

**REPORT ON THE STATUS OF THE FACILITIES AND INFRASTRUCTURE
PROGRAM AT SCIENCE LABORATORIES
AS OF MARCH 31, 2006**

Background

In the Conference Report (107-258) accompanying the Fiscal Year 2002 (FY 2002) Energy and Water Development Appropriations Act, Public Law 107-66, Congress requested that the Department of Energy (DOE) establish a new Facilities and Infrastructure (F&I) program to improve the facilities and infrastructure at DOE Office of Science (SC) laboratories. It directed that at least 25 percent of this funding be used to dispose of excess facilities that will provide the greatest impact on reducing long-term costs and risks.

The House Report (107-112, page 116) accompanying the FY 2002 House Energy and Water Development Appropriations Bill requests that the Department provide a semi-annual report on the status of the F&I program to the Committee on Appropriations. Specifically, the report states that:

The Department is to provide a semi-annual report to the Committee on the status of the facilities and infrastructure program. The report should include the current priority list of proposed facilities and infrastructure projects including cost and schedule requirements. For each site, the report is to include: a current ten-year site plan that demonstrates the reconfiguration of its facilities and infrastructure to meet its missions and to address its long-term operational costs and return on investment; the current budget for all facilities and infrastructure funding in this program, as well as all funding for maintenance and infrastructure upgrades funded through other parts of the budget; and the current status of each facilities and infrastructure project compared to the original baseline cost, schedule, and scope.

Reporting

This is the ninth semi-annual report on the status of the Office of Science (SC) facilities and infrastructure (F&I) program as of March 31, 2006, for the first half of FY 2006.

Overview

The Office of Science operates ten SC laboratories and the Oak Ridge Institute for Science and Education (ORISE), and has some facilities at Lawrence Livermore National Laboratory and Sandia National Laboratory. Together at these locations, SC has 1,519 buildings (21.5 million square feet of space) with an estimated replacement plant value of \$11.1 billion. In

terms of square footage, 55 percent (11.6 million sq. ft.) is over forty years old, while 30 percent (6.4 million sq. ft.) is over fifty years old. The average age of active SC buildings is 34 years.

The FY 2006 funding for SC facilities and infrastructure is shown in Table 1. Direct funding of \$76.5 million is provided by SC research programs for General Plant Project (GPP) funding (i.e., projects less than \$5 million) and by the Science Laboratories Infrastructure (SLI) program for general purpose facilities line item construction projects (i.e., projects \$5 million or larger) and excess facilities disposition projects. Indirect funding of \$153.5 million is provided for laboratory maintenance and Institutional GPP via laboratory overhead and space charges.

The SLI Excess Facilities Disposition (EFD) subprogram was established in FY 2002 to address the backlog of excess facilities at SC's aging laboratories. Through FY 2006, the EFD subprogram will have removed approximately 450,000 sq. ft. and cleaned up 650,000 sq. ft. for reuse.

SC requires each site to update its Ten Year Site Plan (TYSP) annually. The TYSPs identify and prioritize facilities and infrastructure needs, including plans for excess facilities, to adequately support mission needs. The TYSPs are similar to the laboratories' Strategic Facilities Plans prepared prior to 2005. The 2005 TYSPs are available at the following SC website: <http://www.sc.doe.gov/sc-80/sc-82/tysp.shtml>.

Proposed Excess Facilities Disposition Projects

The list of SC's current backlog of EFD projects is shown in Table 2. It is an update of the information in the 2005 TYSPs. It does not include SC facilities which are in the baseline of the Office of Environmental Management (EM) for disposition, or which are currently being considered for inclusion in the EM baseline (e.g., 569,000 sq. ft. of SC buildings at Y-12). Prioritization in the list is based on square footage removed or cleaned up. The Department is currently reviewing its policies on responsibility for disposition of excess facilities, and any revised policies will be reflected in future Semi-Annual Facilities and Infrastructure Reports.

The EFD projects are either facility demolitions or clean-ups for re-use. Demolitions of buildings reduce operating costs and provide space to offset new construction, in accordance with Congressional requirement to offset new building space with the removal of existing building space. Demolitions also provide land for reuse and reduce safety and environmental risks.

Cleanups for reuse reclaim usable space by removing legacy equipment or eliminate the need for protective measures by eliminating chemical or radiological contamination. Such projects improve a site's space utilization.

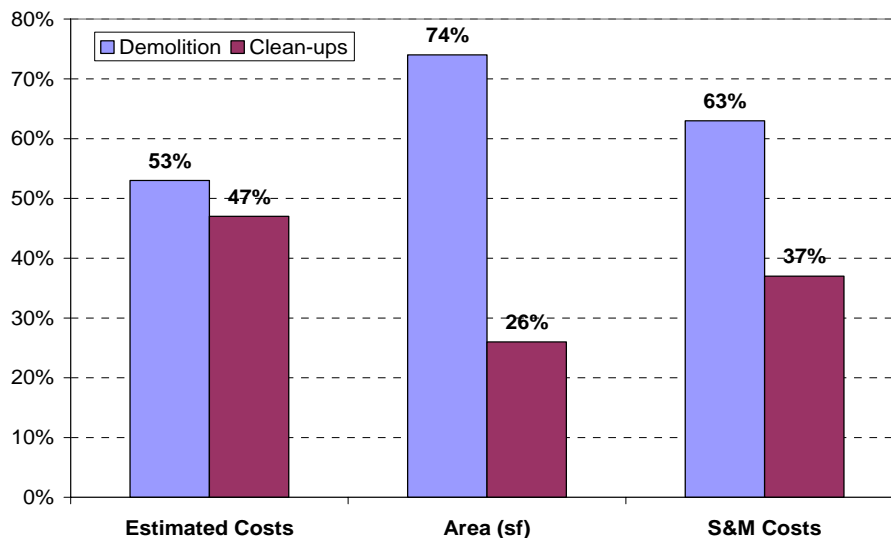
The estimated disposal cost for the facilities shown in Table 2 is approximately \$325 million, an increase of \$218 million from the previous semi-annual report. Most of the increase is due to the addition of three facilities at Argonne National Laboratory: clean-up and removal of Building 200 Hot Cells (\$91M), demolition of the Alpha Gamma Hot Cell Facility (\$50M), and the excess material removal project at Vault 40 (\$26M). The area to be cleaned up or removed has increased from approximately 380,000 square feet in the last report to approximately 527,000 square feet, and the annual surveillance and maintenance (S&M) cost has increased from approximately \$400,000 to approximately \$2,856,000. The table below shows the estimated disposal costs, square footage, and S&M cost savings by laboratory.

Summary of Currently Excess Facilities by Lab

Lab	Disposal Costs Total \$ (000)	Sq. Ft.	S&M Costs
ANL	\$183,976	129,761	\$2,464
BNL	\$44,140	41,335	\$225
LBNL	\$83,544	142,379	\$0
LLNL	\$500	4,333	\$46
ORNL	\$7,527	163,531	\$66
Ames	\$3,100	35,000	\$0
PPPL	\$202	6,840	\$55
SLAC	\$2,100	4,000	\$0
Total	\$325,089	527,179	\$2,856

As shown in Chart 1, demolition projects account for approximately 53 percent of the total estimated cost of currently excess facilities, approximately 74 percent of the total area, and approximately 63 percent of the annual S&M cost reduction.

Chart 1: Comparison of Demolition and Clean-up Projects for Currently Excess Facilities



Individual projects and estimated funding amounts shown are subject to revision based on evolving program priorities, including risk reduction, footprint reduction, cost savings, and availability of space/land for new research activities. They are also subject to change based on more detailed planning and experience gained from disposition of current projects.

Status of On-going EFD Projects

The FY 2006 EFD funding supports seventeen projects, six of which are continuations of projects begun in previous years. The current status of these projects is shown in Table 3. All are within baseline.

The Bevatron project is a large project with an estimated cost of \$65 million to \$75.3 million. It will be funded over multiple years and is being executed in compliance with DOE O 413.3, Program and Project Management for the Acquisition of Capital Assets. The Acquisition Strategy and Critical Decision-1 (Preliminary Baseline) were approved in June 2006.

Two projects funded with FY 2005 funds and that were to be completed in FY 2005 were not yet completed as of March 31, 2006. They are expected to be completed by the end of FY 2006. These projects are:

1. Demolition of Building 370, Alkali Metal Loop at ANL
2. Demolition of Health Physics Calibration and Service Laboratory at PPPL

Photographs of some of the facilities which have been, or are expected to be, demolished in FY 2006 are shown below. They include:

- The 9,000 sq. ft. Waste Handling Facility, with radiological contamination, and the 900 sq. ft. Hydrogen Test Cell Facility, demolished at the Ames Laboratory at a total cost of \$345,000, including \$45,000 in FY 2006 funding;
- The 1,651 sq. ft. Building 374A, with radiological and lead contamination, to be demolished at ANL at a cost of \$329,000;
- The 11,097 sq. ft. Building 86, with asbestos and lead contamination, to be demolished at BNL at a cost of \$276,000; and
- Some of the 49,566 sq. ft. of excess facilities, to be demolished in the Solway and Freels Bend area of ORNL at a cost of \$858,000.

AMES Laboratory
Waste Handling Facility



Before



After

Argonne National Laboratory
Building 374A



Brookhaven National Laboratory
Building 86



ORNL
Green Barn



ORNL
Twin I Barn



Table 1 - Office of Science FY 2006 Facilities and Infrastructure Funding (\$1000s)

Laboratory	General Purpose Facilities Line Item Construction	General Plant Project (GPP) (Projects less than \$5M)	Excess Facilities Disposition*	Total SC Direct- Funded Infrastructure Investment**	Maintenance***	Institutional GPP (IGPP)***	Total Investment
Ames		\$ 631	\$ 45	\$ 676	\$ 915		\$1,591
ANL		\$ 5,520	\$ 770	\$ 6,290	\$ 26,327		\$32,617
BNL	\$ 3,646	\$ 7,620	\$ 600	\$ 11,866	\$ 25,899		\$37,765
LBNL	\$ 3,780	\$ 4,864	\$ 10,900	\$ 19,544	\$ 13,000		\$32,544
FNAL		\$ 5,366	\$ 125	\$ 5,491	\$ 12,521		\$18,012
LLNL			\$ 150	\$ 150	\$ 2,767		\$2,917
ORNL		\$ 6,786	\$ 858	\$ 7,644	\$ 36,828	\$ 10,000	\$54,472
ORISE		\$ 974	\$ 768	\$ 1,742	\$ 475		\$2,217
ORO		\$ 200		\$ 200	\$ 1,891		\$2,091
PNNL	\$ 4,950	\$ 4,500		\$ 9,450	\$ 1,895	\$ 2,000	\$13,345
PPPL		\$ 1,910		\$ 1,910	\$ 5,045		\$6,955
Sandia		\$ 256		\$ 256	\$ 1,960		\$2,216
SLAC	\$ 5,314	\$ 2,840		\$ 8,154	\$ 7,798		\$15,952
TJNAF		\$ 967		\$ 967	\$ 3,490		\$4,457
NDRL		\$ 20		\$ 20	\$ 145		\$165
All Others		\$ 1,839	\$ 275	\$ 2,114	\$ 500		\$2,614
Total SC Budget	\$ 17,690	\$ 44,293	\$ 14,491	\$ 76,474	\$ 141,456	\$ 12,000	\$229,930

* The total of \$14,491 shown is the result of a recission from the FY 06 appropriated amount of \$14,637.
** Total of SLI Infrastructure Line Item Construction, GPP and Excess Facilities Disposition.
*** Funded from laboratory overhead or space charges. IGPP is a pilot program currently under review.

**Table 2 - Current Backlog of Office of Science Facilities Disposition Projects
March 31, 2006**

Lab	Facility Eligible for Disposal	Project Type	Total Estimated Cost (TEC)-\$K*	Square Footage	Annual S&M Savings-\$K	Funding Year	Funding Request \$K
ANL	Bldg. 205 F-111 Vault Cleanup & Hood Removal	Cleanup	\$500	870	\$0	FY 2007	\$500
BNL	Bldg 650 Demolition-Ongoing Project	Demolition	\$6,800	13,654	\$70	FY 2007	\$697
LBNL	Bevatron Demolition-Ongoing Project	Demolition	\$83,000	127,000		FY 2007	\$14,000
ORNL	Bldg. 3503 Cleanup and Deactivation	Cleanup	\$320	13,716	\$26	FY 2007	\$320
ORNL	Bldg. 3111 Demolition	Demolition	\$25	100	\$1	FY 2007	\$25
ORNL	Bldg. 3008 Demolition	Demolition	\$71	565	\$2	FY 2007	\$71
ORNL	Bldg. 2018 Demolition	Demolition	\$560	7,803	\$32	FY 2007	\$560
ORNL	Demolish Containment Building-7600	Demolition	\$5,000	107,922	\$5	TBD	TBD
ANL	Building 330 Chicago Pile 5 (CP-5) Demolition	Demolition	\$5,500	52,743	\$25	TBD	TBD
AMES	Decontamination of Harley Wilhelm Hall	Cleanup	\$3,100	35,000		TBD	TBD
ANL	Bldg. 203 Cleanup of Radium Contamination	Cleanup	\$3,000	23,964	\$0	TBD	TBD
ANL	Bldg. 200 Hot Cells	Cleanup	\$91,215	23,168	\$494	TBD	TBD
ANL	Building 212 Alpha Gamma Hot Cell Facility	Demolition	\$50,000	12,500	\$1,500	TBD	TBD
BNL	Bldg 491 Demolition	Demolition	\$18,070	11,653	\$100	TBD	TBD
ORNL	Demolish Barn D-XF1301	Demolition	\$389	8,025		TBD	TBD
ORNL	Demolish Barn E Deer Checking Station (3 separate structures)-XF1303	Demolition	\$398	8,025		TBD	TBD
PPPL	Experimental Subsystem Removals	Cleanup	\$202	6,840	\$55	TBD	TBD
BNL	Bldg 901 D&D and Removal of Dynamitron	Cleanup	\$7,970	6,740	\$25	TBD	TBD
BNL	Bldg 830 D&D & Removal of Hot Cells and Associated Equipment	Cleanup	\$11,000	5,550	\$25	TBD	TBD
LBNL	Bldg. 50D Demolition	Demolition	\$300	4,959		TBD	TBD
LBNL	Bldgs. 29A - C Demolition	Demolition	\$90	4,631		TBD	TBD
LLNL	Remove Bioscience Research Legacy Facilities at B377		\$500	4,333	\$46	TBD	TBD
ORNL	Demolish Underground Silo-XH1404	Demolition	\$100	3,800		TBD	TBD
ORNL	Demolish Variable Dose Irradiation Facility (VDRIF)-XG1404	Demolition	\$176	3,623		TBD	TBD
ANL	Bldg. 206 High Bay, D-Wing, and B-133 Equipment and Sodium Tanks Cleanup	Cleanup	\$800	3,000	\$18	TBD	TBD
BNL	Bldg 462 D&D of Hot Shop	Cleanup	\$225	2,495	\$3	TBD	TBD
LBNL	Bldgs. 67B & 67C Demolition	Demolition	\$64	2,475		TBD	TBD
ORNL	Demolish Freels Bend Shielding Wall Donkey Arena-XG1410	Demolition	\$115	2,375		TBD	TBD
ANL	Bldg. 205 H-125/H-126 Cell Decontamination	Cleanup	\$400	2,360	\$35	TBD	TBD
ORNL	Demolish Shed D Butler-XF1302	Demolition	\$97	2,000		TBD	TBD
SLAC	Remove Mark II Detector in Bldg 750	Cleanup	\$200	2,000		TBD	TBD
SLAC	Remove HRS Detector in Bldg 660	Cleanup	\$400	2,000	\$0	TBD	TBD
LBNL	Bldg. 40 & 41 Demolition	Demolition	\$40	1,988		TBD	TBD
ANL	Bldg. 205 F-111 Excess/Contaminated Media and Equipment Cleanup	Cleanup	\$1,300	1,530	\$11	TBD	TBD
ANL	Excess Material Removal Project (Addresses Vault 40 Material Removal, CMT and AGHCF Additional Fuel Removal Costs)	Cleanup	\$26,000	1,500	\$290	TBD	TBD
ANL	Building 308 Sodium Loop Removal	Cleanup	\$1,000	1,500	\$15	TBD	TBD
BNL	Bldg 492 Demolition	Demolition	\$75	1,243	\$2	TBD	TBD
ANL	Bldg. 308 Cathode Processor (CP) Removal	Cleanup	\$550	1,200	\$16	TBD	TBD
ANL	Bldg. 310 A-128 and A-114 Cleanup	Cleanup	\$525	1,200	\$11	TBD	TBD
ANL	Building 306 A, B, C & Trailer Demolition	Demolition	\$120	1,116	\$11	TBD	TBD
ORNL	Demolish Interim Grounds Equipment Storage-7020	Demolition	\$48	1,056		TBD	TBD
ANL	Bldg. 205 F-111 Vault Cleanup & Hood Removal-Ph II	Cleanup	\$500	870	\$0	TBD	TBD
ANL	Bldg. 205 X-125 Cleanup	Cleanup	\$352	716	\$6	TBD	TBD
ORNL	Demolish ATDD/NOAA Facility-943	Demolition	\$2	656		TBD	TBD
ORNL	Demolish Museum Office Trailer-XC1405	Demolition	\$27	552		TBD	TBD
LBNL	Bldg. 71E Demolition	Demolition	\$15	513		TBD	TBD
ORNL	Demolish HFIR Trailer-7957	Demolition	\$24	500		TBD	TBD
ORNL	Demolish Unnumbered Abandoned Trailer in HFIR Lot	Demolition	\$25	500		TBD	TBD
ORNL	Demolish Unnumbered Abandoned Trailer in HFIR Lot	Demolition	\$25	500		TBD	TBD

Lab	Facility Eligible for Disposal	Project Type	Total Estimated Cost (TEC)-\$K*	Square Footage	Annual S&M Savings-\$K	Funding Year	Funding Request \$K
ANL	Building 205 A-141 Cleanup	Cleanup	\$159	484	\$5	TBD	TBD
LBNL	Bldg. 75E Demolition	Demolition	\$20	410		TBD	TBD
LBNL	Bldg. 73A Demolition	Demolition	\$15	403		TBD	TBD
ORNL	Demolish Storage House/R&P's-7610	Demolition	\$17	378		TBD	TBD
ANL	Bldg. 202 Lab Radioactive and Biological Contaminated Equipment Demolition and Cleanup	Cleanup	\$75	300	\$12	TBD	TBD
ANL	Bldg. 206 NAK Heat Exchanger Removal	Cleanup	\$500	300	\$10	TBD	TBD
ORNL	Demolish Barn E Silo-XF1304	Demolition	\$50	254		TBD	TBD
ORNL	Demolish Freels Bend Machine Storage Shed-XG1402	Demolition	\$12	245		TBD	TBD
ANL	Bldg. 203 Storage Hole Cleanup	Cleanup	\$50	240	\$1	TBD	TBD
ANL	Bldg. 365 IPNS Modulator Disposition	Cleanup	\$580	200	\$1	TBD	TBD
ORNL	Demolish ESD/NOAA USAF Instrument Trailer-822	Demolition	\$13	200		TBD	TBD
ORNL	Demolish Airways Becan Lighthouse-969	Demolition	\$4	160		TBD	TBD
ORNL	Demolish Stack Monitoring House-7609	Demolition	\$6	144		TBD	TBD
ORNL	Demolish Freels Bend Farm Pump House-XH1406	Demolition	\$5	100		TBD	TBD
ORNL	Demolish Steel Yard Office-7060	Demolition	\$5	100		TBD	TBD
ORNL	Demolish Walker Branch Weir Instrument Trailer-934	Demolition	\$6	96		TBD	TBD
ORNL	Demolish Sentry Post #20b-7072	Demolition	\$4	72		TBD	TBD
ORNL	Demolish PAM Station 041-XF1307	Demolition	\$3	64		TBD	TBD
ANL	Clean-up Historic Tanks and Debris in the 398 and 317 Bone Yard Project	Cleanup	\$350		\$2	TBD	TBD
ANL	Clean-up Historic Vessels and Debris in Misc. Site Bone Yards Project	Cleanup	\$500		\$1	TBD	TBD
SLAC	Clean-up Portion of Sector 17 "Boneyard"	Cleanup	\$1,500			TBD	TBD
	Current Backlog of Demolitions		\$171,816	389,436	\$1,794		
	Current Backlog of Cleanups		\$153,273	137,743	\$1,062		
	Current Backlog of Demolitions and Cleanups		325,089	527,179	\$2,856		

* Cost estimates for projects beyond FY 2007 are very preliminary estimates based on field requests. These costs will be refined prior to the projects being funded.

Lab	Total \$	Sq. Ft.	S&M Savings
ANL	\$183,976	129,761	\$2,464
BNL	\$44,140	41,335	\$225
LBNL	\$83,544	142,379	\$0
ORNL	\$7,527	163,531	\$66
Ames	\$3,100	35,000	\$0
PPPL	\$202	6,840	\$55
LLNL	\$500	4,333	\$46
SLAC	\$2,100	4,000	\$0
Total	\$325,089	527,179	2,856

**Table 3 - Projects Funded by the SC Excess Facilities Disposition Program in FY 2006
March 31, 2006**

Project Number	Project	Project Type	FY 2006 Funding-\$K	Square Footage	Status of Project	Cost/Scope/Schedule
05-AMES-2	Waste Handling Facility and Hydrogen Test Cell Facility Closeout and Demolition-Cont'd	Demolition	\$ 45	9,900	Completed	Completed
	Total FY 2006		\$ 45	9,900		
05-ANL-5	Building 40 Demolition Project-Cont'd	Demolition	\$ 276	NA*	On-going	Within baseline
06-ANL-1	Building 374A Demolition Project	Demolition	\$ 329	1,651	On-going	Within baseline
06-ANL-2	Site Beryllium Remediation Project - Selected Rooms (Phase 1)	Cleanup	\$ 165	9,000	On-going	Within baseline
	Total FY 2006		\$ 770	10,651		
05-BNL-1	Bldg 527 Demolition-Cont'd	Demolition	\$ 45	2,869	On-going	Within baseline
05-BNL-2,5 & 7	Bldg. 197, 933B and 934 Demolition-Cont'd	Demolition	\$ 25	NA**	On-going	Within baseline
06-BNL-3	Bldg 86 Demolition	Demolition	\$ 270	11,097	On-going	Within baseline
06-BNL-4	Bldg 422A Demolition	Demolition	\$ 60	1,264	On-going	Within baseline
06-BNL-5	Bldg 628 Demolition	Demolition	\$ 30	403	On-going	Within baseline
06-BNL-6	Bldg 649 Demolition	Demolition	\$ 30	615	On-going	Within baseline
06-BNL-7	Bldg 482 Demolition	Demolition	\$ 115	3,204	On-going	Within baseline
06-BNL-8	Bldg 650 Demolition - Phase I	Demolition	\$ 25	NA***	On-going	Witin baseline
	Total FY 2006		\$ 600	19,452		
05-FNAL-1	Removal of 2 Muon Enclosures	Cleanup	\$ 125	790	On-going	Within baseline
	Total FY 2006		\$ 125	790		
04-LBNL-1	Bevatron Demolition Project-Cont'd	Demolition	\$ 10,900	NA****	On-going	Project being executed in compliance with DOE O 413.3, Program and Project Management for the Acquisition of Capital Assets. Critical Decision-1 to begin preliminary engineering is planned to be approved in June 2006.
	Total FY 2006		\$ 10,900	0		
06-LLNL-1	Demolish Bioscience Research Legacy Facilities at B3703	Demolition	\$ 150	10,068	On-going	Within baseline
	Total FY 2006		\$ 150	10,068		
06-ORISE-1	Demolition of Bldg. SC-2, Isotope Laboratory, and Bldg. SC-5, Large Animal Containment Facility	Demolition	\$ 768	6,593	On-going	Within baseline
	Total FY 2006		\$ 768	6,593		
06-ORNL-1	Solway and Freels Bend Excess Facilities Demolition (XG1413, XF158X, XF1580, XH1402, XH1405, XG1412, XG1403, XG1405, XG1406, XG1407, XG1408, XG1409 and XG1411)	Demolition	\$ 858	49,566	On-going	Within baseline
	Total FY 2006		\$ 858	49,566		
	FY 2006 Demolitions		\$ 13,926	97,230		
	FY 2006 Cleanups		\$ 290	9,790		
	External Independent Reviews		\$ 275			
	FY 2006 Totals		\$ 14,491	107,020		

* 4,896 sq. ft. will be accounted for after project is completed

** 3,535 sq. ft. accounted for in FY 2005.

*** Phase 1 stabilizes the building; no space will be removed or cleaned

**** 127,000 sq. ft. of excess space elimination will be accounted for after project is completed.