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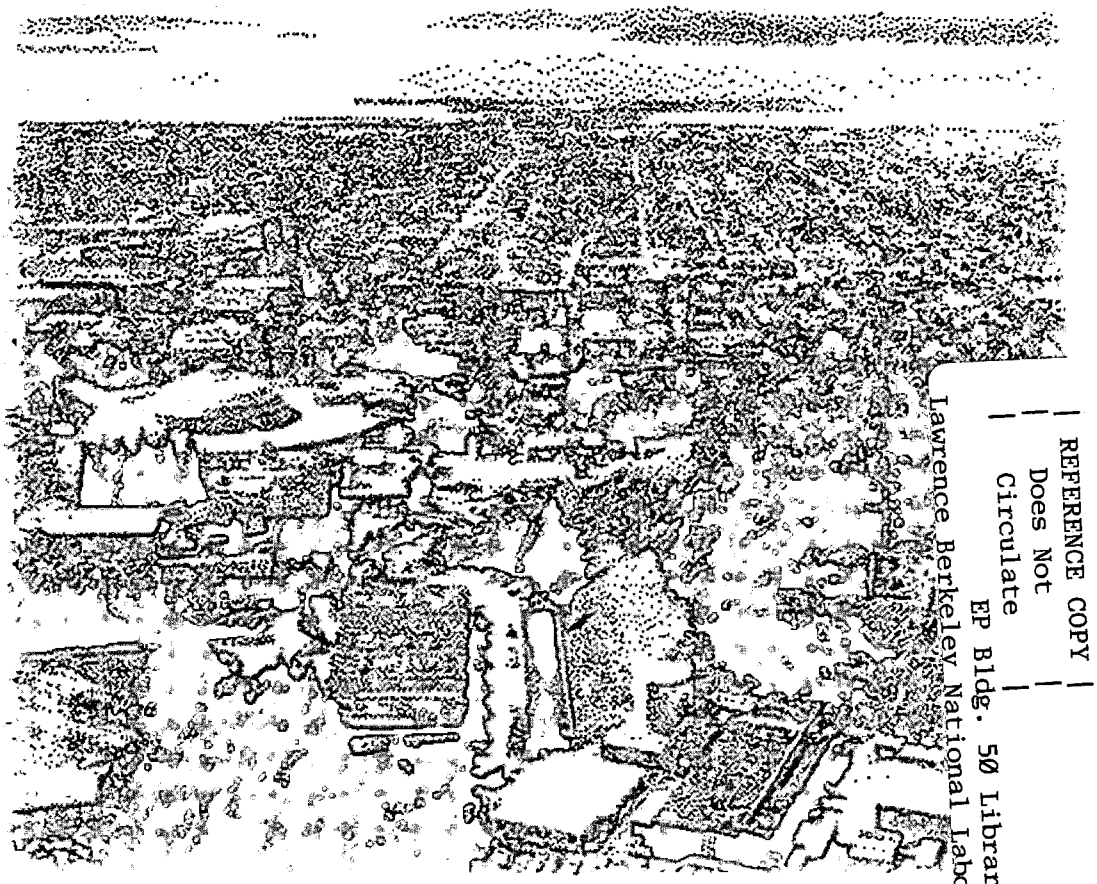
ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY

Contract 98, Appendix F Self-Assessment Report for Fiscal Year 1997

September 1997



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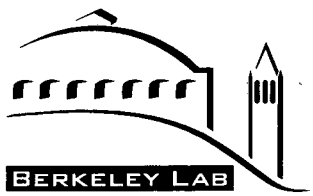
Ernest Orlando Lawrence Berkeley National Laboratory



Contract 98, Appendix F

Self-Assessment Report

for

Fiscal Year 1997

Prepared for the U.S. Department of Energy under Contract DE-AC03-76SF00098

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OVERVIEW

Overview

Purpose and Scope of the Annual Performance Review

The Ernest Orlando Lawrence Berkeley National Laboratory is a Department of Energy multiprogram national research laboratory with principal research roles in computing, energy science, biological and environmental research, and high energy and nuclear physics. Berkeley Lab research programs address a spectrum of national problems through national scientific leadership, technological innovation, and operation of advanced research facilities. Berkeley Lab is managed and operated by the University of California (UC) under a DOE performance-based contract (Contract DE-AC03-76SF00098). This contract requires all three parties (DOE, UC, and LBNL) to utilize a performance-based management system for appraisal and evaluation of all aspects to Berkeley Lab's performance for DOE.

Appendix F to Contract DE-AC03-76SF00098 describes in detail the components and implementation processes to this performance-based management system. Of note are its two principal subsystems:

1. The use of peer review and programmatic self-assessment in the appraisal and evaluation of science and technology performance.

2. The use of clear and reasonable performance objectives, criteria, and measures to appraise and evaluate work in operational and administrative areas.

The two processes share a common core-concept in that both performance evaluations are based on objective, independently validated self-assessments.

Evaluation of Science and Technology

Berkeley Lab's performance in the arena of science and technology is assessed on the basis of comprehensive and balanced peer reviews of the Laboratory's scientific programs by prominent scientists from other institutions. The criteria for these reviews include the quality of science, relevance to national needs and the missions of DOE, performance in the operation of major research facilities, and programmatic planning. The results of the reviews are evaluated by the University of California President's Council on the National Laboratories, whose appraisal is the basis for the University's rating of Laboratory science and technology performance.

In addition, the President's Council evaluates the effectiveness of Laboratory management in fostering an atmosphere conducive to scientific inquiry and intellectual freedom. The Department of Energy then uses the comprehensive University appraisal as the basis for its evaluation of Berkeley Lab performance in science and technology.

Evaluation of Operations and Administration

A key management principle for Berkeley Lab is to incur the necessary costs for safe and environmentally excellent operations and for responsible stewardship of facilities and resources while delivering the best research support services at the lowest cost. This commitment to optimally managed facilities, resources, and services is fundamental to the Berkeley Lab approach to managing operational and administrative functions. The same principle is reflected in the balanced three-way design (quality results - efficient productivity - satisfied clients) of the performance metrics for Operations and Administration.

The Operations and Administration support services at Berkeley Lab are organized in eight areas:

Laboratory Management	Environment, Safety & Health
Facilities Management	Financial Management
Human Resources	Information Management
Procurement Management	Property Management

In each area, performance standards and associated metrics are developed jointly by teams composed of key managers and staff of DOE, UC, and LBNL. Through these DOE/UC/LBNL function-specific partnerships, a comprehensive set of performance metrics are designed to guide and to gauge overall Laboratory performance. Annually, Berkeley Lab conducts an objective self-assessment of performance with respect to each and every metric, independently evaluates the performance data with respect to accuracy and validity, and reports the self-assessment review conclusions to UC and DOE in the form of this report.

FY 1997 Performance Review Summary

During 1997, Berkeley Lab conducted a comprehensive assessment of its performance in all science and technology areas and presented the summary conclusions in a separate submittal to UC and DOE (August 15, 1997). Within this document, we summarize the analysis and conclusions from the self-assessment of FY 1997 Operations and Administration performances. The visionary commitment of senior management and the careful allocation of appropriate resources toward maintaining or improving all aspects of Berkeley Lab is evidenced by the programmatic and administrative excellence cited in these two documents. Highlights from each area follow.

Science and Technology

During this assessment period, 10 scientific divisions were reviewed by 9 peer review committees. A single division was most recently reviewed during 1995-96. Two of these divisions, representing about 20% of Berkeley Lab's research effort, were judged outstanding; seven divisions, representing almost 75% of the Lab's efforts, were rated outstanding/excellent; and two, representing 6% of the total effort, were called excellent. In the case of three divisions, the most recent reviews covered only a portion of their programs; during the past two years, reviews rated the rest of the effort in those divisions as outstanding or outstanding/excellent.

Even at the level of individual projects, most efforts were assessed as excellent or outstanding. Critical comments rarely took the form of negative assessments of a program's value or productivity. Far more common were suggestions that greater effort be made to augment staff or to collaborate more widely. Especially notable were the high marks given to the Laboratory's two largest user facilities: the move of the National Energy Research Scientific Computing Center to Berkeley Lab was described as "a tremendous success . . . . The level of service provided to the users has in fact already in some ways surpassed the level achieved prior to the move." Also, the committee reviewing the Advanced Light Source was impressed by another year of "excellent performance both in its accelerator operation and research programs." The reviewers regarded the increases in user hours, number of users, and number of operating beamlines, as well as the facility's 90% reliability, as reflecting "extraordinary performance."

Operations and Administration

Throughout FY 1995 and 1996 Berkeley Lab pursued an aggressive cost-savings program aimed at optimizing the way support services are provided, showcasing efficiency breakthroughs, and eliminating "non-value-added work" such as unnecessary process steps and overlapping administrative systems. The results have been impressive, with significant cost avoidances and budget savings in all Operations and Administration areas, and a continued steady achievement of systematic performance improvements in FY 1997. Some of the early cost savings were invested in operational equipment modernizations, support system technologies, and infrastructure improvements for continued long-term efficiency benefits—the first of which were realized by Berkeley Lab this year. While there are numerous citations of these dividend payout efficiencies within this report, notable examples include:

- Integrated electronic on-line systems for employee time-recording, labor information management, payroll processing, benefits and tax reporting, and pay distribution.
- Automated budget formulation, rollup, and submission process.
- Comprehensive data-warehouse-based systems for efficient integrated storage of, management of, and access to all corporate administrative information.
- Advanced administrative systems for processing procurement transactions.
- Modern equipment for distributed (yet secure) utilization and manipulation of institutional business data by decision-making managers in the field.

Moreover, within this report each functional area provides evidence and examples of continued performance excellence along with the recently instituted efficiencies.

FUNCTIONAL AREA SELF-ASSESSMENTS

Self-Assessment Report for Fiscal Year 1997

Laboratory Management

Ernest Orlando Lawrence Berkeley National Laboratory

Performance Characterization

The 1997 communications, planning, control, and cost management systems established by the Laboratory Director have resulted in demonstrated program accomplishments and operations performance improvements consistent with the Laboratory's goals. These systems have taken into full consideration customer requirements and incorporate the interests of stakeholders.

The Laboratory Director in 1997 extended his communications activities with Secretary of Energy Federico Peña, and maintained close working relations with Energy Research Director Martha Krebs, Operations Office Manager James Turner, and other DOE officials. Internally he continues to delegate specific responsibilities to deputy directors, division directors, and operational staff, having made key new appointments for 1997 (Division Directors for Physics, Engineering, and Environmental Energy Technologies; Acting Head of Human Resources; and Head of Administrative Services Division). For 1997, Berkeley Lab management addressed key DOE and constituency issues, including new efforts in community relations, information technology, human relations, and other decision elements from existing defined management groups such as the Director's Action Committee. Emphasis was on prioritizing, adding value, increasing accountability and control, and improving budgeting and cost effectiveness. Results included:

- Achieving further improvements in the ratio of direct to indirect personnel.
- Commissioning the community Tritium Monitoring Task Group.
- Establishing Intel/Applied Materials/IBM Research partnerships for semiconductor research.
- Hosting a Headstart computer education program for the community.
- Implementing new information management based business systems.
- Implementing the community Vegetation Management program.
- Increasing public availability of educational tools and scientific information via the Web.
- Initiating the establishment and housing of the DOE Joint Genome Institute under Lab management leadership.
- Opening the new Hazardous Waste Handling Facility.
- Supporting the joint Alameda County, City of Berkeley, and Berkeley Lab sponsored recycling center in the Berkeley Marina.

These 1997 results indicate the attention and direction Berkeley Lab management gives to fulfilling its mission as stated in the Department of Energy's Draft Strategic Plan and Strategic Laboratory Missions Plan, and in support of the Government Performance and Results Act of 1993.

Performance Objective #1

Leadership Communication and Planning: *To support the Laboratory's mission, Laboratory leadership establishes and reinforces expectations for values and effective strategic planning and has systems in place to foster customer focus, communication and trust.* **(Weight = 50%)**

Summary

For 1997, the Laboratory Director provided leadership communications on key issues with Secretary of Energy Peña, and maintained close working relations with our cognizant secretarial officer, Energy Research Director Krebs, with Operations Office Manager Turner, and with other DOE officials. The Laboratory Director established management systems (briefly summarized in the Laboratory Management (LM) section of the *Self-Assessment Report for FY 1996*, p. LM-2), created new vehicles for communications and strategic planning (e.g., the Community Relations and the Tritium working groups), and addressed key issues for DOE and Laboratory constituencies—including safety, community, and cost effectiveness—with continued improvement along these fronts. While focusing on these areas, management continued to complement the strategic goals in Vision 2000 and the Institutional Plan by conducting research of the highest scientific quality, adding value through partnerships, and being the location of choice for programs while conducting all activities with full regard to environment, health, and safety.

For 1997, the Director and Deputy Director for Operations took key steps, particularly in the P2R (Performance/Progress Review) process, to reinforce performance expectations for all employees through higher and more uniform standards of performance, a restructured Human Resources Department, and enhanced communication to all supervisors. Customer focus and effectiveness were central elements of these changes.

The Laboratory Director continued to delegate specific responsibilities to deputy directors, division directors, and operational staff. The Deputy Director for Operations established a new Community Relations Advisory Group to assure coordination across operational and planning units.

The positive results detailed in Performance Measures 1.1a through 1.2a below are indicative of the communication and trust developed with DOE program and administrative managers, the dialogue with key stakeholders in the community, and the direction of University-Laboratory management.

Objective #1 Criterion 1.1

Leadership Communication: *Laboratory leadership provides effective direction by stating the vision, goals and priorities, behaviors and values to be used to accomplish its operational and administrative objectives. The Laboratory listens and responds to its internal and external customers and stakeholders in a fair and open process that encourages dialogue and participation.* **(Weight = 30%)**

Objective #1 Criterion 1.1 Performance Measure 1.1.a

Leadership Direction: *The Laboratory demonstrates effective systems for identifying its customers and stakeholders to ensure that their concerns are considered in the Laboratory's decision making and planning process and that vision, goals, priorities, expected behaviors, and values are established and communicated throughout the Laboratory and to the appropriate stakeholders and customers.* **(Weight = 30%)**

Assumptions:

- Measurement deliverable: Narrative description of the Laboratory's process/system(s) used to (1) effectively develop and communicate direction for accomplishing its operational and administrative objectives and (2) that identifies customers and stakeholders to ensure that their customers and stakeholders concerns are considered in the Laboratory's leadership decision-making and planning process(es).
- "Meets expectations" = Demonstrated effective deployment in a systematic approach which addresses each element of the measure in a consistent and clear manner. The elements are:
  - Identification of Stakeholders and Customers
    - Identifies (internal and external) customers and stakeholders
    - Establishes a process(es) that considers customers and stakeholders concerns into the Laboratory's leadership decision-making process and planning process (e.g., public information/affairs, community and educational outreach, etc.).
  - Communication to the Laboratory and other appropriate audiences
    - Vision/Goals
    - Prioritization efforts
    - Expected behaviors/values
- "Exceeds" and "Far Exceeds" factors to be considered.
  - Evidence of effective deployment and results for achieving a fair and open process that encourages two-way communication with employees, customers and stakeholders and which ensures that concerns are considered in the Laboratory's decision-making and planning processes and
  - Results of the effectiveness of these efforts

Performance Measure Result

1997 Communications Systems and Approach

In 1997, the Laboratory Director established a proactive community communications program that placed emphasis on effective forums to address Laboratory-community issues. These activities engaged the community directly through dialogue with the Mayor of Berkeley and the

City Council, through establishment of the Tritium Issues Work Group, and through other community mechanisms. These forums for working with community leaders and concerned citizens involved coordination among the Laboratory, the Department of Energy (Oakland and HQ, or Headquarters in Washington, D.C.), and the University of California (campus and President's Office). These efforts built upon the Communications Program and the Laboratory's Communications Plan.

The continuing implementation of the *1994-5 Communications Plan* has resulted in approximately 80% of the actions described having been either completely implemented or begun, as compared with approximately 65% completed in FY 1996. This implementation is consistent with the original plan. A reassessment of further implementation is being undertaken by the Public Information Department and the Office for Planning and Communications. The Laboratory's present plan includes:

- Important Messages
- Key Audiences
- Central Themes
- Goals, Objectives, Strategies, and Actions
- Implementation

The Head for Public Communications oversees plan activities and ensures that strong efforts are in place to meet the objectives described. Following the schedule laid out in the Laboratory's Comprehensive Planning Calendar, the Head coordinates (through the Community Relations Advisory Group) a membership of programmatic and operations staff who are assigned actions under the Plan (reference especially Appendix D, p. 33 of the Berkeley Lab *1994-5 Communications Plan*), tracks these actions, and assesses their value to Laboratory stakeholders.

Customers and Stakeholders

For 1997, the Institutional Plan identifies and updates the key customers for Berkeley Lab, explicitly identified in the *1994-5 Communications Plan* (also note *Self-Assessment Report for FY 1996*, p. LM-5), and addresses the interests of other important stakeholders and constituencies. The general system for identifying customers and stakeholders remains in place from 1996, including planning and communications meetings, the Director's Action Committee, the Division Directors' Group meetings, and the Program Heads' group. In FY97, the Director also met three times with the "Director's Roundtable," a group of leading scientists with diverse experience, for exchange of ideas on strategic direction and further improvement of the Laboratory environment.

Laboratory management continues an active dialogue with DOE Secretarial Officers and with the Manager of the DOE Oakland Operations Office (DOE/OAK). Regularly scheduled DOE/Berkeley Lab Senior Management Meetings assure that DOE customer concerns are considered in key decisions and actions. In addition, the OAK/LBNL Executive Streamlining Group has instituted a range of streamlining activities, with the Laboratory and DOE/OAK making key decisions that have resulted in widespread cost savings and efficiencies (see Performance Measure 2.2.a).

To help assure that communications with customers and stakeholders are well-deployed, the Director continues annual reviews of divisional performance, including the quality of communications to DOE program customers, through the UC President's Council Review of Science and Technology (reference Berkeley Lab's *Science and Technology Self-Assessment*). The 1997 annual Division Directors' Strategic Planning Retreat placed emphasis on communications with constituencies and follow-up management actions. The 1997 retreat affirmed the goals of Berkeley Lab Vision 2000 and identified actions for course changes to serve Laboratory objectives over the next 5 years. The directions are included in the Strategic Plan and Initiatives in the 1998 Institutional Plan, and a separate Laboratory strategic plan is slated for issuance this calendar year.

In addition to the material in this report or in the Supporting Data, detailed evidence of formal communications deployment (reference for overview LM *Self-Assessment Report for FY 1996*, pp. LM-5 through LM-7) is maintained in communications staff and program-specific offices. For example, the Public Information Department maintains files of Laboratory Press Releases and news clippings of coverage and notes the distribution of "Hits" on selected Laboratory World Wide Web home pages. The Office of NEPA-CEQA Planning maintains records on Laboratory-Community meetings. In the case of the Hazardous Waste Handling Part B Permit Modification, tracking involved preparing responses to all comments for the Initial Study, a process that exceeds California Environmental Quality Act requirements, but which is directed to improve communications with the community.

The community relations program proactively engages the community and deploys information for neighboring communities, with particular attention to programs and projects that potentially affect the environment, health, and safety of the region. For FY97, the community relations program maintained frequent, proactive communications with community members, elected officials, and regulatory staff, including hosting meetings and tours and distributing fact sheets on issues such as tritium and waste management. Berkeley Lab has implemented a number of mechanisms for routine communication with external stakeholders, as indicated in the *Community Relations Plan: Environmental Restoration Program,* which is readily available through the Web (http://www.lbl.gov/Community/CRP-LBL-TOC.html).

In FY97, the Laboratory engaged the consulting services of community relations specialists to assist with its strategic planning, to suggest ways to improve communications with external audiences, and to recommend organizational changes that would enhance its interactions with community officials and organizations. Following this analysis, the Director approved the funding and recruitment of a full-time Community Relations Coordinator position with the Public Communications program so that a comprehensive effort in building and strengthening the Lab's relationships with constituencies could be developed and managed.

Berkeley Lab's employee community was a special focus in FY97, with several actions taken specifically to enhancing communications with these critical stakeholders. For example, the newsletter *Currents* was expanded and improved as a biweekly, and a new electronic news bulletin service,

Headlines, was instituted on a weekly basis to keep employees up to date on issues and activities at the Lab. The new kiosk system, the *Event Centers*, was developed for pilot launch, and a new series of briefings for all employees on community relations issues was implemented. A Level 1 e-mail system of communications to all employees continues to be an effective tool for conveying timely and relevant information, such as the successfully negotiated labor agreement between the University of California and UPTE, as well as ongoing updates via the "Policy and Procedures Poster." In addition, the Director continues to give open talks to the Laboratory, including the annual State of the Laboratory address, which always include a question and answer period for feedback from the Laboratory population.

In FY97, Berkeley Lab continued to play a leadership role in the Energy Research Laboratories Public Affairs Group, which served both to share information on issues common to the ER laboratory network and as an implementation vehicle for national DOE initiatives in public and community relations. The July 1997 Public Affairs Group meeting was devoted to improving community partnerships; the program was coordinated and sponsored by Berkeley Lab.

The behaviors and values embodied in Vision 2000 have been reinforced through communications vehicles such as *Currents*. The Work Force Diversity Office and the Director's Work Force Diversity Committee sponsored numerous events to communicate the values of respect for diversity and maintenance of teamwork in the spirit of a unified Laboratory. The Center for Science and Engineering Education also provides a mentoring and student development system to strengthen diversity by improving science skills of underrepresented students throughout the nation.

1997 Communications Results

For FY97, the most significant thrust in external communications was the growth of activities in community relations planning and implementation. Preparatory to the establishment of a permanent unit headed by a community relations coordinator, Berkeley Lab took major steps to coordinate current efforts and broaden the scope of Laboratory outreach, in particular in response to several City of Berkeley issues involving Lab programs.

The Public Communications Office formalized the Community Relations Advisory Group, an interdisciplinary committee comprised of representatives of the offices or departments of: Planning and Communications; Public Information; Government Relations; NEPA-CEQA Compliance; Science and Engineering Education; Laboratory Counsel; Facilities; and various Environment, Health and Safety Division Units. Meeting monthly, the group discusses and decides upon various strategies for engaging stakeholders within the Lab's decision-making process, while ensuring a coordinated approach to community relations. As a result, the Laboratory was able to be responsive and thorough in answering community requests for information in areas such as tritium emissions monitoring and control, waste management, and vegetation management. Other examples of results of communication activities included:

Dramatic increase in educational tools and scientific information made available to the public, especially to the next generation of the nation's scientists, via the Web, which supports the national educational and science goals and increased community awareness of Lab research efforts. Many Lab divisions and research groups posted home pages describing research projects. Educational tools such as the Lung Tour and the ABCs of Nuclear Science were added. In addition, the "Image Gallery," with historical and other information, was added to the Lab Web Site, providing the public with an overview of the Lab.

Laboratory-sponsored public meetings and Laboratory appearances at community forums to engage in two-way exchanges with community stakeholders on issues related to waste management and the environment. In the Part B Permit Modification process, the Laboratory responded individually to more than 450 questions and comments from community members. In addition, the tritium emissions issue generated literally hundreds of pages of documentation requested by citizens and city officials. Tritium Lab personnel made frequent voluntary appearances before the Berkeley City Council to educate its leadership about scientific programs, and various community and government representatives were provided with personal tours of facilities that have been the subject of citizen concerns. The Director personally invited and hosted the mayors of Berkeley and Oakland and each member of the respective municipality's City Council to tour the Lab.

The Tritium Issues Work Group is an independent third-party monitoring committee established in FY97 as a result of the city's expressed concerns and Berkeley Lab's commitment of $100,000 to conduct a tritium sampling and measurement program. The broadly representative group includes regulators, citizens' groups, city officials, and other stakeholders charged with developing sampling protocols to assess any community health risk from tritium emissions. Participants have included representatives from the Community Environmental Advisory Commission, Committee to Minimize Toxic Waste, Department of Health Services, Environmental Protection Agency, DOE, City of Berkeley, City of Oakland, Department of Toxic Substances Control, LBNL, LLNL, and UCB.

Speakers' Bureau and regular distribution of fact sheets ensured an active information flow throughout the year. An interactive Speakers' Bureau form was added to the Web, allowing and encouraging community participation. Invited general and specialized tours reflected the openness that characterizes Berkeley Lab's approach to public and community relations (among the visitors in FY97 were the Mayor of the City of Berkeley, the City Manager, City Council members, and various staff to Congressional representatives). Constituent inquiries were handled by the Public Information staff, and the Laboratory's World Wide Web home page receives more than 125,000 "hits" a week (60% being outside the "lbl.gov" domain).

The Laboratory actively participates in local and regional science, technology, and development organizations, including the California Council on Science and Technology, Alameda County Economic Development Board, the Berkeley and Oakland Chambers of Commerce, Federal Laboratory Consortium, Association of University Technology Managers, Association of Bay Area Governments, Bay Area Economic Forum, Licensing Executives Society, and the Bay Area Regional Technology Alliance.

A "Work Smart" standard for quality, customer-focused relationships with regulatory agencies and the public concluded in 1997, the positive outcome serving as a model for the DOE system. In fact, participants responsible for its execution received Vice Presidential "Hammer" awards for their work. The campaign included stakeholder meetings that facilitated two-way communications.

In addition to the results referenced above, key decisions reflect the effectiveness of the system in identifying customers and stakeholders, communicating with them, and incorporating their interests and needs into plans and decisions. Examples of key agreements and new program development include:

A mutual aid agreement to ensure the safety and security of the facility and perimeter neighbors was concluded in tandem with the City of Berkeley by listening to constituency and stakeholder feedback and assessing fire response issues. (Implementation is pending resolution of issues between the City and its union.)

An agreement on transport of hazardous materials through the City of Berkeley was consummated with the City's toxics coordinator and its fire department, ensuring safety for the community via clear and early communications, appropriate routes, and timing arrangements.

The National Energy Research Scientific Computing Center (NERSC). The restructured program at Berkeley Lab was celebrated with a Grand Opening, which included multimedia and printed vehicles to communicate the value and impact of Computing Sciences in research for internal and external constituencies. In further recognition of its strategic importance to the Laboratory, a full-time Public Affairs Coordinator was hired in the Public Information Department, matrixed to Computing Sciences.

A partnership for fire control and suppression through vegetation management matured in FY97, marked by continuing communications with the East Bay community and the University of California. This positive and interactive outreach permitted the Laboratory to reduce fuel load and attendant potential flame height and improve fire response to the perimeter with fenceline adjustments. The program has received compliments from the community. Local residents were visited by Berkeley Lab employees who explained the vegetation program, and they expressed appreciation for the briefings and support for Laboratory efforts in

enhancing the safety of their community. The Laboratory is a founding member of the Hills Emergency Forum, an organization consisting of the City of Berkeley, EBMUD, East Bay Regional Parks, and UCB. The Forum coordinates fire suppression planning for the region.

A Demonstration Partnership for Alternative Building Materials with the City of Berkeley featured the Laboratory's commitment of $25,000 to the construction of a straw-bale Education Facility at the Berkeley Marina Shoreline Project. This effort, in addition to its value in enhancing community relationships, will also reflect the Laboratory's interest in developing and encouraging energy-efficient ideas and programs for society's benefit.

Relationship-building special events were additional hallmarks of Berkeley Lab's continuing outreach efforts. Through FY97, the Lab community embarked on planning activities for the October '97 Open House, the Laboratory's second community day at which visitors (over 5,000 in 1995) experience first-hand the remarkable people and programs that encompass the Berkeley Lab experience. Opening ceremonies commemorating NERSC/ESnet, the commissioning of the new Hazardous Waste Handling Facility, and the new NCEM (National Center for Electron Microscopy) microscopes and user facilities also communicated successes to our several constituents in FY97.

Community outreach and education. The Laboratory maintains an active program for bringing students and teachers from the community to Berkeley Lab. More than 20 high school students are participating at Berkeley Lab during the summer of 1997, and more than 250 undergraduate students have been supported this year. For 1997, Berkeley Lab has initiated a partnership with the Berkeley Biotechnology Education, Inc., program to bring local students here for biotechnology training. The Laboratory maintains a program that facilitates Lab employee volunteerism in local schools. The Office of Workforce Diversity actively sponsors student participation in these programs in conjunction with the Center for Science and Engineering Education. The Laboratory also hosts a Science Exploration Camp for its employees' children.

Internal communications with the Laboratory population continue to build on the mechanisms already in place, such as *Currents,* Level 1 e-mail announcements; talks, including the Director's annual State of the Laboratory Address; and Policy and Procedures announcements. Examples of new efforts include:

Internal communications initiatives were started in FY97, most notably in the incorporation of high-end technologies with the Berkeley Lab Washington D.C. Projects Office (an achievement that was commemorated with a "virtual" Open House featuring coast-to-coast video computer links). Also, a system of "event center" monitors was initiated, the prototype of which was prepared for initial evaluation in the cafeteria. This network of video screens, conveying

information to various central points within the Laboratory, will serve a unifying role for the Laboratory community.

Revised Performance/Progress Review (P2R) instructions are a key step to reinforce performance expectations for all employees, in conjunction with new specifications on criteria for labor relations for supervisors.

Community Issues Workshop for Laboratory employees, particularly one conducted August 1 on waste management permit modification and tritium emissions issues.

Enhancements to existing communications for Laboratory employees with expansion and improvements of *Currents* in conjunction with new electronic bulletin service *Headlines*. Furthermore, the new *Event Centers* kiosk system was launched as a pilot program.

Conclusion

The performance requirements for this measure were met or exceeded at Berkeley Lab.

Successes/ Shortfalls

Berkeley Lab's communications activities and engagement on key local issues have resulted in a new fire protection agreement, an active vegetation management program, joint sponsorship of an energy efficient community facility, and agreed-upon guidelines for transporting wastes through Berkeley, as examples of successful interactions with the community and with DOE. The Laboratory has taken a number of steps with community involvement on sensitive community issues such as the Advanced Sequencing Facility, the National Tritium Labeling Facility, and the operation of the new Hazardous Waste Handling Facility.

In programmatic areas, the successful initiation of the Joint Genome Institute Advanced Sequencing Facility (e.g., the facility lease in Walnut Creek) has been an outcome of active communications with DOE/HQ and OAK and with the Los Alamos and Livermore Laboratories. With DOE and internal customers, Berkeley Lab engaged in and communicated a broad range of administrative and operational activities and actions of significance to its stakeholders.

The Laboratory continues to work with all its customers and stakeholders at community, state, and federal levels to obtain important feedback, to assess issues and progress, and to successfully develop partnerships and programs for achieving mission objectives and operational goals.

Supporting Data

Center for Science and Engineering Education, Lawrence Berkeley National Laboratory.
(http://csee.lbl.gov/CSEE/CSEE.html)

Comprehensive Planning Calendar, Ernest Orlando Lawrence Berkeley National Laboratory.
(http://www.lbl.gov/Workplace/Policy-Memos/CompPlanCal98.html)

Community Relations Plan: Environmental Restoration Program, LBNL PUB 727, October 1993 Revised.
(http://www.lbl.gov/Community/CRP_LBL-TOC.html)

FY 1998 - 2002 Institutional Plan, Lawrence Berkeley Laboratory, Berkeley, California, PUB-5435.
(http://www.lbl.gov/Publications/Institutional-Plan/1998/)

LBL 1994 - 1995 Communications Plan, Lawrence Berkeley Laboratory, Berkeley, California.

Office of Planning and Communications, Lawrence Berkeley National Laboratory, Berkeley, California.
(http://www.lbl.gov/Workplace/OPC/ index.html)

Work Smart Standards Project at Berkeley Lab, Lawrence Berkeley National Laboratory.
(http://www.lbl.gov/Workplace/NS-Program/)

Performance/Progress Review (P2R) Follow-up Information; letter from Interim Head, Human Resources to Directors and Department Heads June 3, 1997.

Science and Technology Self-Assessment: July 1, 1995-June 30, 1996 Ernest Orlando Lawrence Berkeley National Laboratory, August 1996.

"Community Relations Advisory Group" charter maintained in files of the Head of the Public Information Department.

Objective #1 Criterion 1.2

Quality Planning: *The Laboratory implements a strategic and tactical planning processes that reflects shared Laboratory and DOE objectives regarding Laboratory mission and operational performance.* **(Weight = 20%)**

Objective #1 Criterion 1.1 Performance Measure 1.2.a

Integration of Planning Efforts: *The Laboratory demonstrates an institutional strategic planning process that aligns its mission, core competencies, strategic direction with DOE objectives. Through this process the Laboratory develops area specific long-range plans which are effectively integrated with institutional strategic planning. (Examples of area-specific plans are the Information Resources Management Long-Range Plan, ES&H 5-year Plan, Affirmative Action Plans, etc.)* **(Weight = 20%)**

Assumptions:

- Measurement Deliverable: Narrative description of the institutional strategic planning process(es) for determining the external environment and customer requirements and expectations and aligning the Laboratory's mission, core competencies, strategic direction, and operating requirements with these factors and the process(es) for to integrating area-specific plans with institutional strategic planning.
- "Meets Expectations" = Demonstrates the effectiveness of the approach to (1) determining external environment and customer requirements and expectations, (2) aligning the Laboratory's mission, core competencies, strategic direction, and operating requirements (e.g. Laboratory, Strategic Planning, Outreach/inreach efforts, or other) are aligned with these requirements, and (3) integrating area-specific plans with institutional strategic planning.
- "Exceeds" and "Far Exceeds" = Evidence of implementation of process(es) for achieving customer input and the analyses of external environmental factors and integrating this information into appropriate Laboratory documents.

  Note: Each Laboratory is expected to define its primary management customers.

Performance Measure Result

1997 Approach and New Systems

In 1997, the Laboratory Director worked with his primary management customers (reference *Self-Assessment Report for FY 1996*, pp. LM-14 through LM-16, sections on "Determination of Requirements" and "Alignment with Requirements") in the Department of Energy to strengthen Strategic Planning Activities. He reiterated the importance of Berkeley Lab's planning systems in aligning the Laboratory's mission and direction to fulfill its national role as described in the *Strategic Laboratory Missions Plan-Phase I* (note particularly Tables 1 and 2, p. 22–23) and Berkeley Lab's 1998 *Institutional Plan* (see "Strategic Laboratory Missions Plan" paragraph, p. 2–2, and "Strategic Plan" section in the *1998-2002 Institutional Plan*), and in ensuring integration of all plans and support programs. For 1998, he structured an important section of the Plan as Department of Energy Integrated Laboratory System Initiatives to align this Laboratory's key directions to complement other Energy Research and Defense Programs laboratories.

In 1997, the Director called upon each division director to prepare divisional strategic plans for central focus at the 1997 Planning Retreat. Through this process, he delegated to division directors specific planning and development activities for determining customers and environment. The retreat, which focused on the long term, complemented the annual planning and review system and the efforts that division directors undertake for coming fiscal years.

Plans are integrated and coordinated through the Directorate Office by the Office for Planning and Communications and the Initiatives Support Group. Communications systems (given in a general overview in the LM *Self-Assessment Report for FY 1996*, pp. LM-4 through LM-8, with FY 1997 modifications described in Performance Measure 1.1.a above) are essential for this integration. They disseminate the common themes and priorities embodied in the 1997 Planning Retreat by means of divisional Plans and institutional plans. In this manner, Berkeley Lab's plans are coordinated with DOE planning, and in turn, programmatic plans are consistent with national and Laboratory institutional planning, including the 1997 Draft DOE Strategic Plan. The Institutional Plan is prepared as a complementary activity that supports the Government Performance and Review Act of 1993, and it and related institutional management efforts are evaluated as part of the performance-based UC Management Contract.

Determination of Requirements During 1997

In 1997, the Laboratory Director continued, through personal activities as well as the application and/or ongoing development of management systems as referenced in the first paragraph above, to contribute to DOE's strategic objectives through active participation in national planning efforts. Laboratory Director Shank addressed "Science Roadmaps" before the Laboratory Operations Board Workshop on the role of planning. His contributions reflect his views that Laboratory leaders need to work closely with DOE program managers to chart the long-range goals and objectives of DOE's science program for the nation. Working with the multiprogram Laboratory directors and senior DOE Officials, the Director and his staff contributed to the development of the concept of an Integrated System of Laboratories and structured the Laboratory's Institutional Plan to reflect this direction.

During 1997, senior Laboratory management worked with DOE/HQ and OAK to address operational and program requirements. Topics of the OAK/Berkeley Lab meetings addressed implementation of the Joint Genome Institute, safety systems, community relations, the opening of the replacement Waste Handling Facility, contract management, the Laboratory Operations Board, and leadership developments. These discussions strengthened communications paths and dialogue between Berkeley Lab and DOE.

Management and senior scientific staff also actively participated in the reviews and activities that define the requirements and frontiers of the national research environment. In 1997, for example, the Laboratory Director headed the National Research Council's Committee on Optical Science and Engineering to assess the status, needs, and opportunities of the field. Senior management personnel have continued to be active members

of, for example, the National Academies of Science, Engineering, and Medicine; the DOE Laboratory Operations Board; the High Energy Physics Advisory Panel; the Nuclear Science Advisory Committee; the Health and Environmental Research Advisory Committee; and the ESnet Steering Committee. For 1997, senior Laboratory scientists and managers served as presidents of the American Physical Society and the American Society of Cell Biologists. Through this forefront involvement, identified in Berkeley Lab's Annual Report and tracked in the Office of the Deputy Director for Research, Berkeley Lab determines research requirements and aligns its scientific plans to national needs.

Alignment with Requirements During 1997

Berkeley Lab senior management has aligned the Laboratory's role with DOE's *Strategic Laboratory Mission Plan—Phase I* (especially pp. 22, 23) through the annual strategic planning process, as articulated in the *1998–2002 Institutional Plan* (reference p. 2-2 in particular) The plan specifies Berkeley Lab's "principal role" in DOE's fundamental science mission, "major contributing role" in the energy resource mission, and key "specialized participating role" in DOE's environmental quality mission. Examples of the current emphasis on alignment for representative DOE customers and community stakeholders are:

- **Office of Mathematics and Information Sciences**: New 512 processor supercomputer that positions DOE/ER with the most powerful civilian supercomputer.
- **Office of Basic Energy Sciences**: Completion of the National Center for Electron Microscopy Upgrades and the new Sub-Angstrom Microscope. Expanded beamline operations at the Advanced Light Source.
- **Office of Health & Environmental Research**: Lease of the Joint Genome Institute Advanced Sequencing Facility, completion of the structural biology facilities at the Advanced Light Source (ALS), and completion of the Genome Lab on schedule.
- **Office of Environment, Health and Safety**: Completion of the Work Smart Standards Program, initiation of Integrated Safety Management.
- **DOE/OAK Operations Office and Laboratory Operations Board**: Development of improved cost efficiencies in such areas as procurement, travel, time reporting, and NEPA program implementation.
- **National Institutes of Health/UC Berkeley**: Drosophila Genome sequencing.
- **City of Berkeley**: Agreed-upon guidelines for hazardous waste shipment protocols, joint support for energy efficient education center in the Berkeley Marina, Fire Services Agreement implementation pending Berkeley Fire Department labor agreement.
- **East Bay Agencies**: Implementation of the Vegetation Management Program; adjustment of fenceline to assure perimeter protections.

In 1997, Laboratory management worked closely with DOE and the local community to address issues of mutual concern. In addition to senior management meetings, Laboratory operations staff and DOE/OAK staff met

as the Executive Streamlining Group to address improved management and cost cutting. Topics addressed in 1997 included work for others management; waivers of depreciation and added factor; joint work statements and cooperative research and development agreements; functional cost reporting; occurrence reporting; and environment, health, and safety management planning.

During 1997, the Laboratory, the University of California Office of the President, and DOE continued to implement systems for Contract Performance Review and feedback. DOE national reviews and University-organized reviews continue to be refined so that a convergence of information can better support direction and focus. The Laboratory Director has worked closely with the University of California President's Council on the National Laboratories, which has, for example, contributed to a review and management environment that makes possible the Joint Genome Institute among the three University-operated national laboratories. This Institute is a major new DOE laboratory system effort to merge, coordinate, and make more efficient the DOE program in sequencing the human genome (reference pp. 4-3, 4-4 of the Berkeley Lab *Institutional Plan FY 1998*).

Integration of Plans for 1997

During 1997, Laboratory plans continued to be integrated and coordinated through the Directorate Office (which includes the Office for Planning and Communications). The planning systems employed at Berkeley Lab are coordinated through the 1998 Comprehensive Planning Calendar and are intended to support the strategic directions identified in DOE's 1997 Draft Strategic Plan. Berkeley Lab's planners have focused during 1997 on the Integrated System of National Laboratories by working closely with their counterparts in DOE's Office of the Secretary, Office of Energy Research (Office of Laboratory Management and Office of Policy and Planning), and Oakland Operations Office so that Laboratory and DOE planning documents are mutually supportive. Important plan elements and criteria that are consistent and integrated across plans and communications for 1997 include:

Values. The values embodied in Vision 2000 and the Core Values of DOE's 1997 Strategic Plan are mutually supportive, with Berkeley Lab's Vision 2000 continuing to be reflected in all Laboratory plans. Appropriate plans reflect Berkeley Lab's respect for work force diversity and development of Laboratory staff (goals and results summarized briefly in Berkeley Lab's *Institutional Plan FY 1998*, pp. 5-2 through 5-4). They all also include the integration of environment, health, and safety considerations in all Laboratory activities. The Director's 1997 State of the Laboratory address was clear: "If work is unsafe or will create an environmental problem, don't do it."

Goals and themes. Goals and programmatic direction are annually reviewed and developed through senior management strategic planning meetings. The 1997 alignment and programmatic goals described above are integrated with the Office of Energy Research plans (reference *Strategic Laboratory Missions Plan—Phase I*; *Institutional Plan FY 1998* pp. 3-1 through 3-12; *Self-Assessment for*

FY 1996, pp. LM-13 through LM-17). The success in FY 1997 of this integration is demonstrated by the results given below for Office of Energy Research programs.

Program consistency. Laboratory plans, particularly the *Institutional Plan FY 1998,* which acts as a general integration tool for a number of specific functional or office plans and budget submission plans, reflect the programmatic directions of DOE and national long-range plans (for example, in high energy and nuclear physics). For 1997, the Laboratory's programs are also consistent with supporting unclassified research in Defense Programs for Science-Based Stockpile Stewardship and Non-Proliferation, where Berkeley Lab core competencies make a difference, such as in the Los Alamos Neutron Scattering Center and at the Dual Axis Radiographic Hydrodynamic Test Facility.

Schedules. Plans reflect a common annual schedule based on Laboratory and DOE schedules, as specified in the Comprehensive Planning Calendar (http://www.lbl.gov/Workplace/Policy-Memos/CompPlanCal98.html).

Resources. Within an annual cycle, plans are consistent in their specification of resource requirements to achieve the plan goals. Subsequent updates are made to all plans as they are prepared according to the Planning Calendar.

For 1997, the Laboratory has focused on the development of divisional plans and on support of DOE missions and program management planning. At the broadest level, this is articulated in DOE's draft *Strategic Plan* and reflected in the Laboratory's 1998 *Institutional Plan* and other plans.

Demonstrated Results

For 1997, the investments of our customers in Berkeley Lab programs reflect our effectiveness in aligning our activities with customer requirements. Examples of new and developing programs and partnerships include the following:

- Opening the world's most powerful civilian Computing Center (DOE/OCTR)
- Opening the new Hazardous Waste Handling Facility (DOE/California)
- Leasing the Site for the Advanced Sequencing Facility (DOE/OBER)
- Establishing Hazardous Waste Transportation Guidelines (City of Berkeley)
- Upgrading and making additions to the National Center for Electron Microscopy (DOE/BES)
- Opening the Microspectroscopy Beamline at the ALS (Intel, Applied Materials, IBM, DOE)
- Implementing the Vegetation Management Program (East Bay Agencies)

Among these examples, the clear priority for Laboratory/DOE program development and implementation has been the National Energy Research Scientific Computing (NERSC) Center. This facility was successfully established at Berkeley Lab because our proposal was directly aligned to the program requirements, including organization, technical approach, and cost-effectiveness (per DOE Notice of Decision). The NERSC plan was also integrated with the Lab's institutional plan, and was integrated and aligned in terms of goals, values, core competencies, program plan, resources, and schedule. As a result, the Laboratory implemented the planned program transition from Lawrence Livermore National Laboratory within scope, schedule, and budget.

Conclusions

The performance requirements for this measure were met or exceeded at Berkeley Lab.

Successes/ Shortfalls

Berkeley Lab's *Institutional Plan* and *Strategic Plan* describe the mission, goals, core competencies, and strategic directions that are aligned with DOE's *Draft 1997 Strategic Plan* and *Strategic Laboratory Missions Plan.* Many of the Laboratory's specific plans are aligned with these plans and with customers' needs, and are successfully moving forward. These include:

- Commissioning the community Tritium Monitoring Task Group.
- Establishing Intel/Applied Materials/IBM Research partnerships for semiconductor research.
- Establishing the DOE Joint Genome Institute and acquiring a lease for the Advanced Sequencing Facility through Laboratory management leadership.
- Hosting a Headstart computer education program for the community.
- Implementing the community Vegetation Management program.
- Opening the Hazardous Waste Handling Replacement Facility.
- Supporting the joint Alameda County, City of Berkeley, and Berkeley Lab sponsored recycling center in the Berkeley Marina.

Berkeley Lab's successes give evidence that we have implemented an effective process for obtaining our customers' input and for planning our programs in accordance with customer values and priorities.

Supporting Data

Comprehensive Planning Calendar, Ernest Orlando Lawrence Berkeley National Laboratory.
(http://www.lbl.gov/Workplace/Policy-Memos/CompPlanCal98.html)

Institutional Plan FY 1998-2002, Ernest Orlando Lawrence Berkeley National Laboratory, Berkeley, California, PUB-5435.
(http://www.lbl.gov/Publications/Institutional-Plan/1998/)

Office of Planning and Communications, Lawrence Berkeley National Laboratory, Berkeley, California.
(http://www.lbl.gov/Workplace/OPC/ index.html)

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(http://www.lbl.gov/Workplace/NS-Program/)

Draft Department of Energy Strategic Plan, U.S. Department of Energy, Washington D.C.
(http://www.doe.gov/policy/library/stratpln2.pdf)

Strategic Laboratory Missions Plan-Phase I, Laboratory Operations Board, U.S. Department of Energy, July 1996. (2 Volumes).
(http://apollo.osti.gov/doe/whatsnew/labmsspl/labmsspl.html)

Laboratory Management Self-Assessment Report for Fiscal Year 1996, Lawrence Berkeley National Laboratory, October 1996.

Performance Objective #2

Oversight and Cost Management: *To support the Laboratory's mission, Laboratory leadership effectively manages institutional oversight and cost management activities.* **(Weight = 50%)**

Summary

For 1997, the Laboratory Director continued to reduce overhead rates through his overall responsibility for meeting contract requirements and managing costs, and to delegate responsibility for implementing oversight, control, and cost management systems to the Deputy Director for Operations. Under the Deputy Director's management, the Office of Assessment and Assurance (OAA), Office of the Chief Financial Officer (CFO), and the Internal Audit Services Department (IAS) provide the organizational structure to ensure that these obligations are managed.

For the assessment period, management commitments from oversight activities have decreased due to proactive efforts to improve compliance performance. The commitments made were tracked by the Laboratory Corrective Action Tracking System, the Financial Management Corrective Action database, and Internal Audit Services staff; and they have, for the most part, been completed or are on schedule. Increased programmatic efforts have also improved completion of commitments generated by the Laboratory self-assessment program. Commitment information has been provided in a timely and complete manner to allow informed management action, which can include modifying the commitments and securing additional funds through the Director's Action Committee.

Through a 1997 reorganization and consolidation in several financial management functions, cost management activities such as monitoring and reporting are retained by the CFO Budget Office for the Laboratory as a whole. Divisional cost management efforts are also reviewed by the CFO and the Laboratory Director on an annual basis as a part of the process of establishing scientific burden rates.

The Laboratory demonstrated results in its system of managing and prioritizing programmatic costs and administrative and operational support. Institutional goals to further reduce the indirect costs rate have again been achieved and demonstrate an additional reduction of 7% and more. Additionally, the latest (FY96) Institute of Management Accountants (IMA) Benchmarking study reports were very favorable. The statistics demonstrated the CFO Department's efforts to flatten organizational reporting lines in favor of self-directed work teams. For example, the overall span of control in the finance transaction processing activities, based on the 1996 year-end statistics, 17.7 to 1, remains in effect this year.

Objective #2 Criterion 2.1

Management Oversight: *Laboratory leadership establishes effective management oversight and control procedures to meet Contract requirements.* **(Weight = 20%)**

Objective #2 Criterion 2.1 Performance Measure 2.1.a

Accountability and Commitments: *The Laboratory demonstrates that it has a system for ensuring that major commitments are managed and information on status of commitments is timely and complete enough to allow informed management action.* **(Weight = 20%)**

Assumptions:

- Measurement deliverable: Narrative description of system(s) which ensures that major commitments are managed and that timely and pertinent information regarding the status of those commitments allows informed and effective management action(s).
- "Meets Expectations" = Demonstrated effective deployment of a systematic approach for managing commitments to meet Contract requirements utilizing appropriate management oversight and control procedures.
- "Exceeds" and "Far Exceeds" = Evidence of implementation and deployment of the system and procedures which ensure that major commitments can be effectively managed in a timely manner that allows informed and effective management action(s).

  Note: "Major Commitments: are defined as actions resulting from internal and external oversight activities (e.g. Laboratory self-assessments, internal audits, implementation plans for Directives/Rules/changes to contract clauses and EPA, IG, GAO audit findings or DOE assessments, etc.)

Performance Measure Result

Systems for Managing Commitments

The Laboratory has utilized the same management systems for the past several years to address this particular performance measure. The Laboratory Director has overall responsibility for meeting contract requirements. He provides integration through regular meetings with senior management, Director's Advisory Committee, Division Directors' Meeting, etc. He has delegated the responsibility for implementing oversight and control systems to the Deputy Director for Operations. Under the Deputy Director's management, the Office of Assessment and Assurance (OAA), Office of the Chief Financial Officer (CFO), and the Internal Audit Services Department (IAS) provide the organizational structure to ensure that major commitments—the tasks and/or functions necessary to correct oversight findings and deficiencies—are managed, as described below. (See table below for an overview of how commitments are systematically managed at the Berkeley Lab.) Within this framework, the processes for managing a range of project, budget, ES&H, and facilities commitments are ensured. Should resource and management issues require a high level of management attention and reallocation of resources, the Deputy Director for Operations will bring these issues before the Director's Action Committee for any further policy development, resource reallocation, or management action.

Berkeley Lab Systems for Managing Commitments

Organization	System	Type of Commitment
Office of Assessment and Assurance	LCATS LSAD	• Environment, Health & Safety • Quality Assurance • Conduct of Operations • Appendix F • Directives/Rules/ Contract Changes
Office of Chief Financial Officer	FMCA	• Internal Financial Audits • External Financial Audits
Internal Audit Services Department	IIA Standard 430 IIA Standard 440	• Internal Audits • Inspector General • GAO
Berkeley Lab Divisions	LSAD SRC Reviews Activity Data Sheets	• Division Self-Assessments
EH&S	Assignment of Professional Staff	• ES&H Compliance

Management action requires a system of reviewing and approving commitments and allocating the necessary resources by multiple levels of managers (higher magnitude commitments having a correspondingly increased level of management review). Once efforts begin, the delegated Operations organization systems provide status information in a timely and complete manner so that managers can take additional action as necessary. The provided information allows managers to concur with the progress or completion of the commitment, modify the commitment (i.e., make or request a change order) as a result of changing circumstances, allocate additional resources and funding to support the commitment, and/or identify issues that require a higher level of management attention (see above).

- The OAA utilizes the Berkeley Lab Corrective Action Tracking System (LCATS) to track commitments resulting from oversight activities in the areas of ES&H, quality assurance, and conduct of operations. LCATS identifies the findings/issues, corrective actions, persons responsible, and completion dates. Quarterly summary reports are sent to DOE, the Deputy Director for Operations, and concerned division directors to allow for any additional management action.

  As part of its role in the Berkeley Lab Self-Assessment Program, OAA also periodically reviews each division's respective Laboratory Self-Assessment Databases (LSADs). Divisions manage their own LSADs to track corrective actions resulting from their internal ES&H self-

assessment activities. Annually, OAA compiles division LSAD reports and conducts trending and root cause analysis.

- CFO manages major commitments resulting from both internal and external financial audits. Internal financial audits include audits performed by the CFO of various Laboratory units and programs. Once major commitments have been identified as a result of these financial audits, CFO assigns due dates and enters the commitment in the Financial Management Corrective Action database (FMCA).
- IAS performs multifaceted audits of Berkeley Lab operations to assist management in achieving internal control objectives. These audits include assurances that costs incurred are reasonable and allowable under the terms of the Laboratory contract. In addition, IAS is the Laboratory's representative for IG and GAO audits. In managing commitments resulting from oversight activities, staff from IAS follow professional standards as prescribed by the Institute of Internal Auditors (IIA), particularly IIA Standards 430, *Communicating Results*, and IIA Standards 440, *Following Up*.

In addition, the Laboratory has established other programs and systems to assist in managing its commitments. For example, divisions are subject to triennial reviews by the Safety Review Committee (SRC) and must follow up on its recommendations. The Environment, Health and Safety Division has assigned professional staff to ensure that the Laboratory is responding fully to ES&H oversight activities conducted by DOE, state, and local regulatory agencies. On an annual basis, line management can request additional funding for their commitments through the Project Planning Group's Activity Data Sheets (ADSs) process. The Deputy Director for Operations finalizes an ADS priority list and submits it to the Director's Action Committee for approval and funding. Overall management planning is also evident in the annual FTP/FWP process, whereby budget requests are reviewed by the Deputy Director for Operations and the Director's Action Committee (DAC).

Evidence of Implementation and Results

- **Commitments resulting from internal and external oversight activities in the areas of ES&H, quality assurance, and conduct of operations** are managed through LCATS. For FY97, LCATS tracked 40 open tasks that addressed findings/issues from eight appraisals. Of these, 36 tasks (90%) have been completed or are on-schedule. There are currently 9 tasks with modified commitments resulting from change orders approved by the concerned division directors. The completion/on-schedule rate is 5% lower than last year. However, the total number of commitments is approximately 50% less as a result of proactive efforts to improve compliance performance.
- **Commitments generated from division self-assessment activities** are tracked through their respective LSADs. For the assessment period, division line management tracked a total of 928 Level 3 or higher division ES&H deficiencies in LSAD, of which 671 (72%) were corrected. No uncorrected items are imminent or life-threatening hazards. Most of the uncorrected deficiencies are related to electric, seismic, and ergonomic upgrades. The completion rate (72%) is significantly higher than last year's completion rate (43%). The

improved result was achieved by introducing a new performance measure addressing corrective actions in the FY97 self-assessment program requirements. Also, in mid-year, the Deputy Director for Operations issued a call for all divisions to review their open corrective action tasks to ensure that no serious deficiencies were left unresolved.

- **Commitments resulting from financial audits** are managed by the CFO through its FMCA database. On a quarterly basis, FMCA is updated to track completed corrective actions and new corrective actions. At the same time, Financial Management Corrective Action report is distributed to appropriate management for review. Adjustments of due dates or changes to corrective actions are subject to management review and approval. For the assessment period, four major commitments were tracked by FMCA. All four commitments are on-schedule or have been completed.
- **Commitments from IAS** are managed by assigned IAS staff, utilizing professional auditing standards. The IAS specialist ensures satisfactory progress and completion of commitments by conducting follow-up activities as prescribed by IIA Standard 440. For the assessment period, IAS tracked 14 commitments. Ten of these commitments have been satisfactorily completed. The remaining four commitments will be completed by the first half of FY98. These commitments do not have a significant impact on the continued effectiveness of the Laboratory's internal controls.

Conclusions

The performance requirements for this measure were met or exceeded at Berkeley Lab.

Successes/ Shortfalls

For the assessment period, the Laboratory has maintained its level of success in handling management commitments in a timely and efficient manner. Of the 58 major commitments tracked by LCATS, FMCA, and IAS staff, 50 commitments, or 86% of the total, are complete or are on-schedule. Proactive efforts to improve compliance have also resulted in a decrease in the number of commitments resulting from oversight activities. For LSAD tasks, an area for improvement last year, there was a concerted effort in the self-assessment program requirements to upgrade the completion rate. The completion rate for LSAD tasks jumped from a low of 43% last year to 72% this year.

Supporting Data

- Institute of Internal Auditors Standards 430, *Communicating Results*.
- Institute of Internal Auditors Standards 440, *Following Up*.
- LBNL Activity Data Sheets (ADSs).
- LBNL Corrective Action Tracking System (LCATS).
- LBNL Financial Management Tracking System (FMCA).
- LBNL Self-Assessment Database (LSAD).

Objective #2 Criterion 2.2

Cost Management: *Laboratory leadership manages its costs to maximize its productivity and competitiveness.* **(Weight = 30%)**

Objective #2 Criterion 2.2 Performance Measure 2.2.a

Maximize Cost Effectiveness: *The Laboratory demonstrates an effective system for managing and prioritizing administrative, operational support, and programmatic costs. This will include establishing institutional goals for indirect cost controls and a process for measuring progress.* **(Weight = 30%)**

Note: The rating for this measure will be based upon equal weight for each of the 3 cost types listed above.

Note: This includes DOE-required ES&H prioritized plans.

Assumptions:

- Measurement deliverable: Narrative description of system(s) that demonstrates effective management and prioritization of administrative, operational support, and programmatic costs including the establishment of cost-effectiveness and cost-savings goals and a process for measuring progress.
- "Meets Expectations" = Demonstrated the effectiveness of the process(es) that manage and prioritize each of the following cost types:
  - administrative
  - operational support
  - programmatic
- "Exceeds" and "Far Exceeds" = Evidence of effective deployment and results of systems for achieving cost-effectiveness and cost-savings. (Note: Examples of results include DOE Headquarters required metrics, Lab-specific goals or targets, historical trends in cost categories, or other relevant results.)

Performance Measure Result

System for Managing Costs

A more elaborate discussion of the process and methods employed at Berkeley Lab is provided within the Laboratory Management portion of *Self-Assessment Report for FY 1996* (pp. LM-25 through LM-28 under POCM 2.2a, Cost Management). Some of the processes and methods particularly applicable in FY97 are highlighted here. Specific accomplishments relating to administrative costs are covered below under "Results—Administrative," and those relating to operational costs are discussed under "Results—Operational Support."

Programmatic costs have been significantly and positively affected through those administrative and operational efficiencies savings that most directly impact the scientific programs. Examples include labor pool modifications such as the new Administrative Services Division (ASD) and cost savings leading to reduction of overhead. Such program-related cost management results are reviewed in "Results—Laboratory-wide," "Results—Institutional Indirect Cost Controls," and "Consolidation Activities."

Within a continuing system of delegated cost management, DAC develops policies and initiatives as well as reviews and establishes key priorities. The Project Coordination Committee (PCC) provides recommendations to the Laboratory Director regarding non-capital alterations, general plant projects, general purpose equipment, and line item capital expenditures. The committee is broadbased, including members from the Directorate; Operations; Chief Financial Office; Environment, Health & Safety; Facilities; Engineering; and Information Computing Sciences. The varied disciplines within the committee bring a variety of perspectives to bear on the process. The PCC evaluates and scores proposed activities using risk-based prioritization systems and provides input at the operational and planning level of capital projects and new initiatives.

Supported by input from the represented divisions, the PCC uses two DOE prioritization processes, OMB Bulletin 95-03 and Circular A094, to rate and rank candidate projects; and all projects are evaluated and ranked using the following systems:

- **The Capital Asset Management Process (CAMP).** CAMP is used to evaluate all capital projects. The CAMP process also considers security and safeguards, mission performance, and waste minimization factors.
- **DOE's Environmental, Safety, and Health (ES&H) Risk-Based Priority Model (RPM).** In order to ensure that higher-risk ES&H needs are appropriately addressed and resources applied prudently, all ES&H-related activities (operations and candidate projects) are rated and ranked annually prior to the Unified Budget Call. An Activity Data Sheet (ADS) is prepared for each ES&H activity, and each activity is scored using DOE's RPM. All ADSs and scores are reviewed by the Laboratory's Project Coordination Committee and by a joint Laboratory and DOE committee (including both Operations and Site Office personnel). Funding is requested for the highest-ranking activities and candidate projects.

Finally, proposed spending plans for each division resulting from the above process are established by line management with quarterly cost review by the Director, deputies, and DAC.

Process for Measuring Results

The Laboratory Director implements the process through the Deputy Director for Operations and the Chief Financial Officer. Within this system the Budget and Resource Planning Office serve to:

- Assess Laboratory overhead and divisional costs.
- Develop cost projections.
- Track costs.

The overall Berkeley Lab management goals—of reducing administrative, operational, and programmatic costs—and Laboratory cost containment initiatives are developed in alignment with DOE streamlining and quality management initiatives. During 1997, the overall program, headed by the Deputy Director for Operations, continued to monitor cost management through a program of targeted non-value-added work elimination. This

effort is documented in the CFO Re-Engineering Accomplishments Inventory.

Effective Deployment and Results

The Laboratory continues to review processes (with full participation by all functional units of Operations, including employee representation) to identify reengineering opportunities.

Tri-Lab Initiatives

During FY97, Berkeley Lab continued its efforts to identify areas for potential cost savings through collaborations between Laboratories. Berkeley Laboratory management, through the Tri-Lab Initiatives Council, continues to collaborate with Lawrence Livermore National Laboratory (LLNL) and the Los Alamos National Laboratory (LANL), using benchmarking activities to identify areas for potential cost savings. As part of this effort, the Berkeley Lab-CFO participated in the Institute of Management Accountants' Continuous Improvement Center (IMA's-CIC) financial process benchmarking study. During FY97, this financial process streamlining work group made up of Berkeley, Los Alamos, and Livermore Laboratory managers and the Tri-UC Lab functional committees continued to share ideas, best practices, and systems. The benchmarking study focused on cost and cycle time metrics involved with providing the following financial support functions:

- Accounting Transaction Processing
- Finance Management
- Control and Risk Management
- Decision Support.

One key benchmark of the resulting FY96 IMA report (from participants with revenue <$1B) placed LBNL CFO/Finance's General Ledger costs at 0.1116% of the previous year's expenditures. As a comparison, the median result was 0.1953%, and the top range of the first quartile was 0.1119%.

Another Tri-Lab initiative that is moving forward is a DOE policy change whereby DOE has delegated to the Laboratory the authority to secure and issue lower fare tickets for foreign travel in advance of receiving DOE's "formal" foreign travel authorization. This process change will produce cost savings Laboratory-wide as travelers take advantage of lower advance ticketing prices. Previously this had not been allowable due to the non-refundable status of such ticketing. In the first three months of a DOE-approved pilot program, the savings were $21.6K.

In addition, the Berkeley and Livermore Laboratories continue to realize efficiencies and cost savings by jointly sharing the cost for Travel Management and contracts for travel services as well as vendor discounts.

Results—Laboratory-wide

Ongoing cost savings continue to be realized and planned by implementing Laboratory-wide automation efficiencies and reengineering daily operations.

To continue responding to DOE requirements, new information and processing systems are necessary. Reduced staffing levels since FY96 implicitly require more efficient data management infrastructure to maintain customer support as well as maintain and improve efficiencies. In this arena, the following new systems modules are operational and serve to support this upgrade of information systems and maintain efficiencies:

- PeopleSoft (Human Resources).
- Maximo (Facilities).
- Oracle (Procurement).

To continue and further support process improvements, the new Financial Management System (FMS) is in readiness for implementation October 1, 1997. It will include the following new laboratory-wide, integrated financial system PeopleSoftware modules:

- General Ledger.
- Project Costing.
- Budget (both internal and external).

Since the Budget module will not be implemented at first, the Laboratory has been actively pursuing a new electronic Financial Management System to improve all budgetary processes by:

- Providing on-line viewing of the Laboratory's current budgetary status to all appropriate Laboratory staff.
- Including B&R reporting capabilities within the Financial Management System to further assist institutional control of project commitments.

It is expected that this new system will enhance financial projections and facilitate communication effectiveness.

These new systems will provide greater flexibility and improved quality of management information, resulting in greater operating efficiencies at both institutional and programmatic levels. The system also provides a modern relational database technology, which will greatly improve the collection and distribution of the Laboratory's financial data.

Berkeley Lab's current FMS strategy is centered on migration from an IBM environment to a UNIX/ORACLE platform. Reduced use of the IBM mainframe computers, which are reaching the end of their life cycle, will avoid costly maintenance and reporting delays caused by inevitable "down-time" problems. Further details are available in the Information Management and Financial Management sections of this report.

CFO staff members, partnering with programmatic staff, have participated in the redesign of the chart-of-accounts and numerous business processes, establishing the foundation for providing efficiencies within and for the entire Laboratory effective 10/1/97.

See Appendix F—Financial Management POCM 2.1b for a complete discussion of these new systems and the efficiencies and cost savings achieved.

Results—Administrative

Below are highlights of improvements implemented during FY97 within the Berkeley Lab CFO Department:

General Ledger

- Reengineered Travel Disbursement and Expense Request processes through automation improvements that eliminate manual exchange of data and interim feeder files. The improved software also eliminates the need for space to store canceled checks.
- Implemented electronic processing of cost transfer requests, which reduces divisional travel off-site.
- Automated effort (hours to work-months) adjustment calculations.
- Streamlined access to DOE/Berkeley Lab financial data through download of DOE trial balance, which improves processing time and efficiency of financial statement preparation.
- Expanded cross-training in the Transfer Voucher preparation, which improved task coverage of critical closing processes.

Contract Accounting

- Reengineered a process of simplified accounting for California Institute for Energy Efficiency (CIEE) pass-through contracts. This improvement eliminates data entry into the Sponsored Projects/Proposal Tracking System (SPPT) and Work for Others and Reimbursable Work System (WRW) systems and replaces manually prepared reports.
- Cross-trained Contract Accounting staff members to support invoice distribution, improving task coverage and preventing costly downtime.

Accounts Payable

Lab-wide use of ProCard, instituted in FY96, has increased by a phenomenal 262% over last year at this time (May). The growing use of ProCards for small procurements and continued successful implementation of the "just-in-time" (JIT) program (developed by the Web/EDI Systems Contracting Team; see Financial Management POCM 2.3, *Workforce Management—Self-Directed Work Teams*), will continue to reduce the need to maintain small dollar items on hand in the Laboratory's inventory holdings. Examples of this implementation of JIT are contracts with VWR for chemicals and lab supplies and with Bay Area Gas for gases.

The following overall efficiencies and related savings were realized laboratory-wide from expanded ProCard features:

ProCard Phase II

- Standardization/centralization of procedures.
- Improved payment processes, including the ability to charge numerous accounts with the same card, resulting in reduced manual entries.

Results—Institutional Indirect Cost Controls

During Fiscal Year 1997, Lab-wide efforts to reduce and control costs resulted in the following reductions to institutional overhead rates:

Pool	% Reduction
General & Administrative/Site Support Pools	5.68%
Payroll Burden	1.25%
Scientific Burdens	0.38%

To achieve these reductions, Berkeley Lab managers jointly worked to evaluate shared or common processes and identify best practices with the objective of eliminating non-value-added activities and to reengineer or automate processes where possible. While increased distribution bases have contributed to declining rates, cost containment has also been a significant element in these rate reductions. For example, the FY97 incremental increase in Payroll Burden base earnings over FY96 was 7.7%, while related incremental costs rose by 7.3%, thus reducing the overall rate. Costs in the Scientific Division Burdens were held constant (at less than a 1% increase), while the base increased 3%. The reduction in the General and Administrative/Site Support indirect rates was a result of reduced pool costs (by 5%) and an increase in the base of 7%.

As a result of these rate reductions, the total composite indirect rate charged on scientific labor fell by more than seven percentage points. This is calculated by summation from the pools identified in the above table. The FY96 Composite Total is 107.2%, and the FY97 projected year-end Composite Total is 99.9%, which yields an improvement of 7.3%. The reduction in overhead charged to divisions allowed more of the total Laboratory funding to be available for programmatic research.

Examples of activities which contributed to these savings are fully discussed in the FY96 Laboratory Management POCM 2.2a, *Cost Management.*

Additional FY97 activities contributing to realized savings are detailed in the Operational Support results below.

Results—Operational Support

Outsourcing Opportunities

Facilities—Mail Service: As part of the continued effort to maximize cost efficiencies, the responsibilities for mail service to the Laboratory were outsourced to Pitney Bowes Management Services. An immediate benefit is a projected 10% cost reduction per year. Additionally, Pitney Bowes provides staff with expertise to deal with the new, complex, and changing Postal Service regulations. One result of this expertise will be recommendations on how the Laboratory may be able to take advantage of postage discounts offered by the U.S. Postal Service.

Environmental Health & Safety—Security and Site Control: As a result of Lab management's reevaluation of security and site access controls, the primary security services at the Lab were also outsourced during FY97, to Burns Security International. This change provides cost-effective services more focused on Lab needs with respect to the security of sensitive equipment, a means to monitor safety issues, and the consistent enforcement of Lab site access policy to ensure the safety and security of employees, guests, and contractors. While financial savings have not yet been determined, the contract is designed to obtain more services for comparable costs.

Finance—Accounts Payable: As a cost-savings measure, and a means of upgrading the IBM computers, the Lab contracted with Litton Computer Services to process our Accounts Payable system. As described in the Information Management section of this report, this service provides improved systems for all employees at a reduced cost to the Lab.

Consolidation Activities

Expanded Span of Control: The latest (FY96) IMA Benchmarking study reports were very favorable. The statistics demonstrate the CFO Department's efforts to flatten organizational reporting lines in favor of self-directed work teams. The overall span of control in the Finance transaction processing activities, based on the 1996 year-end statistics, was 17.7 to 1 and remains in effect as of mid-year.

Contributing heavily to this impressive ratio is the large span of control by the CFO/Finance Manager, which encompasses General Ledger and Contract Accounting (Accounts Receivable), and the Associate CFO Finance, who directs all of the Finance Units and the Cost Compliance and Analysis Unit. Further, the two units directed by the CFO/Finance Manager also represent an even larger span of functions when all the transaction processing activities are considered (general accounting, cash, billing, credit, and collections). As noted below, to improve internal control, the General Ledger acquired Conference Accounting, and Business Services acquired Conference Coordination. This realignment will further improve the FY97 span of control statistics.

Readings from the September, 1996, IMA Continuous Improvement Center workshop indicate statistics approaching 20; for example, the overall span of control in the Finance transaction processing activities was 17.1 to 1 and has been maintained into FY97. This is a composite ratio of staff to managers or front-line processors to first supervisory levels. Corporate norms would be 10 to 1, with 20 to 1 being quite exceptional.

Other significant achievements in trimming organization reporting lines are demonstrated within the CFO/Sponsored Projects Office (SPO) Department. The SPO manager has a span of control of 9:1. There has been no increase in staff, despite a large increase in non-DOE funds being brought into LBNL between FY95 and FY96. Of the total annual Laboratory funding of approximately $350M, the SPO Department manages funding of about $60M Work For Others funding.

Merging of Related Functions

For some time, the functions of the CFO Department have been scrutinized and reviewed relative to the best alignments with other operations. During the first half of FY97, two functions within the CFO Department and one external to CFO were identified and realigned for optimal operation based on functionality and shared systems:

- Payroll merged with Human Resources.
- Inventory Accounting merged with Facilities.
- Conference Unit added to CFO Department with Conference Accounting under General Ledger and Conference Coordination under Business Services.

The realignment of Laboratory conference activities under the CFO Department has strengthened the internal control of non-DOE funded cash activities by reengineering and establishing a well-designed and deployed process to account for conference-associated cash activities.

As part of the CFO Department's efforts to increase internal control and flatten organizational reporting, all functions of conference management (comprised of Conference Planning—CP and Conference Accounting—CP sub-activities) were absorbed under existing CFO management during the first half of FY97, which increases the Span of Control ratio, as well as providing a more effective internal control. The Conferences Unit staff operates with separation of functions between planning and accounting for invoiced expenses (Conference Planning—CP reporting to CFO/Business Services) and payment authorization (Conference Accounting—CA reporting to CFO/Finance).

To ensure segregation of DOE funds in compliance with DOE guidelines on unallowable costs, a separate "Conference" bank account was established, which accounts for all Berkeley Lab conference cash and credit receipts, providing complete disclosure and reporting of total conference costs.

An extensive effort was made to redesign Conference Polices and Practices, inclusive of newly developed procedures and staff training (see Financial Management POCM 3.3a for a full discussion).

These reorganizations are intended to produce cost savings through sharing jointly the investment in systems and improved productivity resulting from shared environments and centrally-based activities. For example, Payroll processes are tightly coupled with those in the Human Resources Department (HR). Customer response capability and systems technology are better served in such a consolidated process.

Human Resources—Realignment: A number of organizational changes in the Human Resources Department have been made to improve services, combine related activities, and reduce duplication of effort. All site access activities were aligned under Security Services in the EH&S Division, and the Payroll Unit was moved from Finance to HR's Compensation and Benefits Department to streamline tasks. HR also works closely with the new ASD as well as the previously existing Site Access Office to provide better service for employees and guests.

Scientific Divisions—Administrative Services Department (ASD): To manage within the 4% cost reduction to budgets achieved in FY96, divisions continue to focus on ways to improve their management structure for cost effectiveness. To support the concept that programmatic leaders should not have to run small businesses, the Administrative Services Department (ASD) is moving forward, promoting shared administrative/ support functions and reduced duplication.

During FY97, the Administrative Services Department (ASD) head was selected. This department head will work closely with the Laboratory's Customer Advisory Board to ensure that ASD's services are efficiently delivered, cost-effective, and meet the needs of researchers. Following are the principles and goals that ASD accomplished during FY97:

- Established cross-functional infrastructure teams mobilized to meet programmatic project initiatives.
- Created a secondary workforce of "just-in-time" experts to augment career staff and serve as a feeder group to permanent positions (no peak-load staffing).
- Continued our progress in providing seamless institutional administrative services rather than providing services along strict programmatic organizational lines.

Maintenance/Training/Repair Process Improvements

Hoist and Crane Maintenance and Training: Responsibility for Hoist and Crane Maintenance at the Laboratory has been assumed by Crane Pro Services, which has contracted to perform inspection, repair, and certification of cranes and hoists. Administrative support for the program has been included in the service contract as well, including a crane engineer position on an as-needed basis, which provides an approximate savings of $125,000 per year. Hoist and Crane Training is now given to key Laboratory employees, who in turn train other Lab employees, thereby reducing training costs.

Small Tool Repair: CST (California Service Tool) has received a contract to repair all of Facilities' small tools. CST's tool costs are competitive, and LBNL will receive a credit for the basic evaluation of a tool toward the purchase of a new tool. The estimated savings are approximately $1,000 per month.

Elevator Maintenance: Lodestar Elevator Service Company has accepted a service contract for providing a full-time elevator technician. The initial difference is a savings of $30,000 per year, and it is expected that 50% of that amount will be the savings realized after administration and performance monitoring and any additional maintenance.

Cost Savings Through Innovation

Space and Energy Management: Working with the DOE, Facilities was able to simplify the approval process for work performed in leased space, saving both time and project dollars.

Additionally, the Laboratory's electric utility rates were significantly reduced through negotiations with DOE and other Labs (LLNL and SLAC), which resulted in a more equal sharing of cost savings achieved by the use of alternative electric power sources.

Improved Administrative Services: This year, employees could sign up for benefits using an Interactive Voice Response system that reported directly to UCOP, eliminating a substantial amount of paperwork and providing a more convenient process. Also manual check writing was eliminated and employee paystubs now include benefits and savings plan reports. These and other electronic capabilities have improved reporting capabilities and eliminated many processing steps while providing better service and reducing costs.

Conclusion

The performance requirements for this measure were met or exceeded at Berkeley Lab.

Successes/ Shortfalls

During FY97, the Berkeley Laboratory system of cost management controls resulted in maintaining the FY96 base overhead level (in constant dollars) through efficiencies deployed by all functional units of Operations and Laboratory Management. As a key element for success in this area, the Laboratory's management continues to implement improvements to the organizational system that provide an effective operational and integrated infrastructure with efficient alignment of function.

Major improvements in Administrative cost efficiencies were undertaken in FY 1997 in the General Ledger, Contract Accounting, Accounts Payable, and the ProCard systems. Improvements were also achieved in Operational cost efficiencies; in outsourcing tasks in Facilities, Security, Site Control, and Accounts Payable; in increased span of control in a number of support functions; and in maintenance/ training/ repair functions.

The entire process of systematic cost management at Berkeley Lab translates into management of programmatic costs. Particular highlights of the year were progress in streamlining and sharing resources in the labor pool, as structurally instituted with the Administrative Services Department, and in indirect cost savings through initiation of Lab-wide support systems in the areas of Human Resources, Facilities, Procurement, and Financial Management, and several consolidation activities. The success of such efforts in FY 1997 is demonstrated by the further reductions in institutional indirect cost. This was a Lab-wide accomplishment achieved only through the active partnership of the administrative and operational functions with the scientific divisions.

Supporting Data

- Berkeley Laboratory Annual Financial Report FY96.
- Operations Budget for Fiscal Year 1997.
- Indirect Budgets Worksheet.
- DOE Institutional Plan On-Site Review 8/96.
- CFO Re-Engineering Accomplishments Inventory YTD May, 1997.
- Berkeley Lab Financial Management System One-Year Plan, 1997.
- Berkeley Lab *Currents*. (http://www.lbl.gov/Publications/Currents/)
- Laboratory Management (LM) *Self-Assessment Report for FY 1996*, October 1996. (Particularly POCM 2.2a, *Cost Management*.)
- *Streamlining Initiatives at Berkeley Lab*, OAK/LBNL Executive Streamlining Group.

Self-Assessment Report for Fiscal Year 1997

Environment, Safety & Health

Ernest Orlando Lawrence Berkeley National Laboratory

Performance Characterization

Summary of Accomplishments and Deficiencies

This year the Lab's ES&H functional area satisfied gradients for 18 out of 19 (95%) performance measures. This equals the FY96 level of performance success.

FY97 ES&H performance demonstrates that the Berkeley Lab is in position to implement an Integrated Safety Management System as prescribed in next year's performance measures. Management tools are currently in place to meet all seven of the principles of this management system. An existing institutional document defines line management authority and responsibility (Regulations and Procedures Manual, or RPM) (PUB-201). The Lab's authorization systems to assure protection of the public, its workers, and the environment are defined in the Lab's Health and Safety Manual (PUB-3000) and Operating and Assurance Program Plan (PUB-3111 rev 5.0). In addition, the Health and Safety Manual provides specific guidance for identifying hazards associated with work and the applicable requirements and guidance to control these hazards.

The upward trend in Berkeley Lab's ES&H performance against these measures demonstrates that over the years, resources are allocated appropriately to implement a cost-effective ES&H program. For example, public and worker radiological doses are well below control levels accepted by DOE and the Lab and are a very small fraction of any regulatory limit. The Lab continues to devote resources to the goal of staying within dose limits that are as low as reasonably achievable.

Areas for Improvement

The Lab partially met the success gradients for Measure 3.1.b, Institutional ES&H Training. During the performance period, the Lab recognized that resources should be directed toward improved management of the ES&H training information, in particular the systems used to identify candidates for required ES&H courses and toward making Web and computer-based training available. Because the improvements were completed toward the end of the performance period, there was insufficient time to evaluate the impact on the gradients for this measure, which are stated in terms of completion rates for targeted courses and audiences.

Performance Objective #1

Protection and Prevention: *The Laboratory will conduct operations in a safe manner that protects human health, the environment and the public and prevents adverse impacts thereon.* **(Weight = 53%)**

Summary

Overall the Lab has been very successful in meeting and exceeding the letter and spirit of this objective. The Lab's performance in all measures either met or exceeded performance expectations. Within statistical norms, data for many of the quantitative measures was either at the same level or lower than the previous performance period, FY96. The Lab's performance in radiation dose to the public (1.1.b), chemical exposure prevention (1.1.d), waste minimization (1.2.a) and pollution prevention (1.2.b) exceeded its performance over the prior performance period (FY96). Its performance in radiation protection of the worker (1.1.a), accident prevention (1.1.e) and medical and safely/health integration was equal to that in FY96. Although its performance in Measure 1.1.c was not equal to FY96, the Lab did meet expectations for this measure.

The Lab's performance in waste minimization is especially impressive. The Lab far exceeded waste minimization goals in three out of four waste streams and exceeded waste minimization goals in the fourth waste stream.

A minor lapse in meeting its own standard for implementing an ALARA program occurred when the ALARA committees did not meet quarterly. This oversight has been corrected.

There was a minor lapse in the operation of realtime environmental radiation monitors. Backup systems and accelerator operations information successfully filled in the missing realtime information. Corrective actions were immediately implemented to eliminate future failures of this type.

Objective #1
Criterion 1.1

Effective Protection and Prevention: *An effective Environment, Safety and Health Program will identify, control and respond to hazards. The intent of the following group of performance measures is to assure that the Laboratory's ES&H systems effectively address protection and prevention. They represent key protection and prevention elements that are adequate to demonstrate the effectiveness of ES&H systems.* **(Weight = 39%)**

Objective #1
Criterion 1.1
Performance Measure 1.1.a

Radiation Protection of Workers: *Occupational external and tritium (excluding accidental exposure and/or intake) radiation doses from DOE operations will be managed to assure that applicable 10 CFR 835 limits are not exceeded. An effective ALARA program is in place to manage collective dose.* **(Weight = 7%)**

Assumptions:

- For FY97 the performance period is January 1, 1996 through December 31, 1996.
- Any actual or anticipated significant change in workloads (interpreted to be an increase or decrease of 10% or more) that would affect radiation doses will be brought to the attention of UC and DOE and appropriate adjustments will be made.
- The Laboratory will define any change in its control level for collective dose in coordination with its local DOE office by October 1 for use during the following calendar year.

Gradient:

Meets Expectations:

- A proactive management strategy (such as an effective ALARA Program) is in place to manage and reduce exposure for the optimum individual and collective dose.
- All individual doses are below 10 CFR 835 limits.
- Collective dose is within 5% of the Laboratory's 3 year running average.
- A Laboratory specific control level for collective dose is established.

Exceeds Expectations:

Is evaluated by considering a combination of the following:

- Collective dose is reduced by at least 10% of the Laboratory's 3 year running average or the collective dose is below the control level.
- Evidence of Senior Management involvement/leadership in the ALARA Program.

Far Exceeds Expectations:

- Laboratory ALARA goals for individual exposures are achieved.

Performance Measure Result

Workload

While the Biomedical Isotope Facility has come online and all Advanced Light Source Beam Lines are now operational, there have been no overall significant changes in workload at the Lab that would affect radiation doses to the worker.

Control Level

There have been no changes in the control level. The site control level for collective remains at 6 rem; this is in current agreement with the local DOE office.

Berkeley Lab ALARA Program

The Berkeley Lab's ALARA goal is that no individual exceeds the administrative control limit of 500 mrem per year without appropriate investigation, justification, and approval by senior Lab management. Additionally, the Lab manages individual doses through the individual work authorizations within the Radiological Work Authorization (RWA), Radiological Work Permit (RWP), Sealed Source, and X-Ray programs. These authorization programs target individuals who really need protection under ALARA, in addition to ensuring that the ALARA review is coordinated with all of the other aspects of radiation safety oversight.

One of the elements of the Lab's Radiation Protection Program (RPP) is the establishment of ALARA Committee(s). Its purpose is to provide programmatic guidance and oversight. In 1996 there were two committees, the ALARA Executive Committee (AEC) and the ALARA Working Committee (AWC).

As described in the RPP Attachment II, the responsibilities of the AEC were to:

1. Set annual ALARA site goals.
2. Approve individual program ALARA goals.
3. Annually review performance relative to these goals.
4. Approve ALARA design reviews.
5. Coordinate the annual ALARA Program Appraisal.
6. Set special criteria for investigation of abnormal events.
7. Advise upper management on improving progress toward minimizing radiation exposure and radiological releases.

The responsibilities of the AWC were to:

1. Determine and recommend ALARA goals.
2. Identify and train affected personnel.
3. Perform audits.
4. Document reviews of radiological work.
5. Review facility designs.
6. Maintain records.

In AEC meetings on 2/29/96 and 7/12/96, as a means of strengthening the RPP, the AEC committee voted to dissolve itself and the AWC, and to establish the Radiation Safety Committee (RSC). The AWC was dissolved on March 28, 1996. Meeting minutes record discussions developing strategies for the transfer of AEC/AWC functions to the RSC. The RSC was established on January 14, 1997.

AEC responsibilities were discharged as noted. Specifically,

- At the February 29, 1996 meeting, it reviewed program performance for 1995, including performance relative to the ALARA goals. Further progress towards minimizing exposure was discussed again at its July 12, 1996 meeting.
- In the 2/29/96, meeting, the AEC approved the site and individual ALARA goals.
- For 1996, there were no ALARA design reviews required by the AEC.
- For 1996, there were no abnormal events that required special criteria.
- The annual program appraisal was scheduled for 1997 and was part of the agenda for the January 16, 1997 RSC meeting.

The AWC discharged its responsibility for recommending the 1996 ALARA goals during an earlier 1995 meeting. These proposals were adopted by the AEC at its February 1996 meeting. The responsibility for proposing goals for 1997 was assumed by the RPP staff. The Radiological Control Manager submitted 1997 ALARA goals, which were adopted by the RSC on January 26, 1997. Oversight of this function was provided through quarterly reviews by DOE/OAK.

All radiation safety training continued to be developed, conducted, and monitored by RPP staff with no substantial change due to dissolution of the AWC. Training was implemented and oversight was provided through the RWA or RWP program managers.

Annual radiation safety performance audits and reviews continued to be performed by RPP staff through the RWA program with no change in frequency, thoroughness, or detail due to dissolution of the AWC. Further oversight of this function was provided independently by the LBNL Office of Assessment and Assurance and the 1996 Integrated Hazard Assessment (IHA).

In 1996, there were no design reviews requiring AWC participation and all required records were managed by RPP staff. Forty dose investigations took place during 1996. Every dose above the administrative action levels (50 mR for whole body and 500 mR for extremity) is validated by a staff HP. This information is passed along to the appropriate field HP who, if the dose is not within acceptable or expected bounds (based upon their work scope and authorization), may perform a follow-up investigation. Most of the dose investigations confirmed deep exposures from either hard beta, gamma, or dose to extremities. There were one or two shallow dose investigations. These dose investigations ensure that all doses received by LBNL staff are within their work scope and RPP review and management. The Berkeley Lab was well within expected bounds for all 40 investigations in 1996 and 20 so far in 1997.

Six Class III authorizations were renewed during 1996. The Class III operations are those with the highest hazard guide values and therefore the highest levels of risk, controls, and oversight. Each renewal had a component addressing actual dose summaries for the year, an evaluation of that dose, and general ALARA principles and techniques.

All dosimetry assignments are made via the authorization program. This will ensure that all personnel who may require dosimetry actually receive it, that it is of the correct type and frequency, that appropriate training has been given, and that all aspects are being reviewed by field staff to ensure that it is being implemented.

As implied above, the RWA program is a key component contributing to the Lab's ALARA program. All elements of the RWA program are defined in EH&S Procedure 707 (Revision 1, September 1995). All critical elements of the procedure are fully implemented. The procedure calls for data management to be performed using a database (RADAR); in FY97 this database was in development. Currently most database functions are managed manually.

Individual Dose

The maximum allowable individual dose under 10 CFR 835 is 5 rem per year. No individual doses exceed these limits. In Calendar Year 1996, the individual collective dose histogram is tabulated below:

Individual Collective Dose, mRem	Numbers of LBNL Employees or Guests Receiving Dose CY 1996
0 to 15 (non detect)	2632
15 to 100	92
100 to 500	8
Greater than 500	0

Five individuals received 100 to 200 millirem and three received 200 to 300 millirem in CY 1996.

Five of the individuals were associated in various capacities with Research Medicine. One was a contractor who used sealed sources to calibrate the PET scanner. Others were involved in administration of radioisotopes to humans or animals, or in the chemical preparation of the material. This work, by its nature, involves exposure to moderate levels of high-energy gamma radiation from positron emitting radioisotopes.

Other individuals were exposed to various sources of radiation at the 88-Inch Cyclotron and the actinide chemistry laboratories.

LBNL does have a formal administrative control level established for individual whole body exposure of 500 mRem; Associate Lab Directorate approval is required for any planned exceedance. This provides administrative assurance that all doses are within the expected range for the work being performed here. No doses exceeded this value in 1996.

Collective Dose

The Lab's 3-year running average collective dose is 5.639 rem. The collective dose for 1996 is 4.6 rem. This is over 18% less than the 3-year running average and is well below the control level of 6 rem.

Supporting data indicate the cumulative dose for the second, third, and fourth quarters was larger than for the first quarter. The low first quarter cumulative dose was due to a lower than normal workload. The doses received in the final three quarters reflect fluctuations in normal activity and additional dose due in particular to two activities: the Building 70 Pit Room Inventory Characterization Project (a one-time project) and the new Building 56 PET Accelerator coming on-line. Doses from these activities do not appear to be significant enough at this time to warrant an adjustment in the performance expectations, but they will be closely tracked. The ALARA program has been extremely effective in 1996 and total dose is lower than the previous year, despite an increase in radiation work.

Laboratory Control Level for Collective Dose

The Laboratory specific control level for collective dose remains unchanged from earlier years at 6 rem. This is documented in the January 3, 1997 letter (DIR-97-0442) from David McGraw to Hattie Carwell regarding Contract 98, Appendix F Performance Measures.

Senior Line Management Involvement in the ALARA Program

In 1996, senior line management was represented on the AEC. Their involvement and leadership drove the dissolution of the two ALARA committees and the formation of the RSC.

The EH&S Division sends out quarterly EH&S performance summaries to all division directors. These summaries include updates to site-wide collective dose. In cases where it is warranted, specific divisions may also receive their own division's performance for targeted indicators. The summary pivots each division director with current safety-related information. Division safety coordinators and EH&S liaisons also receive the same information, thereby ensuring that there is both senior management and working level involvement.

Successes/ Shortfalls

The Lab continues to make good progress toward minimizing cumulative worker radiation dose. The transition of the AEC and AWC to the RSC did not adversely affect radiation protection of the worker; the RSC is fully commissioned and is actively working to strengthen the RPP. Senior line management is represented on the RSC and its involvement and leadership is key to the running of the RPP.

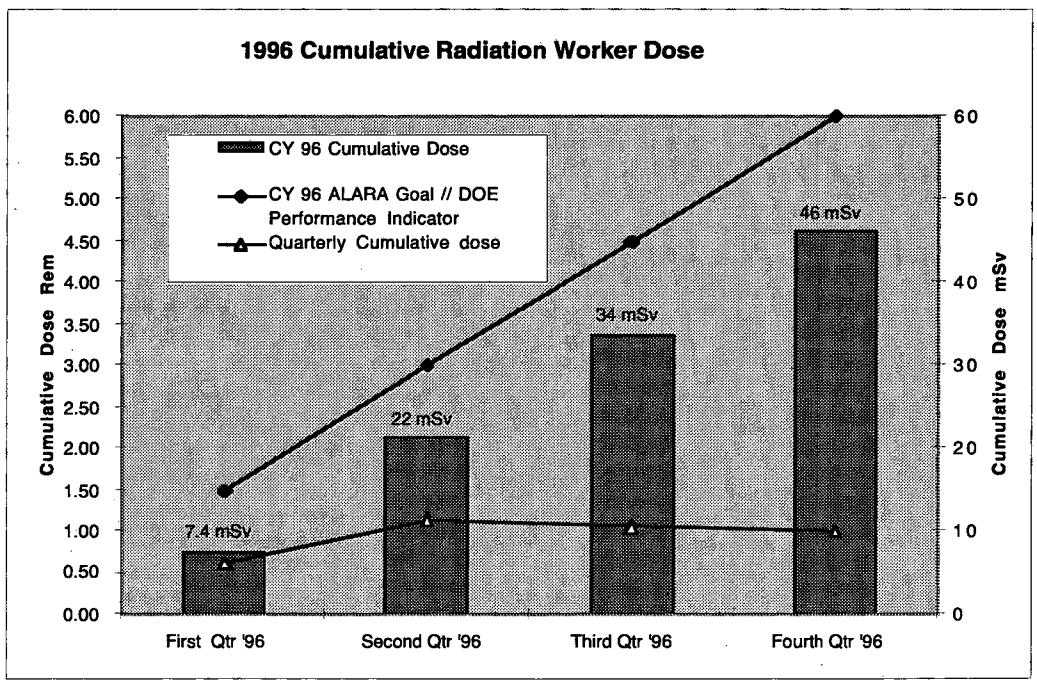
The Lab did not recognize that early dissolution of the AEC and AWC created a non-compliance with its own RPP regarding quarterly meeting of the AEC and AWC.

All individual doses are well below 10 CFR 835 limits. The Lab has a specific control level established for collective dose. The Lab's collective dose is over 18% below its 3-year running average. Lab ALARA goals for individual exposures have been achieved.

The Lab has met all gradients for this measure.

Supporting Data

- 7/18/97 Q-mail to David Balgobin EH&S QA Coordinator from Mike Schoonover.
- Excerpts and responses in a letter to R. Keith Christopher addressing questions in his letter dated 3/31/97.
- EH&S Procedure 707, Revision 1, September 1995.



Objective #1
Criterion 1.1
Performance Measure 1.1.b

Radiation Protection of the Public: *Public radiation doses to the maximally exposed individual from DOE operations will be measured or calculated and controlled to assure that applicable Federal limits are not exceeded. An effective ALARA program in place to manage dose to the public.* **(Weight = 6%)**

Assumptions:

- For FY97 the performance period is January 1, 1996 through December 31, 1996.
- Any actual or anticipated significant change in workloads (interpreted to be an increase or decrease of 10% or more) that would affect radiation doses will be brought to the attention of UC and DOE and appropriate adjustments will be made.
- Each Laboratory will define any change in its site control level for the maximally exposed individual dose in coordination with its local DOE office by October 1 for use during the following year.

Gradient:

Meets Expectations:

- An effective ALARA program is in place to manage and reduce dose, or to maintain dose at the control level.
- Federal limits are not exceeded.
- Maximally exposed individual dose is within at least 5% of the site's 3 year running average.
- A Laboratory site control level is established.

Exceeds Expectations:

- Public dose is reduced by 10% percent from the site's three year running average (this criterion is not a factor if the Laboratory is at or below its site control level).

Far Exceeds Expectations:

- Public dose is maintained below 1 mrem.

Performance Measure Result

Workload

There have been no significant changes in the 1996 workload at the Lab that would affect radiation doses to the public.

Site Control Level

The site Environmental ALARA control level was determined by the ALARA Executive and Working Committees. These committees were responsible for numerous diverse tasks aimed at radiation protection of workers and the public, including setting annual ALARA goals. These committees were combined to establish the Radiation Safety Committee, which was commissioned in early January 1997. The Radiation Safety Committee (RSC) has responsibility for reviewing and changing the Environmental ALARA control level. Factors contributing to the

determination of an appropriate Environmental ALARA control level include:

- Contribution from direct radiation: 88-Inch Accelerator beam line run times and ion Z value; there is an inverse relationship between the value of Z (the number of protons) and the production of gamma and neutron radiation.

  Gamma Sphere: this is a specific experiment installed at the 88-Inch Accelerator. The instrument itself is the most sensitive gamma detector in the world and is used to study nuclear deformations (superdeformations) under high impact nuclear collisions. This experiment will also generate gamma and neutron radiation.
- Contribution from non-direct radiation, air pathway: Airborne particulate and non-particulate radionuclides are released as a normal byproduct of research at LBNL. Airborne radioactive releases are regulated under 40 CRF 61 Subpart H, National Emission Standard for Emissions of Radionuclides Other Than Radon From DOE Facilities (NESHAP). An annual NESHAP report is prepared and submitted to DOE and the U.S. EPA as part of the NESHAP requirements. The greatest contributor to airborne dose comes from tritium in the form of HTO released from the National Tritium Labeling Facility, an NIH-funded research lab.

  Non-direct radiation, all other pathways other than air: A comprehensive dose pathway analysis is contained within the site's Environmental Monitoring Plan, November 1995. The analysis concludes that dose to the maximally exposed individual (MEI) via all other non-air pathways is insignificant.

The control level remains unchanged at 3 mrem per year to the site MEI.

Environmental ALARA Program

In 1996 there were two committees, the ALARA Executive Committee (AEC) and ALARA Working Committee (AWC), to provide programmatic guidance and oversight:

The responsibilities of the AEC were to:

1. Set annual ALARA site goals.
2. Approve individual program ALARA goals.
3. Annually review performance relative to these goals.
4. Approve ALARA design reviews.
5. Coordinate the annual ALARA Program Appraisal.
6. Set special criteria for investigation of abnormal events.
7. Advise upper management on improving progress toward minimizing radiation exposure and radiological releases.

The responsibilities of the AWC were to:

1. Determine and recommend ALARA goals.
2. Identify and train affected personnel.
3. Perform audits.

4. Document reviews of radiological work.
5. Review facility designs.
6. Maintain records.

Early in 1996, the AEC voted to combine with the AWC to establish the Radiation Safety Committee (RSC). A more complete description of the transition from the AEC/AWC to the RSC may be found in the report for Measure 1.1.a under Berkeley Lab ALARA Program. The newly commissioned Radiation Safety Committee has the responsibility of addressing environmental ALARA issues and tracking their implementation through programs designed to minimize public exposure from Lab operations.

All experiments undergo peer review under guidance written by the former ALARA committee. All new experiments and projects with significant changes are reviewed with respect to Environmental Radiation Safety as part of the radiation use permit process.

Compliance Limits

The applicable federal limits are established under 10 CFR 20 and 40 CFR 61 subpart H and are 100 mrem/yr (all pathways) and 10 mrem/yr (air pathway), respectively. None of the federal compliance limits have been exceeded. The cumulative dose for the year, from all pathways, is 1.89 mrem. This total public dose is well within the established Berkeley Lab control level of 3 mrem and is about 1.9% of the allowable federal limit (100 mrem).

Maximally Exposed Individual Dose

The nearest MEI is located at the fenceline adjacent to the 88-Inch Cyclotron. Real time monitors located between the 88-Inch Cyclotron and the fenceline provide an ongoing measurement of the fenceline dose to the hypothetical MEI. The site's 3-year (1993, 1994, 1995) running average is 2.3 mrem. The maximally exposed individual dose (MEID) for 1996 is 1.89 mrem, a reduction of over 17% of the 3-year running average. This statistic is for performance measure assessment purposes only, as these figures are accurate to ± 20% and thus statistically no difference can be seen between them.

Successes/ Shortfalls

A shortfall in the direct radiation monitoring program allowed a malfunctioning condition to continue unchecked for almost two months. Expeditious corrective actions were implemented to eliminate repetition of this type of occurrence. The dose for this 2-month period was reconstructed from accelerator activity records. Also, it should be noted that the Lab employs a TLD program as backup for the real-time monitors. TLD data confirmed reconstructed data with a very high degree of confidence.

The Lab continues to implement technologies to reduce its production of public dose. While emissions from the NTLF contribute a small fraction of the MEI dose, the Lab has been successful in implementing emissions

controls that have reduced radiological emissions from 575 Ci in 1988 to 5 Ci in 1996.

The Lab has an effective environmental ALARA program aimed at reducing dose. There is a Lab control level.

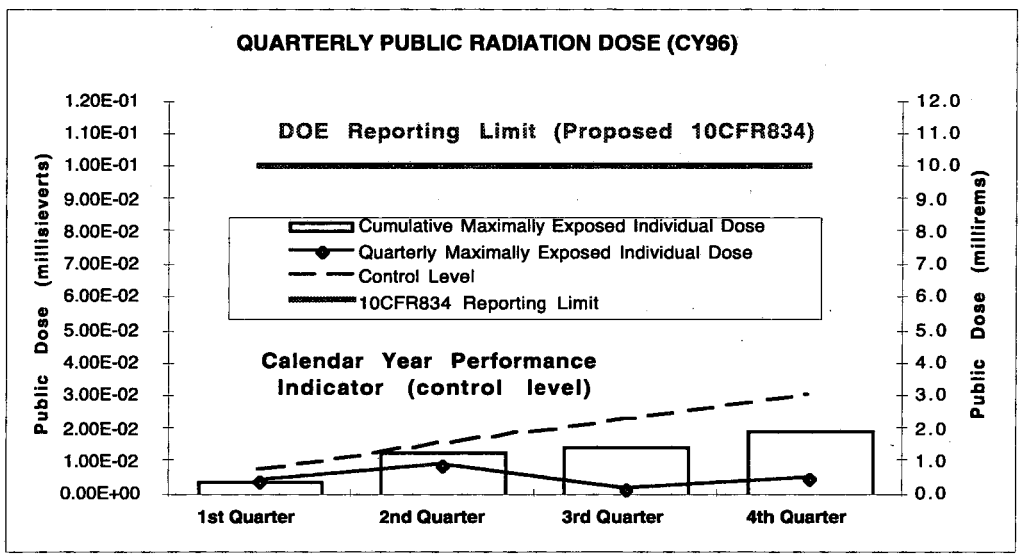
None of the federal limits nor control levels were exceeded in 1996.

There has been a reduction of over 17% in the MEI dose from the 3-year running average.

The MEI dose for 1996 was 1.89 mrem.

The Lab has met 5 out of 6 success gradients for this measure.

Supporting Data



Quarter (CY96)	Total Direct Dose [mSv]
1st Quarter	3.60E-03
2nd Quarter	9.10E-03
3rd Quarter	1.70E-03
4th Quarter	4.5E-03
Annual:	1.89E-02

Objective #1
Criterion 1.1
Performance Measure 1.1.c

Radiological Exposure Prevention: *Unplanned internal exposures to radioactive material and ORPS reportable occurrences of skin or personal clothing contamination are managed and minimized.* **(Weight = 7%)**

Assumptions:

- For FY97 the performance period is January 1, 1996 through December 31, 1996.
- The severity of the events is to be considered in the evaluation. The weighting from high to low severity is: intakes of greater than 100 mrem, skin contamination, then clothing contamination.
- Data for this measure is reported as a normalized number of occurrences or exceedances.
- Some variability is expected which may not be indicative of a trend.

Gradient:

Meets Expectations:

- A proactive management strategy is in place to reduce frequency and severity which includes follow-up to occurrences or exceedances.
- The number of occurrences will be maintained to within 5% of the baseline (Calendar Year 1994) or a number agreed upon by the Laboratory and the local DOE office.

Exceeds Expectations:

- The number of occurrences meets the goal for a decreasing trend set by agreement between the local DOE office and the Laboratory.

Far Exceeds Expectations:

- The reduction in the number of occurrences exceeds the goal established between the local DOE office and the Laboratory.

Performance Measure Result

Proactive Management Strategy

The Lab's ALARA program is described in the report for Measure 1.1.a under the heading Berkeley Lab ALARA Program. Work authorizations assure that working conditions, controls, worker training and skills are commensurate with the radiological hazards. The Radiological Work Authorization Program was revised in September 1995. This was a major revision incorporating a large number of programmatic changes and an overall increase in the level of detail. There is a proactive management strategy in place to reduce the frequency and severity of radiation exposures through the Radiation Safety Committee, Work Authorizations, training programs, and ES&H field support. Follow-up and investigation are key components used to develop lessons learned. Lessons learned are shared with division safety coordinators. Major program changes that make up the current proactive management strategy include:

- Radiological Work Authorizations (RWAs) that cover routine research activities are now considered separately from short term projects such as facility modifications and decommissioning, which are covered by the

Radiological Work Permit Program. This allows program administrative controls to become more customized to the type of work activity.

- An Observation of Experiment Review is implemented as the primary tool for ALARA reviews in the workplace.
- Radiation worker retraining is integrated with the annual RWA renewal process. ALARA and program compliance are formally discussed with each research group holding an RWA.
- A low activity source authorization was implemented to streamline administrative requirements for researchers using very low levels of radiation activity.

Number of Unplanned Exposures

During Calendar Year 1996, there was one incident of clothing contamination. On April 16, during a planned inventory of the EH&S division sealed sources, a container of foils was opened and foil removed for counting. A pinhead-sized amount of material was observed falling to the ground. Subsequent area monitoring revealed contamination on the floor and 3000 dpm (alpha) on one shoe of the technician. Decontamination protocols were initiated immediately. The area and personal clothing contamination occurred in a posted Radiological Storage Area. Occurrence report SAN—LBL-EHS-1996-0002 was initiated and categorized as off-normal.

During the baseline year (1994), three incidents qualified under this measure. There were none in 1995. The Lab and DOE have mutually agreed to a goal of four unplanned exposures per year.

Successes/ Shortfalls

Documented Successes

LBNL, as evidenced in the very low number of ORPS reportable occurrences in this category over the previous three years (1994, 1995, and 1996), has demonstrated that personnel are handling radioactive material safely and that the authorization and training programs are effective.

The Lab has a Radiological Protection Program in place as its proactive management strategy. The aim of the program is to reduce frequency and severity of incidents; it vigorously follows up occurrences or exceedences.

In 1996, there was one incident of personal clothing contamination.

The Lab has met all the success gradients for this measure.

Supporting Data

ORPS database.

Objective #1
Criterion 1.1
Performance Measure 1.1.d

Chemical Exposure Prevention: *The number of exposures to toxic materials and physical and biological agents that are above applicable occupational exposure and medical removal levels will be tracked. A decreasing trend is expected.* **(Weight = 7%)**

Assumptions:

- For FY97 the performance period is July 1, 1996 through June 30, 1997.
- "Action level" is defined as one-half of 8-hour TWA, STEL and Ceiling for the OSHA PEL, ACGIH TLV®, unless a different action level is specified by OSHA.
- Data for this measure is reported as the number of occurrences or exceedances versus the number of measurements taken.
- Exposure measurements will be corrected by the protection factor of the personal protective equipment in use.
- Some variability is expected which may not be indicative of a trend. Changes in operational levels or volumes shall be considered fully.
- Applicable exposures above the OSHA PELs resulting from an accident will be addressed by the local DOE office and the Laboratory.

Gradient:

Meets Expectations:

- Using a risk-based approach, the Laboratory will maintain and improve its site-wide exposure assessment and monitoring plan to characterize employee exposures to hazardous chemicals, physical agents (except ionizing radiation) and biological agents.
- The exposure and monitoring plan is fully implemented.
- The exposure and monitoring plan is of sufficient quality and integrates Industrial Hygiene and Medical.
- Ninety-five percent of the sampled exposures to toxic material/physical agents will be below the OSHA PEL.
- There is appropriate and documented follow-up to exposures above the OSHA PEL.
- A proactive management strategy is implemented to minimize exposures.

Exceeds Expectations:

- Ninety-five percent of the sampled toxic material/physical agent exposures will be below the ACGIH TLV® or other published occupational health standards.
- There is appropriate and documented follow-up or response to exposures above the ACGIH TLV® or other published occupational health standards.

Far Exceeds Expectations:

- Exposures above the action level are followed up by an Industrial Hygienist and controls are instituted to decrease exposure for ongoing operations. The follow-up and controls are documented and implemented within the performance period.

- Exposures that are below the ACGIH TLV® but cannot be reduced below the action level in an economically feasible manner will be given credit at the "Far Exceeds" level.

Performance Measure Result

Exposure and Monitoring Plan

Implementation of the Exposure Assessment and Monitoring Plan continued during this performance period (July 1, 1996 through June 30, 1997).

Four continuous improvement goals were established and implemented. These provided targeted direction on managing and developing exposure assessment needs and programs. It was assumed that evaluation of overall performance on Performance Measure 1.1.d would be based on overall status, maintenance and progress on exposure assessment needs, and not necessarily on completion of specific items below.

I. Conduct chemical and other IH physical agents exposure assessments as part of the Integrated Functional Appraisal (IFA) activities.

A. Complete Integrated Hazard Appraisals (i.e., hazard identification) of all Berkeley Lab operations.

Performance Status: Integrated Hazard Appraisals were completed for all work and hazards in all divisions Lab-wide in the summer of 1996. This effort included documentation of known hazards and levels-of-concern, and field audits verifying hazard information.

B. Initiate systematic, prioritized appraisals of Berkeley Lab operations as part of the Berkeley Lab Integrated Functional Appraisal (IFA) process initiation. The IFA is the Lab's independent assessment of its own Self-Assessment Program (see the report on Measure ES&H 3.1.a). It builds upon the information developed from the IHA. In 1997, the IFA was conducted for four divisions (EH&S, Physics, Material Sciences, and Chemical Sciences). Each year the IFA will be conducted for three or four different divisions, assuring that each division will be independently assessed tri-annually.

Performance Status: The IFA has commenced and is on schedule. The Berkeley Lab chose four divisions and is conducting a review of high, medium and 5% of the low level hazards. Reports are being drafted and data is entered into a database for evaluation.

C. Evaluate chemical exposure potential for operations evaluated in the prioritized IFA.

Performance Status: IFA field appraisals evaluated all ES&H concerns, including chemical exposure potential. Only a few new operations were identified that need additional chemical exposure evaluation as documented in the 1997 IFA reports and database. During the next performance period, exposure potentials from carbon tetrachloride use, ozone generation, radio-frequency etching, and asbestos sources will be evaluated.

D. Complete written qualitative evaluations of exposure potential for IFA identified "medium" or "high" exposure levels.

Commence quantitative monitoring for operations where exposure potential may be significant and effectiveness of controls needs evaluation.

Performance Status: Evaluations of operations identified during the IFA as needing additional exposure evaluation have been started, but completion will follow completion of the IFA summary reports. For example, quantitative monitoring was identified for work areas where there may be ozone, noise from bead blasters, asbestos, solvent wiping, and radio-frequency etching. Evaluations are documented in IH files and records and medical services files and records.

II. Maintain the chemical assessment, control, management and performance measure systems currently in place.

A. Conduct documented exposure assessment for chemical exposure potentials that are identified by current non-IFA recognition means.

Performance Status: All existing IH programs continue to identify new operations that need exposure potential evaluations. Documentation of these evaluations is filed in the central IH exposure assessment and building files and is indicated by the exposure measurement indicator presented below.

B. Track and report exposure data.

Performance Status: Included on each written exposure evaluation document is a summary of exposure evaluation, measurement, and health-standards comparison data for that specific evaluation. Every 3 to 4 months, this data is summarized and reported for Performance Measure 1.1.d reporting purposes.

C. Ensure additional controls are implemented for all exposures above the PEL, TLV, or action level.

Performance Status: IH staff take immediate action to ensure control of any exposure above action levels, including reporting of exceedances to responsible personnel in the IH group and Health services as documented in the IH exposure files. No exceedances above action levels were identified during the reporting period.

D. Provide records of all quantitative exposure evaluations to Health Services.

Performance Status: Hard or electronic copies of all documented exposure evaluations are sent to Health Services, where they are placed in the medical files of personnel that were evaluated.

E. Evaluate exposure potential of employees referred by Health Services.

Performance Status: Health Services periodically sends requests (i.e., often e-mail requests, but sometimes verbal requests if confidentially is needed) to the IH professional responsible for the appropriate customer base. The IH professional evaluates the need and communicates the evaluation in writing back to

Health Services. Copies of evaluations are present in the IH and Health Services records.

III. Formulate an industrial hygiene exposure information integrated management needs assessment and strategy.

Performance Status: An IH electronic information management working group held prescheduled meetings every one to two weeks for seven months to accomplish the items noted below. The working group was composed of two IH and two information systems management professionals.

A. Determine IH information management needs and priorities.

Performance Status: Needs and priorities were evaluated and documented 4/97. Current IH program hard-copy and database information was used as basis of the evaluation. This is documented in IH records an electronically on the Lab's EHSNOV2 server in the IH folder.

B. Develop software requirements specifications.

Performance Status: Fifteen pages of draft software requirements were developed by 4/97. A working group evaluation of potential software development costs versus purchase of potential pre-developed IH software concluded that pre-developed software may be more cost-effective. To evaluate pre-developed IH software, a checklist of required and/or desired software data elements was developed 6/97. This is documented in IH records and electronically on the Lab's EHSNOV2 server in the IH folder.

C. Evaluate predeveloped software from potential subcontractors.

Performance Status: A national search of IH software packages was completed 5/97. This search identified three to four packages that will be evaluated using the requirements checklist. Software packages are installed on-site and evaluation is planned for 7/97. (These include Comprehensive Tracking System and Air Force Command.)

D. Determine hardware needs and setup.

Performance Status: Hardware needs were identified 2/97. PCs were purchased and installed by 8/97 in all IH offices to replace Macintosh systems.

IV. Develop the Berkeley Lab documentation of Similar Exposure Groups (SEGs).

Performance Status: During work on this goal, it was determined that only conceptual changes to SEGs should be developed and that software requirements should be identified, since final management of SEG information will be dependent on the capabilities of the information management system that is finally selected.

A. Develop an updated list of SEGs and potential SEGs.

Performance Status: A conceptual change in how IH tracks SEGs was developed 6/97 in the form of a list of potential "similar exposure processes" that may be tracked in the new IH software. This is documented in IH records and electronically on the Lab's EHSNOV2 server in the IH folder.

B. Further develop Berkeley Lab's SEG descriptions.

Performance Status: A potential model SEG description for "Painters" was developed 12/96. This is documented in IH records and electronically on the Lab's EHSNOV2 server in the IH folder.

Program Quality and Integration of Industrial Hygiene and Medical Services

Industrial Hygiene and Medical Services continue to share information. The Employee Survey of Work Environment and Activities form used by Medical Services is used as a basis for notification of Industrial Hygiene to conduct exposure assessments. For instance, IH received a referral from Health Services on October 8, 1996 regarding an employee's concern about chemicals in the workplace and pregnancy. There was immediate follow-up with the concerned employee and the concerns were addressed to the employee's satisfaction. Records are maintained in employee medical and in IH files.

Measures of Sufficient Quality

- Program management.

  Performance Status: The exposure assessment function is thoroughly integrated into all IH, Field Support Department, and Health Services strategies and programs (e.g., Respiratory, IFA, and Medical Surveillance Programs). In addition to this integration and the specific IH exposure assessment program and plan documents, maintenance and continuous improvement on exposure assessment has been implemented using the goals presented above.
- Identification and evaluation.
- Prevention and control.
- Communications and training.

  Performance Status: In addition to daily interactions between EH&S professionals, pre-scheduled IH Technical Program and/or IH/Occupational Medicine meetings are held about every other week. IH and Health Services professionals attend both meetings.

Exposure Measurements: There have been 76 exposure evaluations with a total of 136 exposure measurements (7/96 through 5/97). There were no exposures above the action level (1/2 TLV), the TLV, or PEL. In addition, no biological monitoring results exceeded OSHA medical removal limits.

If there is an exposure evaluation measurement above the action level, the Lab's industrial hygienists initiate a rigorous follow-up and corrective actions are established to control the condition. All follow-up actions are documented in central record program binders and personnel files.

Proactive Management Strategy: At a multidisciplinary site, the Industrial Hygiene proactive management strategy partitions exposure risk control into programs that target specific areas of exposure risk. These are

listed below and are included in continuous improvement assessment (June 12, 1996):

- Asbestos management program
- Biosafety program
- Chemical hygiene and safety plan
- Drinking water quality program
- Hazardous gas safety program
- Hearing conservation program
- HEPA filter testing program
- Indoor air quality program
- Lead management program
- Respiratory protection program
- Ventilation safety program

Successes/ Shortfalls

Using a risk-based approach, the Lab continues to improve and implement its exposure assessment and monitoring plan. The plan integrates Medical Services into its operations; the plan scope and depth reflects sufficient quality to ensure that workers are protected from exposure to toxic materials and/or harmful physical agents.

The exposure and monitoring plan for this performance period has been implemented. The plan is of sufficient quality and integrates Industrial Hygiene and Medical services.

One hundred percent of the sampled exposure measurements are below the OSHA PEL and ACGIH TLV and other occupational health standards. One hundred percent of the sampled exposure measurements were below the action levels for toxic materials and harmful physical agents.

In past performance periods, when exposures above the action level were measured, IH professionals exercised a vigorous response, establishing engineering and/or administrative controls aimed at eliminating the exposure root cause.

Supporting Data

- Berkeley Lab Industrial Hygiene Program Continuous Improvement Assessment, dated June 12, 1996, revision 1.
- Performance Measure 1.1.d, 1997 Exposure Assessment Goals, November 27, 1996 revision.
- Exposure measurement data sheet, dated December 5, 1996.
- Industrial Hygiene Function Information System User Needs and Performance Requirements, April 3, 1997.

Objective #1
Criterion 1.1
Performance Measure 1.1.e

Accident Prevention: *Severity and frequency of accidents over the baseline 3 years (1993-1996) were analyzed to identify the top 3 personnel accident/injury types in each area. The number of Bureau of Labor Statistics reportable occurrences of these accidents will be tracked. A downward trend is expected as compared to the baseline years.* **(Weight = 7%)**

Assumptions:

- For FY97 the performance period is July 1, 1996 through June 30, 1997.
- Laboratory statistics will be collected for the baseline population for the period July 1, 1993 through June 30, 1996. It is envisioned that the population will be slightly different for each Laboratory.
- It is recognized that an initial increase may be experienced whenever a new prevention program is introduced and that some variability is expected which may not be indicative of a trend.
- Workers' Compensation costs will be considered during the self assessment.
- For FY97 and future years, the accident/injury types and baseline years will be updated by mutual agreement of the local DOE office and the Laboratory.
- Subcontractor operations/personnel are included if the subcontractor is performing part of the Laboratory's operations. Subcontractors are excluded if they are "servicing" the Laboratory (e.g., copy machine vendors or transient construction workers covered under 29 CFR 1926).

Gradient:

Meets Expectations:

- A downward trend in frequency and/or severity for each of the 3 accident/injury types is achieved.
- The subcontractor work force (as defined in the assumptions) is included.

Exceeds Expectations:

- A downward trend in frequency and severity for each of the 3 accident/injury types is achieved.
- A proactive management strategy is in place to reduce frequency and severity and to include the subcontractor work force.

Far Exceeds Expectations:

- An ongoing process to evaluate the accident prevention records of "transient" subcontractor companies is in place.
- An exceptional reduction in frequency and severity for each of the 3 accident/injury types is achieved.
- An additional 2 "accident/injury types" are identified and reduced.

Performance Measure Result

Workers Compensation Costs

Over the last two years, the average workers compensation frequency rate has dropped to 3.4 cases per 200,000 hours worked (down from 6.6 in 1994), and the severity rate has dropped to $27,500 in total losses per 200,000 hours worked (down from over $50,000 in 1994). As a result of this sustained improvement in performance, the workers compensation payroll withholding rate for the Berkeley Lab recently was decreased by one third.

This trend is reflected in the 12-month moving averages shown in the two graphs in the Supporting Data section.

Workers' compensation costs are reported to senior Lab management and division safety coordinators quarterly.

Injury Frequency and Severity Rates

The Lab is tracking all injuries to all workers in support functions, back injuries to all LBNL staff, and ergonomic injuries to all LBNL staff.

The baseline period is July 1993 through June 1996 (3-year data). To date in the current performance period, there has been a significant decline in severity or frequency for all three injury types.

Subcontractor Work Force

The subcontractor work force is not included in the statistical analysis of injury frequency and severity. Little benefit would be gained for the resources expended to collect subcontractor data. It is more resource efficient to include subcontractors in corrective actions.

Contract labor personnel are included in all corrective actions, but not in the accident statistics.

1. Throughout 1996, the Lab was unable to get DOE to accept injury reports for contract labor employees. The DOE commenced contract labor data collection beginning in 1997 under code 8004014. This is less than or equal to 10% of the hours worked at the Berkeley Lab. Contract labor statistics can be included in the performance measure once they have been collected for a baseline period.
2. Currently the Berkeley Lab has no way of determining how many hours other subcontractors work on-site. Obtaining this information would require the institution of a whole new record-keeping system.
3. By measuring the performance of LBNL employees, and including contract labor people in the corrective actions, the Lab realizes the most cost-effective benefit from its corrective actions.

Proactive Management Strategy

Subcontractor Workforce

The subcontractor workforce is included with the general Lab population in all corrective actions.

Construction

A full-time dedicated construction safety inspector routinely inspects all LBNL and subcontractor construction. All safety infractions are recorded, and serious or imminent danger situations are addressed and corrected immediately.

Repetitive Motion Injuries (RMIs)

RMIs are a significant accident type at the Berkeley Lab. The Laboratory has mounted an aggressive ergonomics program to address RMIs, in particular those associated with computer work stations. Many field health and safety professionals have completed the 4-hour EH&S course "Office Ergonomics Evaluators' Training" and are now available to evaluate employee workstations.

The Laboratory also offers a 2-hour EH&S class, "Ergonomics for Computer Users," (through a cooperative arrangement with the UC Berkeley campus) and maintains an ergonomics display room where employees can inspect and try out ergonomic workstation furniture and equipment. Some of the furniture is available for assessment loan to allow employees to determine its efficacy with their RMI. The Berkeley Lab now also has a Web site dedicated to workstation ergonomics.

Back Injuries

Back injuries are included in the Behavior Based Accident Prevention (BBAP) program for Facilities (where most of the back injuries are occurring—see below under Support Function Injuries). Also, the Lab recently hired a safety engineer to address Support Function injuries. Back injury prevention will be a main area of focus.

Support Function Injuries

An analysis of the injury frequency and severity rates at the Lab indicates that support services organizations typically have the highest rates. The Lab has initiated programs that target injury-susceptible populations.

The Lab initiated a behavior-based accident prevention program (BBAP) for the Facilities Department beginning in November, 1996. The BBAP effort focuses on positively influencing the behavior of employees, supervisors, and managers through positive feedback and consistent problem-solving.

The process is employee-driven. A steering committee of hourly employees was formed in November 1996, to manage the process with full Facilities Management support. The steering committee reviewed past accidents and

on the basis of this review identified critical safe behaviors which—if consistently employed—will reduce the accident frequency and severity by 90 to 95%. These safe behaviors are contained in a checklist and have been communicated to all Facilities employees through several 1 to 2 hour training sessions.

Supervisors are responsible for training employees in these safe behaviors, and most have done so since February 1997 through their regular (mostly weekly) safety meetings. Supervisors are also responsible for making time available for employees to work as volunteer coaches.

At this point, 15 employees have been trained and function as volunteer safety coaches, and additional coaches are in training. Our goal is to have 20 coaches at any given time, each conducting two coaching sessions per week. Coaches go out and observe employees at work, record their observations, and then provide feedback to the employee about the observations. As the coaching sessions become more frequent and routine, the accident rate is expected to decrease substantially. See graph in Supporting Data section.

At this point we have posted a first set of percent safe ratings by craft, and summaries of what safe and at-risk behavior was observed for each craft. Supervisors can use these data to tune their safety meetings to address the problems in their specific crafts. We will also post accident statistics for the Facilities Department as a whole.

Back injuries are a significant part of the injury problem to be addressed by this process.

Within the EH&S division, the fire department historically has posted most of the injuries. An ad-hoc committee under the jurisdiction of the division safety committee is working with the department to identify key causes and implement preventative actions.

Successes/ Shortfalls

There is a downward trend in frequency and severity for each of the three accident/injury types tracked during this performance period.

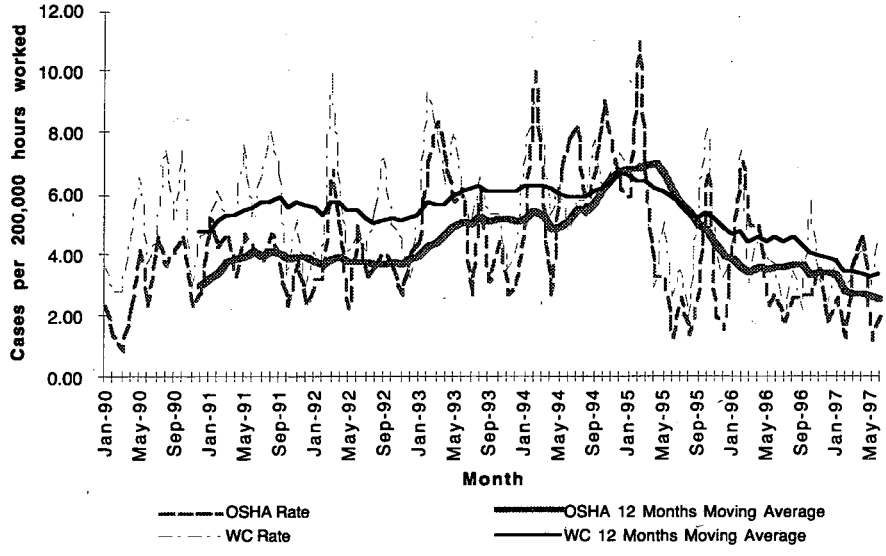
The subcontractor workforce is included in all occupational safety corrective actions.

There is a proactive management strategy in place to reduce frequency and severity. A behavior-based accident prevention program has been put into place for the Facilities Department, which is expected to result in continued reduction of support function injuries and back injuries.

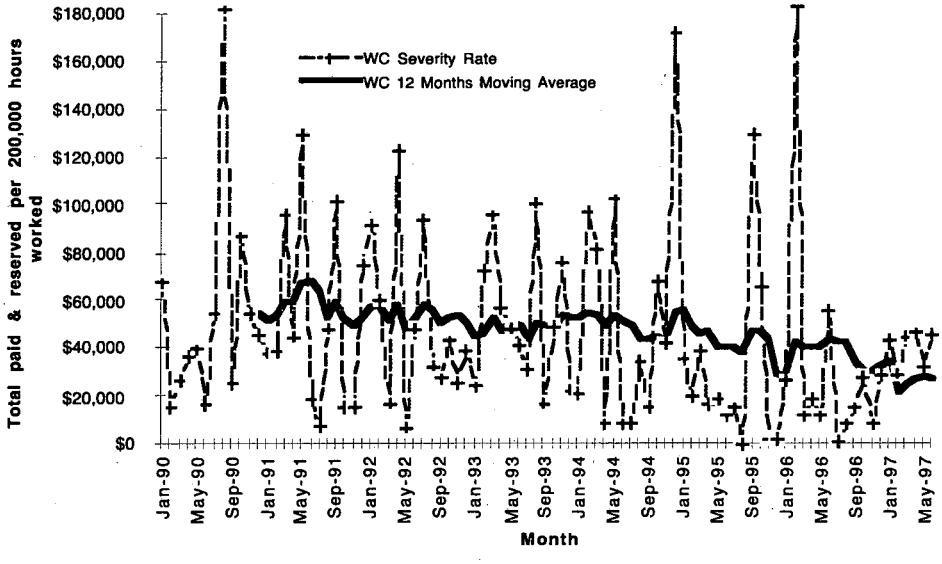
The Lab has exceeded expectations for this measure.

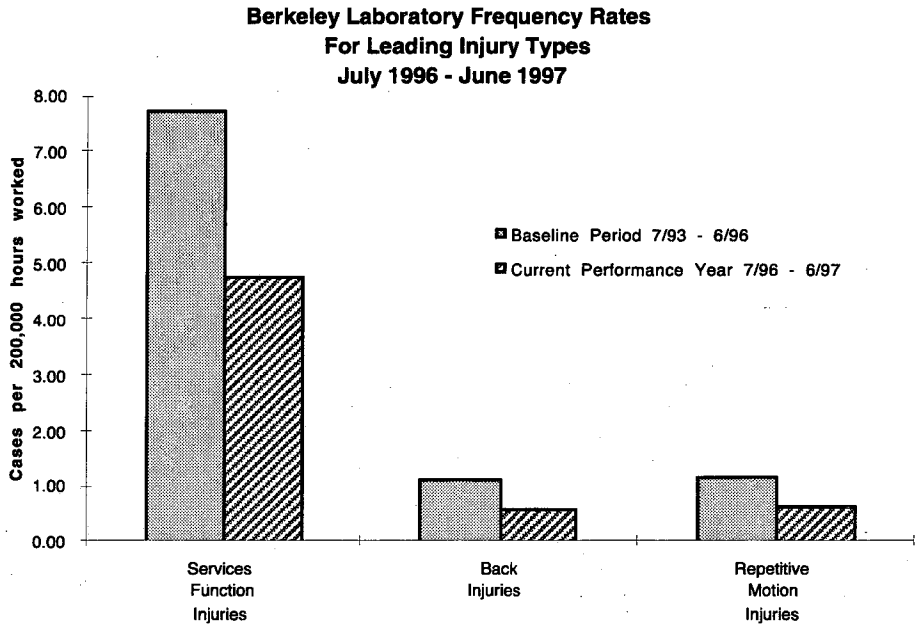
Supporting Data

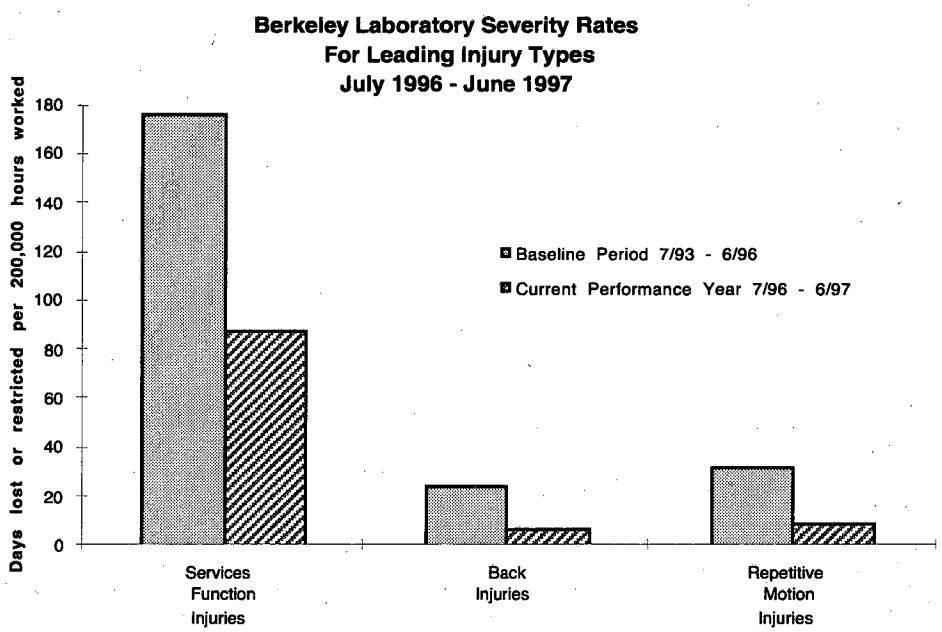
OSHA &Workers Compensation Frequency Rates
Monthly and 12 Months Moving Averages



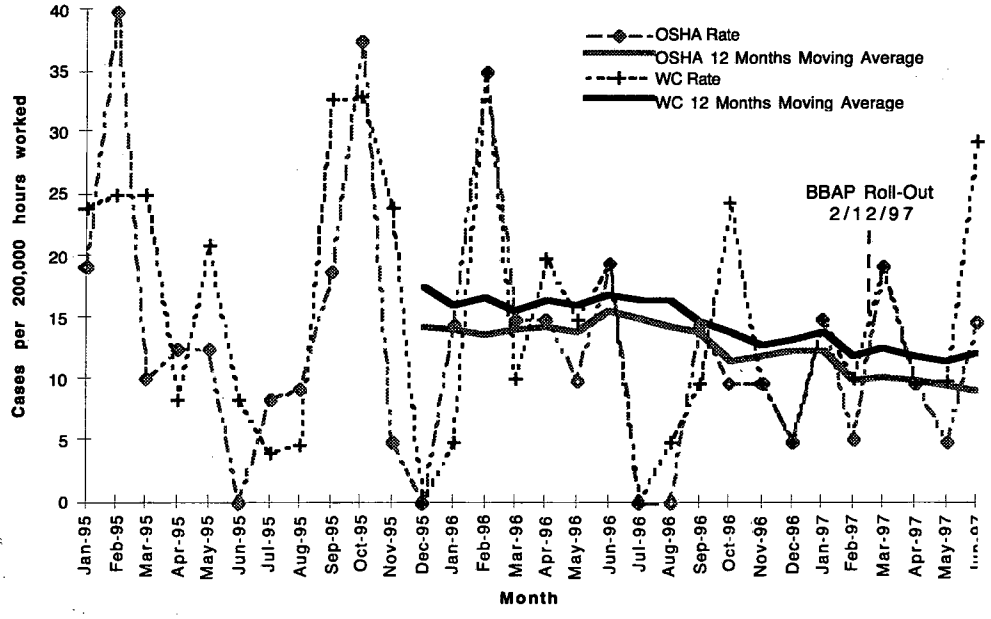
Berkeley Lab Workers Compensation Severity Rate
Monthly and 12 Months Moving Average



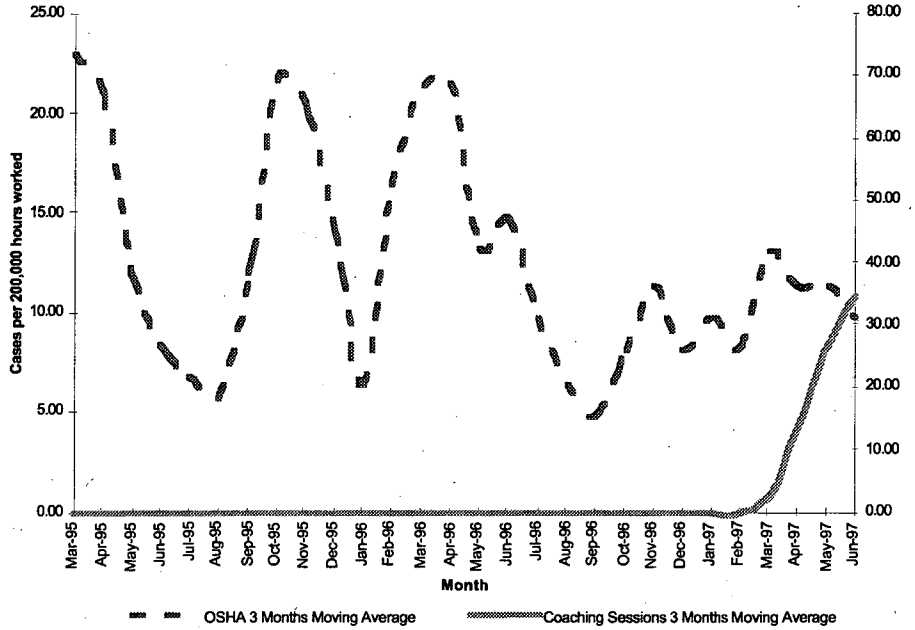

Berkeley Laboratory Frequency Rates
For Leading Injury Types
July 1996 - June 1997
Cases per 200,000 hours worked
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
Baseline Period 7/93 - 6/96
Current Performance Year 7/96 - 6/97
Services Function Injuries
Back Injuries
Repetitive Motion Injuries


Berkeley Laboratory Severity Rates
For Leading Injury Types
July 1996 - June 1997
Days lost or restricted per 200,000 hours worked
180
160
140
120
100
80
60
40
20
0
Baseline Period 7/93 - 6/96
Current Performance Year 7/96 - 6/97
Services Function Injuries
Back Injuries
Repetitive Motion Injuries

Facilities Department OSHA & Workers Compensation
Frequency Rates
12 Months Moving Averages



Facilities Department Injuries vs Coaching Sessions



Objective #1
Criterion 1.1
Performance Measure 1.1.f

Medical and Safety/Health Integration: *Monitoring data will be provided to the medical staff who will utilize these data in the health evaluation of employees. Continuous quality improvement of the interaction between Safety/Health and Medical will be based on the Peer Review and Improvement Process.*
(Weight = 5%)

Assumptions:

- The intent of this measure is to help prevent injuries and illnesses from occupational exposure to chemical, biological and physical agents. The long term goal is primary prevention and enhancement of secondary prevention capabilities (early detection and intervention, minimization of adverse health effects, and implementation of corrective action).
- The Peer Review and Improvement Process will be refined and used by Laboratory Medical Directors and Laboratory Health and Safety Managers. The process shall include broad objectives for the 3 Laboratories; specific objectives shall be developed for each individual Laboratory.
- DOE will be invited to participate in the Peer Review and Improvement Process. Medical confidentiality will be maintained in the process. "Peers" are the 3 Laboratory Medical Directors or their designate, and an Industrial Hygiene representative from each Laboratory.
- The Peer Review should include both qualitative and quantitative evaluations. It may include a random sample of employee medical charts, and/or review of other appropriate documents to evaluate the interaction between Industrial Hygiene and Medical.

Gradient:

Meets Expectations:

- Industrial Hygiene exposure and monitoring information is used by Medical.
- A quality Peer Review and Improvement Process is in place. Baseline Peer Review has been completed by June 30, 1996.

Exceeds Expectations:

- Medical surveillance feedback information is used by Industrial Hygiene.
- The Peer Review and Improvement Process demonstrates the integration of medical with other safety and health disciplines in addition to Industrial Hygiene.

Far Exceeds Expectations:

- There is optimal two-way interaction between Medical and appropriate safety and health disciplines.

Performance Measure Result

Industrial Hygiene Information Used by Medical Services

A number of programs within Industrial Hygiene have their counterpart in Medical Services, which serves as a basis for sharing of information. The Field Support Department component of Hearing Protection provides exposure assessment, noise monitoring, and database maintenance. Medical Services provides audiograms, training, and ear defenders (protection) and maintains its own database. Work is currently underway to develop and integrated IH/Medical Services database.

The Field Services component of the asbestos program provides exposure monitoring and project review (on abatements and construction in older buildings); Medical Services provides spirometry and medical approval to work on asbestos abatements.

Industrial Hygiene administers the respiratory protection program and provides exposure assessment, appropriate selection of respirators, fit testing and training in accordance with OSHA requirements (29 CFR 1910.134 and ANSI Z88.2, 1992). Employees are not allowed to use a respirator or go through respirator fit testing until spirometry and medical approval is given. Linking Medical Services and Industrial Hygiene in this way assures a quality respiration protection program.

The Medical Services component of the lead program measures blood lead levels and provides training to workers who could be exposed to lead. Field Services provides exposure assessments, air monitoring, bulk sampling, project review, and training.

Integration of Medical Services with Other EH&S Disciplines

Medical Services integrates its services with Radiation Protection and Occupational Safety. The Employee Survey of Work Environment and Activities serves as a basis for field assessment by either Radiation Protection or Occupational Safety. The Declared Pregnant Worker program provides work place evaluation and dosimetry, if needed; initial contact and pregnancy counseling is provided by Medical Services.

The Ergonomic Display Center is administered by Medical Services and issues evaluation requests to Occupational Safety.

Carcinogen review

Health Services and IH collaborated on a detailed assessment of carcinogen use/exposure at Calvin Lab.

Medical Surveillance Information Used by Industrial Hygiene

Industrial Hygiene and Medical Services continue to share information. The Employee Survey of Work Environment and Activities form used by Medical Services is used as a basis for notification of Industrial Hygiene to conduct exposure assessments. For instance, IH received a referral from Health Services on October 8, 1996 regarding an employee's concerns about

chemicals in the workplace and pregnancy. There was immediate follow-up with the employee and the concerns were addressed to the employee's satisfaction.

Specific examples of medical surveillance information used by IH include

- Exposure related to drilling concrete and potential chromic acid exposure, referred from Health Services to P. Davis or follow-up.
- Respiratory concern related possibly to mold, followed up jointly by J. Kody and P. Davis.
- Blood lead level composite information (graph) provided to IH.

Peer Review and Improvement Process

There is a robust tri-Lab/DOE peer review process. On December 3, 1996, a tri-Lab Occupational Medicine meeting was held (with IHs representation from each of the three Labs) to discuss standardizing approaches across the three institutions for medical surveillance, sharing resources, and automated tracking systems. On December 17, 1996, a tri-Lab meeting was also held to lay out the overall objectives for the upcoming peer review process, as well as to determine the schedule for the upcoming reviews.

The peer review of the LBNL Medical Services and Field Support Department interface was held on April 17, 1997 and was reported on May 6, 1997; the May 6 report denotes specific progress the Berkeley Lab has achieved not only on identified discrete opportunities for improvement during the 1996 process, but also the broader goals/objectives to achieve greater overall program effectiveness in the areas of occupational medicine and related health and safety disciplines. Dr. James P. Hughes participated in the 1997 peer review for the Berkeley Lab as an informed observer who was tasked with providing an independent assessment of the proceedings, and by extension, the effectiveness of the integration of the pertinent disciplines at the Berkeley Lab. Tri-Lab/DOE meetings are held periodically throughout the year.

Based on the findings of the 1997 peer review, the Berkeley Lab was tasked with addressing four areas/process enhancements (noted below) that will move the Lab toward the highest degree of integration between Medical Services and all appropriate EH&S disciplines.

Specific enhancements are:

- The use of the qualitative field assessment reviews, which originate with the integrated hazard assessment (IHA) process, as opportunities to identify at-risk populations for surveillance, refining when quantitative data become available; including Health Services, where applicable, in the development and roll-out of the Behavior-Based Safety Program (BBSP).
- Further development of the active collaboration/partnership between Health Services and the other occupational safety and health disciplines within EH&S to define/refine Similar Exposure Groups (SEGs); reaching consensus among disciplines as to final SEG composition.

- Continuation of joint Health Services / Field Support Department information system initiatives and efforts (e.g., absorbing SAAR into OHM).
- Expanding Health Services/Field Support Department efforts more fully to include line management (stakeholders, customers) in the established integrated functional appraisal process for evaluation of hazards in the field.

In addition, for the first time, formal tri-Lab initiatives were an outgrowth of the 1997 peer review. Five shared issues/concerns are to be considered during the 1998 peer review cycle:

1. Continue to make progress on common medical surveillance areas of concern, as well as seek standardization of elements of medical surveillance protocols, where appropriate.
2. Establish consensus and working interpretation of OSHA recordables and attendant procedures.
3. Develop compatible and consistent shared injury coding tools.
4. Collaborate to address management of absenteeism on a more effective basis.
5. Work continuously to share information system tools/products and implementation issues/experiences to minimize the substantial cost associated with information system development and application.

Evidence of Optimal Two-Way Interaction Between Medical Services and Appropriate Safety and Health Disciplines

Documentation of the integration of Medical Services with Industrial Hygiene, Radiation Protection, and Occupational Safety is provided above. The programs are administered daily through verbal, electronic and hard copy communications. Records of these communications are found in the individual employee medical records and in the records of each of the disciplines exchanging information with Medical Services.

Successes/ Shortfalls

The Berkeley Lab has been successful in assuring Industrial Hygiene exposure and monitoring information is used by Medical Services, and conversely, Industrial Hygiene uses information from Medical Services.

There is a very effective exchange of two-way information between Medical Services and all health and safety and radiological disciplines at the Lab.

A tri-Lab peer review has been performed that measured the degree of integration between the Lab's health, safety and radiological safety disciplines and Medical Services. This process provided an additional measure of validation during 1997, with the inclusion of James P. Hughes, M.D., as independent observer/reviewer; Dr. Hughes found "conduct of the Environmental Health and Safety services at LBNL to be well developed according to that model *(that is, effective integration of preventive services—Medical, Nursing, Industrial Hygiene and Safety),* continuing to

improve, and presently exceeding expectations under Performance Measure 1.1.f of the UC-DOE Contract."

The Lab has far exceeded expectations for performance in this measure, satisfying all performance gradients.

Supporting Data

- January 10, 1997 e-mail to David Balgobin from Jack Salazar.
- Occupational Medicine Field Support Department Memoranda of Understanding (March 28, 1997).
- Established Occupational Medicine Field Support Department Services and Activities Examples (March 28, 1997).
- Occupational Medicine / Field Support Department Integrated Incident Exposure Management Flow Chart (March 28, 1997).
- Los Alamos National Laboratory memorandum from Judy Gosling, Jeff Schinkel, Kathleen Noonan and Robb Hadley to Jack Salazar, Henry Stauffer, Connie Grondona and LBNL ES&H senior management, dated June 21, 1996; LBNL Peer Review, December 14 1995.
- UC Performance Measure 1.1.f, Occupational Medicine and Industrial Hygiene Integration: LBNL Peer Review, April 17, 1997 Report (dated May 6, 1997 from Gosling & Schinkel (LANL), Roberts & Noonan (LLNL).
- Report on invited participation in the Peer Review Meeting on UC Contract Performance Measure 1.1.f: "Occupational Medicine and Industrial Hygiene Integration" at the Lawrence Berkeley National Laboratory (LBNL), April 17, 1997 (dated April 30, 1997, James P. Hughes, M.D.).

Objective #1
Criterion 1.2

Waste Minimization: *The Laboratory has a program in place to reduce both the amount of waste generated for disposal and pollutant emissions.* **(Weight = 14%)**

Objective #1
Criterion 1.2
Performance Measure 1.2.a

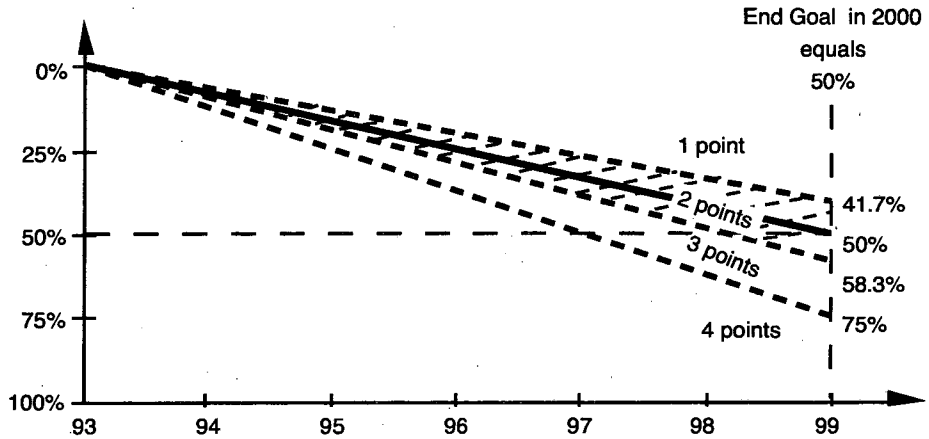
Waste Reduction and Recycling: *The Laboratory continues to progress towards meeting the DOE's pollution prevention goals for the year 2000.* **(Weight = 7%)**

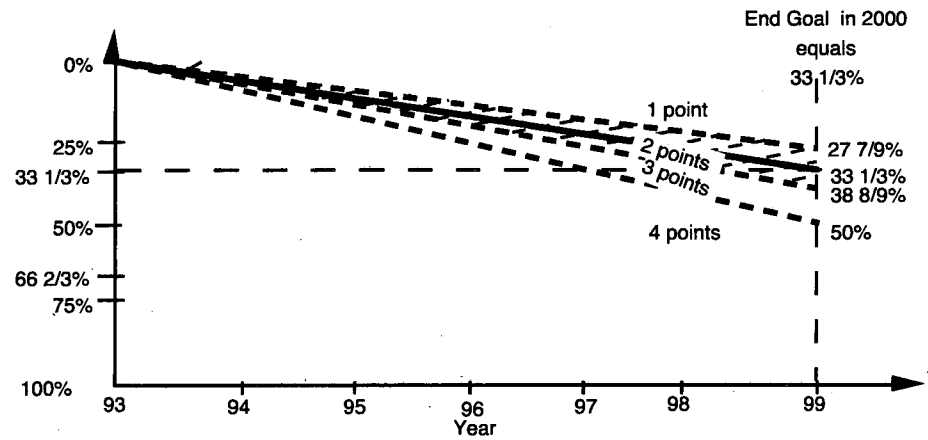
Assumptions:

- DOE's pollution prevention goals by waste type, that are measured by this performance measure, are defined as follows:
  - Reduce by 50% the generation of radioactive waste (defined as TRU and LLW) from routine operations
  - Reduce by 50% the generation of low-level mixed waste from routine operations
  - Reduce by 50% the generation of hazardous waste from routine operations
  - Reduce by 33% the generation of nonhazardous waste from routine operations
- For FY97 the performance period is January 1, 1996 through December 31, 1996.
- CY93 waste generation quantities will be used as a baseline for measuring waste reductions. (CY94, corrected to reflect previous years improvements, will be used for nonhazardous waste at LLNL)
- Recycling, reuse and exchange are considered to be a method of waste minimization and will be tracked.
- Any significant new project, activity or increase in workload will be evaluated for pollution prevention/waste minimization opportunities. After pollution prevention/ waste minimization opportunities are implemented for the project or activity, the resulting new waste stream will not be included in the waste reduction calculation. Pollution prevention opportunities are tracked in 1.2.b.
- Cleanup and stabilization waste (including environmental restoration waste, stabilization of nuclear and nonnuclear materials, and deactivation and decommissioning of facilities), legacy, construction debris and USEC waste will not be included in the calculations for meeting the waste reduction goals but will be included in the discussion on meeting the recycling goal.
- Waste generation will be reported and measured in the same way that it has been reported for this performance measure in previous years.
- For scoring purposes, consideration will be given for proactive programs carried out in the five years prior to the 1993 baseline year when that program resulted in significant (i.e., greater than 50%) reductions of major waste stream types. This consideration is intended to avoid penalizing early, successful waste minimization programs that are continuing.

Gradient:

Progress toward reduction goals are evaluated by using the following chart or progress on an agreed- to "waste type" reduction plan:





Meets Expectations:

- A reduction in generation of each waste type is calculated and scored (1 to 4 points) then summed. The sum for the four waste types is 7, 8 or 9 points.

Exceeds Expectations:

- A proactive management strategy is in place for recycling and substituting materials and modifying processes.
- A reduction in generation of each waste type is calculated and scored (1 to 4 points) then summed. The sum for the four waste types is greater than 9 points but less than 12.

Far Exceeds Expectations:

- A reduction in generation of each waste type is calculated and scored (1 to 4 points) then summed. The sum for the four waste types is greater than 12 points and less than 16.
- An annual increase in the types and amounts of wastes and materials recycled and/or reused onsite or offsite.

Performance Measure Result

Baseline Adjustment

Waste Reduction Progress to Date

At Berkeley Lab, credible 1993 waste generation figures are available for routine sanitary and routine hazardous wastes. In addition, these wastes are shipped very soon after they are generated (sanitary) or received at the Hazardous Waste Handling Facility (hazardous), so the baseline for these two waste types are based on shipped quantities in 1993. The generation rate for sanitary waste gives credit for recycling and represents sanitary waste shipped off-site for landfill. The routine hazardous waste generation rates are for shipped quantities, regardless of destination, so the waste generation data reflect source reductions, as well as on-site reuse, recycling, and treatment.

It would be resource inefficient to isolate the increased routine solid sanitary waste, other than to estimate the impact based on total site population or total operating budget in a calendar year. Thus, at the end of each fiscal year, the 1993 baseline for routine sanitary waste will be recalculated to normalize for the effects of changed site budget or population.

For low level radioactive and low level mixed wastes, credible 1993 baseline generation rates are not available as the Lab's waste tracking system (Shoebox) did not become operational for these waste types until 1994. In addition, shipments of low level radioactive and low level mixed wastes are sporadic, so shipped quantities do not accurately reflect generation rates. To alleviate these problems, Berkeley Lab has calculated 1993 baselines for low level radioactive and low level mixed wastes by linearly extrapolating the good quality waste generation data in Shoebox for 1994 and 1995.

Waste Type	1996 Waste Reduction Value	1996 Waste Reduction Goal	Gradient Points
Low level radioactive	25.69%	25%	2
Low level mixed	52%	25%	4
Hazardous	69.17%	25%	4
Non-hazardous	33.74%	16.67%	4
		Total Points	14

Proactive Management Strategy for Recycling, Substituting Materials and Modifying Processes

Berkeley Lab has aggressive source reduction, reuse, and recycling programs for all major types of waste generated at the facility. Major facility waste streams are mixed, low level, hazardous and sanitary. All

major waste streams are annually considered for reuse, recycling, or source reduction.

Sanitary Waste: Typically, more than 80% of Berkeley Lab's paper waste is recycled. A new "dumpster diving" program was initiated in 1996 and more formally organized in 1997. The Waste Minimization Team is currently working with dumpster owners and recycling contractors to increase the recyclability of dumpster waste. The Lab's vegetative waste program, supported through overhead recycles all green waste for on-site use.

A Return on Investment project has been funded to amend the language in Berkeley Lab subcontracts to require all construction subcontractors to provide recycling dumpsters and to track and report the amounts of waste generated and recycled for each project.

Hazardous Waste: Hazardous chemicals are listed for reuse on the Berkeley Lab Chemical Exchange database. Other large hazardous waste streams are reused or recycled either on or off site, where practicable. The Berkeley Lab Site Restoration Program treats and recycles contaminated soils, where cost effective.

Low Level and Low Level Mixed Waste: All potentially large waste streams from decommissioned facilities, such as the Bevalac, are considered for reuse or recycling, as evidenced by the award-winning program to ship concrete shielding blocks to Brookhaven National Laboratory and the recent shipment of over 10,000 pounds of slightly activated lead bricks to the Stanford Linear Accelerator for reuse as shielding.

Berkeley Lab does not generate nuclear materials or USEC waste.

Waste and Materials Recycled and/or Reused: Reuse, recycling, and exchange are considered to be methods of waste minimization and are tracked at Berkeley Lab. Because source reduction, reuse, and recycling are the preferred waste minimization strategies, Berkeley Lab continually searches for opportunities to employ these techniques to reduce the amounts of wastes requiring shipment off site for treatment and/or disposal. Each year, several new waste streams are identified for source reduction, with the highest priority going to low level mixed waste due to the high cost of managing this type of waste. In 1996, researchers at the Building 88 accelerator recycled organic solvents through their research apparatus, reducing the amount of activated solvents by several hundred liters. Other major streams were reduced through source reduction, reuse, or recycling. These included several thousand tons of slightly activated concrete from the decommissioned Bevatron accelerator (reused at Brookhaven National Laboratory), routine paper waste (>80% recycled), tritiated low level and mixed waste from experiments in Building 83 (98% source reduction through materials substitution), lead glass (several tons recycled into glass art), vegetative waste (100% chipped and recycled for use in on-site vegetation management), coolants from Building 77 (88% volume reduced on site; remaining 12% recycled off site). Other sanitary waste streams that are recycled include vegetation removed for fire protection or other purposes, cardboard, plastic, aluminum and other metals, and glass. Each year, the Berkeley Lab recycling coordinator identifies new sanitary waste

streams for potential reuse or recycling. New low level radioactive and mixed waste streams amenable to source reduction or treatment are identified through annual Pollution Prevention Opportunity Assessments.

Successes/ Shortfalls

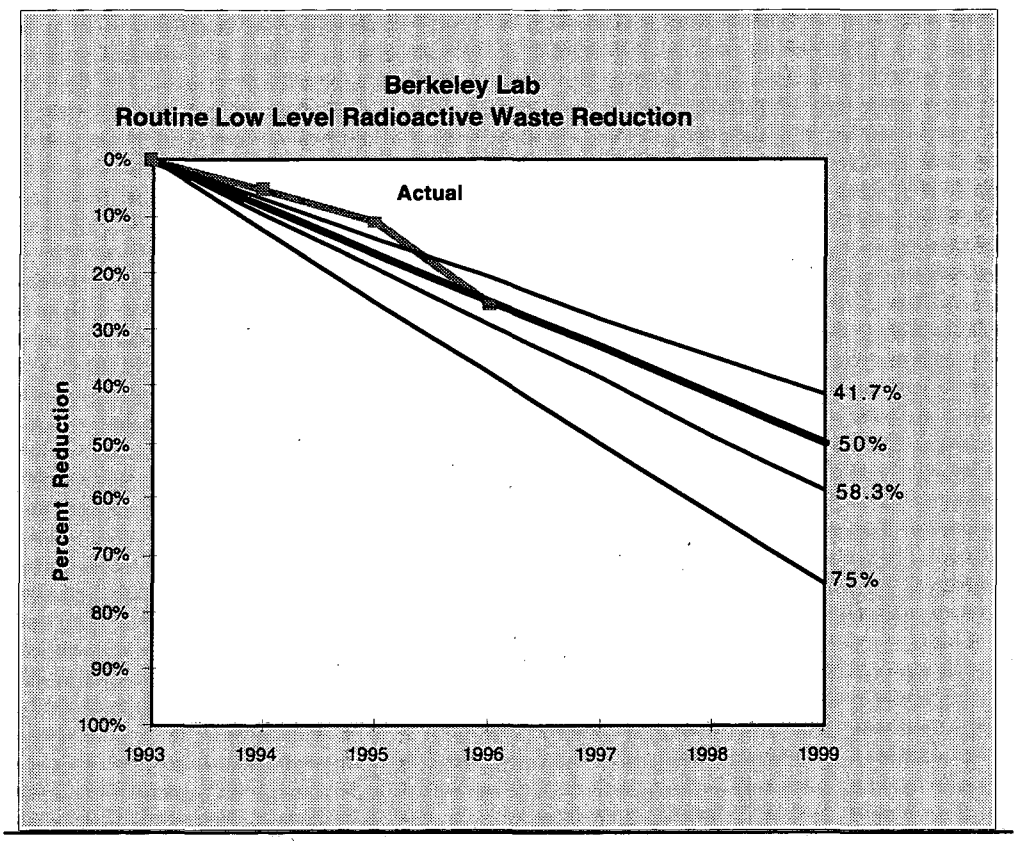
The Lab was successful in exceeding waste minimization goals for all four waste streams.

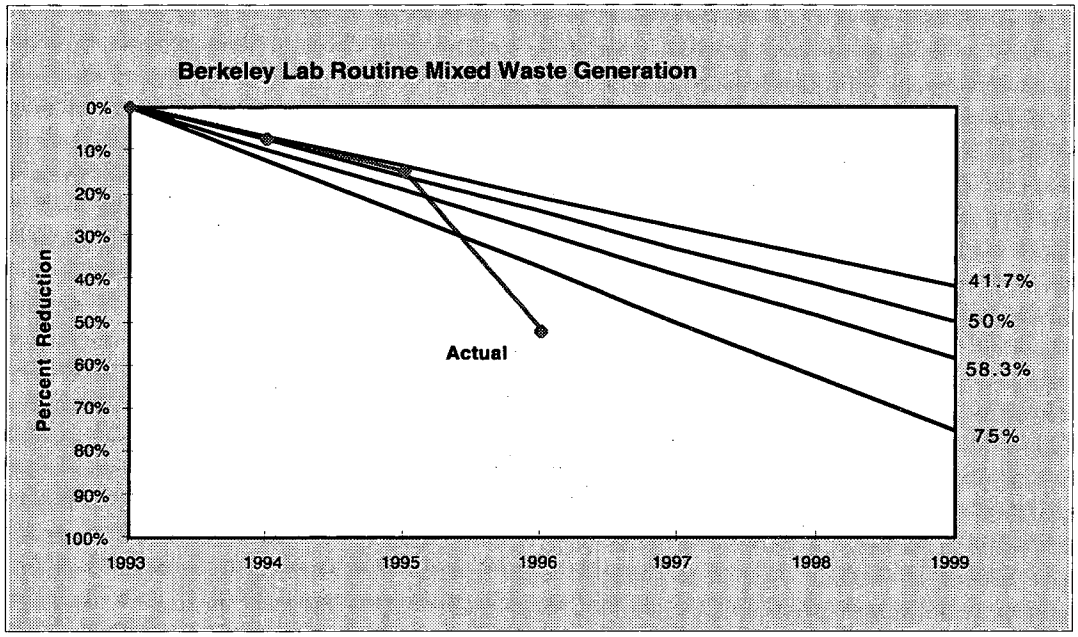
A proactive management strategy is in place to recycle, substitute materials, and modify processes.

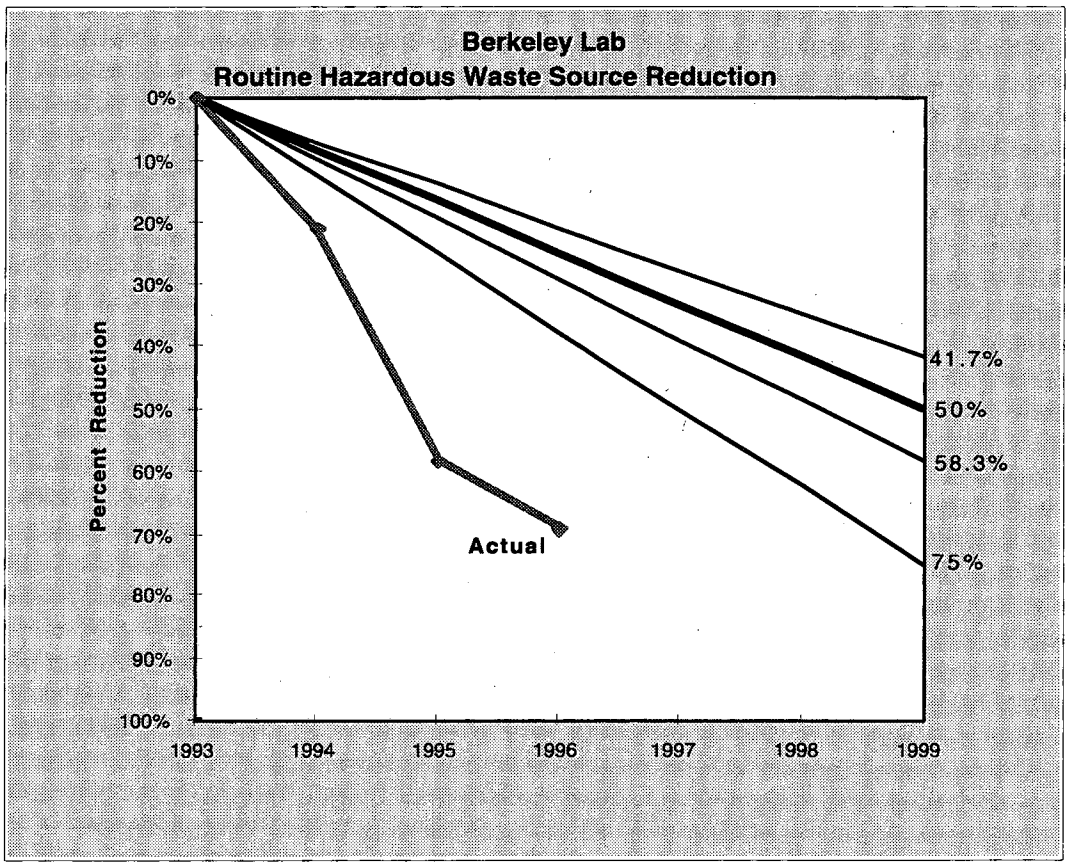
The Lab has initiated robust recycling and reuse programs and identifies new waste streams each year for minimization efforts.

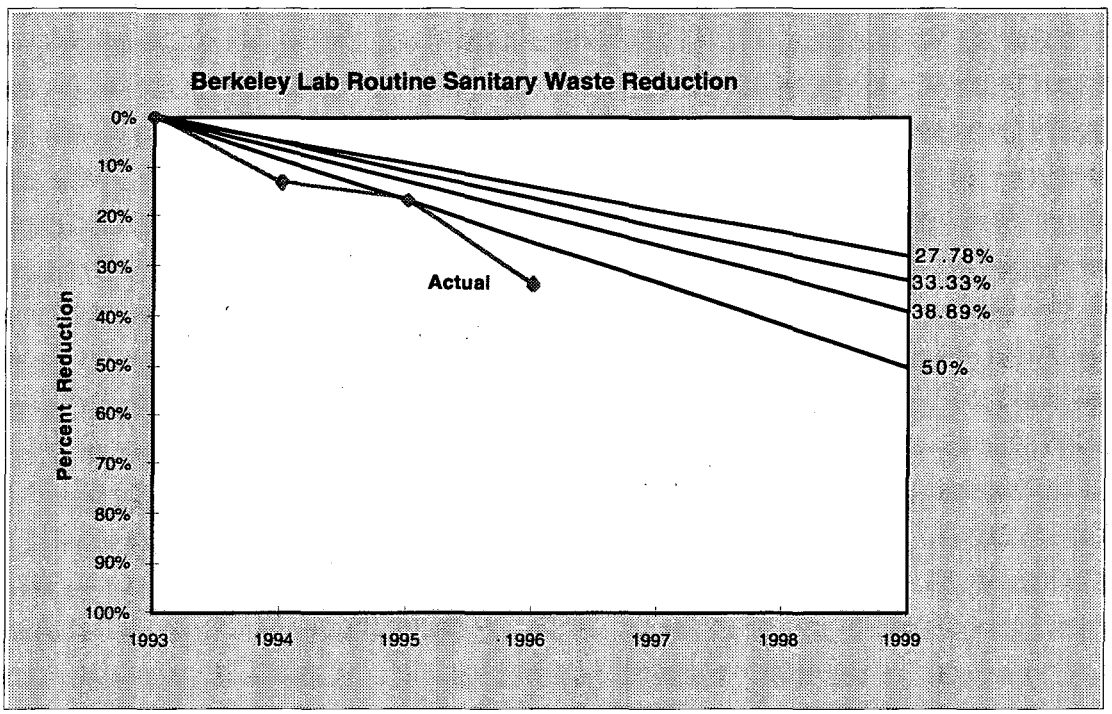
The Lab's performance has far exceeded expectations for this measure.

Supporting Data




Berkeley Lab Routine Mixed Waste Generation
Percent Reduction
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
1993
1994
1995
1996
1997
1998
1999
Actual
41.7%
50%
58.3%
75%


Berkeley Lab
Routine Hazardous Waste Source Reduction
Percent Reduction
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
1993
1994
1995
1996
1997
1998
1999
Actual
41.7%
50%
58.3%
75%


Berkeley Lab Routine Sanitary Waste Reduction
Percent Reduction
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
1993
1994
1995
1996
1997
1998
1999
Actual
27.78%
33.33%
38.89%
50%

Objective #1
Criterion 1.2
Performance Measure 1.2.b

Pollution Prevention: *The Laboratory continues to survey on-site operations for opportunities to reduce waste and pollutant releases to all media. Specific opportunities are identified and success in project implementation and achievement of the agreed-to waste or pollutant reduction project goal(s) are tracked.*
(Weight = 7%)

Assumptions:

- For FY97 the performance period is July 1, 1996 through June 30, 1997.
- Criteria for selecting opportunities include reductions in the number of discharge points, chemical substitution or process changes that reduce pollutant mass emissions or releases, process changes that result in the reuse or recycling of potential pollutants, and protecting health and safety.
- The prioritization uses a weighting factor approach that includes four criteria: quantity, cost, waste type and operational factors.
- The Laboratory has in place a program of evaluating new projects and activities for pollution prevention opportunities.

Gradient:

Meets Expectations:

- An updated and prioritized list of waste reduction and pollution prevention opportunities is provided to DOE/OAK by October 31 for potential funding in that fiscal year.
- Good progress is made on funded, site-specific milestones and on achieving the agreed to waste or pollutant reduction project goal(s).

Exceeds Expectations:

- Once the projects from the October 31 list described above in "Meets" are selected by DOE for funding, the Laboratory selects two additional projects to be funded from program or overhead budgets
- Good progress is made on the scheduled milestones for these new projects.

Far Exceeds Expectations:

- Some of the Laboratory's pollution prevention projects address the transuranic, low level and low level mixed waste streams which are costly to manage, have a high toxicity and are highly radioactive.

Performance Measure Result

Updated and Prioritized List of Waste Reduction and Pollution Prevention Opportunities

At Berkeley Lab, the prioritization is accomplished using the Risk Based Prioritization Model found in the institution's 5-year plan. The weighting criteria are broader than, but contain elements related to, quantity, cost, waste type, and operational factors. A list of projected pollution prevention opportunities for FY97 was developed and agreed to by the local DOE office. The list was updated on February 15, 1997 to reflect the results of funding decisions made by Berkeley Lab management in January 1997.

Proposed Project	Milestone	Actual completion date	Funding status
Decayable waste segregation begun at HWHF	10/1/96	10/1/96	EM 30 funded
Purchase and install Luminometer in B83	11/1/96	11/1/96	EM ROI funded
Request ROI funding for Gas Chromatograph Isotope Ratio Mass Spectrometer	11/15/96	11/15/96	EM 30 and BES funded
Perform preliminary construction, B76 Natural Gas Station	12/31/96	12/31/96	Funded
Purchase dewatering equipment for tanks	2/15/97	2/15/97	Overhead funded
Submit Natural Gas Station Project on FY98 Unified Budget Call Planning List	2/21/97	2/21/97	Overhead funded
10,000 pounds of induced lead bricks shipped to SLAC for reuse	4/1/97	4/1/97	EM 30 funded
C-14 reduction equipment specifications defined	4/1/97	4/1/97	EM 30 funded
Consolidate low level and mixed waste reduction plans	4/1/97	4/25/97	Overhead funded
Install dewatering equipment for tanks	4/1/97	4/1/97	Overhead funded
Request additional FY97 ROI funding	5/12//97	5/12/97	EM 30 funded
Hazardous waste streams prioritized for PPOAs	5/15/97	5/15/97	EM 30 funded
Decay in Place policy implemented	6/1/97	6/1/97	EM 30 funded
Specifications for B25 filtering unit defined	6/30/97	6/30/97	EM 30 funded
Specifications for B77 sludge dryer defined	6/30/97	6/30/97	EM 30 funded
Specifications for scintillation counter defined	6/30/97	6/30/97	EM 30 funded
Master Specifications revisions defined	7/1/97	7/1/97	EM 30 funded
Perform sanitary sewer upgrades			Line item funded $2.4M
Milestones:			
▷ Issue Notice to Proceed	10/96	10/96	
▷ Establish construction schedule	11/96	11/96	
▷ 50% construction completion	7/97	6/97	
▷ 100% construction completion	11/97	On schedule	

B83 Luminometer

The purchase and installation of a luminometer in Building 83, funded through the EM Return On Investment program, resulted in a 98% decrease in the generation of tritiated low level radioactive and mixed waste from the experiments conducted by Dr. Mary Helen Barcellos-Hoff. This project resulted in a national "Zero Generation" award from DOE.

Preliminary Construction of B76 Compressed Natural Gas Station

Energy efficiency funds were invested in preliminary construction work at the natural gas station at Building 76. This project has been submitted as part of the Unified Budget Call for possible FY98 funding.

Compressed Natural Gas Station

As part of the site's energy management strategy, installation of a natural gas station will enable the site to use natural-gas-powered vehicles. A test of natural gas vehicles on-site indicates that air quality will be enhanced and vehicle maintenance and operating costs will be reduced. A natural-gas-powered fleet is more immune to the vagaries of the oil-supplying nations and is consistent with the site's long-term strategic plans. The Lab is exploring funding options for this project.

GCIRMS

Purchase and installation of a Gas Chromatograph Isotope Ratio Mass Spectrometer (GCIRMS) in Building 70 would reduce the Laboratory's non-RCRA mixed and low level radioactive waste generation rates by approximately 100 kg/year for each type of waste. DOE/EM has supported this project by making $100K of the needed $200K available. The Center for Isotope Geochemistry has funded the balance of the procurement funds with support from Basic Energy Sciences. The GCIRMS would allow the use of C-13 as a tracer, rather than C-14; the GCIRMS is used for metabolic studies on the biodegration of DNAPLs in fractured rock studies. This would eliminate non-RCRA mixed waste (diesel and other organics + C-14), as well as C-14 low level wastes. Instead, the wastes would be non-RCRA hazardous and sanitary, respectively.

Dewatering Equipment

Dewatering equipment was purchased and installed for Berkeley Lab diesel tanks to recover the diesel for on-site use. The project is funded by overhead.

B70A UST Replacement

Funding options for the Building 70A underground storage tank (UST) are being explored. This project will complete a long-term effort for the Lab to come into compliance with 40 CFR 280. The compliance deadline for completion is December 22, 1998. A replacement aboveground storage tank (AST) will be installed be the end of FT97 using overhead funding.

Sanitary Sewer Upgrade

According to the Conceptual Design Report, the Sanitary Sewer Upgrade is being performed to repair leaks and broken sections revealed during an inline survey several years ago. Completion of this project will contribute to the site's commitment to the Water Quality Control Board for elimination of releases to surface and subsurface waters as part of the Storm Water Pollution Prevention Plan. This is a line item funded project that is making good progress against its published milestones. Indeed, 50% completion was achieved by June 1, 1997, and the project will be finished by 11/1/97, perhaps with additional scope.

Additional Pollution Prevention Projects Chosen for Funding

The following two projects were chosen by the Lab and funded from either overhead or program funds after the acceptance of the initial prioritized list of projects by DOE in October 1996.

Consolidation of Waste Reduction Plans

The consolidation of the low level Radioactive and Mixed Waste Reduction Plans includes revision of individual Pollution Prevention Opportunity Assessments for all routine low level radioactive and mixed waste generating processes. This project is funded by overhead.

GCIRMS

Purchase and installation of a Gas Chromatograph Isotope Ratio Mass Spectrometer (GCIRMS) in Building 70 would reduce the Laboratory's non-RCRA mixed and low level radioactive waste generation rates by approximately 100 kg/year for each type of waste. DOE/EM has supported this project by making $100K of the needed $200K available. The Center for Isotope Geochemistry has funded the balance of the procurement funds with support from Basic Energy Sciences.

Progress Made on Newly Funded Projects

Good progress has been made on all funded milestones. No milestones have been missed or changed.

Pollution Prevention Projects Addressing TRU, Low Level, or Low Level Mixed Waste Streams

Additional low level radioactive and mixed waste reduction projects were identified by May 1, 1997 and proposals were submitted to EM at that time. The projects were all funded, as follows:

- $100,000 for a new Gas Chromatograph Isotope Ratio Mass Spectrometer. The instrument will allow Earth Science Division scientists to replace C-14 with the stable C-13, thereby eliminating substantial amounts of routine low level radioactive and non-RCRA mixed wastes.

- $60,000 to modify the Berkeley Lab Master Specifications to include waste management, waste minimization, and reporting requirements for construction work performed on the site.
- $52,000 for a sludge-drying oven for Building 77 to reduce the water content of hazardous sludges from the Fixed Treatment Unit prior to shipment off site.
- $30,000 for filtering equipment to remove metallic copper particles from the process stream prior to treatment in the Fixed Treatment Unit at Building 25, thereby reducing the generation of hazardous sludges and allowing the copper to be recycled.
- $30,000 for a scintillation counter for Building 74 to enhance their ability to identify liquids that are suitable for drain disposal.
- $5,000 for an oilless pump for Building 88 to eliminate the generation of activated pump oils that are now managed as non-RCRA and RCRA low level mixed wastes.
- ~$20,000 for two diagnostic kits to allow two Life Science Division research groups to reduce their use of radioactive tracers in their experiments.
- ~$8,000 for new Life Science Division scientists to allow them to switch from chemical to digital photographic methods, eliminating a moderately large hazardous waste stream.

Three additional Return on Investment projects were proposed in July 1997, and were funded in August 1997:

- $35,000 for a microplate ELISA reader to reduce Low-Level Radioactive Wastes.
- $1,700 for a semidry transfer unit to reduce methanol waste in the Western Blot Transfer Procedure.
- $14,000 for a PCR Instrument to Reduce Low-Level Radioactive Liquid Wastes.
- $15,000 for Dr. Ilham Al Mahamid to begin proof of principle studies on resin removal of actinides and RCRA metals from Berkeley Lab low level radioactive and mixed wastes.

Successes/ Shortfalls

The Lab was successful in developing an updated list of waste reduction and pollution prevention opportunities that was agreed to by the BSO. Good progress has been made on all funded milestones. The Lab has funded three additional projects after the original acceptance of the list of pollution prevention opportunities. Many new projects addressing low level radioactive or mixed waste reduction have been initiated.

Supporting Data

Waste minimization / pollution prevention files and records are maintained by Dr. Brian M. Smith at Building 85B.

Performance Objective #2

Compliance: *The Laboratory will comply with applicable Federal, State and local ES&H laws, regulations and ordinances and with applicable and accepted DOE directives.* **(Weight = 12%)**

Summary

The Lab's performance has satisfied this objective. There were no environmental findings, there was one environmental violation.

On December 24, during the Lab Christmas break, shortly after contractor testing, the Building 85 (new hazardous waste handling facility) fire suppression system malfunctioned. Firefighting foam was released into the exterior yard, exiting the site via storm drainage and flowing into Strawberry Creek. As the facility was not commissioned, no hazardous, mixed, or low level radioactive waste was involved. The City of Berkeley, the jurisdiction agency, cited the Lab for violating the Clean Water Act.

It should be noted that under Measure 2.1.b, Tracking and Trending of Environmental Releases, the number of releases in Calendar Year 1996 is compared with the average number of releases over the prior three years. There had been one release over the prior three years in comparison to one release in a single year. Based on the current wording, it would appear that there has been a significant increase in the number of releases. Clearly this is not the case, as the overall number (and severity) of releases is very small. The Lab's performance for this measure meets or exceeds expectations.

No imminent danger situations were discovered; most serious violations were corrected within 24 hours and all were corrected within 5 days.

Objective #2
Criterion 2.1

Effective Compliance Programs: *The Laboratory will have effective programs in place designed to achieve compliance with applicable ES&H Federal, State and local laws, regulations and ordinances and, where cost-beneficial, with applicable DOE orders as provided in Article XV, Clause 3 of the Prime Contract.*
(Weight = 12%)

Objective #2
Criterion 2.1
Performance Measure 2.1.a

Tracking and Trending of Environmental Findings and Violations: *The number of validated environmental violations and findings resulting from inspections by regulatory agencies and formal audits will be tracked and trended. A downward trend is expected for each category from the 1993 base year.*
(Weight = 4%)

Assumptions:

- Changes in regulatory procedures after the 1993 base year that increase or decrease the level of occurrence reporting shall be brought to the attention of UC and DOE as soon as possible and adjustments made to the base year figure, as appropriate.
- "Formal" audit is defined as one that results in a formal report to the Laboratory that flows through the appropriate audit tracking departments at the Laboratory (LLNL-ARO and LBNL-OAA).
- All uncontested violations and findings will be counted. Contested violations will not be reported. "Validated" means after the Laboratory and DOE agree that it is a violation or finding.
- Data will be normalized based on number of inspections the Laboratory experiences by reporting the number of uncontested violations/findings per inspection or audits. The trending will be done on the number of violations and findings in a calendar year.

Gradient:

Meets Expectations:

- The number of violations and findings are within 20% of the average of the previous three years.
- A proactive management strategy is in place to reduce or minimize findings and violations.

Exceeds Expectations:

- A downward trend in findings and violations is achieved.

Far Exceeds Expectations:

- The Laboratory receives no findings or violations during the year.

Performance Measure Result

Numbers of Findings and Violations for Calendar Year 1996

In 1993, there were 52 inspections and audits, yielding a total of 98 findings or violations. The normalized baseline value (for comparative purposes) for the number of findings and/or violations per audit and/or inspection is 1.88 findings and/or violations per audit and/or inspection. In 1994, 44 inspections and/or audits yielded 22 findings and/or violations. The ratio of findings to inspections in 1994 was 0.5. In 1995, 66 inspections yielded 0 findings. The average for the previous three years (CY 1993, 1994 and 1995) is 8 findings in 10 inspections.

Year	Number of Findings and/or Violations (F)	Number of Inspections and/or Audits (A)	Ratio F/A
1993	98	52	1.88
1994	22	44	0.5
1995	0	66	0
1996	1	58	0.0172
Three-year (1993, 1994, 1995) running average			0.793 or 8 findings in 10 inspections

In 1996, there was one violation arising from the malfunction of the fire suppression system in Building 85, the new hazardous waste handling facility. On December 24, during the Lab Christmas break, shortly after contractor testing, the Building 85 fire suppression system malfunctioned, releasing high expansion firefighting foam. As the facility was not commissioned, no hazardous, mixed, or low level radioactive waste was involved. Foam exited the building and entered Strawberry Creek via the storm drains. The City of Berkeley cited the Lab for violating the Clean Water Act.

It should be noted that the Lab has been nominated by the East Bay Municipal Utility District (EBMUD), the site's waste water permit administrator, for a California Water Environmental Association Award for the site's past efforts to reduce discharges and pollution.

Proactive Management Strategy Is in Place to Minimize Environmental Findings and Violations

The Laboratory strategy to minimize environmental findings and violations follows a fourfold parallel path characterized by the implementation of formal programs and addressing internal and external Lab environmental concerns on an ongoing basis.

1. The Laboratory formally documents environmental protection in a number of plans:
   - Storm Water Monitoring Plan—required by the State General Permit for discharge of storm water; requires annual reporting to the Regional Water Quality Board.
   - Storm Water Pollution Prevention Plan—required by the State General Permit for discharge of storm water, describes the site's best management practices for prevention of storm water pollution originating on-site.
   - Environmental Monitoring Plan—required by DOE orders and draft 10 CFR 834; describes environmental monitoring, sampling and surveillance activities, their rationale and quality assurance. Data generated from the implementation of this plan is used in the publication of the annual Site Environmental Report (available on the Internet at the LBNL EH&S homepage, http://www-ehs.lbl.gov/).
   - Spill Prevention and Control and Countermeasures (SPCC) Plan — addresses the risk associated with the release of petroleum products from above ground-storage tanks (ASTs).

   Implementation of these plans is complete.
2. The Lab showcases its environmental protection programs in the public arena. During 1996, the Environmental Protection Group participated in a number of public forums aimed at addressing public concerns over tritium releases by showcasing the Laboratory's environmental programs. The group frequently meets with the City of Berkeley, has met with the Citizens' Environmental Action Committee (CEAC) and conducted site visits with concerned citizens.
3. The Lab uses all available means to identify areas for improvement with respect to environmental releases. These include external audits and appraisals, the Contract Performance Measure self-assessment, the internal assessment program, Safety Review Committee assessments, and DOE assessments. The Laboratory pursues corrective actions aggressively and tracks the status of open items through the LCATS database.
4. The Lab uses the 5-year management budget planning tool to identify and document projects aimed at eliminating environmental findings and violations. This 5-year plan, updated annually, uses a rigorous compliance risk-based approach to candidate areas for improvement. Activity data sheets are used extensively to prioritize and document the cost/benefit/consequence to the Laboratory to qualify for funding of compliance projects.

Successes/ Shortfalls

The Lab has been successful in implementing a proactive environmental protection strategy aimed at eliminating environmental findings and violations. There was one environmental violation in Calendar Year 1996. This represents a 97.9% improvement over the average of the previous three years.

The Lab's performance in this measure exceeds expectations.

Supporting Data

EBMUD Permitted Inspections	**Permitted discharge location**	**Number of Findings/ violations**	**Number of inspections**
1996 Inspections conducted during the week of:			
Jan 8	Hearst & Strawberry	0	2
Jan 8	B77	0	1
Mar 11	Hearst & Strawberry	0	2
Apr 1	B77	0	1
May 6	B25	0	1
May 13	Hearst & Strawberry	0	2
May 14-19 (5 days)	B77 (startup)	0	1
June 10	Hearst & Strawberry	0	2
July 8	B77	0	1
July 15	Hearst & Strawberry	0	2
Aug 19	B77 (startup)	0	1
Oct 28	B77	0	1
Nov 4	Hearst & Strawberry	0	2
Dec 2	B25	0	1
Unannounced Inspections:			
Jan 17/18	Hearst & Strawberry	0	2
Feb 8	B25	0	1
Feb 8/9	B77	0	1
Feb 26/27	Hearst & Strawberry	0	2
Apr 8/9	Hearst & Strawberry	0	2
July 2/3	Hearst & Strawberry	0	2
July 3	B25	0	1
Aug 13/14	Hearst & Strawberry	0	2
Aug 14/15	B77	0	1
Aug 22/23	B77	0	1

Area	Organization	Date	Results	Number of Inspections
B70 UST	City of Berkeley	7/22/96	no violation	1
B85A UST	City of Berkeley	9/16/96	no violation	1
Air	BAAQMD	10/23/96	20 permitted sources, no violations	20
Building 85/ Strawberry Creek	City Of Berkeley	12/24/96	Citation letter dated 1/16/97	1

Objective #2
Criterion 2.1
Performance Measure 2.1.b

Tracking and Trending of Environmental Releases: *Reportable occurrences of environmental releases exceeding regulatory or permitted levels imposed by local, State or Federal agencies will be determined and trended. A downward trend is expected. Changes in regulatory procedures after the 1993 base year that increase or decrease the level of occurrence reporting shall be brought to the attention of UC and DOE as soon as possible and adjustments made to the base year figure, as appropriate.* **(Weight = 4%)**

Assumptions:

- Tracking and trending will not include reports of excursions that do not exceed regulatory requirements. Such excursions are within compliance limits.
- Data will be collected for the period of January 1, 1996 through December 31, 1996.

Gradient:

Meets Expectations:

- The number of occurrences of environmental releases are within 20% of the average of the previous three years.
- A proactive management strategy is in place to reduce or minimize environmental releases.

Exceeds Expectations:

- A downward trend in number of occurrences of environmental releases is achieved.

Far Exceeds Expectations:

- The Laboratory has no occurrences of environmental releases during the year.

Performance Measure Result

Number of Releases That Exceeded Regulatory Limits

In Calendar Year 1996, one release to the environment exceeded a regulatory limit. On December 24, 1996, a malfunction of the Building 85A fire suppression system released high expansion firefighting foam to Strawberry Creek via the site storm drainage. The system is part of a new, unoccupied building. The system was tested by construction contractors shortly before the malfunction as part of a preoccupation punchlist.

The City of Berkeley cited the Lab for violation of the Clean Water Act, or specifically the site's storm water discharge permit. While there is no specific limitation for firefighting foam, the site is constrained from adding any non-exempt substance to its storm drainage.

The record of the number of qualifying releases is tabulated below:

Year	Number of Releases to the Environment that Exceeded Regulatory Limits
1993	1
1994	0
1995	0
1996	1

The 3-year running average is one event per three years. There was one release in Calendar Year 1996. The prior three years' performance statistics indicate that an upper ceiling for environmental protection excellence has been achieved and maintained. The 1996 event is a normal statistical irregularity and is not indicative of any weakness in the Lab's Environmental Protection program. An occurrence report was initiated and corrective actions implemented immediately.

Proactive Management Strategy in Place to Reduce or Minimize Environmental Releases

The proactive management strategy has largely been described in the report on Measure 2.1.a. However, it is worth noting that while environmental protection is formally documented very well in its plans and procedures, it is the informal day-to-day communications with diverse functions within the Lab that accurately characterize the Lab's environment protection performance. For instance, on December 10, 1996, a Lab employee, noticing that a water delivery truck was leaking diesel fuel, first bought the leak to the attention of the driver and then notified the ES&H Division. The Fire Department was notified, responded (ref. Incident Report 9600000208), and cleaned up the oil. This incident epitomizes the high level of awareness resident in the Lab community necessary for any successful program, and comes about through ongoing training and informal professional relationships.

Successes/ Shortfalls

A proactive management strategy is in place to reduce or minimize environmental releases. The Lab has successfully continued to maintain the baseline level of excellence with respect to environmental releases above regulatory limits.

There was one qualifying release in 1996; the 3-year average is one release in three years. The one release in 1996 technically exceeds the 3-year average for the Lab. As the 3-year average is extremely low (one release in the prior three years), the one release in 1996 does not represent any programmatic weakness.

The Lab has met all performance expectations for this measure.

Supporting Data

- ORPS reporting database.
- January 16, 1997 letter to Ron Pauer from the City of Berkeley regarding "Citation."

Objective #2
Criterion 2.1
Performance Measure 2.1.c

Occupational Safety and Health: *Hazards are recognized during Occupational Safety and Health assessments and serious and imminent danger situations are appropriately mitigated.* **(Weight = 4%)**

Assumptions:

- Data will be collected for the period of July 1, 1996 through June 30, 1997.
- Imminent Danger situations and Serious violations are as defined by the OSHA Field Inspection Reference Manual and by Section 13(a) of the Occupational Safety and Health Act.
- The performance measure allows time for dialogue, on a case-by-case basis, to determine whether a violation is to be classed as "serious."
- Subcontractor operations/personnel are included if the subcontractor is performing part of the Laboratory's operations. Subcontractors are excluded if they are "servicing" the Laboratory (e.g., copy machine vendor or transient construction workers covered under 29 CFR 1926).

Gradient:

Meets Expectations:

- Routine Safety and Health Assessments are conducted.
- Imminent danger situations are mitigated immediately upon discovery.
- All serious violations are mitigated or corrected within 5 working days or an agreed-upon schedule.
- The Laboratory demonstrates that its safety and health systems effectively address compliance.

Exceeds Expectations:

- A proactive management strategy is in place to minimize the occurrence of imminent danger situations and serious violations.
- The Laboratory's safety and health system achieves one or more of the key program elements that are indicative of exemplary safety and health programs. These program elements include management leadership, employee involvement, worksite analysis, hazard prevention and control, and safety and health training.
- The Laboratory improves its process to identify and manage compliance findings.

Far Exceeds Expectations:

- The Laboratory's safety and health system achieves the key program elements that are indicative of exemplary safety and health programs. These program elements include management leadership, employee involvement, worksite analysis, hazard prevention and control, and safety and health training.

Performance Measure Result

Routine Safety and Health Inspection

The Lab administers formal and informal health and safety inspections. The degree of formality is characterized by the level of planning and assessment protocols. The strength of informal annual self-assessments within the

division lies in the dissemination of responsibility for safety throughout the Lab. These self-assessments provide a vehicle to inspect, document, and track corrective actions that is directly available to Functional Management. Guidance for division self-assessments is found in PUB-5344, available on the Internet (http://www.lbl.gov/Workplace/EHS/ESH_PUB5344.html). Annual self-assessments target 100% of the division space, unless appraisals indicate that a lower inspection frequency is appropriate. The Office of Assessment and Assurance (OAA), an independent function within the Lab reporting directly to Lab senior staff, validates and tracks completion of self-assessment corrective actions. The report on EH&S Measure 3.1.a summarizes the success of the Lab's divisional self-assessments.

The Lab's Safety Review Committee (SRC), made up of Lab staff and management, conducts independent Management of Environment Safety and Health (MESH) reviews of every Lab division on a rotating 3-year schedule. The SRC reports directly to the Lab directorate.

The Initial Hazard Assessment (IHA) affords the EH&S division an opportunity to determine and categorize workplace hazards. In 1996, the IHA was conducted in partnership with local DOE representation with the objective of categorizing hazards throughout the lab. The IHA was completed and documented in a report published August 1996. The data was entered into a database, where it will form the basis for future Integrated Functional Appraisals (IFAs). The IFA is the Lab's system for independent evaluation of its divisional ES&H self-assessment described above. No imminent danger or serious violations were discovered as part of the IHA in 1996.

In 1997, the Lab conducted an Integrated Functional Appraisal (IFA) of the EH&S, Physics, Material Sciences, and Chemical Sciences divisions. Walk-throughs and reports are complete with database entry to be completed before the end of FY97. No imminent danger or serious violations were discovered as part of the IFA in 1997.

The Lab employs a full-time construction safety inspector. Safety inspection logs are maintained and reviewed by occupational safety professionals. The reviewed log indicated that for the performance period to date all serious violations were corrected immediately (i.e., within 24 hours of the report). Serious violations are bought to the attention of the construction superintendent immediately and work is stopped until the situation is rectified. No imminent danger situations were noted.

The Lab Fire Department inspects 100% of all Lab space annually and provides reports to building managers and EH&S safety personnel.

Less formal, but no less effective, is the day-to-day role played by EH&S occupational safety professionals. Typically assigned to research or support divisions, these professionals serve as 1:1 liaisons with division safety coordinators. Division safety coordinators typically work closely with their division employees and are known throughout the organization as key environment, safety, and health points of contact. When workplace health and safety concerns are bought to their attention, they work closely with their field support liaison (EH&S representative) to quickly resolve the issue.

Imminent Danger Situations

No imminent danger situations were discovered within the current performance period.

Serious Violations Resolved Within Five Working Days

All serious violations noted by the construction safety inspector were corrected within 24 hours. The Lab maintains a subcontractor database of serious violations and imminent danger situations. No imminent danger situations were discovered through the subcontractor inspection program. A review of the subcontractor safety violations database indicated that out of 128 violations, there were 4 possible serious violations. These are described below:

1. Excavation over 5 feet deep, no protective system data available and shores being used did not meet OSHA tables for distance and depth. Worker exited trench immediately.
2. 2nd floor, opening between duct and slab covered with green sheetrock, worker using as platform; work stopped and corrected immediately.
3. 2 workers connected their lanyard to the same vertical lifeline while working on a suspended scaffold. Corrected immediately.
4. Exposed energized electrical equipment in basement elevator mechanical room not guarded against accidental contact. Corrected immediately — access to room blocked, secured and signage provided.

Three of the four subcontractor safety violations were corrected the day of discovery and one was corrected within five days.

Safety and Health Systems Effectively Address Compliance

The Lab effectively addresses compliance formally through the self-assessment program. Annually, each division conducts a self-assessment against 11 performance criterion. This program is described more fully in the report on Measure 3.1.a.

EH&S subject area experts are available to the divisions on a consultant basis to provide independent, unbiased oversight and assistance with self-assessment. A compliance checklist with over 700 compliance and contract related items is available as an assessment tool.

One of the best means of effectively addressing compliance and implementing a proactive posture toward health and safety in the workplace is to enlist all employees and hold them responsible for conducting their work in adherence to all EH&S policies. Adherence to all EH&S policies and knowledge of applicable sections of PUB-3000 and other job-specific health and safety considerations are performance requirements for all LBNL employees and are a part of their annual performance appraisal.

The Lab does have safety and health systems in place through its self-assessment program (Division S/A, IFA & MESH), fire company inspections, RCT surveys, SAA/WAA inspections and construction safety

oversight activities to identify safety and health issues in the workplace. The databases that exist to document hazards and track abatement include LSAD, IFA, construction safety (via Loretta Valentine), and RADAR (to a limited extent until programming is completed). Any imminent danger and/or serious violations have consistently been addressed within prescribed timeframes, if not sooner. Efforts are currently underway to improve the Lab's safety and health processes to identify and manage compliance and hazard findings. These include the postmortem of IFA, OAA's effort to bring LSAD in line with WSS set, DOE/LBNL Performance Improvement Team workgroups, and development of an "Ethicsline" by Internal Audit to field anonymous calls reporting hazardous issues (real time).

Proactive Management Strategy in Place to Minimize the Occurrence of Imminent Danger Situations and Serious Violations

The Lab's Vision 2000 statement sets the stage on which the Lab will perform as it continues world-class research into the next millennium. Couched within the Vision Statement is the following: "All of our activities will be conducted with full regard for the environment, health, and safety." This sends a very clear message to the Lab community and all outside stakeholders that environment, health, and safety concerns will continue to form one part of the backdrop against which the Lab must operate. This is a keystone to establishing a proactive management strategy that addresses health and safety concerns as it helps forge a culture of concern and awareness around those circumstances that give rise to imminent danger situations and serious violations.

PUB-3000, the Berkeley Lab Health and Safety Manual maintained on the Internet (http://ehs.lbl.gov/ehsdiv/pub3000), establishes line management responsibility for recognition of all hazards in their respective areas of responsibility. Since line management staff are not expected to be experts in hazard mitigation, occupational safety professionals are available for consultation through the EH&S division. The Activity Hazard Document, Radiation Work Authorization, Radiation Work Permit, and Sealed Source Authorization are work authorization permits that initiate a higher level of scrutiny, review, and documentation for certain activities where there is a high hazard potential. PUB-3000 is currently being updated.

The Lab articulates its proactive management strategy through a system of independent checking functions. Any successful program of this sort needs clearly stated senior management support. At Berkeley Lab, this is articulated through the Safety Review Committee (SRC). The SRC reports directly to the Lab Director and operates independent from divisional influence. All levels of Lab employee are represented on the committee, appointed by the Lab Deputy Director (Klaus Berkner, Director of Operations), and provide the necessary range of employee perspectives.

The Office of Assessment and Assurance (OAA) establishes formal institutional programs aimed at implementation of the Lab's quality assurance requirements relating to compliance with the Environment, Health and Safety policies and programs at the Lab.

Each division director has commissioned a safety committee with management and non-management representation. The goals of these

committees are to raise safety awareness specific to each division and to identify and help mitigate hazards.

Berkeley Lab demonstrates that all key elements for an exemplary safety and health programs are fully implemented:

- Management leadership is articulated through the various safety committees. However, senior management must remind employees that they are responsible for upholding a safe workplace. On March 28 Dr. Shank, the Lab's Director, sent a memo to all employees reminding them of their responsibility for integrating safety into all work activities.

  There were only four safety-related incidents this year, a year in which Dr. Shank was highly visible, participating in stand-downs and providing direction to targeted audiences on workplace safety.

  It is important that exemplary work be recognized, as this also sends a powerful message to the Lab regarding senior management involvement in ES&H issues. Dr. Shank and associate Lab directors awarded three outstanding performance awards to scientists who directly contributed to improvements in ES&H.
- Employees at all levels are represented (presently in the form of committee term appointments). For example, Waste Management field technicians conduct tailgate safety meetings whenever non-routine waste management projects are being performed. Also, a Behavior-Based Accident Prevention program implemented in the Facilities Department relies on the participation of field laborers for its success. This program is more fully described in the report in Measure 1.1.e.
- Worksite analysis is formally conducted through the Self-Assessment Program, the IHA, the MESH reviews, Fire Department inspections, construction safety inspections, and day-to-day inspections performed by EH&S professionals.
- Hazard prevention and control is implemented through program procedures and PUB-3000, chapter 6. This section of PUB-3000 requires all new projects and all significant changes to existing projects to undergo a hazard analysis. The various inspections and assessments identify hazards, and the resulting corrective actions (tracked through institutional or divisional databases) mitigate and control hazards.
- Safety and health training: Berkeley Lab provides numerous ongoing health and safety courses, taught by EH&S professionals. A complete listing of the current coursework is available on the Internet at http://www-ehs.lbl.gov/html/training.htm. The Lab also maintains a training database. (See Performance Measure 3.1.b write-up for a more complete discussion.)

The Lab rounds out its proactive management strategy through support of the EH&S Field Support Department. This department is made up of three groups dedicated to providing 1:1 service with each of the research divisions and support functions within the Lab. The department provides consultation and services associated with :

- Emergency services, safeguard and security, and fire operations
- Industrial hygiene

- Occupational safety
  - Radiation protection
  - Training
  - Hazard management

An EH&S Field Services professional is assigned as liaison to each division and serves as a point of contact for the division safety coordinator and as an EH&S consultant resource for the whole division. As such, the liaison maintains a very close working relationship with division personnel maintaining a high degree of familiarity with the day-to-day divisional operations. This establishes a formal relationship, which serves as a single focal point to convey and administer EH&S consultation/training and assessment.

Management of Corrective Actions and Compliance Findings

Findings and compliance issues, revealed through self-assessments (including MESH reviews and IFAs) are tracked by each division using its Laboratory Self-Assessment Database (LSAD). There are four levels of concern with compliance findings categorized in the top three levels and the fourth level reserved for non-compliance findings or findings associated with best management practices and Lab policy.

Findings and compliance issues discovered through DOE assessments are tracked by the Lab's LCAT database. Other compliance issues are tracked through occurrence and NTS reporting systems. The Lab's occurrence reporting performance is reported under Measure 3.1.c.

Successes/ Shortfalls

Routine safety and health inspections are conducted throughout the Lab. All imminent danger situations are immediately mitigated upon discovery and all serious violations are mitigated or corrected with five working days. The Laboratory demonstrates that its safety and health systems effectively address compliance through formal audits and assessments. A proactive management strategy is in place to minimize the occurrence of imminent danger situations and serious violations. The Lab achieves all key program elements that are indicative of exemplary safety and health programs.

The Lab has satisfied all the gradients for this measure.

Supporting Data

- PUB-3000, the Health & Safety Manual.
- PUB-201, the Regulations & Procedures Manual.
- PUB-5344, Laboratory Self-Assessment Program.
- December 9, 1996 memo from Jeffrey Chung to Don Bell, Jack Salazar, Stacy Cox; FSD 97-073, Subject: Appendix F Performance Measure 2.1.c
- March 28, 1997 Memo to all Employees from Charles V. Shank, Director, Subject: Safety Alert.

Performance Objective #3

Integration and Accountability: *The Laboratory program and line management is accountable for integration of ES&H programs into all programs and conduct of operations.* **(Weight = 19%)**

Summary

The Lab's performance under this objective just met expectations. The Lab did not meet all minimal performance gradients under Measure 3.1.a, Integrated Self-Assessment Program. While the Lab successfully conducted 92% of its scheduled appraisals and corrected 89% of its LSAD-recorded deficiencies, only 24% of the corrective actions were implemented on schedule.

The Lab met its performance gradient for all targeted courses except Chemical Hygiene (4% below the target). The highly mobile and transient Lab population adds a prohibitive degree of difficulty in capturing the right audience. The Lab has identified this difficulty and implemented Web-based training and an improved Web-based Job Hazard Questionnaire that expedites training database entry and verification of completed training. As this critical element in the training infrastructure was implemented toward the end of the performance period, completion of Chemical Hygiene training had not caught up with the performance target. The Lab should be credited for all the successful work completed in improving the training infrastructure.

The Lab's performance in closing out Occurrence Reporting Corrective Actions (ORs) exceeded expectations. The Lab has failed to satisfy the DOE standard for categorizing ORs in a timely manner. Corrective actions have been implemented and are being tracked.

Technically, the Lab's performance under Measure 3.1.d, Control of Radioactive Material, met expectations. There were three qualifying loss-of-control incidents, most notably the lack of accurate accounting of 11 sealed sources. As the Lab failed to adhere to its own and DOE's standard on management of sealed sources, it assessed itself as needing improvement in this area.

Objective #3
Criterion 3.1

Planning, Integration and Execution: *The managers of Laboratory projects/programs are knowledgeable of their ES&H responsibilities and properly plan and execute projects/programs with due regard for ES&H issues. Planning, integration and execution will be such that adverse consequences, including additional costs, relative to ES&H issues can be minimized.* **(Weight = 19%)**

Objective #3
Criterion 3.1
Performance Measure 3.1.a

Integrated Self-Assessment Program: *The Laboratory maintains a self-assessment program which identifies both strengths and areas for improvement. A sample of the self-assessment program will be reviewed for effectiveness. The sample will evaluate four directorates at LLNL and four divisions at LBNL against the Laboratory's Self-Assessment Program Plan.* **(Weight = 4%)**

Assumptions:

- For FY97 the performance period is July 1, 1996 through June 30, 1997.
- By May 1, the Laboratory and local DOE office will mutually select the Directorates (at LLNL) or Divisions (at LBNL) to be assessed by the Laboratory, UC and DOE.
- The DOE evaluation will be conducted as part of the annual pilot oversight appraisal.
- The LLNL Self-Assessment Program Plan is contained in the Health and Safety Manual Supplement 2.04. LBNL's Self-Assessment Program Plan is contained in the Operations Assurance Plan.
- Each Directorate at LLNL or Division at LBNL has their own self-assessment plan that they would be evaluated against.

Gradient:

Meets Expectations:

- The plans have been reviewed on an annual basis as required.
- Organizational elements and facilities to be included in the assessment are stated in the plan.
- A summary of the hazards are identified and listed for each facility and operation for that assessment period
- At least 80% of the scheduled formal self-assessments have been completed and reports issued.
- At least 80% of the corrective actions have been completed on schedule.

Exceeds Expectations:

- At least 90% of the scheduled formal self-assessments have been completed and reports issued.
- At least 90% of corrective actions have been completed on schedule.

Far Exceeds Expectations:

- One hundred percent (100%) of the scheduled formal self-assessments have been completed and reports issued.
- Corrective actions are consistently completed on schedule.
- Informal self-assessments are documented according to the directorate or division plan

- Inspections and reviews on behalf of the directorate or division have been conducted to assess compliance.

Performance Measure Result

Laboratory research and support organizations performed self-assessments in FY96 and FY97 covering the measurement period July 1, 1996 through June 30, 1997. The self-assessments were in accordance with Laboratory policies and procedures. From the FY96 division self-assessments, the Laboratory was able to draw the following conclusions about line management performance in managing ES&H:

- Laboratory operations and facilities maintained a good safety record.
- Laboratory operations and facilities did not adversely impact the environment.
- The following ES&H management systems and controls targeted for assessment in FY96 were in place:
  - Hazard reviews of projects and experiments
  - Work space inspection planning and implementation
  - Authorizations for work with radiological materials
  - Monitoring of critical ES&H training
  - Emergency preparedness
  - Management of satellite accumulation areas
  - Documentation for disposal of hazardous, mixed and radioactive waste
  - Implementation of mixed waste minimization strategies
  - Maintenance of chemical inventories
  - Calibration of toxic and flammable gas monitors
  - Implementation of corrective actions
  - Quality assurance documentation (for ES&H).
- Implementation of the targeted ES&H systems and controls was uneven. Organizations that identified gaps in their implementation of systems and controls or gaps in their mitigation of workplace hazards identified root causes where possible and their corrective actions. Corrective action plans were documented in division self-assessment reports or LSAD self-assessment databases. A trend of less than adequate implementation of systems and controls was noted for three of fourteen Lab organizations. Corrective action was taken by Lab management. Documentation of corrective actions was submitted to the Office of Assessment and Assurance for evaluation and selective validation. Institutional root causes, e.g., inadequate procedures, were communicated to the appropriate support organization for evaluation and correction.

Successes/ Shortfalls

The Laboratory's self-assessment program was effective in identifying significant trends at the institutional and divisional levels and in serving as a catalyst for management-level corrective action. Evidence of its effectiveness was the continued good safety and environmental record of Lab operations and facilities during the performance measurement period and the Laboratory management actions undertaken to address program conclusions for FY96. The Laboratory has demonstrated a satisfactory record of correcting identified ES&H deficiencies.

Timely implementation of LSAD-recorded corrective actions is an area for improvement. The root cause(s) for delays in corrective action implementation lie in part in the low-risk nature of deficiencies tracked on LSADs. The deficiencies tracked in the LSAD databases tended to be lower hazard conditions such as inadequate seismic bracing and less than optimum use of electrical equipment. Higher risk deficiencies tended to be corrected immediately (or corrective actions were initiated immediately) and divisions, in many cases, exercised the Laboratory option to forego tracking of these particular corrective actions on their LSADs. The Office of Assessment and Assurance will nevertheless be providing performance data on the average "age" of open LSAD-recorded corrective actions to Lab management for evaluation.

The Laboratory maintained a good record in its performance of scheduled formal assessments with the exception of the Safety Review Committee. The root cause was the committee's re-evaluation of its charter during the measurement period. As a result, their appraisals were postponed pending the outcome of the re-evaluation. The Deputy Director for Operations reaffirmed the committee's role as a forum for proactive line management involvement; it will continue its appraisals and has rescheduled the three it was to have performed during FY97.

Supporting Data

The four divisions targeted for evaluation under Performance Measure 3.1a developed self-assessment plans for the measurement period; these were documented in their FY95 and FY96 annual reports. All reports were reviewed by the Office of Assessment and Assurance. The reports included organizational elements and facilities to be included in the respective divisions' self-assessments.

Workplace hazards for all divisions were identified in the Fall of 1996 as part of the Integrated Hazard Appraisal initiative (see assessment for Performance Measure 4.2a). The hazards were summarized in summary reports and in an Integrated Hazard Appraisal database.

The three types of formal self-assessments that were scheduled in the period July 1, 1996 through June 30, 1997 and their completion rates are shown below. Divisions tracked corrective actions for deficiencies identified through division self-appraisals, EH&S functional appraisals, and Safety Review Committee appraisals on their LSAD databases.

Appraisal Type	Number of Scheduled Appraisals	Number Appraisals Performed	Percent Scheduled Appraisals Performed	Number of LSAD Corrective Actions*	Number of LSAD Corrective Actions Completed on Schedule (Number Completed)	Percent Completed on Schedule (Percent Completed)
Division Self-Appraisals (Note b)	41	40	98%	132	31 (118)	24 % (89%)
Integrated Functional Appraisals	4	4	100%	†	†	†
Safety Review Committee Appraisals	4	1	25%	not applicable	not applicable	not applicable

Notes:
*Hazard levels 1 through 3 only; level 4 deficiencies (to be implemented when time and resources permit) were excluded.
† Data shown for the four targeted divisions only.

Reports are in draft form; deficiencies not yet documented pending factual accuracy reviews.

Objective #3
Criterion 3.1
Performance Measure 3.1.b

Institutional ES&H Training: *In 1995, the Laboratory established baseline data for the assessment of ES&H training completion. In partnership with the local DOE office, the Laboratory defined the specific parameters for the data set. The data sets included a number of higher risk facilities, a subset of the worker groups within those facilities, and a set of institutional training requirements. The Laboratory will build upon the 1995 baseline by establishing:*

- *Improvement goals specific to the Laboratory*
- *Risk based compliance levels with institutional ES&H training requirements in each data set*
- *Success criteria based on the specific improvement goals or staying at desired levels*

(Weight = 6%)

Assumptions:

- For FY97 the performance period is July 1, 1996 through June 31, 1997.

Gradient:

Meets/Exceeds/Far Exceeds Expectations:

- Laboratory specific improvement goals with corresponding success criteria will be established in conjunction with the local DOE office by October 31 of the rating year.

Meets

Course	% Comp. Targets
LOTO	80
Comp. Gases	60
Chemical Hygiene	70

Exceeds

Course	% Comp. Targets
LOTO	85
Comp. Gases	70
Chemical Hygiene	80

Far Exceeds

Course	% Comp. Targets
LOTO	90
Comp. Gases	80
Chemical Hygiene	90

Performance Measure Result

Training Results

The Lab recognized that its system for identifying training candidates was not working. Resources were directed to revamp the ES&H training system as a first training compliance step. As described above, system improvements were completed in June of 1997 that enabled proper identification of employees who needed mandated training. However, though training classes were conducted consistently throughout the

performance year, system improvements, such as implementation of the revised JHQ, were not in effect until the end of the performance year. Therefore, the Lab community was not able to take advantage of this tool. The training completion rates reflected below are still based, for the most part, on the assumptions inherent in the previous edition of the JHQ, assumptions that tend to target a larger population than is required for such areas as LOTO, Chemical Hygiene, and Compressed Gases.

Lab Training Results

Course	Lab % complete training
LOTO	84%
Compressed Gases	61%
Chemical Hygiene	66%

The Lab has not met the training targets set in March 1997. However, training completion statistics, as noted in the discussion above, are expected to show significant improvement.

Program Improvements

The Lab established its success criteria with the local DOE on March 12th 1997. The Lab recognized that its administrative tool (the Job Hazard Questionnaire, or JHQ) for determining necessary coursework was too conservative, capturing a larger audience than necessary within the context of identification of pertinent EH&S requirements. The Lab revised the JHQ to better target only those course candidates required for compliance with regulatory and Laboratory mandated training. In December 1996, the Lab was presented with a first draft of the new JHQ, which was subsequently revised in February 1997. This version was presented to Lab senior management, and the revised version was made available to the Lab on February 12, 1997. On February 13, 1997, EH&S staff presented to the division directors a model for Internet (Web) based training, including access to the JHQ on-line. General Employee Radiation Training (GERT) , as well as Chemical Hygiene and Safety Plan training are now available on-line through the Internet to all Lab employees. Computer-based training and challenge exams were developed to address employee concerns about availability of classes and sufficiency of training issues. Direction and support was given to accelerate the project to support a broader base of on-line Web-based EH&S training. Further, on June 23, 1997, the JHQ was made available to the general Laboratory population for on-line data entry via the World Wide Web; this enhancement includes the capability of near real time (within one day) input of submitted information into the training database, and automated supervisor/division notification of updates.

Division-specific JHQs on a broad scale will be developed beginning in July 1997; currently, two divisions have piloted customized versions of the institutional JHQ. These customized versions are the product of user input, ad-hoc meeting groups, and the Process Improvement Team, and will be used as a model for the Lab.

Successes/ Shortfalls

A risk-based assessment was used to identify critical training requirements for employee populations at risk in chemical hygiene, compressed gas safety, and electrical lockout requirements, and it was agreed to in March 1997. The Lab has recognized inefficiencies in its system for identifying which employees need compliance training. A complete review of its Job Hazard questionnaire has overcome these inefficiencies. The questionnaire is now available on the Internet and the training base can now be automatically updated. However, as improvements were implemented toward the end of the performance period, completed training statistics have not caught up with the improvements. A strategy is being implemented to address the training goals specific to the Lab.

In addition, the Lab took positive steps in addressing another root cause that contributes to reduced training program performance by enhancing the relevancy of the course content. The EH&S division has made challenge exams in GERT as well as Chemical Hygiene and Safety available on the Web (as previously noted), and has offered classes that are specifically geared for specific audiences (i.e., divisions) that address their own unique workplace issues/hazards. This approach was successfully used for Chemical Hygiene Training in the Life Sciences Division; in this instance, a tailored challenge exam was developed, a preliminary session was given to familiarize attendees with the concepts associated with the exam, and ultimately students completed the exam while proctored—all in a one-and-a-half hour session. Moreover, the Lab has reviewed, and will continue to investigate, other delivery options (e.g., computer-based training) that can provide additional flexibility in the manner in which training programs are administered.

The Lab, especially in consideration of its efforts to strengthen key training systems and address root causes for program ineffectiveness, has met the gradients for success in this measure.

Supporting Data

- JHQ update notifications.
- Online EH&S training database (http://www-ehs.lbl.gov/html/training.htm)

Objective #3
Criterion 3.1
Performance Measure 3.1.c

Corrective Actions: *Corrective actions as detailed in final ORPS reports will be completed on or before the target date 95% of the time. The Laboratory will notify the local DOE office and seek their approval for changes in target dates for corrective action.* **(Weight = 5%)**

Assumptions:

- "Final" means the ORPS report determined to be final by DOE.
- Address historical corrective action close-out in the discussion of a "Proactive Management Strategy

Gradient:

Meets Expectations:

- Corrective actions are completed on or before the target date 95% (or one report if less than twenty reports total) of the time.
- A proactive system is in place to manage completions and changes.

Exceeds Expectations:

- 95% past corrective actions closed out.

Performance Measure Result

Performance Period

The performance period for this measure is Calendar Year 1996.

Closeout of Corrective Actions

In 1996 there were 34 corrective actions with closeout dates during the calendar year. All 34—100%—were closed out on or before schedule.

Proactive System to Manage Completions and Changes

Once a month, the Occurrence Report Administrator reviews each open OR for corrective action status. Corrective action owners whose completion dates are upcoming within the next 30 days are contacted by phone, fax, and electronic mail to notify them of the upcoming deadline. Records of all communications are maintained in OR case files. Changes to the Corrective action deadlines are made at this time. There have been no changes in corrective action deadlines in 1996.

The administrator continues to publish a summary of OR status and distribute it among concerned parties. The summary serves to notify EH&S division liaison and division safety coordinators of any EH&S issues that need to be addressed.

Past Corrective Actions

There are no outstanding past corrective actions; 100% are closed out.

Successes/ Shortfalls

The Lab successfully managed all Occurrence Report Corrective actions, completing them on or before their scheduled completion date.

Shortfall

The Lab has not categorized Occurrence Reports within the required time period after discovery of an incident. The Lab has taken actions to assure the categorization period is met.

Supporting Data

Following are ORPS Reports for CY95 with Corrective Actions assigned Target Completion Dates in CY96/97.

SAN—LBL-EHS-1995-0004	Packing & Shipping Errors of Mixed Waste Shipment to Hanford, Initiated 4/25/95	
Corrective Action	**Due**	**Completed**
CA #1	95	95
CA#2	95	95
CA #3	95	95
CA #4	1/10/96	1/10/96
CA #5	95	95
CA #6	95	95
CA #7	95	95
CA #8	95	95
CA #9	95	95
CA #10	95	95
CA #11	95	95
CA #12	95	95
CA#13	4/13/96	4/13/96
CA #14	95	95
CA #15	95	95
CA #16	95	95
CA #17	95	95
CA #18	95	95
CA #19	95	95
CA #20	2/10/96	1/29/96
CA #21	95	95
CA #22	95	95
CA #23	95	95
CA #24	95	95
CA#25	2/28/96	2/28/96
CA #26	95	95
CA #27	95	95

SAN—LBL-OPS-1995-0002	Quarterly Suspect Parts Notification Initiated 5/2/95	
Corrective Action	**Due**	**Completed**
CA #1	10/31/97	—

SAN—LBL-EHS-1995-0005	1994 Potential Lead Exposure above PEL, Initiated 7/13/95	
Corrective Action	**Due**	**Completed**
CA #1	95	95
CA #2	10/15/97	-
CA #3	95	95

SAN—LBL-EHS-1995-0006	Offsite Motor Vehicle Accident Initiated 10/12/95	
Corrective Action	**Due**	**Completed**
CA #1	4/5/96	4/5/96

SAN—LBL-AFRD-1995-0001	Deficiency Observed in Gamma Monitors, Initiated 10/26/95	
Corrective Action	**Due**	**Completed**
CA #1	95	95
CA #2	95	95
CA #3	7/31/96	7/31/96

SAN—LBL-ENG-1995-0001	Low Level Radioactive Contamination at Bldg 70A, Initiated 11/8/95	
Corrective Action	**Due**	**Completed**
CA #1	9/15/96	9/1596
CA#2	5/2/96	5/2/96
CA #3	5/2/96	5/2/96
CA #4	9/15/96	9/15/96
CA #5	5/2/96	5/2/96
CA #6	5/2/96	5/2/96
CA #7	5/2/96	5/2/96

Following are ORPS Reports Initiated in CY96.

SAN—LBL-OPS-1996-0001	Discharge of Diesel-Contaminated Water into Storm Drain, Initiated 1/30/96	
Corrective Action	**Due**	**Completed**
CA#1	1/31/96	1/31/96

SAN—LBL-EHS-1996-0001	Improper Characterization of Mixed Waste Shipments to Hanford, Initiated 3/7/96	
Corrective Action	**Due**	**Completed**
CA #1	9/20/96	9/20/96
CA #2	9/20/96	9/20/96
CA #3	9/20/96	9/20/96
CA #4	11/15/96	11/15/96

SAN—LBL-OPS-1996-0002	12-kV Electrical Shock from Backfeed Through Transformer, Initiated 4/2/96	
Corrective Action	**Due**	**Completed**
CA #1	4/1/96	4/1/96
CA #2	5/30/96	5/30/96
CA #3	3/31/96	3/31/96
CA #4	3/31/96	3/31/96

SAN—LBL-EHS-1996-0002	Low Level Radioactive Contamination of Personal Clothing, Initiated 4/16/96	
Corrective Action	**Due**	**Completed**
CA #1	12/2/96	12/2/96
CA #2	12/2/96	9/30/96
CA #3	12/2/96	9/30/96
CA #4	7/15/96	7/15/96
CA #5	3/31/97	not yet completed

SAN—LBL-OPS-1996-0003	Fall and Injury of Contract Worker at Building 84, Initiated 7/3/96	
Corrective Action	**Due**	**Completed**
Investigation is ongoing. Corrective actions are to be determined.	—	—

SAN—LBL-EHS-1996-0003	Loss of Accountability for Sealed Radioactive Sources, Initiated 7/8/96	
Corrective Action	**Due**	**Completed**
CA #1	4/30/96	4/30/96
CA #2	1/31/97	1/30/97
CA #3	4/30/96	4/30/96
CA #4	4/30/96	4/30/96

SAN—LBL-EHS-1996-0004	False Bomb Device Discovered in Building 70, Initiated 8/1/96	
Corrective Action	**Due**	**Completed**
CA #1	8/28/96	8/28/96

SAN—LBL-ENG-1996-0001	Off-site Vehicle Collision with Injury, Initiated 8/1/96	
Corrective Action	**Due**	**Completed**
CA #1	10/11/96	10/11/96

SAN—LBL-OPS-1996-0004	LOTO Violation and Injury in Service to Building 66 AHU, Initiated 8/26/96	
Corrective Action	**Due**	**Completed**
CA #1	10/31/96	10/9/96
CA #2	9/30/96	9/30/96

SAN—LBL-OPS-1996-0005	Partially Severed Finger Segment at East Canyon Electrical Project, Initiated 10/1/96	
Corrective Action	**Due**	**Completed**
CA #1	10/16/96	10/16/96

SAN—LBL-ENG-1996-0002	Surface Damage to Multiple Autos from a Release of Sulfuric & Phosphoric Acids, Initiated 10/22/96	
Corrective Action	**Due**	**Completed**
CA #1	6/21/97	6/21/97
CA #2	6/21/97	6/21/97
CA #3	6/21/97	6/21/97

Objective #3
Criterion 3.1
Performance Measure 3.1.d

Control of Radioactive Material: *Radioactive material, including radioactive sources and contaminated articles, is managed so that it is not found outside of controlled areas.* **(Weight = 4%)**

Assumptions:

- For FY97 the performance period is July 1, 1996 through June 31, 1997.
- Data for this measure is reported as the normalized number of occurrences or exceedances.
- Some variability is expected which may not be indicative of a trend.
- This measure is directed toward current management and control of radioactive materials.

Gradient:

Meets Expectations:

- A proactive management strategy is in place to reduce frequency and severity which includes follow-up of incidents where radioactive material is found outside of a Controlled Area.
- The number of occurrences will be maintained to within 5% of the 3 year running average or within a limit set between the Laboratory and the local DOE office.

Exceeds Expectations:

- The number of occurrences demonstrate a decreasing trend set by local DOE agreement with the Laboratory.

Far Exceeds Expectations:

- A reduction in the number of occurrences that is set by the Laboratory and the local DOE office.

Performance Measure Result

Proactive Management Strategy

This measure is closely aligned with Measures 1.1.a (Radiation Protection of the Worker) and 1.1.c (Radiological Exposure Prevention). The Lab administers radiation protection, integrating performance identified in all three measures. Consequently, the proactive management strategy is very similar. The proactive management descriptions found in the reports on Measures 1.1.a and 1.1.c address the Radiation Work Authorization program. Key components of the RWA program directly address issues relating to control of radioactive material aimed at reducing frequency and severity of loss of control incidents. All areas possessing an RWA are routinely surveyed. Any activity above threshold limits is brought to the attention of the RWA owner. If the degree of activity is above thresholds, the Radiological Control Manager (RCM), division safety liaison, and division safety coordinator are notified. Follow-up corrective actions are initiated and tracked to completion by radiation protection personnel.

Number of Occurrences

The 3-year running average (performance periods FY95, 96 and 97) is three incidents per year; during the performance period to date there have been three reportable incidents that qualify under this measure.

- The Lab's audit of its own sealed source program revealed that eleven sealed sources out of over 400 sealed sources were not accounted for. Occurrence report SAN—LBL-EHS-1996-0003 was initiated and categorized as Off Normal.
- On 2/26/97 there was loss of control of P-32 labeled material which resulted in skin and personal clothing contamination as well as contamination of physical areas beyond the work authorization area (RWA). Occurrence report SAN—LBL-LSD-1997-0002 was initiated and categorized as Off Normal.
- On 4/17/97 there was loss of control of F-18 labeled material, which resulted in personal clothing contamination and contamination outside of a controlled area. Occurrence Report SAN—LBL-LSD-1997-0004 was initiated and categorized as Off Normal.

Successes/ Shortfalls

A proactive management strategy is in place to reduce the frequency and severity of loss of control of radioactive materials. A follow-up process aims at eliminating loss of control of radioactive materials. There were three reportable incidents during the performance period to date, which equals the 3-year running average.

The Lab has failed to adhere to its own and DOE's standard on management of its sealed sources.

Supporting Data

ORPS reporting records.

Performance Objective #4

Risk Management: *The Laboratory will ensure that for its programs and operations, ES&H risks are analyzed and controlled.* **(Weight = 11%)**

Summary

The Lab has excelled in its performance under this objective. It has conducted Emergency Drills and exercises on schedule and has appropriately implemented lessons learned.

The Lab agreed with the local DOE office on a set of three performance tasks for FY97. All tasks have been successfully completed.

Objective #4 Criterion 4.1

Emergency Readiness: *The Laboratory maintains the capability to respond appropriately to minimize injuries, degradation of the environment, loss of life and property damage in the event of an emergency.* **(Weight = 4%)**

Objective #4 Criterion 4.1 Performance Measure 4.1.a

Emergency Preparedness: *The Laboratory provides an Emergency Readiness Assurance Plan (ERAP) annually and implements it during the following fiscal year.* **(Weight = 4%)**

Assumptions:

- For FY97 the performance period is July 1, 1996 to June 30, 1997.

Gradient:

Meets Expectations:

- The ERAP is completed on time.
- The schedule for exercises and drills is met.

Exceeds/Far Exceeds Expectations:

- Lessons learned from the ERAP drills and exercises are implemented appropriately.

Performance Measure Result

Completion Status of the LBNL ERAP

The Emergency Readiness Assurance Plan (ERAP) for LBNL was completed on September 30, 1996 and is documented in memo DIR 96-260 from David McGraw to Richard Nolan (BSO).

Schedule for Drills and Exercises

The lessons learned from the May 14, 1996, full participation exercise were included in the ERAP submitted in September, 1996.

Drills conducted during the performance year:

- Emergency drill at Buildings 2, 29, 29 ABC on February 4, 1997. A summary report and lessons learned were published.
- Emergency Drill at the new Hazardous Waste Handling Facility (B85) was conducted on March 14, 1997. A summary report and lessons learned were published.
- A Lab-wide earthquake exercise—including a duck, cover and hold drill followed by evacuation of all buildings—was conducted on May 14, 1997. Building managers and emergency team leaders critiqued the conduct of the drill with their teams.
- A tabletop exercise for the Command Center Team was conducted on May 20 and 21, 1997. The exercise scenario used computer models to simulate a wild land fire threatening the Berkeley Lab. A summary report and lessons learned were drafted. A followup training to

disseminate lessons learned was held for building managers and emergency team leaders on July 29 and 30, 1997.

Successes/ Shortfalls

The Lab's ERAP has been completed on time. Scheduled exercises and drills have been performed on schedule and lessons learned are implemented.

Supporting Data

- Lawrence Berkeley National Laboratory, Emergency Readiness Assurance Plan, September 1996
- Memo DIR 96-260 from David McGraw to Richard Nolan.
- Annual Emergency Exercise Corrective Action Plan, 9/30/96

Objective #4 Criterion 4.2

Facility Safety: *The Laboratory plans and designs its facilities, and operates within them such that potential adverse impacts are controlled and mitigated to an acceptable risk.* **(Weight = 7%)**

Objective #4 Criterion 4.2 Performance Measure 4.2.a

Hazard Analysis: *The Laboratory maintains current and accurate Safety Analysis Reports (SARs) and Preliminary Hazards Assessments (PHAs) and its nuclear and non-nuclear moderate hazard facilities identify and operate within the facility's operating parameters defined as Technical Safety Requirements (TSRs) and Operational Safety Requirements (OSRs). For other facilities, appropriate hazard analyses are completed as required and a safety envelope is established.* **(Weight = 7%)**

Assumptions:

- FY97 the performance period is July 1, 1996 to June 30, 1997.
- The performance measure applies to nuclear and nonnuclear moderate hazard facilities at LLNL and mututally agreed-upon facilities at LBNL.
- The Laboratory will use existing guidance to decide the level of detail for hazards/safety analysis documents, TSRs and OSRs for nuclear and non-nuclear facilities.
- Safety Analysis Reports for nuclear facilities are reviewed annually. Hazards analysis for the other facilities are reviewed every five years or as required. Documents are amended whenever significant changes are planned.

Gradient:

Meets Expectations:

- The Laboratory provides a schedule for hazards/safety analysis in the quarterly reports.
- Hazards/safety analysis documents are in place or the schedule milestones are met. If milestones are not met, change requests are submitted to the approval authority before the original milestone date.
- Proactive management systems are in place to monitor operational changes and identify any necessary changes to hazards/safety analysis documents. The hazard /safety documents are updated and facility changes are implemented according to schedule.
- ORPS reportable occurrences of violations of TSRs and OSRs are maintained to within 25% of the previous year.

Exceeds:

- ORPS reportable occurrences of violations of TSRs and OSRs (Safety Envelope for LBNL) are decreased or maintained at the control limits.

Far Exceeds Expectations:

- In facilities with completed SARs, all operational changes were activated after a USQ review has been performed.
- No ORPS reportable violations for TSRs or OSRs occur.

- Hazards/Safety Analysis documents for nuclear and non-nuclear moderate hazard facilities are complete. Hazards analysis for other facilities are reviewed every five years or as required.
- Major facility safety upgrades identified through hazard analysis are completed ahead of schedule.

Performance Measure Result

Measure Agreement with Local DOE

The Lab and local DOE office agreed to the completion of three tasks that would satisfy the requirements for this measure in FY97. This is documented in the 1/8/97 memo to DOE BSO (Phil Roebuck).

The Lab agreed to:

1. Complete the Integrated Hazard Appraisal (IHA) process.
2. Complete development of the Integrated Functional Appraisals (IFA).
3. Develop and test a hazard assessment pilot; using hazard data from the IHA, one division will be chosen and hazard documentation requirements identified.

Schedule for Integrated Hazards Analysis

The Lab completed a comprehensive review of hazards throughout the site in October 1996. The Integrated Hazard Assessment (IHA) identified and cataloged workplace hazards for the whole Lab. This was a preliminary task in identifying applicable Work Smart Standards for the Lab. This initiative was completed in November 1996.

Status of Hazards/Safety Analysis

The Lab hired one FTE in support of the implementation of the IFA. The Lab has completed the 1997 IFA walkthroughs and reporting, for four divisions, and will complete data entry by the end of FY97.

Hazard Assessment Pilot

Based on IHA hazard data, the Chemical Sciences Division was chosen for hazard documentation requirements assessment. A Safety Analysis was written and completed.

Hazardous Waste Handling Facility

The Final Safety Analysis Document for the new HWHF was competed in April 1997. The facility's safety envelope is established through a set of Operational Safety Requirements.

Proactive Management Systems

PUB-3000 establishes line management responsibility to determine the need for process review and hazard analysis. Chapter 6 of PUB-3000 provides

- Hazard Assessment Flow chart for new facilities and projects, existing projects, and research proposals.

- Guidance for writing project descriptions.
- Guidance for process authorizations and Activity Hazard Documentation (AHDs).

Adherence to ES&H policies is a performance requirement for all Lab employees. The Lab formally documents qualifying hazardous operations through the Activity Hazard Documentation process. Determination for need of an AHD is conducted whenever there is a significant change in a process or a new process/project is being planned. Division self-assessments audit the Lab's systems for an effective activity hazard review process. Specific systems are implemented within each division usually through the Division Safety Committee.

The AHD process is consistent with these relevant DOE orders:

- DOE Order 5480.23, Nuclear Safety Analysis Reports.
- DOE Order 5480.25, Safety of Accelerator Facilities.
- DOE Order 5481.1A, SAN Management Directive: Safety Analysis and Review System.
- DOE Order 5481.1A, Safety Analysis and Review System.

Number of ORPS Reportable Occurrences of Violations of TSRs and OSRs

In the current performance period there have been no ORPS reportable occurrences of violations of TSRs and OSRs.

Successes/ Shortfalls

The Lab has provided a schedule for hazard analysis in this report (IFA/IHA). Hazards/ safety analysis documents are in place. Proactive management systems are in place assigning line management responsibility for hazard assessment. There were no ORPS reportable violations of TSRs and OSRs within the performance period.

The Lab has met all the success criteria for this measure.

Supporting Data

- 1/8/97 memo to Phil Roebuck, DOE/BSO.
- PUB-3000, Health and Safety Manual
- Operating Parameters Management Plan, 6/28/95.
- PUB-201, Regulations & Procedures Manual.
- PUB-5341, Chemical Hygiene and Safety Plan.
- ORPS database.

Performance Objective #5

Customer Focus: *The Laboratory will conduct its business in a manner that meets or exceeds expectations and, through continuous communications, will foster customer and stakeholder mutual trust and credibility.* **(Weight = 5%)**

Summary

The Lab has exceeded its performance expectations for this objective. FY97 continues to be a successful period for the Lab, providing opportunities for public outreach and development of trust and openness. The Lab has stepped up to these challenges by implementing a communications plan through an executive level communications taskforce aimed at identifying and addressing external stakeholder/customer concerns.

Public concern raised over issues revolving around releases of small amounts of tritium into the environment prompted the Lab Director to contribute $100,000 to a third party environmental monitoring effort.

The Lab has vigorously addressed internal customer ES&H needs through a variety of modalities. Executive customer concerns are raised and tracked directly through the directorate level.

Objective #5 Criterion 5.1

Customer Expectations: *The Laboratory has a system for identifying its ES&H customers and stakeholders and ensuring that their concerns are considered in its decision making and planning processes within the area of environment, safety and health.* **(Weight = 5%)**

Objective #5 Criterion 5.1 Performance Measure 5.1.a

External Customers: *The Laboratory measures and evaluates the environment, safety and health expectations of its external customers and incorporates the input into Laboratory programs as appropriate.* **(Weight = 2%)**

Assumptions:

- The intent is to obtain feedback such as during and after meetings, presentations and other already established activities and to evaluate the responses received. There is no expectation that the Laboratory will develop community surveys solely for the purpose of this measure.

Gradient:

Meets Expectations:

- The Laboratory has identified a core set of external customers and stakeholders.
- External customers opinions are solicited and analyzed. The Laboratory takes actions to address feedback concerns.

Exceeds/Far Exceeds Expectations:

- The Laboratory communicates actions taken to customers groups.

Performance Measure Result

Performance Period

The performance period for this measure is June 30, 1996 through July 1, 1997.

Identification of Lab Stakeholders

The Lab identifies key stakeholders throughout the Institutional Plan for FY1997 – 2002. The public media and Lab workers are recognized as important stakeholders who should be informed and assured that the Lab is being operated safely and with their best interests in mind. Strengthening communications at all levels, internal and external, to build trust with the public and Berkeley Lab employees is among the key elements of the Berkeley Lab Critical Success Factors. This emphasis parallels the Department of Energy's goal to change its culture to one of openness, communication, and trust. A Laboratory-wide Communications Plan was issued in 1995 and is being instituted as resources allow.

Solicitation of External Customer / Stakeholder Opinions and Communication of Actions Taken to Customer Groups

The Public Communications Office formalized the Community Relations Advisory Group, an interdisciplinary committee comprised of

representatives of Planning and Communications, Public Information, Government Relations, NEPA-CEQA Compliance, Science Education, Laboratory Counsel, Facilities, and various Environment, Health and Safety units. Meeting monthly, the group discusses and decides various strategies in engaging stakeholders within the Lab's decisionmaking process, while ensuring a coordinated approach to community relations. As a result, the Laboratory was able to be responsive and thorough in answering community requests for information in areas such as tritium emissions monitoring and control, waste management, and vegetation management. Other examples of results of communication activities included public meetings and the Tritium Issues Work Group.

Laboratory-Sponsored Public Meetings

Laboratory-sponsored public meetings were held and Laboratory appearances at community forums were made to engage in two-way exchanges with community stakeholders on issues related to waste management and the environment. In the Part B Permit Modification process, the Laboratory responded individually to more than 450 questions and comments from community members. In addition, the tritium emissions issue generated literally hundreds of pages of documentation requested by citizens and city officials. Tritium Lab personnel made frequent voluntary appearances before Berkeley City Council to educate the city leadership about scientific programs, and various community and government representatives were provided with personal tours of facilities that have been the subject of citizen concerns. The Director personally invited and will host the mayors of Berkeley and Oakland and each member of the respective municipality's City Council.

Tritium Issues Work Group

The Tritium Issues Work Group is an independent third-party monitoring committee established in FY97 as a result of Berkeley Lab's commitment of $100,000 to resolve issues involving tritium emissions. The broadly representative group includes regulators, citizens' groups, city officials and other stakeholders charged with developing sampling protocols to validate Berkeley Lab's conclusions about community health risks from tritium emissions.

Regulators

The Lab maintains active contacts with 15 environmental regulatory organizations (not including DOE).

Successes/ Shortfalls

The Lab has identified the appropriate set of external customers and stakeholders regarding current ES&H issues.

The Lab has incorporated external customer and stakeholder concerns into its decisionmaking and planning processes.

The Lab has openly communicated the actions it has taken and its responses to its external customers and stakeholders.

Supporting Data

- Meeting minutes maintained by the Environmental Protection Group and the Waste Management Group.
- Various local newspaper articles on the tritium issue.

Objective #5
Criterion 5.1
Performance Measure 5.1.b

Internal Customer Focus: *The Laboratory measures internal customer expectations or needs and maintains/improves services.* **(Weight = 3%)**

Assumptions:

- There is some existing baseline data.

Gradient:

Meets Expectations:

- Identify and track customer feedback.

Exceeds/Far Exceeds Expectations:

- Take actions to address feedback concerns.

Performance Measure Result

Performance Period

The performance period for this measure is Calendar Year 1996.

Existing Baseline Data

The Lab continues to listen closely to its internal customers, addressing customer concerns at the division liaison/safety coordinator level. Issues are documented in the minutes of the meetings EH&S division files and records and constitute the Lab's existing baseline data.

The Lab solicits input from its internal customers through dedicated process improvement teams or project brainstorming meetings; examples of these are described below.

Identifying and Tracking Customer Feedback

Division safety coordinator meetings are conducted regularly and are used to address internal customer concerns such as:

- Waste generator support, particularly in the area of waste generator training, waste characterization and the administration of non-conformance activity reports (NCARs).
- Employee EH&S training using the Job Hazard Questionnaire (JHQ); the Lab has directed significant resources toward improving the way JHQ data is managed. Internal Customer feedback has been largely positive.

Issues followup is largely completed outside the Division Safety Coordinator Meetings in individual communications.

Internal customer concerns and input were solicited in two significant initiatives in 1996.

IFA Process Improvement Team

During this performance period, the Lab continued its efforts to institutionalize the Integrated Functional Appraisal process as a tool for assessing Lab compliance issues. Internal customer input into how the process should be implemented was solicited by a two-day Process Improvement Team. Representatives from all Lab divisions participated in breakout sessions, brainstorming IFA implementation methodologies that would work across the Lab. The subsequent IFA was implemented in four divisions, with a range of employees from each division.

ISMS

The Lab kicked off its plan for implementing Integrated Safety Management by conducting a two-day retreat, hosted by the EH&S Division with the objective of soliciting input from representatives throughout the Lab. Speakers from private industry, DOE, LLNL, and other DOE sites made presentations on other integrated management systems, and shared their successes and failures, setting the stage for breakout sessions on the second day. Breakout sessions were held to strategize ISMS implementation and capture internal customer concerns and input. Customer input has been integrated into the ISMS implementation plan.

Continuous Improvement

The Lab recognizes the importance of using or making available as many communication modalities as possible. PUB-3000, the Lab's on-line Environment, Safety and Health manual is being updated. An electronic customer feedback and survey will be a new addition to the manual. This will provide another means of capturing Lab internal ES&H concerns.

The Lab is developing *Ethicsline*, a phone line to the Lab's Internal Audit Function to field anonymous calls on hazardous issues.

As part of the Lab's ongoing process of improvement in the area of customer service, a 1-day workshop entitled Sustaining Excellence in Customer Support Through Division Liaisons was conducted on January 11, 1996. The agenda included customer feedback by customer representatives and feedback from the Office of Assessment and Assurance.

Successes/ Shortfalls

In FY 1997 the Lab was successful in implemented two new systems for capturing customer ES&H concerns. Additionally, the Lab hosted three separate internal customer meetings on specific ES&H initiatives and many more meetings on general day-to-day ES&H issues. Internal customer concerns are incorporated into ES&H decision making and planning processes.

Supporting Data

- January 12, 1996 memo from Jeffrey Chung to David Balgobin. Re: performance measures activities undertaken. Ref: FSD-96-198.
- Division Safety Coordinator Meeting Minutes.

Self-Assessment Report for Fiscal Year 1997

Environmental Restoration and Waste Management

Ernest Orlando Lawrence Berkeley National Laboratory

Performance Characterization

The Berkeley Lab has satisfied performance gradients for all Environmental Restoration and Waste Management (EM) measures. Measure performance for EM 1.1.a, Waste Management, and EM 1.4.a, Cost and Schedule Variance, depend on year-end fiscal data. The current report was drafted using best projections from the most recent quarterly fiscal data. Final figures will be available in the first quarter FY98; final information for these measures will be submitted as supplemental data.

Waste management unit cost of making waste road-ready was reduced significantly over the baseline period. Unit cost reductions ranged from 16% to 89% for all three waste types (hazardous, mixed, and low-level).

Good progress was made for Measure 1.2.a, Advancement of the EM Program. The Lab demonstrates that EM supports innovative business solutions and practices in waste management through the development of a waste management database. The database is a central tool that assures compliance with DOE, state, and federal waste management requirements. EM technologies are developed and used at the Lab to reduce cost and liability in site restoration and waste management.

The Lab exceeded expectations in Measure 1.3.a, Environmental Restoration, with an 11% improvement over the baseline period.

Based on extrapolated third quarter fiscal data, the Lab satisfied the success gradients for Measure 1.4.a, Cost and Schedule Variances. Supplemental data will be submitted when year-end waste management and site restoration fiscal reports are complete.

Performance Objective #1

Environmental Restoration and Waste Management: *The Laboratory will conduct Environmental Management (EM) waste operations in a safe manner that protects human health, the environment and the public, and prevents adverse impacts thereon; the Laboratory will develop innovative solutions to advance the Environmental Management Program; and the Laboratory's Environmental Restoration Program will continually strive to improve efficiency and maximize remediation.* **(Weight = 100%)**

Summary

The Lab performance under this objective exceeded expectations in two measures and met expectations in the rest.

Its performance in bringing down waste management unit costs exceeded performance expectations as did its performance under Measure EM 1.2.a, Advancement of the EM Program.

The Lab met performance expectations for Measures EM 1.3.a and EM 1.4.a, Environmental Restoration and Cost and Schedule Variance, respectively.

Objective #1
Criterion 1.1

Waste Management: *The Laboratory's facilities and operations for handling waste will be managed to minimize the impact on the environment and to maximize the efficient use of EM operating funds. The Laboratory operates its waste facilities to continually strive to improve efficiency and reduce the waste inventory.* **(Weight = 25%)**

Objective #1
Criterion 1.1
Performance Measure 1.1.a

Waste Management: *The Laboratory will collect data on the volume of waste shipped for disposal or recycling (or made "road-ready") per total operations dollar spent (per fiscal year). This data will be trended for improvement in efficiency and compared to an established "Baseline Year."* **(Weight = 25%)**

Assumptions:

- The FY97 performance period is October 1, 1996 through September 30, 1997. Budgets and waste volumes not available for the self-assessment will be projected to the September 30, 1997 date.
- Total program funding is actual budget spent at end of fiscal year for operating and capital equipment (General Plant Project funds are excluded). Currently, these funds are in the Facility Operations and Maintenance Activity Data Sheets.
- Funds allocated for (1) new waste reduction or treatment units designed to improve efficiency or to reduce the amount of wastes for shipment or (2) meeting new DOE or regulatory requirements are excluded from the gradient calculations for this performance measure. These funds, however, shall be tracked and applied toward the next performance period.
- Waste volumes shall be limited to those funded by DOE-HQ(EM-30).
- Certified "Road Ready" volumes will be used for waste without disposal options, e.g. transuranic (TRU).
- Disposal credit will be given to waste volumes discharged to sewer.
- Success Criteria and Waste Type Matrix Elements will be renegotiated every year. The primary objective of the renegotiation will be to establish goals which will ensure that performance is improved versus the baseline.
- Performance Improvement will be adjusted for inflation.
- Low-level wastes (LLW) with CA-only constituents are managed as LLW.
- Toxic Substances Control Act and medical waste will be included with hazardous wastes (HW).
- Mixed wastes (MW) is defined as Federal Facilities Compliance Act mixed waste.
- "Other Waste" is defined as DOE-HQ(EM-30) waste not otherwise included (i.e. nonsewerable).
- Baseline year will be average of FY95 and FY96.
- The conversion factor of the specific density of water (1.0) will be used to convert the weight of wastes to volume measurements.

Gradient:

The score for this performance measure will be based on the following table.

- Far Exceeds Expectations: 90–100%

- Exceeds Expectations: 80–89%
- Meets Expectations: 60–79%
- Needs Improvement: <60%

The Success Criteria Gradient is arrived at through application of the following formula:

$$\text{Score} = \frac{\Sigma \text{ Waste Type Matrix Points}}{\text{Total \# of Waste Types}} \times 100\%$$

Waste Type Matrix Points are assigned from the table below by calculating for each applicable waste type the Performance Improvement (PI) :

$$\text{PI} = \frac{\text{Baseline Year Factor} - \text{Performance Year Factor}}{\text{Baseline Year Factor}} \times 100$$

Where:

$$\text{Performance Year Factor} = \frac{\text{Total Program Funding for Performance Year}}{m^3 \text{ Waste Type Disposed}}$$

$$\text{Baseline Year Factor} = \frac{\text{Total Program Funding for Baseline Year}}{m^3 \text{ Waste Type Disposed}}$$

Waste Type Matrix

Waste Type	PI<-5%	-5%<PI ≤ 5%	5%< PI <10%	10% ≤ PI <15%	PI ≥ 15%
HW	0	1	1	1	1
LLW	0	0.25	0.5	0.75	1
MW	0	0.25	0.5	0.75	1
TRU	0	0.25	0.5	0.75	1
Other	0	1	1	1	1

Performance Measure Result

Baseline Year Factors

For the baseline years FY95 and FY96, three waste types were made road-ready and shipped. The baseline year factors for hazardous waste, mixed waste, and low-level waste are $1.76/M^3 hazardous waste, $7274/M^3 mixed waste, and $1661/M^3 low-level waste, respectively.

Performance Year Factor

The projected performance year factor for FY97 is $1.48 $K/M^3, $1694 $K/M^3 and $176 $K/M^3 for hazardous, mixed, and low-level radioactive waste, respectively.

Performance Improvement (PI)

Based on the above figures, the projected performance improvement for FY97 is 16%, 77%, and 89% for hazardous, mixed, and low-level wastes, respectively.

Projected Score for FY97

As the Performance Improvement is >15% for all three waste types, the score is 100%.

Definition

Since this is the first year that the Lab is reporting on this measure, it is important to establish definitions of "road-ready" and ensure that road-ready waste is not counted more than once. Waste is shipped to Idaho National Engineering Laboratory (INEL) for incineration. As it takes several years to accumulate sufficient waste to make one shipment road-ready, waste will be defined as: that waste which has an INEL waste profile in place, which has been consolidated, which has been sampled and characterized as per the INEL Waste Acceptance Criteria (WAC), and which has been sealed in a drum to prevent further addition of waste. Furthermore, these drums will be marked to prevent waste being counted twice for this measure.

Disposal credit will be taken for waste that is decayed in place and discharged to the sewer.

Cost data for July through September 1997 was extrapolated from existing data. Final data will be available after the end of FY97 and will be submitted as supplemental data.

Successes/ Shortfalls

The Lab was very successful in reducing unit waste disposal costs for hazardous, mixed, and low-level waste streams. The score for this measure is 100%.

Supporting Data

- E-mail communication 7/28/97, A. Kumaranayagam to D. Balgobin re: Performance Measure 1.1.a Final Estimate.

	Average Baseline Year (FY95 & FY96) $K/M^3	FY97 Projected $K/M^3	Performance Improvement	Waste Type Matrix Points
Hazardous Waste	$1.76	$1.48	16%	1
Mixed Waste	$7274	$1694	77%	1
Low-Level Waste	$1661	$176	89%	1
			Σ waste type matrix points	3

Objective #1
Criterion 1.2

EM Program Innovation: *The Laboratory will develop innovative solutions to advance the Environmental Management Program. The EM Program includes Environmental Restoration, Waste Management, and Technology Development.*
(Weight = 25%)

Objective #1
Criterion 1.2
Performance Measure 1.2.a

Advancement of the EM Program: *The Laboratory will advance the state of the art technologies by implementing their usage; participate in the corporate advancement of the EM Program by providing solutions or assistance to other DOE/OAK sites; and identify and implement innovative technological solutions or business practices that result in savings.*
(Weight = 25%)

Assumptions:

- The performance period will be a single DOE fiscal year.
- It is recognized that actions may result in cost savings that extend for more than one year. Credit for cost savings may be taken in each year in which cost savings are realized, up to a total of five years.
- In general, accomplishments are expected using existing resources. In some cases, additional funding may be required to undertake specific innovative solutions. With the agreement of both parties, DOE-HQ(EM) may provide additional funds and/or allow the Laboratory to use cost savings realized to meet this performance measure.

Gradient:

- The degree of innovation achieved will be measured by a point system. Points will be awarded in each of several performance categories, with a total score from all categories being the final score for the performance measure. Projects may receive credit in more than one performance indicator category. The performance indicators and associated award points will be as follows:
  - Advance the state of the art technologies by implementing the usage of Laboratory technologies at DOE or other sites, or utilize other EM technologies at the Laboratory.

    Use of EM technology at the Laboratory: 1 point each technology

    Use of Laboratory developed technology at other sites: 1 point each technology

    Use of Laboratory developed technology at any DOE site: 2 point each technology
  - The Laboratory participates in the corporate advancement of the EM program by providing solutions or assistance on projects at other DOE sites. Projects should result in at least one of the following:

    Cost savings

    Efficiency improvement (i.e., quicker, better quality, etc.)

    Liability or risk reduction

    Use of Laboratory resources and/or facilities to aid others

  (1 point will be awarded for each project that meets one or more of the criteria listed.)

- Provide cost savings by identifying and/or implementing innovative technological solutions or business practices. Innovative technological solutions or business practices are defined as those that represent a significant change from current solutions or existing practices (technological or regulatory). They can not simply be refinements of existing technological or business practices, nor be cost savings due to a simple reduction in scope of work or deliverables.

  LLNL will be awarded 1 point for every $250,000 saved

  LBNL will be awarded 1 point for every $100,000 saved

Rating	Range (LLNL)	Range (LBNL)
Exceeds Expectations	>9	>6
Meets Expectations	4 - 8	3 - 5
Needs Improvement	0 - 3	0 - 2

Performance Measure Result

Waste Management

Innovative Business Practice

The Lab Waste Management organization has developed and is using an Oracle-based database to track and manage all waste streams in accordance with its Operational Safety Requirements (OSRs), and State, Federal and DOE requirements. This innovative business practice has resulted in cost savings. The database was developed at LBNL using EM 30 funds since no comparable commercial software package was applicable to the unique waste management needs of the Lab. Use of the database by all levels of waste management staff has resulted in a higher level of efficiency over manual or other waste management systems. The database is keyed into regulatory requirements and Waste Management's own applicable OSRs, allowing the facility to operate within its compliance envelope. These features reduce compliance liability and worker health risks. Development of actual cost savings would not be cost effective as it would entail the development and implementation of a whole new activity and task tracking system.

Use of Catalytic Oxidation

Chemical synthesis processes at the National Tritium Labeling Facility generate small amounts of tritium mixed with small amounts of organic chemicals. The gaseous mixture is passed over a catalytic oxidation unit that converts the organic fraction to carbon dioxide (a harmless gas present in the atmosphere in trace amounts) and water vapor. The resulting mixture of tritiated water vapor is collected on silica-gel and disposed as low-level waste.

- This EM-funded technology has resulted in cost savings and a reduction in risk / liability to the Lab. The Lab's success in implementing this technology also addresses public concerns over waste generation. Implementing catalytic oxidation creates a more benign type of waste.
- The unit cost for managing and disposing low-level mixed waste is over nine times greater than for pure low-level waste. Using catalytic oxidation significantly reduces the waste disposal costs.

Site Restoration

Cryogenic Drilling

Cryogenic drilling, an EM-funded technique (developed at the Lab) for drilling in highly fractured or otherwise unstable matrices without the use of contaminating materials such as stabilization muds, is used at the Lab. There is an improvement in efficiency over traditional methods, many of which would fail under these conditions. There is a reduction in risk and liability to the Lab, as no other possibly contaminating materials are used in the process. Liquid nitrogen, the cryogen, evaporates (actually boils at –195.8° C), leaving no residue. It is difficult to reliably estimate actual cost savings as this is an entirely new drilling technology and there is no reasonable comparable technology.

Cone Penetrometer

The development and use of a cone penetrometer provides a cost effective means of taking subsurface soil samples (down to 25 ft deep) without the use of a drilling rig. This methodology is currently being used at LBNL. There are cost savings over traditional means of sample acquisition as less time and equipment is used. Lab liability and worker health and safety are improved over alternative samplers because this is a safer instrument to use.

EM-50 Funded Projects

Other EM technologies in various stages of development and implementation at the Lab are:

- New ligands based on natural complexing agents.
- Analog site for characterization of fractured rock.
- Performance verification of viscous barriers.
- Removal and recovery of toxic metals from aqueous waste.
- New radioanalytical techniques. A new radioanalytical technique has been developed and demonstrated at LBNL that is more efficient and cost-effective than contemporary techniques. It has the advantage of using the entire emissions spectrum with correction algorithms for emission self-absorption.

Successes/ Shortfalls

The Lab has advanced the use of EM technologies and innovative business practices and has met the intent of this criteria and measure.

Supporting Data

See table, following page.

Project	EM funding source	Use of EM technologies	Points
Develop and implement Waste Management Database	EM 30	1. Used at LBNL	1
Catalytic oxidation	EM 30	1. Used at LBNL	1
New ligands based on natural complexing agents	EM 50	1. Used at LBNL	1
Analog site characterization of fractured rock	EM 50	1. Used at LBNL	1
Performance verification of viscous barriers	EM 50	1. Used at LBNL	1
Develop and implement cryogenic drilling	EM 50	1. Used at LBNL	1
Cone penetrometer	EM 50	1. Used at LBNL	1
New radioanalytical techniques	EM 50	1. Used at LBNL	1
Removal and recovery of toxic metals from aqueous waste	EM 50	1. Used at LBNL	1
		TOTAL POINTS	9

Objective #1
Criterion 1.3

Environmental Restoration - LBNL: *The Laboratory will strive for continuous improvement (increase) in the number of potential release sites (Solid Waste Management Units and Areas of Concern) completed per total ER dollars spent.* **(Weight = 25%)**

Objective #1
Criterion 1.1
Performance Measure 1.3.a

Environmental Restoration - LBNL: *This measure will track increases in the Site Completion Index, where:*
[(# of active sites in previous fiscal year)(S DR_i)] / [(# of active sites in current fiscal year)(total ER project dollars in millions)] = Site Completion Index, where DR_i is the difficulty rating for site i completed in the current fiscal year. **(Weight = 25%)**

Assumptions:

- Potential release sites are considered completed when the lead RCRA regulator approves "No Further Action" for the site.
- Potential release sites will be weighted in accordance with their difficulty to complete, ranging from 1 for easiest to 10 for most difficult sites to complete. These difficulty ratings will be included in the Current Year Work Plans developed by LBNL and approved by DOE at least annually. Revisions to the difficulty ratings will be managed through the existing Baseline Change Control procedures.
- The Site Completion Index is measured per fiscal year. Data from FY96 accomplishments will be used to develop the performance baseline. The factor (# of active sites in previous fiscal year)/(# of active sites in current fiscal year) has been included to make the calculation statistically consistent. This factor for the base year is considered to be unity.
- It's currently anticipated that the majority of sites which can be completed in a short time frame will be completed by the end of FY98. At that time, this measure will be revised to reflect the future character of the program.

Gradient:

Percentage increase in Site Completion Index *

Rating:	Range:
Far Exceeds Expectations	Index Increased >20%
Exceeds Expectations	10% < Index Increased < 20%
Meets Expectations	-10% ≤ Index Increased < 10%
Needs Improvement	Index Increased ≤ -10%

*Where the percentage increase in the Site Completion Index (SCI) is calculated as follows:

$$SCI = \frac{(\text{Site Completion Index current FY} - \text{Site Completion Index previous FY})\ (100)}{(\text{Site Completion Index FY97})}$$

Performance Measure Result

The Current Year Work Plans (currently supplemented with the Multi-Year Work Plan) cite the difficulty ratings as follows:

1. A difficulty rating of 2 will be assigned to Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) requiring a Risk Assessment.
2. A difficulty rating of 1 will be assigned to SWMUs and AOCs not requiring a Risk Assessment.

In both FY96 and FY97 the difficulty rating of all active sites is 1.

In FY96 there were 82 active sites at the beginning of the fiscal year; in FY97 there were 59 active sites at the beginning of the fiscal year. The budget decreased from $3.26M in FY96 to $3.18M in FY97. Projecting to the beginning of FY98, there will probably be 41 active sites. Performance for this measure is evaluated through the change in Site Completion Index (SCI) from year to year. The baseline year is FY96; the SCI differential in FY97 is 11.5%. Details are summarized below in Supporting Data.

Successes/ Shortfalls

The Lab continues to make good progress in closing active Site Restoration sites and has met the success gradients for this measure.

Supporting Data

- Quarterly review meeting notes, April 29, 1997.
- Quarterly Progress Report, May 1997.
- Letters of closure documenting site closure in FY96 and FY97 are maintained in LBNL Site Restoration files and records.

Performance Period	N_{yr}[1]	DR_i[2]	ΣDr_i[3]	Total ER project budget, $\$M_{yr}$	SCI[4] = $N_{yr-1}\Sigma Dr_i / (N_{yr}\$M_{yr})$	% change in SCI
FY96	82	1	na	3.26	7.06	
FY97	59	1	18 (the number of active sites closed in FY97)	3.18	7.87	11.5%

[1] N_{yr} = Number of active sites
[2] DR_i = Difficulty rating
[3] ΣDr_i where DR_i is the difficulty rating for site i completed in the current fiscal year
[4] For the baseline year FY96 the ratio of active sites is taken to be 1

Objective #1
Criterion 1.4

Cost and Schedule Variances: *The Laboratory's Environmental Management Program will be managed to improve project/program performance. The Laboratory measures its performance of projects/programs against schedule and cost baselines.* **(Weight = 25%)**

Objective #1
Criterion 1.1
Performance Measure 1.4.a

Cost and Schedule Variances: *The cost measure will track Laboratories' performance in executing projects in accordance with an approved and validated project cost baseline. The schedule measure will track the Laboratories' performance in executing projects in accordance with an approved overall schedule.* **(Weight = 25%)**

Assumptions:

- Cumulative percent cost variance (%CV) and cumulative percent schedule variance (%SV) will be obtained from the September Project Tracking System (PTS). The Cumulative CV, SV and BCWP values will be only for the fiscal year being evaluated.
- Baseline change proposals are reviewed and made, if approved, by DOE in 30 days.
- If the FIS Report contains an accounting error, CV, SV and ACWP values provided by LBNL and/or LLNL and verified by the respective DOE Site Representative may be used.
- Includes the following DOE-HQ(EM)-funded activities by ADS No.

  LBNL: SF148211, SF148231, SF148212, SF3914, and SF3931.

  LLNL: SF3941, SF3943, SF3944, SF3948, SF3946, and SF148101 - SF148130 (as one ADS).
- These DOE-HQ(EM)-funded activities do not include ADSs measured in the other Performance Measures.

Gradient:

Rating:	Range (LLNL):	Range (LBNL):
Far Exceeds Expectations	(CV+SV) > 5%	CV, SV > 5%
Exceeds Expectations		0% < CV ≤ 5% 0% < SV ≤ 5%
Meets Expectations	-5% < (CV+SV) ≤ 0%	-5% < CV ≤ 0% -5% < SV ≤ 0%
Needs Improvement	(CV + SV) ≤ -5%	CV, SV ≤ -5%

(A) Cost. The cost measure will track the Laboratories' performance in executing projects in accordance with an approved and validated project cost baseline.

$$CV = \frac{\text{Cumulative CV}}{\text{Cumulative BCWP}} \times 100\%$$

Given: CV = BCWP - ACWP

CV = Cost Variance

BCWP = Budgeted Cost of Work Performed

ACWP = Actual Cost of Work Performed

(B) Schedule. The schedule measure will track the Laboratories' performance in executing projects in accordance with an approved overall schedule.

$$SV = \frac{\text{Cumulative SV}}{\text{Cumulative BCWS}} = 100\%$$

Given: SV = - BCWP - BCWS

SV = Schedule Variance

BCWS = Budgeted Cost of Work Scheduled

BCWP = Budgeted Cost of Work Performed

Performance Measure Result

General Information

Data reported for this measure contain projected values for July, August, and September 1996. The final FY97 cost and schedule variance data will be published in mid-October 1997. This information will be submitted as supplemental data.

Waste Management Cost Variance

The projected cost variance for FY97 for ADSs SF3931 and SF3914 is 0%.

Waste Management Schedule Variance

The projected schedule variance for FY97 for ADSs SF3931 and SF3914 is 0%.

Site Restoration Cost and Schedule Variance Data

The projected cost and schedule variance for FY97 is 10% and 0%, respectively. Validated information will not be available until the middle of October 1997, when the September Progress Tracking System (PTS) report is published.

Successes/ Shortfalls

The Lab has successfully met its cost and schedule variance targets for Site Restoration ADSs SF148211, SF148231, and SF148212 and for Waste Management ADSs SF3914 and SF3931.

Supporting Data

(see next page)

Per the contract calculations:
projected CV = 0%
projected SV = 0%

From PTS report for: Jun-97 shaded cell = assumed values

ADS 3931

Month	BCWS	BCWP	ACWP	sched var	cost var		cum ACWP	cum BCWS	Total Funds Available
Oct-96	550	584	630	34	-46	584	630	550	1680.5
Nov-96	408	372	431	-36	-59	956	1061	958	1680.5
Dec-96	326	323	217	-3	106	1279	1278	1284	3680.5
Jan-97	420	408	408	-12	0	1687	1686	1704	3680.5
Feb-97	420	407	407	-13	0	2094	2093	2124	3680.5
Mar-97	420	739	739	319	0	2833	2832	2544	3680.5
Apr-97	401	475	475	74	0	3308	3307	2945	3680.5
May-97	401	537	537	136	0	3845	3844	3346	3680.5
Jun-97	404	306	306	-98	0	4151	4150	3750	4763.5
Jul-97	779	378	379	-401	-1	4529	4529	4529	5633
Aug-97	469	469	469	0	0	4998	4998	4998	5633
Sep-97	635	635	635	0	0	5633	5633	5633	5633
Cumulative	5633	5633	5633	0	0				

ADS 3914

Month	BCWS	BCWP	ACWP	sched var	cost var		cum ACWP	cum BCWS	Total Funds Available
Oct-96	45	47	47	2	0	47	47	45	23
Nov-96	38	59	59	21	0	106	106	83	23
Dec-96	23	33	33	10	0	139	139	106	388
Jan-97	30	13	13	-17	0	152	152	136	378
Feb-97	30	24	24	-6	0	176	176	166	378
Mar-97	30	29	29	-1	0	205	205	196	378
Apr-97	29	32	32	3	0	237	237	225	378
May-97	29	23	23	-6	0	260	260	254	378
Jun-97	29	20	20	-9	0	280	280	283	378
Jul-97	29	32	32	3	0	312	312	312	378
Aug-97	29	29	29	0	0	341	341	341	378
Sep-97	37	37	37	0	0	378	378	378	378
Cumulative	378	378	378	0	0				

Both EM-30 ADSs

Month	BCWS	BCWP	ACWP	sched var	cost var		cum ACWP	cum BCWS	Total Funds Available
Oct-96	595	631	677	36	-46	631	677	595	1703.5
Nov-96	446	431	490	-15	-59	1062	1167	1041	1703.5
Dec-96	349	356	250	7	106	1418	1417	1390	4068.5
Jan-97	450	421	421	-29	0	1839	1838	1840	4058.5
Feb-97	450	431	431	-19	0	2270	2269	2290	4058.5
Mar-97	450	768	768	318	0	3038	3037	2740	4058.5
Apr-97	430	507	507	77	0	3545	3544	3170	4058.5
May-97	430	560	560	130	0	4105	4104	3600	4058.5
Jun-97	433	326	326	-107	0	4431	4430	4033	5141.5
Jul-97	808	410	411	-398	-1	4841	4841	4841	6011
Aug-97	498	498	498	0	0	5339	5339	5339	6011
Sep-97	672	672	672	0	0	6011	6011	6011	6011
Cumulative	6011	6011	6011	0	0				

Self-Assessment Report for Fiscal Year 1997

Facilities Management

Ernest Orlando Lawrence Berkeley National Laboratory

Performance Characterization

Evaluation of the FY 1997 Performance Measures indicates that Ernest Orlando Lawrence Berkeley National Laboratory effectively met the spirit and goals of the Performance Objectives. Criteria were met or exceeded in all areas, and the overall performance level was improved over the previous year.

Performance Objective #1	**Real Property Management:** *The Laboratory will effectively manage Real Property.* **(Weight = 15%)**
Summary	Berkeley Laboratory has proactively managed the real property issues to accommodate for growth and changes in mission.

Objective #1 Criterion 1.1

FIMS: *Facilities Information Management System (FIMS) contains validated, complete, and accurate information.* **(Weight = 5%)**

Objective #1 Criterion 1.1 Performance Measure 1.1.a

Completed Data Elements: *Number of completed data elements/total number planned for completion.* **(Weight = 5%)**

Assumptions:

- A data completion plan will be made a matter of record in the first month of the fiscal year. The plan will address FIMS data requirements and quality assurance. A sampling scheme will be included as part of the plan. Missing or incorrect data are considered incomplete.

Gradient:

- Far Exceeds Expectations - 0.995
- Exceeds Expectations - 0.99
- Meets Expectations - 0.98
- Needs Improvement - less than 0.98*

Performance Measure Result

Number of completed data elements is 1,255. Total number planned for completion is 703. Number of completed data elements/total number planned for completion is 1,255 / 703 = 1.785.

Successes/ Shortfalls

Resources were available to place more effort in this area than originally planned.

Supporting Data

Self-Assessment was performed on July 3, 1997. Results of assessment will be available at end of fiscal year. See following tables for actual listing of completed data elements.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

FY97 PLAN
(Based on 76 Buildings and 45 Trailers)

Asset	Tab	Data Element	Values/Asset		Approx. Total Fields		Completed
Bld	Bld Info	Contractor-Derived RPV	1		76		75
Bld & Trlr	Bld Info	Seismic Exemption	1		121		120
		Seismic Essential	1		121		120
	Condition	Seismic Model Bld Type	1		121		120
		Seismic Historic	1		121		120
Bld & Trlr	Condition	Summary Condition	1		121		120
Bld	Condition	Rehab Cost	1		11		11
		Rehab Date	1		11		11
				TOTAL	**703**	**SUBTOTAL**	**697**

FY97 ADDITIONAL
(Based on 75 Buildings and 45 Trailers)

Asset	Tab	Data Element	Values/Asset	Approx. Total Fields		Completed
Site	ODS Info	Approx. Qty in Use	11	11		11
		Virgin/Reclaimed Stock	11	11		11
		Recov/Recycled Stock	11	11		11
Bld	Safety Docs	Basis of Initial Operation	1	75		75
		Safety Analysis Doc	1	75		75
		Justif for Continuing Op	1	75		75
		Prelim Haz Analysis	1	75		75
		Prelim Safety Analysis	1	75		75
		Final Safety Analysis	1	75		75
		Tech Safety Reqmts	1	75		75
					SUBTOTAL	**558**
					TOTAL	**1,255**

1.1.a = Completed Data Elements / Total # Planned for Completion **1255/703 = 1.785**

Objective #1 Criterion 1.2	**Office Space Utilization:** *The Laboratory will optimize its total office space utilization (on-site and leased space).* **(Weight = 5%)**
Objective #1 Criterion 1.2 Performance Measure 1.2.a	**Office Space Standard:** *Square feet per person for permanent and leased office space.* **(Weight = 5%)** **Assumptions:** • The intent is to efficiently and cost effectively utilize office space consistent with GSA Standards. The office space inventory, space utilization determination and method of calculation of space utilization will be made a matter of record in the first month of the fiscal year. **Gradient:** • Far Exceeds Expectations - 10% under standard or 10% reduction from previous year • Exceeds Expectations - 5% under standard or 5% reduction from previous year • Meets Expectations - at standard or closer to standard than previous year • Needs Improvement - above standard and no decrease from previous year*
Performance Measure Result	The agreed standard is 135 square feet per person. Square feet of primary office space is 351,318. Number of occupants is 3,337. Square feet per person for permanent and leased office space is 351,318 / 3,337 = 105.
Successes/ Shortfalls	None identified.
Supporting Data	See following table for quarterly tabulations. We expect similar ratios throughout the remainder of the fiscal year.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

Office Space Utilization

Office Space* (sf)	Baseline 4Q FY96	1Q FY97	2Q FY97	3Q FY97
Primary	344,161	344,735	349,962	351,318
# of Occupants**	3,230	3,172	3,241	3,337
Office Utilization (sf)***	107	109	108	105

*Source: Space Database (Facilities Department).

**Source: FSTAFF Database (Human Resources). Includes all persons assigned office space, e.g., guests, faculty, etc.

***Standard agreed upon by DOE and LBNL = 135

Office Space = Hill, Calvin, Donner and locally leased office space minus Exempt areas.

4Q 96 excludes some office area in Exempt buildings: 10, 80, & 90E.

1Q 97 excludes some office area in Exempt buildings: 6, 10 & 80.

2Q 97 excludes some office area in Exempt buildings: 6, 10 & 80.

3Q 97 excludes some office area in Exempt buildings: 6, 10 & 50F.

Objective #1 Criterion 1.3

Substandard Building Space: *The Laboratory will reduce its total substandard building space.* **(Weight = 5%)**

Objective #1 Criterion 1.3 Performance Measure 1.3.a

Building Space Conversion: *Actual square feet of substandard building space converted or eliminated/ square feet of substandard building space planned for conversion or elimination.* **(Weight = 5% - LBNL/LLNL)**

Assumptions:

- Converted or eliminated means upgraded, renovated, deactivated, demolished, excessed, etc. The conversion plan will be made a matter of record in the first month of the fiscal year. Measure not applicable to LANL.

Gradient:

- Far Exceeds Expectations - 1.10
- Exceeds Expectations - 1.00
- Meets Expectations - 0.90
- Needs Improvement - less than 0.90 *

Performance Measure Result

Actual square feet of substandard building space converted or eliminated is 16,115. Square feet of substandard building space planned for conversion or elimination is 7,490. Actual square feet of substandard building space converted or eliminated/square feet of substandard building space planned for conversion or elimination = 16,115/7490 = 2.15.

LBNL Definition

Substandard building space is defined as space within buildings that does not consistently meet the institutional needs or objectives of the Laboratory. Institutional needs or objectives include, but are not limited to, technical and environmental, health, and safety requirements; infrastructure capacity; and structural and cost-effective maintenance. The definition applies only to this measure. It does not apply, nor is the space under this definition, transferable to any other context. Due to the revised definition, total substandard building space will not be determined during this fiscal year. By converting or eliminating substandard space, the total substandard building space will be reduced. "Converted or eliminated" means upgraded, deactivated, demolished, excessed, etc. Substandard space and the conversion plan will be made a matter of record in the first half of the fiscal year. Berkeley Lab's work plan for FY97 follows.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

Successes/ Shortfalls

Due to unanticipated programmatic growth in some divisions, more space had to be upgraded to accommodate new occupants. Converted spaces included lead abatement, ventilation, and egress improvements. Space converted from one use to another (e.g., dry lab to wet lab), which was judged adequate before conversion, is not included in this measure.

Supporting Data

See following table for actual listing of buildings, rooms and areas.

Work Plan for FY97

FY97 Conversion:	Building	Reason	Room Area (ft^2)	Bldg Area Planned (ft^2)	Actual Area Converted (ft^2)
Bldg 50 Ventilation Upgrade	50-6056	Upgrade	89	**601**	
	50-6057		94		
	50-6058		100		
	50-6059		92		
	50-6060		81		
	50-6061		81		
	50-6062		64		
Bldg 10 Lab Upgrades	10-118 Suite	Upgrade	1,527	**1,527**	
Ventilation Upgrade	77-141	Upgrade	5,362	**5,362**	
Improve Ventilation to Machine Rooms	2	Upgrade			**1,998**
Lead Abatement	44-101	Upgrade	545		
	44-101A		147		
	44-101B		68		**760**
Provided Ventilation	50-4002	Renovate	403		**403**
Improve Egress and Ventilation;	51-200A	Upgrade	177		
Add Smoke Detectors	51-200B		215		
	51-200C		298		
	51-200D		110		
	51-200E		208		**1,008**
Converted Dry Lab into Wet Lab	64-223	Renovate	684		
(upgraded air, sink, power)	64-224		1,574		
	64-235		102		**2,360**
Lead Abatement	64-136	Upgrade	7,830		**7,830**
Converted Radioactive Area to Wet Lab	70-131	Renovate	184		
	70-131A		427		**611**
Ventilation and Power	71-121	Upgrade	341		
	71-114		204		**545**
Converted a Dry Lab into a Wet Lab	70A-4475	Renovate	600		**600**
TOTAL SQUARE FEET				**7,490**	**16,115**

Performance Objective #2	**Physical Assets Planning:** *The Comprehensive Integrated Planning Process should reflect current and future Laboratory needs.* **(Weight = 10%)**

Summary

With the joint formulation of LCAM's partnering agreement, LBNL has redirected planning efforts to focus on value-added activities and de-emphasized reporting requirements. We have focused on improving comprehensive integrated processes, documenting plans in new ways, and continuously maintaining information.

Objective #2 Criterion 2.1

Comprehensive Integrated Planning Process: *The Laboratory develops, documents, and maintains a comprehensive integrated planning process that is aligned with DOE mission needs.* **(Weight = 10%)**

Objective #2 Criterion 2.1 Performance Measure 2.1.a

Effectiveness of Planning Process: *The planning process is executed to achieve maximum effectiveness in anticipating and articulating DOE and Laboratory needs.* **(Weight = 10%)**

Assumptions:

- The Laboratory will work with DOE counterparts in a cooperative effort to continuously evaluate the effectiveness of the comprehensive land-use planning process through the development of Laboratory specific planning elements.

Gradient:

- Far Exceeds Expectations - 0.90
- Exceeds Expectations - 0.80
- Meets Expectations - 0.70
- Needs Improvement - less than 0.70 *

Performance Measure Result

Throughout the fiscal year, Berkeley Lab has worked continuously with its DOE counterparts to review planning activities and conduct site visits. We developed a list of planned activities during the first month of the fiscal year and reviewed the status of each activity throughout the year. Changes to activities or schedules were brought to DOE counterpart's attention when they occurred.

Comprehensive Facilities Plan

Plan: Develop and document (the new) Comprehensive Facilities Plan as a stand-alone technical document for use by staff and DOE personnel. It will be printed in FY97 and usable for the next 5 years (through FY02). It will document

- Current site and space condition
- Planning analyses and projections
- 5- and 20-year plans

for the effective use and orderly future development of land and capital assets at the Berkeley Lab site. If appropriate, this document will also serve as a base for developing the Long Range Development Plan.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

Accomplishment: On schedule to print in September. Updated current site and space conditions, including all maps and tables. Finalizing document with textual descriptions of planning analyses and projections, and revising the 5- and 20-year plans. Have generated space utilization analysis and forecasted space and population growth. Have developed extensive siting studies, including master planning several focused areas for office or wet lab space under various funding scenarios. Worked jointly with several disciplines to develop comprehensive analyses of infrastructure needs and assessment of existing building potential in "3-R's" study. The 3-R's are: Rehabilitation (fixing existing building and maintaining current functions); Adaptive Reuse (changing facility to new and different function); and Redevelopment (demolishing existing facility and rebuilding to better accommodate mission requirements).

Vegetation Management

Plan: Continue to implement Maintenance Plan. Review new plant communities in a couple of specific areas. Release parasitoids in eucalyptus groves as we continue to thin groves to sustainable densities. Plant new trees to provide and reinforce screening at specific Lab locations. Field-validate FARSITE modeling with local fire suppression districts and integrate strike team response planning into maintenance plan. Complete re-vegetation guidelines and coordinate with maintenance plan.

Accomplishment: On schedule and on budget. High-risk fuels removed on 8 acres, completing the mid-canyon fuel reduction zone begun in FY96. Goats and humans have reduced fuels on perimeter. Germination of Berkeley Blue Rye, a native perennial grass, continues to be successful. Clumps are expanding well in the second year of growth. Conversion of annual grasslands to perennial grasslands is successful to this point. The area in which the prescribed pile burn was conducted exhibits low germination of broom and other weedy material. We are advancing conversion to Oak Savanna by one year—planted initial oaks in this area during FY97. Due to release of parasitoids, no trees at the Laboratory were lost to the borer in FY97. (Trees in adjacent watersheds were lost to the borer.) Purchase contract for 7,000 parasitoids to be released in the final quarter of FY97. Releases are done during the flight period of the borer—July through September. Pre-release workplan tour completed with UC Riverside entomologists. Next phase will be evaluation of "over-wintering" of parasitoids (in conjunction with the East Bay Hills Regional Parks District) and determination of release figures for FY98. Two hundred oaks and redwoods have been planted in accordance with the screening re-vegetation plan. Next phase will be further plantings in FY98. Worked with the Chief of the Laboratory Fire Department. Met with Fire Chiefs and Fire Suppression Operations Chiefs from the Cities of Berkeley, Oakland, and El Cerrito/Kensington as well as East Bay Regional Parks and the local region of the California Department of Forestry. Reviewed FARSITE computer simulation program inputs (updated based on modeling completed for the litigation arising from the 1991 Oakland Hills Fire) and run results. Validation completed in the field so that participants could use their professional judgments in an on-the-ground assessment. Validation accomplished. Next phase will be to:

- Review some parametric runs regarding ember dispersal and the flammability of woodlands under various fire conditions.
- Facilitate a FARSITE users' group with participation for the validating agencies and others.

Draft revegetation guidelines completed. Staff to be assigned to update text and graphics in draft. Next step—issue final working draft by end of fiscal year.

Facilities Planning Web Site

Plan: Update, revise, and maintain Web site. Priority of updates will be based on need (service to Lab staff, funding, and other commitments.) Activities may include revising descriptions, key plans, area sheets, project lists, etc.; checking links; and fixing tables. Add or revise *Comprehensive Facilities Plan* and Site and Facilities section of the *Institutional Plan*. Add parking map, signage program with guidelines, and order form.

Accomplishment: Although most activities have been accomplished, such as revising planning descriptions, key plans, area sheets, project lists, planning documents (*Comprehensive Facilities Plan* and Site and Facilities section of *Institutional Plan*), parking map and signage, the actual update to Web site has been delayed to FY98 due to a change in priorities within the Facilities Department. Organizational structure for the Facilities Department Web site has been developed and elements are being implemented.

Space Needs Assessment Plan (SNAP)

Plan: Work with Lab divisions to identify current space allocation and utilization and forecasted space needs, and develop and prioritize space options. Establish process and guidelines for determining space solutions.

Accomplishment: Completed tasks identified for FY97, and began preparations for Lab-wide senior management space retreat. Facilities Planning staff will be conducting the first Divisional Space Retreat. Information collected, analyzed and forecasted in SNAP will be a main focus in the retreat. In preparation, we are continuing to meet with each division representative to review current space utilization and 5-year forecasted needs. We have developed and will propose space policies and guidelines to better manage space requests, utilization, and future use.

Signage

Plan: Continue to broaden and implement Lab-wide signage program. Develop and expand interior signage modules to include emergency evacuation or hazard information, level indicators for stair wells, etc. Develop and implement exterior signage program for the ALS area and establish Lab-wide building number policy.

Accomplishment: Extensively expanded scope of projected FY97 signage activities. In process of completing the fabrication and installation of 18 signage projects that include new modules (such as interior emergency

evacuation plans, level indicators for stairwell signage, and staff directories); exterior vehicular directional, pedestrian directional, pedestrian orientation, building identification, building entrance, and Laboratory entrance kiosk signage; and parking modules. Major signage projects include the following areas: Bldg 6 Advanced Light Source (ALS), Bldg 84 Human Genome Laboratory (HGL), Bldg 51 and 51L Computer Training Facility, Bldg 50 Complex, Bldg 65 Human Resources, and Blackberry Entrance Gate. We have also developed and installed graphics for the new Site Security vehicles and revised the side removal panels for the shuttle buses. We are in the process of developing a Lab-wide parking map for visitors that would relate parking modules (in ALS & HGL areas).

Geographical Information System (GIS)

Plan: Assess and if necessary implement new GIS platform. Update base map, parking inventory, etc. and continue to coordinate with Lab staff in other functional areas (EH&S, Computing Sciences, Telephone Services, Fire Dept., etc.) to broaden GIS information. Work with external community (UC Berkeley, East Bay Regional Parks, EBMUD, cities of Berkeley and Oakland, etc.) to give or gather information.

Accomplishment: Assessment of the status of the two leading products identified in the initial survey was completed. Determined that operational costs will be lower with the adoption of another software package. Purchase order issued to Procurement. Software will be installed before the end of the fiscal year. Updates of base map and parking inventory map completed and copies made available to the entire Laboratory community through the "Print Room." Copies have been provided to each of the units expressing specific interest, and input regarding potential uses and upgrades is being sought. The Laboratory's biological data, and that recorded by EBMUD, are being coordinated to create a perspective on a broader scale. The City of Oakland has invited the Laboratory to participate in a joint mapping exercise with itself and the major utilities serving the area. The City of Berkeley is moving ahead to implement its GIS and anticipates implementation will be completed in FY98. UC Berkeley and the Lab have shared data sets of building and utilities to permit updating of maps.

Parking Analysis

Plan: Evaluate and establish appropriate person-per-parking-space ratio for long range planning purposes. Conduct annual inventory, analyses, and projections. Identify potential parking projects and funding requirements.

Accomplishment: Parking inventory and survey completed. Parking maps identifying all parking spaces, their designations, and locations have been confirmed, revised, and updated. New parking maps have been generated and distributed. Identification of potential parking projects in the eastern end of the site has been completed. Work is progressing on the survey of mid-site and western-end project potentials. Work will be completed by the end of the fiscal year.

FIMS

Plan: Populate new and update existing fields, participate in DOE-wide working groups, support newsletter, etc.

Accomplishment: Met all scheduled FIMS activities for FY97 and have populated more fields than planned. Conducted FIMS self-assessment with DOE representative and participated in DOE-wide FIMS workshop, training, and newsletter activities.

Facilities Condition Assessment

Plan: Using DOE-supported criteria, assess buildings and subsystems consistent with Berkeley Lab's 5-year maintenance program. (Subsystems include structural, architectural, HVAC, electrical, plumbing, and special systems.)

Accomplishment: Summary level conditions for each building were assessed with updated information at hand, in response to DOE/HQ request during third quarter of fiscal year. The 10-building plan for a condition assessment based on the Argonne model was also completed.

Successes/ Shortfalls

None identified.

Supporting Data

See following table for listing of planning activities that achieved maximum effectiveness in anticipating and articulating DOE and Laboratory needs.

FY97 Facilities Planning Activities
(Part 2 of 2)

Activity Name	Start Date	Finish Date	1996			1997									Project Manager
			O	N	D	J	F	M	A	M	J	J	A	S	
COMPREHENSIVE FACILITIES PLAN															McClure
Current Condition	10/01	01/30	⇒	⇒	⇒	⇒									
Analyses & Projections	10/01	02/28	⇒	⇒	⇒	⇒	⇒								
5 & 20 Year Plans	10/01	03/30	⇒	⇒	⇒	⇒	⇒	⇒							
Documentation	02/01	06/30					⇒	⇒	⇒	⇒	⇒				
Approvals	07/01	07/30										⇒			
Revise Documentation	08/01	08/30											⇒		
Print Documentation	09/01	09/30												⇒	
VEGETATION MANAGEMENT															McClure
Field Validation Far-Sight Models	11/01	02/28		⇒	⇒	⇒	⇒								
Review New Plant Communities	03/01	03/30						⇒							
Plant New Trees for Screening	11/01	05/30		⇒	⇒	⇒	⇒	⇒	⇒	⇒					
Update Guidelines	05/01	05/30								⇒					
Release Parasitoids	06/01	08/30									⇒	⇒	⇒		
FACILITY PLANNING WEB SITE															Loo
Update	10/12	02/08													
Revise CFP	09/28	10/05												⇒	
Add New Activities	04/06	09/28							⇒	⇒	⇒	⇒	⇒	⇒	
SPACE NEEDS ASSESSMENT PLAN															Sullivan
Identify Allocation/Utilization	10/01	10/30	⇒												
Needs Assessment	10/01	11/30	⇒	⇒											
Options	11/01	09/30		⇒	⇒	⇒	⇒	⇒	⇒	⇒	⇒	⇒	⇒	⇒	
Guidelines	01/01	03/30				⇒	⇒	⇒							
Revise Allocation/Utilization	04/01	06/30							⇒	⇒	⇒				
SIGNAGE DEVELOPMENT															Chen
Interior	12/01	01/30			⇒	⇒									
Exterior	12/01	03/30			⇒	⇒	⇒	⇒							
Implementation	04/01	09/30							⇒	⇒	⇒	⇒	⇒	⇒	
GIS DEVELOPMENT															McClure
Assessment	12/01	12/30			⇒										
Update Maps	01/01	03/30				⇒	⇒	⇒							
Coordination	12/01	09/30			⇒	⇒	⇒	⇒	⇒	⇒	⇒	⇒	⇒	⇒	
OTHER ACTIVITIES															All
FIMS	10/01	08/03	⇒	⇒	⇒	⇒	⇒	⇒	⇒	⇒	⇒	⇒			
Facilities Condition Assessment	02/01	05/18					⇒	⇒	⇒	⇒					
Parking	04/01	09/28							⇒	⇒	⇒	⇒	⇒	⇒	

Performance Objective #3	**Project Management:** *The Laboratory will complete construction projects within approved budgets and schedules.* **(Weight = 35%)**
Summary	Berkeley Lab continues to meet expectations for completing projects on time and within budget.

Objective #3 Criterion 3.1

Construction Projects Under $2000K: *Construction projects greater than $500K and less than $2000K meet baselines.* **(Weight = 6%)**

Objective #3 Criterion 3.1 Performance Measure 3.1.a

Project Schedule: *Number of projects completed on schedule/total number of projects scheduled for completion.* **(Weight = 6%)**

Assumptions:

- The intent is for timely execution of construction projects. Project completions adjusted for uncontrolled forces such as weather, strikes, etc. Beneficial occupancy is considered completion. A list of projects scheduled for completion will be made a matter of record in the first month of the fiscal year. By mutual agreement between the Laboratory and DOE, projects may be weighted for project significance and/or for late/early completion.

Gradient:

- Far Exceeds Expectations - 1.00
- Exceeds Expectations - 0.85
- Meets Expectations - 0.70
- Needs Improvement - less than 0.70 *

Performance Measure Result

Under the revised plan approved by DOE, four projects were scheduled for completion in FY 1997. Four projects were completed. 4 / 4 = 1.00

Successes/ Shortfalls

None identified.

Supporting Data

See following table.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

No.	Loc	Project Title	PM	TEC	Scheduled Completion (Mo/Yr) Actual (Forecast)	Completed
		Construction Projects greater than $500k and less than $2,000k				
1	72	Office/Lab Addition (NCEM)	CA	1550	Jan-97	1
~~2~~	~~2~~	Lithography Lab (See Note 1)	~~KH~~	~~750~~	~~Sep-97~~	N/A
3	10	Chemical Dynamics Lab Conversion	JP	800	Apr-97	1
4	2	Molecular Design Institute (See Note 2)	JP	710	Aug-97	1
5	70A	Upgrade Glove Box System (See Note 3)	PO	535	Apr-97	1
					Total	4

$$3.1.a = \frac{\text{\# of projects completed}}{\text{\# of projects scheduled for completion}} = \frac{4}{4} = 1.00$$

Notes

1. Project deleted from list for FY97 completion to accommodate on-going research in the affected space. DOE approval letter dated June 30, 1997 pertains.
2. Project completion date changed from May-97 to Aug-97 to accommodate user research schedule and one month construction completion delay.
3. Project TEC revised in Dec-96 from $490K to $535K; Therefore, project added to the performance plan.

Objective #3 Criterion 3.2

Construction Projects Over $2000K: *Line-Item projects (including any project $2000K and over regardless of type of funds) meet baselines.* **(Weight = 29%)**

Objective #3 Criterion 3.2 Performance Measure 3.2.a

Total Estimated Cost (TEC): *Estimated cost at completion for all active projects/current baseline TEC for all active projects.* **(Weight = 10%)**

Assumptions:

- The intent is to measure Laboratory performance in executing projects within the approved TEC. The method of calculating estimated cost at completion and how to handle contingency will be made a matter of record in the first month of the fiscal year. Disposition of pending Baseline Change Proposals, for the purposes of this measure, will be made by mutual agreement in the first month of the fourth quarter of the current fiscal year. By mutual agreement between the Laboratory and DOE, projects may be weighted for project significance.

Gradient:

- Far Exceeds Expectations - 0.96
- Exceeds Expectations - 0.98
- Meets Expectations - 1.00
- Needs Improvement - greater than 1.00 *

Performance Measure Result

All projects were completed within the approved TEC.

51,895K / 51,895K = 1.00

Successes/ Shortfalls

None identified.

Supporting Data

See following table.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

Item No.	Loc	Project Title	TEC @ Completion	Baseline TEC	Uncontrollable or Directed Changes	Adjusted Baseline TEC
1	85	Hazardous Waste Handling Facility	13,125	13,125	0	13,125
2	Site	East Canyon Electrical Safety	3,854	3,854	0	3,854
3	6	ALS Structural Biology Support	7,882	7,882	0	7,882
4	84	Human Genome Laboratory[1]	24,634	24,634	0	24,634
5	Site	Sanitary Sewer Restoration	2,400	2,400	0	2,400
		Total $	51,895	51,895		51,895

$$3.2.a = \frac{\Sigma\text{TEC @ Completion}}{\Sigma\text{TEC Baseline}} = \frac{51,895}{51,895} = 1.00$$

[1]Baseline change #4 on the Human Genome Laboratory revised the baseline TEC downward $66K from $24,700K to a new total of $24,634K.

Objective #3
Criterion 3.2
Performance Measure 3.2.b

Project Schedule: *Estimated schedule at completion of all active projects/current baseline schedule of all active projects.* **(Weight = 7%)**

Assumptions:

- The intent is to measure Laboratory performance in executing projects in accordance with the approved schedules. Schedule measured in months and cumulative for all Line Item projects. Completion is defined as construction completion or beneficial occupancy as mutually agreed to between DOE and the Laboratory. Disposition of pending Baseline Change Proposals, for the purposes of this measure, will be made by mutual agreement in the first month of the fourth quarter of the current fiscal year. By mutual agreement between the Laboratory and DOE, projects may be weighted for project significance and/or for late/early completion.

Gradient:

- Far Exceeds Expectations - 0.90
- Exceeds Expectations - 1.00
- Meets Expectations - 1.10
- Needs Improvement - greater than 1.10 *

Performance Measure Result

Of the five projects, two were on schedule, two slightly over schedule, and one significantly ahead of schedule.

Successes/ Shortfalls

The Sanitary Sewer Restoration project was completed 15 months ahead of schedule due to an innovative design alternative.

Supporting Data

See following table.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

Item No.	Loc	Project Title	Assigned PM	Funding Type	Funding Year	A Baseline Start	B Baseline Compl	C Actual (Forecast) Compl	D Actual Schedule Months C-A	E Uncontrollable or Directed Changes	F Baseline Months B-A+E
1	85	Hazardous Waste Handling Facility (See Note 1)	Harkins	LIP	1988	Feb-88	Jan-97	Feb-97	111	0	110
2	Site	East Canyon Electrical Safety	Pickrell	LIP	1992	Feb-92	Oct-96	Oct-96	58	0	58
3	6	ALS Structural Biology Support (See Note 2)	Harkins	LIP	1994	Jan-94	Dec-96	Feb-97	38	0	36
4	84	Human Genome Laboratory	Siemiatkoski	LIP	1994	Dec-93	Dec-97	(Dec-97)	50	0	50
5	Site	Sanitary Sewer Restoration	Orozco	LIP	1996	Jan-96	Aug-98	May-97	17	0	32
								Total Months	274		286

3.2.b $$\frac{\Sigma\text{Schedule Months(Actual/Forecast Completion-Baseline Start)}}{\Sigma\text{Schedule Month Baseline(Baseline Completion-Baseline Start)}} = \frac{274}{286} = 0.96$$

Notes

1. Baseline change #5 on the Hazardous Waste Handling Facility revised the baseline completion date to January 1997.
2. Baseline change #7 on the ALS Structural Biology Support Facilities project revised the baseline completion date to December, 1996.
3. Beneficial occupancy of the scope of work for Sanitary Sewer Restoration as defined in the original project baseline was completed in May, 1997.

Objective #3
Criterion 3.2
Performance Measure 3.2.c

Work Performed: *Number of milestones completed on schedule/number of milestones planned for completion.* **(Weight = 12%)**

Assumptions:

- The intent is to measure actual progress against that planned for the fiscal year and for the Laboratory to commit and cost funds in a timely manner. A milestone list for all active projects will be negotiated with DOE and made a matter of record in the first month of the fiscal year. Only significant milestones will be listed, but each active project will have at least one milestone per year. By mutual agreement between the Laboratory and DOE, milestones may be weighted for project significance and/or for late/early completion. Negotiated milestones are not to be interpreted as baseline change approval. Milestones must be consistent with either approved or proposed baselines.

Gradient

- Far Exceeds Expectations: 1.00
- Exceeds Expectations: 0.90
- Meets Expectations: 0.80
- Needs Improvement: Less than 0.80

Performance Measure Result

All planned milestones were completed.

Successes/ Shortfalls

None identified.

Supporting Data

See following table.

	Project	Milestone	Planned				Actual	Milestone		
			Initial	Adjustment (days)	Note	Current	(forecast)	Met	Pending	Not Met
1	**Sanitary Sewer Restoration**	Issue Notice to Proceed	Oct-96			Oct-96	Oct-96	1	0	
2		Establish detailed construction Schedule	Nov-96			Nov-96	Nov-96	1	0	
3		Achieve 50% construction complete	Jul-97			Jul-97	Mar-97	1	0	
4	**Hazardous Waste Handling Facility**	Complete Design for Part B Permit Issues	Oct-96			Oct-96	Oct-96	1	0	
5		Beneficial Occupancy of add'l work required for Part B Permit Upgrade	Jan-97	30	1	Feb-97	Feb-97	1	0	
6	**ALS Structural Biology Support**	Beneficial occupancy of work done under subcontract #726	Nov-96			Nov-96	Nov-96	1	0	
7		Complete Design First Floor Utilities Infrastructure	Oct-96			Oct-96	Oct-96	1	0	
8		Complete Installation of Standard Equipment	Jan-97			Jan-97	Jan-97	1	0	
9	**Human Genome Lab**	Complete roof installation	Dec-96			Dec-96	Dec-96	1	0	
10		Receive 75% of standard equipment	Sep-97		2	Sep-97		1	0	
11		Beneficial occupancy of work done under subcontract #737	Sep-97			Sep-97		1	0	
12	**East Canyon Electrical Safety**	Beneficial occupancy of work done under subcontract #730	Nov-96			Nov-96	Oct-96	1	0	
							Count	12	0	0

Number of milestones completed on schedule/number of milestones planned for completion = 12 /12 = 1.00

Notes

1. Milestone date extended one month due to subcontractor-caused delays in completing negotiations of Part B Permit change order. DOE approval letter dated June 30, 1997 pertains.
2. Reduced from 100% to 75% to cover construction contingencies. DOE approval letter dated June 30, 1997 pertains.

Performance Objective #4	**Maintenance:** *The Laboratory will maintain capital assets to ensure reliable operations in a safe and cost-effective manner.* **(Weight = 25%)**
Summary	Berkeley Lab continues to operate its capital assets in an efficient and cost-effective manner, providing reliable service to the research community.

Objective #4 Criterion 4.1

Maintenance Management: *Maximize the development of the maintenance management program as defined within Appendix E of the UC-DOE contract.* **(Weight = 7%)**

Objective #4 Criterion 4.1 Performance Measure 4.1.a

Appendix E Milestones: *Sum of completion percentages for all milestones worked/milestones scheduled for completion.* **(Weight = 7% - LBNL/LLNL)**

Assumptions:

- Completion percentage for each milestone will be an average of the completion percentages for each facility included in the milestone. To exceed expectations all high hazard and nuclear facilities must achieve scheduled milestones. Measure not applicable to LANL.

Gradient:

- Far Exceeds Expectations - 105%
- Exceeds Expectations - 100%
- Meets Expectations - 95%
- Needs Improvement - less than 95% *

Performance Measure Result

All FY97 milestones were completed.

Successes/ Shortfalls

None identified.

Supporting Data

Milestones FY97:	Due Date	Status
FY97.1 Developed maintenance procedures for Category 2 equipment in low-hazard class facilities.	Jun-97	100% Complete
FY97.2 Lab's central maintenance organization verifies accuracy of equipment inventory in non-hazard class facilities.	Jun-97	100% Complete

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

Objective #4 Criterion 4.2

Maintenance Backlog Control: *Manage maintenance backlog to control growth.* **(Weight = 3%)**

Objective #4 Criterion 4.2 Performance Measure 4.2.a

Maintenance Backlog Amounts: *Maintenance backlog amount minus unfunded backlog reduction projects/baseline maintenance backlog.* **(Weight = 3%)**

Assumptions:

- Maintenance Backlog is defined as the amount of all maintenance and repair work not accomplished. Backlog does not include alterations/modifications necessary to bring a facility up to current code. The Maintenance Backlog will be defined by inspection, including all identified deficiencies, and normalized for percent of the site inspected. LBNL and LLNL baselines are those used for the FY94 POCMs. The LANL baseline is that used for the FY95 POCMs. As more facilities are inspected, the baseline should be adjusted to reflect better accuracy. Maintenance Backlog growth is to be adjusted for inflation. If a reduction is taken as a result of capital funded projects, only the portion that reduces maintenance backlog should be taken for credit. Backlog can also be reduced by closing, deactivating, or demolishing an entire facility and reducing the backlog amount by the portion associated with that facility. A reduction in backlog resulting from verification by the facility manager or others, does not change the backlog for this measure, but does adjust the baseline downward. Unfunded backlog reduction projects must be recognized at the highest Laboratory planning council.

Gradient:

- Far Exceeds Expectations - 0.98
- Exceeds Expectations - 0.99
- Meets Expectations - 1.00
- Needs Improvement - greater than 1.00 *

Performance Measure Result

The performance measure ratio is 0.73.

Successes/ Shortfalls

None identified.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

Supporting Data

The data below represent mission-based maintenance backlog.

FY	Backlog
94	$7,200K (revised baseline)
95	$6,894K
96	$3,141K
97	$3,731K

[(7200 + 6894 + 3141+ 3,731)/4] / 7200 = 0.73

Objective #4 Criterion 4.3

Preventive Maintenance: *Planned preventive maintenance is performed as scheduled.* **(Weight = 4%)**

Objective #4 Criterion 4.3 Performance Measure 4.3.a

Scheduled Maintenance Activities: *The number of planned preventive maintenance activities overdue by 3 months or more/the total number of planned preventive maintenance activities.* **(Weight = 4%)**

Assumptions:

- The plan for preventive maintenance will be made a matter of record during the first month of the fiscal year.

Gradient:

- Far Exceeds Expectations - 0.01
- Exceeds Expectations - 0.05
- Meets Expectations - 0.10
- Needs Improvement - greater than 0.10 *

Performance Measure Result

For the 12-month period ending June 30, 1997, 785 of 20,482 planned preventive maintenance actions were three months overdue for a ratio of 0.0383.

Successes/ Shortfalls

None identified.

Supporting Data

	Q1 FY97	Q2 FY97	Q3 FY97	Q4 FY97
Planned	19,458	18,186	20,482	20,724
Overdue	810	839	785	811
Overdue Ratio	0.0416	0.0461	0.0383	0.0391

Note: 12-month data analyzed at end of each quarter.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

Objective #4 Criterion 4.4	**RPIE/PPPE ORs:** *Minimize the number of Occurrence Reports (ORs) resulting from failures of Real Property Installed Equipment (RPIE) and Personal Property and Programmatic Equipment (PPPE).* **(Weight = 5%)**
Objective #4 Criterion 4.4 Performance Measure 4.4.a	**RPIE/PPPE Failure:** *The number of final Occurrence Reports that are the result of equipment failure attributed to maintenance program deficiencies or performance of maintenance work/the total number of occurrences.* **(Weight = 5%)** **Assumptions:** • Non-performance of scheduled maintenance is considered a maintenance program deficiency. **Gradient:** • Far Exceeds Expectations - 0.05 • Exceeds Expectations - 0.10 • Meets Expectations - 0.15 • Needs Improvement - greater than 0.15 *
Performance Measure Result	Of the 13 Occurrence Reports completed by LBNL this year, none was the result of equipment failure attributed to maintenance program deficiencies or the performance of maintenance work.
Successes/ Shortfalls	None identified.
Supporting Data	N/A

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

Objective #4 Criterion 4.5

Condition Assessment: *Real property and installed equipment capital assets will be surveyed for condition.* **(Weight = 6%)**

Objective #4 Criterion 4.5 Performance Measure 4.5.a

Condition Surveys: *Number of completed condition surveys/number of condition surveys planned.* **(Weight = 6%)**

Assumptions:

- The intent is to survey all facilities within a 5 - year cycle. Source of condition surveys may be CAS program or similar effort. Survey Plan will be made a matter of record within the first quarter of the fiscal year.

Gradient:

- Far Exceeds Expectations - 1.15
- Exceeds Expectations - 1.00
- Meets Expectations - 0.90
- Needs Improvement - less than 0.90 *

Performance Measure Result

For the first three quarters of this fiscal year, eight building condition surveys were planned and all eight were completed for a ratio of 1.00. Projecting through the fourth quarter, a total of 11 condition surveys are planned. It is anticipated that a total of 11 surveys will be completed for a ratio of 1.00.

Successes/ Shortfalls

None identified.

Supporting Data

	Q1 FY97	Q2 FY97	Q3 FY97	Q4 FY97	Annual Total
Planned	4	2	2	3	11
Completed	4	2	2	3	11

(11/11=1.00)

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

Performance Objective #5	**Utilities/Energy Conservation:** *The Laboratory will maintain a reliable utility system and conserve energy.* **(Weight = 15%)**
Summary	Berkeley Lab continues to exceed its energy conservation and reliability goals.

Objective #5 Criterion 5.1

Reliable Utility Service: *Maintain reliable utility service.* **(Weight = 5%)**

Objective #5 Criterion 5.1 Performance Measure 5.1.a

Electric Service: *Total number of customer hours of electrical service less the number of customer hours of unplanned outages/total customer hours.* **(Weight = 5% - LBNL/LLNL; Weight = 1.5% - LANL)**

Assumptions:

- Unplanned outages that are caused by occurrences outside the boundary of the Laboratory's utility system may be excluded. Definition of "Customer Hours" = "X" kVA at "Y" kV which each Laboratory defines for its electrical system. A 12-month running average will be reported.

Gradient:

- Far Exceeds Expectations - 99.995%
- Exceeds Expectations - 99.990%
- Meets Expectations - 99.982%
- Needs Improvement - less than 99.982% *

Performance Measure Result

There were two unplanned outages during FY 1997. The reliability ratio is 99.993%.

Successes/ Shortfalls

None identified.

Supporting Data

See following table.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

5.1.a Customer Hour Outages	Total number of customer hours of electrical service less the number of customer hours of unplanned outages/total customer hours = **[(148,952,770- 9,875) / 148,952,770] X 100 = 99.993% .**

Bank Number	Buildings Served	kVA	Customer Value (kVA) 5 Customers	1st Quarter FY 1997 Total Hours 2209 Total Customer Hours	1st Quarter FY 1997 Total Hours 2209 Unplanned Outage Hours	2nd Quarter FY 1997 Total Hours 2160 Total Customer Hours	2nd Quarter FY 1997 Total Hours 2160 Unplanned Outage Hours	3rd Quarter FY 1997 Total Hours 2183 Total Customer Hours	3rd Quarter FY 1997 Total Hours 2183 Unplanned Outage Hours	4th Quarter FY 1997 Total Hours 2208 Total Customer Hours	4th Quarter FY 1997 Total Hours 2208 Unplanned Outage Hours
10	16,17,27,52,53	3000	600	1325400	0	1296000	0	1309800	0	1324800	0
14	25,25A,26,44A, 44B	750	150	331350	0	324000	0	327450	0	331200	0
15	16,44,52,52A,53	300	60	132540	0	129600	0	130980	0	132480	0
16	16	1500	300	662700	0	648000	0	654900	0	662400	0
25	50	500	100	220900	0	216000	0	218300	0	220800	0
30	70	500	100	220900	0	216000	0	218300	0	220800	0
31	70A	750	150	331350	0	324000	0	327450	0	331200	0
35	50A,50C,50E	1000	200	441800	0	432000	0	436600	0	441600	0
36	53,58	1500	300	662700	0	648000	0	654900	0	662400	0
38	50B,50D,50F	1000	200	441800	0	432000	0	436600	0	441600	0
47	74,83	750	150	331350	0	324000	0	327450	0	331200	0
49	46,47	750	150	331350	0	324000	0	327450	0	331200	0
51	51,63,64	2500	500	1104500	2000	1080000	0	1091500	0	1104000	0
53	51	1500	300	662700	7200	648000	0	654900	0	662400	0
54	51	1500	300	662700	0	648000	0	654900	0	662400	0
55	51	1500	300	662700	0	648000	0	654900	0	662400	0
56	51	750	150	331350	0	324000	0	327450	0	331200	0
57	51	1500	300	662700	0	648000	0	654900	0	662400	0
66	62,72,73	2000	400	883600	0	864000	0	873200	0	883200	0
70	54,70,70A	750	150	331350	0	324000	0	327450	0	331200	0
71	71	2500	500	1104500	0	1080000	0	1091500	0	1104000	0
72	31,42,76,61,77,77A,78,79	2000	400	883600	0	864000	0	873200	0	883200	0
80	65,88	2000	400	883600	0	864000	0	873200	0	883200	0
90	90,90 Trailers	750	150	331350	0	324000	0	327450	0	331200	0
101	51	2500	500	1104500	0	1080000	0	1091500	0	1104000	0
102	51	2500	500	1104500	0	1080000	0	1091500	0	1104000	0
105	51	2500	500	1104500	0	1080000	0	1091500	0	1104000	0
106	51	2500	500	1104500	0	1080000	0	1091500	0	1104000	0
112	EPB Hall,55,55A,56,60,71 and Blackberry Trailers	2500	500	1104500	0	1080000	0	1091500	0	1104000	0
113	EPB Hall	2500	500	1104500	0	1080000	0	1091500	0	1104000	0
158	58A	2500	500	1104500	0	1080000	0	1091500	0	1104000	0
171	71	2000	Shut Off	0	0	0	0	0	0	0	0
None	West 71 Rectifier	2680	536	1184024	0	1157760	0	1170088	0	1183488	0
None	West 71 Rectifier	2680	536	1184024	0	1157760	0	1170088	0	1183488	0
198	88	2000	400	883600	0	864000	0	873200	0	883200	0
RV-1-88	88 Rectifier	2800	560	1237040	0	1209600	0	1222480	0	1236480	0
215	66	1500	300	662700	0	648000	0	654900	0	662400	0
217	69,75	1500	300	662700	0	648000	0	654900	0	662400	0
218	37,43	2000	400	883600	0	864000	0	873200	0	883200	0
237	2	2000	400	883600	0	864000	0	873200	0	883200	0
238	2,29	2000	400	883600	0	864000	0	873200	0	883200	0
301	6	2000	400	883600	0	864000	0	873200	0	883200	0
302	6	2000	400	883600	0	864000	0	873200	0	883200	0
303	6	2000	400	883600	0	864000	0	873200	0	883200	0
304	6	2000	400	883600	0	864000	0	873200	0	883200	0
305	10,80	1500	300	662700	0	648000	0	654900	0	662400	0
306	4,5,7,14,40,41,45,48	1000	200	441800	0	432000	0	436600	0	441600	0
307	6	2000	400	883600	0	864000	0	873200	0	883200	0
309	34	1500	300	662700	0	648000	0	654900	0	662400	0
357	85	1000	200			432000	0	436600	0	441600	0
420	72	750	150			324000	0	327450	675	331200	0
480	50B 1st & 2nd Floor	1500	300	662700	0	648000	0	654900	0	662400	0
	Total Transformer kVA	87460									
	Total Customers		17092								
	Total Customer Hours Per Quarter			36983078		36918720		37311836		37739136	
	Total Customer Hours of Unplanned Outages Per Quarter				9200		0		675		0
	Total Customer Hours Past 12 Months			148952770							
	Total Customer Hours of Unplanned Outages Past 12 Months				9875						
	12 Months Running Average Performance Indicator				**99.993%**						

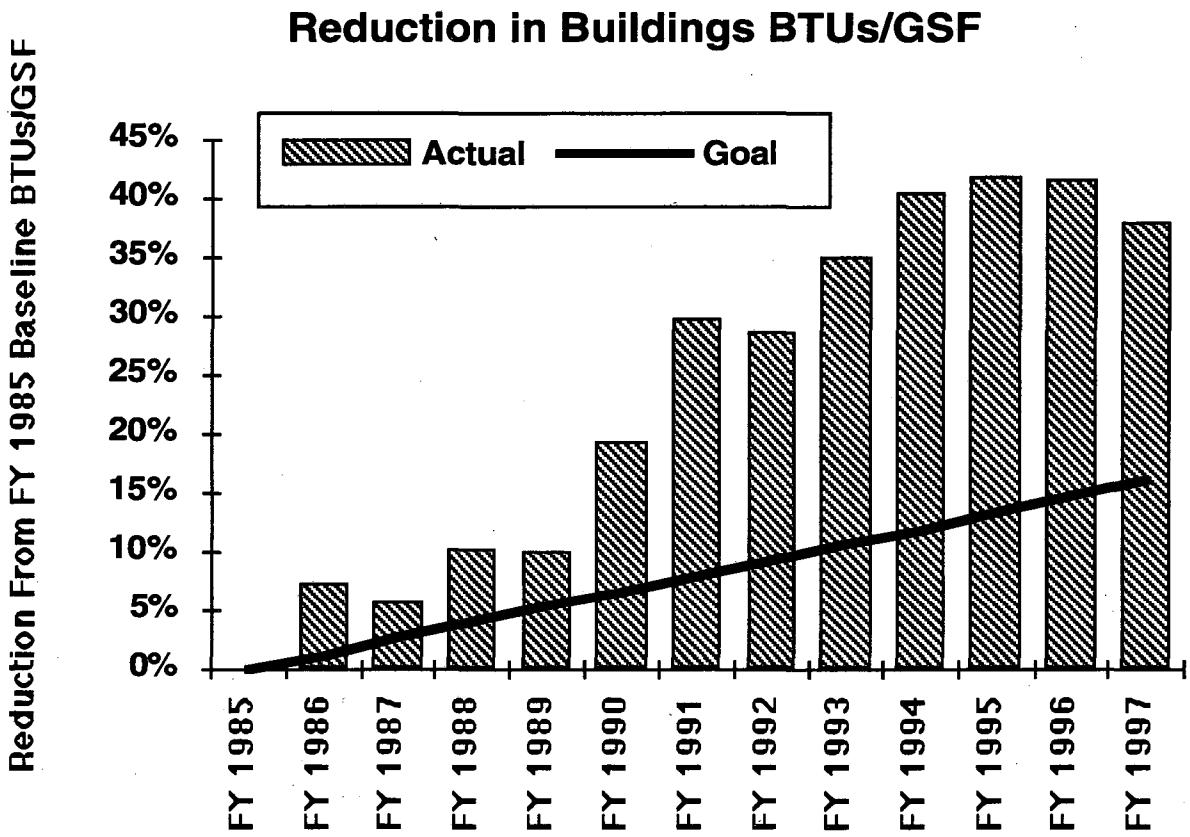
Objective #5 Criterion 5.2	**Energy Consumption:** *Manage energy usage.* **(Weight = 5%)**
Objective #5 Criterion 5.2 Performance Measure 5.2.a	**Building Energy:** *The reduction in energy usage from FY85 levels in BTUs per gross square feet of building expressed as a percent of FY85 energy usage.* **(Weight = 5%)** **Assumptions:** • Reduction for FY97 interpolated from the DOE goal of a 20% reduction from FY85 levels by FY2000. **Gradient:** • Far Exceeds Expectations - 22% • Exceeds Expectations - 19% • Meets Expectations - 16% • Needs Improvement - less than 16% *
Performance Measure Result	For FY 1997, the reduction in energy usage from FY 1985 levels in Btu per gross square feet of building expressed as a percentage of FY 1985 energy usage is 38.08%. The reduction percentage declined from the previous year due to the addition of energy-intensive mission programs without increase in building area.
Successes/ Shortfalls	None identified.
Supporting Data	See following table and graph.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

5.2.a Building Energy	The reduction in energy usage from FY85 levels in BTUs per gross square feet of building expressed as a percent of FY85 energy usage = **[(332,930 - 206,141) / 332,930] X 100 = 38.08%**

Base Year 1985	1Q85	2Q85	3Q85	4Q85	FY 1985
Building MWh	27,009	26,335	27,372	17,287	98,004
Electrical BTU/GSF	67,782	64,849	67,403	42,570	242,604
Total Natural Gas kCFT	38,607	41,676	23,887	18,677	122,847
Natural Gas BTU/GSF	28,757	30,460	17,459	13,650	90,209
Total GSF	1,360,000	1,386,000	1,386,000	1,386,000	1,379,500
Total BTU/GSF	96,538	95,309	84,862	56,220	**332,930**

Last 4 Quarters	1Q97	2Q97	3Q97	4Q97	FY 1997
Building MWh	17,669	18,205	17,829	18,400	72,103
Electrical BTU/GSF	33,080	33,710	33,014	34,072	133,876
Total Natural Gas kCFT	35,498	46,159	27,999	22,100	131,101
Natural Gas BTU/GSF	19,726	25,369	15,388	12,146	72,265
Total GSF	1,823,000	1,843,159	1,843,159	1,843,159	1,838,119
Total BTU/GSF	52,806	59,079	48,402	46,218	**206,141**



Objective #5 Criterion 5.3	**IHEM Retrofits and Studies:** *In-House Energy Management (IHEM) retrofit and study projects meet baseline schedules.* **(Weight = 3%)**
Objective #5 Criterion 5.3 Performance Measure 5.3.a	**IHEM Retrofit Schedules:** *Summation of the cost of each project times months to complete/summation of the cost of each project times months approved.* **(Weight = 2%)** **Assumptions:** • Excludes Low-Cost Retrofits and Energy Savings Performance Contracts. Start date is receipt of funds and authorization to proceed. Completion is defined as beneficial occupancy in FY97. Projects are pre-approved by DOE for 24 months unless otherwise agreed. **Gradient:** • Far Exceeds Expectations - 0.90 • Exceeds Expectations - 0.95 • Meets Expectations - 1.10 • Needs Improvement - greater than 1.10 *
Performance Measure Result	Of the 12 projects planned for completion in FY97, 8 were completed ahead of schedule and 4 were behind schedule. The performance ratio is 1.04.
Successes/ Shortfalls	None identified.
Supporting Data	See following table.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

5.3.a IHEM Retrofit Schedules			Summation of the cost of each project times months to complete/summation of the cost of each project times months approved = **125,402 / 121,032 = 1.04**.							
Item No.	Location	Project Title	A Project Cost $K	B Baseline Start Date	C Actual or (Forecast) Beneficial Occupancy	D Actual Schedule Months C - B	E Project Cost times Actual Months A x D	F Uncontrol-lable or Directed Changes	G Baseline Months 24 + F	H Project Cost times Baseline Months A x G
1	54, 72, 76	Energy Efficiency Upgrades	810	Oct-94	Jul-97	33	26,730	0	24	19,440
2	Site	Building Automation Group 1	1,172	Dec-94	Nov-96	23	26,956	0	24	28,128
3	Site	Electrical Meters	75	Jan-95	Jul-97	30	2,250	0	24	1,800
4	Site	Building Automation Group 2	1,104	Jan-95	Mar-97	26	28,704	0	24	26,496
5	Site	Motor Retrofits Group 1	418	Feb-95	Dec-96	22	9,196	0	24	10,032
6	Site	Motor Retrofits Group 2	554	Feb-95	Dec-96	22	12,188	0	24	13,296
7	6	Lighting Retrofit	125	Sep-96	Sep-97	12	1,500	0	24	3,000
8	88	Boiler Retrofit	84	Jun-95	Jul-97	25	2,106	0	24	2,016
9	Site	Process Loads	231	Oct-95	Aug-97	22	5,082	0	24	5,544
10	50A/B	Boilers Intertie	120	Oct-95	Aug-97	22	2,640	0	24	2,880
11	Site	Packaged HVAC	223	Oct-95	Sep-97	23	5,129	0	24	5,352
12	3	Energy Efficiency Upgrades	127	Oct-95	Sep-97	23	2,921	0	24	3,048
			Sum of Costs x Months				**125,402**			**121,032**

Objective #5
Criterion 5.3
Performance Measure 5.3.b

IHEM Study Schedules: *Summation of the cost of each study times months to complete/summation cost of each study times months approved.*
(Weight = 1%)

Assumptions:

- Excludes Low-Cost Studies. Start date is receipt of funds and authorization to proceed. Completion is defined as submission of Study Report to DOE in FY97. Studies are pre-approved by DOE for 12 months unless otherwise agreed.

Gradient:

- Far Exceeds Expectations - 0.90
- Exceeds Expectations - 0.95
- Meets Expectations - 1.10
- Needs Improvement - greater than 1.10 *

Performance Measure Result

Two studies were completed in FY 1997. One was completed ahead of schedule. The second was completed one month late but at 65% below cost. The performance ratio is 0.94.

Successes/ Shortfalls

None identified.

Supporting Data

See table below.

5.3.b IHEM Study Schedules			Summation of the cost of each project times months to complete/summation of the cost of each study times months approved = **764 / 816 = 0.94**.							
Item No.	Location	Project Title	A Project Cost $k	B Baseline Start Date	C Actual or (Forecast) Study Sub-mission	D Actual Schedule Months C - B	E Project Cost times Actual Months A x D	F Uncontrolable or Directed Changes	G Baseline Months 12 + F	H Project Cost X Baseline Months A x G
1	Site	Highbay Heating	40	Dec-95	Oct-96	10	400	0	12	480
2	Site	EMCS Global Optimization	28	Dec-95	Jan-97	13	364	0	12	336
			Sum of Costs x Months				**764**			**816**

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

Objective #5 Criterion 5.4

Energy Management: *Energy initiatives are managed consistent with a comprehensive energy management plan.* **(Weight = 2%)**

Objective #5 Criterion 5.4 Performance Measure 5.4.a

Energy Goals: *Energy goals accomplished/goals scheduled to be accomplished in accordance with the plan.* **(Weight = 2%)**

Assumptions:

- The energy management plan will be made a matter of record in the first month of the fiscal year. Areas to be addressed in the plan are: (1) building operation & maintenance, (2) central plant operations & maintenance, (3) construction/modification, (4) identification of energy and water conservation opportunities, (5) acquisition of equipment/products/supplies, (6) employee awareness, (7) real property leases, and (8) alternative fuels.

Gradient:

- Far Exceeds Expectations - 0.95
- Exceeds Expectations - 0.85
- Meets Expectations - 0.75
- Needs Improvement - less than 0.75 *

Performance Measure Result

All 12 goals planned for FY 1997 were completed. The performance ratio is 1.00.

Successes/ Shortfalls

None identified.

Supporting Data

See following table.

*For all gradients in Facilities Management, a linear scale is assumed for scoring in the region below Meets Expectations. Plans, lists, and milestones made a matter of record in the first month or first quarter of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE.

5.4.a Energy Goals		Energy goals accomplished/goals scheduled to be accomplished in accordance with the plan = 12 / 12 = 1.	
Item No.	Goal Category	Goal	Deliverable / Completion Date Actual or (Forecast)
1	Building Operation & Maintenance	Shut down all non-essential equipment and reduce temperature setpoints over the Christmas to New Years holiday break.	Report of energy savings due to the shutdown of equipment. **Complete 1/97**
2	Building Operation & Maintenance	Develop detailed graphics on the Barrington Energy Monitoring and Control System (EMCS) for at least one building to improve operator interface.	Beneficial Use memo from the Project Manager and printout of graphics. **Complete 9/97**
3	Central Plant Operations & Maintenance	Replace Bldg. 50 boiler BR-3-50, Bldg. 62 cooling tower CT-1-62, and Bldg. 74 boiler BR-5-74 with more energy efficient units.	Beneficial Use memos from the Project Managers. **Complete 7/97**
4	Construction/ Modification	Pipe Bldg. 80 heating from Bldg. 6 to allow demolition of BR-1-80.	Beneficial Use memo from the Project Manager. **Complete 8/97**
5	Identification of Energy and Water Conservation Opportunities	Propose a water conservation retrofit project with simple pay back period under 10 years to DOE.	Project Data Sheets. **Complete 9/97**
6	Identification of Energy and Water Conservation Opportunities	Prioritize existing retrofit proposals and request new or under-run funding for the top priorities.	Proposal to DOE. **Complete 2/97**
7	Acquisition of Equipment/Products/Supplies	Ensure that equipment is specified in accordance with Title-24 energy efficiency requirements for the Bldg. 6 2nd Floor Space Conversion project.	Title-24 LTG Certificate of Compliance and Project specifications. **Complete 4/97**
8	Employee Awareness	Coordinate Energy Awareness Month activities including a General Administrative e-mail memo, distribution of posters, displaying a banner at the main Laboratory entrance, an Energy Fair at the Cafeteria, and articles in the weekly "Headlines" and biweekly "Currents" publications.	Publication copies and photographs. **Complete 10/96**
9	Employee Awareness	Publish a request for employee cooperation in the Holiday Shutdown including suggestions for employee action and an estimate of savings.	Publication copy. **Complete 12/96**
10	Real Property Leases	Complete construction of the energy efficiency improvements funded for Building 3, Calvin Laboratory.	Completed construction subcontract plans and specifications. **Complete 9/97**
11	Alternative Fuels	Obtain and place in service a minimum of three new alternative-fuel vehicles from GSA and at least one compressed natural gas (CNG) vehicle under PG&E's Natural Gas Vehicle Loan program.	Vehicle Identification documents (GSA) and Signed Agreement and Memorandum of Understanding (PG&E). **Complete 10/96**
12	Alternative Fuels	Propose the use of GPP funding for a CNG fueling station.	GPP proposal. **Complete 10/96**

Self-Assessment Report for Fiscal Year 1997

Financial Management

Ernest Orlando Lawrence Berkeley National Laboratory

Performance Characterization

This fiscal year, while the Laboratory faced programmatic growth in the areas of the Human Genome Center and the National Energy Research Scientific Computing Center (NERSC), the Laboratory's Appendix F Financial Management performance continued to improve, despite reduced resources. This was possible through enhanced efficiencies, organizational reengineering, process reengineering, and the development of new and enhanced systems. During this year, the Finance Department has led a major dismantling of the Laboratory's old finance and business systems and has directed the development and implementation of two key building blocks—General Ledger and Project Costing—for a new, cutting-edge financial system.

Special accomplishments related to the performance measures are to be noted:

- Successful completion of the Laboratory's financial systems initiatives to provide improved capabilities and cost/cycle reductions with October 1, 1997 implementation date for the new PeopleSoft Financial Management System (FMS).
- Enhancements to the integrated Human Resources/Payroll system resulting in improved labor distribution and tracking processes using the Laboratory Electronic Tracking System (LETS).
- Successful contract negotiations and management producing increased technology transfer (CRADA) revenues, cash management improvements through University-advanced funds, and administrative efficiencies realized through retention of DOE-approved delegation processes extended to Laboratory management.
- Effective funds management and reporting processes.
- Continued success in the accuracy, cycle time, and cost of accounting processes.
- Effective work force management, including extensive training efforts in the areas of budget formulation, new financial systems, and overall financial knowledge and awareness.
- Expanded use of cost-effective procurement methods (ProCard and Just-in-Time Systems Purchasing).
- Continued development and improvement of effective internal controls.

Performance Objective #1

Customer Focus and Satisfaction: *The Customer Focus and Satisfaction Category examines the Laboratory's Finance and Budget Organizations' systems for customer learning and for building and maintaining customer relationships.* **(Weight = 20%)**

Summary

The Berkeley Laboratory CFO Department provides the following key financial services to the programmatic and administrative divisions and departments of the Laboratory:

- Accounting Activities
- Budgeting Activities
- Financial Information Reporting and Management
- Analysis of Financial Data
- Funding Control and Analyses

The CFO Department, through close and frequent communications and partnering with customers, suppliers, and stakeholders, identifies deficiencies that can then be met with proactive effort. The department has systematically gathered customer information through a Customer Satisfaction Improvement Program to assist in measuring progress and addressing customer needs and levels of satisfaction. Specific activities are mentioned below and within 1.2.a of this performance objective.

This customer commitment is reflected throughout our annual Strategic Plans. A specific example of this objective is the continued customer involvement in the development and implementation of the Laboratory's new financial systems, processes, and policies.

Objective #1
Criterion 1.1

Describe how the Laboratory's Finance and Budget Organizations determine near-term and longer-term requirements, expectations, and preferences of its internal and external customers and develops learning strategies to understand and anticipate needs. **(Weight = 12%, Scoring Code A-D)**

Areas to Address

a. How the Finance and Budget Organizations determine current and near-term requirements and expectations of customers. Include: (1) how customer groups are defined; (2) how information is collected, including what information is sought, frequency and methods of collection; (3) how the finance organization provides information and access to assist customers to comment, and to complain.

b. How the Finance and Budget Organizations address future requirements and expectations of customers. Include an outline of key listening and learning strategies used.

c. How the Finance and Budget Organizations evaluate and improve their processes for determining customer satisfaction, requirements, expectations, and preferences in support of missions.

Assumption:

- UC modified Baldrige scoring table will be used to score this section (see below).

Score	Approach/Deployment
50% to 59.9%	• No systematic approach evident; anecdotal information
60% to 69.9%	• Beginning of a systematic approach to the primary purposes of the Item • Early stages of a transition from reacting to problems to a general improvement orientation • Major gaps exist in deployment that would inhibit progress in achieving the primary purposes of the Item
70% to 79.9%	• A sound, systematic approach, responsive to the primary purposes of the Item • A fact-based improvement process in place in key areas; more emphasis is placed on improvement than on reaction to problems • No major gaps in deployment, though some areas or work units may be in very early stages of deployment
80% to 89.9%	• A sound, systematic approach, responsive to the overall purposes of the Item • A fact-based improvement process is a key management tool; clear evidence of refinement and improved integration as a result of improvement cycles and analysis • Approach is well-deployed, with no major gaps; deployment may vary in some areas or work units
90% to 100%	• A sound, systematic approach, fully responsive to all the requirements of the Item • A very-strong, fact-based improvement process is a key management tool; strong refinement and integration - backed by excellent analysis • Approach is fully deployed, without any significant weaknesses or gaps in any areas or work units

Score	Results
50% to 59.9%	• No results or poor results in areas reported
60% to 69.9%	• Early stages of developing trends; some improvements *and/or* early good performance levels in a few areas • Results not reported for many to most areas of importance to the applicant's key business requirements
70% to 79.9%	• Improvement trends and/or good performance levels reported for many to most areas of importance to applicant's key business requirements • No pattern of adverse trends and/or poor performance levels in areas of importance to the applicant's key business requirements • Some trends and/or current performance levels- evaluated against relevant comparisons and/or benchmarks - show areas of strength and/or good to very good relative performance levels
80% to 89.9%	• Current performance is good to excellent in most areas of importance to the applicant's key business requirements • Most improvement trends and/or performance levels are sustained • Many to most trends and/or current performance levels- evaluated against relevant comparisons and/or benchmarks - show areas of leadership and very good relative performance levels
90% to 100%	• Current performance is excellent in most areas of importance to the applicant's key business requirements • Excellent improvement trends and/or sustained excellent performance levels in most areas • Strong evidence of industry and benchmark leadership demonstrated in many areas

Approach and Deployment

Current and Near-Term Requirements and Expectations of Our Customers

How Customer Groups Are Defined

In order to determine key customer requirements (wants and needs), consideration was given to how the CFO customers would be categorized. It was determined that customer segments fall within groups or categories that rely on similar output and analysis from the financial and accounting data systems. Each segment of customers requires a combination of services associated with cost allowability, costing practices and policies, and cost/revenue operating results and related projections. As data and responses from customers are gathered, the requirements as initially perceived are modified to reflect key themes and customer expectations.

A major key to our future is expanding our customer base. The newly awarded multi-million dollar National Energy Research Scientific Computing Center (NERSC) gives an opportunity to demonstrate the CFO Department's skills in providing customer satisfaction. The CFO Department will maintain close communication with representatives from

NERSC for feedback and will demonstrate, through our interactions, our commitment to the highest level of customer service.

With these characteristics in mind, it was determined that two key customer segments are served by LBNL-CFO's financial and budget organizations (and the respective requirements): Lab-wide internal customers and external customers.

Lab-Wide Internal Customers: The table below identifies current customers as well as those non-customers using tools viewed as "competition." Within the Berkeley Laboratory environment, "competition" is defined as non-acceptance of financial products and services through disuse. When this occurs, the efficiency of the entire Laboratory is compromised through duplicative processes—which sometimes produce inaccurate data.

Internal Customer Segment	Key Requirements
LBNL Director of Operations	Reliable and timely analyses
LBNL Program and Project Managers	Responsiveness to inquiries; quality data; clear communications
LBNL Divisions Senior Management Associate Directors and their Senior Representatives	Timely/cost effective transactional processing; timely and informative budget/financial management information; responsive and clear communications
New (1997) Customers—National Energy Research Scientific Computing Center (NERSC)	Quality Financial and Accounting support services
Non-Customers (defined as the Laboratory community not currently satisfied and using "shadow" financial systems)	Improved products and services
Laboratory Employees—including Controller's Organization Employees	Quality and timely information and data provided with courtesy and respect

External Customers: The ultimate goal of LBNL-CFO's financial and budget organizations is to continue examining and evaluating both its internal and external customer satisfaction quotients (by means of the annual Appendix F Self-Assessment Reports). The external customer segments include DOE, UC, and others, as detailed in the table below.

External Customer Segment	Key Requirements
DOE Area Office—Finance/Budget Departments	Quality budget/financial information; compliance with professional standards and regulatory requirements
DOE Program Offices	Clarity of cost proposals
DOE Headquarters—Finance/Budget Departments	Compliance with financial and accounting professional standards and regulatory requirements
University of California (UC)/Office of the President/Laboratory Administration Office	Contract compliance, operational results in accordance with professional standards and regulatory requirements
External/Other (Suppliers; Work for Others Program Sponsors and General Public)	Timely and complete responses to inquiries; clear communications/reports

Methods and Frequency for Collecting Customer Information

To ensure Lab-wide customer outreach, and to practice listening to and learning from our customers, the Deputy Director for Operations and all Operations Department heads, continue to hold meetings every month with division administrators and their key staff to:

- Review the status of system changes.
- Resolve issues and problems.
- Communicate a full understanding of the implications resulting from pending changes.

While the emphasis during FY97 is on financial system implementation, the daily interaction with CFO/Finance, Budget staff, and the program administrators and their budget staff provide opportunities to share and work solutions to issues the group participants feel would produce operational improvements. Continual "validation checks" with programmatic customers are an effective and routine part of this interactive process.

Additionally, the Laboratory's new CFO, as one of his first priorities, contacted each of the top divisional heads and their administrators to listen and learn about any unfulfilled needs and gather feedback on how to satisfy any shortfall.

To expand our process for gathering customer expectations and perceptions, during FY97, a survey was developed, approved by management, and results collected. This activity augments the method of focus groups and one-on-one interaction and fulfilled the FY96 POCM commitment to develop, as a multi-year undertaking, a comprehensive Customer Service Plan.

The discussion below covers the Laboratory's objectives and strategies to continue effective communication and customer involvement in the

development and implementation of high quality systems, processes, and policies.

How the CFO Department Provides Information and Access to Assist Customers to Comment and Suggest Improvements

Data Collection and Customer Assistance

The CFO Department has developed a Customer Service Plan to obtain customer feedback. This quality improvement effort includes budget-related elements and is accomplished through dialogue with customers and by the use of a survey to develop key customer themes and understand expectations. The process is intended to encourage and continue one-on-one meetings, survey data collection, and other methods of direct feedback. As part of customer awareness, training sessions to increase customer knowledge of the CFO functions are offered. These efforts expand understanding of processes and improve the overall workflow by converting "non-customers" from in-house "patch" systems to the use of Laboratory's improved financial services and products.

One example of continued customer awareness and training is the training provided for the new PeopleSoft financial package (FMS), which includes programmatic staff participation alongside the CFO staff. See Work Force Management Measure 2.3 for discussion of "work teams" assisting the FMS progress. Other examples are the ongoing ProCard training, and the Budget Workshop session.

Additionally, this year the CFO/Finance/Budget chaired a new committee to enhance Laboratory staff knowledge in financial matters. Also included in this outreach to provide customers training are expanded courses covering the functional areas of Budgeting and Work for Others. These courses serve all facets of internal customers, both financial and programmatic, such as budget personnel, division administrators, and principal investigators.

The CFO Department has continued to participate in the Laboratory's Operations Division Quality Improvement Challenge to create high-level customer service results through proactive direct dialogue with divisions. Individual budget training sessions and continued enhancement of handbooks are examples of these activities.

To provide easy access to the CFO Department and methods for customers to seek information, assistance or comment regarding concerns and suggestions, the following specific mechanisms are in place: electronic information tools, customer focus teams and forums, telephone observation, Town Hall Meetings, listening and learning strategies, and surveys.

Electronic Information Tools:

- The CFO/Finance Department Web-based Home Page has been developed during this fiscal year. Detailed functions, customer contacts, a survey form, and financial forms are available on-line.
- The Voice Mail system used at the Laboratory provides a variety of alternatives in response to customer telephone inquiries. Each phone

may be programmed to provide a special message or to roll over to another employee should this be required.

- Electronic mail is provided on each employee's computer desktop. This method provides immediate attention to customer requests and a means of recording inquiries and the resulting responses.
- Accounts Payable uses a phone messaging service that directs customers to the appropriate functional representative.
- The Finance Department and Budget Office provide full coverage in each organization's administrative office through administrative specialists. All telephone inquiries directed to administrative managers are responded to by a live person.

Customer Focus Teams and Forums as Customer Observation Tools: Laboratory management has used the written survey (discussed below) to complement its preferred method of forums and one-on-one interactive customer information gathering processes. This preferred interactive choice, which better fits the Laboratory environment, involves regularly scheduled meetings comprised of cross-functional teams representing the Laboratory's internal customers.

The teams include equally represented scientific, operational and ISS staff members. This diverse group provides insight through their expertise in developing and implementing the following new systems:

- General Ledger
- Project Management
- Human Resources
- Labor Distribution
- Account Authorization
- Budget

The teams are consulted almost daily for suggestions regarding regular operational processes as well as for critical input to the current system upgrade efforts regarding the Financial Management System. Any other customer feedback is solicited at the same time.

The team method has encouraged and developed a spirit of cooperation throughout the Laboratory. Customers are encouraged to speak up about concerns and issues and can rely on the CFO to work with them to collaboratively reach a solution.

Through this collaboration, a committee with representatives across organizational lines from the Chief Financial Office, ISS, and divisions have formed the **Financial Management Systems Team**. This work team has special subgroups for field training and provides Web updates on the FMS status.

Telephone Observations: Other methods of observing the customer community and performing "needs assessment" involve independently monitoring telephone requests and inquiries. Staff members and managers continually compare their telephone requests and inquiries with others on the work teams as an effective and direct way to "pulse" the community for

a customer dissatisfaction quotient. Where similar inquiries or complaints are received, the team finds a solution for the issue or problem that is a "win-win" for all involved.

Town Hall Meetings: In addition, CFO continues to hold Town Hall Meetings, which bring administrative information and FMS progress updates to the staff. These meetings provide a congenial backdrop for open forum discussion and efficiently and effectively communicates the team concept to inform and include staff members with both direct and indirect impact on financial management successes.

Key Listening and Learning Strategies: CFO continues active pursuit of opportunities to improve the quality of customer services and to measure the value of those services currently provided. To gather a full understanding of customer needs, customers are invited to participate in issue-specific discussion groups. Examples of these activities include the monthly DOE/LBNL Finance liaison meetings and the re-establishment of the Finance Forum by the CFO Department. The Finance Forum meets monthly to discuss a pre-established agenda and includes the following members:

- Divisional Finance/Budget staff specialists
- CFO/Budget managers and specialists
- CFO/Finance managers and specialists

During FY97, these groups have produced the following results:

- Timely completion of the FY97 Cost Accounting Disclosure Statement
- Continued input and direct divisional involvement in the new Financial Management System (FMS).

In the table below are examples of specific processes employed to assist customers, receive comments and suggestions.

Survey Method: Consistent with the FY96 POCM commitment that the CFO Department develop a comprehensive Customer Service Plan as a multiyear undertaking, a survey was developed, approved by management, and results collected.

The survey form accommodates all facets of customers both internal and external, financial and programmatic. However, as outlined in FY96, the survey process will be a multiyear endeavor with FY97 as the baseline covering the customer segments internal to the Laboratory.

Deployment of the survey (Attachment A, Supporting Data) was implemented and distributed by CFO/Finance Department managers and staff at meetings as well as during other times to record feedback from customers. The survey form was placed on the CFO/Finance Web-based Home Page for easy access for customer input. The intent of the survey is to assist the assessment of customer needs by identifying key areas requiring associated action commitments. It also documents proactive efforts that have contributed to customer satisfaction through quality products and services.

Processes to Assist Customers

Method	Customer	Purpose	Frequency
Year-End Closing Feedback	DOE; Division Administrators (DAs); CFO staff	Gather feedback on year-end closing process and identify areas for improvement	Annually
Directorate Financial Management Self-Assessments	LBNL Mgmt. & DAs	Share best practices and gather suggestions for improvements to policies and procedures	Annually
Budget Office Follow-On Activities	DOE; LBNL; Mgmt; DAs	Seek customers' needs and expectations regarding Budget services and products	Annually
Appendix F Financial Management Performance Measures Development and Reporting Process and Formulation (negotiation)	DOE; UC: LBNL; Management	Develop performance measures and share comments, lessons learned, and suggestions for improvement	Semi-Annually and Annually (update)
Field Budget Submission Post-Process Evaluation	DOE; DAs	Gather feedback on Field Budget Submission and seek areas for improvement	Annually
CFO Visits to DOE/HQ	DOE	High-level interaction regarding policies, practices and procedures	Monthly
DOE Monthly CFO; Budget; Other LBNL Staff	DOE	Interaction, planning, review regarding various issues, policies, practices and procedures (e.g., Cost Accounting Standards (CAS))	Monthly
DA Meetings	DAs	Provide guidance for financial stewardship, allow forum to express concerns, questions and suggestions	Weekly & Monthly
Financial Management Systems (FMS) Committee Meetings, Demonstrations Sessions	LBNL Mgmt & Staff; Division Adm.; DAs	Share LBNL-wide financial business and reporting needs to develop a quality integrated financial system	Weekly (during FY97)
Financial Management Systems Improvement Council (FMSIC) Meetings	DOE	Provide forum for collaboration, sharing, and exchange of concepts related to financial management practices	Ongoing
Customer Satisfaction Improvement Plan Processes	All Customers	Update, validate effective processes for gathering data and fulfilling customer expectations and needs	Ongoing
Laboratory Electronic Time System (LETS) Upgrade Meetings	LBNL—All Employees/Lab Customers	Share information regarding time reporting (effort) and gather feedback for reporting and data enhancements	Ongoing
Query Customers Regarding New Products and Systems (FMS; ProCard; LETS; Systems Contracting (JIT))	LBNL—All Employees/Lab Customers and Some External Recipients (Vendors, etc.)	Share information and gather feedback for enhancements and modifications	Ongoing
Electronic Notices; Town/Other Meetings; Newsletters Network Systems; Work-teams; Training Sessions; Survey	LBNL—All Employees/Lab Customers and Some External Recipients (Vendors, etc.)	Deliver quality financial management leadership and updates on new systems, policies, practices, and products/services; ensure sound financial practices and procedures and effective operations	Ongoing
Divisional Survey	Divisions	Gather data and input to identify areas for improvement and "pulse" customer's satisfaction level	Annually

The survey uses a value ranking criteria for all customer satisfaction assessment as follows:

Satisfaction Level	Ranking Value
Far Exceeds Expectations	5
Exceeds Expectations	4
Meets Expectations	3
Needs Improvement	2
Not Satisfactory	1

The Laboratory recognizes customer interaction as an important element assuring that activities are prioritized to address Laboratory-wide, DOE, and external vendor/customer needs. Thus, to ensure that the survey is received as a welcome tool to foster cooperation and teamwork, customers contacted will have opportunities to provide write-in suggestions for incorporation into the plan. The survey is designed to identify areas of improvement as well as identify the services/products our customers value most.

How CFO Addresses Future Requirements and Customer Expectations

The CFO Department is committed to systems and process improvements. Future requirements of internal customers are solicited through weekly and daily interaction to "pulse" our customers. This effort is emphasized as a top priority item and integrated into each CFO employee's yearly performance appraisal through a newly developed "workplan" process. Each individual from the highest level management to staff members commit to achieving successful customer satisfaction through consistent quality service.

To emphasize the CFO Department's commitment, the first mission our new CFO undertook was to personally meet with each division's top level of management and their administrators to gather specific comments on their satisfaction or dissatisfaction specific to each unit (service sector) of the CFO. The result from these meetings are discussed below (Objective Criterion 1.2) under "Results and Successes." To instill and renew customer satisfaction as a top priority, at his first Town Hall meeting, the CFO emphasized that our department exists because of customers and encouraged all management and staff to make the customer service commitment along with him to embrace customer requirements and expectations as the core of our mission. Each employee is appraised of the current competitive environment and charged with the responsibility of fulfilling customer needs to the full extent of the Laboratory's resources. Each CFO/Finance/Budget employee's appraisal also contains a goal of customer satisfaction.

After a new suggestion, process, or system is in place, the CFO Department continues to listen to the users (customers) to learn what worked and what did not. These follow-on activities are accomplished through the ongoing team and forum processes discussed above.

The process of assessing future DOE and UCOP/LAO (external) customer segment requirements is determined through the yearly negotiations and update of the Appendix F performance process. These activities stress improved quality, productivity, and cost effectiveness.

How CFO Will Evaluated and Improve Current Customer Satisfaction Process

Management and staff of the CFO Department enjoy a close relationship with our customers, which fosters an ongoing feedback process that assists us in evaluating and improving both our products and services and our methods for collecting customer information.

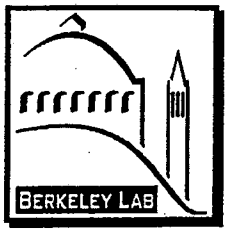
The CFO management will evaluate the combined processes (interactive discussion and survey method) and determine from the resulting data and feedback which processes will produce the most effective tools for assessing and satisfying customer requirements. Over several years, it has been evident that the interactive one-on-one process is a non-intrusive, productive method. We anticipate it will continue to provide useful results in the future.

Supporting Data

- See Documentation Folder.
- Attachment A, the CFO/Finance Customer Survey form (below).

Attachment A/Survey Form

A T T A C H M E N T A



The CFO/Finance Department is committed to its customers and is continuously working towards improving service. Please take a few moments of your time to complete the following questionnaire and rate your most recent contact/experience with the CFO/Finance Department by using the scale below. If you have not requested assistance from CFO/Finance, please pass this questionnaire to someone in your Division who has. Your input will help us to identify areas for improvement. Thank you in advance for participating!

Satisfaction Level	Ranking Value
Not Satisfactory	1
Needs Improvement	2
Meets Expectations	3
Exceeds Expectations	4
Far Exceeds Expectations	5

NAME OF DIVISION/DEPARTMENT RESPONDING _____

In general, your response is requested regarding CFO/Finance as an overall department. You may, however, make your response Unit specific, e.g. General Ledger, etc. Please indicate this under "Comments" below.

1) The CFO/Finance Department was helpful in addressing my request for _____.

_____ 1 _____ 2 _____ 3 _____ 4 _____ 5

2) The request was responded to and completed in a timely fashion.

_____ 1 _____ 2 _____ 3 _____ 4 _____ 5

3) Please rank the quality of the work provided by CFO/Finance.

_____ 1 _____ 2 _____ 3 _____ 4 _____ 5

4) How would you rate your overall satisfaction with CFO/Finance's customer service?

_____ 1 _____ 2 _____ 3 _____ 4 _____ 5

5) What services do you consider most valuable - Provide response under "Comments" below.

6) What Reports and Analyses are most valuable - Provide response under "Comments" below.

Comments_____

_____

_____

_____

Please fold, staple, and mail to CFO/Finance, Mailstop 936B Attention: Lori Morford or fax to x5995.

3/18/97-lam

Objective #1
Criterion 1.2

Summarize the Finance and Budget Organizations' customer satisfaction and dissatisfaction results using key measures and/or indicators of these results. Compare results with previous periods and competitors where appropriate.
(Weight = 8%, Scoring Code R)

Areas to Address

a. Current levels and trends in key measures and/or indicators of customer satisfaction and dissatisfaction. Results should be segmented by customer groups and product and service types, as appropriate.
b. Address any appropriate customer satisfaction information relative to competitors.

Assumption:

- UC modified Baldrige scoring table will be used to score this section (see Exhibit I).

Performance Measure Result

The following summary of resulting customer input discusses two methods of eliciting customer responses regarding satisfaction and dissatisfaction:

1. Interactive one-on-one methods.
2. The survey process.

The goal of both methods is to continuously evaluate and improve the data gathering of current customer requirements as well as to identify the requirements of non-customers or customers of competitors (as defined above under Objective Criterion 1.1).

During FY97, the CFO/Finance Department has provided its customer base many opportunities to learn about newly developed products and services. Using the Laboratory's ever-improving electronic capabilities to disseminate information, periodic "news flashes," electronic Level I (All-Employee) notices, and similar electronic communications, customers are apprised of upcoming training and financial overview sessions and about improved and new financial services and products.

Interactive Customer Focus Forums

While this dialog method of gathering customer feedback does not always produce "hard" quantified results, observation of customer preferences provides evidence of significant successes. During FY97 these groups have produced the following reported, observed, and quantified results:

- Through the DOE/LBNL liaison monthly meetings, current external customer satisfaction levels are evidenced by the collaborative successful and timely completion of the CAS Disclosure Statement.
- Continued input and direct divisional involvement in the new Financial Management System (FMS).

- One hard measure of internal customer satisfaction (in a new product brought on-line by the CFO organization) is the dramatic increased use of ProCard for low-value materials and supplies. Transactional use of ProCard has increased YTD May 1997, by more than 260% over May of 1996. Because only two invoices must be paid each month, this success has a trickle-down effect to provide on-time vendor payments and improves both internal and external customer satisfaction.
- Because of the CFO's partnering and inquiries with the Laboratory customer base about needs and wants for the new FMS system, we have commitment from 100% of the divisions to migrate from old "shadow" financial reporting to those newly designed products produced by the FMS. This represents recaptured customers.
- As evidence of acceptance of new financial services offered, FY96 statistics show 85% of all Laboratory employees use direct deposit for earned compensation.
- Through interactive collaboration with its customers, the CFO Department identified administrative staff within both divisional organizations, Operations, and the new Administrative Services Department (ASD). This reengineered group now provides services matrixed back out to the division community, resulting in the following benefits:
  - Ensures commonality and consistency of operations.
  - Provides service by staff members who are current on policy and procedural changes.
  - Avoids duplication of functions performed both in the divisions and ASD.
  - Provides flexibility for coverage of peak workloads.
  - Effects an overall reduction of divisional administrative staff.

This implementation of a central service center demonstrates successful, customer-involved collaborative efforts.

In the table below and following are examples of specific products/services provided to customers.

Product/Service	Customer	Method	Result
Capital Equipment Report	Senior DAs	Monthly data	Up-to-date funding data by capital equipment account including cost and lien data to assist DAs in project planning
Uncosted Balances Report	Senior DAs	Monthly data	Provide DOE requirement for uncosted balances
Field Budget Submission	Senior DAs and Budget Office Specialists	Meetings with DAs, Budget Managers, and Specialists	Training and improved processes and procedures

Product/Service	Customer	Method	Result
Annual Financial Report (Financial Statement)	DOE; LBNL Employees	In response to requests from both internal and external customers (DOE)	Financial results for the fiscal year; comparative data for prior years; disclosure notes in preparation for DOE audited financials
Financial Management of Plant Assets	DOE; DAs; CFO Management	Spreadsheet report	Detailed total funding and cost data for projects (from project inception)
Year-End Closing Processes	DAs, CFO Mgmt & staff	Discussions with all customers after FY96 Year-End Closing	Implementation during FY97 Year-end Closing of lessons learned
Financial Systems (FMS) development/ integration with feeders for "live" implementation Lab-wide as of 10/1/97	DOE; LBNL Mgmt; DAs; all Employees	Continual customer interaction and participation to solicit customer requirements, needs, and expectations	Various system developments; enhancements (see POCM 2.1.b., Leadership in Systems Improvements)
Contract Labor Reporting/Payment	DOE; DAs; Vendors	Proactive interaction with DAs (users of contract labor) and vendors to seek an effective method for processing timely payments	Developed report that serves both as internal distribution of cost information and validation to pay monthly vendor charges based on verified record, saving approximately 0.5 FTE/yr in administrative effort and producing on-time payments
Home page and internal computer network (LAN)	DOE; UC; all LBNL employees;	Responding and keeping current with electronic capabilities	Continued enhancement of LBNL CFO Web site to include such products as CAS Conformed Pricing Model; CAS Disclosure Statement; current rate structure; signature authority and various frequently used financial forms
Cost Accounting Standards (CAS) Disclosure Statement (form)	Lab-wide	To initiate and respond to customer knowledge	Addresses frequently asked questions; provides understanding of composition of overhead cost; improves forecasting and pricing
Signature Policy	Lab-wide	Special Committee	Revised policy to empower DAs, expand dollar levels, strengthen internal controls, and disseminate information Lab-wide through the Web
Financial Management System training (FMS)	LBNL Employees as appropriate	To initiate and respond to customer knowledge	See POCM 2.3, Workforce Management, for discussion of training efforts

Survey Method

To gather data on a financial customer satisfaction index, all divisions were provided an opportunity to respond to an aggregate of customer survey responses to all areas of the CFO/Finance Department. Participants were asked to make their response regarding CFO/Finance as an overall department, but it was indicated that responses could be unit-specific (General Ledger, etc). Respondents were asked to rate their most recent contact/experience with the department by using the following ranking scale:

Satisfaction Level	Ranking Value
Far Exceeds Expectations	5
Exceeds Expectations	4
Meets Expectations	3
Needs Improvement	2
Not Satisfactory	1

The survey form was placed on the Finance Web Page and the existence of the Web Page was announced though an electronic all-employee *Headlines* notification. In order to solicit candid responses, only the name of division or department responding was requested. A "Far Exceeds" score, between 17–20, represents "total satisfaction"; an "Exceeds" rating is from 13–16; a "Meets" rating is from 9–12; a "Needs Improvement" rating is from 5–7; and, finally, a "Not Satisfactory" rating is from 1–4. Furthermore, comments under the "bonus" write-in category indicate customers have a high level of confidence in the services and/or reports.

From the 13 divisions contacted, the survey brought 12 responses. The respondents rated themes covering a wide range of functions such as Monthly Closing; Year-End Closing Contract Labor; Laboratory Electronic Time System (LETS); the new Financial Management System (FMS); Cost Transfers; and ProCard. All responses and suggestions are distributed to work-teams for incorporation into the development of new processes, practices and policies. Below is a table which provides the resulting data. As displayed by the attached chart, 75% of the respondents' felt CFO/Finance far exceeded their expectations and the remaining 25% felt the department exceeded their expectations.

Survey Data

Survey No.	Helpful	Timely	Quality	Overall Satisfaction	Total Satisfied Score
#1	5.0	5.0	5.0	5.0	20.0
#2	5.0	5.0	5.0	5.0	20.0
#3	5.0	5.0	5.0	5.0	20.0
#4	5.0	5.0	5.0	5.0	20.0
#5	5.0	5.0	5.0	5.0	20.0
#6	5.0	5.0	5.0	4.0	19.0
#7	5.0	5.0	4.0	5.0	19.0
#8	5.0	5.0	4.0	4.0	18.0
#9	4.0	5.0	4.0	4.0	17.0
#10	4.0	4.0	3.0	3.0	14.0
#11	4.0	3.0	3.0	3.0	13.0
#12	3.5	4.0	3.0	3.0	13.5
Total No. Surveys: 12					
Total Average Score	4.6	4.7	4.3	4.2	17.8

As the table indicates, results from the survey provided a composite overall average score of 17.8 ("Far Exceeds"), indicating a high level of overall satisfaction among those customers responding.

One critical response of Accounts Payable involved a dissatisfaction with the timeliness of vendor payments. Although payments are made on time 85% of the time, the remaining 15% statistic indicates a need for some improvement in the timely payments to a few vendors.

The CFO/Finance Department has investigated the root cause for delayed payments and has determined that 90% of these instances are due to materials as received not matching the vendor invoicing. Thus, the Accounts Payable system applies its control features and rejects payment. Upon resolution, these invoices require manual processing.

The CFO Department recognizes this as an opportunity to both better serve customers and improve transaction costs through eliminating manual rework activity. To resolve the problem, weekly meetings were held between the CFO, associate CFOs for Business and Finance, and the head of Information Systems and Services. The goal of these meetings was to remedy the problem through a three-step process:

1. Increase proactive and clear initial communications from Laboratory buyers to vendors.
2. Review the current (possibly restrictive) policy on the variance tolerance for mismatched receiving documents.
3. Deploy expanded purchasing practices for low-value materials services through progressive methods such as ProCard and Systems Contracting, which eliminate purchase orders and the associated Buying and Receiving labor costs.

The survey produced no specific recommendations for process improvements. However, one survey commented that the Accounts Payable

had already incorporated (customer) suggestions given to improve its accrual process. This type of feedback will be acknowledged. It helps the CFO Department understand customer needs.

In addition to the above data, various unsolicited e-mail and faxed comments were received that provided evidence of customers satisfied with the quality of information and responsiveness involving specific areas in CFO/Finance.

Supporting Data

- *The Berkeley Lab Organizational Announcement*. Ernest Orlando Lawrence Berkeley National Laboratory, 1997.
- See Documentation Folder.

Performance Objective #2	**Operational Effectiveness:** *Achieve cost effective and efficient Financial Management operations by applying available resources to continuous improvement efforts.* **(Weight = 50%)**

Objective #2 Criterion 2.1

Leadership in Improving Financial Management Efficiency and Effectiveness: *Consistent with DOE requirements and plans, take proactive leadership role to improve the financial management effectiveness and efficiency of the budget processes and financial reporting systems.* **(Weight = 20%)**

Objective #2 Criterion 2.1 Performance Measure 2.1.a

Quality Performance in Reporting Processes: *Budgets, reports and information, analyses, estimates, and proposals submitted have minimal time/form/content deficiencies and incorporate budget validation and other systematic customer feedback.* **(Weight = 10%)**

Objective #2 Criterion 2.1 Performance Measure 2.1.a Assumption & Gradient 1

Budget and Reimbursable Proposals

Assumptions:

- Annual budget and reimbursable proposal processes will be measured for timeliness and quality by measuring on-time performance. A narrative will describe the continuous process/product improvement and the proactive activities related to this Performance Measure.

Gradient:

- A Meets Expectations rating is achieved by meeting customer due dates for the annual budget and reimbursable proposal submissions and by demonstrating tangible improvements in these processes and/or in the products developed. Factors that will be considered for a higher rating include:
  - reductions in cycle time and/or cost, automation improvements and initiatives
  - proactive activities such as training and development of Financial Management staff and internal customers.
  - customer feedback and other relevant information.

Performance Measure Result

Assumption and Gradient 1: Budgets and Reimbursable Proposals

CFO/Budget has met this performance measure by submitting the FY1999 Budget documents early and has developed streamlined data submission activities (see Supporting Data).

Successes/ Plans of Action

Cycle Time and Cost Reductions

The Budget Department submitted the direct and indirect budgets to DOE one day early. This exceeds the requirement of this metric for 100% on-time response to our customer's defined deadlines. The reimbursable submission was also submitted on time. Attached are the specific annual budget submission dates and the respective responses.

The Budget Office conducts an internal post-budget review to discuss operations, what went well, and where improvements are needed. One enhanced process which received positive comments from 80% of the

divisional users was the newly revised data input sheet, which takes divisional input and electronically rolls the data to the final budget package. The comments indicated that the revisions made the input process much easier.

The physical size of the budget was reduced again this year and although all costs have not been tallied, it appears that the printing costs were trimmed once again. As a result, postage costs were minimized for both the Laboratory and the Department of Energy. The cost reductions realized were $0.4K.

Process Improvements

To ensure that the Laboratory budget requests, Field Task Proposal Agreements (FTPAs), Activity Data Sheets (ADSs), and Proposal Planning Documents (PPDs) were properly and accurately developed, CFO/Budget provided the Laboratory with the following training and support services:

- Budget preparation workshop, December 1996. This was attended by DOE/OAK Budget personnel and the Laboratory's division administrators and budget analysts.
- The workshop training publication, an on-line DOE Budget Process Handbook.

Additionally, this year the Laboratory increased its electronic methodologies involved in submission of budget data by at least 50%. This was primarily due to the enhanced electronic data gathering form discussed above.

The DOE Budget Process Handbook describes in detail the federal and DOE budget cycle and preparation process with specific "how to" instructions for completing each of the various types of budget request documents. This document specifically explains what information is required to fill out the Field Work Proposals box by box. Publishing this document simplified the budget submission process for the resource analysts by clarifying the data requirements.

Effectiveness/Efficiencies and Cost Savings

LBNL participated in a multi-Lab Cooperative Research and Development Agreement (CRADA) with Lawrence Livermore National Laboratory (LLNL) and Sandia National Laboratory (SNL) to contract with (Intel) Extreme Ultraviolet Limited Liability Corporation (EUVLLC) for $135 million in funding over 3 years. This required daily interaction with the three Labs, two DOE operation offices (AL and OAK), and the sponsor.

The negotiations were completed in three months, and included a separate Intellectual Property Agreement (IPA) and Memorandum of Agreement (MOA) between the three Labs to function as a Virtual National Laboratory. Through this collaborative effort between the Laboratories, DOE, and Intel, a 3-year CRADA was signed in April, 1997.

SPO has modified its WFO contracts in a standardized format with standard terms and conditions to address new DOE requirements in DOE Order 481.1 and has submitted them to DOE/BSO for approval. This is the first step to

continue DOE's contract approval delegation to LBNL using the new contract requirements (DOE Order 481.1). Such self-approval improves work flow for non-federal sponsors and expedites account opening and project commencement. These standardized documents would contain standard terms and conditions, eliminating the process of DOE/OAK approving non-federal contracts. This process is scheduled to be completed by September 30, 1997. The delegation of authority does not extend to federal sponsors.

As a second part of implementing efficiencies in the approval processes, LBNL is currently reviewing for implementation to LBNL the delegation of non-federal proposals covered within DOE Order 481.1

LBNL became the first Laboratory to execute a CRADA as a result of the Energy Research/Laboratory Tech Transfer partnership program (ERLTR) call for proposals and review process. LBNL was recognized by Energy Research headquarters as having the shortest time to execute a CRADA with the sponsor.

During FY96 and FY97, LBNL avoided the use of a large block of WN funding. This was possible due to negotiations of a large project (UCB funded Drosophila) whereby UCB advanced funds rather than requiring the Laboratory to use WN funds. The agreement made WN funding available for other research projects, preventing project delays. In addition, a policy change initiated by the CFO/Budget/SPO department now requires user agreements to require advances. Both efforts have saved $6 to $8 million in WN funding. The UCB advanced funding resulted in more effective use of funding for both DOE and LBNL.

Quality Performance in Reporting Processes

Analysis of the Sponsored Projects/Proposal Tracking System (SPPT) is ongoing to formulate its replacement. As a result of the new Financial Management System, resident legacy systems must be replaced. LBNL management has been invited to participate as a member on a forum of prospective customers to assist PeopleSoft (software vendor) in their development activities for a new contract management product.

As a member, the LBNL representative will present the following features which have been identified as those needed to improve the capabilities of the existing SPPT System.

- Simplify input requirements
- Provide enhanced reporting to external and internal customers and improve data accuracy
- Provide automated account closings
- Provide automated notification to users on proposal status
- On-line system input capabilities to contracts officer(s)

SPO and DOE/OAK have begun a series of meetings to improve the CRADA approval process. Improvements and recommended further enhancements to date include:

- Implementation of e-mail approval capabilities for CRADAs and Joint Work Statements (JWSs).
- In the future, e-mail transmissions of the actual JWS and CRADA will be explored.
- Evaluation for full electronic processes (no hard copies) is expected to be completed by August 31, 1997.

DOE Requests—Validation and Customer Feedback

CFO/Budget continues as a key participant in the Laboratory's Operations Division Quality Improvement challenge to create high-level customer service results through proactive direct dialogue with the divisions. Individual budget training sessions and continual enhancement of handbooks are examples of these activities.

CFO/Budget will continue active pursuit of opportunities to improve the quality of customer services and measure the value of those services currently provided as illustrated below:

- The CFO/Budget has additionally begun chairing a new committee to enhance Laboratory staff knowledge in financial matters. Also included in this training development are expanded courses for the Laboratory's budget personnel, division administrators, and principal investigators to learn more about the functional areas of budgeting and Work for Others processes.
- The Budget Office is involved in improving all Budgetary Systems and is currently conducting in-depth interaction sessions with the greater Laboratory staff to enhance efficiencies and accuracy of budgets from the detail level to summaries.
- The CFO Department has developed a Customer Service Plan to obtain customer feedback. This quality improvement effort will include budget-related elements and is to be accomplished through the use of the survey and feedback process discussed in Performance Measure 2.1. The process is intended to encourage and continue one-on-one forums as well as training sessions and other methods of direct feedback. Survey results will be tabulated and included in the final Appendix F Measure. (See Performance Measure 1.0.)

Supporting Data

- See Documentation Folder.
- DOE Field Budget Call Submission Checklist (below).

Attachment/Submission Checklist

Attachment C

DEPARTMENT OF ENERGY
FY 1999 FIELD BUDGET CALL
SUBMISSION CHECKLIST

EXHIBIT	HANDBOOK REFERENCE (Attachment E)	DUE DATE
Primary Budget Materials:		
Program Direction (Federal FTEs Only)	Chapt. II, para.2	April 15
Field Work Proposals and Activity Data Sheets	Chapt. II, para.3	April 15
Project Data Sheets	Chapt. II, para.4	April 15
Supplementary Budget Materials:		
Motor Vehicle Statement	Chapt. III, para.3	April 29
Reimbursable Work	Chapt. III, para.4	April 29
Cost of Work for Others	Chapt. III, para.5	April 29
Aircraft Statement	Chapt. III, para.6	April 29
Surplus Facilities Management	Chapt. III, para.7	April 29
Isotopes Inventory Transactions	Chapt. III, para.8	April 29
Acquisition of Fixed Assets	Chapt. III, para.9	July 30
Financial Management Activities	Chapt. III, para.10	April 29
Landlord	Chapt. III, para.11	April 29
Crosscut Requirements:		
*Environmental, Safety and Health	Chapt. IV, para.2	April 15
Safeguards and Security	Chapt. IV, para.3	April 15
*Information Management	Chapt. IV, para.4	April 15

***Field sites may take until April 29 to submit ES&H and IM portion of crosscut data for the Field Budget Call.**

Objective #2 Criterion 2.1 Performance Measure 2.1.a Assumption & Gradient 2

DOE Periodic Reports and Special Ad Hoc Requests

Assumptions:

- The measurement of DOE periodic reports and special ad hoc DOE requests regarding budgets, analyses, estimates, and proposals submitted will include only formal written requests with deadlines of 8 or more working hours. Incorporate budget validation and other systematic customer feedback. Narrative will include customer satisfaction information from 1.1.

Gradient:

- A Meets Expectations rating is achieved with 90% of on-time performance with acceptable quality as determined from customer feedback. Factors that will be considered for a higher rating include:
  - on-time performance greater than 90%
  - good customer feedback
  - process improvements, cost, and cycle time reductions

Performance Measure Result

Assumption & Gradient 2: DOE Periodic Reports and Special Ad Hoc Requests

The CFO Department consistently responds to written DOE requests early or on-time. During the 10 months ending 7/31/97, the CFO Department achieved a 99% early or on-time cumulative response rate to all 72 DOE requests and special ad hoc reports.

Successes/ Plans of Action

The 100% rating breaks down as follows:

Submitted	No. of Requests			Percent		
	FY97	FY96	FY95	FY97	FY96	FY95
	YTD July					
Early	62	48	not available	86%	86%	60%
On-Time	9	23	not available	13%	32%	40%
Late	1	0	0	1	0	0

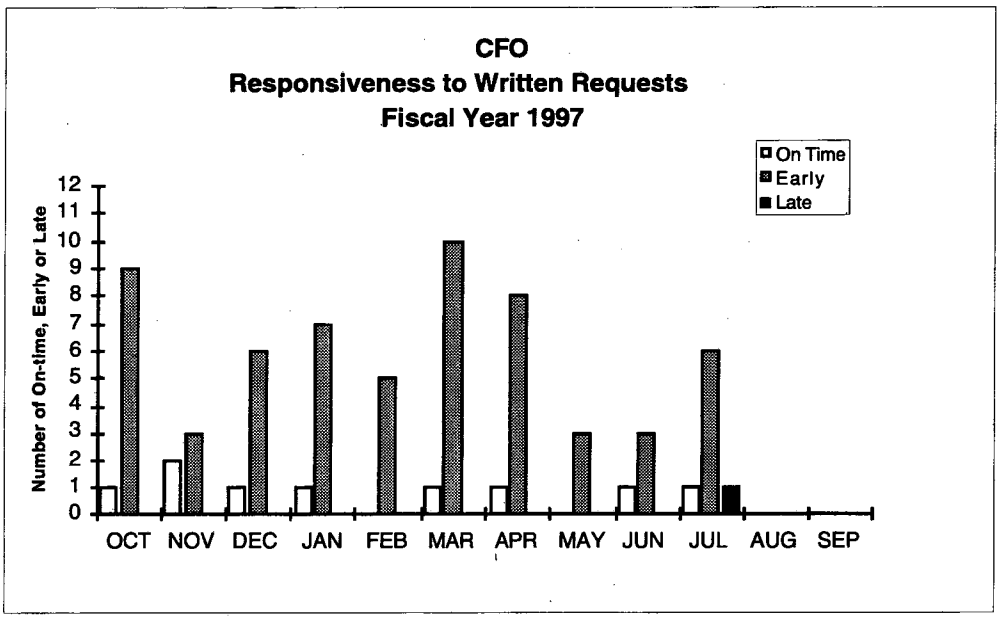
A comparison of this July's year-to-date results with the same time period in previous years shows a continued improvement in early responses and is indicative of LBNL's commitment to customer service and continued progress in this area. As the above statistics show, results are greater than 90%.

The CFO Department continues to prioritize DOE requests as part of a continuing effort to exceed quality and response time expectations. One periodic report which is consistently provided "early" is the monthly FIS transmission to DOE. We have received several positive comments from

DOE-Finance indicating that they benefit from this early transmission because it enables DOE to begin their editing process early. This extra lead time allows DOE more time for review and analysis.

Supporting Data

- See Documentation Folder.
- See attached graph illustrating a 99% early or on-time response to written DOE requests.



Objective #2
Criterion 2.1
Performance Measure 2.1.b

Leadership in Systems Improvements: *Seek opportunities to provide proactive leadership in support of DOE and laboratory initiatives for continued contractor systems improvements.* **(Weight = 10%)**

Assumptions:

- Narrative describing progress in support of this criterion. Use existing tools and the one year systems plan.

Gradient:

- Factors that will be considered for rating include:
  - timeliness of the plan
  - cost and cycle time reductions
  - improved capacities
  - customer feedback
  - progress towards long term initiatives

Performance Measure Result

Major Projects and Electronic Resource Upgrades

The Laboratory has submitted on time to DOE the requested One-Year System Plan. The Lab's plan demonstrates proactive leadership supporting DOE and Laboratory initiatives with respect to developing systems. Additionally, the CFO/Finance Department has implemented electronic-aided tools to serve its customers. Below are the highlights and accomplishments as of July 1997.

Financial Management System (FMS)

The new Financial Management System, scheduled to go "live" October 1, 1997, will include the following PeopleSoft modules:

- General Ledger
- Project Costing
- Budget—both internal and external

This new system will allow for the use of modern relational database technology, which will greatly improve the collection and distribution of the Laboratory's financial data. LBNL's current FMS strategy is centered on a migration from an IBM environment to a UNIX/ORACLE platform. Reduced use of the IBM mainframe computers, which are reaching the end of their life cycle, will avoid costly maintenance and reporting delays caused by inevitable "down-time" problems.

Major Impacts from Improved Capabilities

General Ledger: On-line journal entries access by programmatic staff will replace the old manual cost transfer processes.

- A chart of accounts with DOE Standard General Ledger (SGL) format.
- MARS fields will be provided for, as required by DOE.
- Projects will have both costs and budget on the same line.
- PeopleSoft chartfields will be utilized to identify general ledger account, projects, B&R categories, fund types, MARS, Organization Code, Job Orders. Inclusion of these fields will greatly improve the detail collection and reporting of cost and budget information.
- This system is on schedule and will meet the target for implementation October, 1997.

Project Costing:

- Provides Work Breakdown Structure (WBS) capabilities.
- Interactive project set-up procedures (automatic linking with B&R, fund type, MARS, organization, and overhead codes).
- Detail costs reports inclusive of "soft" weekly feeder system closes which apply burden and overhead for timely information.
- Provides unlimited levels of detail.
- Provides a real job order tracking capability.
- This system is on schedule and will met the target for implementation October 1997. "Soft" weekly feeder system closes will be migrated downstream as the legacy systems are adjusted to interface in FMS Project Costing.

Budget:

- The FMS Steering committee elected to defer implementation of a separate Budget System. In the interim, the FMS Project Costing module, which is on schedule for October 1997, will serve as the budget data mechanism to provide the features below.
- Provides Lab-wide standard budget development capabilities with roll-up by the Budget Office.
- Provides roll-over of budget from plan to execution.
- Has capability to modify budget forecast to compare Presidential and actual budget funding.
- Provides electronic transfer of budget to project costing and general ledger modules to match with costs.

Customer Input and Feedback

During this year, the CFO organization has worked very hard to develop and implement the FMS project. Lab-wide cross-functional teams have been formed to study specific areas and to make recommendations. Customers have been involved at all levels as part of the teams to analyze the functionality of the systems and assure satisfaction of their needs.

Timeliness of the Plan

In addition to the on-time submittal of the One-Year System Plan, the availability of financial information for customers has been a high priority. To ensure that both the hardware and software are in readiness for the October 1, 1997 implementation, individuals from CFO, ISS, and the divisions have attended training classes during the year sponsored by the new systems vendor, PeopleSoft.

These classes have covered general ledger, project costing, budgets, and reporting tools. In addition, the Laboratory will be developing in-house training to help develop the skills of LBNL staff in the use of the new system.

The Laboratory is currently working with a vendor to outline course material that will supply the Laboratory at large with overview information about uses of the new financial system. Also included are course structures specifically addressing Project Set-up and Resource Adjustments (on-line journal entries) for division personnel. These courses will be offered throughout the month of September 1997 in preparation for the October 1997 implementation. The CFO organization will conduct training sessions utilizing the consultants currently involved in the implementation as well as the core implementation team to bring CFO staff up-to-date with new processes and procedures.

IRIS (Integrated Reporting and Information System)

The IRIS system was initially a demonstration project (FY1996) to show the feasibility of making administrative data available on the Web. The first step was to take a various mix of information and unite it within a single date infrastructure (data warehouse). Following this was the creation of IRIS, which brings the information to the user. By using the IRIS web site, employees can now access information contained in the ledger, property, purchasing, ProCard, training, accounts payable, and account authorization databases.

CFO/Finance Web Site—Homepage

CFO/Finance has developed a Web site (Home Page) to enhance information retrieval for Laboratory staff. The Web site explains the functions of each unit in the Finance Department and identifies staff to contact for assistance. Also available on the Web site are various forms required to process financial activity which are to be used Laboratory-wide. These forms include Cost/Effort Transfers and Requests for Issuance of Checks. The availability of these forms on the Web increases convenience, improves turn-around time, and reduces paperwork across the Laboratory.

The Web site is used to ensure that information is accessible in the area of compliance as well. For example, the categories of unallowable costs can be found at this new CFO/Finance site. The Cost Accounting Disclosure Statement (CAS) is provided to the Laboratory via a "public" computer networking system and models explaining the proper application of CAS approved rates and overhead burdens continue to be improved on the CFO/Budget Web site.

The CFO/Finance Web site will also be a source for referencing terminology associated with the new Financial Management System (FMS). The FMS Training team is developing a reference guide to provide a clear understanding of new terminology associated with the new applications which will be housed on the Finance Home page.

Near-Term Initiatives

- The Laboratory is also exploring the implementation of the PeopleSoft time and labor application for FY 1998 as part of this project.
- In the future, further updates to IRIS will bring additional information to the Web.
- Recognizing that the Net is becoming an integral part of organizations, CFO will continue to improve its Web sites as part of our quality commitment to customer service.

Successes/ Shortfalls

Improved Capacities—Cost/Cycle Time Reductions

Due to the need to devote extensive Laboratory resources to the new FMS and the resulting fact that this new system will be replacing older systems, a moratorium has been placed on upgrading most legacy systems. Exceptions have gone through a rigorous review and the following upgrades have been completed:

Accounts Payable System (APS)

An enhancement of the Accounts Payable System that allows purchase orders to close out automatically has completed the evaluation phase, has been approved, and is in the process of being implemented. When the programming is completed, this will eliminate the need to manually examine POs for closure as well as manually close them out of the system.

Contract Labor System (CLS)

The plan to automate the Contract Labor Time Reporting System by converting and processing the data through the Laboratory Electric Time System (LETS) has been completed. Automation of this process has produced efficiency gains as well as improved data integrity by eliminating the need to produce labor-intensive paper timecards and the subsequent manual input of this data into the contract labor system.

Further efficiencies have been realized by using the reporting features within LETS to reduce the costs and cycle time involved with making payments to the contract labor vendor. Because all contract labor time is processed through LETS, a monthly report has been designed which calculates the contract labor rates, including the mark-up, to produce the total monthly cost owed the vendor. Ultimately, this report is used to make payment—avoiding administrative costs to process vendor invoicing. The cycle time savings realized by this change in invoicing process is estimated at approximately 10 days/month in administrative time. This method is estimated to save 0.5 FTE/year for an estimated $25K.

DOE Management Analysis and Reporting System/Standard General Ledger MARS/SGL

LBNL has completed the necessary programming tasks which will provide the reimbursable work order number in MARS information and is ready to transmit the data when requested by DOE.

The Laboratory implemented changes to provide object classifications codes for all funded cost transactions as requested by DOE for FY 1997 activity.

Human Resources/Payroll System

The PeopleSoft HR/PR System, which was implemented July 1, 1996, was very successful and has provided uninterrupted payroll service to our employees. This integrated HR/Payroll System has replaced our main frame system with a client server based system. During 1997, the system has produced the following enhanced services to the Laboratory:

- It provides the capability to track all Payroll and Human Resources actions by effective date, providing historical tracking of all actions.
- It allows for complete review and editing of payrolls which can then be recalculated, resulting in error-free payroll processing.
- This payroll system interfaces to LETS, allowing for data capture and interface of on-line time input to paycheck.
- An ad hoc check-generating function eliminated all manual effort and possible errors associated with manual (on demand) checks.
- Actions such as new starts or termination automatically create pay adjustments for the partial period, eliminating many calculations of these items.

ProCard

Phase 2 of the ProCard system, which allows cardholders to charge multiple Laboratory accounts with one procurement card, is currently in operation. Installation of the software on cardholders' computers and training are currently underway. Phase 1—the manual one-account per card process—will be retained. As of August 11, the Laboratory has 233 cardholders, of which 58 use the new Phase 2 (multiple accounts per card) process and 175 use the Phase 1 (one account per card) process. Ongoing training is being done to move the latter cardholders over to the Phase 2 process.

Additionally, all low-value buying activities are monitored with the goal of moving the activity out of Oracle and on to either the ProCard process or Just-in-Time contracts.

Procurement Systems

The Oracle Purchasing system continues to provide distributed data entry of purchase requisitions, approvals, subcontracts, and receivals. It has led to efficiencies by eliminating duplicate data-entry and reducing processing time. During FY 1997, 90 additional users were added to the Oracle Purchasing System, bringing the total number of requesters, approvers, and buyers to 490. Also during FY 1997, the system was upgraded to version

10.6SC to allow for the later move to a graphical user interface. As part of this upgrade and the previous years' upgrade from version 9.4 to 10.6, several issues were resolved that improved the reliability and integrity of the data.

The remaining Procurement subcontracts (blanket, cost-type, IUT, A&E, construction, and A-Orders) were "retrofitted" into Oracle Purchasing and the AP interface changed to accommodate the automatic entry of Procurement information of these types of subcontracts into the Laboratory's Accounts Payable System.

Stores Accounting System

In early FY97, the Stores Accounting System began utilizing a new Oracle-based relational database application called Maximo. Transactions that previously were processed weekly in batch mode are now processed on-line, providing the following benefits:

- A self-validation process occurring concurrently which enhances the effectiveness and accuracy of the Stores inventory.
- Real time processing to update Stores database expedites reordering processes.
- Savings in staff effort through eliminating manually reviewed error reports now validated up-front within Maximo.
- Real time processing for instant verification of stock catalog numbers or bad/inactive accounts.

The CFO/Finance staff (1.0 FTE) previously performing accounting control of stores inventory transactions has been redirected to the following two activities as dictated by the current business environment:

1. As part of CFO's reengineering of systems, a staff member has been assigned to a team which is evaluating vendor software for the future acquisition of a Property management system.
2. Areas of concentration include the redesign of operational processes involving the creation of assets and internal controls to assure (equipment) data integrity.

Travel Disbursements (TD)

The Travel Disbursement system enhancements include the following electronic features, which have significantly improved efficiency as well as data integrity:

- Automated Clearinghouse (ACH) payment capabilities for credit card reimbursements and enhanced data integrity verifications.
    1. First Bank Travel Cards are issued to Laboratory employees for charging official travel-related expenses. When submitting reimbursement vouchers, travelers can elect to have the Laboratory's TD system pay them either via check or via an ACH transfer to the First Bank Credit Card Account.
    2. The TD system accumulates ACH travel reimbursements for bimonthly transfers to the bank. These transfers are

automatically applied to the traveler's credit card account, as the cardholders' monthly statements reflect.

VISA account data from the bank is uploaded to the Lab's TD system monthly and electronically matched with employee identification numbers. This automated process is used in the TD system to verify and generate correctly coded account numbers for future ACH payments.

Supporting Data

- See Documentation Folder.

Objective #2 Criterion 2.2

Transaction Processing Improvements: *Reduce cycle times and/or cost per transaction, and improve quality and accuracy for the following transaction processing activities:*
- Accounts Payable
- Accounts Receivable
- Suspense Account
- Payroll
- Domestic Travel Accounting
- General Accounting
(Weight = 20%)

Objective #2 Criterion 2.2 Performance Measure 2.2.a

Quantification of Improvement: *Trend toward best FMSIC and/or industry quality practices as appropriate per benchmarking data. Achieve measurable improvement over prior baselines.*
- accuracy
- cycle times
- cost
Graph monthly cycle times with a minimum standard line and target line and/or graph the cumulative cost per transaction with a minimum standard line and target line. **(Weight = 20%)**

Assumptions:

- This performance measure includes a series of graphs which chart the accuracy, cycle times, and cost effectiveness of identified production activities. The Laboratory will establish individual maintenance or improvement targets based on management priorities and/or its position with respect to FMSIC and/or industry benchmarking results. It is recognized that activities already performing at acceptable levels may only require maintenance targets. The Laboratory will use graphs and data elements consistent with FY 96 self-assessment.

Objective #2 Criterion 2.2 Performance Measure 2.2.a Gradient 1

Gradient 1: Accounts Payable—Discounts

Measure gross cost effective discounts available vs. discounts taken. Discounts ≤ $10 may not be cost effective.

Performance Measure Result

As of July 1997, the Accounts Payable unit met the minimum standard of 85% of discounts taken for this measure. Cumulative July, 1997 (year-to-date) discounts taken are 85%. The target has been set at 85% (lower than previous years) to take into account the loss of experienced staff and a declining "available" discounts base as a result of the dramatic increase in ProCard use and a significant loss of discounts from the vendor base (see discussion under "Successes").

Successes/ Plan(s) of Action

Discounts taken continue at the high level set in FY96. The following trend demonstrates this continued success.

	FY97	FY96	FY95	FY94
YTD July Results	85.0%	90.4%	83.6%	69.7%
Projected/Actual Yr.-End Results	85.0%	91.3%	84.1%	71.2%

Two primary events resulted in a small decline from the FY96 results.

1. First, a new vendor who won the most recent bid on one contract labor requisition did not offer the discounts received during the previous vendor's agreement. The resulting impact was significant as the purchased commodity contributed to a projected 36% ($24K) of the total available discounts ($68K). Because the results of this metric are derived by achieving a percent of available discounts, if available discounts decline as dramatically as 36%, and that percentage is concentrated in a single vendor, the dollars required to maintain the same result require a much greater level of effort. Further impacting the situation is the consequence that as the base of available discounts declines, the same absolute dollar discounts "lost" reduces the overall percent achieved. For example, if available discounts are $10,000/month, the dollar amount which can be lost is $1,000 to achieve 90% taken. However, if discounts available are $6,400 and $1,000 are lost, the percent drops to 84%.

   For discussion purposes, had this major vendor's contribution to the available discounts still existed, and assuming our historical recovery of 100% of those discounts offered, a recast of the July, 1997 year-to-date actual provides a much improved result of 91% taken rather than 86%.

   The decision to accept vendors' bids includes many business concerns, including discounts, to meet Laboratory requirements at the best overall total cost. Thus, care must be taken to evaluate the true benefit received from recovering costs in the form of discounts.

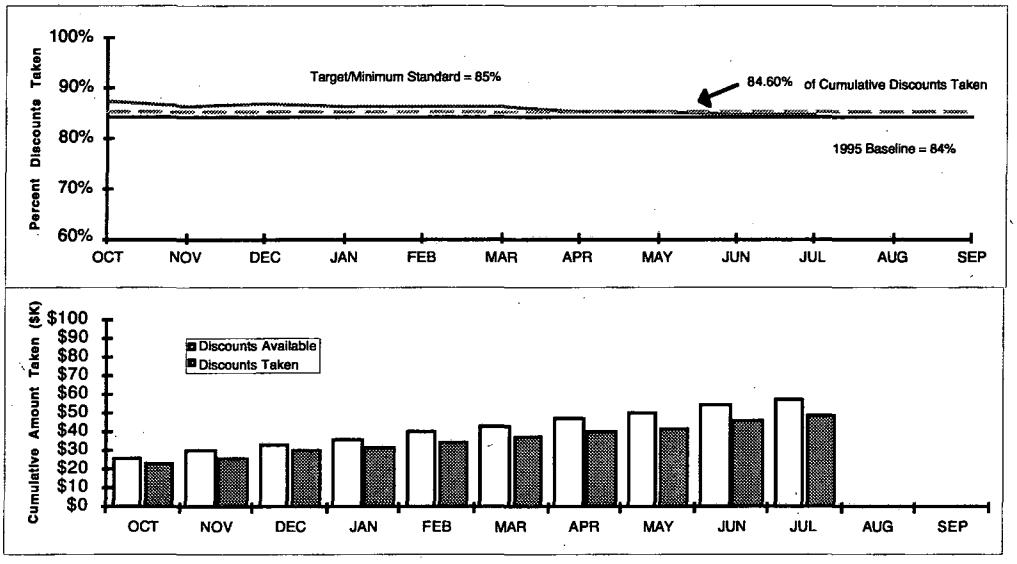
2. The second impact resulted due to continued restructuring of the CFO/Finance department workforce to meet the staffing challenges of our new General Ledger implementation effort. The AP unit has four (31%) new employees or employees with new assignments. Two of these new positions are the result of the transfer of two high performers within the AP unit to General Ledger. Overall, these realignments produce strong staff support to critical functions and strengthen the department with cross-training and expanded skills.

Despite the depletion to the available discounts and staff retraining disruptions, the AP unit projects sustained results above the 1995 baseline of 84% and expects to meet its target of 85% of available discounts.

Supporting Data

- See Documentation Folder.
- See attached graph illustrating that Accounts Payable discounts taken continue to exceed the standard of 85% YTD July, 1997.

CFO
Accounts Payable Vendor Invoice Discounts Taken
Fiscal Year 1997



Objective #2
Criterion 2.2
Performance Measure 2.2.a
Gradient 2

Gradient 2: Accounts Payable—Cycle Time

No more than 15% of vendor payments occur before or after due date. Cumulative graph line showing % of payments made with 15% minimum standard line and a 10% target line. Consistent with DOE Order 534.1, payment dates to be calculated from date of constructive receipt or invoice date, whichever is later. Use gross number of invoices not just controllable invoices. Measure invoices not dollars.

Performance Measure Result

As of July 1997, the Accounts Payable Unit has met and exceeded by 1% the standard for this measure. Cycle Time compliance for July 1997 YTD is 86%.

The Accounts Payable System releases each payment for on-time processing based on the terms set up for each order and provides on-line "query" notification. To monitor productivity, reports are generated showing statistics for each desk on the number of invoices processed and percent processed "on-time."

The cumulative productivity gains (with all years prior to FY97 restated to exclude equivalent ProCard transactions and cost) are presented below:

	YTD			
	7/97	7/96	9/95	9/94
On Time	86.0%	84.0%	82.0%	71.0%
Late Entry	4.0%	2.0%	5.0%	17.0%

The total on-time statistic continues to show improvement despite increased invoice volume due to NERSC and other increased payments. Because the Laboratory lacked additional staffing resources to match increased workload, late invoice entry slid somewhat this year. Also impacting this metric was the staff turnover and new employees as described in the Discounts section. Training activities of new staff continues and will be measured again by year end to follow progress.

As presented by the tabulated results above, late invoice entry is a controllable item which the Accounts Payable unit monitors for root causes and appropriate follow-up corrective action. The balance (10%) of the items are noncontrollable events to AP: divisional late certification (3)%, late receival (3%), and other (4%).

Successes/ Plan(s) of Action

The ability to continue productivity gains is primarily due to increased usage of ProCard for general operational low-value purchases, allowing staff effort to be applied to improved cycle times.

The increased Pro-Card activity over that of FY96 during the same review period is provided below:

Period	Number of Transactions	% Increased In Dollars	% Increased In No. of Trans.
FY96 Oct - May	3,350	$ 1,401,072	N/A
FY97 Oct - May	8,667	$ 3,525,630	159%

Phase 2 of ProCard System is now operational. The capabilities of Phase 2 give the cardholders more flexibility and improve productivity. Examples of these improvements include the ability to:

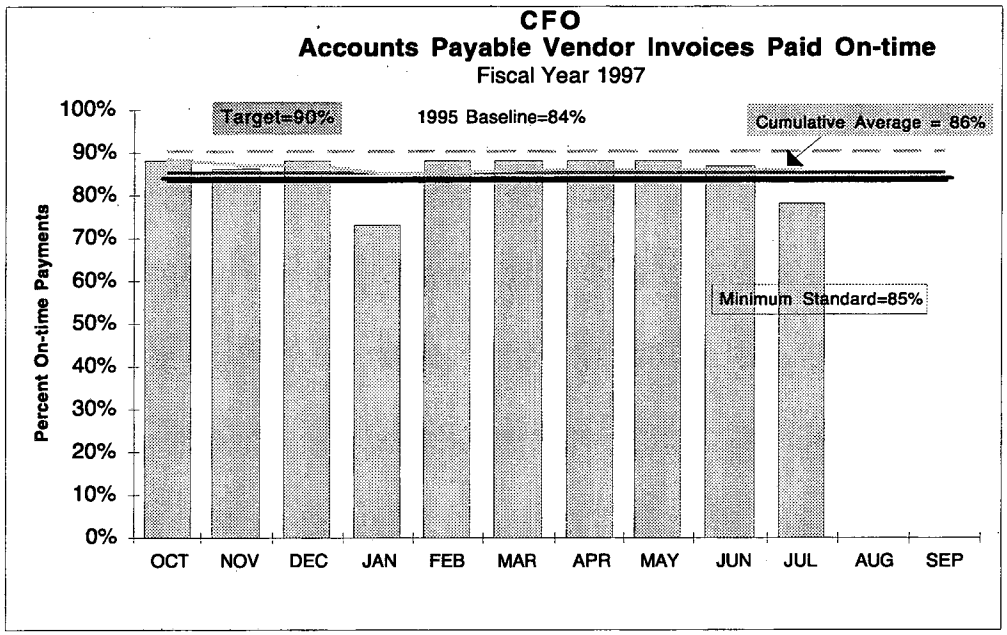
- Edit and query purchases
- Allocate costs to more than one account
- Make account number changes on-line without manual journals.

Continued and projected increased usage of ProCard should continue to improve this statistic.

Further efficiencies are being realized by using the reporting features within LETS to reduce the costs and cycle time involved with making payments to the contract labor vendor. Because all contract labor time is processed through LETS, a monthly report has been designed which calculates the contract labor rates (including the mark-up) to produce the total monthly cost owed the vendor. Ultimately, this report is used to make payment, avoiding administrative costs to process vendor invoicing. The cycle time savings realized by this change in invoicing process is estimated at 10 days/month in administrative time. This method is estimated to save 0.5 FTE/year for an estimated $25K.

Supporting Data

- See Documentation Folder.
- See attached graph illustrating that Accounts Payable cycle time continues to show improved trends during FY97.


CFO
Accounts Payable Vendor Invoices Paid On-time
Fiscal Year 1997
Target=90%
1995 Baseline=84%
Cumulative Average = 86%
Minimum Standard=85%
Percent On-time Payments
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP

Objective #2
Criterion 2.2
Performance Measure 2.2.a
Gradient 3

Gradient 3: Accounts Payable—Cost

Graph production cost per transaction with minimum standard line and target line. Use appropriate benchmarking cost element criteria. Labor costs will include fringe benefit costs and no other burdens. In the case of working supervisors, include measurable time spent on processing accounts payable. Transactions are defined as number of invoices.

Performance Measure Result

The Accounts Payable Unit continues to show improvement in this performance statistic. The July 1997 cumulative transaction cost is at $5.32.* This statistic shows that results achieved are substantially better than the already stringent target of $5.90.

The target is stringent for LBNL because it was derived from FY95 actuals which were already a substantial improvement over previous years for LBNL.

Successes/ Plan(s) of Action

The following trend analysis shows the continuing progress being made in this area:

	YTD July '97	YTD July '96	YTD July '95
Actual[1]	$5.32	N/A	N/A
Actual Prior to ProCard	N/A	$5.19	$6.58
Yr-End Target	$5.90	$6.50	$7.79

[1]Uses number of ProCard payments per month (2 times/month) vs. line items paid on each ProCard invoice.

Note: Prior years are reported with an inflation/merit increase factor of 4% per year.

Actuals including ProCard *transactions* demonstrate a continuing cost reduction each year, including FY97, whereas actuals excluding ProCard transactions show an increase this year. This occurred because ProCard involves so many transactions and so few payments. It should be noted, by observing the cost per transaction using the methodology which includes ProCard transactions, that total AP costs have significantly declined even if the cost per invoice statistics (calculated excluding ProCard transactions items) does not reflect this.

The staff reassignments described in the "Discounts" section of this measure is one reason for the slight cost increase this year (using the ProCard payments statistic). These newly assigned staff members require more overtime to complete their tasks, thereby driving up the Accounts Payable costs. This situation is due primarily to the transfer of two highly experienced AP staff members to the General Ledger unit. The impact to

*Uses number of ProCard payments per month (2 times/month) vs. line items paid on each ProCard invoice.

cost/transaction during the early months of this year has declined through July (reduction of 39%) as staff reaches maturity.

The benefits offsetting the increased AP costs result from enhancement to CFO employee skills mix due to the cross-functional training activities involved with these moves.

The current period results are substantially better than the target level primarily due to the benefits derived from continued implementation and expansion of previous reengineering efforts such as:

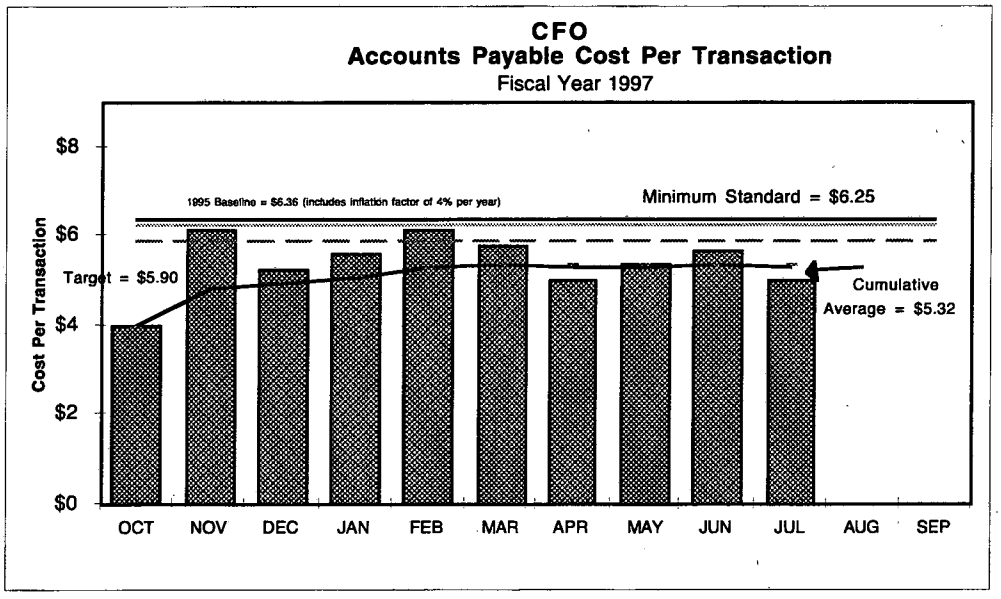
- Introduction of an improved ProCard System which increased the capability to query transactions and change accounts. Card use has continued to increased as shown above under "cycle time."
- Implementation of an automated time reporting system for contract labor, reducing the need to prepare manual time cards and manually input them into the Contract Labor System.
- Increased utilization of automated Oracle Procurement System—blanket orders now included. This provides a database of procurement activity in this area and reduces the effort needed to prepare paper purchase orders and receivers for keypunching.
- Introduction of IRIS query capability for divisions to see Accounts Payable database. This reduces the number of calls to Accounts Payable and provides more timely information to the divisions.
- Reorganization of Accounts Payable to add a lead clerk to help with reengineering activities.

Additional reengineering activities are under way both within Accounts Payable and collaboratively with other CFO departments involved in the payment processes. These should have a positive effect on this statistic in the future. A few that are currently in progress are:

1. A program to automatically close Purchase Orders from the AP System if certain criteria are met. This will reduce both division time (spent determining what POs should be closed) and AP time (spent closing them).
2. Additional systems contracts with vendors are being evaluated using electronic means of ordering and providing payment to the vendor and are designed to improve efficiency.

Supporting Data

- See Documentation Folder.
- See attached graph illustrating that Accounts Payable costs per transaction fall well below the target and minimum standard.


CFO
Accounts Payable Cost Per Transaction
Fiscal Year 1997
Cost Per Transaction
$8
$6
$4
$2
$0
1995 Baseline = $6.36 (includes inflation factor of 4% per year)
Minimum Standard = $6.25
Target = $5.90
Cumulative
Average = $5.32
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP

Objective #2
Criterion 2.2
Performance Measure 2.2.a
Gradient 4

Gradient 4: Accounts Receivable—Cycle Time

Aged receivables will be measured and reduced in 181+ days, 121-180, 91-120, 61- 90, 31-60, 1-30 groupings.

Performance Measure Result

LBNL has exceeded the performance measure objectives. The average aged Accounts Receivable balance has been maintained at 4% below the FY 1996 level with significant accomplishments in the 180+ category.

Successes/ Plan(s) of Action

During the first 10 months of FY 1997, the monthly aged Accounts Receivable balance ranged from a high of $1,703K to a low of $642K. The 10-month average was $1,138K compared to $1,364K for the same period during FY 1996. December had the highest balance, $1,703K, yet 52% or $881K of that total was in the 1-to-30-day category. During January, all the December 1-to-30-day balance and 50% of the current billing was collected.

In March 1997, the total aged Accounts Receivable reached a record 4-year low of $642K. During March, the balance in the 180+ category decreased to a low of only $0.66K, or 0.1% of total aged Accounts Receivable. This balance represents an 83% decline in the 180+ category over the same time period during FY96. The final July increase in the 180+ category to $45K was a result of a contractual retention by the customer, Oak Ridge National Laboratory (see note below). This retention issue remains highly visible, with the Laboratory's Sponsored Projects Office and Engineering Division taking the lead as the direct customer contact to resolve outstanding issues and to expedite payment.

As the table below demonstrates, the average level of receivables has steadily declined each year since 1994 for an overall impressive 60% reduction. This continued improvement has been accomplished while revenues have increased over the 1994 level by 8.7%.

Demonstrated Results

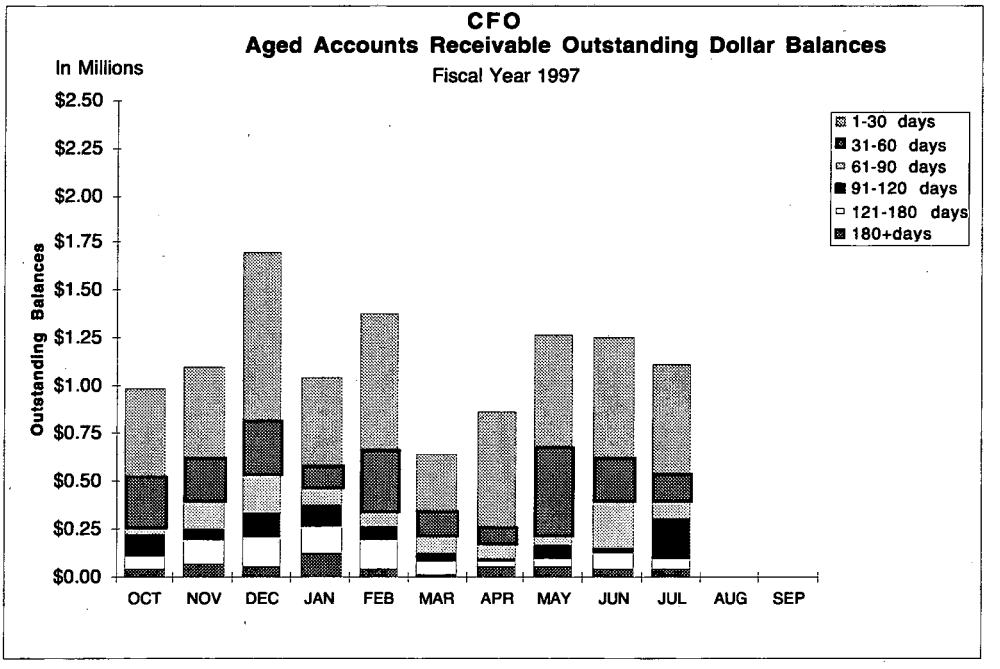
	Year to Date July			
Total Aged A/R	FY97	FY96	FY95	FY94
$(000)				
High	$1,703.0	$2,112.0	$2,580.0	$4,359.0
Low	642.0	781.0	1,050.0	1,507.0
Average	1,138.0	1,364.0	2,204.0	2,714.0
180+ Days	45.0*	12.0	10.0	279.0

*This balance was reduced to $20.0 on 8/4/97 resulting from a payment received and deposited.

Peak periods during the first 10 months of FY97 were promptly collected, resulting in an overall YTD July improvement over the same time period in FY96 of 47%. Timely collection of the 1-to-30-day category has precluded buildup in other categories. As of August closing, the 180+ category will be zero and will remain as such through year end. This reflects significant accomplished in the 180+ category.

Supporting Data

- See Documentation Folder.
- See attached graph illustrating aged Accounts Receivable outstanding dollar balances.



Note: The July 180+ balance was reduced to $20K on 8/4/97 resulting from a payment received and deposited. The remaining $20K is being actively monitored.

Objective #2
Criterion 2.2
Performance Measure 2.2.a
Gradient 5

Gradient 5: Accounts Receivable—Cost

Graph production cost per transaction with minimum standard line and target line. Use appropriate benchmarking cost element criteria, general guidelines, and customer billing assumptions. Labor costs will include fringe benefit costs and no other burdens. In the case of working supervisors, include measurable time spent on processing accounts receivable. Transactions are defined as number of invoices issued.

Performance Measure Result

LBNL has exceeded the performance measure objectives. The cumulative average cost per transaction is $5.25, slightly below the FY97 target of $5.45 but far below the FY95 baseline of $7.18 (includes 4%/yr inflation factor).

Successes/ Plan(s) of Action

For FY 1997, the target has been set at $5.45, the same level as FY 1996. Based on results from the FY96 IMA Benchmarking Study, the costs per transaction surpassed the first quartile measure for total costs and was fractionally higher than the lowest finance headcount per hundred million dollars of revenue. These statistics indicate that this metric is running at close to maintenance status.

The cumulative average cost per invoice as of 7/31/97 was $5.25 compared to $5.11 (includes 4%/yr inflation factor) as of 7/31/96, up 2.7%, but nearly 4% below the target of $5.45.

The volume of invoicing increased compared to the same period last year. The increase in invoicing primarily involved inter-DOE-work orders, which require manual preparation and absorbed all current period productivity efficiencies. Thus, as expected, this incremental volume did not improve the cost per transaction. This manual process will be scrutinized for ways to further improve the process. Additionally, realignment in personnel necessary to meet ongoing business requirements contributed to the factor of higher costs.

Yearly Trend

Year to Date July

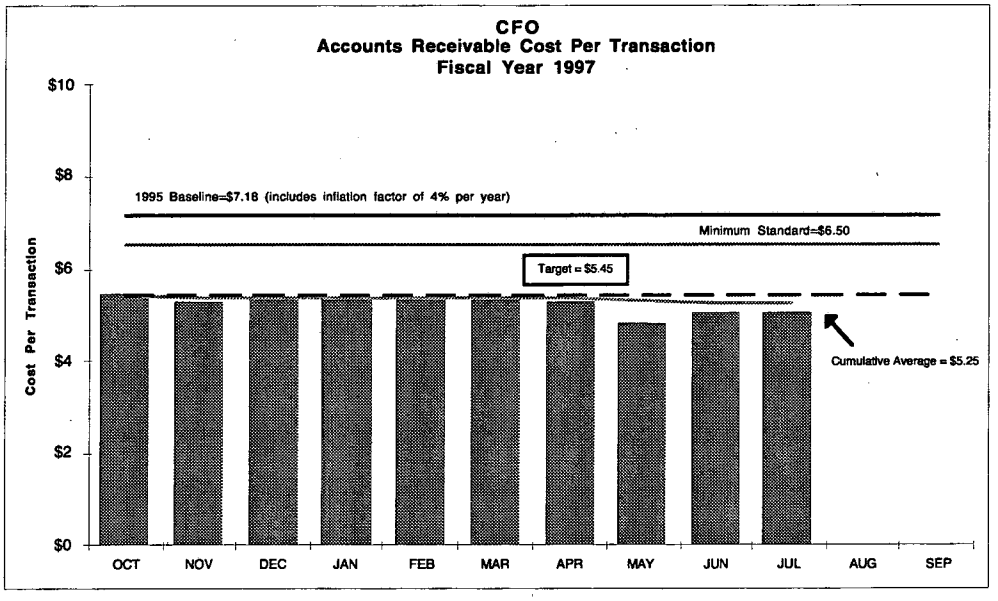
FY97	FY96	FY95
$5.25	$5.11	$7.63

Note: Prior years are reported with inflation/merit increase factor of 4% per year.

As indicated above, the manual inter-DOE-work orders billing will be reviewed for possible productivity gains.

Supporting Data

- See Documentation Folder.
- See attached graph illustrating that Accounts Receivable cost per transaction remains below the FY97 target.



Objective #2
Criterion 2.2
Performance Measure 2.2.a
Gradient 6

Gradient 6: Suspense Account—Process Improvement

Improve the process for clearing of suspense account transactions.

Gradient:

- A Meets Expectations rating is achieved by having cumulative dollars in suspense account(s) zeroed out at year end. Factors that will be considered for a higher rating include:
  - average cumulative dollars in trends down during year
  - minimization of cumulative dollars in and cumulative dollars out discrepancy
  - improvement in performance from previous year

Performance Measure Result

The Laboratory maintains a series of accounts to handle suspense items. These accounts are analyzed and cleared (following established Suspense Account Reconciliation Procedures) by General Ledger Unit staff during the month after the suspense amount is posted.

The cumulative dollars in Suspense Accounts 3598-01, 3598-02, 3598-09, and 1840-01 were zeroed out as of September 30, 1996.

The average cumulative average dollars "in" during the first 10 months of FY97 is trending downward. The cumulative high of $145K in December has been reduced to $114K as of the end of July.

A comparison of the cumulative average dollars "in" for the first 10 months of FY97 and FY96 shows a reduction from $135K to $114K, or approximately 15.5%.

Demonstrated Results

Comparison to FY1996 and 1995

	Number of Items			Average Cumulative $K In			Average Cumulative $K Out		
(FY)	1997	1996	1995	1997	1996	1995	1997	1996	1995
Oct.	193	119	361	92	233	506			
Nov.	256	185	245	118	181	393	37	116	180
Dec.	133	216	168	145	172	388	48	120	148
Jan.	145	111	134	130	168	352	103	127	176
Feb.	125	102	250	141	179	318	99	135	256
Mar.	90	90	418	132	155	315	114	141	239
Apr	87	103	150	130	138	292	112	132	247
May	112	149	102	120	130	266	110	121	256
June	121	84	108	117	129	263	105	115	236
July	106	81	150	114	135	265	104	116	237
	1,368	1,240	2,086						

The rate at which the dollars are cleared to final accounts has steadily increased YTD July as follows:

	Percent of Cumulative $K Out	YTD July Cum Avg $ Out	YTD July Cum Avg $ In
July '97	91.2%	104	114
July '96	85.9%	116	135
July '95	89.4%	237	265

Successes/ Plan(s) of Action

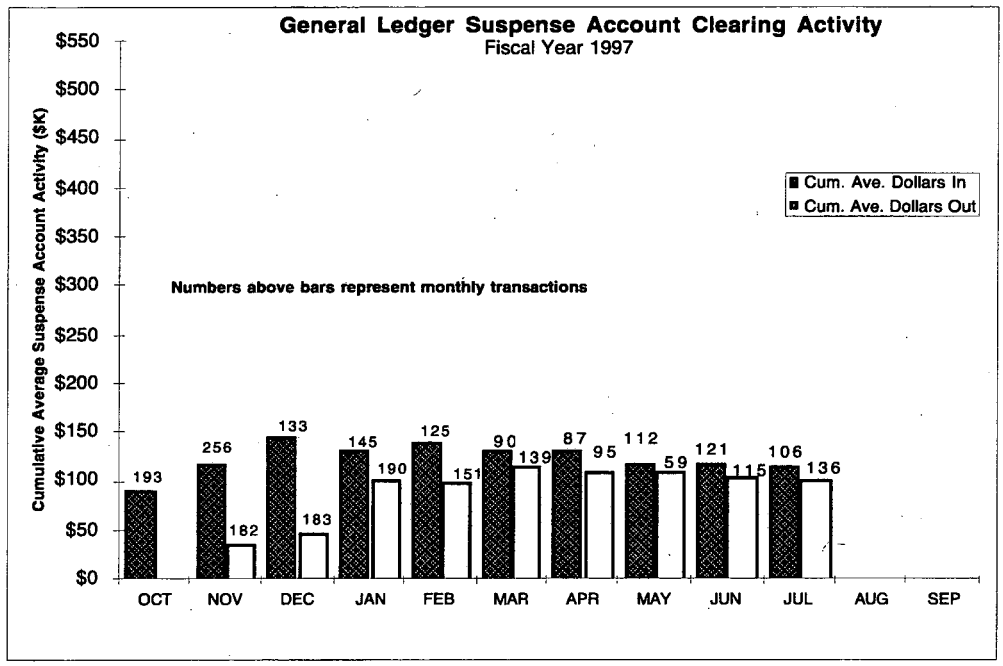
As demonstrated by the YTD July 1997 5% increase in the rate of clearing average cumulative dollars "out" in comparison to the same period for FY96, the Laboratory is continuing to research the suspense balances, along with help from the divisions, and takes a proactive role in booking the amounts in suspense accounts to the correct final cost objectives. Also, as demonstrated by the first 10 months (15.5% improvement in cumulative average dollars in), the CFO Department is applying additional labor resources to perform thorough reviews of feeder input so that errors can be corrected up front.

In addition to maintaining our current aggressive activity of clearing suspense items, plans are in place to improve suspense activity processes by incorporating systematic methods embodied within the new General Ledger system. Strong emphasis will be placed on methods of preventing and resolving suspense items.

The plan to continue last year's improvement of minimizing the discrepancy between average cumulative dollars "in" and "out" was temporarily slowed down as a result of staff reassignment in our career training program. With the training complete, this staff can again resume their normal schedules for clearing suspense items. The slight increase in the total number of items was also related to this same situation.

Supporting Data

- See Documentation Folder.
- See attached graph illustrating improved General Ledger Suspense Account activity over the course of FY97.


General Ledger Suspense Account Clearing Activity
Fiscal Year 1997
Cumulative Average Suspense Account Activity ($K)
$550
$500
$450
$400
$350
$300
$250
$200
$150
$100
$50
$0
Cum. Ave. Dollars In
Cum. Ave. Dollars Out
Numbers above bars represent monthly transactions
193
256
182
133
183
145
190
125
151
90
139
87
95
112
59
121
115
106
136
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP

Objective #2
Criterion 2.2
Performance Measure 2.2.a
Gradient 7

Gradient 7: Payroll—Cost

Graph cost per employee with minimum standard line and target line. Use appropriate benchmarking cost element criteria. Labor costs will include fringe benefit costs and no other burdens. In the case of working supervisors, include measurable time spent on processing payroll.

Performance Measure Result

The Berkeley Laboratory has maintained excellent customer satisfaction, and has met all legal requirements imposed by federal and state agencies. Payroll costs continue to track the excellent performance achieved in previous years. Achievements in internal customer satisfaction are evidenced by the absence of negative survey responses and the lack of employee complaints involving incorrect pay.

Additionally, LBNL has been identified as an IRS Quality Supplier. Quality Suppliers are organizations that file information returns magnetically/electronically with the Internal Revenue Service without formatting errors for two consecutive tax years. Our external (Federal-IRS) customer has awarded the Lab a commendation in recognition of the Lab's quality contribution to the Information Reporting Program which, in turn, translates into quality service for all IRS customers.

As of July 1997, the cumulative average processing cost per employee is $2.90. CFO has exceeded the projected FY97 target goal of $3.30 by 12%. This year's target set an aggressive reduction of 7.3% over the FY96 target of $3.56 (adjusted for merit/inflation factor).

Successes/ Plan(s) of Action

The 3-year comparison of transaction costs for processing payroll (including the recast 1996 target as presented above) is as follows:

FY	Actual Cost/Transaction	Target Cost/Transaction
1997	$2.90 (YTD July)	$3.30
1996	$3.48 (YTD July)	$3.56
1995	$3.99 (YTD July)	$4.30

Note: Prior years are reported with inflation/merit increase factor of 4% per year.

Of noteworthy mention is the placement the Payroll function achieved during the FY96 IMA Benchmarking Study. When measured among participants in its class (organizations with less than one billion dollars in revenue), and considering economies associated with the Lab's high-cost geographic demographics, headcount and total costs were slightly below the median value, as follows:

	FTE per $100M Revenue	Total Costs as % of Revenue
IMA Median	1.25	0.0987%
LBNL	1.15	0.0845%

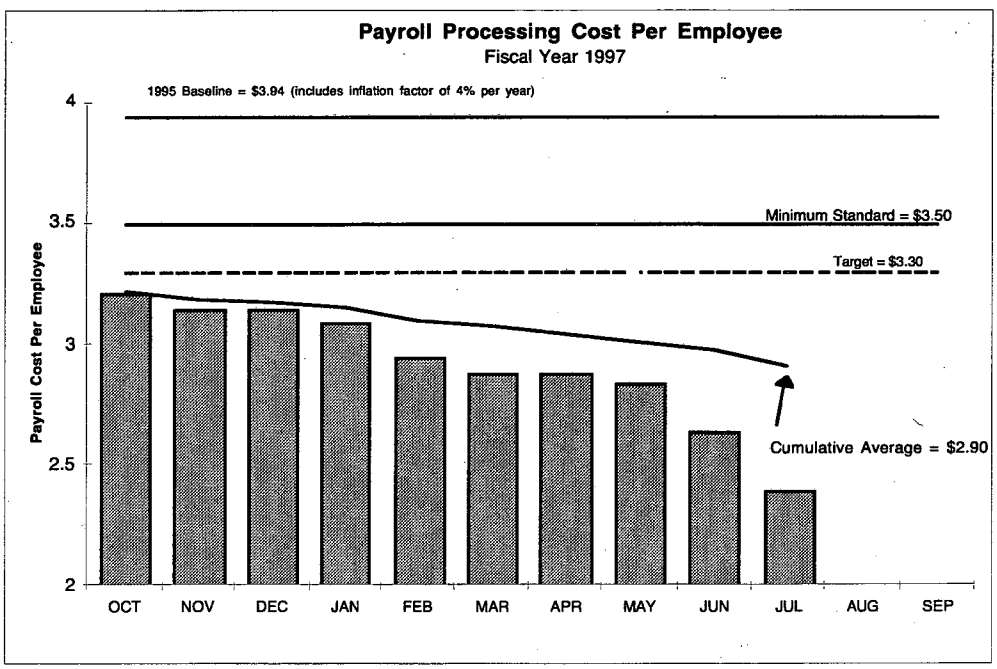
The Payroll Department has been transferred to Human Resources to effect efficiencies associated with the integrated HR/Payroll System and facilitate further systems-enhancement implementation. The benefits of such shared services will be generated as the Payroll and Human Resource organizations realize the efficiencies of sharing a common data warehouse. Payroll is one of the biggest transactional areas. Merging the common employee skill sets within Payroll and Human Resource will provide expanded financial and benefit information coverage to its customers.

Because of efficiencies realized by the LETS system's automated processing, the Payroll Department has realized a reduction of 1.0 FTE, which translates to a reduction of more than $72K per year.

Although the alignment of the Payroll function has changed, the CFO Department will continue to track and report the metrics related to processing employee payrolls through FY97.

Supporting Data

- See Documentation Folder.
- See graph illustrating that average Payroll processing cost per employee is below the FY97 target goal.



Objective #2
Criterion 2.2
Performance Measure 2.2.a
Gradient 8

Gradient 8: Domestic Travel Accounting—Cycle Time

The Laboratory will establish cycle time reduction/maintenance targets after considering relevant information and management priorities. Performance clock begins when receipts are received in Travel Accounting from the traveler. All receipts are recorded at the end of that business day. Measure is for closure of all domestic travel vouchers submitted. The clock stops when Travel Accounting completes and sends the completed voucher out for signature and/or payment. If the information (receipts and paperwork) received is inadequate to complete a voucher and additional information is needed, a date is recorded which stops the clock until that information is received by Travel Accounting.

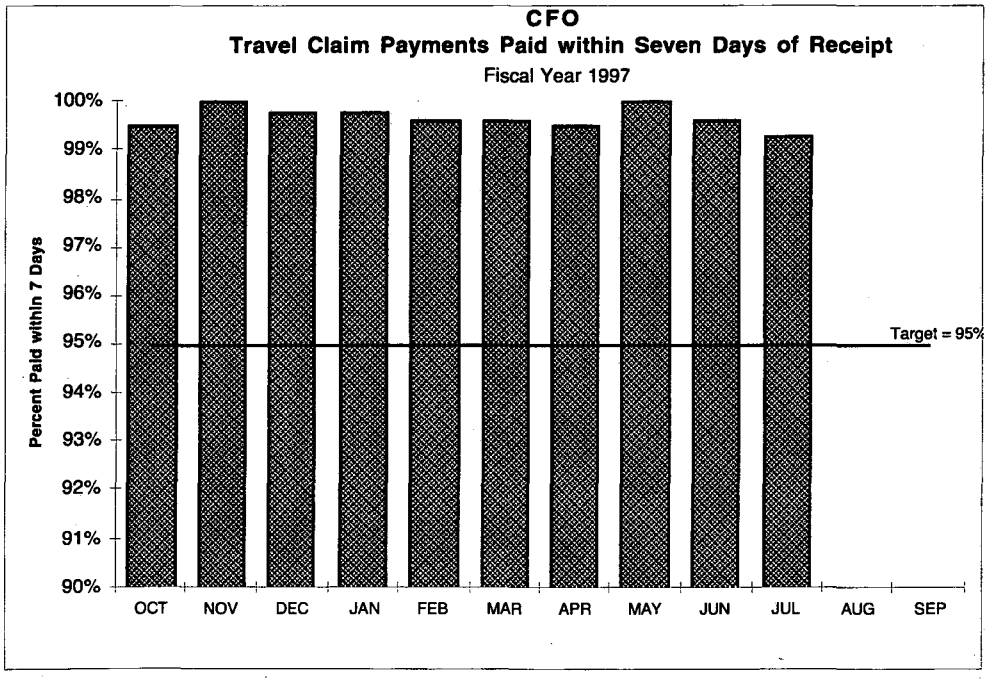
Performance Measure Result

CFO Travel Office has achieved continued high standards of performance during Fiscal Year 1997. During the reporting period ending July 1997, the cycle time performance remains near the 100% level with 99.3% of all domestic travel claims paid within seven days.

This year's maintenance of close to the 100% level, for processing submitted claims within seven days, demonstrates a continued efficient customer-service-oriented process.

Supporting Data

- See Documentation Folder.
- See attached graph illustrating the 99.3% rate of domestic claims processing.



Objective #2
Criterion 2.2
Performance Measure 2.2.a
Gradient 9

Gradient 9: Domestic Travel Accounting—Cost

Graph production cost per travel claim with minimum standard line and target line. Use appropriate benchmarking cost element criteria. Labor costs will include fringe benefit costs and no other burdens. Travel claims defined as expense reports submitted. In the case of working supervisors, include measurable time spent on processing travel expense reports.

Performance Measure Result

During the month ending July 1997, the Travel Unit of Berkeley Lab has significantly exceeded this performance measure by reaching a cost per transaction of $8.79. This is a 32% improvement over July, 1996 (adjusted for inflation/merit increases). The CFO/Travel Department has also achieved a cost per transaction 35% lower than the target established ($13.50/claim) and 53% lower than the FY95 baseline of $18.55 (includes 4%/yr inflation factor) per claim.

Successes/ Plan(s) of Action

The new travel expense report has significantly reduced the administrative effort to process claims, and coupled with continued alignment of staff and processes, the CFO/Travel Department has been highly successful in reducing the cost of processing transactions.

Demonstrated Results

Cumulative Cost per Claim

7/31/97	7/31/96	7/31/95
$8.79	$12.98	$18.47

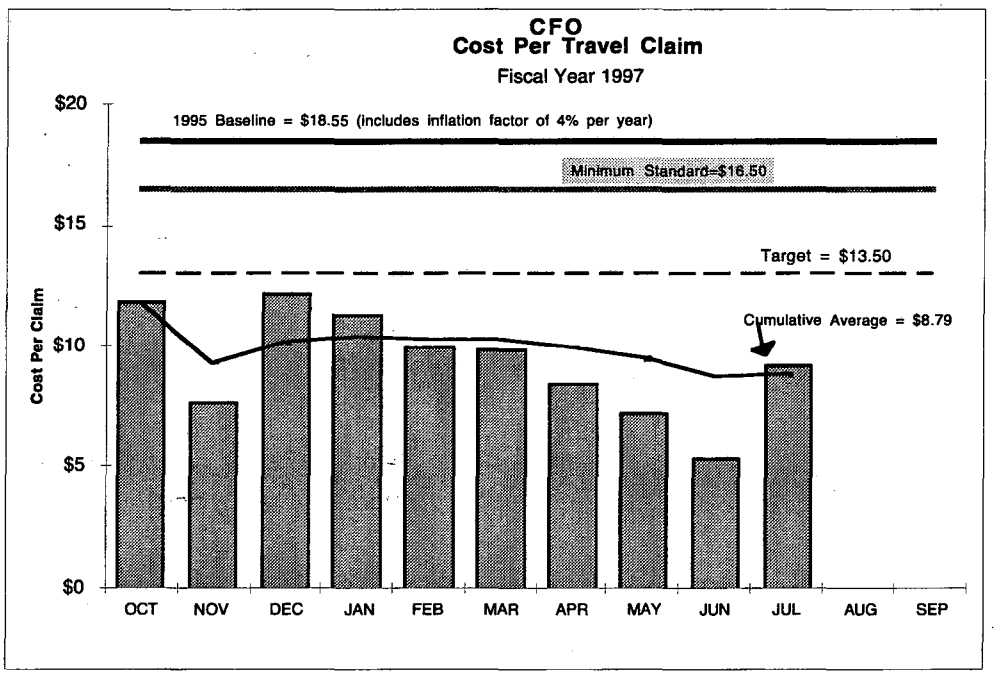
Note: Prior years are reported with inflation/merit increase factor of 4% per year.

Contributing to this impressive reduction are the benefits resulting from sharing the administrative functions of the LBNL's Travel Manager with LLNL. The LBNL Travel Manager is dedicated to LLNL 20%. Other contribution process improvements include:

- Centralized domestic ticket processing outsourced to Sato Travel.
- Delegation of domestic travel approvals to immediate management

Supporting Data

- See Documentation Folder.
- See attached graph illustrating that cost per travel claim is well below the baseline and target amounts for FY97.


CFO
Cost Per Travel Claim
Fiscal Year 1997
1995 Baseline = $18.55 (includes inflation factor of 4% per year)
Minimum Standard=$16.50
Target = $13.50
Cumulative Average = $8.79
Cost Per Claim
$20
$15
$10
$5
$0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP

Objective #2
Criterion 2.2
Performance Measure 2.2.a
Gradient 10

Gradient 10: General Accounting—Cycle Time

Graph a comparison of actual days to close to targeted days to close and cumulative average. Close date is defined as the date that the General Ledger is closed. The Laboratory will establish cycle time improvement targets after considering relevant information and management priorities.

Performance Measure Result

The General Ledger Cycle Time Performance Measure is being met 100% of the time. In addition, the General Ledger Unit has successfully exceeded the targeted days to close (3.0 days) by lowering this metric consistently to 2.5 days each month (except May, which was 2.75 days) through July, 1997.

The General Ledger Unit continues to play a proactive role by issuing a monthly closing calendar so that all CFO groups are aware of the deadlines. CFO/Finance also continues to advise Laboratory staff of due dates so that review and data entry can be completed on a timely basis in order to reach the targeted goal.

Successes/ Plan(s) of Action

The number of days continues to trend downward. Since June of 1996 (14 months), every close but one was accomplished within 2.5 days (excluding September/October).

Demonstrated Results

Continuing Improvement

Month(s)	Number of Days to Close
May 1996	3.0
June 1996	2.5
July – Aug. 1996	2.5
Sept. – Oct. 1996	N/A
Nov. – Apr. 1997	2.5
May 1997	2.75
June – July 1997	2.5

Several important activities contribute to this sustained improvement:

- Management continually aligns staff resources to provide the right level of support for the closing process.
- New staff members throughout CFO have matured capabilities and experience levels which contribute to productivity.
- General Ledger and other CFO staff members possess a cross-section of skills obtained through rotational assignments and cross-training.

Examples to date involve:

- A staff member temporarily assigned to GL returned to Payroll to support Payroll's integration with Human Resources.
- An Accounts Payable staff member with high potential moved over to General Ledger to assume the important task of recording revenue in accordance with DOE requirements. This realignment freed other specialists for ledger closing functions.

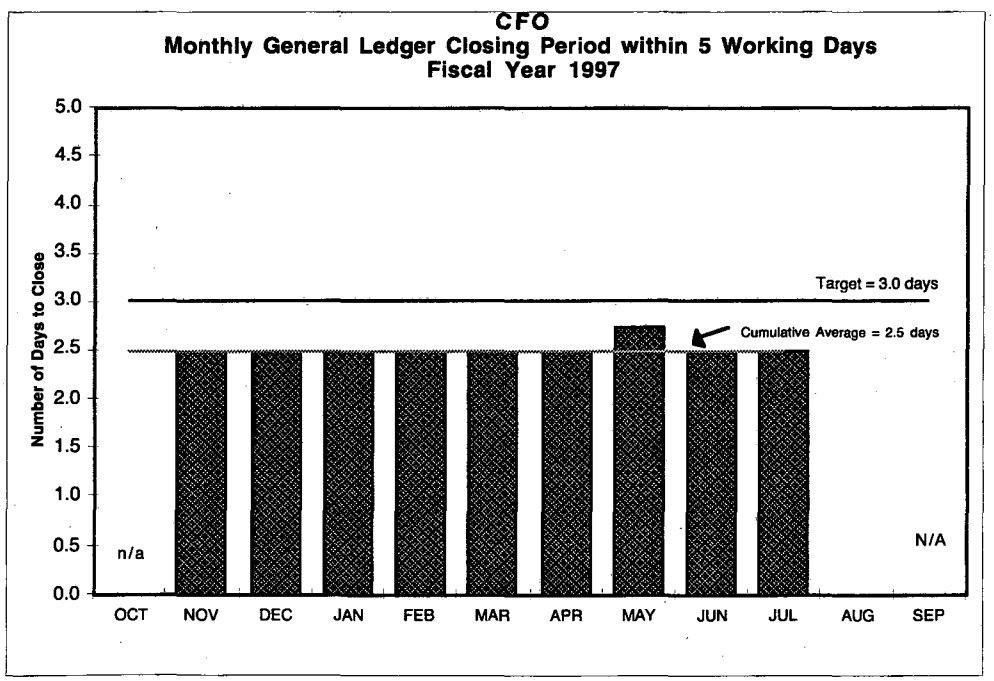
The cross-training activities allow the closing activities to proceed smoothly without delays through a regular and backup pool of qualified staff.

The Laboratory will implement a new Financial Management System in October 1997. As part of this effort, the Laboratory is exploring opportunities to streamline activities and gain efficiencies for the monthly closing process that will provide financial data more quickly and in a manner that fits its customers' needs.

As noted above, the investment in staff training provides the basis for the success of the new FM system sophistication. The CFO organization will enhance and support its investment in people with critical electronic tools and systems.

Supporting Data

- See Documentation Folder.
- See attached graph illustrating that the General Ledger Unit has exceeded our monthly closing target goal of 3.0 days.



Objective #2
Criterion 2.2
Performance Measure 2.2.a
Assumption & Gradient 11

Assumption and Gradient 11: General Accounting—Cost

Narrative and graph (cost per million dollars of previous year's expenditures) that demonstrates a system/method for measuring and reducing these costs compared to industry benchmarking standards/initiatives.

Gradient:

- A rating above Meets Expectations is achieved by meeting Laboratory-specific targets. Factors that will be considered for a higher rating include:
  - trends
  - aggressiveness of targets
  - performance improvements over previous years

Performance Measure Result

As of July, 1997, the General Accounting has exceeded the expectations of this measure by efficient use of staffing resources to manage the work flow. The costs of general accounting activities Year-to-Date July 31, 1997, is 0.08% as a percent of the previous fiscal year's expenditures.

During 1996, Berkeley Lab developed a quantitative methodology to track reengineering developments and their associated cost benefits, which it continues to use to monitor this metric.

Successes/ Plan(s) of Action

The CFO/Finance Department has continued to manage General Ledger staffing costs while pursuing the initialization of the new Financial Management System. This metric has decreased from the July 1996, cumulative average of 0.10% to the July level of 0.08% and has surpassed its aggressive FY97 target of 0.11%.

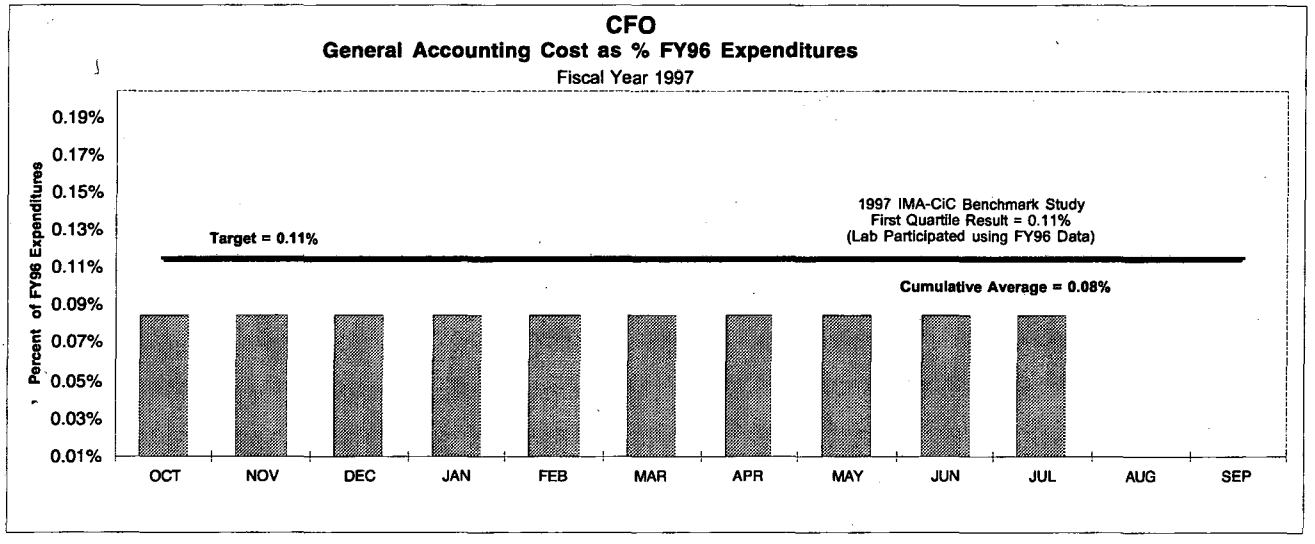
The IMA, CIC Multi-Company Benchmarking Assessment Study performed in 1994 provides the basis for this metric. Category IV (10) from this study provides criteria for the "General Ledger" functional elements of this cost pool. It should be noted that the elements for this metric differ from all other transaction processing performance measures in that the criteria includes supervision and system support costs.

The most recent (FY96) IMA results placed LBNL CFO/Finance's General Ledger costs at 0.11163%. As a comparison, the FY96 best practices First Quartile was 0.1119%.

Future years will benefit from the new financial package, and processing cost will decline by the costs involved with initialization.

Supporting Data

- See Documentation Folder.
- See attached graph illustrating that the Laboratory CFO Department has achieved a cost per transaction that is below its target of 0.11% of prior year revenue and, compared to FY96 data, is below the best practices First Quartile.



Objective #2 Criterion 2.3

Work Force Management: *Develop a highly skilled, motivated, empowered Financial Management Work Force.* **(Weight = 10%)**

Objective #2 Criterion 2.3 Performance Measure 2.3.a

Effective Work Force Management: *Develop a narrative report describing processes, systems, and initiatives related to Financial Management work force management.* **(Weight = 10%)**

Assumptions:

- Narrative to describe assessment of Financial Management work force management of processes, systems, and initiatives.

Gradient:

- A Meets Expectations rating is achieved by establishing a systematic approach to Financial work force management. Factors that will be considered for a higher rating include:
  - span of control ratios
  - number and effectiveness of self-directed work teams
  - merging of related functions
  - training and development activities
  - alignment of individual performance objectives/appraisals with Financial Management objectives

Performance Measure Result

The CFO Department's goal is to improve employee skills through formal training, on-the-job training, and internal cross-training programs. In support of this objective, several methods are initiated to ensure continuing development of a highly skilled, empowered and motivated work force. The longevity of much of the staff validates an environment which fosters employee well-being.

Successes/ Shortfalls

To ensure that employees are recognized for their daily contribution to operational successes, the CFO management continues to utilize several processes for developing a highly skilled, motivated, and empowered Financial Management work force.

Career Development

The detailed career development plans pursued last year by those of the Financial Management work force wishing to participate continue to be reviewed and discussed with each employee during their annual appraisal. At this time, milestones are recognized and future goals are jointly established. The staff very frequently chooses goals and training which integrate and support those of the Financial Management for improved financial data. The CFO Department has at least 4.0 FTE staff members continuing formal education programs.

Examples of choices for training which complement the implementation of the new Financial System follow.

Training

Since the beginning of this year, LBNL has offered on-site computer courses for its employees. CFO/Finance personnel have been encouraged to expand their computer skills by participating in these courses. Excel 7.0, cc: Mail, and Meeting Maker XP courses have been heavily attended by the employees, followed by Word 7.0 and PowerPoint. Employees are continually kept informed of upcoming courses through the LBNL Web site and *Currents*, the Lab's biweekly newspaper.

The CFO/Finance department is proactively upgrading the skills of its staff members to coincide with implementation of the new GL and FM System.

In addition, the core General Ledger and Contract Accounting team members participating in the implementation of the PeopleSoft Financial Management System have been involved in intensive PeopleSoft training. The following courses have been attended by team members at various PeopleSoft facilities throughout the country:

1. PeopleSoft General Ledger
2. PeopleSoft Project Costing
3. Query/Crystal Report Writing
4. N'Vision Report Writing
5. PeopleTools - Overall View

In the fall of 1996, 92% of the General Ledger and Contract Accounting staff as well as employees in other CFO units attended an offsite Excel for Windows 95 course. The course was presented by Advanced Integration Methods and customized specifically for the Laboratory's finance needs. The course familiarized employees new to Excel with its capabilities and enhanced the skills of employees already proficient in Excel. The benefit from this course has been demonstrated in the multiple projects related to the implementation of our Financial Management System which have relied heavily on Excel worksheets. Some examples are:

- The edit rules for mapping the legacy accounts to the PeopleSoft Financial Management System (FMS) are maintained on a complex Excel worksheet. This worksheet is continually edited by General Ledger and electronically transferred to ISS for uploading in the mapping program. Without the aid of Excel 7.0, this voluminous set of data would be very difficult to manage.
- Table set-ups for the FMS were developed through PS Query language and transferred to Excel for data manipulation and preparation of the final Table Set Documentation.

Development Activities

In order to ensure the smooth and efficient operation of functions within the General Ledger Unit, a system is in place which assigns functions to individuals charged with primary responsibilities. Also, two back-up staff

members are trained to cover the activity. The cross-training provides mutual benefits for both the employees and the Laboratory. The operations of General Ledger has improved as this training provides personnel with an understanding of the goals of the General Ledger Unit as a whole.

Expanded Span of Control

The latest (FY96) IMA Benchmarking study reports were very favorable. The statistics demonstrate the success of the CFO Department's efforts to flatten organizational reporting lines in favor of self-directed work teams. The overall span of control for Finance transaction processing activities, based on the 1996 year-end statistics, was 17.7 to 1 and remains in effect as of July 1997. As a comparison, a ratio of 20:1 would be considered impressive (IMA Continuous Improvement Workshop, September 1996).

Contributing heavily to this impressive ratio is the large span of control by the CFO/Finance Manager, encompassing General Ledger and Contract Accounting (Accounts Receivable), and the Associate CFO Finance, who directs all of the Finance Units and the Cost Compliance and Analysis Unit. Further, the two units directed by the CFO/Finance Manager represent an even larger span of functions when all the transaction processing activities are considered (general accounting, cash, billing, credit and collections). As noted below, to improve internal control, the General Ledger acquired Conference Accounting, and Business Services acquired Conference Coordination. This realignment will further improve the FY96 span of control statistics.

Other significant achievements in trimming organization reporting lines is demonstrated within the CFO/SPO department. The SPO manager has a span of control of 9:1. There has been no increase in staff, despite a large increase in non-DOE funds being brought into LBNL between FY95 and FY96. Of the total annual Laboratory funding of approximately $350M, the SPO Department manages about $60M in Work For Others funding.

Self-Directed Work Teams

Financial Management System

To coordinate the design, development, and information flow for the Financial Management System, a FMS Committee with representatives from the following cross section of organizational lines have formed the Financial Management Systems Team. This work team has special subgroups for field training and provides Web updates on the FMS status:

- Chief Financial Office (CFO)
- Information Systems & Services (ISS)
- Laboratory Divisional Representative

In addition, sub-groups have been formed within the CFO Department to interact with the above FMS Steering Committee. These groups designate an "owner" for the processes involved and assign the staff "team" members with specific assignments. The process results in staff ownership for clearly defined tasks and deliverables.

WEB/EDI Systems Contracting

This team was established to recommend a cost-effective, user-friendly, automated system to be integrated with existing systems for acquisition of low-dollar/high-volume commodities by Berkeley Lab users. The membership included Procurement, Facilities, Accounts Payable, Internal Audit, and a representative from the Chemical Sciences Division. The team has recommended that the Berkeley Lab develop a Web/EDI system to provide:

- Front-end Just-In-Time ordering system
- On-line supplier catalogs
- EDI back-end to send releases to vendors and process payments
- Management and financial reports

The following goals and objectives were accomplished during this reporting period:

- Survey the market and state of technology (fact finding).
- Develop alternatives (with risks) which best fit Berkeley Lab.

Alignment of Workforce with Financial Management Objectives

The SPOT Recognition Award program continues to recognize and reward individual and/or team outstanding efforts that support management objectives. To date, six SPOT awards have been presented. Throughout FY97, 20 to 25 will be awarded. Also, the Outstanding Performance Award (OPA) Program is available to reward contributions that significantly impact the success of a division or department.

In addition, CFO continues to hold Town Hall Meetings to bring administrative informational progress updates to its staff. These meetings provide a congenial backdrop for open forum discussion and efficiently and effectively communicate the "team" concept (each staff member has an impact on financial management successes). While the meetings have a specific agenda, questions on any subject matter and requests for presentation on a specific topic or by guest speakers are invited. As in previous years, the meetings share with employees:

- Updates regarding new programs at the Laboratory.
- Updates regarding the state of the budget.
- Updates on the new Financial Management System project.
- Explanations of the process and results of actions affecting the workforce.
- Announcements and awards presentations for demonstrated excellence in cost reduction, customer service, programmatic effectiveness, or organizational effectiveness.

To emphasize workforce alignment with Financial management objectives, each employee works with his/her manager to develop a "workplan" during the yearly performance appraisal process. The "workplan" describes ongoing goals with specific target dates for completion.

Merging of Related Functions

For some time, the functions of the CFO Department have been scrutinized and reviewed relative to the best alignments with other operations. During the first half of FY97, the following two functions within the CFO Department and one external to CFO were identified and realigned for optimal operation based on functionality and shared systems:

- Payroll merged with Human Resources.
- Inventory Accounting merged with Facilities.
- The Conference Unit was added to the CFO Department with Conference Accounting falling under General Ledger and Conference Coordination under Business Services.

These reorganizations are intended to produce cost savings through jointly sharing the investment in systems and improved productivity resulting from shared environments and centrally based activities. For example, Payroll processes are tightly coupled with those in HR. Customer response capability and the systems technology are better served in a consolidated process.

Additionally, the AP and Procurement departments are looking at efficiencies which could be realized by transferring the processing of ProCard customer statements to Procurement. Such a realignment would provide improved customer service and coordination since one staff member in Procurement is already in charge of the ProCard activity and receives questions about the statements.

Supporting Data

- See Documentation Folder.
- IMA Continuous Improvement Workshop Minutes, September 1996.

Performance Objective #3	**Financial Stewardship and Integrity:** *Financial management practices provide for financial stewardship, including compliance and data integrity.* **(Weight = 30%)**

Objective #3
Criterion 3.1

Costs and Commitments Are Managed Properly: *Ensure that all costs and commitments are within DOE-authorized funding levels or that costs and commitments in excess of such levels are properly reported and recorded.* **(Weight = 6%)**

Objective #3
Criterion 3.1
Performance Measure 3.1.a

Costs and Commitments Are Controlled to Appropriate Funding Levels: *Identify funding levels. Control costs to B&R Level 9, graph % within funding levels. Control commitments within authorized major funding levels (Obligation Control Level).* **(Weight = 2.5%)**

Assumptions:

- "Within funding levels" to mean within funding modifications.
- "Commitments" definition to be consistent with definition used in Uncosted Obligations Report.
- Meeting the objective of this performance measure is applicable only at year end for Construction, Operating, Capital Equipment funds. Line item capital equipment and construction is applicable monthly. The UC grade will be assessed consistent with this statement. Quarterly graphs for Operating, and non-line item capital equipment and construction. Line item capital equipment and construction will be graphed monthly.
- Graph costs plus commitments to Obligation Control Level limits.
- Graph Costs to Level 9 limits.

Gradient:

- A Meets Expectations rating is achieved by staying within funding levels as defined above. Factors that will be considered for a higher rating include:
  - monthly trends
  - training and development
  - other proactive activities to effectively manage and control funds

Performance Measure Result

The requirements for this performance measure have been achieved. The objective of this performance measure is applicable only at year-end for Operating, Equipment, and Construction funds except the objective for line item capital equipment and line item construction projects, which is applicable monthly. Through the third quarter 1997, the Laboratory has achieved a success rate of 100% in maintaining costs within authorized funding at B&R Level 9. ECOR levels for both Plant & Equipment and Operating have also been controlled during this period within 100% of major funding levels.

The CFO Department has processes in place to monitor and avoid funds control violations, which are described under "Proactive Measures."

Successes/ Shortfalls

Line Item Construction projects were maintained 100% within authorized funding B&R by month, excluding commitments (liens) during each month of FY97. Likewise, the Laboratory achieved a 100% success rate in maintaining plant (excluding Line Item Projects) and capital equipment within authorized ECOR funding levels, including commitments during this period.

Proactive Measures

Beginning last fiscal year, there has been increased focus by DOE-HQ and OMB to keep uncosted balances at a defined methodology. To ensure that balances are in compliance, the Budget Office reviews internal and DOE Plant and Capital Equipment reports monthly to determine whether any ECOR or B&Rs are at risk of exceeding funding levels. Particular attention is paid to liens (commitments) to ensure that they accurately represent authorized future spending. Monthly financial management reports are distributed to project management personnel. These reports show costs and funding by B&R and identify those areas where funding is low, indicating accounts which should be closed until additional funding becomes available. The continued use of the above reports has reduced inquiries from divisions and departments regarding funding balances by 50%. The improvements were accomplished by giving the programmatic divisions more summary detail to facilitate communications regarding funding balances. These details enable the projects to plan spending activities accordingly and remain within funding constraints. Reports include:

- B&R Status Report
- The Financial Status/Management Report
- Status of Obligations
- Capital Equipment Reports
- Construction Status Reports

Other proactive measures completed or continued during 1997 are as follows:

- The B&R Status report has been improved to include monthly liens so that costs and commitments are tracked on a nine-digit B&R level. The use of these reports continues to reduce funding problems.
- CFO/Budget is proactive in the process of controlling costs by maintaining communications with the divisions. Monthly B&R status reports are distributed to each division director and their division administrator to identify funding available less costs and commitments. Active telephone follow-up is maintained with the division administrators to ensure that action plans are in place covering projects at the 80% completion level.
- Electronic capabilities are in place to provide common financial models which assure consistency in the application of budgetary data and rate structures. These applications are available on the Lab Network in the CAS Cookbook. The applications provide all rates, examples, and a template for use in preparing budgetary data.

- The Laboratory has been actively pursuing a new electronic Financial Management System to improve all budgetary processes by:
  - Providing on-line viewing of the Laboratory's current budgetary status to all appropriate Laboratory staff.
  - Including B&R reporting capabilities within the Financial Management System to further assist institutional control of project commitments.

It is expected that this new system will enhance financial projections and facilitate communication effectiveness.

Training/Workshop Activities

The Budget Office participates in monthly meetings with the Facilities Department and DOE to monitor current and future spending on construction projects. It also communicates regularly with the divisions to monitor costs and planned expenditures for capital equipment. In addition, General Purpose Equipment spending and available balances are closely evaluated monthly to ensure that the support divisions achieve steady progress in meeting the Laboratory's most pressing multi-program equipment needs.

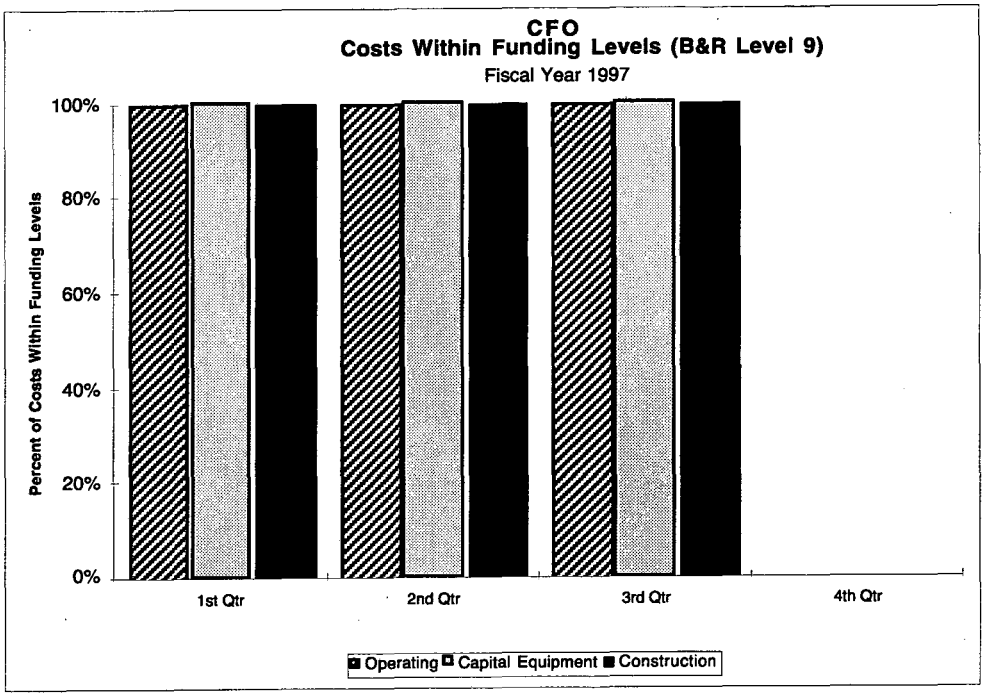
Beginning mid-FY97, the Finance Forum was reinstituted. Members of the forum include the CFO Department, division administrators, and both CFO and division budget analysts. The intent of the forum is as follows:

- Present status on key projects
- Disseminate information
- Gather feedback from the divisions
- Identify areas for improvement
- Provide a mechanism for group decision making.

The Laboratory also conducts a yearly Budget Workshop for division administrators, program managers, principal investigators, and Financial personnel on methods for analyzing and reporting project costs. The workshop included training on the federal budget process; DOE funding process; and cost estimating.

Supporting Data

- See Documentation Folder.
- See attached graph illustrating how Costs and Commitments are controlled to appropriate funding levels.


CFO
Costs Within Funding Levels (B&R Level 9)
Fiscal Year 1997
Percent of Costs Within Funding Levels
100%
80%
60%
40%
20%
0%
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Operating
Capital Equipment
Construction

Objective #3
Criterion 3.1
Performance Measure 3.1.b

Control of Funds: *Proactive activities designed for control of funds.*
(Weight = 3.5%)

Assumptions:

- Narrative describing initiatives.

Gradient:

- A Meets Expectations rating is achieved by implementing an effective process for mitigating administrative control of funds violations. Factors that will be considered for a higher rating include:
  - process improvements
  - enhancements to controls
  - awareness training
  - timely notification to DOE of significant changes in projected year-end uncosted balances.

Performance Measure Result

The CFO Department has monitoring processes in place to avoid funds control violations. The Financial Management System acquisition scheduled to go "live" October 1, 1997 includes B&R reporting capabilities to assist institutional funds control. The FMS will provide on-line viewing of the Laboratory's current budgetary status to all appropriate Laboratory staff. Additionally, the reorganization of the Sponsored Projects Office (SPO) under CFO/Budget continues to provide effective consolidation of incoming funding sources.

Successes/ Shortfalls

Process Improvements/Controls

The following activities have been established to assure that successful processes are in place to manage funds control:

- Reports are provided to the divisions to advise of potential cost overruns.
- Budget staff follow up with the project managers regarding funding areas identified for concern.
- Finance and Budget review data from the DOE Trial Balance Report to proactively resolve possible funding concerns.
- Bridge funding is applied in compliance with DOE directives to cover temporary funding requirements.

As a result of making UCDRD available as bridge funding, numerous ongoing NIH proposals, which otherwise would have experienced delayed completion schedules, were temporarily funded. These were largely from the Life Sciences Division.

The Sponsored Projects Office (SPO) has worked with other CFO organizations—BSO, DOE/OAK, and UCOP—to address Work for Others (WN) funding issues. Specifically, SPO now requires non-federal users of

LBNL user facilities to provide advance funding. Under the previous policy, WN funding had been used for that purpose.

In addition, SPO was successful in obtaining over $6M advance funding (rollover) from UCB to allow work to begin on a WN (B&R 60) project. Discussions were held between LBNL and UCOP (David Mears) to solicit the University's help in obtaining advances from UC campuses when federal funds are being transferred to the Berkeley Lab. DOE/OAK, along with BSO, have been very helpful in securing WN funds when needed and have delegated the control of WN funds to the Budget Office.

Although begun in FY 1996, the request for advances were further developed in FY 1997. At the moment the use of WN funding is low, which provides a tremendous relief of funds for other projects.

As part of the system development requirements for the new Financial Management System, the Laboratory is collaborating with PeopleSoft as part of a forum to develop a new product which would provide budget validation as well as the ability to perform automated comparisons to actual performance (see further discussion regarding further collaboration with PeopleSoft for development of a funds control product under POCM 2.1a).

Awareness Training

DOE/OAK has begun issuing mid-month contract modifications, which provides timely data allowing for improved analyses to prevent funds control violations.

The Budget Office participates in monthly joint LBNL/OAK reviews of active construction projects. CFO/Budget takes proactive steps to ensure that completed plant projects move through the close-out process on a timely schedule. Collaborative activities and suggestions to DOE on how to establish standard processes for funding categories have been positive. Likewise, the Laboratory has increased its efforts to monitor uncosted balances. The Budget Office reviews all project uncosted balances at year end and prepares an annual Uncosted Balance Report (see below under "Timely Notification").

Other collaborative activities include:

- Reviewed and provided comments to OAK, HQ, and Laboratory Operating Board on the Functional Cost Reporting.
- Participated in developing a new policy on the treatment of gifts for the next contract with UC.
- In process of developing a more streamlined procedure which allows SPO to approve non-federal WFO projects.

Each month, DOE/OAK and CFO personnel meet to jointly discuss issues related to Cost Accounting Standards and indirect costs and rates.

Timely Notification

Despite being understaffed by two individuals, the CFO Department sent the FY 1999 Budget Formulation Package to DOE/OAK one day early. Other reporting requirements that have been provided to DOE/OAK on a timely basis are:

- Uncosted Balance Reporting through FIS (monthly)
- Annual Uncosted Balance Report

CFO/Budget and division budget personnel have jointly developed a database of all research projects at the Laboratory. The information retrieval and development of this LBNL database involved extensive effort and was provided on time to the Federal Office of Science and Technology Information (OSTI). Although this data does not contain uncosted balances, total costs of each project are provided for use by DOE as a planning tool.

Supporting Data

See Documentation Folder.

Objective #3 Criterion 3.2

Asset and Debt Management: *Improve asset and debt management practices.* **(Weight = 6%)**

Objective #3 Criterion 3.2 Performance Measure 3.2.a

Document Improvements: *Identify and report annually cash and inventory management improvements/accomplishments.* **(Weight = 6%)**

Assumptions:

- Asset management includes cash, advances, Letter of Credit, inventories, stores, precious metals, valuation of physical plant assets, depreciation, and closings from work-in-process. Debt management includes debt collection processes, allowance for bad debts and write-off. Narrative description describing initiatives in any of the above areas to better manage assets and debts.

Gradient:

- A Meets Expectations rating is achieved by demonstrated incremental improvement. Factors that will be considered for a higher rating include demonstrated quantum improvement.

Performance Measure Result

Berkeley Lab has exceeded performance measure objectives through strengthened internal controls and instituting changes resulting in improved services.

Successes/ Plans of Action

Demonstrated Quantum Improvement

Inventory Levels and Stores Asset Management

Implementation of the new Maximo application for Stores transactions provides the following process improvements:

- Real time processing and expedited reordering.
- Improved inventory accuracy, and productivity gains realized from the on-line error validation process the system provides.

Lab-wide use of ProCard, instituted in FY96, has increased phenomenally by 262% over last year (July through May) at this time. As discussed in 1996, the growing use of ProCard for small procurements and continued successful implementation of the "just-in-time" (JIT) program developed by the WEB/EDI Systems Contracting Team (see Measure 2.3, Workforce Management/Self-Directed Work Teams), will continue to reduce the need for small dollar items on hand in the Laboratory's inventory holdings. The Laboratory currently has JIT contracts with:

- Boise Cascade—office supplies
- VWR—chemical and laboratory supplies
- Bay Area Gases—gases

Improved Cash Management Processes

The CFO Department has strengthened the internal control of non-DOE funded cash activities by establishing and reengineering the following processes:

- Realigned the Laboratory Conference Department under CFO.
- Established a bank account independent of DOE funds to comply with DOE guidelines on unallowable cost.
- Redesigned Conference Policies and Practices inclusive of newly developed procedures and staff training. See Section 3.3.a for further discussion.
- Redesigned and improved the daily deposit log to broaden its scope and include cash as well as non-cash receipts, thus centralizing the recording of monies and simplified monthly deposit reconciliations. The improved deposit log saves time while performing reconciliations and data research activities.

Imprest Funds

CFO/Finance has continued its commitment to financial stewardship. There have been ongoing efforts to eliminate petty cash funds. Imprest fund balances throughout the year have averaged $2,380. This balance consists of a Cashier Imprest fund of $250, four departmental petty cash funds totaling $780, and two emergency response funds totaling $1,350.

Since October 1991, the Laboratory community has employed the use of ATM for access to cash in lieu of travel advances. The increased usage of ProCard and corporate credit cards has enabled the Laboratory to keep a minimal balance of petty cash funds on hand.

The CFO/Finance Department has been able to keep a minimal balance of currency on hand due to ongoing efforts involving:

- Expanded the use of corporate credit cards by Laboratory employees for official travel related expenses.
- Arranged with Bank of America to allow Laboratory employees and visiting guests to cash Berkeley Lab issued checks at the downtown Berkeley branch.
- Processed all petty cash reimbursements through the Accounts Payable Unit.
- Accepted credit card payments for registration fees at Berkeley Lab sponsored conferences.
- Continued to encourage divisions to reduce the volume of petty cash transactions through the expanded use of ProCard.

Letter of Credit

CFO/Finance continues to be successful, through the daily analysis of the Letter of Credit (LTO) cash drawdown requirements, in maintaining the daily LTO bank account balance as close to zero as administratively possible.

One example of the CFO/Finance Department's measure to enhance and improve efficiencies is the new process now in place to receive canceled checks electronically via a CD ROM, thus avoiding the handling of paper copies.

CFO/Finance takes measures to keep abreast of newly developing electronic commerce products. CFO/Finance is investigating various enhancements to its processes such as a Bank of America PC-based system for generating in-house domestic and foreign wire transfer.

Debt Collection

The CFO/Finance/Contract Accounting Department actively monitors outstanding receivable accounts by sending past due notices and making telephone contact to resolve issues that may be holding up payment. For example, the Contract Accounting Department worked with the Engineering Division to reach agreement for final payment from Oak Ridge National Laboratory on a $20K debt in the +180 days category.

CFO/Finance/Contract Accounting has reviewed the requirements of the Debt Collection Improvement Act of 1996 (DCIA), which requires debts over 180 days to be turned over to the Treasury. The CFO Department monitors all past due receivables and is ready to process any qualified debts to DOE/OAK by September 15, 1997.

The Contract Accounting (CA) staff has reviewed the essentials of this new process, as made available on the Treasury FMS Internet Website. CA will provide DOE with the necessary and sufficient documentation to identify those debts which qualify within the >180 days past due category and with information on the previous collection effort made by CA. This information will enable DOE/OAK to issue the required legal demands for payment and other due process notices before formal reporting is made to the Treasury.

Currently, no outstanding debts in the >180 days category qualify under the Federal Debt Collection Act of 1996.

Supporting Data

- See Documentation Folder.

Objective #3 Criterion 3.3

Effective Internal Controls and Compliance: *Provide for effective internal controls and ensure timely and effective resolution of identified weaknesses.* **(Weight = 12%)**

Objective #3 Criterion 3.3 Performance Measure 3.3.a

Internal Controls/Compliance Management: *Maintain an effective system for identifying, reviewing, and correcting (if identified) financial management internal control/compliance processes.* **(Weight = 12%)**

Assumptions:

- Describe and self assess selected systems/processes identified in conjunction with DOE.

Gradient:

- A Meets Expectations rating is achieved by accurately describing well designed and well deployed systems/processes for managing internal controls and compliance. Factors that will be considered for a higher rating include:
  - a risk prioritization system that demonstrates laboratory focus on high risk financial management control/compliance areas
  - prompt completion of corrective actions
  - process improvements
  - aggressiveness of corrective action schedules
  - effective process for identifying with DOE, annual target areas

Performance Measure Result

Berkeley Lab and DOE representatives collaborated to identify systems and processes that provide for effective internal controls and ensure timely and effective resolution of identified weaknesses. This effort focused on areas with potentially high-risk financial management control and compliance issues. The following areas were mutually selected items for self-assessment:

I. Risk Prioritization System
II. Conferences—Cash Management
III. Honorarium Payments
IV. Documentation Compliance and Compliance Information Delivery
V. Account Authorization, Accountability, and Structure
VI. Enhanced Travel VISA and ProCard Processes and Controls

Each topic is discussed in detail under Successes.

Successes/ Shortfalls

I. Risk Prioritization System

(Proactive actions that demonstrate Laboratory focus on high risk financial management control/compliance)

During August, 1997, the ACFO Finance implemented a formal risk prioritization system for all functions within Finance. Finance managers are required to sign a monthly assurance letter that states the manager has reviewed all of the high risk areas under his/her sphere of responsibilities.

High-risk areas are ranked to determine whether the risk exposure is high, medium, or low. Those areas having a high and medium mark require comment from the respective Finance manager(s). After further review by the ACFO, if warranted, a corrective action plan with an early completion deadline is developed to quickly bring the area into compliance. All areas with a corrective action plan will have a monthly follow-up by the ACFO.

The areas included (but not limited to) in the assurance letter are:

Accounts Payable
- Payment Processes
- Invoice Processes
- Vendor File Setup
- Non-PO Payments
- Accrual Processes
- Dual Payments
- Purchase Order Close-out
- Account Reconciliations

General Ledger
- DOE Financial Information System
- Account Reconciliations
- Petty Cash
- Honoraria Payments
- ProCard Payment
- Audit Status
- Bank Accounts
  - Wire Transfers
  - Reconciliations
  - Check Payments
  - Deposits

Travel
- Travel Expense Payments
- VISA Card Payments

Conferences
- Allowable/Unallowable
- Conference Close-out
- Bank Accounts
  - Deposits
  - Payments
  - Reconciliations

Accounts Receivable
- Invoice Processes
- Bridge Funding
- Banking—NIH

II. Conferences—Cash Management

(Prompt completion of corrective action/process improvements)

At the recommendation of DOE, the CFO Department has strengthened the internal control of non-DOE funded cash activities by reengineering and establishing a well-designed and deployed process to account for cash activities associated with conferences. An outline of the improved process and staffing alignment is as follows:

A. Realigned the Laboratory Conference Activities under CFO

- As part of the CFO Department's efforts to increase internal control and flatten organizational reporting, all functions of conference management (comprised of Conference Planning-CP and Conference Accounting-CA sub-activities) was transferred to CFO during the first half of FY97.

- The Conferences Unit staff operates with separation of functions between planning and accounting for invoiced expenses (Conference Planning-CP reporting to CFO/Business Services) and payment authorization (Conference Accounting-CA reporting to CFO/Finance).

B. Established a separate "Conference" bank account

- Deposits are independent of DOE funds in compliance with DOE guidelines on unallowable cost.

- Bank account is currently set up to account for all Berkeley Lab conference cash receipts and credit receipts which provides

C. Redesigned Conference Policies and Practices inclusive of newly developed procedures and staff training. (Also see Section 3.2.a)

Deposit Processes and Controls

- Internal control processes include a daily deposit log maintained by Accounts Payable (AP) with electronic transmittal to the General Ledger (GL).
- Documentation and flow of deposits require that:
  - GL make timely deposits to the Conference Bank Account at the Bank of America via courier.
  - GL process receipt of deposits to CA.
- CA processes credit card payments and vouchers for electronic funds transfer to the Conference Bank Account.
- Monies on deposit with Bank of America in the Conference Bank Account are segregated between allowable and unallowable balances.

Disbursement Processes and Controls

- CP reviews invoices and forwards them to CA for further analysis and review for allowable vs. unallowable status. From this review, CA ensures that the necessary level of funds earmarked for unallowable costs are available in the Conference Bank Account. Payment cannot occur unless funds are on deposit.
- Additionally, DOE allowable costs are reviewed by the Cost Compliance and Analysis Lead for approval and a request to transfer monies to the Conference Bank Account is forwarded to Accounts Payable (AP) (see next bullet).
- To provide complete accounting for conference cash disbursements (both DOE and non-DOE funded), when invoicing is received for DOE

allowable costs, DOE funds are transferred from the Letter of Credit to the Conference Bank Account for final disbursement.

- A final overall review and signature approval of all disbursements and supporting documentation is made by the General Ledger Unit.

Reconciliation and Close-Out Control Process

- A monthly summary reconciliation of the Conference Bank Account is performed by General Ledger. This reconciliation is reviewed and approved by the General Ledger Manager.
- Each conference project (account) receives a final analysis of receipts and disbursement. This step is performed by Conference Accounting to determine the balance of the conference project (account).
- All overages are deposited to the Federal Reserve Bank on behalf of DOE. The check disbursement (transferring overages to DOE) and supporting documentation receives final review by General Ledger.

III. Honorarium Payments

(Prompt and aggressive completion of corrective action with effective process improvements)

To address weaknesses identified during the DOE 1996 Operational Awareness process, formalized reconciliation procedures for the Honorarium tax accounts were implemented this year. These accounts record the collection and deposits of taxes withheld from Honorarium recipients. The procedures focused on:

- Segregation and assignment of duties to ensure quality analyses and completed "staff action."
- Timely and accurate deposit activities.
- Streamlined and reinforced integrity of data used in reporting requirements.

The improved processes strengthen internal control with segregated duties as follows:

- Payroll is responsible for accurate and timely deposit of tax monies and for the tax reporting requirement.
- General Ledger performs analyses and reconciliations while Payroll processes required adjustments.
- All Honorarium Tax Account Reconciliations require the signature of the performing staff member, the approving supervisor, and the examiner.

To further strengthen the Honorarium process and communicate required compliance with internal Laboratory and DOE requirements, the CFO/Finance Department has developed a new form (see Supporting Data below) which was implemented during the second quarter of FY97. The form was reviewed with Finance, division and Audit management and the requirements for compliance discussed with Laboratory divisions.

IV. CFO/Finance Compliance Information Delivery and Documentation Process

(Process improvements)

To assure delivery of compliance and control requirements to the Laboratory-at-large, the Berkeley Lab has taken proactive steps to provide new or improved electronic methods to affect control and compliance management. One vehicle that CFO/Finance has developed during the first half of FY97 is a CFO Web site to enhance information dissemination and retrieval for Laboratory staff.

The Web site explains the function of each unit in the Finance Department and directs the user to the appropriate staff to contact for assistance. Also available are various forms required by Finance and used Laboratory-wide, thus, promoting consistency and compliance with internal and DOE regulations.

The Web site is used to ensure that information is accessible in the area of cost compliance. For example, the categories of unallowable costs can be found at this new CFO/Finance site. Other electronically available reference documents provided via a "public" computer network system are:

- The Cost Accounting Disclosure Statement (CAS)
- The Financial Management Manual (FM Manual)

Additionally, a CFO/Budget Web site is under development. Upon completion, the site will transfer the current CAS compliant calculations models located on the network "public" Lab-wide drive. Implementation is scheduled by year-end. These models are continually enhanced and updated with current and forward pricing rates. During FY97, these applications have been modified to be compatible with both PC and Mac hardware. Expanded distribution to all users will increase use of these models, and provide consistent and proper application of CAS, approved rates, and overhead burdens.

Other mechanisms by which compliance information and control is managed are as follows:

- LBNL's Electronic Headlines (e-mail) reporting Lab-wide.
- Town Hall Meetings presenting financial compliance issues as well as general matters of safety, etc.
- Central Points-of-Contact (Published on the CFO Web site) for:
  - Sales and Use Tax Information
  - DOE Directives
  - Allowable Costs

V. Account Authorization, Accountability, and Structure

(Effective process improvements)

To improve control and accountability as well as provide enhanced delivery of updates to ledger accounts and signature authorities, the Berkeley Lab is in the process of reengineering the signature authority component of the Account Authorization System (AAU). This component will be operational

October 1997, and greatly improves upon the current AAU, which contains a large number of individual names and account numbers, is cumbersome, and requires constant labor intensive updates.

Additionally, the AAU is the only Laboratory system using Informix, which runs on an IBM mainframe. With implementation of the new Financial Management System (October 1, 1997), the Laboratory must migrate from this legacy mainframe.

Management has given the approval for a new AAU system to reside on the Berkeley Lab Web site, which will include the following characteristics:

- Approval authority to charge costs to projects based on employee job classification.
- Standard job classification matrixes are being developed which will decrease and replace the volume of individual names and accounts.
- Authority for authorized staff to charge costs to any project up to their approval level.
- Divisional "owner/home" responsibility for verifying costs charged to a project.

Following are the major advantages to the newly approved signature authority process:

- Simplified procedures for signature authority verification.
- A universal Lab-wide practice.
- Dramatically reduced maintenance efforts involved in updating the current magnitude of individual names and account numbers.

Overall, the enhancements will serve more effectively and efficiently than the previous system. Not only will it be easily available to those who need to use it, it will also, through simplification and the streamlined process, increase internal control over the area of signature authority.

Recognizing that the Net is becoming an integral part of all organizations, CFO/Finance will continue to improve its Web site in an effort to improve control and compliance and increase our quality of customer service. In keeping with this concept, plans are in place to incorporate the resources currently provided through computer networks as part of the new Finance Web site.

The implementation of the new signature authority practice (AAU) and procedures will be completed this fiscal year.

VI. Enhanced Travel VISA and ProCard Processes and Controls

(Prompt completion of corrective actions with effective process improvements)

To address and resolve identified inappropriate activity with regard to the Laboratory-issued VISA and ProCard, the CFO Department has strengthened its internal controls for the use of the Travel VISA Card and ProCard. Described below are the newly implemented enhancements.

Travel VISA

Strict Lab Policy on Business Use of Travel VISA: The RPM has been revised to formalize the policy on the use of the Travel VISA for official Lab business only. This policy was communicated throughout the Lab through a Level 1 distribution.

Clarification of Employee Liability: It is made clear to employees that the contract for the VISA card is between VISA and the employee. The Laboratory is not responsible for unpaid balances. If a card is canceled by VISA for non-payment, VISA works with the employee to develop a payment plan.

Should an employee abuse the Lab-issued business VISA by not paying balances in a timely manner, the employee's manager may take corrective action by rescinding the card privileges or implementing direct electronic payment of business expenses to First Bank. As stated above, all other balances charged by an employee are not the responsibility of the Laboratory.

Expanded Review and Approvals of Application Forms: All Travel VISA applications are reviewed by the Travel Department and approved by the Travel Manager and the ACFO Business Services. Travel VISA application forms submitted require signed approval from the divisions. The Travel Department checks the Web Lab Directory to verify the applicant's current employment status.

Restricted Processing of Applications: Applications are submitted electronically to First Bank through First Link. First Link is a direct online connection from the Lab Travel Department to First Bank with restricted access and password protection. Access is restricted to the Travel Manager and one designated Travel Clerk. First Bank will only accept applications if processed through First Link.

Monthly Reporting from First Bank: On a monthly basis, First Bank provides the Lab Travel Department a report of delinquent accounts. Every month, the Travel Department reviews these accounts and reminds the employees (via e-mail) of the required payments.

Trip Numbers Required by Sato (Vendor): Purchase of plane tickets from Sato Travel are controlled through trip numbers. Charges to the VISA accounts are thus identified. Because each trip number has unique and meaningful characters, Sato Travel can detect bogus trip numbers. At the end of each month, a tape from Sato with costs and trip numbers is matched with the Lab's travel database. If trip numbers do not match, the Lab will seek cancellation of the ticket (if not yet used) or, if used, will require reimbursement from the employee.

Employees may buy a ticket from another travel agency or directly with the airline (and possibly charge the First Bank VISA). However, should a ticket be booked directly with the airline, the traveler must then call Sato and give the agent the information. Sato will then apply any Lab discount to the fare and issue the ticket. If a ticket is purchased from another travel agency, the reimbursement will be limited to the actual cost of the ticket, minus any

discount had it been purchased from Sato. Ongoing training sessions and e-mail Travel New Flash Bulletins announce these policies to all employees. These restrictions serve to encourage appropriate advance planning and discourage misuse of the VISA card.

VISA Cancellation Upon Employee Termination: The contract with First Bank requires the Laboratory (Travel Department) to notify First Bank within two business days of an employee cardholder's termination, for all cardholders who terminate employment with the Lab. Collection of issued VISA cards is part of the Laboratory's formal employee "Termination Checklist" and it is the responsibility of the employee's direct manager to report terminated employees to the Travel Department. Upon such notification, the Travel Department notifies First Bank that the cardholder is no longer an employee and requests cancellation of the VISA card.

Although First Bank supplies a daily listing to the Laboratory of all cardholders, this listing does not lend itself to efficient identification of holders organized by division. First Bank has been requested to provide this listing organized by division name. Until First Bank can modify its list to sort by division, it is not an effective tool. Divisions find it difficult to inform the Travel Department of which terminated employees have active cards. In the interim, the Laboratory Human Resource Department has been asked to enhance their Lab Web Homepage employee directory. This is updated daily to include a subset of daily terminations. This improvement would provide an effective mechanism by which the Travel Department could check daily for action to be taken to cancel VISA cards within the two-day requirement rather than relying on the "Termination Checklist" or direct notification from divisions.

ProCard

- Increased training for ProCard users has been implemented.
- The number of audits performed by Procurement have been increased and are performed "unannounced."
- The distribution of the monthly statements is now made to supervisors rather than the card holders. Additionally, cardholders and their supervisors sign an agreement to perform a monthly review of transactions.

Supporting Data

- See Documentation Folder.
- Division Review Travel Worksheet (below).

Division Review Travel Worksheet
Ernest Orlando Lawrence
Berkeley National Laboratory

Name: _____

HOTEL

☐ Please reserve a room for me at the hotel being used by the reviewers
for the nights of _____ departing _____

my credit card number is _____ exp. _____

HONORARIUM REQUEST

☐ Yes, — I may accept an honorarium and

My acceptance confirms that

1. I am not a full-time employee of DOE, another Federal Government agency, or another DOE contractor.

2. If I do fall within one of the categories listed above, I am currently on leave-without-pay status.

I understand it is my responsibility to comply with agreement(s) I may have with non-government employers regarding payments of honoraria.

_____ _____
Signed Date

Please provide your:

Social Security Number:_____

Home Address _____

☐ No, — I do not request an honorarium.

PARKING

☐ I will rent a car and/or require parking.

☐ I will use the Berkeley Lab shuttle to and from the hotel.

DINNER

O I will attend the Director's dinner on the first evening of the review.

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Objective #3 Criterion 3.4

Quality of Data and Reports: *Financial accounts and reports fully disclose the results of operations, and contain accurate, useful, timely information for program and fiscal management needs.* **(Weight = 6%)**

Objective #3 Criterion 3.4 Performance Measure 3.4.a

Policies, Data and Reports Consistent with CAS: *Policies, Data and Reports consistent with CAS compliance and DOE requirements; financial practices are consistent with approved disclosure statement.* **(Weight = 3%)**

Assumptions:

- Narrative describing activities and processes in support of this criterion.

Gradient:

- A Meets Expectations rating is achieved by having practices consistent with approved disclosure statements. Factors that will be considered for a higher rating include:
  - agreed audit report findings
  - proactive interaction with DOE
  - training and development of staff and relevant program personnel

Performance Measure Result

LBNL has exceeded the performance measure expectations through definitive proactive interactions with DOE, timely CAS Disclosure Statement updates, and training and development of staff and division personnel.

Successes/ Shortfalls

The Laboratory has taken the following proactive measures and completed various reviews to address Cost Accounting Standards (CAS) compliance:

- CAS Disclosure Statement modifications
- Regular CAS liaison meetings between OAK and LBNL
- CAS training and education
- CAS Cookbook upgraded for ease of use on both PCs and MACs
- LBNL policies and procedures related to CAS
- Pricing model upgraded
- Indirect Rate Submissions to DOE/OAK
- Approval of provisional rates and changes to cost accounting practices
- Member of the Financial Management Systems Improvement Council (FMSIC)
- Placed a reference copy of the CAS Disclosure Statement on the Lab Network

DOE/OAK and Berkeley Lab Work-Team

During this fiscal year, CFO has worked closely with DOE/OAK's Business Evaluations and Performance Division to update and set forth adequate written disclosure of changes to the Disclosure Statement.

As a result of collaborative review, the LBNL CFO Department received concurrence and approval of Lab-initiated recommendations and changes to costing practices. This same work-team (consisting of CFO/Budget, CFO/Finance, and DOE/OAK representatives) completed the final CAS Disclosure Statement document that revised and disclosed all Lab-controllable issues.

Cost Accounting Standards Board (CASB) Disclosure Statement Status

LBNL continues to refine and improve its cost distribution systems through on-going reviews of accounting practices and from input provided by division personnel. During FY97, the following CAS-related actions were taken which provide consistency in costing and reporting as well as simplify the process:

- Continued refinement of costing practices for the integration of NERSC from LLNL.
- Continued process to reduce the grandfathering of pre-FY95 capital projects from overhead.
- Included all Energy and Environment Program Management Burdens as part of their Scientific Burden budgets.
- Analyzed the business impact, and developed and implemented CFO and Human Resources (HR) Support Burdens which improves compliance with CAS requirement to assign costs to benefiting projects.

Other External Liaison Activities

During this reporting period, the CFO Department has participated in successful communication meetings to collaboratively formulate and implement both DOE initiatives and CAS compliance issues.

One example was the recent agreement between LBNL and UC that avoided unallowable interest charges, resulting in compliance with DOE contractual and CAS required practices.

Additionally, LBNL has been an active participant in reengineering and streamlining the DOE Functional Cost exercise. LBNL attended the Functional Cost meeting with all other national laboratories to discuss mutual concerns. As a result of this work-group, changes were begun to clarify and reduce the preparation effort by combining two of the required Laboratory Technical Support reporting categories.

Indirect Rate Submission to DOE/OAK

Timely submittals were presented to DOE/OAK requesting approval for revised FY97 provisional rates; changes to the Energy and Environment Scientific Burden rate; and updates to Payroll, G&A and Site Support rates.

Effective monitoring of costs and analyses by the CFO Department has identified declining cost elements. This resulted in updated projections that are consistent with and verify the Lab's cost-controlling efforts. These proactive measures have provided both DOE and the Lab scientific community with financial information critical to their planning processes.

Training and Education

The Budget Office maintains an electronic on-line "CAS Cookbook" that:

- Contains approved forward pricing rates.
- Explains how the various overheads and burdens are applied to different types of costs in various situations.
- This year the Cookbook was modified to allow use by both PC and Macintosh hardware.

Other training activities included:

- An off-site policy was written, approved, and distributed Lab-wide to clarify circumstances required to classify a project as "off-site."
- A CFO/Budget manager was matrixed to the Facilities organization to facilitate CAS and financial awareness.
- Internal and external CAS training was attended by Budget Office staff members.
- A diverse Lab-wide audience received, as part of the Procurement Information Session, training on the application of Procurement and Material Handling Burdens.

Throughout the remainder of FY97, the Budget Office is drafting the following proposed CAS changes to address the relative complexity of the current CAS structure, improve Laboratory knowledge and understanding, reduce CAS administrative effort and continue CFO's commitment to compliance with CAS requirements.

- Development and implementation of an Administrative Services Department (ASD) Burden.
- Working to convert all scientific burdens to the support burden distribution system consistent with other organizational burdens (projected for FY98 implementation).
- Preparing to publish the policies on the Web rather than via network distribution.

Supporting Data

- Lab Web—Finance Home Page.
- Lab Computer Network.

Objective #3
Criterion 3.4
Performance Measure 3.4.b

Audited Financial Statements: *Prepare for FY97 year end audited Financial Statements consistent with DOE requirements.* **(Weight = 3%)**

Assumptions:

- Narrative describing activities and processes in support of this criterion.

Gradient:

- A Meets Expectations rating is achieved by demonstrating that the Laboratory is adequately prepared for this effort. Factors that will be considered for a higher rating include demonstrated proactive activities in preparation for audited financial statement audits.
- Laboratory-specific targets identified by end of January of each year contingent on availability of benchmarking results.

  Note: Laboratory-wide cost savings initiatives require the highest level of visibility and Laboratory commitment. For this reason, Performance Objectives, Criteria and Measures (POCMs) addressing cost savings are included in the Laboratory Management POCMs instead of here in the Financial Management section.

Performance Measure Result

CFO/Finance has continued to improve the processes involved with the preparation of the annual financial statements. During this fiscal year, CFO/Finance implemented formalized/documented procedures that greatly aid the preparation of the FY96 financial statements.

Successes/ Shortfalls

During the first 10 months of FY97, the CFO/Finance Department has made the following improvements to assure complete and adequate preparation of the annual financial statements:

- Developed formal procedures to document the processes for preparing the annual financial statement. The CFO/Finance Financial Statement procedures have enhanced the development of our annual statements by consolidating instructional and background information. In addition, they act as an excellent resource reference to review and prevent errors and omissions that might occur during the development stages of the report. They also help to assure the standardization of our annual reports, thereby making it easier to compare between years.
- In response to an August 1, 1996 request from DOE/OAK regarding the Statement of Recommended Accounting Standards No. 6, "Accounting for Property, Plant and Equipment," CFO/BS/Property Services raised its capitalization threshold to $25,000 and recorded the related write-offs. The timely recording of DOE-directed accounting standards will be reflected in the Laboratory FY97 Financial Statements.
- CFO/Finance is currently implementing PeopleSoft's Financial Management System (FMS). This system will streamline and expand our analysis and reporting capabilities. Accounts will be structured in a logical accounting sequence patterned after the DOE Standard General Ledger (SGL). This new account structure will simplify and improve

our assembly of data for transmission to DOE as well as the annual financial statements.

- CFO continues to perform balance sheet reconciliations in order to facilitate audit procedures and provide for an immediate verification of status. Reviewed reconciliations are filed in a centralized location. The CFO/Finance Department is developing a centrally controlled check-off list to assure that all balance sheet reconciliations are performed in a timely manner and have been reviewed and approved.
- An electronic "folder" on a public computer network available to Finance staff has been established. This folder contains schedules and other input requirements for the annual financial statement. It also coordinates staff preparation by:
    1. Linking the reviewing staff member with the preparer.
    2. Providing the preparation "logic," which documents the preparation process for each exhibit.

Supporting Data

- Lab Web—Finance Home Page.
- Lab Computer Network.

Human Resources

Performance Characterization

FY97 has been a critical year in the evolution of the Human Resources (HR) Department at LBNL. In January 1997, an Acting Head was appointed and a major initiative to refocus the department was begun. The emphasis has been on (re)defining what the critical functions of the department are and can be, and how the department can provide value-added support to the Laboratory's research missions. This process has been undertaken in the HR Department by:

- Understanding what the changing research missions of the Laboratory are.
- Finding ways to plan ahead to define and meet present and future HR-related needs of the Laboratory.
- Critically examining departmental processes to identify redundant, unnecessary work and excessive handoffs.
- Communicating directly with customers to determine their needs and to work jointly on improving HR processes.
- Thoroughly assessing all current HR positions and activities with the objective of identifying and working towards optimal staff size and skill mix for the department.

These activities have dovetailed nicely with the Appendix F Self-Assessment Performance Objectives, especially with regard to cost effectiveness, customer needs, and alignment with the Laboratory's mission/business strategy.

Some of the highlights of this fiscal year include:

- Transfer of the Payroll Unit from Finance to the HR Compensation and Benefits Unit, thereby reducing handoffs and eliminating redundant work.
- Creation of multiple task groups (all customer-based) under the direction of the new Human Resources Information System (HRIS) and Financial Management System (FMS) Project Managers, who are critically reviewing all HR transaction processes and procedures with a goal of reengineering, streamlining, and reducing handoffs and redundancies.
- Approval and subsequent hiring of five additional HR professionals to augment the Employee/Labor Relations, Compensation, and Staffing Units.
- Partnering with the newly founded Administrative Services Department (ASD) and the Site Access Office to develop seamless service for new employees and guests. This has involved joint planning meetings that focus on streamlining processes and reengineering as necessary.

Performance Objective #1

Cost Effectiveness: *The Laboratory will have cost effective HR practices. Practices could be policies, services, programs, systems, processes and procedures.* **(Weight = 32%)**

Summary

The Laboratory has vigorously embraced the objective of having cost-effective HR practices this fiscal year. It has done so both in compensation and in the launch of an aggressive new approach to reviewing HR systems and processes.

In the compensation arena, we continued to exceed baseline levels. We have made steady progress in our job classification reviews. (Note that two years ago we had already completed reviews of 85% of the baseline job classification set.) In addition, implementation of our market-based pay policy has exceeded expectations. This was reflected in the fact that 71% of our weighted classification average salaries fell within ± 5% of the range control points. Finally, with regard to the Laboratory's adherence to its salary guidelines, the revised annual guidance was approved and promulgated in July, 1997. For all nonscientist and engineer employee salary increases, the merit planning matrix was updated, linking performance appraisal ratings and salary position in the pay range to the range midpoint. For scientists and engineers, we continued to use formal guidelines to link proposed salaries, performance appraisal results, peer-group comparison, and market references.

During the past fiscal year, the Human Resources Department has undergone significant restructuring and continues a critical re-evaluation of its systems, procedures, and practices in order to increase efficiency and increase cost effectiveness. The active involvement of the HR Management team in critically evaluating the workload and activities of the department has resulted in the approval of an additional five professional staff members.

One of the most significant reviews done in HR this fiscal year resulted in the transfer of the Payroll Unit from Finance to Compensation and Benefits, thereby reducing handoffs and eliminating redundant work.

An intense, well-structured effort has been launched in connection with the implementation of a new Human Resources Management Information System (HRIS). This effort involves multiple task groups (all customer-based) under the direction of the new HRIS and FMS Project Managers, who are critically reviewing all HR transaction processes and procedures with an eye to reengineering them as much as possible before they become part of the HRIS.

In the course of its process reviews, the HR Department has also pursued its objectives of work force excellence and cost effectiveness in Compensation. The primary effort has been to replace generic families, such as Administrative Services (nonexempt) and Administrator or Administrative Specialist (exempt), with new job families that better describe the work being performed and, by doing so, to align Laboratory pay practices with current market practices. More details on these and related activities are

provided under Performance Measure 1.2.a, Review of HR Systems and Processes.

A barrier to improvement identified this year, which is in the process of being overcome, is that the HR Department was not optimally staffed either in number of staff or the appropriate skills mix. We have recognized that changes in the context in which we conduct HR activities mandates changes in our staffing profile. A major factor defining our context is that a significantly increased percentage of the workforce has become represented by UC systemwide collective bargaining units. This does create an on-going challenge and a need for expertise and awareness that must permeate all HR activities and all levels of our staff.

Objective #1
Criterion 1.1

Compensation: *Compensation is administered in a manner which takes into account external and internal equity.*

Objective #1
Criterion 1.1
Performance Measure 1.1.a

Currency of Job Classification: Cumulative % of classifications reviewed, updated and evaluated in accordance with the Laboratory's current system.. Baseline is to have every classification reviewed at least once every 5 years. **(Weight = 6%)**

Agreement:

(1) Report annually on cumulative % of classifications reviewed (including results/actions) with the goal of 100% by the end of a 5-year period.

(2) In assessing the value of job classifications, both internal alignment and external market forces must be considered.

(3) Classifications for which changes are required will be counted under the cumulative % in the year in which the changes have been completed.

Gradients:

- Meets Expectations—100% in 5 years
- Exceeds Expectations—100% in 5 years, plus a quality review process/system institutionalized as a part of normal processes.

Performance Measure Result

This is the fourth year that this performance measure has been in effect. Excellent progress is being made. Job classification review is an ongoing activity at LBNL aimed at the goal of having reviewed all classifications within a 5-year period.

Beginning with a baseline of 115 nonrepresented classifications, in FY 1994 and FY 1995 LBNL reviewed, updated, or added 47 nonrepresented and nonscientist classifications. The cumulative percentage of classifications reviewed by FY 1995 was 85%, well beyond what would have been considered reasonable progress prorated over the 5-year performance period. This is especially true since during FY 1994 through 1995, of the baseline set of non-represented job classifications, three classifications were deleted and sixty nonrepresented classifications became part of the UPTE collective bargaining unit. Our baseline became, in effect, somewhat of a moving target.

In FY96, with customer consultation, HR reviewed and implemented 10 new administrative classifications designed not only to better describe the knowledge and skills required for all levels of job families but also to provide accurate descriptions, reflecting the market jobs. These classifications included those that had previously been the nonexempt, non-represented administrative job families, as well as three exempt administrative classifications. In addition, during the same period, LBNL implemented 16 new classifications within the represented, nonexempt, administrative group. Eighteen exempt administrative classifications, originally intended for implementation in FY96, are being modified and perhaps reduced in number to reflect work as it is actually performed at the

Laboratory. It is the intention that these classifications be implemented in FY97. LBNL intends to implement the remaining administrative managerial and exempt classifications in FY98. These new administrative classifications are a move away from broad generic titles to specific job families that are market-driven, provide employees more distinctive career paths, and result in a more cost-effective HR program.

It is difficult to determine the cumulative percentage of classifications reviewed and updated as of FY97, since, as noted, the original base number of 115 included many classifications absorbed by a new bargaining unit (UPTE). However, it is still our objective that all classifications will be reviewed and updated within the 5-year period ending FY 1999.

In summary, LBNL has made significant progress toward the goal of implementing a job classification program that encompasses the entire Laboratory. As of FY97, the majority of the classification reviews are already behind us. When the administrative job classifications have been finalized, we plan to move on to the represented classifications. When the task is complete and all classifications have been reviewed, the plan is to start at the beginning of the review cycle again to be certain that our classifications are reviewed every five years.

Successes/Shortfalls

While the LBNL Human Resources Department is generally satisfied with the manner in which the review and implementation of administrative classifications have progressed to date, there have been delays.

Factors causing or contributing to delays in the original 5-year plan developed in consultation with UC and Towers/Perrin Consulting include:

1. A 1995 FLSA review of 14 classifications and 340 positions.
2. A major reduction in force (RIF) in August 1995.
3. The need for compensation staff to meet and confer with as well as provide information to the bargaining units representing LBNL's clerical, service, technical, nursing, research, and skilled crafts employees.
4. An internal requirement for Lab-wide review of and feedback for any proposed new classification. (In some instances, it has been necessary to revise the classification description to reduce the number of levels in the family or to rewrite descriptions in order to reflect precisely the work being performed at the Laboratory.)
5. New Laboratory research initiatives, such as NERSC and the Human Genome Center, which have required HR support, especially compensation support.

Supporting Data

Final Report 5/2/94 Job Classification System Review at LBL.

The following tables:

- Job Classifications Implemented in FY94 and FY95
- Job Classifications Implemented in FY96

- Job Classifications Implemented in FY97
- Work in Progress: FY98 Job Classifications to Be Implemented.

Job Classifications Implemented in FY94 and FY95

Job Code	Job Title	Range Minimum	Range Midpoint	Range Maximum
218.1	Project Manager	$4,216	$5,459	$6,703
218.2	Program Manager	$5,225	$6,793	$8,361
218.3	Program Manager, Sr.	$5,879	$7,643	$9,407
220.1	Facilities Architect I	$4,216	$5,459	$6,703
220.2	Facilities Architect II	$4,691	$6,098	$7,505
220.3	Facilities Architect, Chief	$5,225	$6,793	$8,361
221.1	Facilities Civil/Structural Engineer I	$4,216	$5,459	$6,703
221.2	Facilities Civil/Structural Engineer II	$4,691	$6,098	$7,505
221.3	Facilities Civil/Structural Engineer, Chief	$5,225	$6,793	$8,361
222.1	Facilities Electrical Engineer I	$4,216	$5,459	$6,703
222.2	Facilities Electrical Engineer II	$4,691	$6,098	$7,505
222.3	Facilities Electrical Engineer, Chief	$5,225	$6,793	$8,361
223.1	Facilities Mechanical Engineer I	$4,216	$5,459	$6,703
223.2	Facilities Mechanical Engineer II	$4,691	$6,098	$7,505
223.3	Facilities Mechanical Engineer, Chief	$5,225	$6,793	$8,361
224.1	Facilities Energy Management Engineer I	$4,216	$5,459	$6,703
224.2	Facilities Energy Management Engineer II	$4,691	$6,098	$7,505
224.3	Facilities Energy Management Engineer, Chief	$5,225	$6,793	$8,361
225.1	Facilities Project Manager I	$4,216	$5,459	$6,703
225.2	Facilities Project Manager II	$4,691	$6,098	$7,505
225.3	Facilities Project Manager, Chief	$5,225	$6,793	$8,361
226.2	Facilities Estimator II	$4,691	$6,098	$7,505
226.3	Chief Facilities Estimator III	$5,225	$6,793	$8,361
227.1	Facilities Planner I	$4,216	$5,459	$6,703
227.2	Facilities Planner II	$4,691	$6,098	$7,505
227.3	Facilities Planner, Chief	$5,225	$6,793	$8,361
230.1	Environmental Health & Safety Professional I	$2,906	$3,719	$4,533
230.2	Environmental Health & Safety Professional 2	$3,810	$4,934	$6,057
230.3	Environmental Health & Safety Professional 3	$4,691	$6,098	$7,505
230.4	Environmental Health & Safety Professional 4	$5,879	$7,643	$9,407
231.1	Occupational Physician	$6,616	$8,601	$10,585
231.2	Occupational Physician II	$7,231	$9,401	$11,570
260.0	Computer Systems Engineer I, Trainee	$2,906	$3,719	$4,533
260.1	Computer Systems Engineer I	$3,166	$4,068	$4,971
260.2	Computer Systems Engineer II	$3,810	$4,934	$6,057
260.3	Computer Systems Engineer III	$4,691	$6,098	$7,505
260.4	Computer Systems Engineer IV	$5,879	$7,643	$9,407
261.3	Computer Systems Supervisor	$4,691	$6,098	$7,505
261.4	Computer Systems Manager I	$5,225	$6,793	$8,361
261.5	Computer Systems Manager II	$5,879	$7,643	$9,407
262.3	Computer Operations Supervisor	$4,691	$6,098	$7,505
263.1	Change Control Administrator	$2,718	$3,398	$4,078
263.2	Change Control/Security Supervisor	$3,810	$4,934	$6,057
381.1	Research Associate	$2,325	$2,961	$3,597
381.2	Research Associate, Senior	$2,927	$3,729	$4,531
381.3	Research Associate, Principal	$3,680	$4,698	$5,716
381.4	Research Associate, Staff	$3,985	$5,081	$6,177

Job Classifications Implemented in FY96

JOB TITLE	JOB CODE	REPRE-SENTED	FLSA STATUS	EEO CODE
NONREPRESENTED CLASSIFICATIONS				
Budget Analyst I	405.1	NR	E	B13
Budget Analyst II	405.2	NR	E	B13
Budget Analyst III	405.3	NR	E	B13
Budget Analyst IV	405.4	NR	E	B13
Educational Program Administrator	495.1	NR	E	B13
Executive Secretary to the Director	497.1	NR	E	D01
Human Resources Assistant I	576.1	NR	NE	D01
Human Resources Assistant II	576.2	NR	NE	D01
Human Resources Assistant III	576.3	NR	NE	D01
Executive Assistant	590.1	NR	NE	
REPRESENTED CLASSIFICATIONS				
Clerical Assistant I	570.1	R	NE	D01
Clerical Assistant II	570.2	R	NE	D01
Administrative Assistant I	572.1	R	NE	D01
Administrative Assistant II	572.2	R	NE	D01
Administrative Assistant III	572.3	R	NE	D01
Finance/Budget Assistant I	574.1	R	NE	D01
Finance/Budget Assistant II	574.2	R	NE	D01
Finance/Budget Assistant III	574.3	R	NE	D01
Travel Assistant I	578.1	R	NE	D01
Travel Assistant II	578.2	R	NE	D01
Travel Assistant III	578.3	R	NE	D01
Payroll Assistant I	580.1	R	NE	D01
Payroll Assistant II	580.2	R	NE	D01
Purchasing/Contracts Assistant I	582.1	R	NE	D01
Purchasing/Contracts Assistant II	582.2	R	NE	D01
Purchasing/Contracts Assistant III	582.3	R	NE	D01

Job Classifications Implemented in FY97

JOB TITLE	JOB CODE	FLSA STATUS	EEO CODE
NONREPRESENTED CLASSIFICATIONS			
Accountant I	406.1	E	B13
Accountant II	406.2	E	B13
Accountant III	406.3	E	B13
Procurement/Subcontract Specialist I	407.1	E	B13
Procurement/Subcontract Specialist II	407.2	E	B13
Procurement/Subcontract Specialist III	407.3	E	B13
Human Resources Specialist I	425.1	E	B13
Human Resources Specialist II	425.2	E	B13
Human Resources Specialist III	425.3	E	B13
Human Resources Administrator I	426.1	E	B13
Human Resources Administrator II	426.2	E	B13
Human Resources Administrator III	426.3	E	B13
Administrative Generalist I	435.1	E	B13
Administrative Generalist II	435.2	E	B13
Administrative Generalist III	435.3	E	B13
Communication Specialist I	445.1	E	B10
Communication Specialist II	445.2	E	B10
Communication Specialist III	445.3	E	B10

FY98 Job Classifications to be Implemented

NONREPRESENTED CLASSIFICATIONS	REP?	FLSA STATUS
Contract Administrator I	NR	EXEMPT
Contract Administrator II	NR	EXEMPT
Contract Administrator III	NR	EXEMPT
Management 1	NR	EXEMPT
Management 2	NR	EXEMPT
Management 3	NR	EXEMPT
Management 4	NR	EXEMPT
Management 5	NR	EXEMPT
Management 6	NR	EXEMPT
Patent Advisor I	NR	EXEMPT
Patent Advisor II	NR	EXEMPT
Patent Advisor III	NR	EXEMPT
Program Development Manager	NR	EXEMPT
Program Development Manager Sr.	NR	EXEMPT
Project Administrator I	NR	EXEMPT
Project Administrator II	NR	EXEMPT
Project Administrator III	NR	EXEMPT
Supervisor 2	NR	EXEMPT
Supervisor I	NR	EXEMPT
Technical Librarian I	NR	EXEMPT
Technical Librarian II	NR	EXEMPT
Technical Librarian III	NR	EXEMPT

Objective #1
Criterion 1.1
Performance Measure 1.1.b

Effectiveness of Implementation of Market-Based Pay Policy: *% of weighted classification average salaries (for LLNL: job family) fall within ±5% of target agreement.* **(Weight = 10%)**

Agreement:

This measure may be limited to those classifications with 10 or more incumbents and for LLNL and LANL, to those classifications that are benchmarked. Classification average salary will then be compared to the target and designated "yes" if the classification average falls within ±5% of the target and "no" if they do not. The populations of classifications designated "yes" will then be added and the sum divided by the total population in the covered classifications. Targets for the fiscal year shall be established prior to the implementation of the salary review for that fiscal year.

LLNL will track and share data at the classification level, but will be graded at the job family level. For positions included in the competency-based performance management pilot ("role/stage assignment(s)" are substituted for "classification(s)") the numbers for the approximate 1,300 employees in the pilot will be deleted for all calculations whenever appropriate

Gradients:

- Meets Expectations—50% or greater but less than 70%
- Exceeds Expectations—70% or greater but less than 85%
- Far Exceeds Expectations—85% or greater

Performance Measure Result

This performance measure was exceeded in FY97. Seventy-one percent of the LBNL classifications were within the ± 5 of the range control points. The range control point is the classification mid-point, which reflects market rates. The results were obtained by identifying the 24 nonrepresented classifications that included 10 or more incumbents and then comparing their average salaries as of July 1, 1997, to the current FY97 range midpoints, which are LBNL's control points. Seventeen classifications were designated as "YES" in that they had average salaries that fell within 5% of the range midpoint. The seven classifications designated as "NO" had average salaries that were more than ± 5% of the midpoint of the range.

LBNL's performance of 71% within the range control points could well be due to the catch-up provision of the salary freeze (FY93), which required our averages to remain below the pre-freeze market position for 5 years. Monitoring the salary increase process and adhering to salary guidelines should continue to bring improvements in this area.

Year-end data will be provided as an addendum to this report in October 1997.

Successes/Shortfalls

Close examination points out real success in this performance measure. While 71% of the classification averages are within ±5% of the range midpoints, 88% were within ±6% of the range midpoints, and 92% were within ±8% . All 24 classifications (100%) were within ±9% of the range midpoints. In FY97, no one classification of employees stands out as being unusually far above or below the range midpoints, indicating a consistent improvement in reflection of market rates for both classification and pay range.

Since 1993, LBNL has worked consistently to improve its classifications and pay ranges so they would reflect competitive market rates. However, because of the catch-up provision of the salary freeze, our averages must remain below the pre-freeze market position. That problem is tempered somewhat by the new classifications being introduced. The number of pay ranges will be reduced, and those ranges will more closely reflect market rates. Pay is linked to performance; a salary administration manual explains LBNL's pay philosophy and programs to supervisors. These changes, especially the market-driven pay ranges, will support LBNL's efforts to improve its performance against this measure in the future.

Supporting Data

The following table lists those classifications containing 10 or more employees where the averages fall within the control midpoint (YES) and the seven classifications that are outside the midpoint control (NO).

Effectiveness of Implementation of Market-Based Pay Policy

Job Code	Count Job Code	Job Title	Midpt/ Hour	Midpt/Mo	Avg Comp Rate	Compa-ratio	% Within Midpoint	Plus or Minus 5%
310.1	24	Scientific Engr Assoc	27.10	4,698.00	4,309.14	91.7%	8.3%	NO
260.1	27	Computer Systems Engr I	24.18	4,190.50	3,878.41	92.6%	7.4%	NO
168.2	16	Administrative Specialist 2	20.22	3,505.50	3,305.19	94.3%	5.7%	NO
199.2	17	Management II	49.57	8,592.50	8,231.90	95.8%	4.2%	YES
168.3	41	Administrative Specialist 3	23.80	4,126.00	3,993.59	96.8%	3.2%	YES
167.2	13	Administrator 2	20.22	3,505.50	3,415.31	97.4%	2.6%	YES
260.4	21	Computer Systems Engr IV	45.42	7,872.00	7,675.95	97.5%	2.5%	YES
168.4	42	Administrative Specialist 4	28.02	4,856.50	4,859.22	100.1%	-0.0%	YES
167.3	23	Administrator 3	23.80	4,126.00	4,135.65	100.2%	-0.2%	YES
720.0	22	Lead Technologist	25.35	4,411.00	4,526.61	102.6%	-2.6%	YES
330.1	28	Technical Supervisor	27.10	4,698.00	4,824.43	102.7%	-2.7%	YES
302.1	28	Electronics Engr Assoc	27.10	4,698.00	4,827.78	102.8%	-2.8%	YES
260.2	59	Computer Systems Engr II	29.32	5,081.50	5,225.14	102.8%	-2.8%	YES
330.2	15	Technical Superintendent	32.92	5,705.50	5,896.40	103.3%	-3.3%	YES
191.4	13	Tech Editor and Writer IV	28.04	4,870.50	5,035.83	103.4%	-3.4%	YES
168.5	15	Administrative Specialist 5	33.09	5,736.00	5,941.32	103.6%	-3.6%	YES
306.2	18	Mechanical Engr Assoc, Sr	29.61	5,132.00	5,329.95	103.9%	-3.9%	YES
306.1	34	Mechanical Engr Assoc	27.10	4,698.00	4,893.51	104.2%	-4.2%	YES
230.2	25	Env Health & Safety Prof 2	29.32	5,081.50	5,298.84	104.3%	-4.3%	YES
260.3	63	Computer Systems Engr III	36.24	6,281.00	6,586.60	104.9%	-4.9%	YES
199.1	14	Management I	38.40	6,657.00	7,015.79	105.4%	-5.4%	NO
302.2	14	Electronics Engr Assoc, Sr	29.61	5,132.00	5,419.70	105.6%	-5.6%	NO
230.3	24	Env Health & Safety Prof 3	36.24	6,281.00	6,654.38	105.9%	-5.9%	NO
310.2	18	Scientific Engr Assoc, Sr	29.61	5,132.00	5,557.73	108.3%	-8.3%	NO

RESULTS: Where employees number 10 or more, 71% of LBNL classification averages fall within ± 5% of midpoint control

Objective #1
Criterion 1.1
Performance Measure 1.1.c

Adherence to Salary Administration Guidelines: *Annual Laboratory guidelines for setting salaries which ensure consistency, pay for performance, and equity, internally and externally, are approved by management and implemented prior to the annual salary review.* **(Weight = 9%)**

Agreement:

The purpose is to achieve and demonstrate consistency and equity in guidelines — not new guidelines annually. Guidelines will be reviewed annually and revised as appropriate.

Evaluate Laboratory performance against annual salary guidelines using the following:

Annual salary review adjustments: Report the number and percentage of zero or minimum merit increases by S&E, administrative, and technical employee groups. Also report the salary increase distribution for each employee category, except for the step structure at LLNL.

Performance Measure Result

This performance measure has been met. LBNL's nonrepresented annual Salary Review Guidelines have been updated and revised. They were approved by senior management and implemented in August, 1996. For all salary increases, a merit planning matrix was updated for all nonscientist and engineer employees, linking the performance appraisal rating and the salary position in the pay range with the midpoint. This provided a market reference consistent with the Salary Review Guidelines. For scientists and engineers, the Laboratory continued to use formal guidelines, linking proposed salaries to performance appraisal results, peer-group comparison, and market references. The Salary Review Guidelines represent a well-defined pay-for-performance system that provides a direct link to employee merit pay and documented performance. The Laboratory Director reviews all performance ratings for scientists and engineers with his direct reports, the Deputy Director for Operations oversees all Operations employee reviews and the Administrative Services Department Head oversees all ASD employee reviews.

A salary offer worksheet, completed as part of the hiring package, is reviewed and approved by HR Staffing Specialists. Starting salary recommendations that are "exceptional" are also reviewed and approved by the Compensation Unit.

A salary increase distribution analysis indicated that three scientist and engineer employees, or less than 0.005% of total Lab employees, received no salary increase at the time of the October 1, 1996 review. Seven administrative employees, or 3%, received no increase. All technical employees received an increase.

Year-end data will be submitted in October 1997.

Successes/Shortfalls

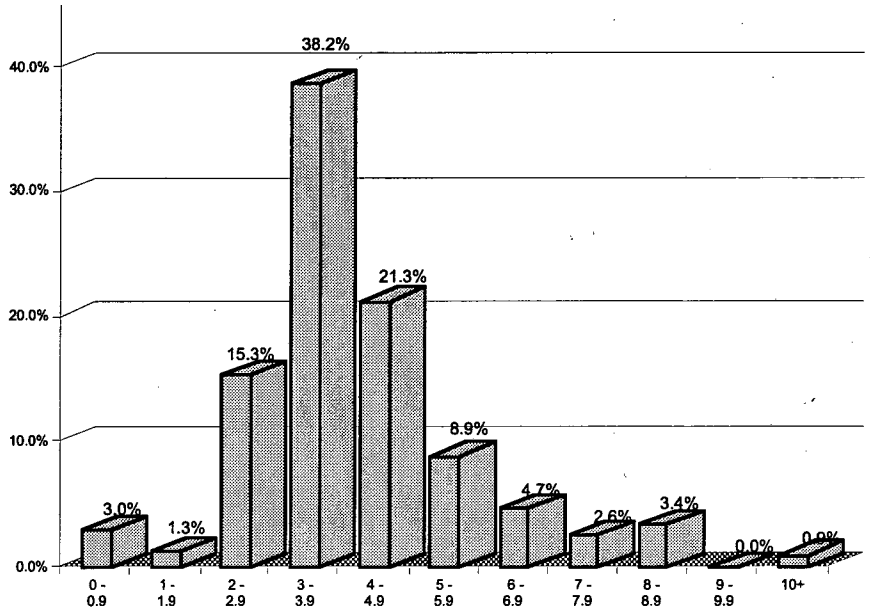
Annual Salary Review Guidelines include a Merit Plan Matrix guide that illustrates the link between an employee's position within the salary range and his/her performance appraisal rating. All guidelines have been incorporated into a comprehensive Salary Administration Manual, which is now available to all employees on the Web. In addition, the Laboratory Director continues to review the performance appraisal summary and proposed salary adjustment for each scientist and engineer to ensure guidelines are being followed.

One shortfall has been the small staff in HR compensation. With the addition of two compensation analysts in August 1997, LBNL expects to provide more training for supervisors and also to produce a brochure for all employees that will describe how pay is determined at the Lab.

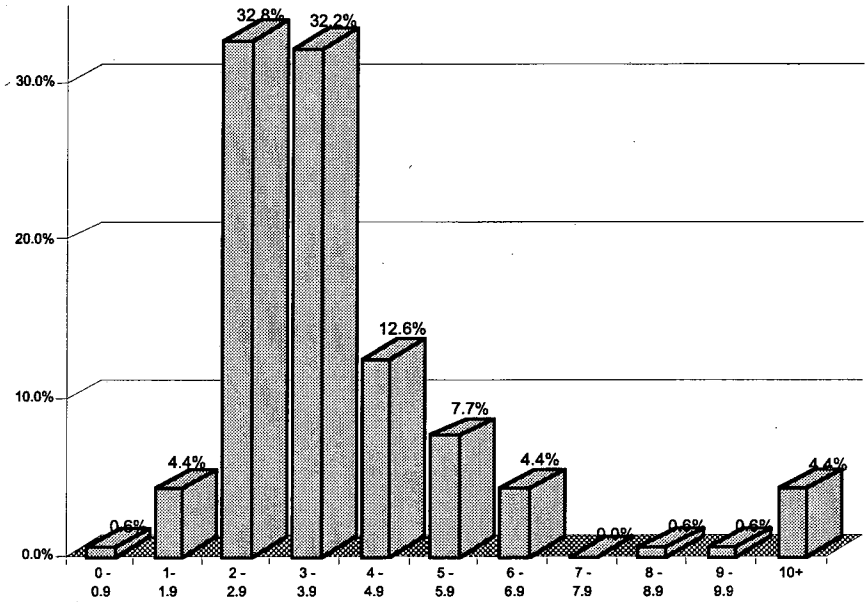
Supporting Data

- The FY97 Salary Review Guidelines for nonrepresented employees were issued to the Laboratory in August 1996.
- Salary Administration Manual.
- Salary Offer Worksheet.

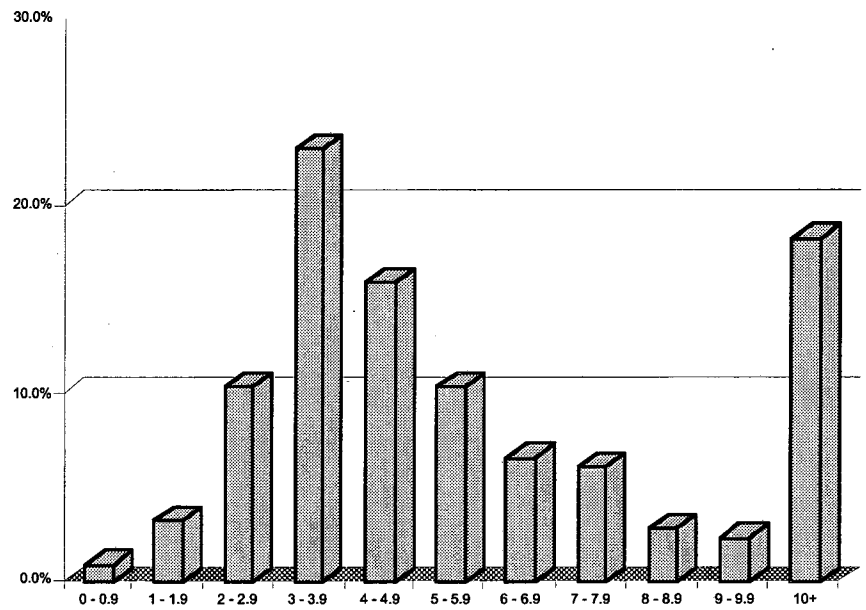
The following three charts indicate the October 1, 1996, merit distributions for the three employee categories noted above (administrative, technical, and scientists and engineers). The FY98 Salary Review Guidelines and a table of FY98 nonrepresented rate ranges are attached.



Administrative merit distributions. Average increase is 4.13%.



Technical merit distribution. Average increase is 3.87%.



Professional (scientists and engineers) merit distribution. Average increase is 6.34%.

FY 1998 Salary Review Guidelines for Nonrepresented Classifications

Objectives

- Reward accomplishments and contributions toward department/division and overall Laboratory objectives.
- Motivate high levels of productivity and performance.
- Maintain a competitive compensation position within our marketplace.

Pay for Performance

As in previous years, productivity, overall performance, and contribution are the most important considerations in determining new salaries. Our objective is to recognize high quality work and reward it accordingly.

P2R Performance Rating

Any merit increase system which relates pay levels and pay programs to the performance of employees in their jobs is dependent upon performance ratings as the primary tool. It is each supervisor's responsibility to assess individual performance and consider the employee's level of performance in recommending a new salary.

Market-Based Salary Ranges

The salary ranges are effective October 1, 1997. Midpoints of each salary range are positioned to reflect the "going" rate for comparable levels of responsibility among our competitors in the job market. Thus, the midpoint establishes a "market value" for the salary range and becomes the focal point for all internal salary determinations. Based on a comparison of our current range midpoints to available market data (projected to April 1998), salary ranges have been adjusted to reflect market competitive rates.

Continued on next page

FY 1998 Salary Review Guidelines for Nonrepresented Classifications, Continued

Merit Increase Recommendation

Each employee's salary, over time, should be commensurate with his/her level of performance. Assuming that the job classification has been compared to the appropriate market, and the individual position is properly classified, the two major considerations in the merit process are "current position of salary in a salary range for the job" and "performance rating." By using the merit plan matrix guidelines, the employee's salary, over time, will be in the appropriate segment of the range, based on his/her performance. Employees with demonstrated outstanding sustained performance should have salaries targeted toward the third and fourth quartiles of the respective salary ranges.

Eligibility

Employees hired on or before April 1 in an eligible category are eligible for an October 1 merit increase, if they successfully complete the six-month probationary period. Eligible categories of employees include full and part time career, term, or temporary employees. The following employee categories are **not** eligible:

- Employees hired after April 1, 1997
- Faculty
- Special scientists
- Postdocs
- GSRAs, and Student Assistants.

NOTE: Please see Page 5 for instructions regarding indeterminate time employees.

Merit Plan Matrix

To use the Merit Plan Matrix Guidelines below, locate the block on the matrix where the performance rating of the individual intersects with the quartile in which the current salary falls. For example, the minimum salary for an Budget Analyst II (classification code 405.2) is $3,360, and the 2nd quartile is $3,838. Therefore, if the salary for that employee is $3,525 and his or her performance rating is "Meets", the salary would fall in the first quartile and the employee could receive a merit increase of up to 5.0% of base salary (or up to $175), to a new salary of $3,700.

Continued on next page

FY 1998 Salary Review Guidelines for Nonrepresented Classifications, Continued

Merit Plan Matrix (Continued)

Please indicate on the enclosed computerized worksheet a merit increase recommendation for each eligible employee in your division, utilizing the matrix guidelines. Merit spending must be within the budget provided, by employee category (i.e., Professional Exempt, Administrative Exempt and Nonexempt, and Technical Exempt and Nonexempt) for your division. As in previous years, the Division Director's Reserve can be used across employee categories. **Salary Increase Worksheets are to be returned to the Compensation Unit by Friday, August 29, 1997.**

FY 1998 Merit Plan Matrix Guidelines

Salary Range Position	*1st Quartile*	*2nd Quartile*	*3rd Quartile*	*4th Quartile*
Performance Rating				
Outstanding	up to 8.0%	up to 7.0%	up to 6.0%	up to 5.0%
Exceeds	up to 7.0%	up to 6.0%	up to 5.0%	up to 4.0%
Meets	up to 5.0%	up to 4.5%	up to 4.0%	Up to 3.0%
Improvement Needed	0%	0%	0%	0%

Minimum Midpoint Maximum

Merit Plan Matrix (Continued)

The Merit Plan matrix guidelines provide a range of increase percentages with which to work. These are only guidelines and it is understood that there will be other factors that influence the salary recommendation. For example, all salaries must be within the new range minimum unless the employee's performance rating is "Improvement Needed" or is a VERIP rehire.

Lump Sum Merit Awards

Individuals who receive an "Exceeds" (E), "Outstanding" (O), or "Meets" (M), performance rating and who are paid at or near the salary range maximum are eligible for a lump sum, nonbase-building, merit award. For example, an hourly paid employee who receives a non-base increase of $0.46 would actually receive an annualized amount of $956.80. If the merit increase (base rate) amount will result in the employee's salary exceeding the range maximum, a lump sum merit award may be proposed in conjunction with a base rate merit increase. For example, a 2% merit increase, and a 3% lump sum paid at or above the salary range maximum may be proposed. All monthly paid salary increases, whether merit or lump sum, should be indicated as a dollar amount on the computerized worksheet.

NOTE: Lump sum increases are paid on a one-time basis and are subject to withholding taxes.

FY 1998 Salary Review Guidelines for Nonrepresented Classifications, Continued

Dual Rate Increases

Employees receiving a dual rate are eligible for merit increases up to but not exceeding the percentage increase used for their primary classification (e.g., if receiving 3% in primary classification, increase may not exceed 3% in dual-rated classification).

Time Frame

Performance ratings and proposed new salaries should be based on the employee's achievements and performance in the current position for the July 1, 1996 through June 30, 1997 review period, and not the employee's potential, education, or experience.

Criteria to Consider

Several other factors must be given consideration before the salary recommendation is finalized:

- Salary administration must be nondiscriminatory and consistent with the objectives of our Affirmative Action Policy and Guidelines.
- Salary relationships with peers, supervisors, and subordinates should be equitable.
- Salary history, including amounts and dates of the last increase, may be considered. For instance, an employee's having received a post-October reclassification salary increase due to additional job responsibilities may have some bearing on the salary recommendation for this review.

Written Justification Requirement

Divisions are required to provide written justification for salary increases which result in a proposed salary of $150,000 ($12,500 monthly) or greater. The current DOE approval level is $150,000. Justifications, in memo form, should be submitted no later than September 20, 1997 to Human Resources.

Continued on next page

FY 1998 Salary Review Guidelines for Nonrepresented Classifications, Continued

Input of Merit Amount, Reclass Amount, New Salary, and Lump sum	The Merit Amount for nonexempt employees should be in dollars and cents, whereas for exempt employees the amount should be rounded to the nearest dollar interval. This is also true for input to the New Salary, Reclass Amt. and Lump sum columns.
Performance Measures	Columns AA through AD require input as part of the validation process for this year's UC/DOE Performance Measures. These must be completed prior to approval of the FY 1998 salary increases. Required input includes the P2R (Performance) Rating, the date the P²R was signed by the employee, the date the position description was last updated or reviewed as indicated on the form, and whether or not Performance Planning and Development Plan was completed.
Additional Worksheet Input Requirements	The spreadsheets will be used to update the database and cannot be changed in any way. If you hide columns or move columns around, they should be restored to the original order before they are sent back.
Indeterminate Employees	Indeterminate employees (excluding VERIP rehires) are eligible for merit increases. Merit increases for these employees are NOT to be included on the automated worksheet but are to be submitted separately on a PAF by September 15. A written justification must be attached to the PAF for increases which exceed the percent allocated for the respective employee group.
Reclassification Requests	Requests for reclassifications should be submitted for the October review to the Human Resources Department. The package should include an updated Position Description, and a Salary Action form. Both forms are available on the LBNL Home Page, Our Workplace, Laboratory Support Services, Forms Online, Human Resources, Personnel Action Forms (PAFs) are not required for the October review, but will be required for all post-October cases that request a change in salary or classification. Reclassification requests for October 1 are due by **August 29, 1997.**

Continued on next page

FY 1998 Salary Review Guidelines for Nonrepresented Classifications, Continued

Post October Actions

The annual salary review is intended to be a once-a-year, focal-date assessment of each eligible employee's salary and classification. Divisions are, therefore, urged to spend the majority of their total merit allocation during the October Salary Review and to recommend a minimum of salary actions outside of the October Review.

Reclassification requests will continue to be reviewed throughout the year by Human Resources with the effective date usually the first of the month following receipt of request.

For further information or questions regarding the salary review process and procedures, please contact the Compensation Unit as follows:

Tom Taylor (Manager)	Ext. 5245
Nona Comfort	Ext. 6750
Carrie Joy	Ext. 4389
Matthew Mleczko	Ext. 6865

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FY 1998 Salary Review Guidelines for Nonrepresented Classifications, Continued

GLOSSARY OF TERMS

Job F	Job Function	Professional, Administrative, Technical
E/N	Exempt/Nonexempt Status	Exempt -Positions that are exempt from overtime provisions of the Fair Labor Standards Act (FLSA) Nonexempt - Positions that are included in the overtime provisions of the FLSA
L1	Level 1 - Organization (Org.) Code	Division /Department/Center
L2	Level 2 - Org. Code	Department/Program
L3	Level 3 - Org. Code	Group
L4	Level 4 - Org. Code	Unit
Comprate	Compensation Rate	Compensation rate is either an hourly rate or actual salary paid based on scheduled hours.
FT SAL	Full time monthly equivalent	Salary based on 100% time
Min - 2Q - Mid - 3Q - Max	Salary range in quartiles	See Matrix P3.

Objective #1
Criterion 1.2

Review and Evaluation of HR Systems and Processes: *All HR systems and processes are designed to optimize the delivery of services with respect to quality and cost.* **(Weight = 7%)**

Objective #1
Criterion 1.2
Performance Measure 1.2a

Review of HR Systems and Processes: *The Laboratory will critically examine HR systems and processes using a variety of techniques that may include internal customer feedback mechanisms, cost benefit analysis, work flow analysis, process mapping, benchmarking, etc., to streamline, reengineer, outsource, or eliminate existing systems and processes or implement new initiatives.* **(Weight = 7%)**

Measurement Deliverable: Narrative description of the above.

Gradients:

- Meets Expectations—Major HR systems or processes (as defined by the Laboratories) are prioritized for review. Project plans are developed for one or two, and action is initiated.
- Exceeds Expectations—As a result of reengineering, outsourcing or other actions, improvements are achieved as evidenced by internal customer feedback, improved cycle times, benchmarking earlier outcomes vs current outcomes, cost benefit analysis, or comparisons with other organizations which have made similar efforts, cost savings, etc.
- Far Exceeds Expectations—As a result of reengineering, outsourcing or other actions, significant improvements are achieved as evidenced by internal customer feedback; improved cycle times; benchmarking earlier outcomes vs current outcomes, cost benefit analysis, or comparisons with other organizations which have made similar efforts, cost savings, etc.

Performance Measure Result

During the past fiscal year, the Human Resources Department has undergone significant restructuring and continues a critical re-evaluation of its systems, procedures, and practices in order to increase efficiency and cost effectiveness. Key to this process is the daily meeting of the HR Management Team, which, in addition to the acting department head, comprises the ER/LR, Staffing, Compensation/Benefits & Payroll, and Institutional Policy managers. This group provides direction and coordination of the departmental system and process reviews and works together to prioritize projects. Each manager is responsible for personally overseeing selected reviews and ensuring that appropriate cross-talk takes place within HR and with appropriate external departments.

A major task undertaken by the Management Team was to analyze current and future HR workload demands and develop an HR Staffing Plan. The plan considered every existing position and person in the department. Its implementation has resulted in the hiring of five new HR professionals.

One of the most significant reviews done in HR this fiscal year resulted in the transfer of the Payroll Unit from Finance to Compensation and Benefits, thereby reducing handoffs and eliminating redundant work. Also, Coordination and Employee Buying Service activities were moved from HR to Finance to allow HR to focus on its core functions. Administrative policy

activities were moved from the Operations Directorate office to HR to strengthen the existing policy functions. In addition, a project manager was assigned to assist with the coordinated development of the HRIS and FMS infrastructure computer systems.

An intense, well-structured effort has been launched in connection with the implementation of HRIS. This effort involves multiple task groups (all customer-based) under the direction of the HRIS and FMS Project Managers, who are critically reviewing all HR transaction processes and procedures with an eye to reengineering them as much as possible before they become part of HRIS.

Process improvement teams are meeting to review and analyze current HR processes such as hire, termination, staffing, employment actions, contract labor, etc., in order to commend process changes utilizing the new PeopleSoft HRIS System. The goal is to implement one point of entry for HR actions, so that hand-offs, delays, and redundancies are reduced.

In the course of its process reviews, the HR Department has also pursued its objectives of work force excellence and cost effectiveness in the Compensation arena. The primary effort has been to replace generic families, such as Administrative Services (nonexempt) and Administrator or Administrative Specialist (exempt), with new job families that better describe the work being performed and, by doing so, to align Laboratory pay practices with current market practices. New job families for nonexempt administrative personnel were implemented at the beginning of the 1997 fiscal year, when the five classifications of Administrative Services were redefined to include job families with two or three levels (e.g., Payroll Assistant, Human Resources Assistant, and Purchasing Assistant).

A particularly innovative initiative launched by HR this year has been to partner with the newly founded Administrative Services Department (ASD) and the Site Access Office to develop seamless service for new employees and guests. This has involved joint planning meetings that focus on streamlining processes and reengineering as necessary. These groups have also partnered to co-locate their physical space to best serve the Laboratory community.

Successes/Shortfalls

The re-assignment of the Payroll function to HR, the coordinated co-development of the HRIS and FMS systems, and the innovative partnering with the Site Access Office and ASD are particular successes this fiscal year.

Supporting Data

- Current HR organization chart.
- Organization chart for HRIS implementation showing all work groups.

Performance Objective #2

Work Force Excellence: *The Laboratory will develop and motivate its work force to excel in meeting programmatic needs of the Laboratory and its customers.* **(Weight = 17%)**

Summary

The Objective of Work Force Excellence has been defined to include two measurable components—performance management and employee relations.

In the area of performance management, the two measured activities are individual development plans and the currency of performance appraisals. In both of these measurements, our data show that we have far exceeded the expectations set forth in the measures. Year-end data will be submitted in October to document our FY97 performance. (A separate submittal is necessary because the self-assessment report is published before our annual performance appraisal cycle is complete.)

The employee relations arena reveals a dramatically decreased number of external complaints from the previous fiscal year (from 28 to 4). However, we recognize that numbers alone are not indicative of the effectiveness of our complaint resolution process and that they do not reveal anything about the changing circumstances (e.g., layoffs, union activity) in which employee relations complaints occur. We are pleased to report that we have had good success with both mediation and arbitration in avoiding external complaints. Eight formal employee grievances were successfully resolved in a less costly and less adversarial manner through mediation and the use of a union contract Joint Conference Board. In addition, two Public Employer Relations Board (PERB) cases potentially adverse to the Laboratory were resolved by negotiation rather than further litigation.

We look forward to collecting data next year under the revised version of the employee relations performance measure. It will add real value by allowing us to identify issues and look for trends in terms of types of issues and/or areas within the Laboratory that are in need of remediation.

Objective #2
Criterion 2.1

Performance Management: *Effective employee performance management.* **(Weight = 12%)**

Objective #1
Criterion 2.1
Performance Measure 2.1a

Individual Development Plan: *% of employees with a current development plan. Baseline is 75%.* **(Weight = 5%)**

Agreement:

- A 2% random sample of the covered population will be drawn to review development plan for acceptability. An IDP will not be counted as current unless it has the elements set forth in laboratory guidelines.

Gradients:

- Meets Expectations—75% or greater but less than 80%
- Exceeds Expectations—80% or greater but less than 85%
- Far Exceeds Expectations—85% or greater

Performance Measure Result

This performance measure has been far exceeded. The FY96 division validation process indicated that 98.5% of employees had completed development plans, exceeding the 75% baseline.

In FY96, a team of Human Resource professionals conducted a 5% random sample of development plans. The review found 100% of the sample to be complete and according to guidance.

Year-end data will be submitted in as an addendum to this report in October, 1997.

Successes/Shortfalls

The audit of employee development plans validated their completeness and adherence to guidance. However, in some areas there was marginal explanation of specific areas of development such as coursework to be taken or timelines for completion of employee training.

Supporting Data

- Refer to FY96 Self-Assessment Addendum.
- FY97 data will be submitted as an addendum in October 1997.

Objective #1
Criterion 2.1
Performance Measure 2.1b

Currency of Performance Appraisals: *A system that evaluates each employee on an annual basis, against pre-established, job-related performance criteria is in place. % of individual performance appraisals completed annually will be measured. Baseline is 95%.* **(Weight = 7%)**

Agreement:

- Report latest viable data. Percent completed determined by dividing the number of completed performance appraisals by the eligible population. A performance appraisal will not be counted as completed unless it has the elements set forth in the laboratory guidelines. September data will be used for FY97.

Gradients:

- Meets Expectations—95%
- Exceeds Expectations—greater than 95%
- Far Exceeds Expectations—greater than 97%

Performance Measure Result

This performance measure has been far exceeded. The October 1996 division validation process indicated that 99.3% of employees have a completed performance appraisal. In FY 1995, 99% of employees had a completed performance appraisal.

Human Resources selected a statistically random sample of all completed performance appraisals in the three employee groups: administrative, technical, and scientists and engineers. The performance appraisals were reviewed by HR staff for completeness and consistency with established Laboratory performance appraisal guidelines. This review showed that 100% of the performance appraisals were complete and done in accordance with guidance.

Year-end data will be submitted as an addendum to this report in October, 1997.

Successes/Shortfalls

The annual performance appraisal guidance package was revised in FY97 and a completely refurbished training module for supervisors was developed.

Supporting Data

- Refer to FY96 Self-Assessment Addendum.
- FY97 Performance Appraisal Guidelines.
- Supervisor's Performance Appraisal Training Module vugraphs.
- FY97 data will be submitted as an addendum in October 1997.

Objective #2 Criterion 2.2

Employee Relations: *Effectiveness of employee relations program.* **(Weight = 5%)**

Objective #2 Criterion 2.2 Performance Measure 2.2a

Effectiveness of Employee Relations: *Measure the effectiveness of complaint resolution, including but not limited to issues related to EEO, AA, employee discipline, whistleblowing and issues addressed by administrative review or grievance process, or the ombudsman.* **(Weight = 5%)**

Agreement:

Data for external complaints will be provided for the current and the last two years. External complaints are agency filings and lawsuits. Multiple filings on the same issue by the same individual will count as 1; actions filed by applicants and retirees will not count against this performance measure.

The laboratories will provide a narrative summary of management initiated actions that would impact the results of this measure.

Performance Measure Result

The Laboratory recognizes that gross numbers of external complaints are not, in themselves, a valid measure of the effectiveness of its complaint resolution mechanisms. However, such data may be useful in identifying problem areas, such as particular divisions with the same types of complaints, repeated complaints of particular kinds across the Laboratory, etc. Such information may in turn form the basis for targeted remediation, such as providing written guidelines, one-on-one counseling, policy clarification, supervisory/ management training, etc.

Although the base number of external complaints in FY96 (28) was small, the number of complaints dropped significantly in the first three quarters of FY97 (4). By comparison, in FY95 there were 16 external complaints.

The types of complaints compare as follows:

	Discrimination	Management action	Layoff	Other	**Total**
FY95	15	1			**16**
FY96*	23		2	3	**28**
FY97†	4				**4**

*Of the 24 discrimination complaints in FY96, 13 alleged discrimination on the basis of the Laboratory's post-employment medical testing policy. A summary judgment was issued in favor of the Laboratory. Another four discrimination complaints and one unfair labor practice charge were connected with the FY95 Reduction in Force.

†Data reflect 10/1/96 through 6/30/97 only.

In order to understand the data related to this measure, it is essential that the reader consider the contextual factors out of which the reported complaints arose. In the fourth quarter of FY95, the Laboratory experienced a significant layoff involving over 100 people. Increased external complaint

activity was part of the aftermath of this, and these increased complaints influenced the data for both FY96 and, to a lesser extent, FY97.

Another fact of life at the Laboratory that has influenced external complaint filings and can be expected to continue to influence them is collective bargaining. At this time, over 40% of the Laboratory's workforce is represented by six different collective bargaining units. Some of these units have been at the Laboratory for a number of years, such as those connected with the American Federation of Federal, State, County, and Municipal Employees (AFSCME) and the Building Trades Council (BTC). As increasing numbers of employees are represented and the mix of unions involved has changed to include increasingly sophisticated ones, it can be predicted that some unions may take more aggressive stances, which can lead to increased external complaint activity.

It is noteworthy that the first three quarters of FY97 have been packed with collective bargaining activity, including continuation of protracted negotiation with the Technical Unit of the Union of Professional and Technical Employees (UPTE). This activity culminated with a tentative agreement in July. Ratification is expected in August. In addition, ongoing negotiations have continued with the Research Associate unit of UPTE and the California Nurses Association.

Additionally, the ER/LR unit has undergone major staffing changes, including hiring a new head in March and the re-assignment of the Worker's Compensation function to ER/LR. Under the direction of the new head, the unit's internal processes are undergoing review (including the system for reporting on case statistics). The latter will be upgraded in FY98 and used as a tool to mount the kind of targeted remediation strategies mentioned above.

With all of these contextual factors in mind, the fact remains that the total number of external complaints between FY96 and FY97 dropped significantly, and some old cases were resolved. The Laboratory used mediation to resolve six lay-off cases, and it used a union contract Joint Conference Board to resolve two discharge cases arising out of a hoax bomb incident. Two PERB cases potentially adverse to the Laboratory were resolved by negotiation rather than further litigation. All these cases were resolved more quickly and inexpensively than would have been the case with traditional litigation or arbitration. These processes afforded the Laboratory an opportunity to work cooperatively with two unions in resolving employee grievances in a less adversarial and less costly manner than arbitration. The Laboratory will consider the further usage of such informal conflict resolutions.

Successes/Shortfalls

The dramatic reduction of external complaints in FY97 is a successful outcome.

We successfully used the mediation and contract Joint Conference Board to resolve employee grievances.

In addition, in the third quarter of FY97, after an exhaustive search, a highly experienced ER/LR professional who is also a labor attorney was hired to head the ER/LR unit. He has begun a thorough review of internal unit

procedures and systems (including case categorization) to increase effectiveness and to assist management in determining where we need to focus remediation efforts and improve case management.

Supporting Data

See table, Performance Measure Result.

Performance Objective #3

Equal Opportunity: *Strengthen the commitment to and accountability for equal opportunity, affirmative action and work force diversity.* **(Weight = 24%)**

Summary

Results of FY96 (October 1 to September 30) Affirmative Action goals and results for the first two quarters of FY97 (October 1, 1996 to March 31, 1997) are the focus of this self-assessment. Year end data for the last two quarters of FY97 will be provided as an addendum to this report in October 1997.

The Berkeley Lab continually works to ensure equal employment opportunity for all people and pursues the concepts of EEO within the Laboratory at all times. The Laboratory is committed to recruit women and people of color into its work force. Equally important is retention of those employees. Our goal is to increase the representation of women and people of color in our mid- and senior-management level job groups. Community outreach activities, university and college relations initiatives, and refined targeted recruitment efforts are utilized for this purpose.

On balance, the overall utilization of women and people of color remained relatively unchanged during FY96. At the beginning of FY96, women were fully utilized in 18 of 33 job groups. At the beginning of FY97, women were fully utilized in 17 of 33 job groups. The net reduction in utilization among women is due to an increase in underutilization in two job groups and a reduction in underutilization in one job group. At the beginning of FY96, people of color were fully utilized in 19 of 33 job groups. At the beginning of FY97, people of color were fully utilized in 18 of 33 job groups. The net reduction is due to an increase in underutilization in one job group. This resulted in the Laboratory's continued achievement of Laboratory-wide representation of women (31.28%) and people of color (26.14%) above the aggregate availability targets (28.71% women and 25.18% people of color) for these groups.

None of the above-mentioned activity occurred in high priority job groups as identified in the Laboratory's FY96 Self-Assessment report. Specifically, the following four job groups were identified in the FY96 Affirmative Action Program (AAP) Year analysis:

- Research Associate (B11) — African American
- Mechanical Technicians (C02) — Women, People of Color
- Electronic Technicians (C03) — Women
- Health/Medical (C06) — Women

Final analysis of personnel activities associated with these four areas during the FY96 AAP Year revealed positive progress with respect to Research Associate (B11). The Laboratory demonstrated good faith efforts relative to realizing an applicant pool of 7.0% for African Americans compared to availability of 4.0%. This resulted in one African American to hire. With respect to the other three job groups (Mechanical Technicians (C02),

Electronic Technicians (C03), and Health/Medical (C06)), which represent the federal occupation category Technicians, progress fell short of expectations.

The Laboratory divisions will continue to carry out a variety of baseline and ongoing development activities aimed at obtaining diverse applicant pools and developing and retaining employees. Basic Equal Opportunity/ Affirmative Action efforts have been incorporated into standard division procedures, such as the inclusion of EEO/AA responsibilities in supervisors' performance reviews, development of recruitment plans when vacancies exist, equity review of salary actions, and participation in related training programs. The Laboratory will continue to support development efforts by facilitating participation in training, the tuition reimbursement program, and on-the-job training. In addition, the Laboratory will continue facilitating division participation in the formal mentor program. Divisions will continue to participate in the Committee on Diversity by sending representatives to discuss related issues and action-oriented planning. The committee makes recommendations to the Laboratory Director about ways to enhance the Berkeley Lab work environment and to accommodate the diverse needs of its employees.

The Laboratory will direct proactive efforts to reduce and/or eliminate underutilization in job groups and/or classifications through the use of training programs, employment pools, and targeting of management-level positions. The Laboratory will continue to implement new initiatives to further Affirmative Action and EEO throughout the year. Refer to the *Berkeley Lab's Affirmative Action Program*, Section 17, Good Faith Efforts, for an illustration of Affirmative Action efforts and Human Resource programs that support the goals stated above.

The specifics of this analysis are given in the *Berkeley Lab's 1997 Affirmative Action Program*, Section 14, Utilization Analysis, Section 15, (Fiscal Year 1996: Progress) and Section 16 (Concerns and Resolutions).

See following table, "FY 1997 Progress of Underutilization in Areas with Statistically Significant Underutilization."

The barriers to fully utilizing women and people of color in underutilized job categories are the lack of hiring opportunities and/or inconsistent applicant pools in areas that have statistically significant underutilization. Also, changes in scientific programs and funding make it difficult for managers and supervisors to project future hiring opportunities on a consistent basis. As mentioned, four job groups demonstrated statistically significant underutilization in Calendar Year 1996. Of these four, only one was expected to have significant placement opportunities based on historical trends. Therefore, the Laboratory must look beyond placement as the sole approach to combating underutilization. Specifically, the Laboratory will utilize a variety of good-faith efforts, such as community outreach activities, university and college relations initiatives, refined targeted recruitment efforts, and employee developmental efforts as means of obtaining diverse applicant pools and developing and retaining its employees.

FY 1997 Progress of Underutilization in Areas with Statistically Significant Underutilization

Job	Female			Total Minority			African			Hispanic			Asian			Native American			Total		
Group	Oct-96	Mar-97	Change	Oct-96	Mar-97	Change	Oct-96	Mar-97	Change	Oct-96	Mar-97	Change	Oct-96	Mar-97	Change	Oct-96	Mar-97	Change	Oct-96	Mar-97	Change
A03	10	10	0	1	4	3	0	0	0	3	3	0	0	0	0	0	0	0	13	13	0
Total A	10	10	0	1	4	3	0	0	0	3	3	0	0	0	0	0	0	0	13	13	0
B04	1	7	6	9	10	1	4	5	1	6	6	0	0	0	0	0	0	0	11	18	7
B11	0	0	0	0	0	0	5	6	1	3	2	(1)	0	0	0	0	0	0	8	8	0
Total BS	1	7	2	9	10	1	9	11	2	9	8	(1)	0	0	0	0	0	0	19	26	7
C02	7	7	0	12	13	1	2	1	(1)	4	5	1	3	2	(1)	1	1	0	17	16	(1)
C03	11	10	(1)	10	10	0	1	3	2	3	3	0	3	3	0	0	0	0	18	19	1
C06	10	9	(1)	0	0	0	0	0	0	2	1	(1)	0	0	0	0	0	0	12	10	(2)
C07	4	2	(2)	7	7	0	2	2	0	2	3	1	2	1	(1)	0	0	0	10	8	(2)
C08	1	1	0	2	2	0	0	0	0	0	0	0	3	3	0	0	0	0	4	4	0
Total C	33	29	(4)	31	32	1	5	6	1	11	12	1	11	9	(2)	1	1	0	61	57	(4)
E01	1	1	0	3	4	1	0	0	0	4	4	0	0	0	0	0	0	0	5	5	0
Total E	1	1	0	3	4	1	0	0	0	4	4	0	0	0	0	0	0	0	5	5	0
Total	45	47	-2	44	50	6	14	17	3	27	27	0	11	9	-2	1	1	0	98	101	3
			(4.44%)			13.64%			21.43%			0.00%			(18.18%)			0.00%			3.06%

Objective #3
Criterion 3.1

Employment of Women and Minorities: *Promote work force diversity and improve the representation of minorities and women in the work force through the development and implementation of strategies and other affirmative action "good faith efforts."* **(Weight = 24%)**

Objective #3
Criterion 3.1
Performance Measure 3.1.a

Employment of Minorities: *Planning and implementation of good faith efforts designed to improve recruitment, selection and retention of minorities in high priority underutilized job groups.* **(Weight = 12%)**

Agreement:

1. High priority underutilized groups will be selected at the beginning of the assessment period. The following factors may be utilized for the designation of high priority areas: underutilization levels, availability levels, placement opportunities and typical size and diversity of applicant pools.
2. The Laboratory will provide a results oriented plan with a purpose of improving organizational performance in the recruitment, selection, and retention of minorities in the selected high priority areas.

   The plan will display the specific actions which will be targeted for achievement during the fiscal/calendar year and assigned responsibility for those actions. The plan shall incorporate, at a minimum, good faith efforts designed to enhance the following:

   - coupling of outreach and recruitment efforts in high priority job groups
   - systematic effort to measure and report outcomes and impact of the outreach and recruitment process
   - diversity and viability of candidate pools
   - efforts to educate and sensitize the work force to diversity awareness
   - integration of diversity issues in Laboratory operations and the daily fabric of Laboratory life
   - active top management support of diversity considerations, including affirmative action and educational outreach efforts
   - representation of minorities as defined in the Laboratory's Affirmative Action Program

Gradients:

- Meets Expectations—Plan Development and Execution
  1. *Plan Development*—The Laboratory developed a results-oriented plan which clearly communicates the Laboratory's commitment and investment in carrying out its good faith efforts to develop strategies and actions to improve employment and retention of minorities in high priority underutilized job groups. The plan must incorporate, at a minimum, good faith efforts as outlined above.
  2. *Plan Execution* —Specific actions identified in plan were carried out substantially in the manner and time-frames identified in the plan.

     The Laboratory will summarize how the plan was executed relative to the specific actions taken to improve the recruitment, selection and retention of minorities. The summary should include a narrative describing the efforts taken, and any significant outcome or events

resulting from the process. The summary should also include statistical analyses assessing the plan's effect on the representation of minorities in candidate pools, interviews, placements, and attrition in the specified job groups.

- Exceeds Expectations—In the aggregate, high priority underutilized job groups show improvement toward full utilization. Job groups not designated as high priority also show improvement or remain at the same level of utilization.
- Far Exceeds Expectations—In addition to the criteria for exceeds expectations, improvement toward full utilization is achieved for each designated high priority group or full utilization is achieved in any of the high priority job groups.

Performance Measure Result

Fiscal Year 1997 AAP Goals

At the beginning of the current assessment period, utilization analysis was performed and the following seven job groups were identified as high priority for people of color and their corresponding ethnic categories:

• Computer Sci/Math/Statistics (B04)	Hispanic
• Research Associates (B11)	African American
• Mechanical Technicians (C02)	People of Color
• Electronic Technicians (C03)	People of Color
• Technical Associates (C07)	People of Color
• Accelerator Operators (C08)	Asian
• Machinists—Entry (E01)	Hispanic

Representation of Minorities as Defined in the Laboratory's Affirmative Action Program

The following represents a mid-FY97 progress review of utilization among the high priority job groups. The results demonstrate that while there was no elimination of underutilization among the high priority job groups, underutilization was reduced in three ethnic categories across four job groups. There were a total of 157 placements, of which 51 (32.48%) were in high priority job groups. Of the 51 placements, 14 (27.45%) were filled by people of color, which is above the aggregate availability (11.82%) at the end of the six-month review period. The Laboratory continues this pattern by maintaining its current placement rate (19.38%) above the aggregate availability of 11.82%.

The following plan was developed to address the need to couple outreach and recruitment efforts in high priority job groups with systematic efforts to measure and report outcomes and impact of this process, including tracking the diversity and viability of candidate pools:

At the beginning of the fiscal year, outreach recruitment efforts were focused on Research Associates (B11). This category is the entry level for Laboratory research positions, and a number of vacancies were anticipated, particularly in the Life Sciences Division Human Genome Program.

The Human Genome Program was willing to hire recent college graduates with BS/BA degrees in molecular biology, biochemistry, or related fields.

Staff from Human Resources and Work Force Diversity met with Life Sciences Program administrators to review and discuss Affirmative Action goals and objectives.

A broad recruitment strategy was developed, including targeted mailings and contact with traditionally minority colleges and Lab participation in job fairs. Web-based recruiting was utilized and ads and flyers were distributed specifically calling for Human Genome Center Research Associates.

Contact was also made with and flyers distributed to U.C. Berkeley staff who work with placement of graduate and undergraduate minority students in the biosciences.

Staffing Unit Activities to Support Outreach Recruitment

The Laboratory is currently in the process of rebuilding the Staffing Unit and reengineering Staffing Unit processes. Two staffing professionals were hired in April and May of 1997. Each has been assigned to work directly with the two areas of the Laboratory that are in a high recruitment mode—the Computing Sciences Division (including the National Energy Research Supercomputing Center (NERSC)) and the Life Sciences Division (including the Human Genome Program). A key assignment of each staffing professional is to work with hiring managers in these areas to review underutilization goals and develop broadbased recruitment strategies for current and future openings that will result in qualified and diverse applicants.

In order to attract diverse applicant pools, Laboratory job openings are publicized on a broad basis throughout the Bay Area and, based on the position, nationally. The Laboratory publishes a *Current Job Opportunities Bulletin* on a biweekly basis. The bulletin is mailed to over 218 Bay Area professional and minority organizations, including Employment Development Departments. The Job Bulletin is also updated weekly on the World Wide Web, linked to both the Laboratory and University of California home pages. The on-line bulletin is becoming an effective recruitment tool, and in the past year, several thousand applicants have forwarded their resumes electronically. Depending on the recruitment, ads are placed in Bay Area newspapers and sent to targeted professional organizations and journals. Staffing professionals also regularly attend professional job fairs. Beginning with the next fiscal year (FY98), the Staffing Unit will implement a revised tracking mechanism to better determine the effectiveness of the various recruitment sources and identify which recruitment sources are generating selected applicants.

The job vacancy requisition is available electronically. When a hiring supervisor completes a requisition to post a job vacancy, the requisition will

automatically indicate areas of underutilization per the Laboratory's Affirmative Action Plan. The underutilization rate for each job group is updated on a quarterly basis.

The Staffing Unit and the Work Force Diversity Office are jointly reviewing areas of anticipated hiring in order to develop expanded recruitment strategies in job groups with current and anticipated vacancies that are identified as high priority (having significant underutilization or potential adverse impact). These efforts are occurring during the fourth quarter of FY97 and on into FY98. A major focus will be to hire large numbers of research associates for the new Human Genome Program.

High Priority Job Groups—Outreach/Recruitment/Measurement

During the fourth quarter of FY97, the following programs are being implemented to expand outreach and recruitment efforts in high priority job groups, and to measure and report the outcomes and impact of the efforts:

- An HR staff member has been designated to provide ongoing Affirmative Action Plan reporting and to design programs to meet targeted recruitment activities.
- The HR Staffing Unit professionals have been advised of the high priority job group and corresponding targets.
- As recruitments occur in the high priority job groups, the staffing professionals will work with the hiring manager to develop broad recruitment strategies to increase the diversity of applicant pools, including tapping national professional organizations and targeted colleges and universities, and making use of recruitment advertising, Resumix database bank search, and employee referrals.
- During the recruitment process, a summary profile of the applicant pool(s) will be developed and reviewed with the hiring manager to determine if the pool contains qualified diverse candidates (including candidates from targeted ethnic or gender categories for the job group), and whether additional targeted recruitment efforts are required before a final selection occurs.
- On a quarterly basis, starting the fourth quarter of FY97, management reports will be generated, reviewed, and discussed. These reports will reflect a summary profile of the applicant pools for the designated high priority job groups, and a summary profile of the ethnicity and gender of selected candidates in these job groups in relation to the designated targets.
- The quarterly review will determine whether recruitment, outreach, and selection is meeting targets in the high priority job groups and whether additional efforts are required.
- The Resumix automated applicant tracking system has been reformatted to better track the recruitment source that has generated the candidate. Quarterly management reports will also be generated to determine the effectiveness of the various recruitment sources, and to identify the recruitment sources that have attracted selected candidates. (Note: This is a performance measure for FY98.)

The following efforts were designed to educate and sensitize the work force to diversity awareness, integrate diversity issues into Laboratory operations and the daily fabric of Laboratory life, and encourage active top management support of diversity considerations, including Affirmative Action and educational outreach efforts:

Committee on Diversity

The Laboratory will continue to develop and offer Laboratory-wide programs (events and activities) that promote cultural awareness. Laboratory divisions will continue to participate in the Committee on Diversity by sending representatives to discuss diversity-related issues and action-oriented planning. The committee makes recommendations to the Laboratory Director about ways to enhance the Laboratory's work environment and accommodate the diverse needs of its employees. The committee is also actively involved in identifying Laboratory-wide programs that are culturally beneficial to the Laboratory community. One of the Committee's recommendations was the development of an annual Diversity Calendar, designed to promote cultural awareness.

National Society of Black Physicists

In order to fulfill its commitment to actively support local and national professional associations designed to improve the employment opportunities for people of color, the Laboratory encourages participation in community affairs. For example, the Laboratory recently hosted the 20th Annual National Society of Black Physicists (NSBP) Conference on site. The mission of the NSBP is to encourage and increase representation of people of color in physics careers. At this conference, the laboratory awarded a scholarship that was sponsored by the NSBP. The Laboratory has also been involved in a successful collaboration with Jackson State University (JSU), a historically black college; the Ana G. Mendez University System (AGMUS), a predominantly Hispanic university system located in Puerto Rico with two four-year universities and a two-year technical junior college; and the University of California at Berkeley (UCB), an ethnically diverse, major research university. JSU, AGMUS, and the Laboratory have worked together closely for over 10 years as participants in the Science Consortium and have significantly improved the education, scientific, and administrative infrastructure at JSU and AGMUS. An outgrowth of this alliance is the Bioremediation Education, Science, and Technology Centers (BEST), to which UCB adds an extremely strong academic program with world-class research facilities and over 120 existing courses relevant to bioremediation training. Coupled with this program is the Laboratory's own Lawrence Postdoctoral Fellowship Program. This fellowship program was developed as a year-round postdoctoral program aimed at improving diversity and developing promising scientists and engineers for career employment opportunities. This program recently awarded a fellowship to an African-American Postdoctoral Fellow who will be working in collaboration with the BEST program.

IMPACT

Most recently, the Laboratory has developed a diversity initiative called the Internet-Mediated Partnership between Colleges and Communities for Technology (IMPACT). The initial partnership consists of Southern University and A&M College; Jackson State University; Tennessee State University; The High School Genome Program; The Well-Connected Educator; Lenk and Associates; school districts in Louisiana, Mississippi, Washington, and California; and schools nationwide. Through this consortium, IMPACT consolidates a wealth of experience in integrating education, science, and technology. IMPACT members have considerable experience developing and implementing successful national and regional K-12 and undergraduate education. IMPACT's goals include continued support of minority institutional development; further development of Internet-based educational technologies, such as the M-Bone, for students (elementary school through college) and their faculty; expansion of undergraduate, graduate, and faculty research opportunities; and enhancement of community outreach activities in science and technology by forming informal education programs to complement formal in-school curricula.

HiCREST

The Laboratory has also signed a memorandum of understanding with the HiCREST collaborative, whose vision is to establish an alliance of graduate-level Hispanic Serving Institutions (HSIs) to achieve a "virtual national HSI" that will dramatically increase the participation of Hispanic scientists and engineers in the nation's scientific and technological enterprise. By taking a systematic approach to building linkages, HiCREST strengthens the nation's HSIs and increases their contribution to and participation in the goals of the Departments of Energy, Education, Defense, and other federal agencies. Through HiCREST, participating parties will work toward several goals, among them building and developing a cadre of Hispanic scientists and engineers for academia, the federal laboratories, and the industrial sector for the twenty-first century. It will increase contributions of HSIs to attainment of the goals of the federal departments mentioned above and other federal agencies, and to stimulation of increased collaboration across departments and agencies in the advancement of HiCREST goals.

These activities will continue to be monitored throughout the remainder of this fiscal year and the results will be made available in data that will be submitted as an addendum to this report in October 1997.

Successes/Shortfalls Refer to response in Performance Measure Result above.

Supporting Data

- Berkeley Lab's 1997 Affirmative Action Program, Section 8, Outreach and Recruitment
- Berkeley Lab's 1997 Affirmative Action Program, Section 14, Utilization Analysis
- Berkeley Lab's 1997 Affirmative Action Program, Section 15, Fiscal Year 1996: Progress
- Berkeley Lab's 1997 Affirmative Action Program, Section 16, Concerns and Resolutions
- Berkeley Lab's 1997 Affirmative Action Program, Section 17, Good Faith Efforts
- Berkeley Lab's 1997 Affirmative Action Program, Section 18, CY97 Placement Goals
- Berkeley Lab's 1997 Affirmative Action Program, Section 19, Monitoring
- Targeted Recruitment Efforts, Human Genome Research Associates
- Year-end data will be provided as an addendum to this report in October 1997.

Objective #3
Criterion 3.1
Performance Measure 3.1.b

Employment of Women: *Planning and implementation of good faith efforts designed to improve recruitment, selection and retention of women in high priority underutilized job groups.* **(Weight = 12%)**

Agreement:

1. High priority underutilized groups will be selected at the beginning of the assessment period. The following factors may be utilized for the designation of high priority areas: underutilization levels, availability levels, placement opportunities and typical size and diversity of applicant pools.
2. The Laboratory will provide a results oriented plan with a purpose of improving organizational performance in the recruitment, selection, and retention of women in the selected high priority areas.

   The plan will display the specific actions which will be targeted for achievement during the fiscal/calendar year and assigned responsibility for those actions. The plan shall incorporate, at a minimum, good faith efforts designed to enhance the following:

   - coupling of outreach and recruitment efforts in high priority job groups
   - systematic effort to measure and report outcomes and impact of the outreach and recruitment process
   - diversity and viability of candidate pools
   - efforts to educate and sensitize the work force to diversity awareness
   - integration of diversity issues in Laboratory operations and the daily fabric of Laboratory life
   - active top management support of diversity considerations, including affirmative action and educational outreach efforts
   - representation of women as defined in the Laboratory's Affirmative Action Program

Gradients:

- Meets Expectations—Plan Development and Execution
  1. *Plan Development*—The Laboratory developed a results-oriented plan which clearly communicates the Laboratory's commitment and investment in carrying out its good faith efforts to develop strategies and actions to improve employment and retention of women in high priority underutilized job groups. The plan must incorporate, at a minimum, good faith efforts as outlined above.
  2. *Plan Execution*—Specific actions identified in plan were carried out substantially in the manner and time-frames identified in the plan.

     The Laboratory will summarize how the plan was executed relative to the specific actions taken to improve the recruitment, selection and retention of women. The summary should include a narrative describing the efforts taken, and any significant outcome or events resulting from the process. The summary should also include statistical analyses assessing the plan's effect on the representation of women in candidate pools, interviews, placements, and attrition in the specified job groups.
- Exceeds Expectations—In the aggregate, high priority underutilized job groups show improvement toward full utilization. Job groups not

designated as high priority also show improvement or remain at the same level of utilization.

- Far Exceeds Expectations—In addition to the criteria for exceeds expectations, improvement toward full utilization is achieved for each designated high priority group or full utilization is achieved in any of the high priority job groups.

Performance Measure Result

Fiscal Year 1997 AAP Goals

At the beginning of the current assessment period, utilization analysis was performed and the following four job groups were identified as high priority for women:

- Administrative Management (A03)
- Mechanical Technicians (C02)
- Electronic Technicians (C03)
- Health/Medical (C06)

Refer also to Performance Measure Results 3.1.a, which is also relevant to this measure.

Representation of Women as Defined in the Laboratory's Affirmative Action Program

The following percentages represent a mid-fiscal year (October 1, 1996 through March 31, 1997) progress review of utilization among the high priority job groups. The results demonstrate that while there was no elimination of underutilization among the high priority job groups, underutilization was reduced in three job groups. There were a total of 157 placements, of which 51 (32.48%) were in high priority job groups. Of the 51 placements, 16 (31.37%) were filled by women, which is above the aggregate availability (25.55%) at the end of the six-month review period. The Laboratory continues this pattern by maintaining its current placement rate (32.00%) above the aggregate availability of 25.55%.

Summer Science Camp

A group of LBNL parent employees formed a California nonprofit entity for the purpose of running a summer science camp for children of LBNL employees. The nonprofit entity obtained liability insurance and was responsible for the payment of costs including payroll and staff. The Laboratory did not provide any financial assistance to the program but did provide space (with approval of DOE) for a staging area each day as well as space for an afternoon educational component. The Center for Science and Engineering Education (CSEE) provided training to the lead person as well as some assistance in developing the educational component modules. The program was endorsed by Laboratory management and a memorandum of understanding was approved.

The program is very popular with Laboratory employees and is considered a Bay Area model.

Successes/Shortfalls Refer to response in Performance Measure Result above.

Supporting Data

- Berkeley Lab's 1997 Affirmative Action Program, Section 8, Outreach and Recruitment
- Berkeley Lab's 1997 Affirmative Action Program, Section 14, Utilization Analysis
- Berkeley Lab's 1997 Affirmative Action Program, Section 15, Fiscal Year 1996: Progress
- Berkeley Lab's 1997 Affirmative Action Program, Section 16, Concerns and Resolutions
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- Berkeley Lab's 1997 Affirmative Action Program, Section 18, CY97 Placement Goals
- Berkeley Lab's 1997 Affirmative Action Program, Section 19, Monitoring
- Year-end data will be provided as an addendum to this report in October 1997.

Performance Objective #4

Customer Needs: *Human Resources has a system for identifying and evaluating customer needs and for building and maintaining positive customer relationships.* **(Weight = 10%)**

Summary

An important part of the Human Resource Department's restructuring and process improvement activities this year has been development of systematic ways to evaluate customer needs and strengthen our relationships with our customers. Our use of focus groups for the HRIS implementation (see Performance Measure 1.2.a) provides customer feedback for process improvement. Over 50 HR customers are involved with the identification of broken processes, time delays, and unnecessary approval levels—problems that are impediments to responsive customer service.

HR Staffing Specialists have been assigned to work directly with key programmatic customers in Life Sciences and Computing Sciences that are in major growth modes.

The use of 360-degree performance appraisal input and joint advance planning meetings have also been effective means of identifying customer needs. Details are provided below.

In addition, stakeholder concerns are identified and addressed in weekly meetings with DOE/OAK HR staff.

Objective #4
Criterion 4.1

Customer Needs: *Requirements, expectations and preferences of internal and external customers are collected and addressed. Strategies to evaluate and anticipate needs are in place.* **(Weight = 10 %)**

Objective #4
Criterion 4.1
Performance Measure 4.1.a

Customer Needs: *Implementation and utilization of internal and external customer input mechanisms.* **(Weight = 10 %)**

Agreement:

- Mechanisms will be used to gather customer input regarding HR practices. Practices could be policies, services, programs, systems, processes and procedures. These mechanisms are varied and could include customer surveys, focus groups, customer feedback forms, etc. Measurement will include the extent of utilization of customer input in improving HR practices and will include closing the loop with the customers. Measurement deliverable will be a narrative description of how the laboratory addresses the performance criterion and objective.

Gradients:

- Meets Expectations—Internal and external customer input mechanisms exist and are utilized to evaluate and improve human resources practices. Input and any changes to practices, whether resulting from feedback or not, are communicated to the customers, as appropriate.
- Exceeds Expectations—Internal and external customer requirements, expectations and preferences are collected and utilized in a methodical manner to evaluate and improve human resources practices. Methodical manner means the information sought from customer feedback mechanisms and the frequency of collection are clearly defined. New or changes to existing practices are clearly linked to feedback results as well as the laboratory's strategic direction and communicated to the customers, as appropriate.
- Far Exceeds Expectations—In addition to the items identified under Exceeds Expectations, other data such as industry standards, utilization of services and operational effectiveness indicators are collected and taken into consideration. Furthermore, Human Resources evaluates and improves its processes for determining customer requirements, expectations and preferences.

Performance Measure Result

Effective Human Resource activities are critical to the success of Berkeley Laboratory programmatic initiatives. The HR Department works to align itself with the needs of its internal customers in furtherance of these initiatives. In addition, the department works cooperatively with DOE and the University of California to ensure that Human Resource activities at the Laboratory are fully responsive to their current and future needs.

The HR Department fulfills its objectives in consultative partnership with its stakeholders and customers. An example of this has been the establishment of weekly meetings with a key stakeholder—DOE/OAK Human Resources staff—to mutually share current information and to work on joint solutions to problems.

A relatively new concept, 360-degree performance input, has been launched by the Deputy Director, Operations, to gather feedback on how the Laboratory's main business units are providing customer service. This information, in turn, is discussed with the head of the HR Department as a means of providing information for the continuing improvement of the delivery of HR service.

The focus groups (Staffing, Hire, Termination, Contract Labor, etc.) established for HRIS implementation are also being used to provide customer feedback for process improvement. Over 50 HR customers are involved with the identification of broken processes, time delays, and unnecessary approval levels—problems that are impediments to responsive customer service.

In addition, as a result of joint planning meetings with key programmatic customers in the Life and Computing Sciences Divisions, HR has assigned a Staffing Specialist to Computing Sciences and one to the Human Genome Center to support their special needs. As areas that are in programmatic growth mode, these are doing the majority of current career hiring (see Performance Measurement Result 3.1.a). Plans are in place to institute quarterly meetings with the Directorate and key programmatic customers (Computing, Energy, Life, and General Sciences) to determine how HR can best support the customer's staffing, training, and other HR-related needs in the short and long term.

Successes/Shortfalls

See Performance Measure Results above.

Supporting Data

See Performance Characterization, Performance Measure Results, and Supporting Data 1.2.a, 2.2.a, and 3.1.a.

Performance Objective #5

HR Leadership in Deploying Mission/Business Strategy: *The Laboratory aligns its HR plan with the Laboratory strategic or institutional plan and supports the principle of the DOE contractor HR strategic plan.* **(Weight = 17%)**

Summary

This year has brought a refocusing of HR Department attention on its critical functions and its potential value as a vital support to the Laboratory's research missions. The activities reported in Performance Measure 1.2.a, Review of HR Systems and Processes, and 4.1.a, Implementation of (Customer) Input Mechanisms, are relevant to this performance objective as well. In particular, the meetings we have begun to have with key scientific divisions (i.e., Computing Sciences and Life Sciences) have allowed us to refine our planning for targeted recruitment, appropriate staff support, etc., to meet the on-going research directions of the Laboratory.

Significant efforts have been occurring to link HR staff to Laboratory researchers through quarterly meetings with program leaders, in order to be aware of and support program planning and staffing needs. The rebuilding of HR staff and the reorganization of HR with programmatic leaders is repositioning the HR Department to demonstrate competence, add value, and increase its credibility in support of the Laboratory's strategic mission.

Objective #5 Criterion 5.1

HR Leadership: *HR programs and policies in recruitment and staffing, compensation and benefits, employee relations, and training are aligned with Laboratory business strategies.* **(Weight = 17%)**

Objective #5 Criterion 5.1 Performance Measure 5.1.a

HR Leadership: *Measurement will include evaluation of the HR planning process that addresses alignment of HR programs and practices with business plans as well as the well being of the entire work force. Measurement will also include the strategy to communicate with employees, supervisors and managers regarding HR programs and practices.* **(Weight = 17%)**

Agreement:

- Measurement Deliverable—Narrative description of the above.

Gradients:

- Meets Expectations—Documented plan to align HR programs and practices with the Laboratory business plans. Documented communication strategy.
- Exceeds Expectations—Evidence of implementation of plan.
- Far Exceeds Expectations—Evidence of implementation of the HR plan that addresses key aspects of the HR planning elements contained in the Baldridge criteria. In addition, the work force planning process addresses the alignment of the work force with business needs such as core mission requirements, cost cutting or budget requirements and streamlining efficiency initiatives, while balancing such requirements with the needs of employees. The organization demonstrates a balance between work force and organizational needs by effectively implementing strategies for targeted recruitment, skill mix requirements, internal placements, appropriate retraining programs, outplacement activities, etc.

Performance Measure Result

Much of the activity reported under Performance Measure 4.1.a concerning customer needs applies to this measure as well. The Staffing Unit in particular has worked to more closely partner with major customers (Computing Sciences, Life Sciences) whose activity reflects the major thrusts of the Laboratory's research and hiring direction.

In addition, the acting head of the HR Department, appointed in January, has sensitized the HR staff to the importance of being an active support to the Laboratory's missions and business objectives. This message has been brought home at several all-hands meetings.

The activity reported in Measure 1.2.a, Review of HR Systems & Processes, is also relevant to this measure. As stated in the performance characterization, key aspects of HR Planning have addressed the following elements:

- Understanding what the changing research missions of the Laboratory are.
- Finding ways to plan ahead to define and meet present and future HR-related needs of the Laboratory.

- Critically examining departmental processes to identify redundant, unnecessary work and excessive handoffs.
- Communicating directly with customers to determine their needs and to work jointly on improving HR processes.
- Thoroughly assessing all current HR positions and activities with the objective of identifying and working towards optimal staff size and skill mix for the department.

Successes/Shortfalls

See Performance Characterization Summary, Performance Objective #1 Summary, and Performance Measure Results 1.1.a, 1.1.b, 1.2.a, 2.2.a, 3.1.a, and 4.1.a.

Supporting Data

HR Department All-Hands Meeting vugraphs.

See also:

- Performance Characterization Summary and Performance Objective #1 Summary.
- Performance Measure Results 1.1.a and b, 1.2.a, 2.2.a, 3.1.a, and 4.1.a.

Self-Assessment Report for Fiscal Year 1997

Information Management

Ernest Orlando Lawrence Berkeley National Laboratory

Performance Characterization

Lawrence Berkeley National Laboratory manages information as a corporate resource: as such, information management planning is incorporated in institutional planning processes; information is shared through the World Wide Web rather than being independently created several times; institutional documents are maintained and distributed electronically instead of in paper form; and information is more easily and quickly accessible to those who need it, on demand.

Berkeley Lab uses information management technology to improve the quality of its products and add value to scientific programs. This is accomplished on two fronts:

1. By upgrading the computational and communications tools available to working scientists. Berkeley Lab is taking a leadership role in building the network infrastructure to support the DOE2000 initiative and other geographically dispersed collaborative research endeavors. Elements of this infrastructure currently under development include:
    - Electronic logbooks that allow scientists across the country to record and share data from their joint research.
    - Scalable security architecture with flexible interfaces to protect cross-platform, open network applications.
    - Floor control mechanisms in the Mbone architecture, allowing moderated meetings during video conferencing over the World Wide Web.
    - A bandwidth allocation application that will guarantee uninterrupted bandwidth to high-priority collaborations regardless of network traffic.
    - A software framework that integrates the various communication and collaboration tools.

    This network infrastructure will provide routine remote access to national user facilities such as the Advanced Light Source and the National Center for Electron Microscopy, expanding the availability of these resources. These developments will not be confined to the DOE2000 initiative, but are laying the foundation for the standard computing/communications infrastructure of the future.
2. By employing information technology to reduce the non-scientific effort required of our research staff and improve the appearance, production, and dissemination of the research results of the Laboratory. Administrative processes have been streamlined, costs have been reduced, the publication process has been simplified, the World Wide Web has been utilized to increase the availability of LBNL work products, and security has been maintained in the face of a significantly greater level and intensity of penetration attempts than in previous years.

In 1997, Berkeley Lab's Information Management (IM) Program has again resulted in improved customer services and improved work processes in several areas, notably Purchasing (through ProCard), time reporting (through LETS), Telephone Services (through lower costs and an extended numbering plan), Reports Coordination (through a forms-based interface on the Web), and Training (through a significant expansion in the number of

classes offered on-site and through the Web). Customer satisfaction in one area—workstation support—remains rather low, however. To address this problem, Computing Sciences convened a Design Team to evaluate the current situation and provide recommendations. In response to the Design Team report, the Computing Sciences Directorate is forming a new department within the Information and Computing Sciences Division that will have responsibility for the complete local computing environment.

Performance Objective #1

Information Management Program: *The Laboratory manages information as a corporate resource to improve the quality of its products, to add value to scientific programs and customer services, and as a tool to improve its work processes. In the area of Scientific & Technical Information, the IM focus will be on STI dissemination.* **(Weight = 100%)**

Summary

See "Performance Characterization."

Successes/ Shortfalls

This year the Information Management Self-Assessment Program was fully integrated into the Appendix F process, eliminating reporting redundancies. Performance Measure 2 describes the program carried out at the department level with full DOE partnership. The managers and their DOE counterparts developed specific agreements by which the Appendix F measures would be performed and graded. Also, ongoing meetings produced increased levels of understanding and awareness among all parties involved.

The Information Management Program confronts a number of challenges, such as providing support for an increasing diversity of products and capabilities necessary to maintain compatibility with collaborators at many other institutions, and a need to provide better workstation support in-house. Within current resource constraints, however, the Information Management Program at Berkeley Lab is healthy, vigorous, innovative, and effective, and measurements are graded within these constraints.

Supporting Data

IM Department Reports and other supporting documentation for this assessment are located in the IM Appendix F Web site at http://teamweb.lbl.gov/appendixf/.

The FY97 IM Appendix F Web site has the following structure:

FY97
- POCMs
- Site-Specific Agreements
  - Information Systems and Services
  - Computer Protection Program Manager
  - Telephone Services Center
  - Radio Frequency Spectrum Management Program
  - Technical and Electronic Information Department
- Self-Assessments
  - Information Systems and Services
  - Computer Protection Program Manager
  - Telephone Services Center
  - Radio Frequency Spectrum Management Program
  - Technical and Electronic Information Department
  - Overall Assessments

Documents with names ending in ...xl.doc were uploaded from Excel spreadsheets; those with names ending in plain ....doc were uploaded from Word documents.

All documents may be downloaded to Mac or PC platforms. On the Mac, they may appear as documents of unknown type. In this case, they should be opened through the appropriate application rather than via double-clicking. If the desired document doesn't appear in the "Open" dialogue box, change the setting of the "List files of type:" parameter to "All Files."

Objective #1
Criterion 1.1

Strategic and Tactical Planning: *Information Management practices will be guided by programmatically coordinated strategic and tactical planning.* **(Weight = 25%)**

Objective #1
Criterion 1.1
Performance Measure 1.1.a

Planning Implementation: *Exhibit evidence the planning processes supports the Laboratory's mission.* **(Weight = 25%)**

Assumptions:

- Measurement deliverable – narrative description of the Laboratory's process/system(s) for implementing strategic and tactical plans in support of the mission objectives in the Laboratory's institutional and/or strategic plans. The narrative description may be accomplished through reference to accessible work products or other existing Laboratory documentation.
- Information management planning should support both programmatic and operational/administrative needs.

Gradient:

- Meets Expectations: Demonstrated approach, supported by planning documents, that effectively supports the Laboratory's missions and customer requirements. Planning documents demonstrate the effectiveness of the planning approach of (1) aligning with the Laboratory's missions (2) determination of customer requirements and expectations (3) integration of the various components of information resources.
- Exceeds and Far Exceeds factors to be considered: Results from one or more of the following:
  - effectiveness of any cost saving/avoidance/efficiency strategies attempted attributable to past planning;
  - successful implementation of quality improvement initiatives attributable to past planning; or
  - substantial progress against milestones under challenging conditions.

Performance Measure Result

Information Management planning is an integral part of the long-range institutional planning. It also contains components to provide the flexibility needed to incorporate new developments in technical capabilities. IM plans incorporate a number of complementary planning processes, including committees and working groups within the Computing Sciences (CS) Directorate, Lab management meetings and retreats, and special purpose planning groups that incorporate administrative departments slated to manage and use particular information systems. These IM planning components are fully integrated into Laboratory planning.

Each of the IM departments embarked on successful planning activities, and noteworthy accomplishments were achieved. Plans are in alignment with the Laboratory mission; they address customer requirements and expectations; and there is a coherence across the planning documents. These planning efforts resulted in improved programmatic mission-orientated accomplishments and significant cost savings to the Laboratory.

See the planning documents and notable achievements on the IM Web site for details.

Successes/ Shortfalls

In 1997, an Information Management Design Team was convened to consider the scope and quality of current IM computational support and to recommend steps for improvement. A new department within CS, Computing Infrastructure Support, is being developed to implement the accepted recommendations. This move was in response to customer feedback gathered throughout the year.

An important part of IM planning is education of its personnel, resulting in improved service to the Lab and wise decision-making when confronting the burgeoning expanse of directions in information management technology.

A particularly noteworthy result of successful planning is ISS's early implementation of the PeopleSoft payroll system (a top priority for Lab support). ISS met almost all of its agreements in this area and in several cases the expectations were exceeded. The Computer Security Action Plan formed the basis of the Lab's new security efforts, which effectively handled an increase in activity this year. The Telephone Service Center Projects Plan includes consideration of new services available due to emerging technology, feedback and requests from users, and personnel development to provide improved support for new systems. The Plan for Radio Frequency Management Program appropriately addresses the long-range radio spectrum conservation requirements. The TEID Plan incorporates recommendations of the TEID Peer Review, and has notably resulted in a new job tracking and accounting system and a reorganization of the department to enhance customer service.

Supporting Data

Details and supporting data are in the individual planning documents under Self-Assessments at the IM Appendix F Web site, including the IMplanning.doc, InstPlanxcrpt.doc, and DsgnTmrecc.doc in Overall Assessments.

Objective #1
Criterion 1.2

Self-Assessment Program: *Maintain a self-assessment program that evaluates the effectiveness of management and operational practices.* **(Weight = 25%)**

Objective #1
Criterion 1.2
Performance Measure 1.2.a

Self-Assessment Program: *Demonstrate that self-assessments are taking place and that corrective actions, where necessary, are accomplished in a timely and effective manner.* **(Weight = 25%)**

Assumptions:

- Measurement deliverable – narrative description of the Information Management self-assessment program. The narrative description may be accomplished through reference to accessible work products or other existing Laboratory documentation.. The Laboratory and its DOE Operations Office will agree to develop and document in writing guidelines for self-assessment criteria to be used.

Gradient:

- Meets Expectations: A demonstrated approach containing a schedule for self-assessment activities and any subsequent corrective action plans. (Note: See UC Manual rating guidelines for information about rating factors for corrective action plans.)
- Exceeds and Far Exceeds factors to be considered:
  - System for rescheduling missed milestones established
  - System for timely communication of changes to appropriate management implemented
  - Cost effective and/or innovative approaches to achieving the objectives of the self-assessment program
  - Aggressive corrective action approaches (where needed)
  - Results of self-assessments demonstrate that compliance issues are being effectively addressed

Performance Measure Result

This year, IM merged its Self-Assessment Program with the Appendix F Program. This eliminated redundancies, kept the focus of the activities on the performance results, and incorporated DOE/Lab agreements and partnering in each department's program.

Self-assessment activities were highly effective—correcting problems while encouraging innovative new directions in partnership with DOE counterparts. Planning objectives were well-defined and integrated with the institutional Laboratory planning. Customer satisfaction was measured and service levels increased. As needed, services and equipment were reviewed against industry standards. Responsiveness to customer input was notable, especially within the constraints of funding and industry timetables.

Successes/ Shortfalls

ISS demonstrated a highly effective program which increased productivity, lessened cost, and used innovative solutions to aggressively address and correct critical action items. Because of their efforts, the Lab's administrative systems continued to operate productively while major conversions from legacy systems to state-of-the-art business systems were put into effective and timely production. ISS's planning and customer responsiveness activities and results were excellent.

While meeting all its milestones, Computer Security identified several new threats in 1997, including increased activity in password files and other hacker activity. The LBNL network monitoring system incorporated significant improvements such as Web traffic monitoring, outbound IRC monitoring, and additional intrusion rules. An effective multi-tiered anti-virus program, which functions at the desktop and institutional levels, was developed and implemented. These efforts have greatly increased the effectiveness of the monitoring system and have improved Lab security.

Telephone Services effectively established "one-stop-shopping" for customer service and has phased in a new Telemanagement System. It has increased and improved services, for instance, providing electronic service orders and phone bills in response to customer requests, and has done so at reduced cost and effort.

In TEID, cycletime baselining and improvement activities were initiated, along with fundamental reorganizations and improvement procedures. Sharing of scientific and technical information among DOE elements and contractors was improved this year by automatic transmission of report information to OSTI. A Web service to help authors and administrators get papers throughout the Lab's document control process was added. Records Management worked with the Federal Records Center to correct past problems and meet a new set of requirements. This included reengineering Lab procedures for archiving records.

Supporting Data

See the material under Self-Assessments and Site-Specific Agreements at the IM Appendix F Web site.

Objective #1 Criterion 1.3

Customer Focused Information Management: *The information management program provides cost-effective quality products and services that meet customer requirements.* **(Weight = 50%)**

Objective #1 Criterion 1.3 Performance Measure 1.3.a

Level of Customer Satisfaction: *Conduct annual reviews of the results of customer satisfaction activities, compare results with previous reviews, trend customer satisfaction, and implement activities toward improvement.* **(Weight = 20%)**

Assumptions:

- Measurement deliverable - the results of the customer satisfaction activities conducted during the previous fiscal year will be used as the baselines.

Gradient:

- Meets Expectations: A demonstrated plan in response to the measurement of customer satisfaction levels. The plan will include the rationale for process by which customer input is acquired. Evidence of customer involvement in all stages of information management, including conceptual, deployment, maintenance, and transition.
- Exceeds and Far Exceeds factors to be considered:
  - cost effective and/or innovative approaches to measuring customer satisfaction
  - aggressive responses to information derived in determining customer satisfaction levels
  - customer involvement in all stages of information management activities, including conceptual, deployment, maintenance, and transition
  - clear evidence of meeting commitments to customers requirements
  - evidence of improvement in customer satisfaction levels relative to product and service innovation

Performance Measure Result

IM departments sought out and incorporated customer input into their planning documents and throughout their activities in 1997. Customers of the individual services were generally well-satisfied with the quality of the services received, and IM responded to customer suggestions with improved services where feasible or appropriate.

Successes/ Shortfalls

A number of service-oriented Web sites that include feedback mechanisms were posted or expanded upon in 1997, and other activities to survey customer opinions were performed.

ISS took considerable initiative to openly display activities to the Laboratory as a whole, such as Major System Project Reports and other information made available on their Web site, and sought out customer input and assessment of their work through regular MIS Management Committee meetings and numerous visits to divisions. Telephone Services included

customer recommendations in their plans, and responded with an especially user-friendly and useful Web site that includes interactive customer forms. CSSP provided a new Web site with security information and a means to gather input.

Overall satisfaction with workstation support as sampled by the Design Team, however, is rather low (see DTCsatsvyxl.doc in the IM Appendix F Web site). Improving customer satisfaction in this area will be a major concern of the newly formed support department in ICSD.

Supporting Data

DTCsatsvyxl.doc in Overall Assessments, plus the individual customer satisfaction materials in the Self-Assessments section of the IM Appendix F Web site.

Objective #1
Criterion 1.3
Performance Measure 1.3.b

Results from Improvements: *Provide evidence of measurable improvements, such as reduced operating costs or added information management capabilities.* **(Weight = 30%)**

Assumptions:

- Measurement deliverable - narrative description of the information management program's accomplishments which have resulted in measurable improvements in the provision of cost-effective, quality products that have met customer requirements. The narrative description may be accomplished through reference to accessible work products or other existing Laboratory documentation.

Gradient:

- Meets Expectations: Demonstrated approach to achieve cost-effective, quality information management services and products. The demonstrated approach will include:
  - establishment of cost-efficiencies and cost-savings goals
  - a system for measuring progress
  - an on-going system for prioritization of the various costs of managing information resources, during all stages from concept to transition
- Exceeds and Far Exceeds factors to be considered:
  - results from cost effective and/or innovative approaches to improving information management
  - successful implementation of new technologies in support of programmatic requirements
  - evidence of successful results from prioritization efforts

Performance Measure Result

Significant savings and improvements in operation were realized in FY97, and several other processes were initiated that are expected to show results in FY98 and beyond. Among the latter are the creation of the unified Help Desk within the new Computing Infrastructure Support Department, the formation of the department itself, the implementation of an industry-standard job-tracking system for TEID, the reorganization of TEID, and several steps toward the definition and implementation of standard workstation environments.

IM incorporated many new technologies and innovative approaches to programmatic and administrative support. Development of effort-reducing systems and wise prioritizing improved performance in 1997. Results in the individual departments are detailed in the documents to be found in Performance Measure 2, the Self-Assessments section, and related documents on the IM Appendix F Web site.

Successes/ Shortfalls

The successes are outlined in the individual self-assessment documents. Not specifically mentioned in those documents, but worthy of notice, is the detection by LBNL network monitoring tools of a virus in a message being distributed by a Headquarters contractor. (See WAZZU.doc in Overall Assessments.)

Supporting Data

See the "Results" documents in the Self-Assessments Section of the IM Appendix F Web site.

Procurement

Performance Characterization

In accordance with U.S. Department of Energy (DOE) Prime Contract DE-AC03-76SF00098, Appendix F - Performance Objectives, Berkeley Lab documents the results of its Fiscal Year 1997 performance-based Procurement System Self-Assessment. The assessment comprises the evaluation of four performance objectives, six criteria, and six measures (including 14 gradient goals).

Results of the Self-Assessment indicate that the Laboratory procurement process functions in a manner that competently supports the Lab's scientific program missions in maintaining high standards of regulatory and policy compliance, customer focus, cost effectiveness, socioeconomic awareness, and effective commercial practice.

Procurement's concerted efforts on continuous improvement in FY97 centering on Value-Based Self-Assessment (VBSA) core processes has enabled it to attain higher overall levels of acquisition proficiency. Thirteen of fourteen Appendix F Performance Objective goals were met or exceeded during the fiscal year. The one exception, Competition Commitments (under Objective 2.1), while falling below expectations at 69.4%, is within 0.6% of the goal objective.

Accomplishments

As reported herein, results for Performance Objectives 1 and 3 have been finalized for the fiscal year. Results for Objectives 2 and 4 are based on cumulative results through Third Quarter FY97. Supplemental data will address final year-end results.

Performance Objective 1, Management of Procurement Business Requirements (30% Weight)

The Laboratory successfully developed, managed, and implemented a program of risk-based purchasing system evaluations in a manner fully responsive to the requirements of the approved System Evaluation Plan. The program evidenced clear and concise documentation of system audits, cost/benefit risk assessments, improvement opportunities, and prioritized corrective action management.

Performance Objective 2, Procurement System Cost Effectiveness (40% Weight)

The Laboratory selected and established—in a timely manner, in partnership with DOE and UC—optimum benchmarks, baselines, goals, and gradients in core areas prescribed in the VBSA Model. In trending and measuring progress through Third Quarter FY97, the Laboratory is meeting and/or exceeding gradients in five of six benchmark categories. The weighted distribution of the benchmarks within the Performance Measure is in accordance with agreements reached with DOE and UC.

Performance Objective 3, Customer Satisfaction (15% Weight)

Under Measure 3.1.a, Working Customer Needs, the Laboratory successfully developed, in partnership with DOE and UC, and implemented a Customer Improvement Plan. Based on results obtained in accordance with methods established for measurement of customer satisfaction, the Laboratory met the criteria for an "Exceeds" rating. Under Measure 3.2.a, Customer Satisfaction Index, results compiled from surveys conducted on Procurement customers indicate a composite weighted customer satisfaction index score of 80.4 for the Laboratory.

Performance Objective 4, Professional & Social Responsibility (15% Weight)

Based on goals and gradients established for measuring the on-time delivery rate of principal vendors within three key commodity categories, the Laboratory's cumulative YTD results indicate that it is achieving the criteria for a "Far Exceeds" rating (Measure 4.1.a, Supplier Performance). Under Measure 4.2.a, Meeting Socioeconomic Commitments, the Laboratory has, through Third Quarter FY97, exceeded all four socioeconomic goals (Total Small Business, Small Business Set-Aside, Small Disadvantaged Business, and Women-Owned Business).

Summary

The Laboratory's performance on Appendix F Procurement Objectives continues at a high level for FY97. An expanded emphasis on process improvement, along with a strong customer focus, ensures that Procurement will operate at a similarly high standard of efficiency, cost effectiveness, and customer satisfaction in future years.

Other than specifics noted for each performance objective, no fundamental barriers to improvement were identified.

Performance Objective #1

Management of Procurement Business Requirements: *The Laboratory shall have systems in place that ensure Procurement programs are consistent with policies and procedures approved by DOE.* **(Weight = 30%)**

Summary

The Laboratory's program for implementing risk-based purchasing system evaluation has been effective in diagnosing and reporting the state of various sub-processes making up and maintaining the Procurement system, and in ensuring that procurements are effected in conformance with the Prime Contract and approved policies and procedures.

Under this objective, the Laboratory is required to implement a program of continuous self-evaluation of its purchasing system consistent with system evaluation criteria identified in the approved System Evaluation Plan and the VBSA Model. The plan includes a schedule of system evaluations covering the FY97 review period, and embodies a sound, systematic, and broad-based approach covering risk-based assessments, opportunities for improvement, and prioritized corrective action management.

To date, all scheduled system evaluations and corrective actions have been completed and documented in a manner that is accurate, cost effective, and fully responsive to all of the requirements of system evaluations. And, in demonstrating strong leadership in implementing and validating remedial actions in a timely and appropriate way, the Laboratory has significantly exceeded expectations.

Objective #1 Criterion 1.1

System Evaluation: *The Procurement organization conducts, documents, and reports annually, the results of a successful evaluation of its purchasing system against established evaluation criteria.* **(Weight = 30%)**

Objective #1 Criterion 1.1 Performance Measure 1.1.a

Assessing System Operations: *The Procurement organization shall develop and submit a risk-based system evaluation plan to DOE and UC no later than October 1, 1996, for review and concurrence. The procurement system shall be assessed against system evaluation criteria as identified in the plan. In addition, an aggressive, cost effective management plan for resolution of system deficiencies and opportunities for process improvement shall be developed. Management of the results of the system evaluation shall be measured. System deficiencies will include those identified by the Procurement organization, internal Laboratory organizations and external organizations.* **(Weight = 30%)**

Basis for Rating:

- Meets: There is a sound, systematic approach, responsive to the primary purpose of the system evaluation. Cost benefit analyses and risk assessments are good when addressing deficiencies and /or opportunities for improvement. Implementation of remedial actions is appropriate and demonstrates responsible leadership in many to most cases.
- Exceeds: There is a sound, systematic approach, responsive to the overall purpose of the system evaluation. Cost benefit analyses and risk assessments are good to excellent when addressing deficiencies and /or opportunities for improvement. Implementation of remedial actions is appropriate and demonstrates responsible leadership in most cases.
- Far Exceeds: There is a sound, systematic approach, fully responsive to all the requirements of the system evaluation. Cost benefit analyses and risk assessments are excellent when addressing deficiencies and /or opportunities for improvement. Implementation of remedial actions is appropriate and demonstrates strong leadership in most cases.

Performance Measure Result

Due to Procurement's sound approach to managing the results of system evaluations, consideration of risk assessments and opportunities for improvement, and the aggressiveness and appropriateness with which corrective actions were resolved, the Laboratory has met the criteria for a far exceeds rating.

Successes/Shortfalls

The Laboratory's System Evaluation Plan was submitted to DOE on September 27, 1996 and approved November 18, 1996. In conformance with the requirements of this performance objective, the FY97 Plan expands and builds upon the Laboratory's comprehensive assessment efforts from prior years—with increased emphasis on system processes, cost/benefit risk assessments, and prioritized corrective action management in managing system evaluation results. Additionally, the evaluations systematically address all relevant VBSA review criteria.

To ensure continuity from prior year Self-Assessment efforts, system evaluations included both process and transactional reviews, and were conducted by a review team headed by a non-Procurement individual.

Sample sizes for transactional reviews were selected based on the U.S. Army Audit Agency Statistical Sampling System (Version 5.4) for establishing confidence level, error and precision rates. Four system evaluations—Management System, One-time Purchases, ProCard, and Fabrications—were scheduled and completed in FY97 (see Table 1 below).

Table 1. System evaluations.

System Evaluation	Purchasing System Element Reviewed	Scheduled Completion Date	Actual Completion Date
Management System; Policies and Procedures; Standard Clauses	Organizational structure, delegation of authority, staffing, training, MIS, Standards of Conduct, Policies & Procedures; Standard Clauses	31 Dec 96; thereafter every 12 months.	16 Dec 96
One-time Purchase Orders	All transactional elements	28 Feb 97; thereafter every 2 years	25 Feb 97
ProCard Purchases (Program Division Cardholders)	Policies & Procedures	30 Apr 97; thereafter, every 12 months. (Last reviewed 30 Sep 96)	15 Apr 97
Fabrications	All transactional elements	30 Jun 97 (last reviewed 21 Dec 95)	23 Jun 97

Results of the FY97 system evaluations recommended, based on joint determinations made by the reviewers and Procurement Manager, a total of six formal corrective actions (one each for Management System and One-time Purchases and four for ProCard). The actions were selected and prioritized based on systemic relevance; levels of perceived risk; liability exposure; cost of implementation; and benefits derived. Among the findings observed, those under ProCard (see below) were deemed to carry the highest risks due to the greater potential for fraud and abuse, while those under Management System and One-time Purchases were considered less relevant from a process standpoint and managed as opportunities for improvement.

To assure expeditious remediation and accountability (the Lab considers timeliness an essential part of effective management), each corrective action was assigned to a member of the Procurement staff. In the case of the most serious findings (i.e., ProCard), the Procurement Manager directly supervised all efforts. The following section traces the decision path and rationale leading to remedial action for each system evaluation finding and the process and basis by which risk assessments and cost benefit analyses were performed.

ProCard

As one of four scheduled system evaluations prescribed in the approved System Evaluation Plan developed to satisfy the VBSA Model for Procurement, the ProCard evaluation also fulfilled the institutional

requirement of the program for periodic reviews of cardholder transactions, as recommended by Laboratory Internal Audit Services. The evaluation determined that ProCard purchases effectively support the Laboratory's program missions, and are effected in a manner that is both cost effective and compliant. No obvious system abuses or non-allowables were found. However, based on transactional reviews, observations were made in the following areas pertaining predominantly to lack of user compliance:

- Account Authorization Approval
- Restricted Items List
- Documenting Material Receipts
- Statement of Account Approvals

Due to the findings of high potential for fraud and abuse, these areas were deemed high risk. As such, the Procurement Manager was directly involved in the development, coordination, and implementation of all resulting corrective actions. This hands-on effort, combined with an uncompromising approach to managing system deficiencies, contributed to a timely yet cost-effective result. Field monitoring by ProCard Administration (an Interim Card Administrator was added to perform field audits on scheduled corrective measures) indicates that efforts expended to date have been largely effective in reducing the rate of reoccurrence (see individual areas below). Additionally, to ensure continued effective administration in the coming year of anticipated growth, a permanent Card Administrator and one clerical person will be added to current ProCard staffing to handle the anticipated increase in management of the ProCard program.

Account Authorization Approval

The review found that five out of 54 sampled ProCard transactions (9%) lacked requisite Account Authorization signatures, which is required prior to order placement. Two out of 23 cardholders were responsible for four of the five exceptions found. Root cause analysis identified cardholder negligence as the primary cause of the administrative oversight.

Risk Assessment: It was determined that not securing proper Account Authorization Approval constitutes a violation of the Laboratory's Procurement Delegation policy, and may subject the Lab to unwarranted liabilities if the practice continues unchecked.

Corrective Action/Improvement Opportunity: Notify violating parties (and their supervisors) on proper Account Authorization protocol, request they obtain missing signatures for ProCard Administrator's review, and inform them that failure to do so would result in revocation of cardholder privileges. This action was completed within 45 days of the review.

Cost/Benefit Analysis: Minimal cost was incurred in implementing the above corrective action—memos were issued to violating parties. The benefit is that further non-compliance would be averted.

Additional Opportunities for Improvement: Continuous monitoring (through field audits) indicates that efforts taken to date have been effective—the latest field sample determined a 6.7% exception rate among

sampled transactions. To ensure continuous improvement in this area, continuous field monitoring will be performed. It was noted, during the course of monitoring, that one card was revoked for the cardholder's failure to adhere to this and a number of other requirements.

Prioritization: Top priority—along with the other ProCard corrective actions managed by the ProCard Administrator under direct supervision of the Procurement Manager.

Restricted Items List

The review found that two of 32 sampled cardholders did not use the current Restricted Items List. It was determined that the existence of two separate lists (one for ProCard, one for Low Value Buying) created confusion for buyers who purchased using both methods. The ProCard list contains Sensitive Items not found on the Low Value list. Root cause analysis identified confusing guidelines as the cause of the non-compliance.

Risk Assessment: Not following Restricted Items purchasing guidelines potentially subjects the Laboratory to a series of cost (employee abuse), property administration (tagging), and safety (i.e., toxic and other prohibited chemicals) liabilities if the practice continues unabated.

Corrective Action/Improvement Opportunity: Consolidate the ProCard and Low Value Buying Restricted Items Lists into a single list. This action was completed within 45 days of the review.

Cost/Benefit Analysis: Minimal cost was incurred in implementing the above corrective action (consolidating a single list of restricted items). The benefit is that a single list would reduce any possible confusion and help avert non-compliance.

Additional Opportunities for Improvement: The Laboratory's monitoring efforts indicate a zero exception rate after corrective action. Based upon this result, no additional opportunities for improvement were identified.

Prioritization: Top priority—along with the other ProCard corrective actions managed by the ProCard Administrator under direct supervision of the Procurement Manager.

Documenting Material Receipts

The system evaluation found that 13% of sampled ProCard orders bear no clear confirmation of material receipt. The reviewer confirmed that material had been delivered on these orders. Root cause analysis identified cardholder negligence in not following ProCard policies and procedures for documenting receipts as the cause of the omission.

Risk Assessment: The lack of documented material receipt hinders month-end statement reconciliation and delays ultimate closure of the order.

Corrective Action/Improvement Opportunity: Issue advisory to all cardholders on proper procedures regarding documenting material receipts. This action was completed within 60 days of the review.

Cost/Benefit Analysis: Minimal cost was incurred in implementing the above corrective action. An e-mail was sent on June 13, 1997 to all cardholders advising them of the procedures for proper material receipt (the e-mail included also another corrective action regarding Statement of Accounts). The benefit is that further non-compliance is averted.

Additional Opportunities for Improvement: Field audit indicates that the Laboratory's effort to heighten awareness in this area has significantly reduced the infraction rate to 6%. To ensure continuous improvement in this area, continuous field monitoring will be performed.

Prioritization: Top priority—along with the other ProCard corrective actions managed by the ProCard Administrator under direct supervision of the Procurement Manager.

Statement of Account Approval

The review found a 25% exception rate (13 out of 54) among sampled transactions that lacked supervisory approval signatures on Statements of Accounts, which constitutes a significant deviation from guidelines. Proper approval of the Statement of Accounts is crucial from a control standpoint since it is the last administrative safeguard, other than the audit itself, against unauthorized uses or abuses of the card. Root cause analysis identified user carelessness as the cause for the high non-conformance rate.

Risk Assessment: Not securing proper Statement approval is a clear violation of the Laboratory ProCard policy, which also presents a significant risk for the Berkeley Lab due to the potential for fraud and abuse, and for unauthorized use of government funds.

Corrective Action/Improvement Opportunity: A series of corrective actions was deemed necessary to prevent further violations:

- Issue warnings to violating parties and their supervisors on seriousness of the violation, advise them that their cards will be revoked unless they obtain all missing signatures on statements and furnish proof to the ProCard Administrator that this is done. Monthly field validations should be performed thereafter until the find rate is significantly reduced.
- Reaffirm that all cardholders are aware of the Laboratory's policy concerning Statement of Accounts, followed by field validations at 30, 60 and 90 days.
- Issue the new ProCard Commitment Delegation Letter to all cardholders and their supervisors. The letter, which was drafted and implemented prior to the audit and outlines the specific policies governing cardholder/supervisor responsibilities, must be signed by both cardholder and his/her manager and must be returned to Procurement by July 15, 1997. Failure to do so will result in revocation of cardholder privileges.
- Add cardholder supervisor signature block to Cardholder Application to make supervisors more aware of their obligations under ProCard. Current applications require only the cardholder's signature.

All of the above corrective actions scheduled to date have been completed on schedule.

Cost/Benefit Analysis: The cost for implementing the above corrective actions, though moderate, was clerically labor-intensive since memos had to be custom-tailored in many instances to deal with the exact circumstances surrounding each violator. The anticipated benefit is that further non-compliance should be averted. (Compliance status is to be continuously monitored by the ProCard Administrator).

Additional Opportunities for Improvement: Monthly field validations indicate that corrective efforts taken to date have been effective in curbing the rate of infraction—the recent 30-day validation (through July 14, 1997) indicates a rate of about 13%. To ensure continuous improvement in this area, continuous field monitoring will be performed. A total of 31 cards were revoked (without impacting Lab business) during this period due to non-compliance pertaining to the new ProCard Commitment Delegation letter (detailed above). Since that time, six cardholders have been reinstated.

Prioritization: Top priority—along with the other ProCard corrective actions managed by the ProCard Administrator under direct supervision of the Procurement Manager.

Management System

The scope and approach for this review, as addressed under the Laboratory's approved System Evaluation Plan, includes review of the management system against a series of review standards pivotal to the management process. These include:

- Management
- Organizational Structure
- Delegation of Authority
- Staffing
- Training and Development
- Management Information System
- Standards of Conduct
- Policies and Procedures
- Standard Clauses

One observation resulted from the evaluation—the omission of a number of standard flow-down provisions (general provisions) in sampled master T&C boilerplate documents (Fixed Price Commercial; Fixed Price Non-Commercial; Cost Reimbursement; Construction; Architect-Engineers; and Consultant/Personal Services), which indicates that the Laboratory may not be incorporating all Prime Contract flowdowns consistently in its subcontracts. Up to the present, the Laboratory's practice has been to grant buyers and supervisors discretion on which standard provisions to include or omit. No liabilities have resulted from this practice.

Analysis

Risk Assessment: The omission of standard subcontract provisions may compromise the Laboratory's ability to successfully subcontract for goods and services, in addition to various legal ramifications.

Corrective Action/Improvement Opportunity: It was determined that the optimum course of action for mitigating the risk would be to incorporate all required Prime Contract Flow-down Clauses into all subcontract master T&Cs or "front-end" document templates as self-deleting provisions. This will eliminate buyer discretion on the matter and eliminate the risk of inadvertently omitting required provisions. This action, which had already begun prior to the audit finding, was completed within six months of the review.

Cost/Benefit Analysis: No added cost is involved for implementing the above corrective action, as a program to update Procurement's Standards Clauses was already under way at the time of the review. The benefit of correction is that potential liability is averted.

Additional Opportunities for Improvement: No additional opportunities for improvement are apparent. The Laboratory's scheduled validation (in December 1997) process will determine the extent of effectiveness.

Prioritization: Top priority—but because the Procurement Manager had identified this deficiency prior to the review, and had already assigned an individual to the project, this was not termed a serious concern. Neither was prioritization a major consideration, since the work was assigned to an individual dedicated to the project.

One-time Purchases

Transactions reviewed hereunder cover fixed-price one-time Purchase Orders (POs)—written subcontracts issued by Procurement with no discernible performance period other than promised delivery date—or, alternatively, those that do not fall under any of the following subcontract types covered separately under the System Evaluation Plan. The assessment determined that, in general, goods and services procured on One-time Purchase Subcontracts are effected in a manner that is both cost effective and compliant—barring a minor observation noted regarding current administrative practices in the area of close-outs.

The single observation relates to the finding that none of the file folders of sampled orders that were physically complete were marked as closed out, even though Oracle indicates that delivery has occurred and that the orders should be closed out (appropriate to the type of orders under review).

Analysis

Risk Assessment: The above finding suggests an administrative oversight with minimal attendant risk, since delivery has already occurred in all of the cases with no outstanding invoice.

Corrective Action/Improvement Opportunity: It was determined that the most cost effective action was for Procurement to update PO file checklists to delete the close-out notation requirement for one-time purchase orders. This action was completed within 45 days of the review.

Cost/Benefit Analysis: The cost of updating, printing and distributing revised file folders is minimal. The benefit of correction is that the close-out process for simplified one-time orders has been streamlined.

Additional Opportunities for Improvement: Elimination of the file checklist notation streamlines the close-out process for most categories of one-time orders. No additional opportunities for improvement were identified.

Prioritization: Low priority—but was implemented immediately due to simplicity of the solution. This action did not impact higher priority items (i.e., Standard Clauses).

Fabrication

No observations were noted under the Fabrication evaluation.

Summary

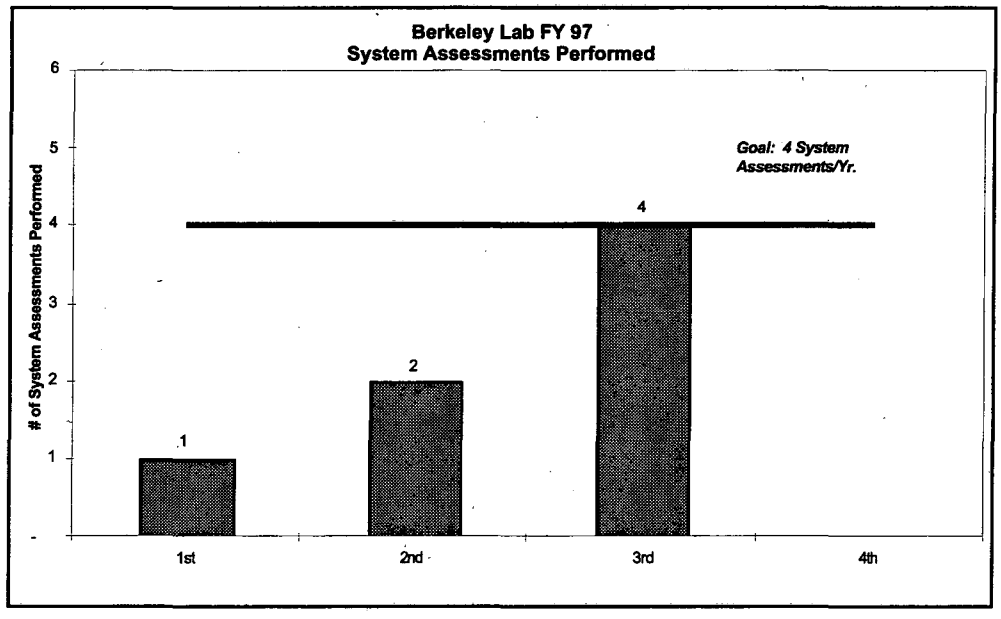
The Laboratory's aggressive management of evaluation results and cost-effective resolution of system deficiencies in FY97 resulted in the timely completion, at minimal cost, of four of ten systemic actions (all under ProCard) as well as one non-systemic action under One-time Purchases, within 45 days from the date of evaluation. Also, three additional ProCard actions were completed within 60 days (three remaining ProCard actions are all currently on schedule for completion through end of fiscal year). Due to greater complexity and required resources, the one remaining non-systemic action—updating of Standard Clauses—was completed within 6 months as agreed-upon with DOE. As shown in Table 2, the Laboratory has completed all corrective actions in a timely manner, and is on schedule to complete the remaining items.

The Laboratory's effective resolution of corrective actions ensures that all system deficiencies, including those identified by Procurement and its internal and external user groups, are appropriately addressed, which contributes to a valid and responsible program that continually seeks out opportunities for improvement and maintains the integrity of the purchasing system.

Table 2. Corrective actions.

Corrective Action	Responsible Person	Scheduled Completion Date	Actual Completion Date
SYS-1-97: Incorporate required Prime Contract Flowdown Clauses into all subcontract master T&Cs or "front-end" document templates.	Speros	30 Jun 97	30 Jun 97
ONE-1-97: Procurement to update PO file checklist to delete closeout notation requirement for one-time purchase orders.	Speros	30 Apr 97	10 Apr 97
PRO-1-97: Notify violating parties on proper Account Authorization protocol; request they obtain missing signatures for ProCard Administrator's review. Revoke card if non-compliant.	Fernandes	30 May 97	30 May 97
PRO-2-97: Consolidate Low Value and ProCard Restricted Items Lists.	Fernandes	30 May 97	30 May 97
PRO-3-97: Issue advisory to all cardholders on proper procedures regarding documenting material receipts.	Fernandes	15 Jun 97	13 Jun 97
PRO-4-97: 1. Issue warnings to violating parties & their supervisors, advise that their cards will be revoked unless they obtain missing signatures and furnish proof to the ProCard Administrator. Conduct monthly follow-up validations (see 2 below);	Fernandes	30 May 97	30 May 97
2. Reaffirm all cardholders on the Laboratory's policy concerning Statement of Accounts.	Fernandes	15 Jun 97	13 Jun 97
a. 30-day validation		14 Jul 97	14 Jul 97
b. 60-day validation		14 Aug 97	14 Aug 97
c. 90-day validation		15 Sep 97	
3. Issue new ProCard Delegation Letter to all 205 cardholders and their supervisors.	Fernandes	30 Jun 97	24 Jun 97
4. Add supervisor signature block to Cardholder Application.	Fernandes	30 May 97	30 May 97
Validate actions.	Chen	30 Oct 97	

Supporting Data



Performance Objective #2

Procurement System Cost Effectiveness: *The Procurement organization shall ensure that business is being conducted at an optimum operational efficiency level.* **(Weight = 40%)**

Summary

This performance objective requires Procurement to measure trends toward benchmarks or industry standards/practices in areas prescribed in the VBSA Model. The core areas currently identified for pursuing cost effectiveness are: cycle-time, process cost, effective competition, and product/service cost savings/avoidance. To meet the VBSA requirement, the Laboratory selected the following six benchmarks for its first year, in conjunction with the process, goals, gradients, and weighted distribution of categories jointly established with DOE and UC:

- Cycle-time: Commodity Orders >$5K - $25K
- Cycle-time: Commodity Orders >$25K - $100K
- Process Cost: Administrative Cost
- Process Cost: Cost as Percent of Revenue
- Effective Competition: Competition
- Cost Savings/Avoidance: Credit Card Usage

In addition to meeting the requirement for being VBSA core elements, the benchmarks represent the product of extensive field study and collaborative discussion between the Lab, UC, and DOE. Virtually all of the Laboratory's selected benchmarks are with national labs, due to their institutional relevance (comparable mission and objectives), and in areas where the Laboratory has already baselined. This ensures that the available data is consistent when compared with LBNL baselines, minimizing the need to normalize data, since normalization could increase the likelihood of misinterpretation.

In FY97, the Laboratory met and/or exceeded the goal criteria in five of six benchmark categories. In the process, the Lab achieved important gains in three of the six benchmarks over FY96 baselines: Cycle-times for Commodity Orders >$5K - $25K and Commodity Orders >$25K - $100K were reduced from their class leading (among benchmarked laboratories) 6 and 10 days to 5 and 8 days respectively; and Credit Card Usage increased from 19% to 32%. These gains were the direct result of continuous process improvement efforts targeted specifically by the Laboratory in these areas. It is noteworthy that these gains were achieved in the face of higher performance baselines since the baselines already embody significant gains from prior years' reengineering efforts (see Successes/Shortfalls below).

The one area that failed to meet goal objectives—Competition, which decreased from 70.2% in FY96 to 69.4% in FY97—did so only marginally. As pointed out in prior Self-Assessments, a competition rate of about 70%, which the Lab has achieved on average in recent years, may be an optimum rate for the Lab, given its current program/procurement mix, the reengineering that increased the prevalence of sole source procurements from new programs, the trend towards partnering with vendors, and the fundamental tenets in conducting theoretical research for which often only

one source is available for subcontracting work. Attempts to force growth in this area would be cost prohibitive and may in fact be counter-productive to achieving "Effective Competition" for the Berkeley Lab.

Objective #2 Criterion 2.1

Pursuing Best Practices: *The Procurement organization successfully uses benchmarking data and industry standards to identify targets of opportunity for improving operational efficiency related to service, cycle times and/ or cost and pursues opportunities aggressively.* **(Weight = 40%)**

Objective #2 Criterion 2.1 Performance Measure 2.1.a

Measuring Efficiency Gains: *The Procurement organization will measure trends toward benchmarks or industry standards/practices in areas prescribed in the Value-Based Self-Assessment (VBSA) Model. The Procurement organization will establish baselines, goals and gradients by December 31, 1996.* **(Weight = 40%)**

Basis for Rating:

- In partnership with DOE and UC, the Laboratory shall establish and justify goals and gradients in pursuit of benchmarks/industry standards in each procurement area identified as a core requirement in the Procurement Value-Based Self-Assessment (VBSA) Model. The weight of the measure will be distributed evenly among the applicable categories unless otherwise agreed to in coordination with DOE and UC. The Laboratory may propose gradients based on data other than benchmarks or industry standards if the Laboratory provides adequate support of other optimum operating levels.

Assumptions:

- The current core areas identified for pursuing cost effectiveness under the Value-Based Self-Assessment Model are cycle time, process cost, effective competition, and product/service cost savings/avoidance.

Performance Measure Result

The Laboratory selected and established—in a timely manner, in partnership with DOE and UC—optimum benchmarks (and weightings), baselines, goals and gradients in core areas prescribed in the VBSA Model. Additionally, the Laboratory met and/or exceeded goal criteria in five of six benchmark categories.

Successes/Shortfalls

Berkeley Lab's proposed baselines, goals, and gradients for measuring performance against selected benchmarks were submitted to DOE prior to December 31, 1996 and approved on February 27, 1997. The accepted baselines and goal reduction gradients are as follows (cumulative 4th Quarter results will be measured against the gradients):

- Cycle-time: Commodity Orders >$5K - $25K (Weight: 5%)
  - Definition: The number of calendar days from the time a requisition is received by Procurement until a purchase order is issued.
  - Baseline: 6 days*
  - Gradient: Meets Expectations - 7.1 days - 8.0 days
    Exceeds Expectations - 6.1 days - 7.0 days
    Far Exceeds Expectations - 6 days or better

* Best-in-class in FY96

- Cycle-time: Commodity Orders >$25K - $100K (Weight: 5%)
  - Definition: The number of calendar days from the time a requisition is received by Procurement until a purchase order is issued.
  - Baseline: 10 days*
  - Gradient: Meets Expectations - 13.1 days - 16 days
    Exceeds Expectations - 10.1 days - 13 days
    Far Exceeds Expectations - 10 days or better
- Process Cost: Administrative Cost (Weight: 5%)
  - Definition: Procurement operating expense as a percentage of total purchase commitment dollars.
  - Baseline: 1.82%
  - Gradient: Meets Expectations - 1.75% - 1.88%
    Exceeds Expectations - 1.61% - 1.74%
    Far Exceeds Expectations - 1.60% or better
- Process Cost: Cost as % of Revenue (Weight: 5%)
  - Definition: Procurement operating expense as a percentage of Laboratory operating budget.
  - Baseline: 0.94%*
  - Gradient: Meets Expectations - 0.961% - 0.98%
    Exceeds Expectations - 0.941% - 0.96%
    Far Exceeds Expectations - 0.94% or better
    (Revenue = Lab Operating Budget)
- Effective Competition (Weight: 10%)
  - Definition: Percentage of subcontract dollars competed against the constrained purchasing base for orders over $25K.
  - Baseline: 70.2%
  - Gradient: Meets Expectations - 70.0% - 70.5%
    Exceeds Expectations - 70.6% - 71.0%
    Far Exceeds Expectations - Greater than 71%
- Cost Savings/Avoidance: Credit Card Usage (Weight: 10%)
  - Definition: Percentage of procurement transactions processed through ProCard.
  - Baseline: 19%
  - Gradient: Meets Expectations - 21%
    Exceeds Expectations - 23%
    Far Exceeds Expectations - 25%

Results

Cumulative third quarter results indicate that the Laboratory has improved its performance in three of six benchmark categories—Cycle-time of Commodity Orders >$5K - $25K, Cycle-time of Commodity Orders >$25K - $100K, and Credit Card Usage (Cost Savings/Avoidance). It has also attained significant achievements in three other categories—Administrative Cost (Process Cost), Cost As Percentage of Revenue, and Competition.

* Best-in-class in FY96

Cycle-time: Commodity Orders >$5K - $25K

The Lab's performance in this category continues to improve over its best-in-class performance among benchmarked laboratories. The averaged cycle-time was reduced from six days to five days—a nearly 17% improvement over FY96—meeting the criteria for far exceeds. The Laboratory's performance attests to the continual effectiveness of reengineering efforts undertaken in recent years, such as Oracle purchasing, improved electronic interfacing between buyer and requester (Oracle, electronic mail); reduced sole source documentation requirements (from raising the $25K threshold to $50K); and increased telephone orders (from raising the $5K threshold to $25K). These all add to a reduction in the time necessary to place transactions.

Cycle-time: Commodity Orders >$25K - $100K

The Laboratory improved from its baseline performance of 10 days to 8 days and met the criteria for a far exceeds rating. The incremental improvement was made possible by: order placement instructions on the new Procurement Web page; improved communication methods between requester, Procurement, and vendor (Oracle, electronic mail, etc.); higher delegated commitment authorities for buyers (commensurate with job classification); and taking advantage of recent regulatory guidelines and tri-Lab standard procurement practices, and implementing the following:

- Institutionalized commercial item exemption for Buy American (eliminated Buy American Approvals for commercial items).
- Eliminated formal written competition under $100K (reduced solicitation and proposal preparation time for small purchases).
- Increased formal sole source justification to $50K (eliminated sole source justifications under $50K).
- Developed simplified file checklist for orders under $100K (reduced file preparation time for small purchases).
- Eliminated vendor certifications and PO acceptances under $100K (reduced proposal preparation time).

The above streamlining measures, along with shorter solicitation turnaround, combined to facilitate and lower response times between Procurement, requesters, and vendors for these and other higher value transactions.

Process Cost: Administrative Cost

Through the first three quarters of FY97, the Laboratory achieved a composite 1.88% ratio, which meets expectations— a commendable result given that performance generally improves in the fourth quarter due to an upward trending in procurement commitments due to the year-end rush in deliveries, resulting in a further lowering of the cost ratio. The result also provides an indication that the Procurement Manager's monitoring and control over expenditures continues to be effective. In particular, labor resources are strictly controlled so that no more resources are utilized than necessary for accomplishing the procurement mission.

The 1.88% composite ratio reflects the following cumulative FY97 Procurement Costs and Commitments to date:

- Procurement Operating Expense: $1,694,990
- Procurement Commitments: $90,009,476

Process Cost: Cost as Percentage of Revenue

Procurement's cumulative performance to date through the first three quarters of FY97 was 0.95%, which exceeds expectations. The reduction in the Cost Index to date confirms that Procurement's cost of operations remains consistently low among benchmarked entities, and affirms the favorable results obtained under Administrative Cost, in that expenditures are monitored and controlled consistently to achieve high levels of efficiency in utilization of resources. The basis of Procurement's results through the third quarter is as follows:

- Procurement Operating Expense: $1,694,990
- Laboratory Operating Budget: $178,103,694

Effective Competition

The Laboratory's cumulative result after three quarters, at 69.4%, fell marginally below the 70% goal. Nevertheless, it was apparent that the results were negatively impacted by the raising, in FY96, of the sole source documentation threshold from $25K to $50K—intended to lower cycle-times while minimally affecting competition. However, results to date indicate that, while cycle-times of orders up to $50K has decreased significantly, competition has eroded more than expectedly between $25K and $50K. If the competition base were increased to $50K to align with the sole source threshold, it would yield a competition rate of 74%.

Additionally, in maintaining a consistent level of performance (vis-à-vis prior years, at around 70%) throughout FY97, despite a growing prevalence of sole sources from areas that have experienced dramatic growth (i.e., Computing Sciences, Human Genome, Earth/Material Sciences, etc.) arising from more complex requirements, Procurement has demonstrated that it has attained a high level of effective competition.

The Laboratory's third quarter results, relative to competition bases for both commitments over $25,000 and $50,000, are as follows:

	$25K Base	$50K Base
Competition Dollars:	$34,293,648	$32,895,347
Competition Base:	$49,382,787	$44,126,897

Cost Savings/Avoidance: Credit Card Usage

The Laboratory's cumulative credit card usage after three quarters (32.7%) offered significant improvements over the 19% baseline, far exceeding expectations. The achievement is attributable to Procurement's successes at:

- Encouraging existing cardholders to make better use of their ProCards.
- Converting Low Value Field Buyers to ProCard.

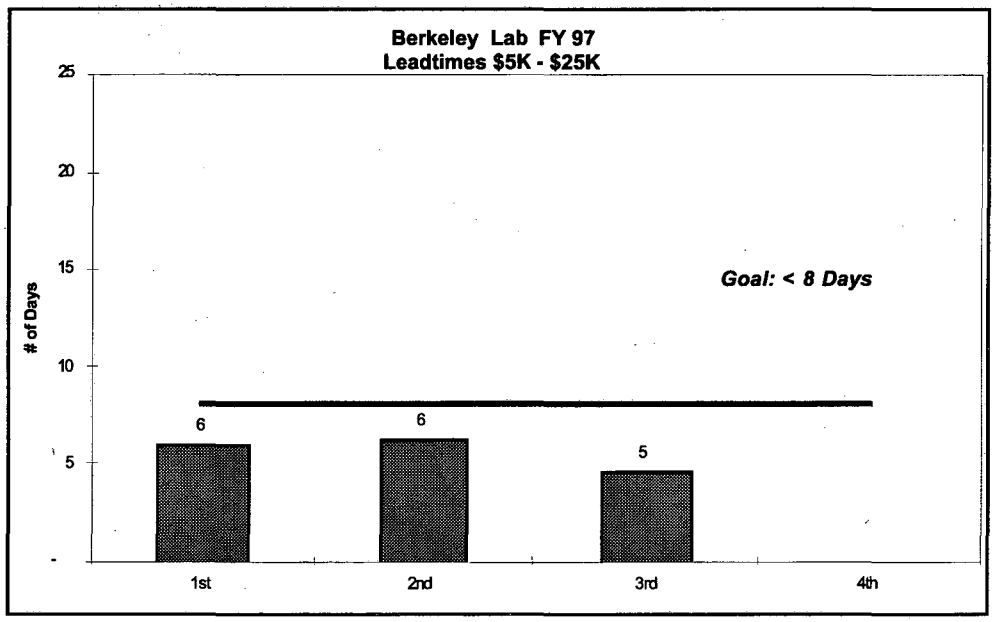
- Encouraging card-holding Low Value Field Buyers to use their ProCards.
- Enlisting new users from divisions that have not participated significantly in the past.

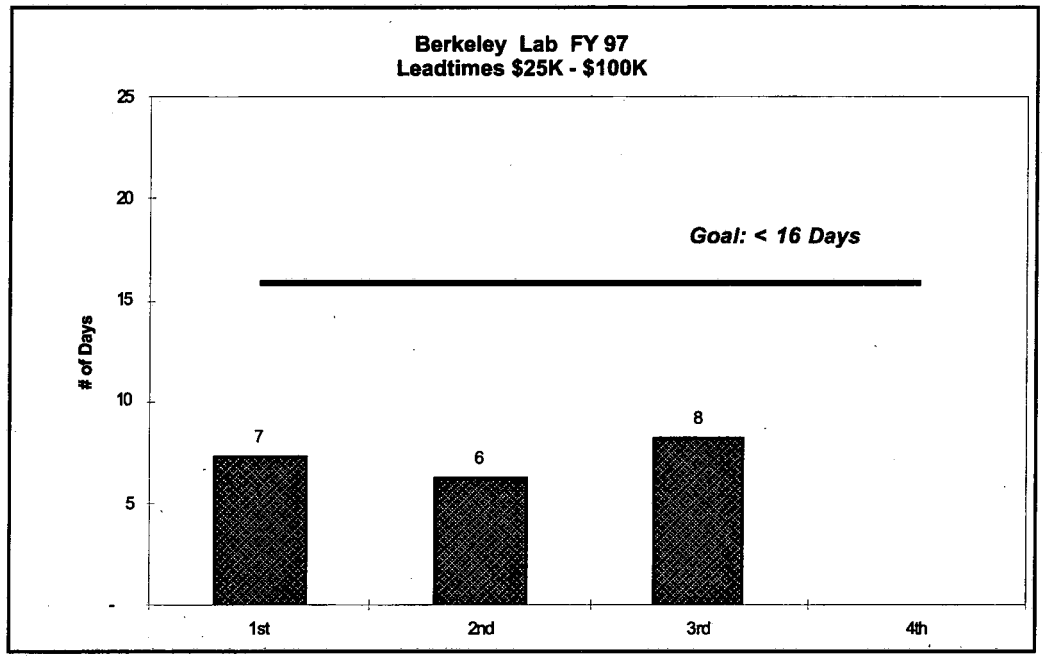
Additionally, numerous actions have been undertaken to enhance usage and facilitate program administration:

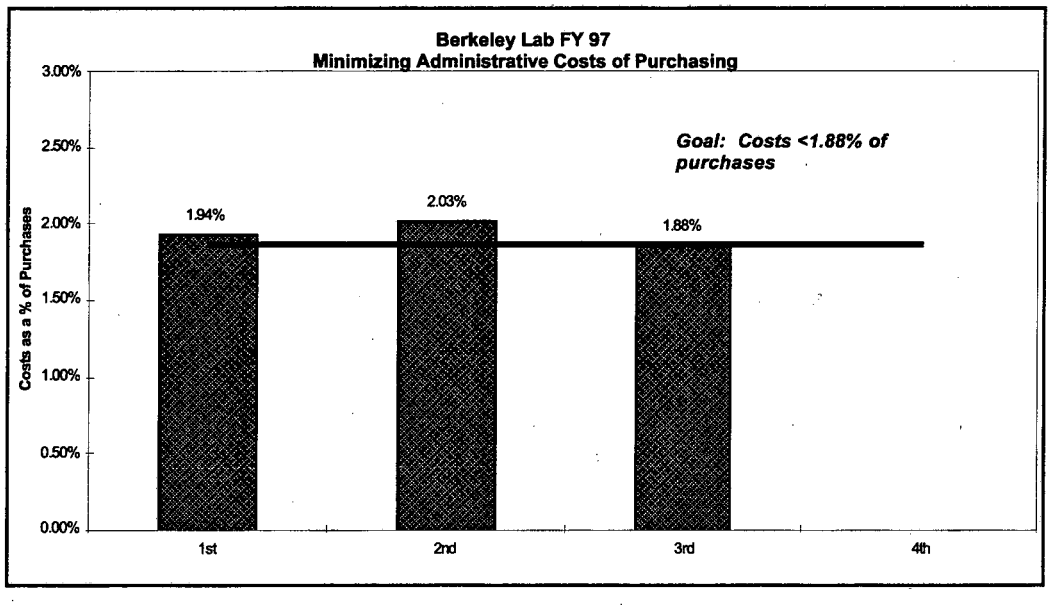
- Plans made for a permanent program administrator.
- ProCard applications made available on the Web.
- Training program revised to offer optional software and "hands-on" training for Phase 2 (multiple-account capability) users.
- High use Level I vendors upgraded to Level II status to facilitate the statement reconciliation process for users.

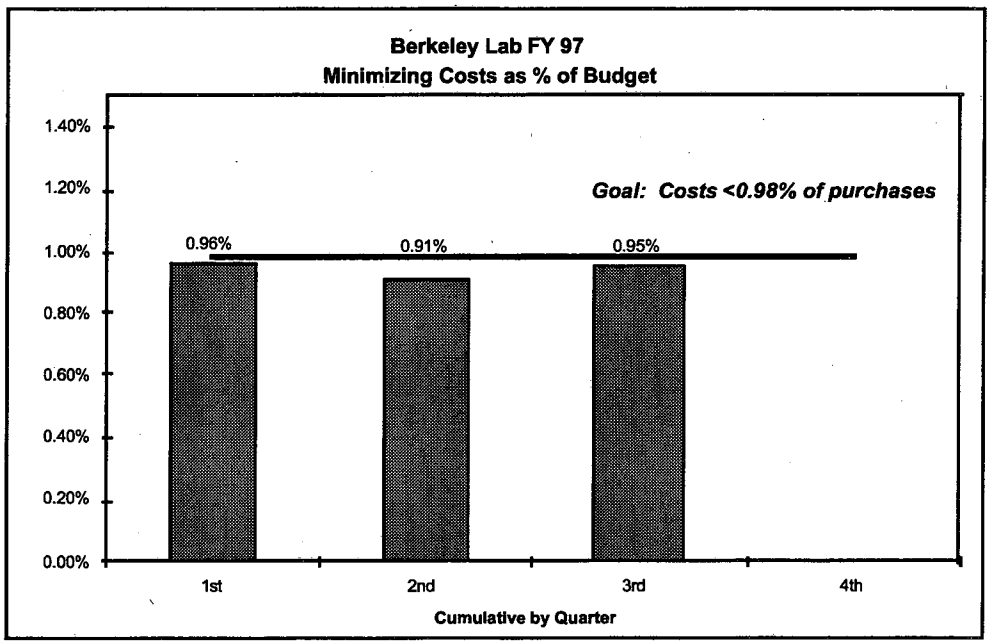
As a result of these actions, ProCard usage in FY97 has significantly increased, from 7,720 transactions in FY96 to 9,836 transactions year-to-date (out of 30,139 total procurement transactions), and projected to exceed 12,000 transactions by fiscal year-end. Based upon a standard savings of $33 per ProCard transaction—derived from the cost of not having to prepare and process the requisition, perform receiving, or process invoice payment—the Laboratory's incremental YTD savings from the baseline amounts to over $69K. With all ProCard transactions taken into consideration, the aggregate YTD savings is in excess of $324K. This validates Procurement's attempts to increase cost savings and reduce the cost of providing service through increased ProCard usage.

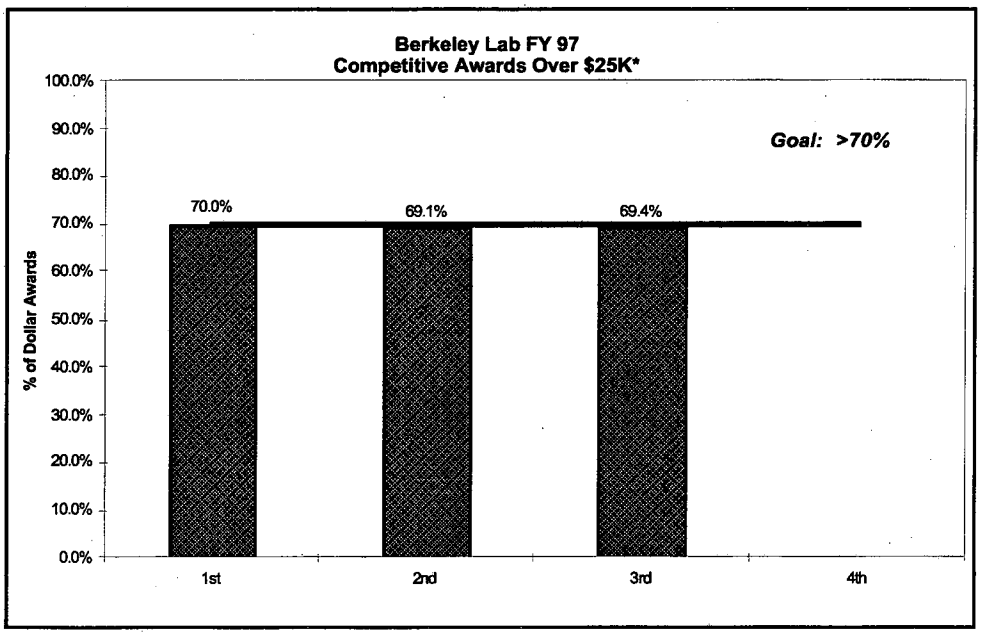
Supporting Data



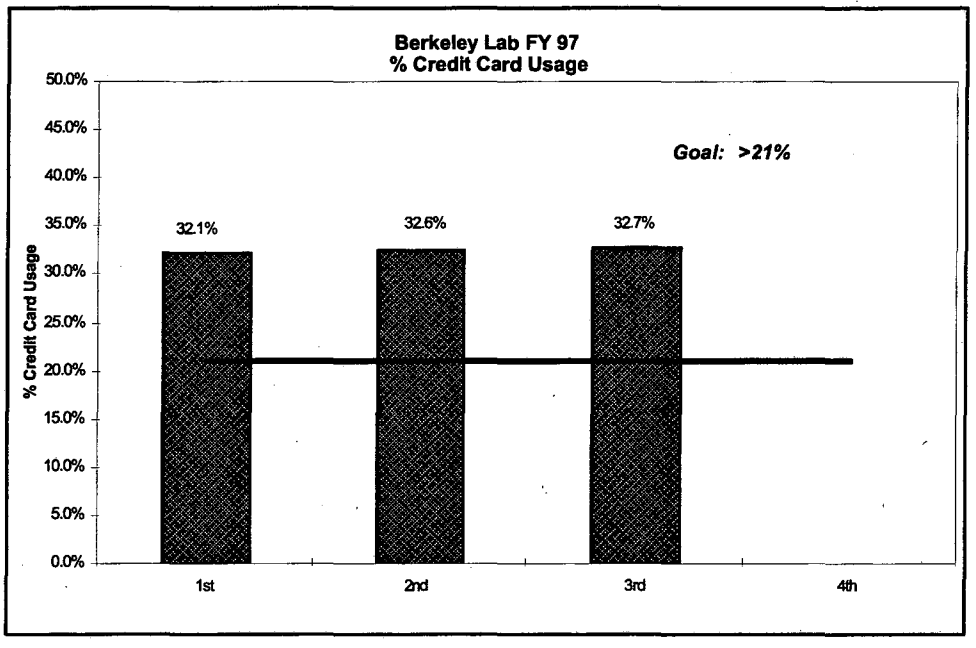

Berkeley Lab FY 97
Leadtimes $25K - $100K
# of Days
25
20
15
10
5
-
Goal: < 16 Days
7
6
8
1st
2nd
3rd
4th


Berkeley Lab FY 97
Minimizing Administrative Costs of Purchasing
Costs as a % of Purchases
3.00%
2.50%
2.00%
1.50%
1.00%
0.50%
0.00%
Goal: Costs <1.88% of purchases
1.94%
2.03%
1.88%
1st
2nd
3rd
4th


Berkeley Lab FY 97
Minimizing Costs as % of Budget
1.40%
1.20%
1.00%
0.80%
0.60%
0.40%
0.20%
0.00%
Goal: Costs <0.98% of purchases
0.96%
0.91%
0.95%
1st
2nd
3rd
4th
Cumulative by Quarter


Berkeley Lab FY 97
Competitive Awards Over $25K*
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
% of Dollar Awards
Goal: >70%
70.0%
69.1%
69.4%
1st
2nd
3rd
4th

* See text.


Berkeley Lab FY 97
% Credit Card Usage
50.0%
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
% Credit Card Usage
Goal: >21%
32.1%
32.6%
32.7%
1st
2nd
3rd
4th

Performance Objective #3

Customer Satisfaction: *The Procurement organization shall maintain a focus on satisfying customer needs.* **(Weight = 15 %)**

Summary

This objective requires Procurement to focus on satisfying customer needs in two areas—Working Customer Needs and tracking a Customer Satisfaction Index.

In FY97, the Laboratory succeeded in enlisting its internal and external customers in formulating workable solutions to customer-driven needs through implementation of its Customer-Driven Improvement Plan. The plan established the framework for selecting customer-driven improvements, methods of customer interaction, documentation of milestones, and verification of results in accordance with methods established in partnership with DOE and UC for measurement of customer satisfaction. The prescribed methods for customer interaction included contacting and working with customers to establish opportunities for improvement; working and jointly reviewing recommended improvements; and implementing improvement methods to meet expectations of improved customer satisfaction.

A total of three customer-driven improvement areas were selected for this measure:

1. Procurement will initiate a policy for rewarding its personnel for noteworthy contributions and accomplishments.
2. Procurement will take steps to facilitate vendors' understanding of the Laboratory's procurement process.
3. Procurement will facilitate division requesters' understanding of the Procurement process.

The improvement areas were selected on the basis of results of the FY96 customer surveys, which identified a number of areas that Procurement customers considered both important and with potential for customer satisfaction improvement. The Laboratory's plan of action was to systematically address these areas of opportunity. Procurement's FY97 survey scores, from customer surveys conducted of each customer group (under Performance Measure 3.2.a below) on responses to questions directly related to the selected improvement areas, served as the basis for measurement against their respective FY96 baselines.

Results from FY97 year-end customer surveys indicate that the Laboratory exceeded expectations under this performance measure (see Successes/ Shortfalls below).

This measure also requires Procurement to establish mutual agreement with DOE and UC on a Customer Survey Plan, conduct annual surveys of designated internal and external customer groups, compile and analyze results, and compute a final composite weighted Customer Satisfaction Index score as an indication of overall customer satisfaction.

Results compiled from the four surveys conducted in FY97 (see Successes/Shortfalls below for surveying methods) indicate a composite

weighted Customer Satisfaction Index score of 80.4, which meets the criteria for a far exceeds rating in accordance with the established gradient.

Additionally, in building upon last year's upward trending in increased awareness and improvement in customer satisfaction, an overall rating of good to excellent was given by respondents in FY97. This indicates that Procurement has attained a high level of customer satisfaction among its internal and external customers, and that current Procurement systems and processes are effective in meeting intended objectives.

Objective #3 Criterion 3.1

Customer Feedback: *The Procurement organization listens and responds to its internal and external customers and stakeholders in a fair and open process that encourages dialogue and participation.* **(Weight = 10%)**

Objective #3 Criterion 3.1 Performance Measure 3.1.a

Working Customer Needs: *Based on the results of the prior year's customer survey, the Procurement organization shall select areas to work in partnership with its customers in order to effect customer-driven improvements in the procurement area. Measurement of improved customer satisfaction will be from an established baseline. The Procurement organization will submit its selection by November 1, 1996, and its plan of action by December 1, 1996.* **(Weight = 10%)**

Basis for Rating:

- Meets: Identify customers (end users) and methods for customer interaction. Establish methods for measurement of customer satisfaction. Implementation plan with scheduled milestones is documented and plan is initiated.
- Exceeds: Identify customers (end users) and methods for customer interaction. Establish methods for measurement of customer satisfaction. Implementation plan with scheduled milestones is documented and milestones met. Documentation of results verifies that customer satisfaction improvement goals for an Exceeds Expectations rating, as selected by the Laboratory in partnership with DOE and UC, have been achieved.
- Far exceeds: Identify customers (end users) and methods for customer interaction. Establish methods for measurement of customer satisfaction. Implementation plan with scheduled milestones is documented and milestones met. Documentation of results verifies that customer satisfaction improvement goals for a Far Exceeds Expectations rating, as selected by the Laboratory in partnership with DOE and UC, have been achieved.

Performance Measure Result

Through open dialogue and communications, Procurement has been successful in partnering with its internal and external customers in FY97 to effect customer-driven improvements. By meeting or exceeding target goals in two of three customer-driven improvement areas, exceeding expectations.

Successes/Shortfalls

The Laboratory's Customer Improvement Plan, inclusive of baselines, goals and gradients, was submitted to DOE on November 26, 1996 and approved March 3, 1997. The Customer Satisfaction Surveys, on which measurement of FY97 performance against the FY96 baseline is based, were completed August 31, 1997. Results from the surveys, along with final approved baselines, goals, and gradients as selected by the Lab in partnership with DOE and UC, are as follows:

	Procurement	Vendors	Requesters
Baseline:	62.2	79.8	67.6
Target Goal:	65.2	82.8	70.6
Results:	78.6	80.4	71.0

The gradients selected for achieving these goals are as follows:

- Meets Expectations: Meeting or exceeding one of the above targeted goals.
- Exceeds: Meeting or exceeding two of the above targeted goals.
- Far Exceeds: Meeting or exceeding all three targeted goals.

In meeting or exceeding two of three targeted goals, the Laboratory has met the criteria for an exceeds rating. Though not meeting the vendor goal, the result does indicate significant improvements over the baseline.

Methods of Customer Interaction

To improve the three Improvement areas from their FY96 baselines, Procurement enlisted the participation of its internal customers (Procurement personnel, requesters) and external customers (vendors) to formulate improvement methods for the specific opportunities identified. A total of 27 Procurement personnel, 15 requesters, and 12 vendors were actively involved. Various communication methods were used to initiate and maintain contact with the customers to achieve this. In addition to group meetings, e-mail, telecons, and mailings were used to exchange information with targeted customers. A basic five-step process was developed and implemented:

1. Contact/meet with customers to confirm problem areas and establish improvement methods.
2. Work on jointly recommended improvements.
3. Contact/meet with customers to review improvement methods.
4. Implement improvement methods.
5. Measure customer satisfaction.

The section below details the process by which customer-driven improvements were selected, developed and implemented, including the selection process, methods of interaction, dialogue and communication, and improvement methods that were proposed as a result of joint efforts between Procurement and its customers.

Procurement Personnel

Due to the group's manageable size, all Procurement Department personnel (Manager, Group Leaders, Procurement Specialists, Administrative Support) were asked to participate in the customer-driven improvement effort. Interaction with the group took place mainly during staff meetings held on February 28, 1997 and March 13, 1997. The objective of the February 28 meeting was to confirm the areas of opportunity as indicated by the FY96 surveys and to establish improvement methods. A 2-week time period was allotted to gather suggestions. Suggestions proposed during this time included:

- Cash spot awards
- Larger cash spot awards
- Employee of the month

- Special training
- Mug/cap/T-shirt
- Professional organization membership
- Certification expenses
- Reserved parking
- Peer potluck
- Conduct salary surveys
- Day off
- Gift certificates
- Gift pool
- Monthly birthday celebrations
- Letter of appreciation from management

Based on these suggestions, a second meeting was held on March 13, 1997 to review the proposed improvement methods, during which agreement was reached collectively by the group to implement the following:

- Spot Recognition Awards: A Lab-wide cash award program for recognition of outstanding accomplishments by employees in Total Quality Management in one or more of the following areas—cost reduction, customer service, programmatic effectiveness, and organizational effectiveness. Cash awards of up to $150 are authorized.
- Employee-of-the-Month: A peer-nominated award for outstanding accomplishments during a particular month, as determined by Procurement Manager and Group Leaders. Employees are called upon to nominate themselves or a peer in response to a monthly call for nominations by the Procurement Manager. Prizes include posting of the employee's photo on the Employee-of-the-Month bulletin board and Web site; employee-selected job-related external training class (cost up to $200); peer potluck honoring achievement; and a choice of LBNL mug, T-shirt, or cap.
- Letter of Appreciation from Procurement Manager/Group Leader: A letter acknowledging an employee's outstanding contributions and performance, as nominated by the Group Leader.

By consensus of the group, the remaining suggestions were either not implemented due to lack of sustained interest (gift certificates, birthday celebrations, gift from peers, salary surveys) or deferred for further consultation with Lab management due to their requirement for long-term institutional approvals (larger cash spot awards, parking, day off, professional organization membership, certification expenses). Special training, mugs, caps, T-shirts, and quarterly (peer) potluck were included as part of the Employee-of-the-Month award. To date, a total of five spot awards, seven employees of the month, and six letters of appreciation have been awarded.

Results of FY97 Customer Satisfaction Surveys indicate significant improvement over the baseline—the Procurement Personnel Index for "Contributions Are Rewarded" increased from 62.2 to 78.6. This

demonstrates that the working improvements have been extremely effective in raising the customer satisfaction level.

Vendors

Twelve Laboratory vendors, selected at random from the list of surveyed vendors from FY96, participated in the customer-driven improvement effort. These vendors were contacted by telecon during the second week of February 1997, to confirm the results of last year's vendor survey concerning vendors' understanding of the LBNL procurement process and to establish opportunities for improvement. Virtually all agreed that lack of clear understanding of the Lab's procurement process presented an opportunity for improvement, and that the following suggestions constitute effective approaches for addressing the issue:

- Posting Information on Web Site. Information for vendors on how to do business with the Laboratory should be posted on the Lab Web site.
- Vendor Information Flier. A pamphlet for vendors explaining similar information should be produced.

Additionally, several vendors suggested that a list of buyers and their commodities would also be helpful. All of the vendors agreed to provide feedback on the draft flier when completed. Subsequently, on February 28, 1997, draft information fliers were mailed to the 12 vendors for comment.

A total of three mailed-in comments were received from two vendors concerning:

- Posting of bid lists on the Web.
- Ways to access FAR Part 19 SIC listing.
- Payment by ProCard.

These were subsequently resolved and a new information flier was printed and made available, as well as the posting of a section entitled "Doing Business with Berkeley Lab" on the Procurement Web site. Both actions were completed prior to distribution of Customer Surveys (also see Performance Measure 3.2.a).

FY97 survey results for vendors indicate a slight improvement over the baseline—the Vendor Index for "Procurement Process Understood" increased from 79.8 to 80.4. This demonstrates that Procurement's working improvement efforts, while not meeting the target goal, have been successful.

Division Requesters

Fifteen representative requesters, selected at random from the list of surveyed requesters from FY96, participated in the customer-driven improvement effort. The Laboratory's first step in customer interaction was contacting the group on February 26, 1997, to confirm that the procurement process was not easily understood, and review improvement opportunities that include providing more detailed procurement user information and/or training. The requesters were advised that their comments would be used to

further improve customer satisfaction. This was accomplished via electronic mail to facilitate requester responses.

Eleven responses were received prior to March 5, 1997. The responses confirmed that lack of understanding of the Laboratory's Procurement process continues to be an area of concern. The majority of requesters who responded indicated that providing more detailed user information and/or training (i.e., via the Procurement Information Session) would help them to understand the Procurement process better. One respondent suggested that Procurement post information on the Web (he was advised that this already existed). It was also noted that most of the respondents did not attend last year's Procurement Information Session.

Since it was apparent that a segment of the Lab user community may not be aware of Procurement's services and the source of that information, efforts were made to broaden this year's Information Session agenda and more fully promote the session. Advance notifications to the Lab community included posting articles in *Currents* as well as *Headlines* (electronic news disseminated by the Lab's Public Information Department) and distributing electronic mail to target participants (i.e., requesters, division administrators, etc.). Also, the scope of Procurement topics was expanded to include a new related subject (ES&H Procurement Safeguards—addressed by an EH&S Department representative) as well as comprehensive descriptions of procurement subcontracting processes. This was done at the urging of the 15 sampled participants who helped develop this year's forum agenda. The Procurement Information Session convened on April 2, 1997.

Results of the FY97 Customer Satisfaction Survey indicate that significant improvements were made over the baseline—the Requester Index for "Procurement Process Understood" went from 67.6 to 71.0, indicating that the Lab community now has a better understanding of the Procurement process. Additionally, 100% of class evaluation forms from the forum, along with all sampled requesters, indicate that the procurement process was now better understood.

Table 1 below, which summarizes ongoing events relative to the subject performance objective, shows that Procurement has timely and aggressively completed all of its Customer Improvement Plan activities for FY97.

Table 1(a). Customer improvement plan activities for Procurement personnel.

Procurement Personnel *Improvement Milestones*	*Documentation*	*Responsible Person*	*Scheduled Completion Date*	*Actual Completion Date*
Meet with Procurement Personnel to confirm opportunities and establish improvement methods	Agenda	Chen/Arri	28 Feb 97	28 Feb 97
Work on improvements	As required	Chen/Arri	28 Feb 97	28 Feb 97
Meet with Procurement Personnel to review improvement methods	Agenda	Chen/Arri	13 Mar 97	13 Mar 97
Implement improvement methods	As required	Chen/Arri	19 Mar 97	13 Mar 97
Measure customer satisfaction	Survey results	Speros	31 Aug 97	31 Aug 97

Table 1(b). Customer improvement plan activities for vendors.

Vendor *Improvement Milestones*	*Documentation*	*Responsible Person*	*Scheduled Completion Date*	*Actual Completion Date*
Select vendors to partner	N/A	Chen	31 Jan 97	31 Jan 97
Coordinate with selected vendors to confirm opportunities and establish improvement methods	Telecon	Chen	07 Feb 97	07 Feb 97
Work on improvements	As required	Chen/Speros	21 Feb 97	21 Feb 97
Contact selected vendors to review improvement methods	Mailing	Chen	28 Feb 97	28 Feb 97
Implement improvements for all vendors	As required	Chen/Speros	30 May 97	15 May 97
Measure customer satisfaction	Survey results	Speros	31 Aug 97	31 Aug 97

Table 1(c). Customer improvement plan activities for requesters.

Requester *Improvement Milestones*	*Documentation*	*Responsible Person*	*Scheduled Completion Date*	*Actual Completion Date*
Coordinate with selected requesters to confirm opportunities and establish improvement methods	E-mail (option to meet)	Chen	28 Feb 97	26 Feb 97
Work on improvements	As required	Chen	07 Mar 97	07 Mar 97
Contact requesters to review improvement methods	E-mail	Chen	12 Mar 97	10 Mar 97
Conduct Annual Procurement Information Session. Implement other improvement methods as needed	Information Packet	Chen/Jones	02 Apr 97	02 Apr 97
Measure customer satisfaction	Survey results	Speros	31 Aug 97	31 Aug 97

Supporting Data	Not Applicable.

Objective #3 Criterion 3.2

Customer Feedback: *As a continuous indicator of overall customer satisfaction, the Procurement organization shall survey in the last half of the rating period the needs and satisfaction of its internal and external customers relative to its purchasing systems and methods. At a minimum the following customer groups will be surveyed and weighted as indicated:*

- Laboratory customers (60%);
- DOE (20%);
- Suppliers (10%)
- Procurement personnel (10%)

The DOE/UC/Laboratory will mutually agree on the acceptability of the surveying process and contents. Survey results will be finalized by the end of the rating period. **(Weight = 5%)**

Objective #3 Criterion 3.2 Performance Measure 3.2.a

Customer Satisfaction Index: *A customer satisfaction index for the Procurement organization shall be created from the results of the individual surveys of customer groups using the weighting in 3.2 and a 100 point scale. The satisfaction index is to be tracked and trended with an upward trend expected.* **(Weight = 5%)**

Basis for Rating:

- Meets Expectations – The Laboratory achieves an index score of 60.
- Exceeds – The Laboratory achieves an index score of 70.
- Far Exceeds – The Laboratory achieves an index score of 80.

Assumptions:

- Additional consideration may be given for actions implemented by the Laboratory to address satisfaction concerns identified by the survey.

Performance Measure Result

Results from customer surveys conducted on internal customers (Procurement personnel/requesters) and external customers (DOE, vendors) indicate a composite weighted satisfaction index score of 80.4 for the Laboratory, far exceeding expectations.

Successes/Shortfalls

The Laboratory's Customer Survey Plan was submitted to DOE prior to March 31, 1997, and subsequently approved. To ensure a consistent basis for comparison against the baseline, the plan's approach, sampling parameters, questionnaires, data compilation and scoring methodologies were kept largely identical to that of FY96. Questionnaires were custom-tailored for each of the four surveys and incorporated major elements of the DOE VBSA model, such as timeliness, quality, efficiency, communication, innovative initiatives, and ethical practices.

Each customer was asked to *rate* their agreement with a question within a range of 1 (strongly disagree) to 5 (strongly agree) and N/A. Additionally, the customer was asked to *weigh* the importance of the question within a range of 1 to 6. To obtain a cross-validation of customer satisfaction, responders were also asked to rate Procurement's performance as Poor, Fair,

Good, or Excellent. As a cost savings measure, surveys were distributed electronically to the maximum extent practicable.

FY97 survey results indicate a composite weighted Customer Satisfaction Index (per weight distribution method established under this Performance Measure) score of 80.4 for the Laboratory (an improvement over FY96's 77.9 score), which meets the criteria for a far exceeds rating. Results for the individual surveys are highlighted below.

DOE Survey

The DOE survey scored a customer group satisfaction index of 88.2 and an overall rating of "Good" to "Excellent," which constitutes an improvement over FY96's 78.3 score. The results largely reflect recent Laboratory efforts to open up to new innovations—which one respondent quoted as being "much improved from last year." Another respondent suggested that the Lab "implement more cost effective systems (i.e., JIT, EDI, etc.)."

The above concerns are already being addressed by Procurement in its efforts to improve operational efficiency and cost effectiveness by adapting best commercial practices and implementing current technology. A new JIT contract for Laboratory supplies has been set up. In addition, a cross-functional task force has been commissioned to study implementing EDI/Web technology for systems contracts.

Procurement Personnel Survey

The Laboratory's Procurement Personnel survey recorded a group satisfaction index score of 82.7 and, consistent with the responses to the 23 questions that were posed, an overall performance rating of good to excellent. The improved result, over the prior year's 74.2 score, was largely attributed to Procurement's successes in responding to customer needs. Survey narrative remarks centered on a few common themes: improve communications between management and employees; more even distribution of workload; and a desire for more openness to employee ideas.

The concern of improved communications has already been addressed by opening and encouraging information exchange between employee and management via regularly scheduled forums (i.e., monthly staff meetings, quarterly CFO Town Hall Meetings).

Vendor Survey

The vendor survey demonstrated a satisfaction index of 85.5 and an overall performance rating of excellent. This was essentially similar to last year's composite index of 85.7. Narrative remarks centered primarily on faster payment of invoices on POs (not subcontracts); supplying vendors with more information about procurement personnel and methods; using credit card for payment; providing a fiscal procurement plan to vendors; and giving vendors greater access to requesters.

Again, many of these concerns have been addressed by the Lab's new Procurement Web site and information flier, which provide highly accessible subcontracting information for vendors wishing to do business

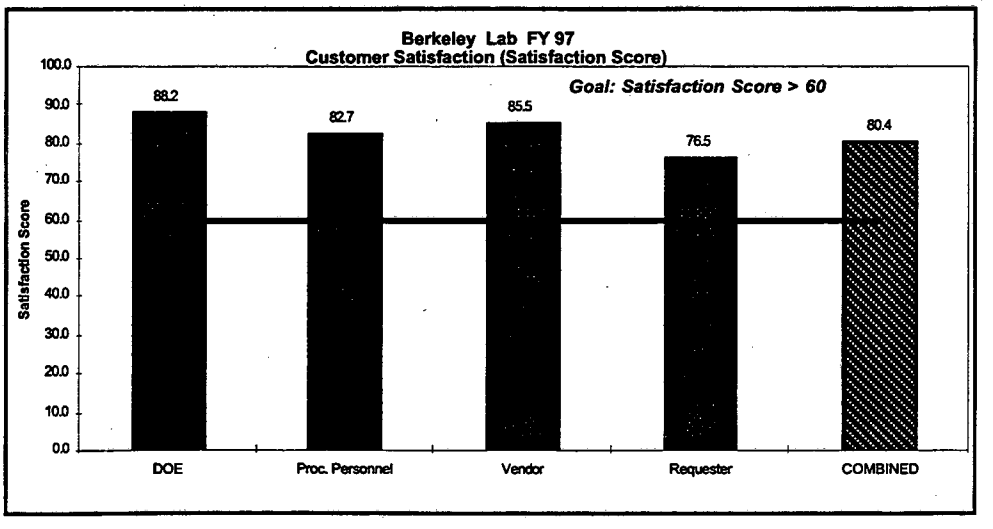
with the Laboratory. Additionally, improved and faster ProCard billing mechanisms and improved internal system interface from Oracle to Accounts Payable also play major roles in expediting the processing of invoices.

Requester Survey

The Requester survey recorded a group satisfaction index score of 76.5 and an overall performance rating of good, which is a slight decrease from last year's 77.1 result. The score was achieved largely from Procurement's continued commitment to achieving high standards of customer service. The survey found that requesters were very satisfied with the level of service provided by Procurement. Buyers were thought of as ethical, professional, and highly competent, but requesters wanted to be kept better informed of delivery status on POs.

PO status has already been addressed by Procurement, since most division requesters have access to either Oracle or the Web-based IRIS system for querying PO status. Requesters can also obtain the same information from buyers. A related issue—buyer follow-up—which affects delivery, is currently addressed under Performance Measure 4.1, where significant progress has been made in FY97. Procurement intends to address this issue in greater depth under its FY98 Appendix F measures.

Supporting Data



Performance Objective #4

Professional & Social Responsibility: *The Laboratory shall ensure that the procurement process is conducted in a professional and socially responsible manner.* **(Weight = 15%)**

Summary

Professional and social responsibility is measured on two fronts. First, the Laboratory shall use its Supplier Rating System to measure the percentage of on-time deliveries of acceptable goods and services, with improvements measured from a first quarter FY97 baseline. Secondly, the Laboratory shall promote and support DOE's socioeconomic program and meet the DOE/UC/Laboratory annual negotiated goals in four specific areas: Small Business (SB); Small Business Set-Aside; Small Disadvantaged Business (DB); and Women-Owned Business(WO).

In FY97, the Laboratory successfully managed its principal suppliers in three major commodity categories (Laboratory equipment, computer hardware, and fabrications), which comprised a key portion of the Laboratory's commodity acquisitions. It also improved on-time delivery performance in a manner that significantly improved the vendors' conformance with subcontract delivery requirements. This was accomplished through buyer training along with development and implementation of a new Supplier Performance Report that buyers use to monitor and track the delivery performance of vendors. The report summarizes and makes available performance data of principal vendors within selected commodity areas.

Based on goals and gradients established in partnership with DOE and UC, the Laboratory has met the criteria for a "Far Exceeds" rating.

The Laboratory's Small and Disadvantaged Business Subcontracting Program continues to demonstrate a high level of support and effectiveness in implementing DOE program objectives in FY97. New programs that helped expand the Laboratory's outreach to SB, DB, WO include creating a Procurement Web site for vendors, and distributing a new information flier.

The program's effectiveness is demonstrated by Berkeley Lab's excellent socioeconomic subcontracting performance for the fiscal year: all goals were exceeded. The Laboratory's YTD achievements are as follows relative to established goals (in parentheses): Total Small Business: 52.4% (43%); Small Business Set-Aside: 29.0% (10%); Small Disadvantaged Business: 20.3% (12.0%); Woman-Owned Business: 12.2% (7.0%). The cumulative YTD results include lower tier subcontractor awards to Small Business, which contributed to approximately 0.2% of the Laboratory's total Small Business awards.

In surpassing all four established goals, the Laboratory has far exceeded expectations.

Objective #4 Criterion 4.1

Supplier Performance: *The Procurement organization shall manage its suppliers in such a manner as to ensure commodities and services meet the Laboratory's requirements in terms of timely delivery of acceptable goods and services.* **(Weight = 10%)**

Objective #4 Criterion 4.1 Performance Measure 4.1.a

Measuring Supplier Performance: *The Procurement organization shall use its Supplier Rating System to measure the percentage of on-time deliveries of acceptable goods and services. Improvement will be measured from a first quarter FY97 baseline.* **(Weight = 10%)**

Basis for Rating:

- In partnership with DOE and UC, each Laboratory shall establish goals and gradients for the percentage of on-time deliveries of acceptable goods and services provided by suppliers. On-time delivery shall be defined as the delivery of acceptable goods and services to the Laboratory by the time specified by the contractual arrangement.

Performance Measure Result

In establishing goals and gradients in partnership with DOE and UC, and successfully managing and improving the on-time delivery performance of its principal vendors in attaining all three stretch goals, the Laboratory has thus far met the criteria for a "Far Exceeds" rating.

Successes/Shortfalls

Under goals and gradients developed in partnership with DOE and UC, the Laboratory will measure the percentage of on-time deliveries within the three selected commodity categories—Laboratory Equipment, Computer Hardware, and Fabrications—which account for nearly 60% of all procurement transactions and dollar awards issued by Procurement to vendors having over $25K worth of business in the baseline period. Fourth quarter results will form the basis for measurement against the following baselines, goals and gradients:

	Lab Equip.	Comp. Hardware	Fabrications
1st Qtr Baseline:	39%	59%	18%*
Target Goal:	60%	70%	50%
Stretch Goal:	70%	80%	60%

The gradients selected for achieving these goals are as follows:

- Meets Expectations: Meeting all three target goals.
- Exceeds: Meeting two target goals and one stretch goal.
- Far Exceeds: Meeting one target goal and two stretch goals.

The Laboratory's ultimate objective is to achieve an on-time delivery rate of better than 90% on all goods and services (where cost effective). As such, the above goals represent only an aggressive interim attempt at bridging that

* Most orders arriving within 1 week of promised date

gap. In FY98, the Laboratory will attempt to increase the percentage with due consideration given to cost/benefit achieved.

Results

The Laboratory's third quarter FY97 results (shown below), though not the definitive basis for performance measurement against the baseline (as the fourth quarter results will be), do provide the indication that the Laboratory is on a pace to meet the criteria for a far exceeds rating.

	Lab Equip.	Comp. Hardware	Fabrications
3rd Quarter Actuals*	78%	83%	89%
1st Qtr Baseline:	39%	59%	18%
Target Goal:	60%	70%	50%
Stretch Goal:	70%	80%	60%

The Laboratory attributes the progress made-to-date to effective development and implementation of its Supplier Management Program, at the heart of which is a new Supplier Performance Report designed to help buyers manage and monitor the performance of vendors. The report, which buyers use for expediting and managing supplier delivery, summarizes and makes available the following performance data of principal vendors within the three major commodity areas (Lab equipment, computer hardware, and fabrications), including the following (not limited to the listing below; other commodity areas also accessible):

- Orders that are outstanding.
- Percentage of POs on time by transaction.
- Percentage of POs on time by dollars awarded.
- Percentage of on-time delivery by commodity.
- Number and names of qualifying vendors (>$25K cumulative business).
- Value of orders—by vendor, commodity, or aggregate count.
- Total count of POs on-time.
- Total value of POs on-time.
- Average days variance.

In addition to making available quantitative data for analysis, a training class on Expediting was held in January 97 in which buyers were given a set of strict guidelines to follow in planning and implementing the expediting process and managing vendors. The class covered the two topics detailed below (Supplier Management and Expediting are coordinated monthly during staff and group leader meetings).

Pre-award Expediting

- Make expediting an integral part of acquisition planning.
- Review expediting requirements with requesters before solicitation.
- Determine level of criticality.

* The universe of vendors with over $25K worth of business continued to provide significant results well into Third Quarter FY97. Thus, the need to include vendors under $25K was not justified.

- Determine frequency and type of surveillance required.
- Identify potential problem areas.
- Schedule pre-proposal conference if needed to clarify issues.

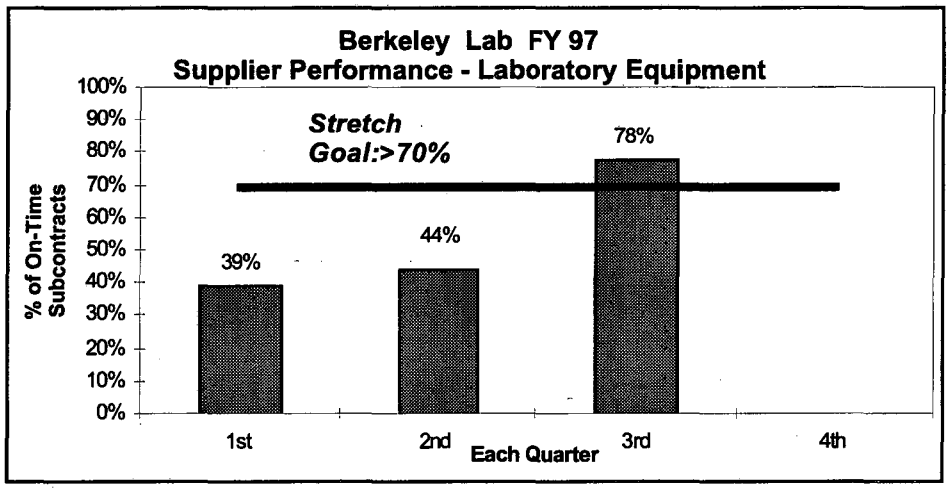
Post-award Expediting

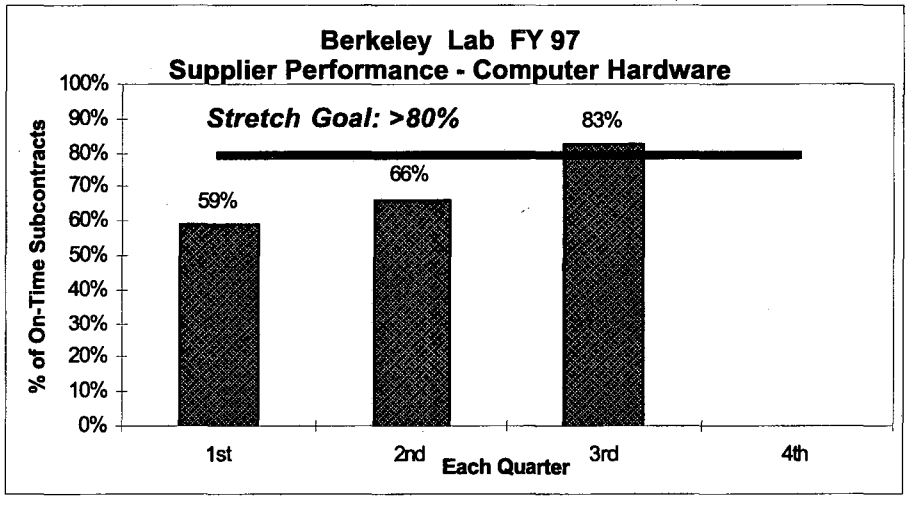
- Use the Oracle system to track deliveries.
- Schedule post-award meeting if needed.
- Maintain close ties with suppliers to monitor progress and identify problem areas.
- Work with requesters to monitor fabrication/inspection milestones.
- Expedite suppliers who have a high probability for delinquency.
- Work with suppliers and requesters to solve problems if situation calls for intervention.
- At first sign of delay, communicate concern to supplier. Notify requester and schedule progress review meeting.
- If delay is imminent and excusable, update Oracle dates and issue subcontract modification.
- If delay is inexcusable, invoke applicable contractual remedies.
- Document all expediting activities.
- Provide one-on-one vendor counseling* .

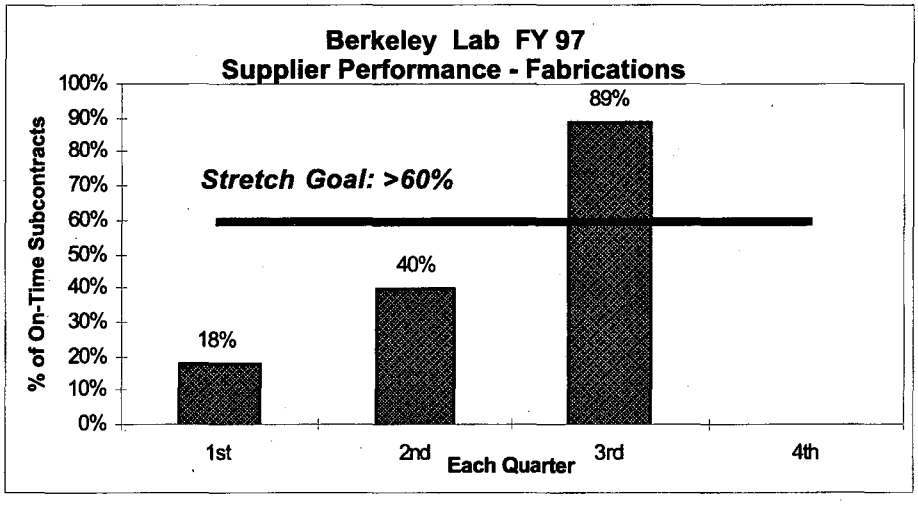
In having achieved significant improvements in on-time deliveries, the Laboratory has demonstrated an effective implementation of its Supplier Management Program and thus has satisfied the requirements of this performance objective. In exceeding all goal gradients in FY97, the Laboratory is significantly closer to meeting its long-term objective of achieving 90% or better on-time delivery of all goods and services where cost effective. It is expected that the experience Procurement has gained in managing suppliers this fiscal year will provide Lab Management with a better grasp of the effectiveness of its improvement strategies and serve as lessons learned for future undertakings in this area.

* For vendors that consistently fail to meet delivery or quality requirements (none encountered during FY97).

Supporting Data







Objective #4
Criterion 4.2

Socioeconomic Subcontracting: *The Procurement organization shall support and promote socioeconomic subcontracting programs. The obligated subcontracted dollars awarded will meet yearly DOE/UC/Laboratory negotiated goals in the following areas:*

(a) Small Business
(b) Small Business Set-Asides
(c) Small Disadvantaged
(d) Small Women-Owned Business

The Procurement organization will propose and provide supporting rationale for socioeconomic goals. The schedule for submitting and negotiating goals will be followed per Appendix D. **(Weight = 5%)**

Objective #4
Criterion 4.2
Performance Measure 4.2.a

Meeting Socioeconomic Commitments: *Actual subcontract dollar obligations (not subcontract face value) in the 4 categories are compared against the negotiated goals. The number of goals met will be measured. Dollars obligated will be plotted as percentages of the specific areas against the purchasing base.* **(Weight = 5%)**

Basis for Rating:

- It is recognized that pursuit of Performance Objective #2, Purchasing System Cost Effectiveness, may impact on the establishment of socioeconomic goals and/or on the final achievement of such goals. Consideration will be given to this impact during forecasting of goals and during evaluation of self assessments.
- Meets: Meeting all goals with consideration given to changes in funding profiles, changes in forecast, deletion of requirements, etc., should goals not be met.
- Exceeds: Exceeds three of the four goals and meets the fourth goal. Consideration will be given to such factors as awards/recognition, pilot program participation, and other support for DOE socioeconomic programs when the Laboratory is borderline to meeting a goal that leads to a rating of Exceeds.
- Far Exceeds: Exceeds all goals. Consideration will be given to such factors as awards/ recognition, pilot program participation, and other support for DOE socioeconomic programs when the Laboratory is borderline to meeting a goal that leads to a rating of Far Exceeds.

Assumptions:

- Obligations qualifying in more than 1 category may be counted in more than 1 category, e.g., Small Business and Small Business Set-Asides.
- The purchasing base for purposes of this measure is all obligations incurred during the fiscal year period, excluding: (1) Subcontracts with foreign corporations which will be performed entirely outside of the United States; (2) Utilities (gas, sewer, water, steam, electricity and regulated telecommunications services); (3) Federal Supply Schedule Orders when all terms of the GSA contract apply; (4) GSA Orders when all terms of the GSA contract apply; (5) Agreements with DOE management and operating contractors and University campuses; (6) Federal government and DOE mandatory sources of supply; Federal prison industries,

industries of the blind and handicapped; and (7) Procurement card purchases.

Performance Measure Result

The Laboratory exceeded all of its socioeconomic subcontracting goals for FY97, as follows (goals in parentheses): Total Small Business: 52.4% (43%); Small Business Set-Aside: 29.0% (10%); Small Disadvantaged Business: 20.3% (12.0%); Woman-Owned Business: 12.2% (7.0%). In having done so, it met the far exceeds criteria based on the established gradient.

Successes/Shortfalls

This objective requires Procurement to compare actual subcontract dollar obligations (not face values) against negotiated goals in four business categories—Small Business; Small Business Set-Asides; Small Disadvantaged; and Women-Owned Small Business—and to measure the number of goals met. Dollars obligated will be plotted as percentages of the specific areas against the purchasing base. Procurement's proposal and supporting rationale for FY97 socioeconomic goals were submitted on a timely basis to DOE per schedule outlined under Contract 98, Appendix D. The goals, as subsequently approved by DOE on October 8, 1996, are detailed below.

- Small Business 43%
- Small Business Set-Asides 10%
- Small Disadvantaged 12%
- Small Women-Owned 7%

Results

The Laboratory continues to meet or exceed all of its socioeconomic goals through the third quarter as follows:

Category	Goals	Actuals*	Dollars
Total Small Business:	43.0%	52.4%	$38M
Small Business Set-asides:	10.0%	29.0%	$22M
Small Disadvantaged Business:	12.0%	20.3%	$15M
Woman-Owned Business:	7.0%	12.2%	$9M

Even though goals lag achievements in all categories, the margins will narrow due to the historical tendency for small business achievements at the Lab to be higher in the beginning of the fiscal year, and trend downwards as the year progresses. The Laboratory, in exceeding goals in all subcontracting categories—including Small Business, Small Business Set-Aside, Small Disadvantaged Business, and Woman-Owned Small Business—has met the criteria for a far exceeds rating. This high achievement reaffirms that the

* Cumulative through 30 June 1997. The above includes lower tier subcontractor awards to small businesses, which accounted for nearly 0.2% of the Laboratory's recorded small business award through midyear FY97. A total of 14 subcontractors contributed to 2nd Tier achievements. The Laboratory's procurement base through Third Quarter FY97 was $72.5M.

Laboratory's diversity subcontracting program and efforts in outreach and technical assistance have been exceptionally effective.

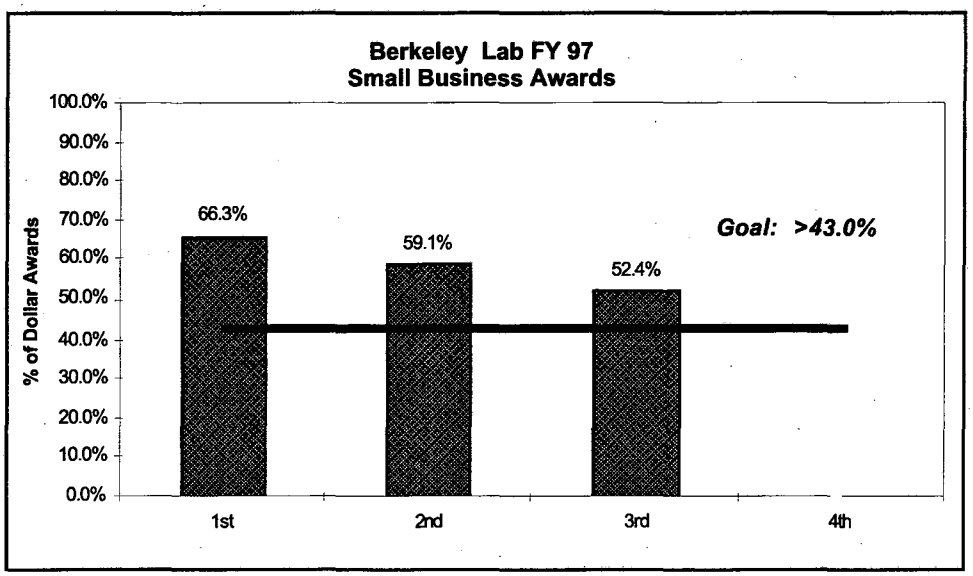
In addition to creating a new Procurement Web site for instructing vendors and disseminating an updated information flier, the Laboratory continued to implement small business outreach efforts proven effective in the past:

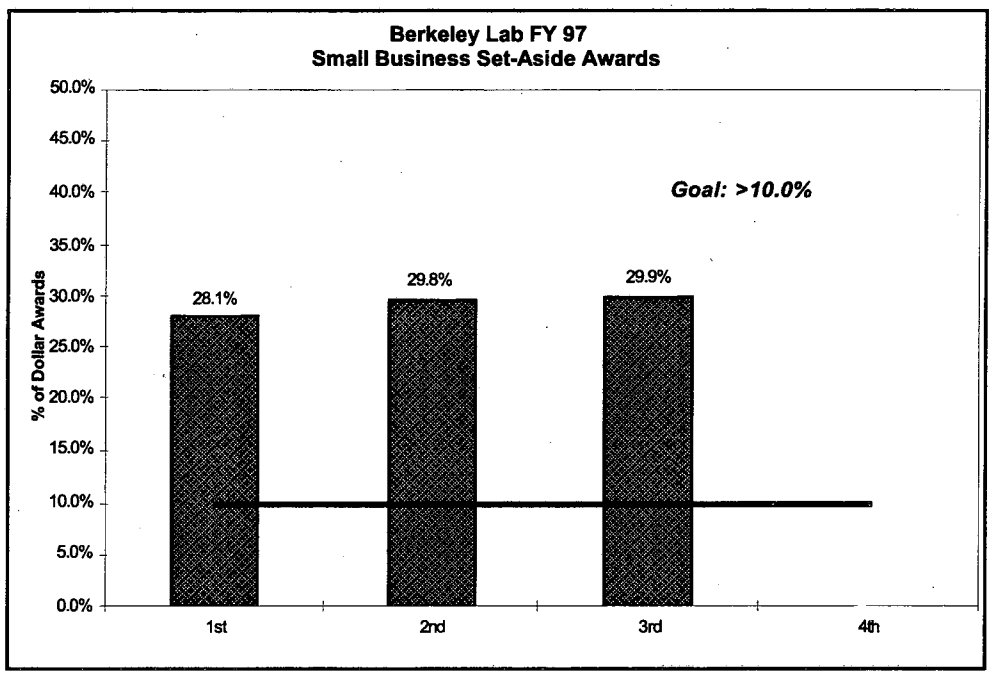
- Rely on Advanced Acquisition Planning for greater lead-times for conducting small business market surveys and publicizing actions.
- Encourage lower-tier SB awards by giving preference to offerors on architect/engineer subcontracts that partner with or subcontract SB/DBs.
- Participate in the Small Business Set-Aside Program.
- Participate in the 8(a) Pilot Program.
- Conduct buyer training and socioeconomic performance evaluation, emphasizing on expanding 8(a) contracting opportunities.
- Make technology transfer and licensing available to small businesses.
- Participate proactively in local technology and trade organizations.
- Conduct vendor interviews.
- Use government and industry source directories to identify small businesses.
- Conduct market analysis/surveys on sole source procurements when feasible to determine availability of small businesses.

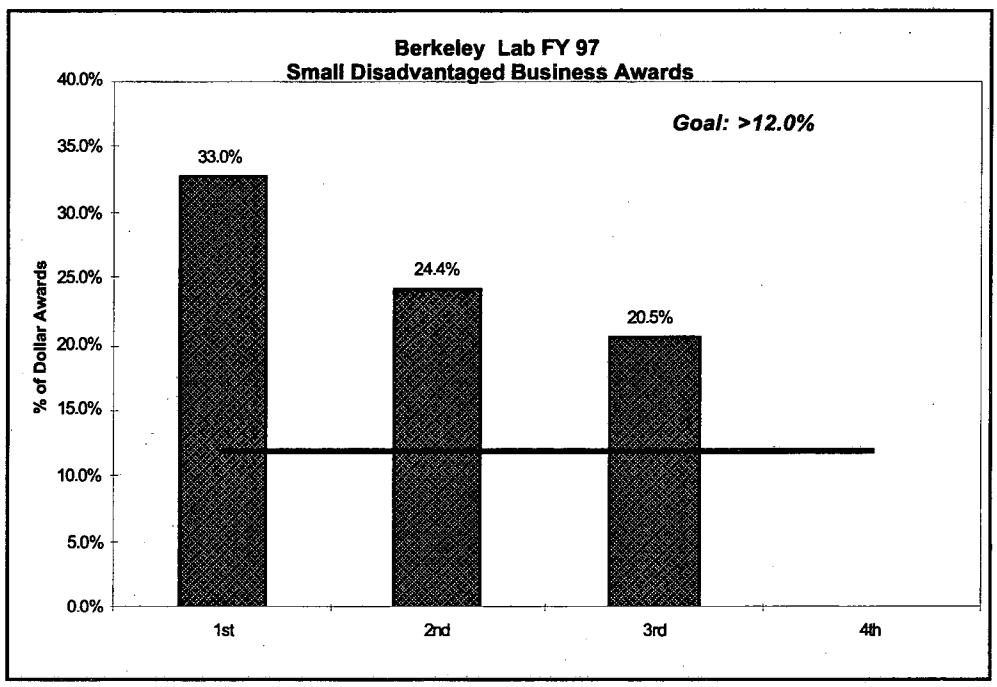
The Laboratory has found that pursuit of cost effectiveness under Performance Objective 2 has had minimal impact on socioeconomic performance.

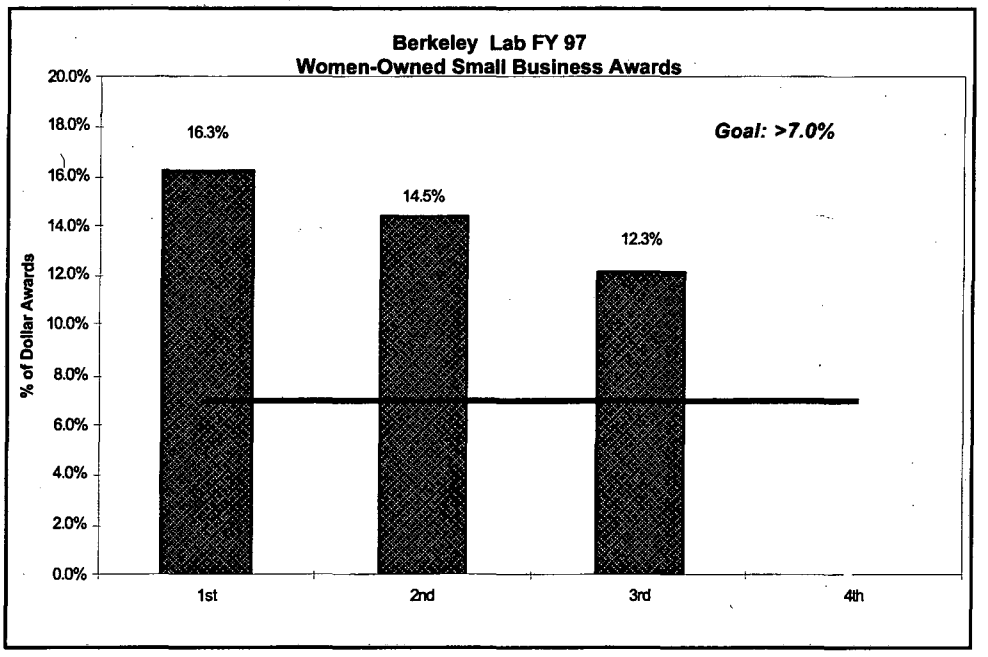
Supporting Data

The data below are derived from the Oracle database.




Berkeley Lab FY 97
Small Business Set-Aside Awards
50.0%
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
% of Dollar Awards
Goal: >10.0%
28.1%
29.8%
29.9%
1st
2nd
3rd
4th


Berkeley Lab FY 97
Small Disadvantaged Business Awards
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
% of Dollar Awards
Goal: >12.0%
33.0%
24.4%
20.5%
1st
2nd
3rd
4th


Berkeley Lab FY 97
Women-Owned Small Business Awards
% of Dollar Awards
20.0%
18.0%
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
16.3%
14.5%
12.3%
Goal: >7.0%
1st
2nd
3rd
4th

Self-Assessment Report for Fiscal Year 1997

Property Management

Ernest Orlando Lawrence Berkeley National Laboratory

Performance Characterization

In accordance with U.S. Department of Energy (DOE) Prime Contract DE-AC-03-76SF00098, Appendix F - Performance Objectives, Berkeley Lab Property Management documents the results of its Fiscal Year 1997 performance-based Property Management Self-Assessment. The assessment comprises the evaluation of four performance objectives, eight criteria, and eight measures.

The Laboratory Property Services organization continues its management approach of focusing on the customer, and its commitment to continuous improvement, while implementing the most cost-effective and efficient property management system.

Significant improvements have been achieved this year in the areas of accuracy of information and inventories. These improvements have been primarily based on establishment of a closer working relationship with the scientific divisions and development of more effective tools to assist the divisions in performing their tasks. The relationship has been strengthened due to bimonthly meetings with representatives from each of the divisions, monthly updates concerning accuracy of information, frequent electronic mail updates on the status of the inventory, and one-on-one meetings to resolve issues associated with performing and reconciling their property inventories.

In FY97, the Laboratory has progressed in decentralizing its property management activities. This has been a two-year process based on the cornerstone of stewardship and accountability. Our goal has been to make the organizational responsibility for property management at the division director level and to maintain accountability for property at the custodian level. This goal has been implemented as follows:

- Establishment of a Property Services Development Task Force, which concluded in the first quarter of FY97 and resulted in the development of a strategic plan with an action item list, schedule, and cost to allow Property Services to provide seamless, customer-focused, effective, and efficient operational support for the Laboratory community. The Task Force consisted of representatives from a variety of scientific divisions, participants from various administrative support organizations, and the Department of Energy Property Administrator. It met with all the division representatives to determine the areas where Property Services was and was not meeting their needs. Based on the Task Force recommendations, three working groups were subsequently formed. In addition, members of the Task Force were requested to participate on the Advisory Board to Property Services. The Working Groups — Procedures, Tagging, and User Criteria—are described in detail below.

- During the first quarter, the Property Services Home Page was introduced. The Home Page provides direct access to the various forms used in Property transactions; the Property Guide on-line; query and report functionality from the Property database; capability to process on-line transactions and submittals of forms; access to property available for reuse, donation and/or Bid-Lot-Sale; and a quick, easy method for

Property system users to send comments, feedback, and/or recommendations to the Property organization.

- FY97 has witnessed the most significant partnering between Property Services and the divisions. At no time in the past has the Laboratory experienced such a close interaction. This is primarily witnessed in the support for the Task Force, working groups, inventory of sensitive and controlled assets, the System Evaluation process, and implementation of a Property Services Advisory Board. All of these activities focused on customer needs.
- The FY97 inventory of sensitive and controlled assets introduced the implementation of a totally new approach for performing the inventory and a distributed, on-line, updated reporting tool that provided divisions with the ability to assess which specific assets still needed to be inventoried. This technique permitted divisions to produce their own current and up-to-date reports and supported division ability to control and utilize their resources. This methodology was a cornerstone of the decentralized inventory function and has been a critical element of our inventory success.
- A new approach has been developed and implemented in FY97 for the assignment of custodians. For the first time, division Property Representatives accepted the responsibility of ensuring the accuracy of custodian assignment of all new assets. This is a significant change from the prior approach, which enhances the recognition of individual accountability at a significantly higher level.
- Property Services implemented a new method of confirming the custodian assignment changes. In the past, custodians were never sure whether or not the input they submitted was received or processed correctly, since there was no direct follow-up communication back from the Property Office. In FY97, we initiated a process of distributing an electronic mail message advising the custodian of the change, with a copy sent to the Property Representative.
- The FY97 Walk-Through benefited from a request made in FY96 to modify the regulations in order to maintain effective implementation of the Walk-Through Program.
- The FY97 Precious Metal inventory was successfully concluded by following a defined plan, obtaining division input prior to initiating the inventory, and maintaining close coordination with the division Property Representatives.
- An evaluation of all aspects of the Property life cycle was performed utilizing the DOE-Contractor Personal Property System Review Checklist.
- The Motor Fleet Manager developed a Vehicle Fleet Management Plan that was approved by DOE. The objective of the plan is "to provide efficient use of government vehicles as resources for achieving operation and research goals of the Laboratory." The objectives will be met by implementing six elements of the plan and meeting the mileage goals established for the three classifications of motor vehicles.

Procedures Working Group

The Procedures Working Group was chaired by a division property representative with the participation of three other divisional representatives and a Property Services staff member. The group addressed 12 different aspects of the property life cycle: Assignment of Property, Tagging Procedures, Home Use Forms, Cannibalization and Salvage, Fabrications, Equipment Pools, Loans, Losses and Thefts, Subcontractor Replacement of Lab Equipment, Trade-ins/Exchanges Returns, Moves, and Inventory. The primary conclusions from this working group were:

- A new property system was needed since "it was not possible to generate new procedures in the context of the current system."
- Education was a root problem since established procedures and practices were not known or were ignored by the user.
- The user had no straightforward, easy way of accessing information.

Each of these points was reviewed by management, and processes were initiated to effectively respond to them. Members of the Advisory Board recognized that a new property application was needed and performed site visits to further evaluate potential property applications (defined in the original Property Services Development Task Force report). This was done in conjunction with the User Criteria Working Group to assure that the future Property system meets the user requirements.

Secondly, the Property Services Home Page was identified as a way to inform Laboratory personnel about property procedures and to provide a user-friendly approach for reference, as well as to process property-related transactions. Two specific results from the Home Page have already shown increased customer benefit. The first is the reduced effort for the customer to arrange for Borrows, Loans, and Off-Site Control files, while allowing direct user data input, which is transmitted electronically to Property Services. The second is the significant increase in the number of assets reutilized from excess property, based on having a listing of excess assets available to all employees. Both the ability to submit requests via the Web and the ease of accessing information provide strong steps forward in building a better relationship between the scientific community and the Property organization, while supporting consistent policies and procedures.

Tagging Working Group

The Tagging Working Group was chaired by a division staff member with the participation of three divisional representatives and a Property Services staff member. The group reviewed property identification labels in current use, evaluated existing tagging procedures, and identified concerns with the current bar code reader equipment being used at the Laboratory. Its primary recommendation was the establishment of a "start-to-finish system integration" between Procurement, Receiving, Accounting, and Property Services. In addition, the group made the following specific recommendations:

- If assets are not going to be received and tagged at central Receiving, the buyer should enter a record to designate that fact for the use of both Receiving and Property Services.

- At the beginning of the purchasing process, the item being purchased should be defined as either sensitive or controlled.
- The purchase order number should be used to create a unique property identification number.
- Bar code readers should be modified to allow transaction processing in the field and for data about the assets being inventoried to be stored.

The Tagging Working Group defined specific requirements for the interface between Procurement and Property, which management agreed to and supported. The first two recommendations have been incorporated into the requirements definition of the Procurement interface being developed by the Information System and Services Department.

Bar code label manufacturers are being contacted to determine if it is feasible to produce a bar code label locally, at Receiving, and have it provide the necessary long-term usage.

In response to the recommendation concerning modification of bar code readers, manufacturers have already been contacted regarding replacing our existing bar code equipment. To respond effectively to the recommendation, we are seeking to procure bar code readers that have the capability to store 4 MB of data.

User Criteria Working Group

The User Criteria Working Group consisted of five representatives from the scientific divisions and the Property Manager from Lawrence Livermore National Laboratory and was led by the Berkeley Lab Property Manager. The goal of this working group was to define the requirements of the Laboratory's future property application. The group started from the conclusions from the Task Force Report. These conclusions were then expressed in a listing of specific system requirements. Additional requirements were then defined based on the principles of user-friendliness, on-line data validation, and integration with the following established systems:

- Financial Management System
- Human Resources Information System
- Purchasing System
- Space Databases

A total of 27 specific user requirements were defined, with 14 mandatory requirements.

A subgroup of the Advisory Board then evaluated various commercial property applications against the defined user requirements. These applications were:

- PeopleSoft
- Oracle
- Maximo
- Sunflower Assets

In addition, several custom property applications developed by other DOE contractors were evaluated.

The conclusion of the evaluation process was that the Laboratory needed a Web-based property application to be fully functional and provide the needed customer focus. The only application that meets that requirement today is Sunflower Assets.

We will continue to improve our methods for controlling and managing property and our interface with the research community in FY98.

Performance Objective #1	**Accountability of Property:** *The Laboratory will achieve accountability for government personal property.* **(Weight = 60%)**

Summary

Significant success has been made in FY97 in the accountability of government personal property in two areas. For the first time, representatives from the divisions were the decision makers on the assignment of custodians for new assets. Secondly, the divisions assumed full responsibility for the inventory and reconciliation of controlled and sensitive property. These activities were supported by a new on-line distributed application that was created during the first quarter of FY97.

It was through their input that an Inventory Plan was developed and scheduled, and it was based on their work that the successful inventory was achieved. This is the first year that the division staff performed the complete inventory and not just the reconciliation as they had done in the past. This change alone has made the concept of accountability a strong and consistent message.

The control and accountability of property held by subcontractors has been consistently performed at the same high level.

Objective #1 Criterion 1.1

Laboratory Responsibility: *The accountable individual is identified for capital and attractive (sensitive) property, and the timeliness of such identification is measured.* **(Weight = 10%)**

Objective #1 Criterion 1.1 Performance Measure 1.1.a

Timeliness of Assignment: *Percentage of property records with the accountable individual assigned within 60 days of the property being recorded in the property information database will be measured.* **(Weight = 10%)**

Basis for Rating:

Percentage of property records with the accountable individual assigned within 60 days:

- Meets = 95 to 97.4%
- Exceeds = 97.5 to 99.4%
- Far Exceeds = 99.5% & Up

Performance Measure Result

The Laboratory developed a new methodology and approach for the assignment of custodians. The primary enhancement to the process was that divisions accepted the responsibility for assigning the appropriate custodian to new assets. This change was a building block in our effort to ensure stewardship at the division level and true accountability at the custodian level. Property Services instituted a new procedure of confirming each database change with the new custodian and the Property Representatives via an electronic mail message. Both of these changes, which were implemented in FY97, established a stronger level of accountability by the custodian and a shift of responsibility and ownership for the custodian assignment to the divisions. A secondary benefit of the new processes was the creation of a stronger working relationship between Property staff and the Property Representatives.

The division custodial assignment process was implemented based on a new query and reporting program that permitted a distributed on-line reporting capability, ToolKit. This new report generation functionality allowed data to be extracted in both summary and detail form. A comparison was made between the number of assets that were assigned a custodian within 60 days of the month when they were entered into the Property database to the total number of assets entered into the database for that month. The number of unassigned assets was based on the ToolKit report and the number of new assets entered in the property database was based on the Property Management and Accounting System (PMAS) report.

Due to the 60-day time-frame for assigning custodians, the first two months of the calendar year had no prior data in comparison, so there is no scoring for this period. DOE/OAK agreed to this approach.

Initially, it was anticipated that the summary report format from ToolKit would be sufficient to determine the level of performance on the measure. However, by April it was realized that the summary data was insufficient to make a valid analysis. Therefore, to validate the performance to date, the

oldest detail report was used as a basis for determining the number of assets that were unassigned during the months of January and February.

The ToolKit detailed report of unassigned assets dated June 2, 1997, was used as a basis of comparison for both March and April to compare against the number of assets that had been entered into the Property database.

The ToolKit detailed report of unassigned assets dated July 1, 1997, was used as a basis of comparison for May to compare against the number of assets that had been entered into the property database.

The methodology for tracking performance on this measure has required continued change and modification to generate accurate and timely reports. However, it was not until August, 1997, that a systematic reporting methodology was established. The results of these changes to the reporting methodology will be evident in the fourth quarter results.

The following table defines the percentage of assets assigned custodians within 60 days based on the indicated methodology:

Month	No. New Entries	No. Not Assigned	No. Assigned	Percent Assigned
January	312	151	161	52
February	91	64	27	30
March	181	42	139	77
April	155	19	136	88
May	171	75	96	56

The Laboratory's percentage of assigned assets is below the Meets rating. However, an effective process, with reporting methodology, is now in place and the responsibility is established with the divisions to ensure a better performance in the future.

Concluding fourth quarter data will be provided for this measure.

Successes/ Shortfalls

We developed a new query and report generation application in the ToolKit environment, which selects new assets added to PMAS that require a custodian be assigned, by division, during the first quarter of FY97.

The original plan to use the Summary Report format from ToolKit to measure timely results of custodial assignments was determined to be ineffective in April. Unlike the summary report, the detailed reports contained the necessary data to determine when the actual entry date of an asset occurred. Thus the performance was compared against detailed reports that were generated at various intervals during the reporting period.

An improvement has been the implementation of the new process to assign custodians by the divisions for the first time.

Supporting Data

- Summary report, by month, of new entries in PMAS.
- Summary and detailed reports from the ToolKit Custodial Assignment Report.

Objective #1 Criterion 1.2

Attractive Property Inventory: *The Laboratory shall conduct successful attractive (sensitive) property inventories as established in its inventory plan. Property accountability records shall be reconciled within 180 days after conclusion of the inventory.* **(Weight = 20%)**

Objective #1 Criterion 1.2 Performance Measure 1.2.a

Attractive Inventory Results: *Percentage of attractive (sensitive) property accounted for, by acquisition value, in the most recent attractive (sensitive) property inventory conducted will be measured.* **(Weight = 20%)**

Basis for Rating:

Percentage of property, by acquisition value, accounted for:

- Meets = 99.5%
- Exceeds = 99.6- 99.7%
- Far Exceeds = 99.8%-Up

Performance Measure Result

Agreement was reached with DOE/UC to perform a statistical sample of attractive (sensitive) Property for the FY97 inventory. This approach offered an opportunity to significantly reduce the expense of performing a wall-to-wall inventory. An inventory plan was prepared and agreed to by DOE/UC. The Property Representatives participated in the development of the inventory plan and recommended the specific time line for the inventory and the reconciliation.

The total number of attractive (sensitive) assets in the property database was 9,357. Based on a 99.9% confidence level, 2% error rate, and a ±1% precision rate, 1,730 assets were defined as required to be inventoried. In addition, 100% of all sensitive assets at employee homes and at off-site locations were added (518 assets). The total number of assets to be inventoried was 2,248, with an acquisition value of $38,827,684. The methodology used to perform the inventory verification (and the factors involved) were: bar code scan, bar code key entry, and keyboard entry for property at employee homes or taken off-site, and any asset retag occurrence.

All assets meeting the inventory criteria were coded uniquely, and an on-line ToolKit report generator was developed to provide divisions with their inventory lists as well as to query and variously sort criteria capability. This is the first year that the inventory was decentralized to 14 divisions that performed and completed the inventory process.

The inventory schedule was from January 15 to June 30, 1997, followed by the 3-month reconciliation. Initially, the divisions were slower than expected in getting started. Therefore, the Property Manager met with each Property Representative to obtain a commitment for a specific start and end dates within context of the approved inventory plan. This effort resulted in the inventory actually starting in March and continuing through June 30, 1997. Recognizing the need to maintain continued and timely support, a color-coded Inventory Schedule was added to the Property Services Home

Page to specifically identify divisions that were performing their inventory in a timely manner.

Inventories were performed based on the approved Inventory Plan, which accepted the following types of inventories: bar code scan, bar code key entry (when the tag was illegible), entry by Property Services for transactions like signed Dual Signature Inventory forms, and retagging of assets that had lost their original Property identification.

In support of the inventory, the Property Services staff completed the following tasks:

- Developed a new bar code training manual and provided one-on-one training to division personnel.
- Purchased additional bar code readers, so that a total of 12 readers were available to perform the inventory.
- Met with Property Representatives and Coordinators on a bimonthly basis to provide instructions, status updates, and use of appropriate forms and to share lessons learned between divisions.
- Resolved issues of assets crossing over divisional stewardship.
- Provided weekly updates on the status of the overall inventory.
- Property Specialists worked directly with specific divisions, providing direct support and guidance.
- Provided support on additional PMAS report retrievals.
- Property Services staff is performing an after-the-fact validation sampling utilizing methodology similar to that used in the actual inventory, per the Inventory plan.

The performance result for the FY97 attractive (sensitive) property inventory was 99.6% as of September 15, 1997.

Final reconciliation data will be provided for this measure.

Successes/ Shortfalls

Successes during the FY97 inventory of attractive (sensitive) property were:

- Developed an inventory status graph, by division, that was updated weekly on the Property Services Home Page. A copy was placed on the Director's office wall at the request of the Deputy Director for Operations.
- Utilized ToolKit distributed application that permitted current and accurate updates of the value and number of assets still to be inventoried. The ToolKit application provided individual division reports that could be sorted in four different methods.
- Established greater rapport with divisional Property Representatives as successes were recognized and alternative approaches were suggested during our meetings.
- Provided inventory information to the divisions through e-mail via *Property Notes*.

Supporting Data

- ToolKit summary and detail reports used to create the Inventory Status Graph.
- PMAS detail reports support Inventory Plan and statistical sampling methodology.

Objective #1 Criterion 1.3

Controlled* Property Inventory: *The Laboratory shall conduct successful controlled property inventories as established in its inventory plan. Property accountability records shall be reconciled within 180 days after conclusion of the inventory.* **(Weight = 20%)**

Objective #1 Criterion 1.3 Performance Measure 1.3.a

Controlled Inventory Results: *Percentage of controlled property accounted for, by acquisition value, in the most recent controlled property inventory conducted will be measured.* **(Weight = 20%)**

Basis for Rating:

Percentage of property, by depreciated value, accounted for:

- Meets = 99.5%
- Exceeds = 99.6- 99.7%
- Far Exceeds = 99.8%-Up

Performance Measure Result

Agreement was reached with DOE/UC to perform a statistical sample of controlled property for the FY97 inventory. This approach offered an opportunity to significantly reduce the expense of performing a wall-to-wall inventory. An inventory plan was prepared and agreed to by DOE/UC. The Property Representatives participated in the development of the inventory plan and recommended the specific time line for the inventory and the reconciliation.

The total number of controlled assets in the property database was 5,254. Based on a 99.9% confidence level, 2% error rate, and a ±1% precision rate, 1,512 assets were defined as needing to be inventoried. In addition, 100% of all controlled assets at employee homes and at off-site locations were added (27 assets). The total number of assets to be inventoried was 1,539, with an acquisition value of $36,236,689. The methodology used to perform the inventory verification (and the factors involved) were: bar code scan, bar code key entry, and keyboard entry for property at employee homes or taken off-site and any asset retag occurrence.

All assets meeting the inventory criteria were coded uniquely and an on-line ToolKit report generator was developed to provide divisions with their inventory lists as well as to query and variously sort criteria capability. This is the first year that the inventory was decentralized to 14 divisions that performed and completed the inventory process.

The inventory schedule that each division committed to was originally scheduled from January 15 to June 30, 1997, followed by the three-month reconciliation. However, the divisions were slower than expected in getting started. Therefore, the Property Manager met with each Property

*Controlled property is property with acquisition value of $5,000 or greater (includes capital property with acquisition value greater than $25,000 as outlined in the August 1, 1996, memorandum to Field Chief Financial Officers from E.E Smedley, Controller).

Representative to obtain a commitment for specific start and end dates within the context of the approved inventory plan. This effort resulted in the inventory actually starting in March and continuing through June 30, 1997. Recognizing the need to maintain continued and timely support, a color-coded Inventory Schedule was added to the Property Services Home Page to specifically identify divisions that were performing their inventory in a timely manner.

Inventories were performed based on the approved Inventory Plan, which accepted the following types of inventories: bar code scan, bar code key entry (when the tag was illegible), entry by Property Services for transactions like signed Dual Signature Inventory forms, and retagging of assets that had lost their original Property identification.

In support of the inventory, the Property Services staff completed the following tasks:

- Developed a new bar code training manual and provided one-on-one training to division personnel.
- Purchased additional bar code readers, so that a total of 12 readers were available to perform the inventory.
- Met with Property Representatives and Coordinators on a bimonthly basis to provide instructions, status updates, and use of appropriate forms and to share lessons learned between divisions.
- Resolved issues of assets crossing over divisional stewardship.
- Provided weekly updates on the status of the overall inventory.
- Property Specialists worked directly with specific divisions, providing direct support and guidance.
- Supported additional PMAS report retrievals.
- Property Services staff is performing an after-the-fact validation sampling utilizing methodology similar to that used in the actual inventory, per the Inventory plan.

The performance result for the FY97 controlled property inventory was 99.7% as of September 15, 1997.

Final reconciliation data will be provided for this measure.

Successes/ Shortfalls

Successes during the FY97 inventory of controlled property were:

- Developed an inventory status graph, by division, that was updated weekly on the Property Services Home Page. A copy was placed on the Director's office wall per the request of the Deputy Director for Operations.
- Utilized ToolKit distributed application that permitted current and accurate updates of the value and number of assets still to be inventoried. The ToolKit application provided individual division reports that could be sorted in four different methods.

- Established greater rapport with divisional Property Representatives as successes were recognized and alternative approaches were suggested during our meetings.
- Provided inventory information to the divisions through e-mail via *Property Notes*.

Supporting Data

- ToolKit summary and detail reports used to create the Inventory Status Graph.
- PMAS detail reports support Inventory Plan and statistical sampling methodology.

Objective #1
Criterion 1.4

Property Close-Outs: *The Laboratory will have an effective and timely process for processing property close-outs of those subcontracts with government-furnished and/or subcontractor acquired property.* **(Weight = 10%)**

Objective #1
Criterion 1.4
Performance Measure 1.4.a

Timeliness of Property Close-Outs: *Percentage of expired subcontracts with GFP/SAP in which property close out is completed within 6 months of receipt of the final inventory close-out report will be measured. Property close-out means that GFP/SAP has been accounted-for and a property disposition determination has been made utilizing one of the following options: returned, sold, transferred, donated, abandoned-in-place, placed under a bailment agreement or transferred to another subcontract. The property disposition determination process includes appropriate screening.* **(Weight = 10%)**

Basis for Rating:

Percentage of expired subcontracts with GFP/SAP in which property close out is completed within 6 months:

- Meets = 90-94.9%
- Exceeds = 95-97.9%
- Far exceeds = 98%-Up

Performance Measure Result

Twenty-five subcontracts had GFP/SAP or had the potential of acquiring GFP/SAP during the period October 1, 1996 through June 30, 1997. Seven of these subcontracts expired during this period. All seven subcontracts were closed out within six months of receipt of the close out reports from Procurement.

Through three fiscal quarters, performance in this area far exceeded the established criteria.

Fourth quarter results will be provided for this measure.

Supporting Data

Monthly reports defining status of subcontracts.

Performance Objective #2

Utilization of Property: *The Laboratory will ensure proper utilization of government property.* **(Weight = 15%)**

Summary

The Walk-Through Program and the vehicle utilization review process have both been improved from last year's approach. Both have benefited from the maturing process so that they now accomplish the goals of development of better systems for monitoring, higher level of commitment by division staff, and a better reporting and control of the process. The net result is a more definitively based scoring with reliable documented data.

Objective #2 Criterion 2.1

Property Utilization Program: *The Laboratory will ensure that property is reviewed for appropriate utilization and underutilized property is made available to others in a timely manner.* **(Weight = 5%)**

Objective #2 Criterion 2.1 Performance Measure 2.1.a

Measure Property Utilization: *Property utilization reviews shall be conducted according to the approved Walk-Through program and the timeliness of resolution of underutilized property findings will be measured.* **(Weight = 5%)**

Basis For Rating:

Timeliness of resolution of underutilized property:

- Meets = 90% of underutilized property findings are resolved within 90 days
- Exceeds = 95% of underutilized property findings are resolved within 90 days
- Far Exceeds = 100% of underutilized property findings are resolved within 90 days

Assumptions:

Resolution of underutilized property findings is defined as finding resolved or corrective action plan in place.

Performance Measure Result

The FY97 Walk-Through Plan was submitted and approved by DOE/OAK. A total of four divisions were included in the plan and the walk-throughs were completed as follows:

Division	Month	No. Assets
• OPS/Facilities	October	11
• Material Sciences	November	129
• Energy and Environment Technology	April	24
• Nuclear Sciences	June	6
	Total	170

All 170 assets identified as underutilized were appropriately resolved within the 90-day disposal period, based on documentation from the divisions and verification of receipt of the assets at the Excess facility.

Successes/ Shortfalls

DOE/OAK approved the request to recognize divisions that had shown good management of their assets in the performance of prior walk-throughs by allowing them to miss the walk-through this year.

Supporting Data

Memos documenting the Walk-Through Plan and close out reports from each walk-through.

Objective #2 Criterion 2.2

Vehicle Utilization Program: *The Laboratory will ensure proper utilization of Government motor vehicles.* **(Weight = 10%)**

Objective #2 Criterion 2.2 Performance Measure 2.2.a

Measure Vehicle Utilization: *Percentage of total eligible motor vehicles meeting local utilization criteria will be measured using the average utilization percentage for each class of vehicles. Reviews will be completed for each class of motor vehicles with established utilization criteria. The weight of the measure will be distributed equally across the number of classes of motor vehicles at each site unless otherwise agreed to by DOE and UC. Laboratory actions on underutilized vehicles, as defined by the Laboratory's Fleet Management Plan, will be described in the annual assessment report.* **(Weight = 10%)**

Basis For Rating:

The average utilization percentage for motor vehicles will be measured:

- Meets = 90-94.9%
- Exceeds = 95-97.9%
- Far Exceeds = 98%-Up

Assumptions:

- For this measure, Government motor vehicle is defined as those vehicles designed to be operated principally on the highways in the transportation of property or passengers, unless otherwise agreed to by the Laboratory, DOE and UC.
- The average utilization percentage will be calculated for each class of vehicles by dividing the overall utilization measured into the overall utilization standard. As an example, 10 vehicles with a utilization standard of 1000 miles per year would equate to an overall utilization standard of 10,000 miles per year. If the overall utilization measured 9500 miles, then the average utilization percentage would be 9500 / 10,000 or 95%.

Performance Measure Result

Three classes of motor vehicles were defined by the Fleet Manger and the criteria for each class was established. The classes and criteria are:

- Discretionary 200 miles per month
- Essential 50 miles per month
- Material Handling 5 hours of operation per month

A methodology was established to tabulate the usage for each class of vehicle during the first quarter of FY97, and since then, quarterly reports have been prepared and submitted to DOE. At the end of the third quarter, all three classes of vehicles had meet the average utilization criteria based on the methodology described below:

$$\frac{\text{total mile per class}}{\#\text{vehicles} \text{ ¥ } \text{criteria}} = \%$$

Discretionary	$\frac{10,218}{50 ¥ 200}$	=	102%
Essential	$\frac{61,641}{185 ¥ 50}$	=	666%
Material Handling	$\frac{655}{34 ¥ 5}$	=	385%

Last quarter data will be provided for this measure. The first through third quarter Report of Vehicle Utilization specified actions being taken to address vehicles that were not being utilized effectively. Examples of these actions are: replacing low mileage vehicles with high mileage vehicles; evaluating mileage in relationship to the period of time we have had use of vehicle; rotating with mail room vehicles; verifying data for accuracy; and replacing scooters with GSA vehicles. The FY97 Laboratory Fleet Management Plan will define the actions taken on underutilized vehicles after the fourth quarter data is obtained.

The Fleet Manager agreed that the FY97 Motor Vehicle criteria needs to be reassessed prior to establishing the FY98 utilization criteria.

Successes/ Shortfalls

The Fleet Management Plan was developed and approved by DOE/OAK. The plan defined the criteria for each class of vehicle and was utilized for the first time.

Supporting Data

Fleet Manager memos and data base printouts.

Performance Objective #3

Efficiency of Operations: The Laboratory shall ensure that property is managed at an optimum efficiency level while maintaining high levels of performance. **(Weight = 15%)**

Summary

The Laboratory selected two areas that have significant visibility to our primary customers and developed methods to reduce the amount of effort associated with performing these tasks. This process included looking at alternative methodologies and creating new approaches that recognized the benefit to our customers, while ensuring compliance to policy and procedures and consistency across the Laboratory community.

Objective #3
Criterion 3.1

Pursuing Cost Efficiency: *The Laboratory shall ensure that property processes/products are provided in the most efficient manner while maintaining high levels of performance.* **(Weight = 15%)**

Objective #3
Criterion 3.1
Performance Measure 3.1.a

Balancing Performance and Cost: *The Laboratory shall select a minimum of two areas in which to pursue cost efficiency while maintaining high performance. Selections will be provided to DOE and UC by October 1, 1996, for review and concurrence.*

Performance levels will be determined and measured against established performance gradients. In those areas where established performance gradients do not exist, performance levels will be measured from an established baseline. Baselines for cost and baselines for performance (if not already in a gradient) will be established and provided to DOE and UC by January 15, 1997, for review and concurrence. Baselines will be established using FY96 and/or 1st Quarter FY97 data.

The weight of the measure will be distributed equally across the number of selected areas unless otherwise coordinated with DOE and UC.
(Weight = 15%)

Basis for Rating:

The correlation of performance achieved and cost accrued will be measured for each area per the following table:

	PERFORMANCE LEVEL		
	Far Exceeds Rating or Improved Performance from Baseline	**Exceeds Rating or Maintains Performance at Baseline**	**Meets Rating or Operates within Acceptable Range of Performance**
Lower Cost	Far Exceeds	Exceeds	Meets
Same Cost	Exceeds	Meets	Needs Improvement
More Cost	Meets	Needs Improvement	Needs Improvement

Assumptions:

Consideration will be given to the impact caused by changes in business requirements. Renegotiation of gradients or baselines may be required as a result of such business requirement changes.

Performance Measure Result

On October 1, 1996 the Laboratory submitted to DOE/UC the selected areas to pursue cost efficiency during FY97. DOE/UC concurrence was obtained. The two areas selected for improvement of performance and cost efficiency were:

- Performing the precious metal inventory.
- Reducing the time frame for disposing of idle assets from walk-throughs.

Establishment of the baselines was completed and submitted on January 15, 1997, and methodology for determining cost savings was agreed to by DOE/UC.

Precious Metal

The precious metal inventory baseline is the expense of performing the FY96 inventory. The total expense for the FY96 precious metal inventory was $16,250. (The original value, $11,720, was understated due to one division misstating their level of effort.)

The methodology used to calculate the expense was based on determining the amount of effort associated with the inventory for the three largest precious metal holding divisions. This average value was then extrapolated across the universe (all precious metal holders), and the actual expense by Property Services staff was added in to establish a total expense for the inventory.

A variety of new approaches was implemented in the FY97 precious metal inventory to reduce the population and minimize the amount of effort associated with performing the task. A very significant factor differentiating between FY96 and the FY97 precious metal inventory was the time period spent doing the inventory. In FY96 the inventory required over three months to perform and close out, while in FY97 it was completed in a month and a half. Other methods applied to save time, decrease effort, and reduce cost were:

- Prior to performing the inventory, an analysis was made to determine which holders had very small quantities of precious metals and to recommend they either turn the metals back into Stores or to transfer the holdings to another holder who had more precious metals.
- Divisions were notified well in advance of the inventory so they could plan the necessary resources to perform the inventory.
- Input from the Property Representatives was obtained to assist in determining methodology to be used for the inventory.
- Property Services worked with the divisions to define a schedule of completion and utilized a new reporting format to ensure close coordination.
- An analysis was performed to determine how many holders had precious metals for over two years without any transactions. The reasoning was that these holders were not using the metals in a consumable environment, but instead were using the metals as a crucible

for mixing, in a target chamber, coating an instrument, etc. Based on this analysis, the Laboratory requested a deviation from performing the inventory for one year. DOE/OAK agreed to the deviation. A total of 41 precious metal holders met the criteria of the waiver and 33 holders became eligible not to be inventoried under the deviation.

The net result of this effort was to significantly reduce the cost in FY97, compared to FY96, while simultaneously increasing performance through the use of more effective planning, working with our customers, establishing a reporting mechanism to ensure timely response, and ensuring an overall process improvement. There were no unaccounted-for losses of precious metals in either FY96 or FY97.

The total expense for the FY97 precious metal inventory was $8,255. This constitutes almost a 50% reduction in expense compared to the FY96 expense ($16,250). This cost efficiency in precious metal inventories was reached while establishing improved performance by reducing the level of effort, using advance planning, and working more closely with the divisions.

Walk-Throughs

The goal was to reduce the overall expense of disposing of idle assets by reducing the time frame for disposition. Agreement was reached with DOE/ UC that a comparison between FY95 and FY97 based on the number of assets processed in the 30-, 60-, 90- and 120-day time periods would be used for determining performance. The following were the agreed-upon factors:

- Number of idle assets disposed of within 30 days times $25.
- Number of idle assets disposed of within 60 days times $50.
- Number of idle assets disposed of within 90 days times $75.
- Number of idle assets disposed of within 120 days times $100.

Based on these factors, the FY95 number of assets disposed of in the referenced time frames equals $29,775. In comparison, the FY97 number of assets disposed of in the referenced time frames equals $9,650.

Besides achieving a significant savings between FY95 and FY97, agreement was previously reached with DOE and UC regarding the performance gradient to be used. The prior gradient established was the following: if at least 25% of the items identified as idle were acted upon within 60 days, that would indicate a sufficient level of cost efficiency to rate a Far Exceeds performance. Concurrence from DOE and UC was agreed to as of April 15, 1997. Sixty-four percent of the FY97 idle assets were acted upon during the first 60 days of the disposition process, per the Comparison of Disposition table included in the Supporting Data section.

The result of the FY97 Walk-Through effort was to significantly shorten the response period for the disposition of assets identified as idle and simultaneously to improve performance by closing out actions on 68% of the idle assets within 60 days (FY95 for the same period was 23%). By closing out all actions within 90 days, in FY97, there was no need to develop Corrective Actions. This cost reduction in walk-throughs was

realized while maintaining the same high level of performance based on our established baseline.

Successes/ Shortfalls

Closer working relationship between division personnel and Property Services promoted the expedient disposition of idle assets.

Supporting Data

- Memos and spreadsheets.

Comparison of Disposition Time Periods for Idle Property

Time Period		No. Items	Factor	Total	%
FY95	30	34	$ 25	$ 850	8%
	60	58	$ 50	$ 2,900	15%
	90	175	$ 75	$ 13,125	44%
	120	129	$100	$ 12,900	33%
Total		396		$ 29,775	100%
FY97	30	6	$ 25	$ 150	4%
	60	110	$ 50	$ 5,500	64%
	90	54	$ 75	$ 4,050	32%
	120	0	$100	$ 0	0%
Total		170		$ 9,700	100%

Performance Objective #4	**Management of Business Requirements to Meet Customer Needs:** *The Laboratory shall ensure that Property Management programs are customer-focused, consistent with approved policies and procedures and applied consistently throughout the Laboratory.* **(Weight = 10%)**
Summary	Agreement was reached with DOE/OAK to utilize a pre-existing set of review questions to respond to the performance measure. In addition, the conclusions and actions based on the Property Services Development Task force were significant factors in our customer focus and the approach we used to implement new processes.

Objective #4 Criterion 4.1

System Evaluation: *The Laboratory shall conduct, document, and report annually, the results of a successful property management system evaluation. The Laboratory shall develop and submit a risk-based system evaluation plan to DOE and UC no later than October 1, 1996, for review and concurrence.* **(Weight = 10%)**

Objective #4 Criterion 4.1 Performance Measure 4.1.a

Assessing System Operations: *The Property Management System Evaluation Plan shall include criteria to establish that 1) procedures and implementation of procedures are customer-focused, 2) property programs are consistent with approved policies and procedures and 3) programs are applied consistently throughout the Laboratory. The property processes shall be measured against identified system evaluation criteria established in the plan. If deficiencies/opportunities for improvement are identified, management's response to such shall be measured in terms of cost / risk analyses applied.* **(Weight = 10%)**

Basis for Rating:

- Meets: Good performance levels reported for many to most system criteria. If deficiencies and /or opportunities for improvement are identified, management's cost benefit analyses and risk assessments are good. Implementation of remedial actions is appropriate in many to most cases.
- Exceeds: Good to excellent performance levels reported for most system criteria. If deficiencies and /or opportunities for improvement are identified, management's cost benefit analyses and risk assessments are good to excellent. Implementation of remedial actions is appropriate in most cases.
- Far Exceeds: Excellent performance levels reported for most system criteria. If deficiencies and /or opportunities for improvement are identified, management's cost benefit analyses and risk assessments are excellent. Implementation of remedial actions is appropriate in most cases.

Assumptions:

- The System Evaluation Plan shall describe the criteria and acceptable thresholds for each criterion. In addition, the plan shall describe the evaluation methods to be used if deficiencies/opportunities for improvement are identified.

Performance Measure Result

Agreement was reached with DOE/OAK to utilize the Contractor Personal Property System Review (CPPSR) checklist as an evaluation plan. The CPPSR contains 10 specific property management functional areas (listed below). Since the CPPSR checklist is based on DOE's risk-based criteria for evaluating contractor property management systems, it provided a similar basis for the Laboratory. The ten functional areas are:

1. Directives and Guidance
2. Organizational Structure
3. Career Development Plans and Training
4. Quality Attainment and Checks and Balances

5. Controls Over Subcontractor Held Property
6. Management and Control of Equipment
7. Management of Supplies and Materials
8. Storage and Warehousing
9. Reutilization and Disposal
10. Motor Vehicle Management

Prior to initiating the functional reviews, it was recognized that several of the functional areas were directly under the responsibility of the Property Manager and the Property Services organization. To ensure that an effective review was performed and the potential risks associated with the specific functional areas were appropriately addressed, personnel from divisions were requested to perform these reviews. To enable division personnel to respond to the CPPSR checklist questions, interviews were held with various Laboratory staff members to respond to the questions involved.

It was determined that the Quality Attainment and Checks and Balances functional review was most significant and most prone to risk, since it involved a review of the controls within the Property Services organization. Therefore, two division personnel were requested to support this review, with a Property Services staff member acting as coordinator.

In only two cases was a Property Services Staff member the evaluator during the Self-Evaluation: at the review of Controls over Subcontractor Held Property and at the review of Management and Control of Equipment. In the first case, the DOE/OAK Property Administrator participated in the review with the Laboratory Property Manager. In the second case, a divisional staff member and a lead accountant interviewed the Property Manager.

Property Services either performs or has direct responsibility over the first six of the ten functional areas. In five of these six areas, personnel from scientific divisions either performed the review or worked with a Property Specialist to complete the review. The other four functional areas are under the responsibility of the Facilities Department and the Property Services staff performed the reviews. (A listing of the areas and the participants is included in the documentation.)

The FY97 Evaluation Plan on Self-Assessment was submitted and approved by DOE and UC. The plan identified the number of positive responses and recommendations followed to determine the level of performance. The table below identifies these factors:

Score	Response	Factors
Meets	Positive Findings = 70%	Recommendations followed 80%
Exceeds	Positive Findings = 80%	Recommendations followed 90%
Far Exceeds	Positive Findings = 90%	Recommendations followed 100%

The CPPSR checklist contained a total of 169 review criteria. One hundred sixty-four, or 97%, of the total were responded to in a positive manner.

During the process of performing the functional reviews, three recommendations were made as part of the reports. These recommendations were implemented as follows:

1. Career Development Plans and Training Recommendation: The scientific community should be kept up-to-date on policy and calendar changes through *Currents* and the Web. Implementation: All Laboratory employees are advised about policy changes through *Currents*, the Property Services Home Page on the Internet, or the Laboratory's news bulletin that is published each week on the Internet.

2. Quality Attainment and Checks and Balances Recommendation: Property Services should continue to hold staff meetings on a regular basis to ensure current policy and other information is disseminated to Property Services Staff on a timely basis. Implementation: Property Services has continued to hold regular monthly staff meetings.

3. Quality Attainment and Checks and Balances Recommendation: Property Services should present a strategic plan implementation progress report every six months to Division Administrators, Property Representatives, and Property Coordinators. Implementation: Management determined it was more cost-effective to inform these groups when items directly affecting them are implemented. This is being done primarily through the following methods: quarterly meetings with the Liaisons from the Administrative Services Department; bimonthly meetings with Property Representatives and Property Coordinators; schedule and calendar updates displayed on the Property Services Home Page; and electronic mail distribution of *Property Notes*.

All three of the specific recommendations were responded to in a positive manner.

Several other actions or conclusions from the reviews were separate from the specific recommendations identified in the reports. They are:

- While performing the Storage and Warehousing functional review, a significant amount of cable and wiring transferred from the Superconducting Super Collider in Texas was noted. As a result, the DOE/OAK Property Administrator, who participated in the review, and the Property Manager were to determine if there was a continued need to store the spools of cable and wiring and whether or not there was a defined future requirement. The conclusion was that DOE/HQ had requested the Berkeley Lab to store the cable and wiring, and Headquarters is currently evaluating their future requirements and need for continued storage.
- The functional review of Reutilization and Disposal pointed out the lack of condition coding of property sent to Excess for disposal by the prior custodian. The result of this finding was an agreement to work with Transportation, Warehouse, Excess, and the Property Services organization to create a new form that would be used to identify the condition code of assets being turned into the Excess organization. The

new form will replace the prior delivery receipt form used by Receiving to ensure hand receipts were obtained by Transportation upon delivering sensitive property assets. The new form will now be a multifunctional form. Agreement has been reached on its layout, number of copies, and distribution. An order has been placed to print the new form for implementation. This new form will also resolve issues previously identified by the Property Services Development Task Force concerning the lack of signed receipts for property sent to Excess.

- During the functional review of the Control Over Subcontractor Held Property, which was performed with the participation of the DOE/OAK Property Administrator, the Laboratory was requested to provide additional feedback on two areas: copies of the subcontract checklists referencing Government property provided to a subcontractor and authorizations for use of equipment items where requested. Copies of the three checklists utilized by Procurement were provided and the authorization for using Government property was addressed.

The CPPSR checklist incorporates specific questions relating to factors associated with the evaluation of the ten functional areas. These factors include the following: verification that the procedures are customer-focused; validation that the property programs are consistent with approved policies and procedures; and consistent application of approved policies and procedures throughout the Laboratory. The following examples illustrate how these factors were evaluated:

Customer Focus of Policies and Procedures

- The Organizational Structure Functional Review references several specific criteria that are relevant to the decentralizing of the Property Services organization and relationship with Laboratory customers.
- The Quality Attainment and Checks and Balances Functional Review discusses issues of the relationship between Property Services and other Laboratory administrative organizations that are Property customers.
- The Management and Control of Equipment Functional Review discusses instructions to the Laboratory community regarding the use, loaning, and borrowing of property.
- Management of Supplies and Materials Functional Review assesses customer needs and use of precious metals and the necessity of transferring precious metals when an employee terminates the Laboratory.

Consistent Policies and Procedures

- The Directives and Guidance Functional Review clearly establishes the baseline that the Laboratory has established property policies and procedures. In addition, each of the functional reviews determined that Property programs are consistently operated in conformance with approved policies and procedures.
- The Controls Over Subcontractor-Held Property Functional Review defined specific processes that occur, indicating the follow-through with established policies and procedures.

- The Reutilization and Disposal Functional Review describes the consistent approach and opportunity all Laboratory employees have to make use of excess property via the Property Services Home Page.
- The Motor Vehicle Management Functional Review establishes the fact that consistent policies and procedures are used throughout the Laboratory regarding vehicles.

Consistent Property Program

- The Directives and Guidance Functional Review inquires about the establishment and dissemination of contractor property management operating procedures. The initiation of the Property Services Home Page has provided an exceptional opportunity to provide all Laboratory employees with a single reference regarding approved Property policies and procedures, the on-line Property Guide.
- The Quality Attainment and Checks and Balances Functional Review discussed the concept of obtaining feedback from the Laboratory community to ensure consistent application. Based on the significant customer feedback associated with the Property Services Development Task Force, the Property program is consistent.
- The Motor Vehicle Management Functional Review responds to the issues of ensuring that vehicles are fully utilized or otherwise made available to other Laboratory users to ensure consistent application of approved policies and procedures.

The CPPSR Checklist identified that the Property program is customer-focused, with policies and procedures consistently applied throughout the Laboratory. No significant inadequacies were identified. The questions that were negatively responded to were due to incomplete data being provided or were based on concerns that had been previously identified and actions initiated to resolve the issues. Out of 169 questions, 164 were responded to positively, resulting in a 97% positive response rate. All recommendations and actions identified during the review were responded to in an effective manner. The conclusion of the Self-Evaluation is that there are areas that need continual monitoring and improvement, but that in general the Laboratory's Property Management Program is competent.

Supporting Data

Copies of the reports from each of the 10 areas reviewed are included in the documentation.

LABORATORY-DIRECTED INDEPENDENT EVALUATIONS

BERKELEY LAB

Protocol for FY 97 Evaluation of Appendix F Self-Assessment

1. PURPOSE

This protocol describes the roles and responsibilities and methods by which an independent, Berkeley Lab-directed evaluation will be performed for the Laboratory's Appendix F Self-Assessment. The evaluation assures that the functional self-assessments are credible and that the conclusions are supported by documented data. The evaluation is performed in accordance with guidance from the University of California, Office of the President (UCOP).

This protocol applies to the evaluation teams, the Berkeley Lab Functional Managers, and the UCOP and DOE observers. An evaluation team is designated for each of the Functional Areas: Laboratory Management, Environment, Safety and Health (ES&H), Environmental Restoration and Waste Management, Facilities Management, Financial Management, Human Resources, Procurement, Property Management, and Information Management.

2. ROLES AND RESPONSIBILITIES

Office of Contract Management (OCM)

- o Prepares, in coordination with the Office of Assessment and Assurance (OAA), the Appendix F Self-Assessment Schedule.

Office of Assessment and Assurance (OAA)

- o Designates and notifies teams. Team members must be independent from the functional areas they evaluate.
- o Prepares the evaluation schedule, Berkeley Lab protocol, checklist, and template for the team evaluation report .
- o Provides orientation to the Functional Managers, evaluation teams, UCOP observers, and DOE observers on the Berkeley Lab protocol.
- o Coordinates the evaluation activities of the Office of Contract Management (OCM), Functional Managers, evaluation teams, UCOP observers, and DOE observers.

Berkeley Lab Functional Managers:

- o Designate points of contact to meet with the evaluation teams and notify OAA.
- o Brief the evaluation teams on:
  - Appendix F performance objectives, criteria, and measures (including the assumptions and agreements)
  - Methods and data used to measure performance
- o Provide draft self-assessment reports to the evaluation teams no later than August 1.
- o Respond to evaluation team questions and recommendations in a timely manner.
- o Request feedback from observers, where desired.

o Notify and coordinate with OAA if there are any problems (e.g. regarding logistics, the evaluation guidelines, conflicts in interpretation of the assumptions and agreements).

Evaluation Team Leaders:

o Schedule teams to meet with Functional Managers for a briefing on the performance measures and methods of measurement.

o Notify the UCOP and DOE observers of briefing times and locations to provide them the opportunity to observe.

o Schedule the evaluation meeting(s) with the Functional Manager and the observers.

o Notify and coordinate with OAA if there are any problems (e.g. regarding logistics, the evaluation guidelines, conflicts in interpretation of the assumptions and agreements).

o Ensure adherence to the evaluation schedule.

o Submit draft evaluation reports to the Functional Managers for factual accuracy reviews.

o Submit final evaluation reports (using the OAA template) to OCM and OAA; and submit completed checklists to OAA.

Evaluation Teams:

[Note: The evaluations are not audits of the Functional Areas; they are Berkeley Lab management reviews. Their value is to ensure that the self-assessments adequately and accurately address the performance measures, assumptions, and agreements.]

o Evaluate the self-assessments for the following:

- The performance objectives, criteria, measures, assumptions and agreements documented in the Contract are addressed properly, completely, and accurately
- Supporting documentation is included or referenced
- Conclusions are supported by the data presented; validate conclusions where deemed appropriate (e.g. using statistical methods)
- Methods used to assure data accuracy and validity are sound and adequate
- Barriers to improvement (i.e., root causes) are identified
- Improvement actions are specified where required and appropriate

o Recommend to the Functional Managers ways to improve the quality or correct deficiencies in the draft self-assessment reports.

o Document the team's findings using the OAA-generated checklist (attached).

o Generate draft and final evaluation reports (attached).

Observers:

[Note: UCOP and DOE observers participate as witnesses. They verify that the Berkeley Lab evaluation, an internal management process, is indeed an independent and valid activity. Observers may actively participate in the evaluation process at the request of Berkeley Lab participants. Some DOE observers will have had an opportunity to review Appendix F progress and to validate assessments through the course of the fiscal year as part of Operational Awareness]

o Attend the Berkeley Lab-sponsored training on its Appendix F Independent Evaluation process

Attend the evaluation team meetings (including briefings, where feasible) with the Functional Area representatives.

o Provide feedback to Berkeley Lab teams or Functional Managers, where requested.

o Notify OAA of any observed problems in the evaluation proceedings

3. PROCEDURE AND SCHEDULE

3.1 **OAA Orientations**: OAA provides individual orientations to the Berkeley Lab Functional Managers, and evaluation teams on the Berkeley Lab evaluation protocol, calendar, and deliverables (May - June). OAA communicates protocol to UCOP and DOE (June).

3.2 **Functional Manager Briefings**: Each Functional Manager briefs the evaluation team and observers (where feasible) on the performance objectives, criteria, and measure (June - July).

3.3 **Evaluation Process Kick-Off Meeting**: OAA meets with evaluation team members prior to commencing the formal evaluation process. The purpose of the meeting is to ensure that issues or questions are resolved and to review the evaluation protocol, calendar, and deliverables (August 1).

3.4 **Formal Evaluation Process:**

3.4.1 Functional Managers provide **draft self-assessment reports** to the evaluation team members for their review (by August 1).

3.4.2 Each team leader schedules the **first evaluation meeting** with the Functional Manager and the observers. Questions or requests for additional information as a result of the team's initial review of the draft self-assessment report should be communicated to the Functional Manager in advance of the first meeting, where possible. Any subsequent exchange(s) of information should be handled through a follow-up meeting or other mutually agreed upon means of communication. (August 4 - 29).

3.4.3 Each team evaluates the self-assessment material using the checklist and completes a **draft evaluation report.** Each team leader schedules a **factual accuracy meeting** with the Functional Manager to review the draft evaluation report. The team leader notifies OAA and the observers of the meeting time and location (August 4 - 29)

3.4.4 Each team leader **submits** to OCM and OAA **the evaluation report** and submits to OAA the completed checklist and any supporting notes and validation results (by September 2).

3.5 **Evaluation Debriefing**: OAA meets with the evaluation teams and Functional Managers to identify noteworthy evaluation or self-assessment techniques, areas for improvement, lessons learned, and institutional perspectives (September).

4. REFERENCES

UCLAO Self-Assessment and Annual Review Manual
Contract 98

5. ATTACHMENTS

List of Evaluators and Observers - Berkeley Lab, FY 97
Evaluation Report Template
Evaluation Checklist

List of Evaluators and Observers - Berkeley Lab FY 97 Independent Evaluation of the Appendix F Self-Assessment

Functional Area	Berkeley Lab Evaluators				External Observers	
	Lead		Team Members		U.C. Functional Manager	DOE Functional Manager
Laboratory Management (Functional Mgr: Michael Chartock)	Adel Flores 486-6562 fax: 7077 ANFlores@lbl.gov	Internal Audit Services & Assessments	Bert H. Schleifer 486-5261 BHSchleifer@lbl.gov Meredith Montgomery 486-4493 MEMontgomery@lbl.gov	Facilities Depart. Admin. Services Depart.	Buck Koonce 987-0738 fax: 839-3831 buck.koonce@ucop.edu	Dick Nolan Dick.Nolan@Oak.DOE.gov
ES&H (Functional Mgr: David McGraw)	Irene Kan 486-6122 fax: 7077 ifkan@lbl.gov	Internal Audit Services & Assessments	Norman Edelstein 486-5624 NMEdelstein@lbl.gov Otis Wong 486-4046 ONWong@lbl.gov Don Rondeau 486-4814 DJRondeau@lbl.gov Pat Thomas 486-6098	Chemical Sciences Division Internal Audit Services Engineer'g. Division AFRD	Howard Hatayama 987-0801 fax: 839-3831 howard.hatayama@ucop.edu Ken Groves	Hattie Carwell 486-4296 fax:486-4710
Environmental Restoration & Waste Mgt. (Functional Mgr: David McGraw)	Irene Kan 486-6122 fax: 7077 ifkan@lbl.gov	Internal Audit Services & Assessments	Pat Thomas 486-6098	AFRD	Howard Hatayama 987-0801 fax: 839-3831 howard.hatayama@ucop.edu Ken Groves	Hattie Carwell 486-4296 fax:486-4710
Facilities Management (Functional Mgr:Robert Camper)	Irene Kan 486-6122 fax: 7077	Internal Audit Services & Assessments	Dick Dicely 486-5067 fax: 6060 RSDicely@lbl.gov	Computing Sciences Directorate	Steve McGrath 987-0703 fax: 839-3831 steve.mcgrath@ucop.edu	John Gonzales 637-1689 john.gonzales@oak.doe.gov

August 18, 1997
Office of Assessment and Assurance (I. Kan)

Functional Area	Berkeley Lab Evaluators				External Observers	
	Lead		Team Members		U.C. (Primary Contact)	DOE (asterisk indicates FM)
Financial Management (Functional Mgr: John Patterson)	El Reyes 486-6561 fax: 7077 EMReyes@lbl.gov	Internal Audit Services & Assessments	J.A. Jezukewicz 486-5683 JAJezukewicz@lbl.gov	Energy & Environm't. Division	Sergio Nevel 987-0784 fax: 839-3831 sergio.nevel@ucop.edu	Lee Elster 637-1555 fax: 637-2006 lee.elster@oak.doe.gov
Human Resources (Functional Mgr: Cheryl McFate)	Adel Flores 486-6562 fax: 7077 ANFlores@lbl.gov	Internal Audit Services & Assessments	Irene Kan 486-6122 fax: 7077	Internal Audit Services & Assessments	Sam Gibson 987-0486 fax: 839-3831 sam.gibson@ucop.edu	Donna Kelly 637-1822 fax: 637-2008 donna.kelly@oak.doe.gov
Procurement (Functional Area Contact: Ken Woodruff)	Otis Wong 486-4046 fax: 7077 ONWong@lbl.gov	Internal Audit	Susan Waters 486-5690	Comput'g Sciences Directorate	Chuck McDonald 987-0783 fax: 839-3831 chuck.mcdonald@ucop.edu	Joann van Guillory 737-1900 Joann.vanguillory@oak.doe.gov
Property Management (Functional Area Contact: Ken Woodruff)	Otis Wong 486-4046 fax: 7077 ONWong@lbl.gov	Internal Audit Services & Assessments	Barbara Thibadeau 486-4026 fax: 486-6003 BMThibadeau@lbl.gov	AFRD	Chuck McDonald 987-0783 fax: 839-3831 chuck.mcdonald@ucop.edu	John T. Morgan 637-1761 john.morgan@oak.doe.gov
Information Management (Functional Area Contact: Dave Stevens)	Irene Kan 486-6122 fax: 7077 IFKan@lbl.gov	Internal Audit Service & Assessments	Glen Dahlbaka 486-5358 GHDahlbaka@lbl.gov	Directorate	Sam Gibson 987-0486 fax: 839-3831 sam.gibson@ucop.edu	Dru Burks 637-1738 fax: 637-2009 dru.burks@oak.doe.gov

Berkeley Lab Appendix F Self-Assessment Evaluation Report - FY 97

Functional Area:

Evaluation Team (name, title, organizational affiliation):

Overall Evaluation:

Accuracy and Completeness:

Adequacy of Supporting Documentation:

Recommendations (if any):

Signatures:

Name (Team Leader) Date

Name Date

Berkeley Lab
FY 97 Appendix F Self-Assessment Evaluation Checklist

Functional Area:_____

Performance Measure Number:

Notes (on performance objective, criterion, measure, methods, Contract assumptions and agreements):

Evaluation Checklist:

1) Are the performance objective, criterion, and measure addressed properly, completely, and accurately? Does the performance measurement method adhere to the Contract 98-specified assumptions and agreements?

2) Is the supporting documentation included or referenced?

3) Are conclusions supported by the data presented? (Describe any validation activities and results.)

4) Are the methods used to assure data accuracy and validity sound and accurate?

5) Are barriers to improvement (i.e., root causes) identified where appropriate?

6) Are improvement actions specified where required and appropriate?

Functional Area Representatives Interviewed (Name, Title, Organization):

Comments (e.g. Lessons Learned, Noteworthy Practices):

_____ _____
Name Date

Berkeley Lab Appendix F Self-Assessment Evaluation Report - FY 97

Functional Area: Laboratory Management

Evaluation Team:

Meredith Montgomery, Administrative Services Department
Bert Schleifer, Facilities Department
Adel Flores, Team Leader, Internal Audit Services and Assessments

Overall Evaluation:

We have reviewed the Laboratory Management Self-Assessment Report for FY 1997 as part of the annual Laboratory-directed evaluation process. Our review of the Self-Assessment report and supporting documentation indicates that the Laboratory adequately demonstrated that it has met the contractual performance objectives, criteria, and measures for FY 97. We concur with Laboratory Management's performance results and conclusions as presented in their Self-Assessment Report.

Our evaluation included reference to supporting data and interviews of key staff from the Office of Planning and Communications, Office of the Chief Financial Officer, and Office of Assessments and Assurance. Overall data accuracy was discussed at length during the evaluation meeting, and some clarifications and revisions were incorporated in the report. Our independent evaluation was observed by representatives from the Department of Energy and the University of California Laboratory Administration Office.

Accuracy and Completeness:

The performance results and conclusions are deemed accurate and complete. The Laboratory Management team responded to all of our questions to our satisfaction.

Adequacy of Supporting Documentation:

We consider the supporting documentation to be reasonable and adequate; they support the stated performance results.

Recommendations (if any):

None.

We appreciate the cooperation and assistance we received from the Laboratory Management Functional Manager and his team throughout the evaluation process.

Signatures:

Name (Team Leader)	Date 9/10/97
Name	Date 9/13/97
Name	Date 9/16/97

Berkeley Lab Appendix F Self-Assessment Evaluation Report - FY 97

Functional Area: Environment, Safety & Health

Evaluation Team:

Irene Kan, Lead, Environmental Engineer, Internal Audit Services and Assessments
Norman Edelstein, Acting Division Director, Chemical Sciences Division
Pat Thomas, ES&H Administrator, Accelerator and Fusion Research Division
Don Rondeau, Head, Division Technical Resources, Engineering Division
Otis Wong, Internal Audit Services and Assessments

Overall Evaluation:

Our review of the Environment, Safety and Health Self-Assessment report and supporting documentation indicates that the Laboratory adequately demonstrated that it has met and in some cases, exceeded the contractual performance objectives, criteria and measures for this FY 97 Appendix Self-Assessment. We base our conclusions on interviews of key staff from the Environment, Health and Safety Division, respectively, and on reviews of supporting documentation.

Accuracy and Completeness:

The performance results and conclusions are deemed accurate and complete.

Adequacy of Supporting Documentation:

The supporting documentation appear to support the stated performance results. We note for Performance Measure 3.1.a, the statistics for timely completion of corrective actions (as recorded on the LSAD database) may be misleading because many higher hazard deficiencies are corrected immediately without benefit of documentation on LSAD (in accordance with Lab policy). Timeliness of corrective actions may actually be better than measured. LSAD is used primarily to track corrective actions that are not implemented immediately because they are lower hazard or require time to identify the appropriate course of action(s).

Recommendations (if any):

None.

Signatures:

Irene Kan — Name (Team Leader) — 9/19/97 — Date

Patricia Thorn — Name — 9/18/97 — Date

Donald J. Rondeau — Name — 14 Sep 97 — Date

Irene Kan for NORMAN EDELSTEIN — Name — 8/18/97 — Date

Otis Wong — Name — 9/19/97 — Date

Berkeley Lab Appendix F Self-Assessment Evaluation Report - FY 97

Functional Area: Environmental Restoration and Waste Management

Evaluation Team:

Irene Kan, Lead, Environmental Engineer, Internal Audit Services and Assessments
Pat Thomas, ES&H Administrator, Accelerator and Fusion Research Division

Overall Evaluation:

Our review of the Environmental Restoration and Waste Management Self-Assessment report and supporting documentation indicates that the Laboratory adequately demonstrated that it has met the contractual performance objectives, criteria and measures for this FY 97 Appendix Self-Assessment. We base our conclusions on interviews of key staff from the Environment, Health and Safety Division, respectively, and on reviews of supporting documentation.

Accuracy and Completeness:

The performance results and conclusions are deemed accurate and complete.

Adequacy of Supporting Documentation:

Discussion of the data and results with the Lab specialists indicated that the conclusions and methodology were valid.

The self-assessment for Performance Measure1.4.a is tentative pending availability of data for the last quarter of FY 97. The Lab will provide Supplemental Data and update its self-assessment conclusions accordingly.

Recommendations (if any):

The evaluation team recommends clarification of the formula for the Site Completion Index.

Signatures:

Irene Kan — 9/19/97
Name (Team Leader) — Date

Patricia Thomas — 9/19/97
Name — Date

Berkeley Lab Appendix F Self-Assessment Evaluation Report - FY 97

Functional Area: Financial Management

Evaluation Team (name, title, organizational affiliation):

El Reyes, Internal Auditor, Internal Audit Services - Team Leader
Joe Jezukewicz, Division Administrator, Energy and Environment Division

Overall Evaluation:

We have reviewed the Financial Management Self-Assessment of their performance against the performance objectives, criteria, and measures in Appendix F, Part A of Contract 98. Our review and evaluation included interviews with Financial Management personnel and examination of supporting documents. Results of our evaluation which included comments that were not addressed or clarified in the self-assessment were provided to Financial Management. Revisions were made and incorporated in the final self-assessment results. Our independent evaluation was observed by representatives from both the Department of Energy and the University of California Laboratory Administration Office. In our opinion, the FY97 Financial Management Self-Assessment addressed properly and completely the performance objectives, criteria, and measures. Factors to be considered for a higher rating have been included by Financial Management in each performance measure. Improvement actions, where appropriate, have been identified. However, we did not evaluate the self-assessment results for Performance Measure 1.0 - Customer Focus and Satisfaction. This measure will be evaluated by designated University of California, Department of Energy, and Berkeley Lab representatives who will use a modified Malcom Baldridge scoring table.

We found the Financial Management staff to be well-prepared and knowledgeable in their responses. We appreciate the cooperation and assistance we received throughout the evaluation process.

Accuracy and Completeness:

The performance results and conclusions were deemed accurate and complete. Plan of actions are specified where required and appropriate.

Adequacy of Supporting Documentation:

Based upon our review of supporting information, performance results and conclusions reached for each performance measure, except for Performance Measure 1.0, were adequate and reliable.

Recommendations (if any):

Comments and suggested revisions were included in the final self-assessment results.

Signatures:

El Reyes	E. Reyes	August 28, 1997
Name (Team Leader)		Date
Joe Jezukewicz	Joe Jezukewicz	August 28, 1997

Berkeley Lab Appendix F Self-Assessment Evaluation Report - FY 97

Functional Area: Procurement

Evaluation Team (name, title, organizational affiliation):

Otis Wong, Lead Auditor, Office of Assessment and Assurance
Susan Waters, Division Administrator, Chemical Sciences and Materials Sciences Divisions

Overall Evaluation:

Based on the review of the FY97 Procurement Self-Assessment Report, the evaluation team concludes that the assessment report is accurate, complete and supportable in addressing the Procurement performance, objectives, criteria and measures (POCMs) described in Contract 98, Appendix F. The team notes that the POCMs required in-depth planning by the Procurement Department to establish baselines, goals and/or gradients to measure the performance and credible methodologies to retrieve and analyze the performance data. The report and supporting documentation fully demonstrate the comprehensive approach that Procurement instituted to address their POCMs.

The evaluation team validated the assessment results by tracing back to the source data/documents. For each POCM, the source data/documents reviewed by the team were sufficient to support the report results. It should be noted that Performance Measure 3.1.a and 3.2.a were not fully addressed because the results of the customer satisfaction survey are not due until 8/31/97. The report acknowledges that this data is not yet available.

Accuracy and Completeness:

The performance results and conclusions are deemed accurate and complete. The team concurs with the conclusions presented in the report.

Adequacy of Supporting Documentation:

The following supporting documentation validates the results and conclusions of the Procurement Self-Assessment Report:

PM 1.1.a. Assessing System Operations: The FY97 Procurement System Evaluation Plan provides a sound, systematic and responsive approach for the required assessment. The FY97 Procurement Assessment Reports describes the cost benefit analyses and risk assessments associated with the identified deficiencies. Procurement memos document the evidence of implementation of appropriate remedial actions and responsible and/or strong leadership.

PM 2.1a. Measuring Efficiency Gains: The FY97 POCM #2.1a. VBSA Benchmarks Plan establishes the baselines, goals and gradients for the measure. The Oracle database is used to track cycle time. Dedicated spreadsheets track and confirm performance for process cost, effective competition and procard cost savings.

PM 3.1.a. Working Customer Needs: The Customer Driven Improvement Plan identifies the customers and the method of customer interaction. Procurement memos and other documents provide the evidence of implementation of the plan. The Customer Satisfaction Survey, although not yet complete, is identified as the document to measure customer satisfaction.

PM 3.2.a. Customer Satisfaction Index: The FY97 Customer Survey Plan provide the basis for the customer satisfaction index. The survey results are not yet complete and available at the time of the evaluation.

PM 4.1.a. Measuring Supplier Performance: The FY97 Appendix F, Performance Measure #4.1.a. Goals and Gradients - Percentage of On-Time Deliveries Plan establishes the goals and gradients for the measure. The Oracle database tracks the on-time deliveries.

PM 4.2.a Meeting Socioeconomic Commitments: The FY97 Socioeconomic Goals for Contract DE-AC03-76SF00098 and the FY97 Small Business Goals identify the goals for this measure. Spreadsheet of FY97 subcontract awards confirms performance for meeting goals.

Recommendations (if any):

None

Signatures:

[signature]	9/8/97
Name (Team Leader)	Date
[signature]	Sept. 8, 1997
Name	Date

Berkeley Lab Appendix F Self-Assessment Evaluation Report - FY 97

Functional Area: Property Management

Evaluation Team (name, title, organizational affiliation):

Otis Wong, Lead Auditor, Office of Assessment and Assurance
Barbara Thibadeau, Accelerator and Fusion Research Division

Overall Evaluation:

Based on the review of the FY97 Property Management Self-Assessment Report, the evaluation team concludes that the assessment report is accurate, complete and supportable in addressing the Property Management performance, objectives, criteria and measures (POCMs) described in Contract 98, Appendix F. The team notes that the POCMs required in-depth planning by the Property Management Department to establish baselines, goals and/or gradients to measure the performance and credible methodologies to retrieve and analyze the performance data. The report and supporting documentation fully demonstrate the comprehensive approach that Property Management instituted to address their POCMs.

The evaluation team validated the assessment results by tracing back to the source data/documents. For each POCM, the source data/documents reviewed by the team were sufficient to support the report results. It should be noted that Performance Measure 1.2.a and 1.3.a were not fully addressed because the results of the property inventory are not due for completion until 9/30/97. The assessment report acknowledges that this data is not yet available.

Accuracy and Completeness:

The performance results and conclusions are deemed accurate and complete. The team concurs with the conclusions presented in the report.

Adequacy of Supporting Documentation:

The following supporting documentation validates the results and conclusions of the Procurement Self-Assessment Report:

PM 1.1.a. Timeliness of Assignment: ToolKit and PMAS databases tracks assignments, although the ToolKit database requires modification to provide the details necessary to accurately track the "within 60 days" performance requirement.

PM 1.2.a. Attractive Inventory Results: The FY97 Property Management Inventory Plan validates the inventory methodology. The inventory results were not available at the time of the evaluation to provide the reconciliation data.

PM 1.3.a. Capital Inventory Results: The FY97 Property Management Inventory Plan validates the inventory methodology. The inventory results were not available at the time of the evaluation to provide the reconciliation data.

PM 1.4.a. Timeliness of Property Close-Outs: The monthly status reports of GFP and SAP subcontracts identify the types and value of assets and dates of closeouts. Individual subcontract files also substantiate closeouts within the 6 month period.

PM 2.1.a. Measure Property Utilization: Walk-Through Reports and the attached inventory spreadsheets substantiate the identification of underutilized properties and the disposition of the properties within 90 days.

PM 2.2.a. Measure Vehicle Utilization: The Fleet Management Plan provides the methodology for measuring vehicle utilization. The Vehicle Utilization Report and the attached listing of vehicles and corresponding usage substantiate the identification of underutilized vehicles and their disposition.

PM 3.1.a. Balancing Performance and Cost: Measurement spreadsheets provide the detailed comparison of costs between fiscal years for performing the Walk-Throughs and the Precious Metal Inventory.

PM 4.1.a. Assessing System Operations: The FY97 Property Management Review Checklist and the Checklist responses are used to assess the Property Management system operations.

Recommendations (if any):

None

Signatures:

Name (Team Leader)	Date 8/29/97
Name	Date 8/27/97

Berkeley Lab Appendix F Self-Assessment Evaluation Report - FY 97

Functional Area: Facilities Management

Evaluation Team:

Irene Kan, Lead, Internal Audit Services and Assessments
Dick Dicely, Computing Sciences Directorate

Overall Evaluation:

Our review of the Facilities Management Self-Assessment report and supporting documentation indicates that the Laboratory adequately demonstrated that it has met the contractual performance objectives, criteria and measures for this FY 97 Appendix Self-Assessment. We base our conclusions on interviews of key staff from the Facilities Department and on reviews of supporting documentation.

Accuracy and Completeness:

The performance results and conclusions are deemed accurate and complete.

Adequacy of Supporting Documentation:

The supporting documentation is deemed adequate; they support the stated performance results.

Recommendations (if any):

None

Signatures:

Irene Kan — 9/12/97
Name (Team Leader) — Date

R L S Dicely — 9/12/97
Name — Date

Berkeley Lab Appendix F Self-Assessment Evaluation Report - FY 97

Functional Area: Human Resources

Evaluation Team:

Adel Flores, Lead, Internal Audit Services and Assessments
Irene Kan, Internal Audit Services and Assessments

Overall Evaluation:

Our review of the Human Resources Self-Assessment report and supporting documentation indicates that the Laboratory adequately demonstrated that it has met the contractual performance objectives, criteria and measures for the FY 97 Appendix F - Objective Standards of Performance. We based our conclusions on interviews of key staff from the Human Resources Department and the Office of Work Force Diversity, and on reviews of supporting documentation.

Accuracy and Completeness:

The performance results and conclusions are deemed accurate and complete for demonstrating "Meets" agreed upon gradients. We believe that performance results in the "Far Exceeds" range could be improved for Performance Measure 5.1 a.

Adequacy of Supporting Documentation:

The supporting documentation was adequate; it supported the stated performance results.

Recommendations:

None.

Signatures:

Adel Flores — 9/22/97
Name (Team Leader) — Date

Irene Kan — 9/19/97
Name — Date

Berkeley Lab Appendix F Self-Assessment Evaluation Report - FY 97

Functional Area: Information Management

Evaluation Team:

Irene Kan, Lead, Internal Audit Services and Assessments
Glen Dahlbacka, Directorate

Overall Evaluation:

Our review of the Information Management Self-Assessment report and supporting documentation indicates that the Laboratory has met, and in many cases, exceeded the contractual agreements established jointly among the Lab, DOE and University of California for this FY 97 Appendix Self-Assessment. It is our understanding that these agreements supercede or clarify the contractual performance measures for each of the performance objectives and criteria.

The basis of our evaluation reviews of all supporting documentation submitted for this report and interviews of key staff from Information Systems and Services, Computer Security Program, Telephone Services, Radio Frequency Program, and Technical and Electronic Information Department, respectively. The interviews indicated generally strong performance in strategic and tactical planning, self-assessment, follow up activities, and customer satisfaction.

Accuracy and Completeness:

The performance results and conclusions are deemed accurate and complete for demonstrating "Meets" agreed upon gradients. We believe that performance results in the "Far Exceeds" range could be improved.

Adequacy of Supporting Documentation:

The supporting documentation is adequate; it supports the stated performance results.

Recommendations (if any):

We recommend that future self-assessments also identify actions proposed or taken to improve customer survey response rates.

Signatures:

Irene Kan — 9/18/97
Name (Team Leader) — Date

Glen Dahlbacka — 9/19/97
Name — Date

ACRONYMS AND ABBREVIATIONS

Acronyms and Abbreviations

AAP	Affirmative Action Program
AAS	Account Authorization System
AAU	Account Authorization
ACGIH	American Conference of Governmental Industrial Hygienists
ACH	Automated Clearinghouse
ADSs	Activity Data Sheets
AEC	ALARA Executive Committee
AFRD	Accelerator & Fusion Research Division
AFSCME	American Federation of State, County, and Municipal Employees
AGMUS	Ana G. Mendez University System
AHD	Activity Hazard Documentation
AIP	Accelerator Improvement Projects
AL	action level
ALARA	As Low As Reasonably Achievable
ALS	Advanced Light Source
ANSI	American National Standards Institute
AOC	Areas of Concern
APS	Accounts Payable System
ASD	Administrative Services Division
AST	aboveground storage tank
ATM	automated teller machine
AWC	ALARA Working Committee
BAAQMD	Bay Area Air Quality Management District
BBAP	Behavior-Based Accident Prevention
BBSP	Behavior-Based Safety Program
BES	Basic Energy Sciences Office
BEST	Bioremediation Education, Science, and Technology Center
BLS	Bureau of Labor and Statistics
BS	Business Services
BSO	Berkeley Site Office
BTC	Building Tracks Council
Btu	British thermal unit
CA	Conference Accounting
CAMP	Capital Asset Management Process
CAP	Corrective Action Plan
CAS	Cost Accounting Standard(s)
CASB	Cost Accounting Standards Board
CDR	Conceptual Design Report
CEAC	Citizens' Environmental Action Committee
CEQA	California Environmental Quality Act
CFO	Chief Financial Officer/Chief Financial Office
CFP	Call for Proposal
CFR	California Code of Regulations
CIC	Continuous Improvement Center

CIEE	California Institute for Energy Efficiency
CNG	Compressed Natural Gas
CP	Conference Planning
CPPSR	Contractor Personal Property System Review
CRADA	Cooperative Research and Development Agreement
CRP	Community Relations Plan
CS	Computing Sciences
CSEE	Center for Science and Engineering Education
CST	California Service Tool
CXRO	Center for X-Ray Optics
CY	calendar year
DAC	Director's Action Committee
DCIA	Debt Collection Improvement Act
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOE/BSO	Department of Energy/ Berkeley Site Office
DOE/OAK	Department of Energy/ Oakland Operations Office
DOEMS	Department of Energy Management System
DP/ER	Defense Program/Energy Research
DTSC	California Department of Toxic Substance Control
E&E	Energy and Environment Division
EBMUD	East Bay Municipal Utility District
ECOR	Estimate of Cost and Obligation Requirement
EDI	Electronic Data Interchange
EDT	Employee Development and Training
EEO/AA	Equal Employment Opportunity/Affirmative Action
EH&S	Environment, Health & Safety Division
EM	Environmental Management
EMCS	Energy Monitoring and Control System
ENG	Engineering Division
EPA	Environmental Protection Agency
ER	Energy Research
ERAP	Emergency Readiness Assurance Plan
ERLTR	Energy Research/Laboratory Tech Transfer
ES&H	Department of Energy Environment, Safety & Health
ES&H	environment, safety & health
ESnet	Energy Sciences Network
EUVLLC	Extreme Ultraviolet Limited Liability Corporation
FAC	Facilities Department
FASA	Federal Acquisition Streamlining Act
FCR	Functional Cost Reporting
FFCA	Federal Facilities Compliance Act
FIMS	Facilities Inventory Management System
FIS	Financial Information Systems
FLSA	Fair Labor Standards Act
FM	Financial Management

FMCA	Financial Management Corrective Action
FMS	Financial Management System
FMSIC	Financial Management Systems Integration Council
FTE	full-time equivalent
FTP/FWP	Field Task Proposal/Field Work Proposal
FTPA	Field Task Proposal Agreement
FTU	Fixed Treatment Unit
FY	fiscal year
G&A	General and Administrative (expenses)
GAO	Government Accounting Office
GCIRMS	Gas Chromatograph Isotope Ratio Mass Spectrometer
GERT	General Employee Radiation Training
GFP	Government-Furnished Property
GIS	Geographical Information System
GPF	General Purpose Fund
GPP	General Plant Projects
GPP/NC	General Plant Project/Non-Capital
GSA	General Services Administration
GSF	gross square feet
GSO	Goods and Services on Order
GSRA	Graduate Student Research Assistant
HAPC	Hazard Assessment Program Coordinator
HEG	homogeneous exposure groups
HGL	Human Genome Laboratory
HP	Hewlett Packard
HQ	Headquarters
HR	Human Resources
HRIS	Human Resources Information System
HSI	Hispanic Serving Institutions
HWHF	Hazardous Waste Handling Facility
IAS	Internal Audit Services Department
IBM	International Business Machines
ICSD	Information Computing Sciences Division
IFA	Integrated Functional Appraisal
IG	Inspector General
IH	industrial hygiene
IHA	Integrated Hazard Assessment
IHEM	In-House Energy Management
IIA	Institute of Internal Auditors
IM	Information Management
IMA	Institute of Management Accountants
IMPACT	Internet-Mediated Partnership Between Colleges and Communities for Technology
INEL	Idaho National Engineering Laboratory
IPA	Intellectual Property Agreement
IRIS	Integrated Reporting and Information System

IRS	Internal Revenue Service
ISMS	Integrated Safety Management System
ISS	Information Systems and Services Department
IUT	Inter-University Transaction
JHQ	Job Hazard Questionnaire
JIT	Just-in-Time
JSU	Jackson State University
JWS	Joint Work Statement
LANL	Los Alamos National Laboratory
LBNL	Lawrence Berkeley National Laboratory
LCAM	Life Cycle Asset Management
LCATS	Laboratory Corrective Action Tracking System
LDRD	Laboratory Directed Research and Development Program
LETS	Laboratory Employee Time System
LIP	Line Item Project
LLNL	Lawrence Livermore National Laboratory
LLW	low level waste
LM	Laboratory Management
LOC	Letter of Credit
LR	Labor Relations
LSAD	Laboratory Self-Assessment Database
LSD	Life Sciences Division
LTO	Lease to Own
MARS	DOE Management Analysis Reporting System
MEI	maximally exposed individual
MEID	maximally exposed individual dose
MESH	Management of Environment Safety and Health
MIS	Management Information System
MOA	Memorandum of Agreement
MSD	Materials Sciences Division
MWIR	Mixed Waste Inventory Report
NCEM	National Center for Electron Microscopy
NEPA	National Environmental Policy Act
NERSC	National Energy Research Scientific Computing Center
NESHAP	National Emissions Standard for Hazardous Air Pollutants
NIH	National Institutes of Health
NSBP	National Society of Black Physicists
NTLF	National Tritium Labeling Facility
OAA	Office of Assessment and Assurance
OAK	(as in DOE/OAKland)
OAP	Operating and Assurance Program
OCTR	DOE Office of Computing & Technology Research
ODS	ozone depleting substance
OHER	Office of High Energy Research
OIG	Office of the Inspector General
OM	Occupational Medicine

OMB	Office of Management and Budget
OPA	Outstanding Performance Award
OPAC	Online Payment and Collection (system)
OPC	Office of Planning and Communications
OPS	Operations
ORPS	Occurrence Reporting Process System
OR	Occurrence Report
OSHA	Occupational Safety and Health Administration
OSRA	Office of Sponsored Research Administration
OSR	Operational Safety Requirement
OSTI	Office of Science and Technology Information
P2R	Performance/Progress Review
PAF	Personnel Action Form
PCB	polychlorinated biphenyl
PCC	Project Coordination Committee
PEL	Permissible Exposure Limit
PERB	Public Employee Relations Board
PET	Positron Emission Tomography
PHA	Preliminary Hazards Assessment
PI	Performance Improvement (or Principal Investigator)
PIT	Process Improvement Team
PO	purchase order
POCM	performance objective, criteria measure
PPD	Proposal Planning Document
PPOA	Pollution Prevention Opportunity Assessment
PPPE	Personal Property and Programmatic Equipment
PRC	Property Reuse Center
PRIP	Peer Review and Improvement Process
PTS	Progress Tracking System
R&D	research and development
RCM	Radiological Control Manager
RCRA	Resource Conservation and Recovery Act
RCT	reverse conducting thyristors (solid-state switch)
RFQ	Request for Quotation
RIF	reduction in force
RMI	repetitive motion injuries
ROI	Return on Investment
RPIE	Real Property Installed Equipment
RPM	The Regulations and Procedures Manual (or Risk-Based Priority Model (DOE))
RPP	Radiation Protection Program
RSC	Radiation Safety Committee
RWA	Radiological Work Authorization
RWP	Radiation Work Permit
S&E	scientists and engineers
SA	self-assessment

SAA	Satellite Accumulation Area (for hazardous wastes)
SAAR	Supervisor's Accident Analysis Report
SAP	subcontractor-acquired property
SA	Safety Analysis
SB/DB	Small Business/ Disadvantaged Business
SCI	Site Completion Index
SEG	similar exposure groups
SGL	Standard General Ledger
SLAC	Stanford Linear Accelerator Center
SLMP	Strategic Laboratory Missions Plan
SNAP	Space Needs Assessment Plan
SNL	Sandia National Laboratory
SPCC	spill prevention control and countermeasure
SPO	Sponsored Projects Office
SPPT	Sponsored Projects Proposal Tracking
SRC	Safety Review Committee
STI	scientific and technical information
SWMU	Solid Waste Management Units
TD	travel disbursements
TEC	total estimated cost
TEID	Technical Electronic & Information Department
TLD	thermal luminescent detector
TLV	toxic limit value
TPA	third party administrator or claims adjuster
TQM	Total Quality Management
TRU	transuranic
TSAC	Telephone Services Advisory Committee
TSCA	Toxic Substance Control Act
TSR	Technical Safety Requirement
UC	University of California
UCB	UC Berkeley
UCDRD	University of California Directed Research and Development
UCOP	University of California, Office of the President
UPTE	Union of Professional and Technical Employees
USQD	Unreviewed Safety Question Determination
UST	underground storage tank
VBSA	DOE Value-Based Self-Assessment
VERIP	Voluntary Early Retirement Incentive Plan
WAA	Waste Accumulation Areas
WAC	Waste Acceptance Criteria
WBS	Work Breakdown Structure
WFO	work for others
WKSG	Work Station Group
WN	type of DOE funding
WRC	Work Request Center
YTD	year to date

Ernest Orlando Lawrence Berkeley National Laboratory
One Cyclotron Road | Berkeley, California 94720

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