

an accelerated cleanup initiative for DOE sites. Sites would receive additional funding in the near term in order to accelerate cleanup and reduce funding requirements in the outyears. The Department's fiscal year 2004 budget request assumed that it would reach agreement with all of the involved State regulators on accelerated cleanup plans. Where such agreement has not been reached, the Committee does not provide the additional increment of funding that was requested for accelerated cleanup. The \$26,122,000 reduction reflects the failure to reach agreement on accelerated cleanup for the Paducah site.

SCIENCE

Appropriation, 2003	\$3,272,328,000
Budget Estimate, 2004	3,310,935,000
Recommended, 2004	3,480,180,000
Comparison:	
Appropriation, 2003	+207,852,000
Budget Estimate, 2004	+169,245,000

The Science account funds the Department's work on high energy physics, nuclear physics, biological and environmental sciences, basic energy sciences, advanced scientific computing, maintenance of the laboratories' physical infrastructure, fusion energy sciences, safeguards and security, science workforce development, and science program direction. The Committee recommendation is \$3,480,180,000, an increase of \$169,245,000 compared to the budget request.

The Committee has provided additional funding for the Office of Science to address the following Committee priorities: high performance computing; additional operating time, equipment upgrades, and staffing to support increased research opportunities at the Office of Science user facilities; remediation of safety deficiencies at DOE Science laboratories; and restoration of domestic fusion funding displaced by the new international fusion initiative. The Committee also provides additional funding to perform essential research and development and preconcept design for one new project (i.e., the Rare Isotope Accelerator). The Committee may consider different or additional priorities for new research facilities once the Office of Science releases its Twenty Year Facility Outlook.

External Regulation of DOE Science Laboratories.—In July 2002, the Department produced a Committee-directed implementation plan for external regulation. The Department identified several key unresolved questions about external regulation, specifically the unknown costs of transitioning to external regulation and the unknown cost savings that might result from such a transition. However, the Department stated that it “believes that these issues can be resolved” and “favors the prospect of a transition to external regulation . . .” The Committee has subsequently taken steps to resolve these questions, tasking the General Accounting Office (GAO) to identify the current costs of DOE's self-regulation of the Science laboratories and the potential savings that might result under external regulation. In its report (GAO-03-633R), the GAO found that the Department could save as much as \$41 million annually by shifting to external regulation of its Science laboratories.

To address the question of transition costs, the Committee in the Energy and Water Development Appropriations Act, 2003, directed the transfer of funds from the Department of Energy to the Nuclear Regulatory Commission (NRC) and the Occupational Safety and Health Administration (OSHA) to conduct compliance audits of the ten DOE Science laboratories. The audits are to be completed for four laboratories by September 30, 2003, and for all ten labs by March 31, 2004. Upon completion of these audits, the laboratories are also to prepare estimates of the costs to correct the identified deficiencies and bring these ten laboratories into compliance with NRC and OSHA safety standards. In recognition of the late start on these audits in fiscal year 2003, the Committee revises the completion date for the audits and associated cost estimates to May 31, 2004.

In response to the Committee's concerns about continued self-regulation, the Office of Science in November 2002 directed its ten laboratories to conduct their own assessment of the potential costs of bringing those laboratories into compliance with NRC and OSHA standards. The Committee recognizes the crude nature of this estimate, particularly as it was conducted without the participation of the NRC and OSHA. Nevertheless, this self-assessment by the Science laboratories represents the only existing estimate of the costs of transitioning the laboratories to external regulation. These laboratories estimated their transition costs to be approximately \$75 million. This estimate, approximate as it is, reveals the existence of a significant backlog of safety deficiencies at these laboratories. The existence and persistence of such a backlog is one of the unfortunate consequences of the Department's adherence to its current scheme of self-regulation. The Department is able to identify safety problems but is unable or unwilling to dedicate the necessary resources to correct these problems.

The Committee believes it is important to the health and safety of laboratory employees, of visiting researchers, and of the population in the surrounding communities that these safety deficiencies be corrected expeditiously. Therefore, the Committee has transferred \$25,000,000 from the Departmental Administration account to the Science Laboratories Infrastructure subaccount to address these safety deficiencies at the ten Science laboratories; these funds may not be reprogrammed for other purposes. In addition, the Committee directs the Department to request sufficient funding in the budget requests for fiscal years 2005 and 2006 to correct the remainder of these safety deficiencies over the next two fiscal years. The completion of the NRC and OSHA compliance audits should permit the preparation of a more accurate estimate of these costs. Regardless of whether the Department continues to regulate itself or makes the overdue transition to external regulation, this backlog of unresolved safety deficiencies must be addressed promptly.

HIGH ENERGY PHYSICS

The Committee recommends a total of \$747,978,000 for high energy physics, an increase of \$10,000,000 over the budget request. The control level is at the High Energy Physics level. The additional funds are provided to increase operating time and enhance

user support at the user facilities located at the Fermi National Accelerator Laboratory and the Stanford Linear Accelerator Center. The Committee recommendation includes the requested amount, \$12,500,000, for construction of the Neutrinos at the Main Injector project at Fermilab. The Committee recognizes the efforts of the staff from the Office of Science, Fermilab, and the other laboratories to bring the Tevatron luminosity upgrade back on schedule. The Committee also encourages the Department to accelerate progress on the Supernova/Accelerator Probe (SNAP), which will provide an important tool to advance our understanding of the history of the universe.

NUCLEAR PHYSICS

The Committee recommendation for nuclear physics is \$399,430,000, an increase of \$10,000,000 over the budget request. An additional \$7,500,000 is provided to increase operating time and enhance user support at the user facilities located at the Brookhaven National Laboratory and the Thomas Jefferson National Accelerator Facility. The Committee recommendation includes \$6,000,000 for research and development and pre-conceptual design activities in support of the Rare Isotope Accelerator, an increase of \$2,500,000 over the requested amount for this project. The Committee strongly encourages the Department to make a prompt CD0 decision for the 12 GeV upgrade to the Continuous Electron Beam Accelerator Facility at the Thomas Jefferson National Accelerator Facility and to include adequate PED funding for this project in the fiscal year 2005 budget request.

BIOLOGICAL AND ENVIRONMENTAL RESEARCH

The Committee recommendation for biological and environmental research is \$562,035,000, an increase of \$62,500,000 over the budget request. The additional funds are provided to increase operating time and enhance user support at the user facilities located at various DOE laboratories that support the biological and environmental sciences user community, and to provide for additional university research grants for biological and environmental research.

BASIC ENERGY SCIENCES

The Committee recommendation for basic energy sciences is \$1,016,575,000, an increase of \$8,000,000 over the budget request. For purposes of reprogramming during fiscal year 2004, the Department may allocate funding among all operating accounts within Basic Energy Sciences.

Research.—The Committee recommendation includes \$575,711,000 for materials sciences and engineering, and \$220,914,000 for chemical sciences, geosciences, and energy biosciences. The additional \$8,000,000 in the material sciences and engineering account is provided to increase operating time and enhance user support at Basic Energy Sciences user facilities. Also included within this account is \$7,673,000 for the Experimental Program to Stimulate Competitive Research (EPSCoR), the same as the budget request.

Construction.—The Committee recommendation includes \$219,950,000 for construction, the same as the requested amount. The Committee recommendation provides the requested funding of \$124,600 for the Spallation Neutron Source (SNS), \$35,000,000 for the Molecular Foundry, \$29,850,000 for the Center for Integrated Nanotechnologies, \$20,000,000 for the Center for Nanophase Material Sciences, \$7,500,000 for PED for the Linac Coherent Light Source, and \$3,000,000 for PED for the Center for Functional Nanomaterials at Brookhaven National Laboratory.

ADVANCED SCIENTIFIC COMPUTING RESEARCH

The Committee continues to support efforts to advance U.S. supercomputing technology and is encouraged that the President's fiscal year 2004 budget identifies supercomputing as a critical component of its Networking and Information Technology Research and Development program. The Committee views the Department of Energy as a key player in the Federal government's efforts in supercomputing. At the same time, the Committee recognizes that a number of other Federal agencies are involved with the development of, and have critical needs for, more advanced computing capabilities. The Committee notes that the White House Office of Science and Technology Policy (OSTP) has recently established the multi-agency High End Computing Revitalization Task Force (HEC RTF). This task force, of which the Department is a participant, has been charged with developing a coordinated, interagency plan for supercomputing research and development that addresses issues of capability, capacity, and accessibility for scientific applications. The Committee strongly supports this interagency HEC RTF effort, and expects the Department to participate fully and to follow the HEC RTF plan for ongoing and future research and development, facility operations, and hardware procurement of its advanced scientific computing resources.

The Committee recommendation is \$213,490,000, an increase of \$40,000,000 over the budget request. The Committee provides these funds for the Department to acquire additional advanced computing capability to support existing users in the near term and to initiate longer-term research and development on next generation computer architectures. The Committee directs the Department to use these funds in a manner fully consistent with the recommendations of the HEC RTF. The Committee also expects that, to the maximum extent practicable, these funds will be awarded using a merit-based, competitive process.

SCIENCE LABORATORIES INFRASTRUCTURE

The Committee recommendation provides a total of \$71,535,000 for Science Laboratories Infrastructure, an increase of \$27,945,000 over the budget request. The majority of this increase, \$25,000,000, is transferred from the Departmental Administration account to correct safety deficiencies at the Science laboratories. The funding provided for Science Laboratory Safety Measures may not be reprogrammed for other purposes. The Committee recommendation also provides an additional \$2,945,000 for excess facilities disposition, bringing this account total to \$8,000,000, comparable to the fiscal year 2003 enacted level. The Committee is disappointed that the

Department's budget request recommended closing the 88-inch cyclotron at Lawrence Berkeley National Laboratory yet failed to provide any funding for the decontamination and decommissioning (D&D) of this facility. Once a particular Science facility is no longer useful, the Department should take prompt action to reduce its landlord costs and make that space available for other purposes. The added increment of funding for excess facilities is to be applied to D&D of the 88-inch cyclotron. The Committee recommendation provides the requested funding of \$1,520,000 for infrastructure support, \$5,079,000 for Oak Ridge landlord costs, \$2,000,000 for Science Laboratories Infrastructure 04-SC001, specifically to initiate PED for project MEL-001-36 at the Stanford Linear Accelerator Center, and \$29,936,000 for construction of various sub-projects under the MEL-001 infrastructure project.

FUSION ENERGY SCIENCES

The Committee recommendation for fusion energy sciences is \$268,110,000, an increase of \$10,800,000 over the budget request. The Committee is cautiously supportive of the Administration's proposal to re-engage in the International Thermonuclear Experimental Reactor (ITER) project, but is disappointed that the budget request provides \$12,000,000 in funding for the U.S. ITER effort only at the expense of displacing ongoing domestic fusion research. The additional \$10,800,000 includes \$4,000,000 for burning plasma experiments, including support for ITER and for the domestic FIRE project, \$5,200,000 for fusion technology, and \$1,600,000 for advanced design and analysis work. If the Department intends to recommend ITER participation in the fiscal year 2005 budget request, the Committee expects the Department will do so without harm to domestic fusion research or to other programs in the DOE Science budget.

SAFEGUARDS AND SECURITY

The Committee recommends \$51,887,000, an increase of \$3,760,000 over the budget request, to meet additional safeguards and security requirements.

SCIENCE WORKFORCE DEVELOPMENT

The Department requested \$6,470,000 for Science Workforce Development in fiscal year 2004, including \$1,000,000 to initiate a pilot program at Argonne National Laboratory providing intensive, hands-on training for approximately 60 science, engineering, and mathematics teachers. The Committee is very supportive of this initiative, but would like to see it applied at all five multiprogram Science laboratories. The Committee recommendation provides \$7,470,000, including \$2,000,000 for the Laboratory Science Teacher Professional Development initiative, to be distributed among all five multiprogram laboratories.

SCIENCE PROGRAM DIRECTION

The Committee recommendation is \$147,053,000 for Science program direction. This amount includes: \$80,102,000 for program direction at DOE field offices, \$58,157,000 for program direction at

DOE headquarters, \$7,774,000 for Technical Information Management; and \$1,020,000 for Energy Research Analyses. The request for program direction for field offices was reduced by \$3,720,000 and the amount transferred to the Safeguards and Security line. The control level for fiscal year 2004 is at the program account level of Science Program Direction.

FUNDING ADJUSTMENTS

The Committee recommendation includes an offset of \$4,383,000 for the safeguards and security charge for reimbursable work, as proposed in the budget request. A general reduction of \$1,000,000 has been applied to the Science account.

NUCLEAR WASTE DISPOSAL

Appropriation, 2003	\$144,058,000
Budget Estimate, 2004	161,000,000
Recommended, 2004	335,000,000
Comparison:	
Appropriation, 2003	+190,942,000
Budget Estimate, 2004	+174,000,000

The Federal government has a clear statutory responsibility, assigned by Congress in the Nuclear Waste Policy Act of 1982, as amended, to provide for the permanent disposal of spent nuclear fuel and high-level radioactive waste. The Department of Energy was required by statute to accept commercial spent nuclear fuel for disposal beginning on January 31, 1998, and entered into legally enforceable contracts with utilities to execute that obligation. Unfortunately, the Department has been unable to meet that deadline, resulting in a number of lawsuits over the Department's failure to meet its statutory and contractual obligation and a growing financial liability over that failure. The Court of Federal Claims has found the Department to be in breach of its contractual obligations and is proceeding to determine the extent of damages.

The primary consequence of the Department's failure to begin accepting spent nuclear fuel is not, however, the existence of lawsuits and damage claims; it is that vast quantities of commercial spent nuclear fuel remain in temporary storage at reactor sites scattered around the country, many located near major population centers. The Committee is not questioning the current safety and security of spent nuclear fuel stored at commercial sites in accordance with Nuclear Regulatory Commission criteria. The Committee does, however, believe that the safety and security of these materials will be enhanced the sooner they are placed in the underground repository at Yucca Mountain. After the events of September 11, 2001, the Committee believes it is more essential than ever to move aggressively to get the Yucca Mountain repository licensed, built, and operating at the earliest possible date.

Chronic funding shortfalls, however, have starved the program of the resources necessary to keep the repository program on schedule. The Department's latest schedule calls for opening the repository and beginning to accept spent fuel in 2010 at the earliest, over 12 years behind schedule. Most recently, the Department requested a total of \$591,000,000 for the nuclear waste disposal program in fiscal year 2003, yet received only \$457,000,000, a funding shortfall

DEPARTMENT OF ENERGY
(AMOUNTS IN THOUSANDS)

	FY 2003 Enacted	FY 2004 Request	House Recommended
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URANIUM FACILITIES MAINTENANCE AND REMEDIATION			
Other Uranium Activities			
Maintenance and pre-existing liabilities.....	140,292	---	---
Use of prior year balances.....	-25,000	---	---
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TOTAL, URANIUM FACILITIES MAINTENANCE AND REMEDiation.....	115,292	---	---
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SCIENCE			
High energy physics.....	702,302	---	---
Proton accelerator-based physics.....	---	399,494	404,494
Electron accelerator-based physics.....	---	159,486	164,486
Non-accelerator physics.....	---	43,000	43,000
Theoretical physics.....	---	42,256	42,256
Advanced technology R&D.....	---	81,242	81,242
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Subtotal.....	702,302	725,478	735,478
Construction			
98-G-304 Neutrinos at the main injector, Fermilab.....	19,962	12,500	12,500
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Total, High energy physics.....	722,264	737,978	747,978
Nuclear physics.....	381,872	389,430	399,430
Biological and environmental research.....	506,685	499,535	562,035
Basic energy sciences			
Research			
Materials sciences and engineering research.....	547,794	567,711	575,711
Chemical sciences, geosciences and energy biosciences.....	220,111	220,914	220,914
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Subtotal, Research.....	767,905	788,625	796,625
Construction			
04-R-313-Nanoscale science research center, the molecular foundry.....	---	35,000	35,000
04-R-314 Nanoscale science research center, the center for integrated nontechnologies, SNL/LASL...	---	29,850	29,850
03-SC-002 Project engineering & design (PED) SLAC.	5,961	7,500	7,500
03-R-312 Center for nanophase materials sciences, ORNL.....	23,844	20,000	20,000
03-R-313 Center for Integrated Nanotechnology.....	4,471	---	---
02-SC-002 Project engineering and design (VL).....	11,922	3,000	3,000
99-E-334 Spallation neutron source (ORNL).....	209,202	124,600	124,600
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Subtotal, Construction.....	255,400	219,950	219,950
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Total, Basic energy sciences.....	1,023,305	1,008,575	1,016,575
Advanced scientific computing research.....	168,455	173,490	213,490
Science laboratories infrastructure			
Infrastructure support.....	1,013	1,520	1,520
Oak Ridge landlord.....	5,046	5,079	5,079

DEPARTMENT OF ENERGY
(AMOUNTS IN THOUSANDS)

	FY 2003 Enacted	FY 2004 Request	House Recommended
Excess facilities disposal.....	7,948	5,055	8,000
Safety-related corrective actions.....	---	---	25,000
Construction			
04-SC-001 Project engineering and design (PED), various locations.....	---	2,000	2,000
03-SC-001 Science laboratories infrastructure project engineering and design (PED), various loc.	3,333	---	---
MEL-001 Multiprogram energy laboratory infrastructure projects, various locations.....	28,043	29,936	29,936
Subtotal, Construction.....	31,376	31,936	31,936
Total, Science laboratories infrastructure.....	45,383	43,590	71,535
Fusion energy sciences program.....	248,375	257,310	268,110
Safeguards and security.....	48,448	48,127	51,887
Science workforce development.....	5,425	6,470	7,470
Science program direction			
Field offices.....	71,932	83,802	80,102
Headquarters.....	55,620	58,217	58,157
Technical information management program.....	6,954	7,774	7,774
Energy research analyses.....	993	1,020	1,020
Total, Science program direction.....	135,499	150,813	147,053
Subtotal, Science.....	3,285,711	3,315,318	3,485,563
General reduction/use of prior year balances.....	-20,000	---	-1,000
Less security charge for reimbursable work.....	-4,383	-4,383	-4,383
Supplemental appropriations (P.L. 108-11).....	11,000	---	---
TOTAL, SCIENCE.....	3,272,328	3,310,935	3,480,180
NUCLEAR WASTE DISPOSAL			
Repository program.....	84,448	85,830	249,830
Program direction.....	59,610	75,170	85,170
TOTAL, NUCLEAR WASTE DISPOSAL.....	144,058	161,000	335,000
DEPARTMENTAL ADMINISTRATION			
Administrative operations			
Salaries and expenses			
Office of the Secretary.....	4,251	4,624	4,251
Board of contract appeals.....	735	653	653
Chief information officer.....	28,377	42,214	34,377
Congressional and intergovernmental affairs.....	4,449	4,724	4,449
Economic impact and diversity.....	4,940	4,701	4,701
General counsel.....	21,572	22,879	20,000
Office of Management, Budget and Evaluation.....	101,854	104,210	104,210
Policy and international affairs.....	13,822	17,777	13,822
Public affairs.....	3,854	4,465	3,854
Subtotal, Salaries and expenses.....	183,854	206,247	190,317