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**The Department of Energy's Foreign Visitors Program: Scientific
Inquiry vs. National Security**

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The U.S. Department of Energy's (DOE) defense nuclear facilities[1] are responsible for producing and maintaining the U.S.' nuclear weapons arsenal. Spread at dispersed locations across the U.S and developed over the five decades since World War II, these facilities have contributed to the U.S. nuclear weapons arsenal's successful deterrence of nuclear attacks against the U.S. and have also promoted scientific research in areas besides nuclear weapons research. Responsibility for nuclear weapons work at these facilities is divided into four categories:

- A. Weapons research and development at New Mexico's Los Alamos and Sandia National Laboratories and California's Lawrence Livermore National Laboratory;
- B. Nuclear materials production and processing (plutonium and tritium) at Washington's Hanford Plant and South Carolina's Savannah River site and uranium processing at Ohio's Feed Materials Production Center and the Idaho National Engineering Laboratory;
- C. Warhead component production at Colorado's Rocky Flats Plant, Tennessee's Y-12 Plant, Ohio's Mound Plant, Florida's Pinellas Plant, Missouri's Kansas City Plant, and Texas' Pantex Plant where final assembly occurs; and

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D. Warhead testing at the Nevada Test Site.[2]

Besides nuclear weapons research, DOE laboratories also conduct scientific research in areas such as biomedicine, high-performance computing, and environmental restoration which benefit from normal scientific exchange between Americans and foreign scientists. The 33 DOE labs have 56,000 employees, an annual budget of approximately \$6.5 billion, and had received 63 Nobel prizes as of late 1997. Such scientific interaction has seen a steady increase in the number of foreign nationals visiting DOE labs from 3,800 per year in 1988 to approximately 7,000 a decade later.[3]

This influx of foreign visitors and employees at DOE labs is a natural outgrowth of scientific research's global nature. It's statutory authorization derives from the Atomic Energy Act of 1954 which called for international cooperation in developing peaceful uses of nuclear energy. Additional provisions of this act provide for classifying and controlling weapons information and a prohibition against disseminating such information to foreign countries without presidential authorization.[4]

This international cooperation has undoubtedly produced scientific

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benefits and facilitated international cooperation as provided for by the authorizing statute. Unfortunately, the agencies and facilities executing this statute's requirements have been less attentive to and successful in fulfilling their statutory requirements to protect the security of this information from unauthorized users.

Concern over DOE nuclear weapons information security dates back at least two decades. It has built steadily since then, culminating in a crescendo of reports during 1999 documenting grievous security lapses and the hemorrhaging of crucial national security information from DOE labs to potentially hostile foreign governments. An early expression of concern over possible security problems involving foreign visitors at DOE labs was expressed in an April 1979 General Accounting Office (GAO) report. This report warned that it was impossible to estimate the role played by U.S. nuclear training of foreign scientists in spreading nuclear proliferation and that there was no way to determine the true intentions of foreign nationals trained in the U.S. or the motivations of their countries in having them receive such training.[5]

Recommendations made in this report to enhance nuclear weapons information security included considering discontinuing distribution

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of government publications capable of providing substantial assistance to anyone seeking a nuclear weapons capability, clarifying specific data or information subject to sensitive nuclear technology export criteria in the Nuclear Nonproliferation Act, and considering home country adherence to the Nonproliferation Treaty in selecting foreign nationals to participate in and receive fellowships from U.S. Government nuclear research programs.[6] An additional demonstration of this report's concern with security is provided by the following admonition:

Although aliens may have an important role in advancing U.S. nuclear research and development, the Secretary of Energy should reassess foreign participation at Government-owned nuclear research facilities and limit, where appropriate, participation that could be used to significantly raise the ability of another nation to make nuclear explosives.[7]

These security concerns would receive heightened emphasis in another GAO report three years later. This document determined that some DOE labs did not control sensitive items despite their susceptibility to theft, properly identify or tag items, adequately account for items, or document property movements or transfers. Another report finding was the practice

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of two labs of excluding items costing \$500 or more from sensitive property controls even though such items would appear to be more vulnerable to theft.[8]

Further concern over security and long-term development at DOE labs would be expressed as the 1980's progressed. Hearings before the House Energy and Commerce Committee in 1987 and 1988 revealed safety problems such as radiation releases and deficient fire protection at DOE nuclear facilities. An equally troubling revelation of these hearings saw DOE weapons site workers threatened with losing security clearances or termination if they reported safety and other concerns to U.S. Government agencies including Congress.[9] Concern over the future of DOE's nuclear complex led Congress to require a presidential report on the future structure of this complex in 1988 and 1989 defense authorization legislation.[10] Congressional concern was also expressed over what it saw as the decreasing importance of DOE's Assistant Secretary for Defense Programs and the Defense Department (DOD) Assistant to the Secretary of Defense for Atomic Energy offices with both of these offices having nuclear security responsibilities.[11]

Nearly a decade after expressing its initial concerns over the foreign

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visitors program, GAO provided further documentation of its concerns with its October 1988 report *Nuclear Nonproliferation: Major Weaknesses in Foreign Visitor Controls at Weapons Laboratories*. Findings from this document indicate that DOE granted nearly 6,700 foreign nationals access to its weapons laboratories between January 1986 and September 1987. These visitors included 222 from communist countries and 675 from other sensitive countries. From this total, GAO randomly selected and reviewed the files for 181 communist and 637 sensitive country visitors during the aforementioned period.[12]

GAO went on to chronicle serious foreign visitors program weaknesses. It mentioned that DOE failed to follow its own requirements and obtain background information on visitors from communist or sensitive countries, its failure to use available data for prescreening visitors from foreign facilities suspected of nuclear weapons related activities, failing to identify and review all visits involving sensitive weapons related subjects, not considering a number of weapons related activities as sensitive subjects, failing to enforce various internal control requirements for approving, monitoring, and reporting foreign visits, and the absence of an integrated information system or reviews of the foreign visitors

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program.[13]

GAO reports continued to document DOE security problems in the early 1990's. A 1991 report warned that DOE information systems containing important data about security weaknesses and incidents possessed limited analytical capabilities and unreliable information. This predicament was compounded by DOE's failure to perform a comprehensive assessment of its information and information technology needs as applied to its security program. GAO asserted such assessment was needed to ensure the coordination and focus of departmental information resources capable of achieving DOE security goals and sharing or transferring data.[14]

Two years later, another GAO report evaluated DOE's security clearance program praising its personnel security clearance backlog reduction from nearly 135,000 cases in 1988 to 1,033 cases in 1993 along with its reduction of clearances issued from 220,000 in 1986 to 174,000 in 1992.[15] However, GAO also criticized DOE for not focusing sufficient management attention on preemployment screening of potential employees, ineffective management of cases involving questionable employee background information, and for not providing closer oversight of

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contractors preemployment investigation of prospective employees.[16]

The mid-1990's saw increased international visitation to DOE labs with the percentage of average annual visits by foreign nationals increasing by over 50% from the late 1980s to the mid-1990s.[17] A September 1997 GAO study showed that out of 5,472 visits to the Los Alamos, Livermore, and Sandia Laboratories between 1994-1996, by visitors from sensitive countries such as China, Pakistan, and Russia, background checks were performed for only 892 or 16% of these visitors.[18]

This same study also detailed additional problems. These included DOE's failure to follow its procedures requiring foreign visitor background checks, Los Alamos and Sandia obtaining a partial exemption to DOE Order 1240.2B in 1994 thus essentially avoiding the background check process, giving foreign visitors unescorted 24-hour access to controlled area facilities, boxes marked as containing sensitive material being left in a foreign visitor accessible hallway, classified information being included in a newsletter sent to 11 foreign nationals, and DOE counterintelligence programs not being based on a comprehensive threat assessment examining the nature and extent of foreign espionage activities.[19]

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Concern over possible foreign espionage at DOE labs, as documented by reports such as this, prompted the House of Representatives to approve the formation of a special investigative committee on June 18, 1998 to examine these security concerns.[20] Chaired by Rep. Chris Cox (R-CA), the House Select Committee on U.S. National Security and Military/Commercial Concerns with the People's Republic of China worked throughout 1998 before releasing a classified version of its report in January 1999 and an unclassified version in May 1999.[21]

Representing the first in a series of blasts against DOE security practices, the Cox Report contained a number of serious charges within its three volumes. It argued that Chinese espionage at DOE laboratories dates from the late 1970s and continues to the present, that China had stolen design information on the U.S.' most advanced nuclear weapons along with classified information on all currently deployed nuclear warheads including the W-88 warhead on Trident submarine D-5 ballistic missiles, and design and other classified information on neutron bomb warheads. Additional report determinations include Chinese intelligence collection efforts targeting Los Alamos, Lawrence Livermore, Oak Ridge, and Sandia laboratories, that China would exploit stolen design information in building

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its next generation of nuclear warheads, that stolen U.S. nuclear secrets enable China's nuclear weapons capabilities to match the U.S.', facilitate the enhancement of mobile Chinese intercontinental ballistic missiles (ICBMs), and that counterintelligence programs at DOE weapons laboratories fail to meet even minimal standards.[22]

Select committee recommendations to repair such damages included requiring a semiannual presidential report on Chinese espionage and responsive and preventative steps taken by various U.S. Government agencies to this espionage, drastically enhancing DOE's counterintelligence capability, congressional examination of whether DOE should retain its nuclear weapons responsibilities, and the need for intelligence community compliance with the National Security Act and congressional insistence on strict adherence to this statute. Additional Cox recommendations include advocating Chinese compliance with the Missile Technology Control Regime (MTCR), greater U.S. MTCR enforcement leadership, giving the State Department sole satellite licensing authority, and new legislation to improve sensitive law enforcement information sharing within the U.S. Government's executive branch.[23]

Cox report contents ignited a political firestorm that continues to rage.

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Wen-Ho Lee, a Los Alamos employee, was arrested on charges of performing espionage for China.[24] Another assault on DOE laboratory security came in June 1999 from the President's Council on Foreign Intelligence Advisory Board (PFIAB). This organization advises the President on intelligence-related issues and had been charged by President Clinton with reviewing the adequacy of DOE laboratory security March 18, 1999.[25]

Chaired by former Senator Warren Rudman (R-NH), PFIAB's report also excoriated the lax security at DOE laboratories. PFIAB determined that DOE weapons laboratories have been and remain major targets of foreign intelligence agencies, open-source information on these DOE facilities alone reveals their security and counterintelligence operations receiving low priority for decades, organizational disarray, managerial neglect, and an arrogant culture have created an espionage scandal waiting to happen, that the subtlety and skill of Chinese intelligence gathering methods are particularly challenging for the U.S. and its weapons laboratories, that DOE is a dysfunctional bureaucracy incapable of reform, that minimum qualifications for the Secretary of Energy include national security and intelligence experience, and the need for fundamental

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change in DOE's institutional culture and attitude toward security.[26]

Rudman panel recommendations include DOE laboratories recognizing that national nuclear stockpile and nuclear secrets protection are its foremost priorities, the need for independent oversight of weapons laboratories, replacing the 15 congressional committees currently overseeing weapons laboratories with a single joint committee, the CIA and FBI expanding their activity to include the weapons facilities, and a more effective personnel security program with clear and attainable thresholds for suspending clearances with cause that includes pending criminal investigations. Additional recommendations include establishing a comprehensive weapons lab cyber-security program, developing a comprehensive classified document control system and classification review, and continuing the foreign visitors program but ensuring tighter security standards such as clear demarcation between secure and open areas at labs and firm guidelines for weapons lab employee contacts with foreign visitors from sensitive countries.[27]

DOE did not remain oblivious to these security concerns. It's Office of Safeguards and Security issued a report in 1999 that gave marginal or unsatisfactory security ratings to Los Alamos, Sandia,

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Lawrence Livermore, Oak Ridge's Y-12 plant, and Rocky Flats in areas such as protection program operations, information security, nuclear materials control and accountability, and personnel security.[28]

A more official policy statement from DOE came with a July 14, 1999 memorandum from Energy Secretary Bill Richardson. This document listed new policies and procedures for DOE to follow in regards to unclassified visits and assignments by foreign nationals at DOE facilities. Richardson's memorandum rescinded DOE order 1240.2B along with its foreign visitor exemptions and waivers. The new directive N 142.1 establishes the Energy Secretary's authority as the sole official responsible for approving visits and assignments for foreign nationals from countries the State Department identifies as terrorist nations, requiring security plans for all unclassified foreign visits and assignments to secure areas at DOE facilities, delegating approval authority for foreign visits and assignments to DOE or contractor site managers, and requiring the involvement of local counterintelligence, security, and export control officials in the foreign visit approval process.[29]

These DOE efforts, though, could not diminish the consequences of its victimization by foreign espionage activities or its enormous failure to

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prevent such activity despite two decades worth of reports documenting DOE's manifold security vulnerabilities. This failure to provide an effective response to long-term and growing foreign intelligence efforts to acquire sensitive technologies with national security applications[30] produced increasing congressional criticism of an already embattled agency and prompted the introduction of legislation to overhaul U.S. nuclear weapons management during the summer of 1999.

Concern over the foreign visitors program reached congressional radar screens before issuance of the unclassified Cox and PFIAB reports. On March 25, 1999, Rep. Jim Ryun (R-KS) introduced H.R. 1348 whose provisions included establishing a moratorium on the foreign visitors program and requiring the creation of counterintelligence programs at DOE laboratories.[31] Senator Richard Shelby (R-AL), the chair of the Senate Select Committee on Intelligence, introduced a companion version of Ryun's bill on April 27, 1999.[32]

Various congressional committees conducted hearings on Cox and Rudman report findings during the summer of 1999 in an effort to obtain additional information on DOE security breakdowns and seek possible legislative remedies to these including the possible creation of a new

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agency to oversee DOE nuclear facilities. During a July 13, 1999 House Commerce Committee hearing on this issue, Rep. Heather Wilson (R-NM), whose district includes the Sandia National Laboratory, observed that despite the voluminous literature on DOE lab security problems little fundamental security improvement had been achieved and that it was necessary for DOE and Congress to try more radical reforms.[33]

Wilson went on to assert that three principles must guide any DOE nuclear security reform proposals:

1. Any legislation must strengthen management lines of authority and accountability, not just move boxes around on an organizational chart. This must be about changing the way that our nuclear programs are managed and strengthening the authority of those in a clearly defined chain of command.
2. Our multi-program laboratories must continue to be able to do work on a wide range of subjects for many customers. Fully one third of the work conducted at our national laboratories is not for the nuclear weapons program....
3. The independent agency within the DOE must have necessary support and staff functions within it to operate independently....[34]

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Another important hearing was conducted by the House Government Reform Committee on June 24, 1999. This hearing examined whether advocates of stricter security controls at DOE and the Defense Department received personnel sanctions for favoring enhanced security measures. Edward McCallum, the Director of DOE's Office of Safeguards and Security testified that several DOE security officers responded to former Energy Secretary Hazel O'Leary's 1994 call to report security deficiencies without fear of reprisal only to suffer disciplinary sanctions afterwards. McCallum also maintained that a long-serving DOE Security Director retired in 1999 after attempting to take action against an employee who violated security procedures and admitted a Russian visitor with an uncleared laptop computer into a secure area at the Savannah River site despite being warned against this by the Security Office.[35]

Another witness, Peter Leitner of the Defense Threat Reduction Agency, testified that he received poor performance evaluations and financial penalties for his work denying export license applications originating with DOE laboratories which he believed would transfer equipment with nuclear weapons application to Russia. Such sanctions were also applied against Leitner for his reports that were critical of

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Chinese efforts to obtain U.S. nuclear technology which he contended were facilitated by the liberalization of U.S. export controls on sensitive technologies.[36]

Legislation introduced by Ryun and Shelby, testimony from the aforementioned and other hearings, Cox and Rudman Report findings, the Thompson-Lieberman investigation, and congressional displeasure at Clinton Administration national security policy and DOE's past security performance, contributed to a significant revamping of DOE nuclear facilities within the 2000 defense authorization bill. The conference committee report for this legislation was published on August 6, 1999.

This document proposed the creation of a new agency within DOE to address these long-standing security deficiencies. Referring to DOE's well-documented security problems, conferees proposed the following treatment:

To correct these systemic problems, the conferees agree to establish the National Nuclear Security Administration (NNSA), a semi-autonomous agency within the Department that would be responsible for nuclear weapons development, naval nuclear propulsion, defense nuclear nonproliferation, and fissile material disposition; establish

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security, counterintelligence, and intelligence offices; and prescribe personnel, budgeting, and other management practices for the NNSA.[37]

Congress also endowed the NNSA with numerous institutional characteristics. The agency would be part of DOE and headed by an Under Secretary for Nuclear Security appointed by the President and subject to Senate confirmation. The Secretary of Energy would be responsible for developing and promoting departmental security, intelligence, and counterintelligence policies and establish DOE counterintelligence and intelligence offices. NNSA's mission would be enhancing national security through military application of nuclear energy and reducing global danger from mass destruction weapons.[38]

Additional congressional mandates for NNSA include its administrator establishing policies and procedures to ensure maximum protection for classified information in its possession, the counterintelligence and intelligence offices being headed by a senior Federal Bureau of Investigation (FBI) executive with counterintelligence experience, and a requirement that this official submit an annual report to the Energy Secretary, Director of Central Intelligence, FBI Director, and congressional defense

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committees on the effectiveness of DOE facilities counterintelligence efforts in classified and unclassified versions. Other stipulations include NNSA establishment of procedures prohibiting individuals without security clearances from having unescorted access to any classified area or access to classified information, users of NNSA computers having no privacy expectations in their use of government computers, and administration submission of annual reports to congressional defense committees on special access programs with such reports containing budgetary and discussion information on these programs along with justification for designating such programs as special access.[39]

This legislation became law on October 5, 1999 when President Clinton signed the Fiscal Year 2000 Defense Authorization Act. In signing the legislation, though, Clinton expressed strong concerns about provisions dealing with NNSA including what he asserted was congress' intent to isolate NNSA personnel and contractors from outside direction, limit the Secretary of Energy's ability to appoint subordinates to direct NNSA activities, and concerns dealing with U.S. policy toward China.[40]

Congressional implementation of this statute began the same day

when House Armed Services Committee Chair Rep. Floyd Spence (R-SC) announced the appointment of an oversight panel chaired by Rep. Mac Thornberry (R-TX) on DOE reorganization. This panel was charged with working with Secretary Richardson to ensure that DOE security reforms contained in the defense authorization legislation were carried out.[41]

The goals of DOE's Foreign Visitors Program in promoting international scientific research and cooperation are laudable. Evidence of the program's success in these objectives are the numerous Nobel Prizes awarded to DOE lab personnel and the opportunity it has provided for numerous foreign nationals to enhance their scientific expertise for their own professional benefit and the advancement of scientific research in their countries.

Unfortunately for the U.S. and its national security interests, this openness and the desire to promote enhanced international understanding of nuclear science, created a climate in which security over militarily sensitive material was effectively ignored by DOE personnel, by DOE predecessor agencies personnel, and postwar presidential administrations. This lackadaisical approach to security was exploited by individuals from nations such as China that do not share the U.S.' lofty ideals of free and open interchange of ideas and research.

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Without access to classified Chinese, foreign, or U.S. intelligence assessments of the value of stolen U.S. nuclear secrets, estimating the exact impact and cost of this espionage on U.S. national security is impossible. Cox report findings about the loss of these secrets in the area of Chinese nuclear warhead technology acquisition alone are alarming.

The creation of the NNSA and other reforms contained in the just-passed defense authorization legislation need time for implementation, regular and effective congressional oversight, and funding to determine their efficacy. Ongoing cooperation between Congress and present and future presidential administrations is also required if U.S. nuclear information security is to be enhanced. Rep. Wilson's advocacy of the need for strengthened DOE management accountability on security issues is of particular importance in future policy developments concerning DOE lab security.

The foreign visitors program should continue but with much tougher security oversight and the swift imposition of stringent criminal penalties for violations committed by DOE personnel or foreign visitors. The program should also restrict access to sensitive information and work areas to cleared visitors from countries with which the U.S. has a formal military alliance. Most importantly, it is imperative that DOE lab employees and

contractors inculcate an attitude in which protecting sensitive information becomes of paramount importance even if it is at the expense of the ideal of enhancing international scientific information exchange. Congress should also examine the feasibility of establishing a direct link between lab funding and lab performance on security and counterintelligence performance.

DOE's foreign visitors program illustrates the consequences of ignoring the security issues involved in working with vital national security information. Such inattention to security has already proven costly to U.S. national security although the full cost can not be determined without access to classified U.S. and foreign intelligence assessments or knowledge of the results of future national security crises involving the U.S. Revelation of foreign espionage at DOE labs reminds us that the U.S. remains vulnerable to a variety of national security threats and that not all individuals and nations share the U.S.' often idyllic goals about the free and open exchange of scientific and other information.

The saga of espionage at DOE labs should also give pause to those advocating the immediate and wholesale declassification of voluminous quantities of U.S. Government information without recognizing the reality

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that there are individuals, organizations, and nations who will attempt to use such information to threaten U.S. national security interests, the physical security of Americans, and the security of people from nations allied with the U.S. Sober acceptance of this reality should be incumbent on all of us working with government information and desirous of enhancing public access to such resources.

It should also foster a professional and ethical commitment by depository librarians to strive for a more pragmatic and accountable approach to government information access. This approach acknowledges the desirability of complete and uncensored access to government information while recognizing the serious intellectual and moral consequences of unauthorized individuals and groups gaining access to sensitive information whose declassification and release has not been authorized by requisite governmental authority. Adopting and adhering to this pragmatic and balanced assessment of government information access represents an intellectually credible and professionally sound way for depository librarians to enter the new millenium as exponents of a more informed citizenry.

References and Notes

[1]There are several histories of individual Energy Department laboratories. Examples include J.L. Heilbron and Robert W. Seidel, *Lawrence and His Laboratory: A History of the Lawrence Berkeley Laboratory Volume*, (Berkeley: University of California Press, 1989), Jack M. Holl, *Argonne National Laboratory, 1946-96*, (Urbana: University of Illinois Press, 1997), Leland Johnson and Daniel Schaffer, *Oak Ridge National Laboratory: The First Fifty Years*, (Knoxville: University of Tennessee Press), and Jo Ann Shroyer, *Secret Mesa: Inside Los Alamos National Laboratory*, (New York: John Wiley & Sons, Inc., 1998). Useful coverage of issues found in researching nuclear energy policy can be found in Shirley J. Burton, Susan H. Karren, and Joseph D. Suster, "Following the Paper Trail West: Using Archival Sources for Nuclear History," *Pacific Northwest Quarterly*, 85, no. 1 (1994): 35-38; and Terrence R. Fehner and F.G. Gosling, "Coming in From the Cold: Regulating U.S. Department of Energy Nuclear Facilities, 1942-96," *Environmental History*, 1, no. 2 (1996): 5-33.

[2]U.S. Congress, Office of Technology Assessment, *Complex Cleanup: The Environmental Legacy of Nuclear Weapons Production*, (Washington, DC: GPO, 1991): 15.

[3]See U.S. Congress, House Committee on Commerce, Subcommittee on Oversight and Investigations, *Assessing the Department of Energy's Management for the National Laboratory System*, (Washington, DC: GPO, 1997): 1-2 for the budgetary, personnel, and Nobel Prize winner numbers. See U.S. Congress, House Committee on National Security, Military Procurement Subcommittee, *Department of Energy's Foreign Visitor Program*, (Washington, DC: GPO, 1999): 2-4; for the increase in foreign visitors to DOE labs.

[4]"Atomic Energy Act of 1954," Public Law 83-703, 68 *U.S. Statutes at Large* 921. Sections 121-124 and 144 of this statute contain specific provisions covering international cooperation while sections 91-92 and 141-145 cover security and information access restrictions.

[5]U.S. General Accounting Office, *Difficulties in Determining If Nuclear Training of Foreigners Contributes to Weapons Proliferation*, (Washington, DC: GAO, 1979): i.

[6]*Ibid.*, v.

[7]*Ibid.*, ii.

[8]*Ibid.*, *Internal Control Weaknesses at Department of Energy Research Laboratories*, (Washington, DC: GAO, 1982): 19. See also U.S. Congress, Senate Committee on Governmental Affairs, Permanent Subcommittee on

Investigations, *Oversight of Department of Energy Research and Development Facilities*, (Washington, DC: GPO, 1983): 3-5, for congressional committee review of and testimony about these problems.

[9]U.S. Congress, House Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, *Safety at DOE Nuclear Weapons Facilities*, (Washington, DC: GPO, 1988): 2.

[10]See U.S. Congress, House Committee on Armed Services, Procurement and Military Nuclear Systems Subcommittee and Department of Defense Nuclear Facilities Panel, *Hearings on National Defense Authorization Act For Fiscal Year 1990--H.R. 2461 and Oversight of Previously Authorized Programs*, (Washington, DC: GPO, 1989): 2-3 et. seq. for coverage of this issue and review of this report.

[11]See U.S. Congress, House Committee on Armed Services, Panel on Nuclear Weapons Safety, *Nuclear Weapons Safety*, (Washington, DC: GPO, 1990): 19-20.

[12]U.S. General Accounting Office, *Nuclear Nonproliferation: Major Weaknesses in Foreign Visitor Controls at Weapons Laboratories*, (Washington, DC: GAO, 1989): 2. See also pp. 15-16 of this report for information on problems GAO faced in evaluating the effectiveness of the foreign visitors program including the availability of little documentation on

problems that may have occurred due to foreign visits from DOE, GAO's inability to obtain background data on foreign visitors because such information is classified and due to CIA concerns that GAO review of such information could reveal intelligence sources and methods, and limitations on access to DOE files due to their containing classified CIA and FBI data.

[13]Ibid., 3. This same page of the report also reveals GAO's determination that out of a total of 818 foreign visits involving sensitive weapons subjects that DOE found only one of those involved a sensitive subject while GAO found at least 37 such visits. Out of 637 visitors from sensitive countries such as India, Israel, and Pakistan, DOE conducted security checks on only 77. Of these, DOE obtained information on 14, did not receive background data on 46 due to the time involved, and received background data on the other 17 individuals after their visits began. After this GAO report, DOE issued Order 1240.2B to cover foreign visitors to DOE labs. See U.S. Department of Energy, Los Alamos National Laboratory, *Welcome to the DOE Directives Home Page*, Internet Access: <<http://peak.lanl.gov:1776/cgi-bin/w3vdkw gw?qryKSB0UHSXp;doe-589>> for the text of this document. See also *DOE Order 5633.B*, 1994, Internet Access: <<http://explorer.doe.gov:1776/cgi-bin/w3vdhgw?qryDQB0yQNp4;doe-829>> for additional DOE facilities nuclear materials security

regulations and "*Criteria and Procedures for Determining Eligibility for Access to Classified Matter or Other Special Nuclear Material*, 10 CFR 710.

For an example of another U.S. Government agency's foreign visitor handling procedures see U.S. Army, Space and Missile Defense Command, *Initial Security Briefing Handbook*, October, 1997, Internet Access:

<<http://www.smdc.army.mil/Intelligence/ Handbook/index.htm>>

[14]U.S. General Accounting Office, *Energy Information: Department of Energy Security Program Needs Effective Information Systems*, (Washington, DC: GAO, 1991): 1-2.

[15]Ibid., *Nuclear Security: DOE's Progress on Reducing Its Security Clearance Work Load*, (Washington, DC: GAO, 1993): 1, 8.

[16]Ibid., 10-12.

[17]Ibid., *Department of Energy: DOE Needs to Improve Controls Over Foreign Visitors to Weapons Laboratories*, (Washington, DC: GAO, 1997): 16.

[18]Ibid., 26. See also p. 52 of this report for DOE's list of sensitive countries.

[19]Ibid., 3-5. See also p. 23 for limitations imposed by the FBI and CIA on GAO's ability to comprehensively examine DOE's controls over foreign visitors.

[20]See "Rollcall No. 244," *Congressional Record*, 144 no. 80 (June 18, 1998): H4747-48 for the authorizing vote, H4748-52 for Select Committee rules, and other parts of this issue of the *Congressional Record* for transcript of the debate over establishing this investigative body.

[21]Vernon Loeb, "Spy Report Sparks GOP Attack: Clinton Defends Reaction to China Espionage Allegations," *Washington Post*, May 26, 1999, A1.

[22]U.S. Congress, House of Representatives, *Report of the Select Committee on U.S. National Security and Military/Commercial Concerns With the People's Republic of China*, House Report 105-851, (Washington, DC: GPO, 1999): 1:ii-xi.

[23]Ibid., 3:166-177.

[24]See U.S. Senate, Committee on Governmental Affairs, *Special Statement on the Wen-Ho Lee Espionage Investigation*, August 5, 1999, Internet Access: <http://www.senate.gov/~gov_affairs/china_thompson.htm> and <http://www.senate.gov/~gov_affairs/china_lieberman.htm> for this committee's investigation of DOE, FBI, and Justice Department handling of the W-88 warhead espionage investigation by Senators Fred Thompson (R-TN) and Joseph Lieberman (D-CT) the committees chair and ranking member. The outcome of Lee's investigation is uncertain.

See also Sydney J. Freedberg, Jr., "Energy Labs Debate Boils Over," *National Journal*, June 26, 1999, 1896-97, for coverage of the politically contentious responses to the Cox Report.

[25]United States, President's Foreign Intelligence Advisory Board, *Science at Its Best Security At Its Worst: A Report on Security Problems at the U.S. Department of Energy*, (Washington, DC: President's Foreign Intelligence Advisory Board, 1999), Abstract, Internet Access: <http://www.whitehouse.gov/WH/EOP/pfiab/pfiab_report.pdf> The appendix to this report can also be found at <<http://www.whitehouse.gov/WH/EOP/pfiab/appendix.pdf>>

[26]Ibid., 1-6.

[27]Ibid., 53-57.

[28]U.S. Department of Energy, Office of Safeguards and Security, *23rd Annual Report to the President on the Status of Safeguards and Security at Domestic Nuclear Weapon Facilities Reporting Period: January 1, 1997 through December 31, 1998*, Redacted Version, (Washington, DC: DOE, 1999), Internet Access: <www.nn.doe.gov/Publications/snsrpt.html>: II-1-14.

[29]Ibid., Secretary of Energy, *Unclassified Foreign Visits and Assignments*, (Washington, DC: DOE, 1999), Internet Access: <www.

explorer.doe.gov:1776/pdfs/doe/doetext/neword/142/n1421.pdf>

[30]There is an enormous body of literature on foreign intelligence efforts to acquire sensitive U.S. technologies through open and covert methods. Examples include U.S. Central Intelligence Agency, *Soviet Acquisition of Western Technology*, (Washington, DC: CIA, 1982): 1-15; U.S. National Counterintelligence Center, *Annual Report to Congress on Foreign Economic Collection and Industrial Espionage*, (Washington, DC: National Counterintelligence Center, 1998), Internet Access: <<http://www.nacic.gov/fy98.htm>> 1-9; U.S. Congress, Senate Committee on Intelligence, *Economic Espionage*, (Washington, DC: GPO, 1996): 2-18, 47-54; U.S. Congress, House Committee on the Judiciary, Subcommittee on Crime, *Economic Espionage*, (Washington, DC: GPO, 1997): 9-16, 81-87; U.S. Congress, Joint Economic Committee, *Economic Espionage, Technology Transfers and National Security*, (Washington, DC: GPO, 1997): 4-25, 62-73; and Christopher Andrew and Vasili Mitrokhin, *The Sword and the Shield: The Mitrokhin Archive and the Secret History of the KGB*, (New York: Basic Books, 1999), 186-89, 215-20, 337-54, 556-58.

[31]H.R. 1348, "To Establish a Moratorium on the Foreign Visitors Program at the Department of Energy Nuclear Laboratories and to Require the Establishment of a Counterintelligence Program at Each of Those

Laboratories," 106th Congress, 1st sess., 1999. This bill had 78 cosponsors as of early October 1999.

[32]S.887, "To Establish a Moratorium on the Foreign Visitors Program at the Department of Energy Nuclear Laboratories, and for Other Purposes," 106th Congress, 1st sess., 1999.

[33]See U.S. Congress, House Committee on Commerce, Subcommittee on Energy and Power, *Restructuring the Department of Energy*, (Washington, DC: GPO, 1999): 12. See also U.S. Congress, House Committee on Commerce, Subcommittee on Oversight and Investigations, *Security at the Department of Energy's Laboratories: The Perspective of the General Accounting Office*, (Washington, DC: GPO, 1999): 14-15, for additional perspectives on this issue from Rep. Wilson.

[34]*Restructuring the Department of Energy*, 13-14.

[35]See U.S. Congress, House of Representatives, Committee on Government Reform, "*Retaliation at the Departments of Defense and Energy: Do Advocates of Tighter Security for U.S. Technology Face Intimidation*," June 24, 1999, Internet Access: <<http://www.house.gov/reform/hearings/whistleblower/99.06.24.htm>> for the opening statements of committee members and witnesses from DOE and the Department of Defense. See also "*Testimony of Edward J. McCallum*," Internet Access:

<<http://www.house.gov/reform/whistleblower/mccallum.htm>>: 7-8; for the testimony cited in this note. For information about the resignation of former DOE intelligence director Notra Trulock who launched the investigation of suspected Chinese espionage at Los Alamos, see Vernon Loeb, "Energy Whistleblower Resigns," *Washington Post*, August 24, 1999, A1.

[36]See Leitner's testimony from this hearing in "*Reprisals and Retaliation: Speaking Truth to Power on China*," Internet Access: <<http://www.house.gov/reform/hearings/whistleblower/leitner.htm>>: 1-12.

[37]U.S. Congress, House of Representatives, "*National Defense Authorization Act For Fiscal Year 2000: Conference Report to Accompany S. 1059*," House Report 106-301, (Washington, DC: GPO, 1999): 927.

[38]Ibid., 928-29.

[39]Ibid., 930-33.

[40]"National Defense Authorization Act for Fiscal Year 2000." Public Law 106-65, 113 *U.S. Statutes at Large* 512. See The White House, Office of the Press Secretary, "Statement by the President," October 5, 1999, Internet Access: <<http://www.pub.whitehouse.gov/uri-res/I2R?urn:pdi://oma.eop.gov.us/1999/10/6/2.txt.1>>: 2,4; for presidential concerns about selected provisions of this law.

[41]U.S. Congress, House Committee on Armed Services, "Spence Appoints Panel to Oversee Implementation of DOE Organization," Press Release, October 5, 1999, Internet Access: <<http://www.house.gov/hasc/openingstatementsandpressreleases/106thcongress/99-10-05spencedoepanel.pdf>>