U.S. DEPARTMENT OF
ENERGY

Fiscal Year 2014 Report to Congress on Laboratory Directed Research and Development (LDRD) at the DOE National Laboratories

Report to Congress
December 2014

United States Department of Energy
Washington, DC 20585

Message from the Chief Financial Officer

As requested in the Fiscal Year (FY) 2001 Energy and Water Development Appropriations Conference Report (H.Rpt. 106-988), the Department of Energy (DOE) is submitting a *Report on Laboratory Directed Research and Development (LDRD) for FY 2014.* The report provides the FY 2014 LDRD expenditures by laboratory and weapons production plant, as well as information on the impact and importance of the LDRD Program in advancing the diverse missions of the Federal Government.

In FY 2014, 1,662 LDRD projects at the DOE national laboratories cost $527 million. The Report also includes information on DOE's Plant Directed Research, Development and Demonstration, and the Site Directed Research, Development and Demonstration Programs.

This report is being provided to the following Members of Congress:

- **The Honorable Barbara Mikulski**
  Chairwoman, Senate Committee on Appropriations

- **The Honorable Richard C. Shelby**
  Ranking Member, Senate Committee on Appropriations

- **The Honorable Harold Rogers**
  Chairman, House Committee on Appropriations

- **The Honorable Nita M. Lowey**
  Ranking Member, House Committee on Appropriations

- **The Honorable Dianne Feinstein**
  Chairman, Senate Subcommittee on Energy and Water Development, Committee on Appropriations

- **The Honorable Lamar Alexander**
  Ranking Member, Senate Subcommittee on Energy and Water Development, Committee on Appropriations

- **The Honorable Mike Simpson**
  Chairman, House Subcommittee on Energy and Water Development, Committee on Appropriations

- **The Honorable Marcy Kaptur**
  Ranking Member, House Subcommittee on Energy and Water Development, Committee on Appropriations

- **The Honorable Carl Levin**
  Chairman, Senate Committee on Armed Services

- **The Honorable James M. Inhofe**
  Ranking Member, Senate Committee on Armed Services

- **The Honorable Howard P. McKeon**
  Chairman, House Committee on Armed Services

- **The Honorable Adam Smith**
  Ranking Member, House Committee on Armed Services

- **The Honorable Fred Upton**
  Chairman, House Committee on Energy and Commerce

- **The Honorable Henry A. Waxman**
  Ranking Member, House Committee on Energy and Commerce

- **The Honorable Lamar Smith**
  Chairman, House Committee on Science, Space, and Technology

- **The Honorable Eddie Bernice Johnson**
  Ranking Member, House Committee on Science, Space, and Technology

- **The Honorable Mary Landrieu**
  Chairman, Senate Committee on Energy and Natural Resources

- **The Honorable Lisa Murkowski**
  Ranking Member, Senate Committee on Energy and Natural Resources

If you have any questions or need additional information, please contact me or Mr. Joseph Levin, Associate Director of External Coordination, at 202-586-3098.

Sincerely,

Joseph S. Hezir

Executive Summary

As requested in the FY 2001 Energy and Water Development Appropriations Conference Report (H.R. 106-988), the Department of Energy (DOE) has prepared a *Report on Laboratory Directed Research and Development (LDRD) for FY 2014.* The report provides the FY 2014 LDRD expenditures by laboratory and weapons production plants, as well as information on the impact and importance of the LDRD Program in advancing the diverse missions of the Federal Government.

In FY 2014, 1,662 LDRD projects at the DOE national laboratories cost $527 million. The Report also includes information on DOE's Plant Directed Research, Development and Demonstration, and the Site Directed Research, Development and Demonstration Programs.

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Secretarial Affirmation

On behalf of the Department of Energy, I am pleased to present the Fiscal Year 2014 Laboratory Directed Research and Development (LDRD) Report to Congress. The Department's national laboratories execute national missions and develop unique scientific and technical capabilities supporting those missions that are beyond the scope of academic and industrial institutions. Further, the laboratories develop and sustain scientific and technical capabilities that the Federal Government deems critical. The LDRD Program provides the laboratories with the opportunity and flexibility to establish and maintain an environment that encourages and supports creativity and innovation, and contributes to their long-term viability. LDRD allows the Department's laboratories to position themselves to advance our national security mission and respond to our Nation's future research needs.

Based on the information and acknowledgments provided to the Department and its contractors by the other Federal agencies that are funding LDRD activities in Fiscal Year 2014, I affirm that all LDRD activities derived from funds of other Federal agencies (1) have been conducted in a manner supporting scientific and technical development that benefits the programs of those agencies, and (2) are consistent with the appropriations acts that provided funds to those agencies.

Ernest J. Moniz
Secretary of Energy
December 2014

I. Congressional Language

This report responds to the Conference Report (H. Rept. No. 106-988) accompanying the Fiscal Year (FY) 2001 Energy and Water Development Appropriations Act, which requested the DOE Chief Financial Officer "develop and execute a financial accounting report of LDRD expenditures by laboratory and weapons production plant." It also responds to the National Defense Authorization Act for FY 1997 (Public Law 104-201), which requires submission each year of "a report on the funds expended during the preceding fiscal year on [LDRD] activities [...] to permit an assessment of the extent to which such activities support the national security mission of the Department of Energy." Further, this report addresses the request in the Conference Report (H.Rpt. No. 107-258) accompanying the FY 2002 Energy and Water Development Appropriations Act, which requests the Secretary of Energy include in the annual Report to Congress on LDRD expenditures "an affirmation that all LDRD activities derived from funds of other agencies have been conducted in a manner that support science and technology development that benefits the programs of the sponsoring agencies and is consistent with the Appropriations Acts that provided funds to those agencies."

II. Introduction

The Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq., in Section 31), directs the Department of Energy (DOE) to ensure the continued conduct of research and development (R&D) and to assist in the acquisition of an ever-expanding body of theoretical and practical knowledge in the fields of energy, its production, uses, handling, and effects. This mission, initially the responsibility of the Atomic Energy Commission (AEC), then that of the Energy Research and Development Administration, and subsequently DOE, has been and continues to be carried out to a significant extent in government-owned facilities.

The AEC recognized that to maintain the laboratories' intellectual vitality, their ability to respond immediately to developments at the cutting edge of science and technology, and their ability to retain the best scientific, technological, and managerial talent, a certain amount of work must be left to the laboratories' discretion. Thus, from its inception, the AEC and its successor agencies made allowable certain amounts of research derived from the ideas of the national laboratory researchers themselves.

In 1985, in response to the recommendations of national panels and commissions, the Department established the Exploratory Research and Development Program to formalize the practice of providing its national laboratories with the means to conduct laboratory-initiated R&D.[1] Six years later, DOE renamed the program Laboratory Directed Research and

[1] See, among others, the *Report of the White House Science Council*, Office of Science and Technology Policy, Executive Office of the President, Washington, DC, May 1983; and Guidelines, Energy Research Advisory Board, December 1985.

Development (LDRD) and formally established it at the DOE national laboratories. Today, the LDRD Program at the DOE national laboratories and analogous programs at the Department's nuclear weapons production plants (Plant Directed Research and Development, or PDRD) and Nevada National Security Site (NNSS) (Site Directed Research and Development, or SDRD) are active components of the DOE mission to promote scientific and technical (S&T) innovation that advances the economic, energy, and national security of the United States (U.S.).[2]

All LDRD activities conducted at the DOE national laboratories are governed by a standard DOE policy (DOE Order 413.2B, *Laboratory Directed Research and Development*), which provides guidance to ensure effective management and oversight of the LDRD Program, while at the same time supporting the laboratories' statutory authority to pursue innovative, self-selected projects in support of the DOE mission. DOE's LDRD policy is consistent with the Department's management practices for all R&D activities in that it includes annual planning and reporting requirements, as well as program and peer reviews to ensure the investments reflect highly innovative and the highest quality research projects. In addition, DOE concurs with each proposed LDRD project before a laboratory commences work to ensure the project complies with Departmental policy. The remainder of this report responds to the LDRD Program financial reporting requirements required by law (see Appendix for the list of statutory and report language requirements).

[2] PDRD Programs at DOE's Kansas City, Y-12, Pantex, and Savannah River Plants are consistent with the statutory authorizations found in Section 310 of the FY 2001 Energy and Water Development Appropriations Act (P.L. 106-377) and Section 3156 of the FY 2001 Floyd D. Spence National Defense Authorization Act (P.L. 106-398). The NNSS's SDRD Program is consistent with the statutory authorizations found in Section 310 of the FY 2002 Energy and Water Development Appropriations Act, 2002 (P.L. 107-66).

III. FY 2014 LDRD Financial Reporting

In accordance with Section 309 of Division D of the Energy and Water Development Appropriation Act, 2014, (Public Law 113-76) and the DOE Order 413.2 B, the maximum funding level established for LDRD must not exceed six percent of a laboratory's total operating and capital equipment budgets, including non-DOE funded work, for the year. Certified Cost Base represents a laboratory's total operating and capital equipment budgets, including non-DOE funded work. Field Chief Financial Officers certify the accuracy of the Cost Base, and certain cost categories are excluded from LDRD contributions.

Table 1. FY 2014 Overall Laboratory Costs and LDRD Costs at DOE Laboratories

Laboratory	# of LDRD Projects	LDRD Certified Costs ($M)	Total Lab Certified Cost Base ($M)	LDRD as a % of Certified Cost Base
Ames Laboratory	9	1.0	**53.0**	1.89%
Argonne National Lab	107	29.2	**753.6**	3.87%
Brookhaven National Lab	40	9.6	**566.1**	1.70%
Fermi National Accelerator Lab	7	.2	**324.1**	.06%
Idaho National Lab	69	17.0	**827.7**	2.05%
Lawrence Berkeley National Lab	83	23.6	**751.7**	3.14%
Lawrence Livermore National Lab	147	78.2	**1,411.7**	5.54%
Los Alamos National Lab	290	118.5	**2,068.0**	5.73%
National Renewable Energy Lab	57	10.3	**356.3**	2.89%
Oak Ridge National Lab	174	36.3	**1,231.8**	2.95%
Pacific Northwest National Lab	182	38.9	**982.2**	3.96%
Princeton Plasma Physics Lab	15	2.0	**102.0**	1.96%
Sandia National Labs	419	151.3	**2,686.3**	5.63%
Savannah River National Lab	40	6.2	**188.4**	3.29%
SLAC National Accelerator Lab	20	4.4	**283.7**	1.55%
Thomas Jefferson National Accelerator Facility	3	.2	**107.9**	.19%
Total	**1,662**	**526.9**	**12,694.5**	**4.15%**

LDRD is treated as a cost of doing business that is accumulated through a percentage of the overhead rate charged by a laboratory; this is based on the premise that LDRD is a cost for keeping the laboratories vibrant, cutting edge, and creative in ideas and new fields, and thereby benefits all programs doing work at a laboratory. LDRD is considered an allowable cost in accordance with the terms of the laboratory management and operating contracts and is identified in the laboratories' accounting systems.

The total FY 2014 LDRD Program cost at the national laboratories was $527 million, which represents 4.2 percent of total cost base at these laboratories.

Each national laboratory conducted a review of the LDRD projects conducted in FY 2014 to determine the relevance of those projects to the missions of the various laboratory customers that provided funds for LDRD in FY 2014. For this review, the laboratory customers were put into three mission categories – defense, non-defense, and homeland security (i.e., Department of Homeland Security (DHS)). Overall, the review indicated that the LDRD projects conducted in FY 2014 were relevant to one, two or all three mission categories. Further, the review indicated that the funds contributed by each customer category were invested in LDRD projects relevant to the respective mission areas at a level at least equal to the LDRD funds provided by the customers.

The following link displays all FY 2014 LDRD Projects:
http://www.energy.gov/cfo/office-chief-financial-officer

IV. LDRD and the Work For Others Program

The Work For Others (WFO) Program creates opportunities to leverage non-DOE Federal and non-Federal resources to accelerate scientific discovery and deploy solutions that benefit both DOE's and the sponsoring entity's mission and goals. WFO plays an important role in the laboratories' efforts to develop, strengthen, and sustain unique S&T capabilities deemed critical by the Government and, in many cases, represents a coordinated set of activities that seek to address large and complex national needs. This leveraging of DOE and WFO activities allows the laboratories to deliver national solutions in a cost-effective manner.

Congress provided language in the Conference Report 107-258 accompanying the Energy and Water Development Appropriations Act, 2002, that requested the Department to notify other Federal agencies that a portion of WFO projects will be used to fund LDRD projects. In addition, with the creation of the DHS in the FY 2002 Homeland Security Act, Congress enacted a requirement that LDRD funding provided by DHS must be used to benefit DHS missions. In response to the FY 2002 Conference Report, the Secretary of Energy issued guidance requiring all LDRD laboratories to notify other Federal agencies of LDRD charges before funding work at

the laboratories. Specifically, each new and/or revised WFO proposal DOE provides to a Federal agency must indicate the amount of LDRD charges that will be collected on the project. Furthermore, the proposal notifies the sponsor that, by providing funding, the agency is acknowledging that LDRD activities are beneficial to its organization and are consistent with the appropriation acts that provided funds to the agency. Subsequently, each WFO funding acceptance document also includes the LDRD charge acknowledgement.

In February 2003, the Secretary of Energy and the Secretary of Homeland Security entered into a Memorandum of Agreement to implement key provisions of the Homeland Security Act. In addition, the Deputy Secretary of Energy issued DOE Order 484.1 on *Reimbursable Work for the Department of Homeland Security.* The Order provides information on the process by which the DHS may place orders for reimbursable work activities to be performed at the DOE laboratories. In the Order, there are provisions for notification of LDRD charges in the cost proposal as well as requirements for acknowledgements regarding the benefits of LDRD before final approval.

In December 2003, DOE's Acting Chief Financial Officer provided other Federal agency Chief Financial Officers who are customers and sponsors of work at the Department's laboratories with applicable guidance and policy documents to explain the Department's processes. Collectively, the implementation and execution of these policies provide the basis for the Secretary's affirmation that the LDRD Program is managed in accordance with the Congressional requirements cited above.

V. FY 2014 PDRD and SDRD Programs – Financial Reporting

Plant Directed Research and Development (PDRD) - Fiscal Year Expenditures

Section 308 of Division C of the Omnibus Appropriations Act, 2009 (Public Law 111-8) allowed the Secretary of Energy to authorize an amount not to exceed four percent for PDRD. Table 2 shows FY 2014 PDRD expenditures by site.

Table 2. FY 2014 PDRD Expenditures

Plant	# of PDRD Projects	PDRD Certified Costs ($M)	Total Plant Certified Cost Base ($M)	PDRD as a % of Certified Cost Base
Kansas City	98	21.9	681.3	3.21%
Pantex	39	4.1	541.9	.76%
Savannah River Plant	13	1.6	178.0	.90%
Y-12	72	23.1	797.6	2.90
Total	**222**	**50.7**	**2,198.8**	**2.31%**

Site Directed Research and Development (SDRD) - Fiscal Year Expenditures

Section 308 of Division C of the Omnibus Appropriations Act, 2009 (Public Law 111-8) allowed the Secretary of Energy to authorize an amount not to exceed four percent for SDRD. Table 3 shows FY 2014 SDRD Program expenditures.

Table 3. FY 2014 SDRD Expenditures

Site	# of SDRD Projects	SDRD Certified Costs ($M)	Total Site Certified Cost Base ($M)	SDRD as a % of Certified Cost Base
Nevada National Security Site	41	6.4	404.7	**1.58%**

VI. Scientific Productivity and Performance

LDRD is an important mechanism through which the Department's national laboratories are provided the flexibility to support the formulation of their own new theories, hypotheses, and approaches; build new and enhance existing S&T capabilities; and identify and develop technology applications with the potential to advance the DOE mission. Over the years, LDRD projects have realized major science and technology breakthroughs that have been reported widely in the scientific community. The Laboratory LDRD page on the DOE website http://science.energy.gov/lp/laboratory-directed-research-and-development/impact/ provides a number of examples of highlights associated with the LDRD Program at the DOE national laboratories. Additionally, the subsequent sections provide examples of key performance results of the LDRD Program for the last several fiscal years.

VII. Workforce Development

The LDRD Program is instrumental in the laboratories' ability to attract promising young scientists and engineers to careers aimed at advancing DOE's mission, thus providing the basis for continually refreshing the laboratory research staff, as well as for the education and training of the next generation of scientists. This includes support for both undergraduate and graduate students working on LDRD projects, technical staff retention resulting from opportunities to retain and hone scientific skills via LDRD, and a range of university collaborations stimulated via LDRD projects. Furthermore, the LDRD Program plays an important role in supporting early-career post-doctoral researchers at the laboratories, as shown in Table 4.

Table 4. Post-Doctoral Researchers Supported by LDRD at the DOE Laboratories in FY 2014

	Total Post-doctoral Count		
	Total # Post-doctoral Researchers at the National Laboratories	Total # of Post-doctoral Researchers Partially or Fully Supported by LDRD Funding[3]	% of Post-doctoral Researchers Partially or Fully Supported by LDRD Funding
Total # in FY 2014	3,188	837	26.3%

VIII. Publications

Publication in the open literature is an important component of any research and development program, especially those that involve the most fundamental scientific studies. Because these reports must first pass through expert reviews by peers in the relevant fields, they are demonstrative of the scientific quality of the knowledge produced through R&D.[4] The table below provides aggregate numbers of publications for FY 2011-2013 derived from LDRD activities at the DOE laboratories. These statistics demonstrate that LDRD is producing a high volume of outstanding science.

Table 5. Number of Peer-Reviewed Publications in FY 2011, 2012, and 2013, Derived from LDRD Projects

	Total Publication Count		
Fiscal Year	2011	2012	2013
Total # Peer Reviewed Publications	1,869	2,049	2,109

[3] The number of post-doctoral researchers supported by LDRD in FY 2014 includes postdoctoral researchers at the DOE/NNSA laboratories that spent 10 percent or more of their time at a laboratory working on LDRD during the fiscal year.

[4] There is no standard value for publications across technical fields (e.g., chemists typically publish numerous short papers, mathematicians publish less frequently but more in-depth, and geologists publish accounts of field work).

IX. Intellectual Property

In 1989, the National Competitiveness Technology Transfer Act (P.L. 99-502) established technology transfer as a mission of Federal R&D agencies, including DOE. Since then, DOE has encouraged its national laboratories to find ways to bring the knowledge, intellectual property, facilities, and capabilities they have developed to the market place in order to meet public and private needs.

Over time, the Department has found that LDRD projects are a productive component in advancing its technology transfer mission. One example of LDRD's productivity is the number of invention disclosures and patents—a useful indicator in measuring technological strength and innovation—that stem from LDRD projects. The table below illustrates the distribution of patents and invention disclosures for FY 2011-2013.

Table 6. Number of Patents Filed/Granted and Invention Disclosures in FY 2011, 2012, and 2013 Derived from LDRD Projects

	Total Intellectual Property Count		
Fiscal Year	2011	2012	2013
Total # Patents	141	103	181
Total # Invention Disclosures	453	335	524

Appendix A. Statutory and Report Language Related to LDRD

Section 309 of Division D of the Energy and Water Development Appropriations Act, 2014 (Public Law 113-76). "Notwithstanding section 307 of Public Law 111-85, of the funds made available by the Department of Energy for activities at Government owned, contractor operated laboratories funded in this or any subsequent Energy and Water Development Appropriations Act for any fiscal year, the Secretary may authorize a specific amount, not to exceed 6 percent of such funds, to be used by such laboratories for laboratory directed research and development."

Section 307 of the Energy and Water Development Appropriations Act, 2010 (Public Law 111-85). "Of the funds made available by the Department of Energy for activities at Government-owned, contractor-operated laboratories funded in this Act or subsequent Energy and Water Development Appropriations Acts, the Secretary may authorize a specific amount, not to exceed 8 percent of such funds, to be used by such laboratories for laboratory directed research and development: Provided, That the Secretary may also authorize a specific amount not to exceed 4 percent of such funds, to be used by the plant manager of a covered nuclear weapons production plant or the manager of the Nevada Site Office for plant or site directed research and development."

Section 308 of Division C of the Omnibus Appropriations Act, 2009 (Public Law 111-8). LABORATORY DIRECTED RESEARCH AND DEVELOPMENT. Of the funds made available by the Department of Energy for activities at government-owned, contractor-operated laboratories funded in this Act or subsequent Energy and Water Development Appropriations Acts, the Secretary may authorize a specific amount, not to exceed 8 percent of such funds, to be used by such laboratories for laboratory directed research and development: *Provided,* That the Secretary may also authorize a specific amount not to exceed 4 percent of such funds, to be used by the plant manager of a covered nuclear weapons production plant or the manager of the Nevada Site Office for plant or site directed research and development: *Provided further,* That notwithstanding Department of Energy order 413.2A, dated January 8, 2001, beginning in fiscal year 2006 and thereafter, all DOE laboratories may be eligible for laboratory directed research and development funding.

Section 309 of Division C of the Consolidated Appropriations Act, 2008 (Public Law 110-161). LABORATORY DIRECTED RESEARCH AND DEVELOPMENT. Of the funds made available by the Department of Energy for activities at government-owned, contractor-operated laboratories funded in this Act or subsequent Energy and Water Development Appropriations Acts, the Secretary may authorize a specific amount, not to exceed 8 percent of such funds, to be used by such laboratories for laboratory-directed research and development: *Provided,* That the Secretary may also authorize a specific amount not to exceed 4 percent of such funds, to be used by the plant manager of a covered nuclear weapons production plant or the manager of the Nevada Site Office for plant or site-directed research and development: *Provided further,* That notwithstanding Department of Energy order 413.2A, dated January 8, 2001, beginning in

fiscal year 2006 and thereafter, all DOE laboratories may be eligible for laboratory directed research and development funding.

109th Congress - House of Representatives Energy & Water Appropriations Conference Report 109-275 (2006). "The conferees are concerned with the level of overhead charges applied to programs funded in this bill and urge the Department to continue to work to minimize the overhead burden on all program activities. In order to ensure an equitable allocation of overhead costs the Secretary should apply overhead charges to LDRD activities consistent with cost accounting practices applied to program activities that are direct funded. The conference agreement increases the allowable percentage for LDRD, PDRD and SDRD activities to allow this accounting change without harming the underlying discretionary research activities. The change in accounting practices should be implemented with no net reduction in LDRD levels below 6 percent of the funds provided by the Department of Energy to such labs for national security activities and 2 percent for PDRD and SDRD activities at the appropriate plants and sites. Within 90 days after the date of enactment of this Act, the Secretary of Energy shall submit a report to the Committees on Appropriations detailing how the accounting change will be implemented without impacting the basic research and the change shall be implemented within 180 days of enactment."

Section 311 of the Energy and Water Development Appropriations Act, 2006 (Public Law 109-103). "Of the funds made available by the Department of Energy for activities at government-owned, contractor-operator operated laboratories funded in this Act or subsequent Energy and Water Development Appropriations Acts, the Secretary may authorize a specific amount, not to exceed 8 percent of such funds, to be used by such laboratories for laboratory-directed research and development: *Provided,* That the Secretary may also authorize a specific amount not to exceed 3 percent of such funds, to be used by the plant manager of a covered nuclear weapons production plant or the manager of the Nevada Site Office for plant or site-directed research and development: *Provided further,* That notwithstanding Department of Energy order 413.2A, dated January 8, 2001, beginning in fiscal year 2006 and thereafter, all DOE laboratories may be eligible for laboratory directed research and development funding."

108th Congress - House of Representatives Energy & Water Appropriations Report 108-212 (2004). "The Committee recognizes the value of conducting discretionary research at DOE's national laboratories. Such research provides valuable benefits to the Department and to other Federal agencies, and is crucial to attracting and retaining scientific talent at the laboratories. However, the Committee continues to have concerns about the financial execution of this program. One concern centers on the manner in which DOE levies the LDRD "tax" on all DOE and Work for Other programs, and then accumulates the funds into an overhead pool. This Committee typically deals with defense and non-defense allocations within the Energy and Water Development bill, and the line between those two allocations is not easily crossed. Under LDRD, however, the laboratory directors are able to pool defense and non-defense appropriations at will. The only obvious solution to this concern is to require DOE to establish and track separate LDRD accounts for defense and non-defense funding sources, and the Committee is not yet ready to direct that change. The other principal concern deals with the application of LDRD to work being performed for other agencies (Work For Others). The

conference report accompanying the Energy and Water Development Appropriations Act, 2002 (P.L. 107–66) directed the Secretary to "include in the annual report to Congress on LDRD activities an affirmation that all LDRD activities derived from funds of other agencies have been conducted in a manner that support science and technology development that benefits the programs of the sponsoring agencies and is consistent with the Appropriations Acts that provided funds to those agencies." The Department has implemented this guidance by including the following language into its standard project proposal and funding acceptance documents that it requires the funding WFO agencies to sign: "The Department of Energy believes that LDRD efforts provide opportunities in research that are instrumental in maintaining cutting edge science capabilities that benefit all of the customers at the laboratory. The Department will conclude that by providing funds to DOE to perform work, you acknowledge that such activities are beneficial to your organization and consistent with appropriations acts that provide funds to you." This is too facile a solution for the Department. According to a review conducted by this Committee's investigative staff, only a little more than half of the WFO customers indicated they could reliably certify that DOE's LDRD activities are consistent with the funding agencies' appropriations acts. Nevertheless, most agencies sign the required certification letter to DOE because they see no real alternative. The Committee fully expects that there are terms and conditions attached to the appropriations acts for these other agencies that are being ignored through this so-called "certification" process for LDRD work."

The Committee is considering changing the arrangement by which LDRD activities are funded to eliminate these concerns. The results of an ongoing General Accounting Office review will help to inform the Committee's choice. The Committee is receptive to streamlining the annual LDRD report to Congress, which is undoubtedly a significant burden for the Department to prepare and is of little value to this Committee in resolving the concerns identified above. The Department should work with Committee staff to develop a simpler and more useful LDRD report."

107th Congress - House of Representatives Energy & Water Appropriations Conference Report 107-258 (2002). "The conference agreement does not include bill language proposed by either the House or the Senate regarding the Laboratory Directed Research and Development (LDRD) program. The conferees recognize the benefits of LDRD and expect LDRD activities to continue at previously authorized levels. However, when accepting funds from another Federal agency that will be used for LDRD activities, the Department of Energy shall notify that agency in writing how much will be used for LDRD activities. In addition, the conferees direct the Secretary of Energy to include in the annual report to Congress on all LDRD activities an affirmation that all LDRD activities derived from funds of other agencies have been conducted in a manner that supports science and technology development that benefits the programs of the sponsoring agencies and is consistent with the Appropriations Acts that provided funds to those agencies."

Utilization of Department of Energy National Laboratories and Sites in Support of Homeland Security Activities - FY 2002 Department of Homeland Security Act (Public Law. 107-296, Section 309, 6 USC 189(6) f) Laboratory Directed Research and Development by the Department of Energy.--No funds authorized to be appropriated or otherwise made available to

the Department in any fiscal year may be obligated or expended for laboratory directed research and development activities carried out by the Department of Energy unless such activities support the missions of the Department of Homeland Security.

106th Congress - House of Representatives Energy & Water Appropriations Conference Report 106-988 (2001). "The conference agreement includes an allowance of six percent for the laboratory directed research and development (LDRD) program and two percent for nuclear weapons production plants. Travel costs for LDRD are exempt from the contractor travel ceiling. The conferees direct the Department's Chief Financial Officer to develop and execute a financial accounting report of LDRD expenditures by laboratory and weapons production plant. This report due to the House and Senate Committees on Appropriations by December 31, 2000, and each year thereafter, should provide costs by personnel salaries, equipment, and travel.[5] The Department should work with the Committees on the specific information to be included in the report."

Section 3136 of the National Defense Authorization Act for Fiscal Year 1997 (Public Law 104-201).

(a) Limitation.--No funds authorized to be appropriated or otherwise made available to the Department of Energy for fiscal year 1997 under section 3101 may be obligated or expended for activities under the Department of Energy Laboratory Directed Research and Development Program, or under any Department of Energy technology transfer program or cooperative research and development agreement, unless such activities support the national security mission of the Department of Energy.

(b) Annual Report.--(1) The Secretary of Energy shall annually submit to the congressional defense committees a report on the funds expended during the preceding fiscal year on activities under the Department of Energy Laboratory Directed Research and Development Program. The purpose of the report is to permit an assessment of the extent to which such activities support the national security mission of the Department of Energy. (2) Each report shall be prepared by the officials responsible for Federal oversight of the funds expended on activities under the program. (3) Each report shall set forth the criteria utilized by the officials preparing the report in determining whether or not the activities reviewed by such officials support the national security mission of the Department.

[5]The offer to streamline the LDRD report resulted in the Department and Hill contacts agreeing not to require costs be provided by personnel salaries, equipment, and travel.