

Responsible Openness: An Imperative for the Department of Energy

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Table of Contents

Preface	vii
Executive Summary	ix
Introduction: The Importance of Openness	1
Openness Is Now Essential	1
The Ingredients of Openness	4
Improving the Classification System	4
Enhancing Public Accessibility	4
Changing the Culture	6
Chapter 1: Classification	7
Overview	7
Achieving a Balance	10
The Fundamental Classification Policy Review	11
Narrowing the Scope of the Classification System .	11
Amendment and Interpretation of the Atomic Energy Act	12
Rulemaking	14
Declassification of Existing Records	15
The Future — Reducing the Burden	17
Chapter 2: Improving Accessibility	19
Continue Developing and Disseminating “Finding Aids”	21
Seek To Enhance Efficiency Through Use of Technology	25
Bring DOE’s Electronic Records Into the Document Management System	26
Chapter 3: Changing the Culture	29
Notes	33

Preface

The Openness Advisory Panel was convened in July 1996 to provide advice to the Secretary of Energy Advisory Board (SEAB) concerning the current status and strategic direction for the Department of Energy's classification and declassification policies and programs, as well as other aspects of the Department's efforts to enhance openness. This report is intended to provide interim advice to SEAB, and through SEAB to Secretary Peña, on a topic that we believe is central to the achievement of the Department's mission — a program of responsible openness.

By “responsible openness” we mean both a mindset and a set of policies by which the Department recognizes and affirmatively seeks to fulfill its obligations to provide the public with accurate and complete information about its activities to the maximum extent consistent with protection of national security and with other societal objectives (for example, protection of personal privacy). We believe that such openness is an essential precondition — in fact, an imperative — for the Department if it is to achieve its objectives. In this report, we shall seek to establish the reasons for this viewpoint and to offer some recommendations as to how improvements can be achieved.

We have been significantly assisted in our work by the several comprehensive studies of classification issues. The Commission on Protecting and Reducing Government Secrecy (the Moynihan Commission) has recently issued a very thoughtful report that urges a systematic and government-wide rethinking of secrecy issues.¹ We have had the benefit of the reviews of the Department's classification system by the National Academy of Sciences.² And, the Department has itself engaged in a careful examination of classification issues, most recently in a comprehensive policy review.³ Our burden has thus been considerably lessened by the efforts of others.

We also hasten to add that the Department has made very significant strides in recent years in seeking to achieve openness — progress for which the Department should be commended. These efforts have included the declassification and release of a significant volume of information of policy or public interest, including information about the nuclear stockpile, nuclear tests, environmental releases, human radiation experiments, and a variety of other matters. The Fundamental Classification Policy Review, an effort that is now near completion, reflects the continuing efforts by the Department to improve its policies and practices. While the Panel has thus had the challenge of seeking to comment on a system that is changing as we are conducting our work, we have the benefit of a Department that is poised to respond.

We have been ably assisted in our work by the SEAB staff and the Office of Declassification. We very much appreciate their contributions.

Richard A. Meserve

Executive Summary

The many decades of secrecy that have surrounded the activities of the Department of Energy have served to create suspicion of the Department and its activities. These suspicions, reinforced by ongoing lapses in providing complete and timely information, damage relations between the Department and its contractors and the communities in which they must operate. These suspicions also erode confidence in the Department by the public and its elected representatives, undermining the Department's capacity to accomplish its missions. As a result, the Secretary should place a high priority on enhancing and institutionalizing openness throughout DOE and its contractor community. The public trust that openness can nurture is an essential precondition for success in the Department's activities. This report recommends actions in three general areas: improving the classification system, achieving greater accessibility to documents and information, and changing the culture of the Department.

The Classification System

The Department must reconcile the need to achieve openness with the obligation to hold certain information secure. Developing a sound policy on the classification of information requires the balancing of overlapping and competing considerations: protecting national security, encouraging an informed citizenry and a knowledgeable group of policymakers in Congress and the executive branch, facilitating the achievement of departmental missions, encouraging fiscal efficiency, assuring the effectiveness of the classification system, and weighing the international implications of DOE policy. We conclude that ***the Department should aim at narrowing the scope of protected information, while***

improving the protection of information that should be safeguarded.

In order to reform the classification system, the Secretary should build on the significant work that has been undertaken in the Fundamental Classification Policy Review and should implement the recommendations arising from that effort. For those items of decontrol on which interagency agreement has been reached, the Department should proceed promptly with the revision of its classification guides. Moreover, the Department, at an appropriate time, should support the amendment of the Atomic Energy Act so as to establish that an affirmative action by Government is necessary to classify information. The restrictions on Unclassified Controlled Nuclear Information (UCNI) should be confined to safeguards and security information and restrictions even in this limited area should be subject to careful examination to determine whether controls are necessary and, if so, whether classification is a preferred means of providing protection.

In order to reduce the burden of the classification system in the future, ***the Department should encourage practices that minimize classification.*** For example, DOE should follow the procedures of certain other departments and, where possible, documents should be unclassified or have their classified content reserved to a classified annex. The classified portions of documents should be clearly and separately marked.

Accessibility

The concept of openness must embrace public accessibility to unclassified information and documents. That is, the achievement of openness must encompass far more than revision of classification policy. Indeed, the bulk of documents under DOE's control are unclassified, but many are effectively unavailable because of poor document management. The inability of DOE to access its own documents means that the Department has limited memory of its own past actions, which can frustrate its capacity to achieve its current missions in an efficient fashion. And, the inability to locate documents simply feeds the public's suspicions that something

sinister is being hidden. As a result, ***the Department must improve its document control systems and its methods of information dissemination.***

The Department has developed certain “finding aids” — guides that can help locate documents of possible interest — in connection with various targeted document reviews (for example, efforts to find records relating to human radiation exposure). In order to improve the system, the Department should seek to extract the lessons that can be learned from these past efforts and should compile a centralized directory of the currently available finding aids. It should also expand its efforts by developing a uniform format for new finding aids and should experiment with such aids in important topical areas, such as documents relating to the evolution of radiation protection standards or to fissile material production.

The Department should also seek to enhance efficiency through the use of technology. There are a number of technologies, some of which are in use by the Department, for scanning paper documents and saving them both as images and as text files that are subject to rapid computerized searches. The Department should explore the feasibility of a broad-scale document management system that is tailored to the Department’s needs and to fund one or more pilot tests. The Department should also explore the use of artificial intelligence to facilitate declassification reviews, even though human review is likely to be necessary for the foreseeable future.

Substantial amounts of information under the control of DOE are now maintained in electronic format as word-processing documents, databases, and e-mail. The shift from paper records entails a significant reorientation of the procedures for the maintenance of information. (Indeed, electronic records may be even more perishable than the paper records that they replace.) The challenge presented by electronic records must be addressed urgently on a Department-wide, if not a Government-wide, basis. While the development of uniform standards for preservation and access may be difficult to attain, a failure to address this problem now will allow today’s confusion to develop into tomorrow’s chaos. The Department, with the high level of computational proficiency in the national laboratories, may be particularly well suited to taking an active role in addressing this urgent problem.

Culture

Revised orders and policy relating to classification and document management, while intended to rectify defects in the system, will fall short of their intended purpose if the entrenched culture of secrecy is maintained. The difficulty of attaining change is compounded by the fact that there is no single focal point or clearly defined budget for classification and declassification and document-management efforts. The roles and responsibilities are divided between DOE headquarters, which establishes policy and guidance, and the DOE Operations Offices and their contractors, which must accomplish the work. Because classification reviews and document management are funded as overhead associated with other activities, they are (perhaps understandably) not given high priority. As a result, the Department must find the means for assuring that document management and classification receive appropriate resources and attention by those who have responsibility for implementing revised policy. Moving toward “risk management” as opposed to “risk avoidance” in classification and declassification decisions is also essential.

Finally, the permanence of any gains will be threatened unless changes in the old ways of doing business are seen by all to be in their self-interest. ***Openness should be established as a core value of the Department through incorporation in performance reviews, program plans and contracting activities.*** For the foreseeable future, openness requires sustained resources and continuing Secretarial attention and emphasis.

Introduction: The Importance of Openness

The development of nuclear weapons was long a central mission of the Department of Energy and its predecessors, and protecting the secrets of those weapons was a primary imperative. The Atomic Energy Act (AEA) established a special regime of secrecy surrounding nuclear weapons which has remained essentially unchanged to this day. The AEA requires protection of “Restricted Data,” which is defined to include all data concerning the design, manufacture, or utilization of atomic weapons, as well as data relating to the production of the fissionable materials that could be used in nuclear weapons.

Not surprisingly, the many decades of secrecy stemming from the Department’s stewardship of the nuclear weapons complex and its critical role in creating a formidable nuclear arsenal served to establish a “culture” of secrecy. However, now that the Cold War is over and the threats have changed substantially, it is time to reassess the costs and benefits of that culture, and consider whether changes are required to meet the challenges of the future.

Openness Is Now Essential

A long history of secrecy has created enormous suspicion of the Department of Energy and its activities. The revelation of information that was shrouded from public view for decades concerning environmental releases from weapons-related operations and human radiation testing has raised legitimate concerns that secrecy has prevented the public from knowing information that it should have been told. As a general matter, the broad scope of secrecy — and the fear that secrecy may conceal imprudent, unethical, or illegal acts — has served to erode public confidence.

DOE needs to have the public trust if it is to accomplish its missions. The Department's capacity to fulfill its missions in national security and other areas ultimately must derive from confidence in the Department by the American public and their elected officials. Excessive secrecy — and the suspicions that it can encourage — can have a corrosive influence on public attitudes toward the Department.

In coming years, DOE must carry out major responsibilities involving nuclear weapons, the management of radioactive materials, and environmental remediation. These will require DOE to select new facilities for producing radioactive tritium (so as to maintain the viability of the current inventory of nuclear weapons), and other facilities for processing radioactive wastes and surplus fissile materials and for storing and finally disposing of these materials. In addition, DOE will have to transport radioactive materials through many communities throughout the country. Given the high level of public concern and sensitivity about radioactive materials, and the continuing debate about nuclear weapons and nuclear power, these would be challenging tasks in the best of circumstances. The difficulty will be aggravated if the Department is suspected of hiding risks and of concealing past accidents. Openness — and the enhanced credibility that can come from it — is a necessary condition for success in these activities.

Greater openness may also be required for the successful achievement of the Department's missions for another, more subtle reason. The Department faces a critical time of transition to an environment of no weapons testing and the possibility of accompanying structural changes within the weapons complex. DOE confronts a major challenge as it pursues an agency mission — the assurance of a credible and reliable nuclear deterrent — that may seem increasingly anachronistic with the end of the Cold War and the disappearance of our major military rival. This reexamination has its greatest programmatic thrust in the program for "Science Based Stockpile Stewardship" (SBSS).

The success of the SBSS program will depend in part on the Department's ability to recruit and retain a staff of highly skilled scientific and technical professionals. But, a life "behind the fence" may not seem as desirable to new recruits as it may have been during the Cold War. Indeed, with the major DOE labs moving toward new missions and ways of operating, the closed lifestyle of the past may prove increasingly difficult to maintain. Finding ways

to assure some openness in the work — or at least efforts to avoid needless secrecy — may prove essential in recruiting a cadre of talented new scientists and engineers to replace those who are moving into retirement or other fields.

Moreover, the restructuring of the weapons program will present some special challenges. SBSS will involve activities that overlap with unclassified work: simulation using advanced computing technologies will replace testing, and experiments will be performed on dual-use machines such as the National Ignition Facility. The productivity of the laboratories will thus probably entail a greater mix of classified and unclassified research than in the past. The less classification there is, consistent with rigorously protecting highly sensitive information, the more conducive the climate is likely to be to productive advance.

The Department is already launched on a path to greater openness. The Department has wisely concluded that its best response to the decay of public confidence is a candid and forthright willingness to acknowledge and confront its past. Through the Openness Initiative launched in 1993, DOE has committed itself to providing the public with records and information. Indeed, some of the most difficult and controversial steps in exposing a hitherto hidden past to public scrutiny have already been taken. In addition, in many areas the Department has also begun to conduct its business in a much more open manner than has been the past practice, with substantial involvement of interested and affected parties in the programs of concern to them. These steps have been well received by the public and various stakeholders, and DOE deserves credit for achieving so much in a short period.

However, much remains to be done to institutionalize and to expand the improvements that have been made to date. Openness should be a normal part of doing business in the Department, sustained by high-level management attention, but not requiring continued high-level prodding. The challenge facing the Department today is to convert openness from a new initiative to a standard operating procedure. Moreover, the Department must find the means to sustain the effort at a time when Congress has reduced the funds for this important activity.

The Secretary should place a high priority on enhancing and institutionalizing openness throughout DOE and its contractor community. The public trust that openness can nurture is an essential precondition for success in the Department's activities.

The Ingredients of Openness

Achieving a policy of openness involves several interrelated elements: improving the classification system, enhancing public accessibility, and changing the culture.

Improving the Classification System

The necessary scope of classification, as well as the process by which classification and declassification are accomplished, have been undergoing careful review. The Fundamental Classification Policy Review, initiated in 1995, is nearing completion, and significant strides in revising classification policy have been made. The Department should now complete the task.

We hasten to add, that while openness does mean declassification of information that no longer requires classification — as well as steps to ensure public access to documents containing information that is unclassified or has been declassified — it most emphatically does not mean the release of information that should be safeguarded. There is good reason that Restricted Data concerning nuclear weapons has been subjected to a statutory classification and protection system. Information about nuclear-weapon design does not lose its value to a potential adversary with the passage of time. Indeed, some of the oldest (and thus least technically sophisticated) nuclear-weapon designs may be of the greatest interest to potential nuclear proliferators. Responsible openness thus entails retaining careful protection of certain types of information. But it also involves defining a boundary for the scope of the classification that is different from that established in the past. This and related issues are discussed further in Chapter 1.

Enhancing Public Accessibility

Because much of the most visible part of the Openness Initiative has dealt with the declassification and release of previously classified information (for example, the amounts and locations of U.S. inventories of plutonium), there is some risk that “openness” may be equated with the declassification of information or documents. Of course, classified information, and how it is handled, is an important element of the problem. But it is not the whole problem.

Iraqi Nuclear Program Builds on 1940s Technology

In June 1991, members of an International Atomic Energy Agency (IAEA) Inspection Team were denied access to a military site near Al Fallujah, Iraq. Inspectors saw dozens of Iraqi trucks loaded with machinery and equipment leaving the site by a back gate. They followed the trucks in their own vehicles and learned that some of the trucks carried 12-foot diameter, 60-ton magnets. They were forced to give up the chase after warning shots were fired, but nevertheless obtained photographic evidence of a uranium enrichment program based on electromagnetic isotope separation, a technology long considered obsolete by the nuclear weapons states.

Electromagnetic isotope separation (EMIS) devices called “calutrons” were used in the Manhattan Project and helped produce the enriched uranium in the bomb dropped at Hiroshima. They are based on the principle that as charged particles pass through a magnetic field, heavier particles will be deflected less than lighter ones with the same charge and kinetic energy. This enables the separation of different isotopes of uranium.

For more than 40 years, however, the nuclear powers have used more efficient technologies to enrich uranium, in particular gaseous diffusion and gas centrifuge processes. Most experts believed that would-be proliferators would choose one of these technical

approaches.

According to the IAEA Action Team, which is charged by the United Nations Security Council with conducting nuclear inspections in Iraq, the Iraqi separator design was based on 1940s U.S. calutron design. Iraq had decided in the early 1980s, when it formally launched its enrichment program, that EMIS was the most suitable technology for its inexperienced scientists and engineers who had to design and manufacture the EMIS components.

Iraq sought to improve the U.S. design with mixed results. In the case of certain key EMIS components, Iraq’s extensive attempts to improve the design failed, leading Iraqi scientists to revert back to the original U.S. design. Nonetheless, because some improvements were made, Iraq prefers to call its machine a “Baghdadtron.”

This example illustrates that technologies considered obsolete by the United States may still be useful to proliferators and require careful review before declassification.

Sources: DOE/Office of Arms Control and Nonproliferation, Critical Technologies Newsletter, Volume 10, Issue 3 (December 1992); International Atomic Energy Agency Action Team reports.

We see “openness” as a broad concept that covers much more than declassification. Providing the public with access to information is equally important. And beyond accessibility of information, openness involves a way of doing business in which stakeholders and other interested parties are invited to participate, rather than be kept at arm’s length.

Even if all of the information in DOE’s possession were declassified immediately, openness would still not be achieved. For example, much of the justification for the Openness Initiative came from public interest in the environmental consequences of activities in the Department’s weapons complex and in the studies on health effects from radiation exposures. Virtually all information bearing on environment, health, and safety is now unclassified. But, the simple fact that the information is

unclassified does not necessarily mean that it is accessible. Unclassified information that is buried in a file is effectively unavailable to the public (or the Department). Moreover, many of the documents embodying such information may also contain classified material and therefore have not yet been publicly released. Ultimate achievement of openness thus requires identification of relevant materials in the huge collection of documents under the Department's "control" and the public release of appropriate documents (or the information they contain). Increasing openness thus presents a difficult document-examination, document-control, and communication problem.

Historically poor record keeping in the Department of Energy and its predecessors, compounded by decentralized, contractor-managed and production-driven operations, has led to a situation in which the Department literally does not know in many cases what records it has or where to find them. This is exacerbated by the policies of secrecy entrenched in the Cold War environment. This combination of factors means that even when records are not specifically classified, the Department often lacks effective and credible mechanisms to make them accessible. Moreover, the Department should put in place procedures to assure accessibility to information that is now being generated or that is created in the future. Approaches to this problem are discussed in Chapter 2.

Changing the Culture

As noted above, the 50 years of secrecy inherent in protecting the development of nuclear weapons inevitably produced a "culture" — a system of beliefs and ways of doing business — that persists among the Department's employees and its contractors. Orders and regulations, however well intended to rectify defects in the system, will fall short of their intended purpose if they run counter to the prevailing mindset of this entrenched culture. It might be expected that this concern would apply only to the nuclear weapons complex, but in fact the non-defense activities of the Department were influenced by the Department's practices in the defense arena and have assumed many of its characteristics.

Until cultural change is seen by all to be in the self interest of the Department's and its contractors' employees, lasting and fundamental changes in the way DOE does business will be difficult to achieve, and the advances of the last few years will be transitory achievements. This problem is discussed in Chapter 3.

Chapter 1: Classification

Overview

One of the significant challenges confronting the Department of Energy is reconciling the need to achieve openness with the obligation to hold certain information secure. A central mission of the Department has been the development of nuclear weapons. Although considerable information relating to the design and construction of nuclear weapons is publicly available, access to the remaining secrets must clearly be denied to a terrorist group or a state seeking to develop or improve a nuclear arsenal. Limiting access to such information is essential for the welfare of all mankind.

It is difficult, however, to define clearly the full range of information that should be protected. All agree that non-public information on the construction of a nuclear weapon should be controlled, but there are legitimate questions as to how far the veil of secrecy should extend. Should it include information about past nuclear tests? Should it include information on the environmental or health impacts from weapons-related operations? Should it include information on technologies that, while bearing on weapons production, have uses in civilian products or manufacture?

Developing a sound policy on classification requires the balancing of overlapping, reinforcing, and at times competing considerations. The main considerations fall into several general categories. Only by weighing the relevant factors can a proper balance be achieved.

- *National Security.* As noted above, the overwhelming imperative of safeguarding essential information relating to nuclear-weapon construction and design should be a decisive consideration in favor of tight classification. As we consider less sensitive

information, however, national security considerations argue for circumscribing the information subject to control.

The narrowing of the information to be protected enables the focusing of resources — time, money, effort — thereby providing greater assurance that core information is truly safeguarded. Diluting resources by sweeping too much under guard may lessen the protection of the “crown jewels.” Indeed, staff and contractors may underestimate the importance of stringent adherence to classification rules if they perceive that the system encompasses information of trivial national security significance.

- *Informed Citizenry.* Perhaps the most fundamental justification for openness rests on the fact that the proper functioning of a democracy depends on an informed citizenry. The public cannot properly assess the performance of its Government if the activities of that Government are concealed from view. Moreover, policymakers in the Congress and the executive branch also need a complete picture of the Department’s activities. Consideration of core principles thus also argues for limitations on secrecy.
- *Achievement of Departmental Missions.* As discussed above, the Department’s capacity to fulfill its missions in national security and other areas ultimately must derive from confidence in the Department by the American public and their elected officials. The public revelation of information that was shrouded from public view for decades concerning environmental releases from weapons-related operations and human-radiation testing has raised concerns that secrecy has served to prevent the public from knowing information that it should have been told. The Department has wisely concluded that its best approach to restoring public confidence is a candid and forthright willingness to acknowledge and confront its past.
- *Efficiency.* For the foreseeable future, the Department is likely to confront tight budgets. Classification is expensive. The classification system constitutes an overhead cost on operations arising from the need to define the information subject to control, to isolate and protect documents containing that information, and to limit and control the individuals who are allowed access. Moreover, there is a cost arising from the obligation to continue to safeguard a classified document into the future until declassification — another costly process —

occurs. DOE estimates that the direct costs of the classification system are almost \$100 million per year.

Moreover, the direct financial costs of the classification system are only a small portion of the true overall costs. Classification — with its burdensome restraints on access — no doubt significantly limits productivity. And, by inhibiting the cross-fertilization of ideas that openness can encourage, classification can constrain technical advance. To the extent that classification imposes limits on scientific or technical exchange that could bear fruit in the civilian economy, it restrains our overall economic advancement and growth. Consideration of efficiency thus argues for narrowing the purview of the classification system.

- *Effectiveness.* It is necessary to weigh as well the effectiveness of a classification system in achieving its objectives. Several recent studies have emphasized that classification is a tool for risk management, not for complete risk avoidance.⁴ This arises from the fact that the chain of protection surrounding classified information can be no stronger than its weakest link. The numerous recent spy cases involving criminality by those with access to classified information — fortunately, none involving DOE — brings home the reality that strict classification cannot guarantee long-term protection.

Moreover, considerable nuclear information is already publicly available. As a result, knowledgeable observers have stated that obtaining classified information may not be necessary for a potential proliferator to construct a weapon, although of course such access may greatly facilitate his work or increase the reliability and efficiency of the resulting device.⁵ Classification is an important tool in preventing or slowing down nuclear proliferation, but it alone cannot do the job.

- *International Implications.* Our security is facilitated by knowledge of potential threats, including the intentions and capabilities of others. Overly stringent classification by the United States invites reciprocal controls by others, with the consequence that our knowledge of foreign activities may be limited. In addition, the lack of openness — and the smothering of informed policy debate that can result — may make it more difficult to obtain international consensus on issues affecting national and international security.

Encouraging Reciprocal Openness

Openness on the part of the United States can encourage reciprocal openness by other nations, reducing tensions and enhancing national security. In late 1994, the Department of Energy declassified and published the remaining secret information regarding the dates and yields of U.S. tests. Secretary O'Leary called upon her Russian counterpart to make a comparable public accounting, stating that the "release of this information should also encourage other nuclear weapon nations to declassify similar information."

Russia reciprocated in July 1996, when Victor Mikhailov, Russian Minister of Atomic Energy, presented Secretary O'Leary with the first-ever report on U.S.S.R. *Nuclear Weapons Tests and Peaceful Nuclear Explosions — 1949 through 1990*. In the foreword of that report, Mikhailov cited the U.S. publication and noted the Russian report's symmetry with the earlier DOE report.

Source: U.S. Department of Energy, United States Nuclear Tests July 1945 through September 1992, Report DOE/NV-209 (Rev. 14), Washington, DC: U.S. Department of Energy, December 1994.

One of the benefits of the Department's willingness to reveal information concerning its uranium and plutonium stockpiles and its past nuclear tests is that this openness has encouraged similar openness by the Russians. Such "transparency" is a safeguard because it facilitates awareness of the direction of foreign nuclear programs, enabling public and diplomatic pressures to deter activities that present proliferation or terrorist threats and creating greater confidence in the arms control process. On the other hand, some of our closest allies (France, Great Britain) have concerns about certain aspects of DOE's openness program. American efforts to reduce the scope of the classification system can thus serve as a complicating factor in relations with countries with whom we have important alliances. The consideration of the international implications of modifications of classification policy thus presents conflicting pressures.

Achieving a Balance

The establishment of a sensible classification program requires a subtle and careful balancing of these various considerations. It is our view that a policy of rigid classification is as unjustified as a policy of unrestrained openness. We share the general view that too much information has been classified in the past, ultimately serving to weaken the protection of the truly sensitive information. ***The Department's classification policy should aim at narrowing the scope of protected information, while improving the protection of information that should be safeguarded.***

Moreover, in recognition that absolute safeguards are not possible, the strategy should be one of risk management rather than simply risk avoidance. The discussion in the remainder of this chapter is intended to assist in achieving greater focus in classification activities.

The Fundamental Classification Policy Review

In connection with recent efforts to improve openness, the Department chartered a group to undertake a comprehensive and fundamental review of DOE's classification policy.⁶ This review, which was chaired by Dr. Albert Narath, a member of this panel and formerly President of Sandia National Laboratories, was a top-to-bottom examination of the substance of the Department's classification policy. The review group comprised about 50 technical and policy experts drawn from the Department's weapons complex, and involved representatives from the Department of Defense and other government agencies. The group was extraordinarily knowledgeable and, given its past experience, might have been expected to be conservative in advocating change. It is thus of singular note that the review in fact proposed sweeping modifications of existing policy. ***The Secretary should build on the significant work that has been undertaken in the Fundamental Classification Policy Review and should implement the recommendations, as discussed in detail below.***

Narrowing the Scope of the Classification System

The review included various working groups that examined the boundaries of the classification system in seven specific substantive areas.⁷ The review group ultimately concluded that much currently classified information could, and should, be declassified. It gave concrete proposals for the declassification of information in more than 100 technical areas, concluding in each instance that release of information would pose no threat to the national security.

This Panel has not had the opportunity, nor does it have the expertise, to reexamine the specific technical conclusions of the

review group. However, we are impressed by their effort. **We recommend prompt action on the review group's recommendations.**

We understand that achieving final consensus on the review group's recommendations has not yet been achieved. In order to maintain the momentum of the review group's efforts, the Department should take the following steps:

- ***For those items for which there is interagency agreement, the Department should proceed promptly to revise its classification guides.***

In order to bring about an actual change in classification practices, it is necessary to implement the policy recommendations through modification of the classification guides that provide concrete instructions on classification matters. This is a substantial task: there are more than 50 headquarters classification guides and about 800 local guides. Because the benefits of a revised classification policy cannot be achieved until the classification guides are modified, the effort should start now.

- ***The Department should pursue those areas of interagency dispute with respect to propriety of declassification to prompt, final resolution.***

Different analysts will weigh the costs and benefits of openness in different ways and thus some interagency friction on declassification matters is to be expected. Given the extensive work that has already been undertaken by the review group to provide the factual foundation for discussion, the Department should pursue efforts to achieve closure with respect to the items on which interagency agreement has been difficult to achieve. If the final resolution of an item is one that endorses the review group's recommendation, then the Department should press forward with the associated modification of the classification guides.

Amendment and Interpretation of the Atomic Energy Act

The framework of the classification system is established by the Atomic Energy Act (AEA) [see 42 U.S.C. §§ 2014(y), 2161-68]. In order to bring about appropriate change, the review group

recommended certain amendments of the AEA or suggested modifications in the implementation of the Act. ***The Secretary should consider and, as the opportunity arises, promote the amendment of the Atomic Energy Act in the areas identified in the Fundamental Classification Policy Review. Moreover, the Secretary should pursue the modification of current policies subject to his control:***

- Restricted Data (RD) are often referred to as being “born classified” — that is, such information is considered a protected secret upon coming into existence without any affirmative act or decision by an official or, indeed, any involvement by Government at all. Although the term “born classified” is never used in the AEA itself, it has become shorthand for the authority from which all classification of nuclear-related information stems. In practice, the original scope of the restrictions associated with the concept of “born classified” have been whittled away by 50 years of declassification actions. Nonetheless, the statutorily imposed secrecy concerning nuclear weapons and other aspects of the use of atomic energy is unique. ***The statutory definition of “Restricted Data” should be modified at an appropriate time so as to establish that an affirmative action by Government is necessary to classify information.***
- The review group also suggested an amendment of the AEA to allow elimination of the category of information known as “Formerly Restricted Data” (FRD). FRD refers to information relating primarily to the military utilization of nuclear weapons which the Department of Energy and the Department of Defense conclude can be adequately safeguarded as “defense information.” [42 U.S.C. § 2162(d)]. Such information can be shared with other nations only pursuant to agreements for cooperation as defined in the AEA. The review group concluded that both DOD and DOE would benefit by reviewing the topics classified as FRD and classifying that information as Restricted Data (which is subject to the Atomic Energy Act), or as National Security Information (which is subject to classification pursuant to Executive Order), and abolishing the category of FRD. ***We join in recommending that the AEA should be amended to allow current FRD to be designated either as RD or as NSI and to eliminate the FRD category.*** This change should both simplify procedures and clarify responsibility for classification decisions.

- The review group also recommended significant limitation of the restraints that are imposed on “Unclassified Controlled Nuclear Information” (UCNI). The AEA allows certain controls on unclassified information. [42 U.S.C. § 2168(a)]. Although the statutory provision was originally aimed at controlling safeguards and physical security information and certain nuclear material and weapons information, its use has expanded over the years to cover many other types of information.⁸ But the proliferation of UCNI controls has created confusion and such controls are fundamentally inconsistent with the philosophy of narrowly confined restraints on information flow for unclassified information. The review group recommended that UCNI be confined to its original scope. ***We recommend that UCNI be confined to safeguards and security information and that its application even in this area be subject to careful examination to determine if such controls are necessary and, if so, whether classification is a preferred means of providing protection.***

It is the Panel’s view that the issue on these matters is not so much on the need for change as on the timing of any initiative to accomplish it. ***We recommend that the Secretary seek an appropriate moment to pursue the amendment of the AEA. However, the narrowing of UCNI controls, which can be undertaken without amendment of the AEA, can and should be implemented now.***

Rulemaking

The Department is undertaking a rulemaking under the Administrative Procedures Act that provides a regulatory foundation for its classification practices. [62 Fed. Reg. 2,252 (Jan. 15, 1997)]. While not achieving as much as a legislative change to the AEA might accomplish, the rule makes serious strides in the direction of improved openness.⁹

While the rule does not concern itself primarily with *what* information is to be classified, it does provide detailed guidance as to *how* classification decisions will be made. The Department’s efforts to develop this guidance by way of notice-and-comment rulemaking represents a radical departure from the past practice of simply imposing requirements by departmental order without any

explicit opportunity for public involvement or judicial review. The Department's decision to proceed by way of notice-and-comment rulemaking should be seen to represent a corollary activity to expanded openness: the Department is also adopting its procedures through open processes. ***We commend the Department for its classification rulemaking.***

Declassification of Existing Records

In the 53 years since the birth of the Manhattan Project, the original ancestor of the DOE, a mountain of some 2.7 million cubic feet of records (approximately 6.75 billion pages) has been created. Just under 10 percent of this total (about 241,000 cubic feet) is in classified storage, of which about 50 percent is thought to represent classified documents. While only a fraction of the Department's documents — under 5 percent of the total pages by this estimate — is classified, the classified portion still represents a daunting volume of nearly 310 million pages.¹⁰ Moreover, history suggests that this estimate will increase as DOE takes more careful inventory of its holdings.

Until recently, this accumulation was still growing, as new classified documents were being created faster than old ones were being declassified. According to the Department, the corner was turned in 1996 when the number of newly generated classified documents fell below the number of documents that were declassified. Nonetheless, a huge backlog remains.

The Department's declassification efforts are driven by a large number of external demands, many of which (for example, court orders or congressional requests) simply cannot be postponed. As a result, DOE has relatively little discretion to "set priorities" for declassification of documents. This lack of flexibility has been compounded by recent budget cuts, which have reduced the number of personnel available for declassification efforts. There are now 26 authorized RD declassifiers at Headquarters, down from 35, and 18 trained for National Security Information reviews, down from 35. Instability in funding is a serious problem because it undermines the Department's capacity to maintain a cadre of skilled personnel. And budget pressures can also be expected to affect adversely the priority attached to declassification efforts at the DOE field sites.

DOE Records

Chart 1. Classified/Unclassified Breakdown

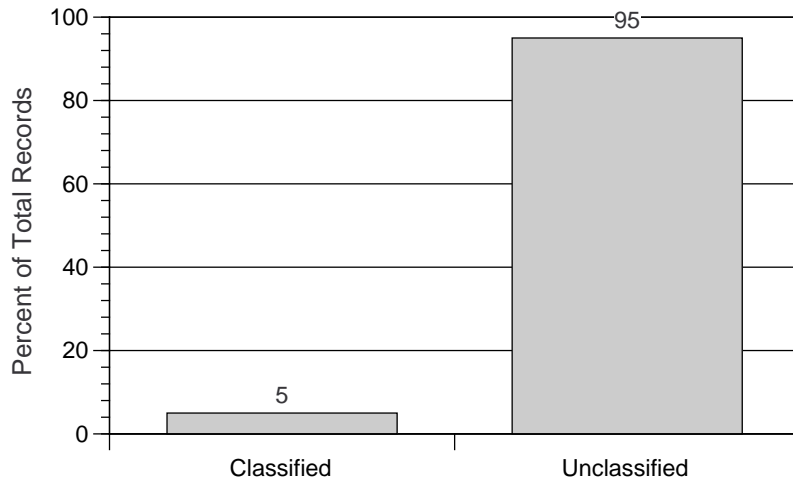
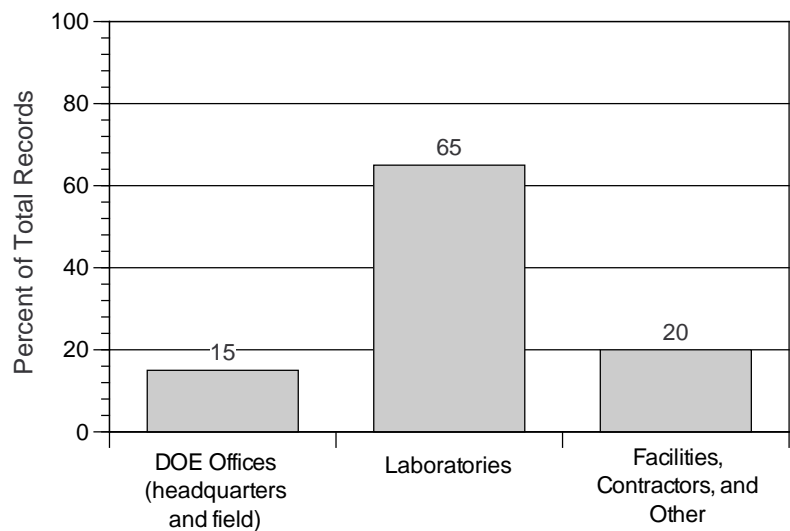


Chart 2. Location of Records



Note: The data presented are approximate.
Source: Data from the DOE Office of Records Management and the Office of Declassification.

In view of the limitations in resources, it is appropriate that declassification efforts be driven by demand from potential users. DOE should therefore focus on *informing* that demand by providing systematic information about what documents exist, what they contain (in general or topical terms), whether they are classified, and where they can be located. This will allow interested parties to target their requests with some specificity, and could well lead to a more efficient use of DOE's limited resources. Means to

Modernizing the Process — The Declassification Productivity Initiative

In 1994, Congress established the Department of Energy's Declassification Productivity Initiative (DPI). The initiative's goal is to improve the efficiency and accuracy of the document declassification review process by creating computer automation tools. Because of the extreme sensitivity of the documents under review, two human reviews are now required to minimize the possibility of error.

DPI's ultimate goal is to produce a computer program that can do the first of the two declassification reviews

now done by highly skilled personnel. This task is not a simple one and will require both sustained effort and support to bring it to fruition. The strategy is to make incremental improvements in the program to make more efficient use of the human reviewers' expertise and time and thereby increase their productivity. This effort, the first of its kind in government, is also expected to have wide application in other government departments.

Source: U.S. Department of Energy, Office of Declassification.

accomplish this objective for both classified and unclassified documents are discussed in the next chapter.

Finally, automatic and intelligent systems may be available to assist in both the cataloging and classification reviews of old documents. There are currently a number of technologies available and/or being developed, both in the private sector and within DOE, for the scanning and electronic cataloging of documents. The technology holds the promise that scanned documents could be evaluated using a set of criteria to determine preliminarily whether they should be classified. The promise is great enough that the technology should be pursued, perhaps initially simply as a means of sorting the collection into documents that are likely to contain classified information and those that are promising candidates for declassification. However, some level of human review is likely to be required for final declassification decisions for the foreseeable future. This is discussed further in Chapter 2.

The Future — Reducing The Burden

With the end of the Cold War, much less classified RD is being generated. Nonetheless, there is a benefit in minimizing classified holdings and in planning to facilitate eventual declassification review.

The Department should encourage practices that minimize classification. Where possible, documents should be unclassified or have their classified content reserved to a classified annex. The classified portion of a document should also be clearly and separately marked. The current approach of mixing classified and unclassified information requires that the whole content of each classified document must be protected pending declassification review. Separating classified information from unclassified information at the time of the creation of documents should significantly reduce the cost of record stewardship in the future.

Other departments and agencies, in particular the Department of Defense, have already begun the practice of producing unclassified versions of reports, particularly those of widespread public interest. When necessary, these reports have classified appendices that can be stored separately. This “dual track” approach permits more information to be made available to the public immediately. It also radically reduces the need for classification review.

Modern computer capability should be harnessed to assist in the classification process for future documents. For example, all documents at their creation, whether classified or not, might be given a precisely defined computer designation. This “tag” might include the date, subject area, topic area, type of document (for example, memorandum, policy paper, technical report) and other indicators deemed useful by potential users. (The “tags” should be uniform throughout the DOE complex.) The tags could also serve as “finding aids” for researchers, both within and outside the Federal Government, and should greatly facilitate document management. Further discussion of the use of computer technology to facilitate access to and control of all DOE documents is found in the next chapter.

Chapter 2: Improving Accessibility

The concept of “openness” embraces far more than classification and declassification. It also includes public accessibility to unclassified information and documents. Accessibility requires, in turn, that DOE know where the information can be found — that is, that it develop some degree of “intellectual control” over its own records. Indeed, it has been said that poor records management is a more effective way to keep information out of the hands of the public than classification.

Unfortunately, the Department of Energy has neither ready access to the documents under its control nor an adequate inventory of those documents. As noted above, according to its own 1995 estimate, the Department is the steward of approximately 2.7 million cubic feet (roughly 6.75 billion pages) of documents in many forms (from laboratory notebooks to policy memoranda) of which it has, at best, incomplete knowledge. Thus, means to address records accessibility overlap with classification issues, but extend far beyond classification.

Inventorying DOE Records

DOE estimates that more than 90 percent of its records have been inventoried. This means that the records have been described adequately to develop a records disposition schedule (the legal authority by which federal records may be destroyed, transferred, or otherwise alienated from agency custody). An inventory is conducted at the series level — that is, a level at which records are kept together because they relate to a specific activity, function, or subject. In making an inventory, one goes into an office, notes descriptive information on file drawers or file folders, does a quick survey to ensure the consistency of that descriptive information

to the drawer or folder contents, notes the range of dates for the records, and calculates volume. Only general information, sufficient to develop a records disposition schedule, is collected in a records inventory. An inventory does not provide an itemized index of specific documents and thus does not enable one to find a specific document quickly. Drawing an analogy to a grocery store inventory, such an inventory could reveal that the store has 10,000 cans of soup, but would not tell you where to find a specific can of Campbell’s soup.

Source: Data from the DOE Office of Records Management and the Office of Declassification.

The current situation — a vast, poorly understood accumulation of classified and unclassified documents under little or no control — is not merely an offense against good recordkeeping practices. It can have serious legal and financial consequences for the Department (see “The Price of Neglect” opposite).

This situation has made it difficult and costly for the Department to meet its obligations in litigation, in responding to Freedom of Information Act (FOIA) requests, in preparing congressional testimony, and in satisfying other demands for historical information. It has also led to embarrassment and needless lawsuits and even the threat of judicial sanctions to punish DOE for lack of responsiveness, and incomplete responses, to requests for information. Indeed, DOE’s inability to access its own documents means that the Department has limited memory of its own past actions, which can frustrate its capacity to achieve its current missions in an efficient fashion. Moreover, the inability to locate relevant documents also feeds the public’s suspicions that something sinister is being hidden from them.

At a more immediate level, the lack of control of historical records makes it arduous and time-consuming for the Department to retrieve information from its own files. For example, the collection of information concerning human radiation experiments was difficult because of poor record management practices, not because of classification (most of the relevant documents were not classified). If the Department hopes to respond more quickly to demands for information in the future, steps must be taken in advance to gain better intellectual control of its records.

The Department must improve its document control systems.

Through the Openness Initiative, DOE has committed to providing the public with records and information and, over the last several years, DOE has taken many steps to facilitate such public access. However, much remains to be done. Until DOE has better control of its records, it cannot fully realize its openness goals.

In implementing the Information Technology Management Reform Act of 1996,¹¹ DOE should ensure that the Chief Information Officer has the authority and resources to improve document-control and records-management practices across all elements of the Department. The Chief Information Officer should be given the authority and resources to address both paper and electronic records, as discussed below.

To make progress in this area, the Department must look both backward, to gain better control of the legacy of documents that

The Price of Neglect

In a still-unresolved lawsuit alleging damages caused by releases of radioactive materials from DOE's Rocky Flats facility, the Department's lack of control of documents led to a contempt order against DOE for failure to comply with a stipulated agreement to produce documents requested by the plaintiffs.

When DOE attempted to comply with a document production schedule, it made several unpleasant discoveries. In December 1995, DOE estimated that the plaintiffs' request for documents related to materials unaccounted for (MUF) would require declassification review of 11,000 pages. In January 1996, the estimate was increased to 400,000 to 500,000 pages, and in February to 670,000 pages. At about the same time, the Rocky Flats contractor located 1,500 reels of microfilm containing documents.

All of this led the plaintiffs to charge that the Department had been making statements about the extent of information in its possession that it knew, or should have known, to be false.

When DOE recognized the true magnitude of the declassification task, it realized that it could not comply with the declassification plan and procedures it had previously accepted in a 1994 stipulated order, and could not meet the court-ordered deadline for completing the declassification review, despite a doubling of the declassification staff from 14 to 28. Because of the great suspicion that was created, the plaintiffs were unwilling to accept DOE's assertions that the MUF documents contained so much highly sensitive information that, when they were reviewed and the classified portions redacted, little useful information would remain.

DOE was forced to divert substantial Headquarters and field resources to a large-scale review of documents. Ultimately, the plaintiffs agreed that the effort was largely a waste of resources because of the low relevance of the small amount of information that could be declassified. Millions of dollars were wasted and DOE's credibility was damaged. And, since the case is not yet closed, the possibility of further embarrassment exists.

already exist, and forward, to ensure that the problems of the past are not repeated in the future. To improve access, the Department must continue its efforts to develop "finding aids" to make searches easier, while at the same time experimenting with the use of modern computer technology to simplify and speed up the process. To avoid problems in the future, the Department must quickly take steps to gain control of the proliferation of electronic documents. Initial steps in each area are discussed below.

Continue Developing and Disseminating "Finding Aids"

As noted in Chapter 1, in a time of highly constrained resources, declassification efforts should be guided by demand. For a demand-driven approach to be effective and efficient, the demand should be informed by knowledge about what documents exist, the

general subject(s) they cover, and where they are located. “Finding aids” — guides that provide pointers that can help researchers locate documents of possible interest — can play an important role in a demand-driven approach.¹²

Availability of good finding aids has the potential to reduce substantially the cost of searches for documents. A report on the impacts of the Openness Initiative on one field office noted that while a search for a known document with a known title costs only around \$200, a search in response to a broad request for all information concerning a general topic could come to nearly \$14,000.¹³ Aids that enable someone seeking a document to increase the specificity of his or her request can reduce the costs of a response.

There are several steps the Department could take to continue to develop and disseminate finding aids to the huge inventory of documents in its possession:

- **Learn from past targeted document reviews.** A first step in improving the record-management process is to review the targeted document review efforts that have been undertaken to date for guidance as to how to proceed in the future. For example, several independent health studies have involved a careful survey of records in order to reconstruct radiological and toxicological doses to the workers or the population surrounding a particular site (“dose reconstruction” surveys). Also important are the human radiation experiments effort, and the recent court-ordered document review at Rocky Flats. These projects should be reviewed for their lessons about how best to gain intellectual control over large quantities of poorly characterized and managed documents.
- **DOE should compile a centralized directory of all currently available “finding aids” for its records.** “Finding aids” for surveyed records have generally been prepared as part of various past document reviews. However, these finding aids focus on cataloging only the records of interest to the particular study and were not intended to be comprehensive in scope. They are also not available in a central DOE repository, are not standardized, and are often in an electronic form that is not “user friendly.” Nonetheless, they shed partial light for the first time on portions of DOE records. The Department has spent substantial resources in developing these finding aids, and the full value should be derived from that expenditure by making the finding aids widely available.

In response to a recommendation by the Presidential Advisory Committee on Human Radiation Experiments, the DOE Office of Human Radiation Experiments (OHRE) has already undertaken a project aimed at making finding aids to inactive records in DOE custody available to the public. In this project, OHRE has collected lists of folder titles for record series of potential interest from across the DOE, added brief introductions that provide background and context for the series, and placed the listings and introductions in public reading rooms. This information will soon be added to the OHRE site on the World Wide Web. ***This effort should be continued and expanded to include all currently available finding aids that exist for the Department's records. The information should be placed directly in OpenNet and should extend beyond health- and safety-related topics.*** The Panel strongly encourages DOE field sites to cooperate with OHRE (which has been renamed the Office of Research, Records, Data and Access) in this effort.

- ***Develop a uniform format and content standard for new finding aids.*** DOE should ensure that there is a uniform set of criteria governing preparation of finding aids so as to maximize the value of future document review efforts. There should be a standardized format, a clear set of categories of information that might be contained in a document, and a common list of keywords. This effort should be coordinated with efforts to develop a new electronic records management system, so that these new finding aids are fully compatible with new records that are subsequently created. Creation of a standardized and broadly applicable format for such finding aids would help ensure that whenever any body of documents is reviewed and cataloged for any specific purpose (such as a dose-reconstruction project), the resulting finding aid will be of use to the full range of potentially interested stakeholders, rather than only those interested in the information that is the immediate object of the effort. This would require a small incremental effort at the time of the review, but could yield a disproportionate benefit in terms of the increased intellectual control of and accessibility to DOE records.
- ***Experiment with preparation of finding aids for important topical areas.*** DOE has recently completed a major effort to gain control over a large body of documents concerning human radiation experiments, and has compiled and published an extensive finding aid for those documents. The DOE OHRE, which performed that task, has proposed using a similar

approach to compile finding aids for other topical areas of interest. We support that proposal. While OHRE recommends that the evolution of radiation protection standards should be the first topic addressed, we suggest consideration as well of a topic that is not directly health-related, such as nuclear-weapons research and development or fissile-material production, in order to respond to the interests of the large community concerned about weapons and nonproliferation policy.

- ***Use the ongoing Large-Scale Review to develop finding aids to both declassified and still-classified documents.*** In June 1994, the Department initiated a Large-Scale Review of classified records for declassification as part of a Department-wide systematic declassification review program. When Executive Order 12958 was issued in 1995, the Large-Scale Review was redirected from documents containing Restricted Data to focus instead on the order's requirement to review and declassify documents containing National Security Information. In August 1996, the Large-Scale Review was redirected again to reemphasize RD and FRD documents, as well as NSI documents, with priority assigned this time to environmental, safety, and health-related documents having the highest potential for declassification.

The review yields only pass/fail decisions: there will be no effort to redact classified documents so that the unclassified portions are made public. Nonetheless, the review offers an opportunity to create finding aids to classified documents that can be valuable in later declassification efforts by enhancing the specificity and focus of subsequent requests for classification reviews. The National Academy of Sciences committee cited experience during the dose-reconstruction project at Hanford that showed that even a simple list of titles of a classified document was a substantial help in focusing the search for information.

DOE is already acting to place index information about declassified documents on OpenNet, and to forward the declassified documents for placement into public reading rooms. To facilitate demand-driven declassification, existing and new finding aids to still-classified documents should be disseminated through OpenNet, DOE reading rooms, and other means.

Seek To Enhance Efficiency Through Use of Technology

As discussed in Chapter 1, existing and emerging technologies hold the promise of a much more efficient records management, cataloging, and location system. If documents are converted into electronic format in this way, it may also be possible to use “artificial intelligence” to facilitate the review of documents for declassification.

- ***Test the effectiveness of electronic document management systems.*** There are currently a number of technologies available and/or being developed, both in the private sector and within DOE, for scanning paper documents, saving them as electronic images and as text files (through optical character recognition, or OCR), and allowing rapid searches of the full text of the documents for words or phrases of interest to the researcher.¹⁴ Such a system would not replace the paper documents with electronic ones, since the originals (or hard copies) may continue to be required for legal purposes and for use by those who do not have access to, or are not comfortable with, computer technology. Instead, the electronic copies, combined with a full text search capability, would serve as an extremely fast and high-powered finding aid that could allow rapid identification and location of documents containing information that has been requested. If this approach proves to be feasible and cost-effective on a large scale, it could eliminate the need for the manually developed finding aids discussed above. ***The Department should seek proposals from the laboratories and the private sector for a document management system tailored to the Department’s needs, and fund one or more pilot tests.***
- ***Pursue the use of artificial intelligence to assist declassification reviews.*** Once a document has been converted to electronic format through scanning and OCR, existing or emerging technology might allow computer evaluation to determine, on a preliminary basis, whether it should be classified. The promise is great enough that the technology should be pursued, perhaps initially simply as a means of sorting the collection into documents that are highly likely to contain classified information and those that are promising candidates for declassification. However, some level of human review is

likely to be required for final declassification decisions for the foreseeable future, at least until it can be convincingly demonstrated that automatic declassification review methods do not have a higher error rate than human reviews.

Bring DOE's Electronic Records Into the Document Management System

The preceding discussion has focused on gaining better control of records that were generated in the past. However, DOE must also address the challenge of ensuring that records yet to come will be better managed from the outset, so that past problems are not repeated. But a fundamental change is occurring that makes the future challenge quite different from the challenge presented by the past documents. The tacit assumption has been that records management is carried out in the domain of paper — pages, files, boxes, repositories, and warehouses. The records problem is almost invariably stated, for instance, in terms of millions or even billions of pages. But the future may differ in a fundamental way: most documents generated today are prepared on increasingly sophisticated word processors and stored in electronic form. In some cases — notably e-mail and some databases — no paper is generated at all.

The shift to electronic media has fundamental implications for records management. While the paper-based domain had been essentially static for years, the new age of electronic information technology is advancing at a prodigious pace. The amazing technological advances in hardware are being matched by increasingly sophisticated software. Indeed, it is not unreasonable to suppose that the advance of hardware and software will continue apace or even accelerate, and will develop in ways that are difficult to predict today.

As a consequence, electronic media may be far more “perishable” than the paper they replace. Who remembers the eight-track tapes in the seventies, the Beta videotapes of the eighties, or the punch tapes and punch cards of early computers? The computer revolution thus presents a challenge for those who seek to safeguard information generated in soon-to-be-archaic formats. We

Report of the Committee on Records of Government

In 1985, the Committee on Records of Government, a blue-ribbon panel created by the American Council of Learned Societies, the Council on Library Resources, and the Social Science Research Council, released a report on government records. Among its principal conclusions were:

The danger of losing historically valuable records is greatly increased by the changeover to electronic recordkeeping. Under current procedure, records created on tapes or disks are erased or lost before anyone exercises judgement about their possible value. In addition, given the rapidity of technological change, even information recognized as valuable can be lost because the equipment and skills necessary to retrieve it become obsolete or unavailable.

They also noted that:

By the mid 1970s, when computer tapes for the 1960 census came to the attention of archivists, there remained only two machines capable of reading them. One was already in the Smithsonian. The other was in Japan!

Because of erasure of electronic records, future historians may know less about the Reagan Administration's 1985 arms control initiatives than about those of 1972 which led to SALT I or, for that matter, those of 1921 which led to the Washington Naval treaties.

Source: Report of the Committee on the Records of Government, Washington, DC (March 1985).

have no ready answer to this problem, but for the foreseeable future, electronic document management systems must at the least be designed with sufficient flexibility so as to adapt to this constant change.

Even without the problems posed by rapid technological advance, the electronic revolution may make the future research into the foundations for policy more difficult. In the electronic domain, there may be little or no "paper trail" to facilitate interpretation. For example, the use of a word processor enables a document to evolve without necessarily leaving a record of changes. Comments by reviewers are incorporated electronically into a new draft, the earlier draft is effectively erased, and there is no record of the "debate" that went into the final product. Often it is this debate, captured in the past in the working documents leading up to the final version, that evokes the interest of the historian, or which turns out to be germane to legal and congressional proceedings. With the shift to electronic media, the whole process by which decisions were reached, and the diversity of the views that went into them, are in danger of being lost forever. Persons 20 years from now faced with examining remaining records for historical or litigation purposes may have no insight as to how decisions, critical and mundane alike, were reached.

The implications of these dramatic changes have yet to draw policymakers' attention to the need to control the generation, storage, and retrieval of information in the future in a way that is fundamentally different from the familiar paper regime. We are entering uncharted territory, seemingly preoccupied with gazing into the rear-view mirror at the past, rather than through the windshield into the future. The Federal Government as a whole — not just the Department of Energy — appears unprepared for the new challenge. A Justice Department attorney recently was quoted as saying that “[w]hen it comes to preserving computer records in an electronic format, *the vast majority* of government agencies simply are not equipped to do that.”¹⁵

The Panel believes that to ensure openness in the future, the challenge presented by electronic records must be addressed urgently on a Department-wide, if not a Government-wide, basis. There is an awareness of the problem in interagency circles, and some agencies are seeking to achieve standardization in the management of electronic records. Nonetheless, the problem is so pressing that DOE may not be able to afford to await development of a Government-wide consensus on uniform standards for the generation, storage, archiving, and retrieval of electronic information. While experience suggests that uniform standards may be difficult to attain, a failure to address this problem now will allow today's confusion to develop into tomorrow's chaos.

The Department possesses a unique resource to apply to the problem unavailable to any other agency of government: the national laboratories, with their high level of computational proficiency, may be well suited to taking an active role in addressing the integrity of future recordkeeping in the face of continuing technological change. Indeed, this capability might enable DOE to take the lead in this challenging task.

Chapter 3:

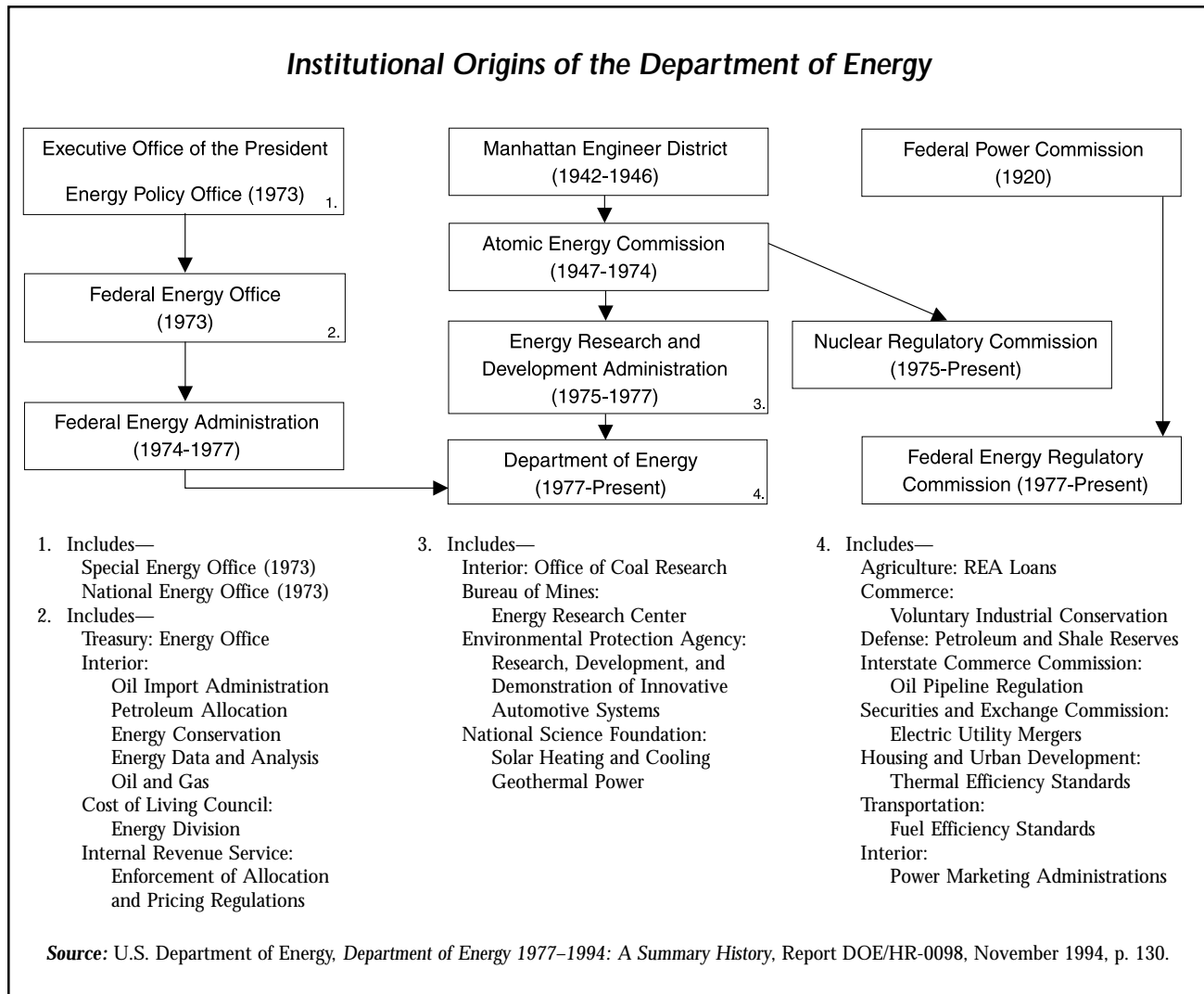
Changing the Culture

Revised orders and regulations relating to classification and documents management, while intended to rectify defects in the system, will fall short of their intended purpose if they run counter to the entrenched culture of the Department. As discussed above, the pervasive mindset during the Cold War was to conceal the activities of DOE from public scrutiny — not only those activities involving classified information, but also unclassified activities. Although the intended goal was to deny information to the Nation's adversaries, the effect was to prevent an open national discussion of DOE's activities. In the long run, public trust was lost. There thus is now a pressing need to change the institutional culture of DOE with regard to openness.

As discussed in the Introduction, the achievement of the Department's missions, including especially its critical mission concerning nuclear weapons, requires significant efforts to change the ingrained habits of 50 years of secrecy. Changes in policy will be ineffective unless the culture of the Department is also changed.

The achievement of change is complicated by the fact that there is no single focal point or clearly defined budget for declassification and document-management efforts within DOE. The roles and responsibilities are divided between DOE Headquarters and the DOE operations offices and management and operating (M&O) contractors. The primary role of Headquarters is to establish policy and guidance. But the accomplishment of the work must rest principally with the operations offices and the contractors.

Operations office managers have significant authority over their respective budgets and staff, and decide how much to spend on classification and declassification activities and on document management at each site. Usually such activities are funded as overhead costs associated with other activities. Because the operations offices are funded primarily through DOE's program



offices (primarily Defense Programs and Environmental Management), they understandably respond to the priorities of those offices. Viewed in this way, a Headquarters directive to perform a classification review or to upgrade document management is essentially an “unfunded mandate” whose execution depends on the willingness of the field offices to allocate the necessary resources. The result is an inconsistently implemented program. In the case of the Large-Scale Review, for example, most

field offices have submitted plans for approval, but only a few have found the funding to begin the review in earnest.¹⁶

The diffusion of responsibility and lack of central control is further compounded by the fact that in many cases documents are in the possession of DOE contractors, who have considerable discretion about whether to fund efforts to review documents for declassification and to make declassified or unclassified documents available for outsiders to use. ***The Department should undertake a systematic examination of its management of classification and document-control activities. The Department should find the means for ensuring that classification and document-control issues receive appropriate resources and attention by those who have responsibility for implementing revised policy.***

Finally, until changes in the old ways of doing business are seen to be in the Department's, the employees' and the contractors' self-interest, lasting and fundamental changes will not occur. Indeed, permanence of the gains that have been made will be threatened. In order to achieve and maintain change, the following steps should be undertaken:

- ***Openness should be established as a core value of the Department through incorporation in performance reviews, program plans, and contracting activities.***
- ***Budgetary adjustments should be made in order to ensure the availability of resources for openness.***
- ***DOE's contractors should be obliged to support declassification, record-maintenance, and accessibility activities that further DOE's openness initiatives. All new contracts should contain explicit language covering these obligations and existing contracts should be amended to the extent feasible.***
- ***For the foreseeable future, openness requires continuing Secretarial attention and emphasis.***

Notes

1. Moynihan, et. al., Commission on Protecting and Reducing Government Secrecy, *Secrecy: Report of the Commission on Protecting and Reducing Government Secrecy* (1997).
2. National Academy of Sciences, *A Review of the Department of Energy Classification Policy and Practice* (1995). The National Academy of Sciences also issued a second report that responded to the Department's request that the Academy examine the adequacy of the Department's response to the initial report: National Academy of Sciences, *Review of the Department of Energy's Response to the Recommendations in the National Research Council Study of DOE Declassification Policy and Practice* (July 1996). Certain members of this advisory panel (Meserve, Cotton) participated in the Academy's efforts.
3. DOE Fundamental Classification Review Group, *Fundamental Classification Policy Review* (Draft, Feb. 1, 1996). Also, R. Pollock, et. al., *Classification Policy Study*, (July 1992).
4. National Academy of Sciences, *A Review of the Department of Energy Classification Policy and Practice* (1995); *Review of the Department of Energy's Response to the Recommendations in the National Research Council Study of DOE Declassification Policy and Practice* (July, 1996); and Moynihan, et. al., *Commission on Protecting and Reducing Government Secrecy, Secrecy: Report of the Commission on Protecting and Reducing Government Secrecy* (1997).
5. National Academy of Sciences, *Management and Disposition of Excess Weapons Plutonium* (1994).
6. Narath, et. al., *Report of the Fundamental Classification Policy Review Group* (1996).
7. These working groups examined weapon design, weapon science, weaponization, nuclear material production, weapons production and military utilization, military reactors, and safeguards and security.
8. National Academy of Sciences, *A Review of the Department of Energy Classification Policy and Practice* (1995).
9. The rule also, in some respects, serves to strengthen the classification system. The rule confines classification to five categories of information:
 - Nuclear Weapon Design and Utilization.
 - Nuclear material and nuclear weapon production.

- Inertial Confinement Fusion.
- Military Nuclear Reactors,.
- Isotope Separation.

DOE uses the term Secret RD for classifying the above information. The DOE security clearance process for granting access to Secret RD entails a full field investigation of individuals involved. This is equivalent to the investigation used throughout the Government for access to Top Secret information in the NSI system. DOE proposes in the regulation to reinstate the use of Top Secret, RD, in consonance with the objective of building “high fences” around the most sensitive of information, and bringing DOE RD security practices into alignment with overall Government NSI practices.

10. Memorandum from Mary Ann Wallace to Anton A. Sinisgalli, February 23, 1995.
11. The National Defense Authorization Act for Fiscal Year 1996 (P.L. 104–106, February 10, 1996) enacted the “Information Technology Management Reform Act of 1996,” which will be codified at 40 U.S.C. sections 1401–1503.
12. The historical documents under the control of the DOE History Division represent a particularly good example of the value of well organized and complete finding aids. Much of this material has finding aids that were developed by the history staff in the 1970s. Because of the existence of these finding aids, historians are able to identify with precision their priorities for classification reviews. Of course, the availability of good finding aids does not by itself solve the problem of accessibility, and historians are still facing obstacles in gaining access to many of the documents because they have not yet been reviewed for declassification.
13. Paper presented by K. Marciante, DOE Oak Ridge Operations, at the Department of Energy Records Management Conference, Las Vegas, Nevada, June 1997.
14. One such system is the Human Radiation Experiments Information Management System (HREX), commissioned by the Department of Energy and developed by Argonne National Laboratory. HREX was designed to allow users to search for imaged historical radiation documents that have gone through the OCR (optical character recognition) process. Additional information on HREX can be obtained at the HREX Web site, <http://hrex.dis.anl.gov>. For technical questions, contact Argonne National Laboratory via e-mail at hrex@dis.anl.gov.
15. “Record-Destruction Order Assailed; Advocacy Groups Seeking to Overturn Rule Sue National Archivist,” *The Washington Post*, June 28, 1997, page A8.
16. DOE Office of Declassification, issue paper prepared in response to specific questions posed by the Priorities Subgroup of the Openness Advisory Panel (October 7, 1996), p. 2.