reported in 1997 that most of the problems with these controls persist.⁴ We found that revised procedures for obtaining background checks had not been effectively implemented and that at two facilities, background checks were being conducted on only 5 percent of visitors from all sensitive countries and on less than 2 percent of the visitors from China. We also found that visits were still occurring that may involve sensitive topics without DOE's knowledge. Moreover, other lines of defense were not working effectively. Security controls over foreign visitors did not preclude them from obtaining access to sensitive information. For example, Los Alamos allowed unescorted after-hours access to controlled areas to preserve what one official described as an open "campus atmosphere." Evaluations of the controls in areas most frequented by foreign visitors had not been conducted.

Additionally, we found that the counterintelligence programs for mitigating the threat posed by foreign visitors needed improvements.

⁴Department of Energy: DOE Needs to Improve Controls Over Foreign Visitors to Weapons Laboratories (GAO/RCED-97-229, Sept. 25, 1997).

These programs lacked comprehensive threat assessments, which are needed to identify the threats against DOE and the facilities most at risk, and lacked performance measures to gauge the effectiveness of these programs in neutralizing or deterring foreign espionage efforts. Without these tools, the counterintelligence programs lacked key data on threats to the facilities and on how well the facilities were protected against these threats.

Information Security

Information security involves protecting classified and/or sensitive information from inappropriate disclosure. We have found problems with information security at the nuclear weapons laboratories that could involve the loss of classified information and/or assist foreign nuclear weapons capability. For example, in February 1991, we reported that the Lawrence Livermore National Laboratory was unable to locate or determine the disposition of over 12,000 secret documents.⁵ These documents covered a wide range of topics, including nuclear weapons design. The laboratory conducted a search and located about 2,000 of these documents but did not conduct an assessment of the potential that the documents still missing compromised national security. We also found that DOE had not provided adequate oversight of the laboratory's classified document control program. Although the laboratory's classified document controls were evaluated annually, the evaluations were limited in scope and failed to identify that documents were missing.

In 1987 and 1989, we reported that DOE had inadequate controls over unclassified but sensitive information that could assist foreign nuclear weapons programs.⁶ Specifically, we found that countries—such as China, India, Iraq, and Pakistan—that pose a proliferation or security risk routinely obtain reprocessing and nuclear weapon-related information from DOE. We also found that DOE had transferred to other countries information appearing to meet the definition of sensitive nuclear technology, which requires export controls. Further, we found that DOE placed no restrictions on foreign nationals' involvement in reprocessing research at colleges and universities.

⁵Nuclear Security: Accountability for Livermore's Secret Classified Documents Is Inadequate (GAO/RCED-91-65, Feb. 8, 1991).

⁶Nuclear Nonproliferation: Department of Energy Needs Tighter Controls Over Reprocessing Information (GAO/RCED-87-150, Aug. 17, 1987) and Nuclear Nonproliferation: Better Controls Needed Over Weapons-Related Information and Technology (GAO/RCED-89-116, June 19, 1989).

In the 1990s, we continued to raise concerns. In 1991, we reported that DOE and its weapons laboratories were not complying with regulations designed to control the risk of weapons technology or material being transferred to foreign countries having ownership, control, or influence over U.S. companies performing classified work for DOE.⁷ We estimated that about 98 percent of the classified contracts awarded at the weapons laboratories during a 30-month period that were subject to such regulations did not fully comply with those regulations.

As recently as February of this year, we reported on information security problems in DOE's Initiatives for Proliferation Prevention with Russia.⁸ Under these initiatives, DOE may have provided defense-related information to Russian weapons scientists—an activity that could negatively affect U.S. national security. We reviewed 79 projects funded by DOE under this program and found nine to have dual-use implications—that is, both military and civilian applications—such as improving aircraft protective coating materials, enhancing communication capabilities among Russia's closed nuclear cities, and improving metals that could be used in military aircraft engines.

We note that the Department of Commerce has also recently raised concerns about nuclear-related exports to Russia from at least one DOE facility. Commerce notified Los Alamos in January 1999 that equipment the laboratory sent to nuclear facilities in Russia required export licenses and that the laboratory may be facing civil charges for not obtaining the required licenses.

Physical Security

Physical security controls involve the protection, primarily through security personnel and fences, of facilities and property. In 1991, we reported that security personnel were unable to demonstrate basic skills such as the apprehension and arrest of individuals who could represent a security threat.⁹ Prior to that report, in 1990, we reported that weaknesses were occurring with security personnel, as some security personnel could not appropriately handcuff, search, or arrest intruders or shoot

⁷Nuclear Nonproliferation: DOE Needs Better Controls to Identify Contractors Having Foreign Interests (GAO/RCED-91-83, Mar. 25, 1991).

⁸Nuclear Nonproliferation: Concerns With DOE's Efforts to Reduce the Risks Posed by Russia's Unemployed Weapons Scientists (GAO/RCED-99-54, Feb. 19, 1999).

⁹Nuclear Security: Safeguards and Security Weaknesses at DOE's Weapons Facilities (GAO/RCED-92-39, Dec. 13, 1991).

accurately.¹⁰ For example, we found that at the Los Alamos National Laboratory, 78 percent of the security personnel failed a test of required skills. Of the 54-member guard force, 42 failed to demonstrate adequate skill in using weapons, using a baton, or apprehending a person threatening the facility's security. Some failed more than one skill test. We also found that many Los Alamos' training records for security personnel were missing, incomplete, undated, changed, or unsigned. Without accurate and complete training records, DOE could not demonstrate that security personnel are properly trained to protect the facility.

Problems we have identified were not only with keeping threats out of the facilities, but also with keeping property in. For example, we reported in 1990 that the Lawrence Livermore National Laboratory could not locate about 16 percent of its inventory of government equipment, including video and photographic equipment as well as computers and computer-related equipment.¹¹ When we returned in 1991 to revisit this problem, we found that only about 3 percent of the missing equipment had been found; moreover, the laboratory's accountability controls over the equipment were weaker than in the prior year.¹² We also found that DOE's oversight of the situation was inadequate and that its property control policies were incomplete. We found similar problems at DOE's Rocky Flats Plant in 1994 where property worth millions of dollars was missing, such as forklifts and a semi-trailer. Eventually, property worth almost \$21 million was written off.¹³

Other problems in controlling sensitive equipment have been identified, such as disposing of usable nuclear-related equipment, that could pose a proliferation risk. For example, in 1993, DOE sold 57 different components of nuclear fuel reprocessing equipment and associated design documents, including blueprints, to an Idaho salvage dealer. DOE subsequently determined that the equipment and documents could be useful to a group or country with nuclear material to process, and that the equipment could significantly shorten the time necessary to develop and implement a nuclear materials reprocessing operation. This incident resulted from a

¹⁰Nuclear Safety: Potential Security Weaknesses at Los Alamos and Other DOE Facilities (GAO/RCED-91-12, Oct. 11, 1990).

¹¹Nuclear Security: DOE Oversight of Livermore's Property Management System Is Inadequate (GAO/RCED-90-122, Apr. 18, 1990).

¹²Nuclear Security: Property Control Problems at DOE's Livermore Laboratory Continue (GAO/RCED-91-141, May 16, 1991).

¹³Department of Energy: The Property Management System at the Rocky Flats Plant Is Inadequate (GAO/RCED-94-77, Mar. 1, 1994).

lack of vigilance at all levels for the potential impacts of releasing sensitive equipment and information to the public, and DOE conceded that system breakdowns of this type could have severe consequences in other similar situations where the equipment and documents may be extremely sensitive.

Personnel Security

DOE's personnel security clearance program is intended to provide assurance that personnel with access to classified material and information are trustworthy. We have found numerous problems in this area, dating back to the early 1980s. In 1987, and again in 1988, we found that DOE headquarters and some field offices were taking too long to conduct security investigations.¹⁴ We found that the delays in investigations lowered productivity, increased costs, and were a security concern. We also found that DOE's security clearance database was inaccurate. Clearance files at two field offices contained about 4,600 clearances that should have been terminated and over 600 employees at the Los Alamos laboratory had clearance badges, but did not have active clearances listed in the files. In other cases, the files contained inaccurate data, such as incorrect clearance levels and names. We followed DOE's efforts to remedy these problems, and by 1993, DOE had greatly reduced its backlog of investigations.¹⁵ However, some DOE contractors were not verifying information on prospective employees such as education, personal references, previous employment, and credit and law enforcement records.

Accounting for Nuclear Material

Material accountability relates to the protection of special nuclear material such as enriched uranium and plutonium. In 1991, we found that DOE facilities were not properly measuring, storing, and verifying quantities of nuclear materials.¹⁶ Without proper accounting for nuclear materials, missing quantities are more difficult to detect. We also found that DOE facilities were not complying with a rule requiring that two people always be present when nuclear material is being accessed or used. This rule is

¹⁴Nuclear Security: DOE's Reinvestigation of Employees Has Not Been Timely ([GAO/RCED-87-72](#), Mar. 10, 1987) and Nuclear Security: DOE Needs a More Accurate and Efficient Security Clearance Program ([GAO/RCED-88-28](#), Dec. 29, 1987).

¹⁵Nuclear Security: DOE's Progress on Reducing Its Security Clearance Work Load ([GAO/RCED-93-183](#), Aug. 12, 1993).

¹⁶Nuclear Security: Safeguards and Security Weaknesses at DOE's Weapons Facilities ([GAO/RCED-92-39](#), Dec. 13, 1991).

designed to preclude a single individual from having access to and diverting nuclear material without detection.

In 1994 and 1995, we reported on DOE's efforts to develop a nuclear material tracking system for monitoring nuclear materials exported to foreign countries.¹⁷ A nuclear tracking system is important to protect nuclear materials from loss, theft, or diversion. In 1994, we reported that the existing system was not able to track all exported nuclear materials and equipment; moreover, DOE had not adequately planned the replacement system. We recommended activities that we believed were necessary to ensure that the new system would be successful. In 1995, we found that DOE had not implemented our recommendations and had no plans to do so. We also found that the system still had development risks. DOE was not adequately addressing these risks and had no plans to conduct acceptance testing, and as a result of these problems, it had no assurance that the system would ever perform as intended. Our concerns were justified, as 3 months after the new tracking system began operating, the technical committee overseeing this system concluded that it faced a high probability of failure and that the system should not be used.

Key Factors Contributing to Security Problems

As you can see, Mr. Chairman, our work over the years has identified a wide variety of specific security problems at DOE facilities. While each individual security problem is a concern, when looked at collectively over an extended period of time, a more serious situation becomes apparent that stems from systemic causes. In our view, there are two overall systemic causes of the security problems. First, there has been a longstanding lack of attention and/or priority given to security matters by DOE managers and its contractors. Second, and probably most importantly, there is a serious lack of accountability among DOE and its contractors for their actions. These two causes are interrelated and not easily corrected.

Lack of Attention and Priority to Security

The lack of attention and priority given by DOE management and its contractors to security matters can be seen in many areas. One area is its long-term commitment to improving security. For example, in response to our 1988 report on foreign visitors, DOE required more background checks be obtained. However, 6 years later, it granted Los Alamos and Sandia exemptions to this requirement, and as a result, few background checks were conducted at those facilities. Also in response to our 1988 report, DOE

¹⁷Nuclear Nonproliferation: U.S. International Nuclear Materials Tracking Capabilities Are Limited (GAO/RCED/AIMD-95-5, Dec. 27, 1994) and Department of Energy: Poor Management of Nuclear Materials Tracking System Makes Success Unlikely (GAO/AIMD-95-165, Aug. 3, 1995).

brought in FBI personnel to assist its counterintelligence programs. However, the FBI eventually withdrew its personnel in the early 1990s because of resistance within DOE to implementing the measures the FBI staff believed necessary to improve security. We note with interest that in response to the current concerns with foreign visitors and other espionage threats against DOE facilities, the FBI is again being brought in to direct DOE's counterintelligence program.

The lack of attention to security matters can be seen in other ways as well. In 1996, when foreign visitors were coming in increasing numbers to the laboratory, Los Alamos funded only 1.1 staff years for its counterintelligence program. Essentially, one person had to monitor not only thousands of visitors to the laboratory but also monitor over 1,000 visits made by laboratory scientists overseas. This problem was not isolated to Los Alamos; funding for counterintelligence activities at DOE facilities during the mid-1990s could only be considered minimal. Prior to fiscal year 1997, DOE provided no direct funding for counterintelligence programs at its facilities. Consequently, at eight high-risk facilities, counterintelligence program funding was obtained from overhead accounts and totaled only \$1.4 million and 15 staff. Resources were inadequate in other areas. In 1992, we reported that safeguard and security plans and vulnerability assessments for many of DOE's sensitive facilities were almost 2 years overdue because, among other reasons, DOE had not provided sufficient staff to get the job done. These plans and assessments are important in identifying threats to the facilities as well as devising countermeasures to the threats. In our view, not providing sufficient resources to these important activities indicates that security is not a top priority. This problem is not new. We reported in 1980 and again in 1982 that funding for security has low priority and little visibility.¹⁸

Earlier I mentioned missing classified documents at Lawrence Livermore Laboratory. In response to that report, both DOE and laboratory officials showed little concern for the seriousness of the situation and told us that they believed the missing documents were the result of administrative error, such as inaccurate record keeping and not theft. Although DOE is required to conduct an assessment of the missing documents' potential for compromising national security, at the time of our report DOE did not plan to do this for over 1 year after we reported the documents missing.

¹⁸Nuclear Fuel Reprocessing and the Problems of Safeguarding Against the Spread of Nuclear Weapons, (EMD-80-38, Mar. 18, 1980) and Safeguards and Security At DOE's Weapons Facilities Are Still Not Adequate, (C-GAO/EMD-82-1, Aug. 20, 1982).

Similarly, security problems identified by DOE's own internal security oversight staff often go unresolved, even today. For example, issues related to the inadequate separation of classified and unclassified computer networks were identified at Los Alamos in 1988, 1992, and 1994. This problem was only partially corrected in 1997, as classified information was discovered on Los Alamos' unclassified computer network in 1998. We found in 1991 that deficiencies DOE identified as early as 1985 at six facilities had not been corrected by 1990 because DOE did not have a systematic method to track corrective actions taken on its own security inspections.

The low priority given security matters is underscored by how DOE manages its contractors. DOE's contract with the University of California for managing its Los Alamos and Lawrence Livermore national laboratories contain specific measures for evaluating the university's performance. These measures are reviewed annually by DOE and should reflect the most important activities of the contractor. However, none of the 102 measures in the Los Alamos contract or the 86 measures in the Lawrence Livermore contract relate to counterintelligence. We reported in 1997 that DOE had not developed measures for evaluating the laboratories' counterintelligence activities, and DOE told us it was considering amending its contracts to address this problem. Performance measures for counterintelligence activities are still not in its contracts for these two laboratories. The contracts do contain a related measure, for safeguarding classified documents and materials from unauthorized persons, but this measure represents less than 1 percent of the contractor's total score. Safeguards and security performance measures in general account for only about 5 percent of the university's performance evaluations for the two laboratories.

The low priority afforded security matters may account for the low rating DOE has just given nuclear weapons facilities in its latest Annual Report on Safeguards and Security. Two weapons laboratories—Los Alamos and Lawrence Livermore—received a rating of “marginal” for 1997 and 1998. In its annual evaluation of Los Alamos' overall performance, however, DOE rated the laboratory as “excellent” in safeguards and security, even though the laboratory reported 45 classified matter compromises and infractions for the year. The previous 3-year rolling average was 20. DOE explained that the overall excellent score was justified based on Los Alamos' performance in many different aspects of safeguards and security. For future contracts, a new DOE policy will enable the Department to withhold a laboratory's full fee for catastrophic events, such as a loss of

control over classified material. We recommended as far back as 1990 that DOE should withhold a contractor's fee for failing to fix security problems on a timely basis. Both laboratories have been managed by the University of California since their inception without recompeting these contracts, making them among the longest-running contracts in the DOE complex.

Lack of Accountability

In the final analysis, security problems reflect a lack of accountability. The well-documented history of security lapses in the nuclear weapons complex show that DOE is not holding its contractors accountable for meeting all of its important responsibilities. Furthermore, DOE leadership is not holding its program managers accountable for making sure contractors do their jobs.

Achieving accountability in DOE is made more difficult by its complex organizational structure. Past advisory groups and internal DOE studies have often reported on DOE's complex organizational structure and the problems in accountability that result from unclear chains of command among headquarters, field offices, and contractors. For example

- The FBI, which examined DOE's counterintelligence activities in 1997, noted that there is a gap between authority and responsibility, particularly when national interests compete with specialized interests of the academic or corporate management that operate the laboratories. Citing the laboratories' autonomy granted by DOE, the FBI found that this autonomy has made national guidance, oversight, and accountability of the laboratories' counterintelligence programs arduous and inefficient.
- A 1997 report by the Institute for Defense Analyses cited serious flaws in DOE's organizational structure. Noting long-standing concerns in DOE about how best to define the relationships between field offices and the headquarters program offices that sponsor work, the Institute concluded that "the overall picture that emerges is one of considerable confusion over vertical relationships and the roles of line and staff officials." As a consequence of DOE's complex structure, the Institute reported that unclear chains of command led to the weak integration of programs and functions across the Department, and confusion over the difference between line and staff roles.¹⁹
- A 1997 DOE internal report stated that "lack of clarity, inconsistency, and variability in the relationship between headquarters management and field organizations has been a longstanding criticism of DOE operations This

¹⁹The Organization and Management of the Nuclear Weapons Program, Institute for Defense Analyses (March 1997).

is particularly true in situations when several headquarters programs fund activities at laboratories. . . .”²⁰ DOE’s Laboratory Operations Board also reported in 1997 on DOE’s organizational problems, noting that there were inefficiencies due to DOE’s complicated management structure. The Board recommended that DOE undertake a major effort to rationalize and simplify its headquarters and field management structure to clarify roles and responsibilities.²¹

DOE’s complex organization stems from the multiple levels of reporting that exist between contractors, field offices, and headquarters program offices. Further complicating reporting, DOE assigns each laboratory to a field operations office, whose director serves as the contract manager and also prepares the contractor’s annual appraisal. The operations office, however, reports to a separate headquarters office under the Deputy Secretary, not to the program office that supplies the funding. Thus, while the Los Alamos National Laboratory is primarily funded by Defense Programs, it reports to a field manager who reports to another part of the agency.

We believe these organizational weaknesses are a major reason why DOE has been unable to develop long-term solutions to the recurring problems reported by advisory groups. Recent events at the Brookhaven National Laboratory in New York, for example, illustrate the consequences of organizational confusion. Former Secretary Pena fired the contractor operating the laboratory when he learned that the contractor breached the community’s trust by failing to ensure it could operate safely. DOE did not have a clear chain of command over environment, safety, and health matters and, as a result, laboratory performance suffered in the absence of DOE accountability. To address problems in DOE’s oversight, the Secretary removed the Chicago Operations Office from the chain of command over Brookhaven, by having the on-site DOE staff report directly to the Secretary’s office. We found, however, that even though the on-site staff was technically reporting directly to the Secretary’s office, the Chicago Operations Office was still managing the contractor on a day-to-day basis, including retaining the responsibility for preparing the laboratory’s annual appraisal. Chicago officials told us that there was considerable confusion regarding the roles of Chicago and on-site DOE staff. As a result, DOE did not fundamentally change how it manages the contractor through its field offices.

²⁰DOE Action Plan for Improved Management of Brookhaven National Laboratory, DOE (July 1997).

²¹Department of Energy: Uncertain Progress in Implementing National Laboratory Reforms, (GAO/RCED-98-197, Sept. 10, 1998).

This concludes my testimony, and I will be happy to answer any questions you may have.

GAO Related Products

Nuclear Fuel Reprocessing And The Problems Of Safeguarding Against The Spread Of Nuclear Weapons (EMD-80-38, Mar. 18, 1980).

Safeguards and Security At DOE's Weapons Facilities Are Still Not Adequate (C-GAO/EMD-82-1, Aug. 20, 1982).

Security Concerns at DOE's Rocky Flats Nuclear Weapons Production Facility (GAO/RCED-85-83, Apr. 22, 1985).

Nuclear Nonproliferation: DOE Has Insufficient Control Over Nuclear Technology Exports (GAO/RCED-86-144, May 1, 1986).

Nuclear Security: DOE's Reinvestigation of Employees Has Not Been Timely (GAO/RCED-87-72, Mar. 10, 1987).

Nuclear Nonproliferation: Department of Energy Needs Tighter Controls Over Reprocessing Information (GAO/RCED-87-150, Aug. 17, 1987).

Nuclear Security: DOE Needs a More Accurate and Efficient Security Clearance Program (GAO/RCED-88-28, Dec. 29, 1987).

Nuclear Nonproliferation: Major Weaknesses in Foreign Visitor Controls at Weapons Laboratories (GAO/RCED-89-31, Oct. 11, 1988).

Nuclear Security: DOE Actions to Improve the Personnel Clearance Program (GAO/RCED-89-34, Nov. 9, 1988).

Nuclear Nonproliferation: Better Controls Needed Over Weapons-Related Information and Technology (GAO/RCED-89-116, June 19, 1989).

Nuclear Security: DOE Oversight of Livermore's Property Management System Is Inadequate (GAO/RCED-90-122, Apr. 18, 1990).

Nuclear Safety: Potential Security Weaknesses at Los Alamos and Other DOE Facilities (GAO/RCED-91-12, Oct. 11, 1990).

Nuclear Security: Accountability for Livermore's Secret Classified Documents Is Inadequate (GAO/RCED-91-65, Feb. 8, 1991).

Nuclear Nonproliferation: DOE Needs Better Controls to Identify Contractors Having Foreign Interests (GAO/RCED-91-83, Mar. 25, 1991).

Nuclear Security: Property Control Problems at DOE's Livermore Laboratory Continue ([GAO/RCED-91-141](#), May 16, 1991).

Nuclear Security: DOE Original Classification Authority Has Been Improperly Delegated ([GAO/RCED-91-183](#), July 5, 1991).

Nuclear Security: Safeguards and Security Weaknesses at DOE's Weapons Facilities ([GAO/RCED-92-39](#), Dec. 13, 1991).

Nuclear Security: Weak Internal Controls Hamper Oversight of DOE's Security Program ([GAO/RCED-92-146](#), June 29, 1992).

Nuclear Security: Improving Correction of Security Deficiencies at DOE's Weapons Facilities ([GAO/RCED-93-10](#), Nov. 16, 1992).

Nuclear Security: Safeguards and Security Planning at DOE Facilities Incomplete ([GAO/RCED-93-14](#), Oct. 30, 1992).

Personnel Security: Efforts by DOD and DOE to Eliminate Duplicative Background Investigations ([GAO/RCED-93-23](#), May 10, 1993).

Nuclear Security: DOE's Progress on Reducing Its Security Clearance Work Load ([GAO/RCED-93-183](#), Aug. 12, 1993).

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