Fiscal Year 2002

Annual Performance Evaluation and Appraisal

Lawrence Berkeley National Laboratory

Prepared by:

U.S. Department of Energy
NNSA Service Center
and
Berkeley Site Office

CONTRACTING OFFICER'S EVALUATION

The Department of Energy, Oakland Operations Office Performance Review Board reviewed and discussed the recommendations of functional managers and staff concerning the appropriate adjectival and numeric ratings with which to rate the University of California's performance in the management and operation of the Lawrence Berkeley National Laboratory. Based upon this process and a unanimous vote of the members of this board, an adjectival rating of "**Outstanding**" is granted, based on a numeric rating of 92.7 percent. This report, entitled the "Fiscal Year 2002 Annual Performance Evaluation and Appraisal - Lawrence Berkeley National Laboratory" provides the basis for my determination, and is hereby endorsed and approved.

Recommendation:

James S. Hirahara

Date: 1/24/03

James S. Hirahara
Chairperson, Performance Review Board
Director, NNSA Service Center

Approval:

Aundra Richards

Date: 1/28/03

Aundra Richards
Contracting Officer, NNSA Service Center

FY 2002 Annual Performance Evaluation and Appraisal of Lawrence Berkeley National Laboratory

TABLE OF CONTENTS

Executive Summary

Executive Summary

Introduction

This Annual Performance Evaluation and Appraisal is produced by the U. S. Department of Energy (DOE) Berkeley Site Office (BSO) and the National Nuclear Security Administration (NNSA) Oakland Operations Office (OAK). It provides the Contracting Officer's written assessment of the Contractor's performance at the Lawrence Berkeley National Laboratory (LBNL, or Laboratory) under contract DE-AC03-76SF00098. The contract Appendix F defines the Objective Standards of Performance agreed to by DOE and the University of California (Contractor or UC) to annually measure the Contractor's overall performance of Laboratory Management, Operations and Administration, Science and Technology/Programmatic performance under the contract.

Performance Period

This Annual Evaluation and Appraisal is for the period from October 1, 2001, through September 30, 2002 (Fiscal Year 2002). Certain performance measures are on a calendar year basis and they are identified in the "Detailed Appraisal Results" section of the report.

Appendix F - Objective Standards of Performance

This document provides the Contracting Officer's Fiscal Year 2002 evaluation and validation of the Contractor's self-assessment of performance in its management and operation of LBNL for DOE under the contract. In this contract, UC and DOE have agreed to use a performance-based management system for Laboratory oversight. The parties agreed to use clear and measurable, objective performance measures as standards against which the Contractor's overall performance in Laboratory Management, Science and Technology, and Operations and Administration under the contract will be assessed and evaluated. DOE and UC also agreed that UC would conduct an ongoing self-assessment process, including self-assessments done by the Laboratory, as the principal means by which the Contractor would evaluate compliance with the performance objectives contained in Appendix F.

DOE BSO and OAK conduct validations of the Contractor's self-assessment and evaluate the Contractor's performance. The validation effort is conducted by teams that are responsible for the various functional areas represented in Appendix F. These teams, with guidance from DOE BSO and OAK management, are responsible for 1) developing an adequate, independent basis for assessing the quality, credibility, and accuracy of the Contractor's self-assessment; and 2) establishing a basis for DOE's evaluation of the Contractor's performance.

This report fulfills the requirements of the contract (Appendix F), and specifically supports and meets the contract requirements of Clauses 2.6 and 5.3:

- Provide a summary of the results from the conduct of the DOE BSO and OAK validation program and evaluation of performance of work;

- Provide a written assessment of the Contractor's performance under the contract based upon the DOE BSO and OAK appraisal program, and the Contracting Officer's evaluation of the Contractor's self-assessment; and

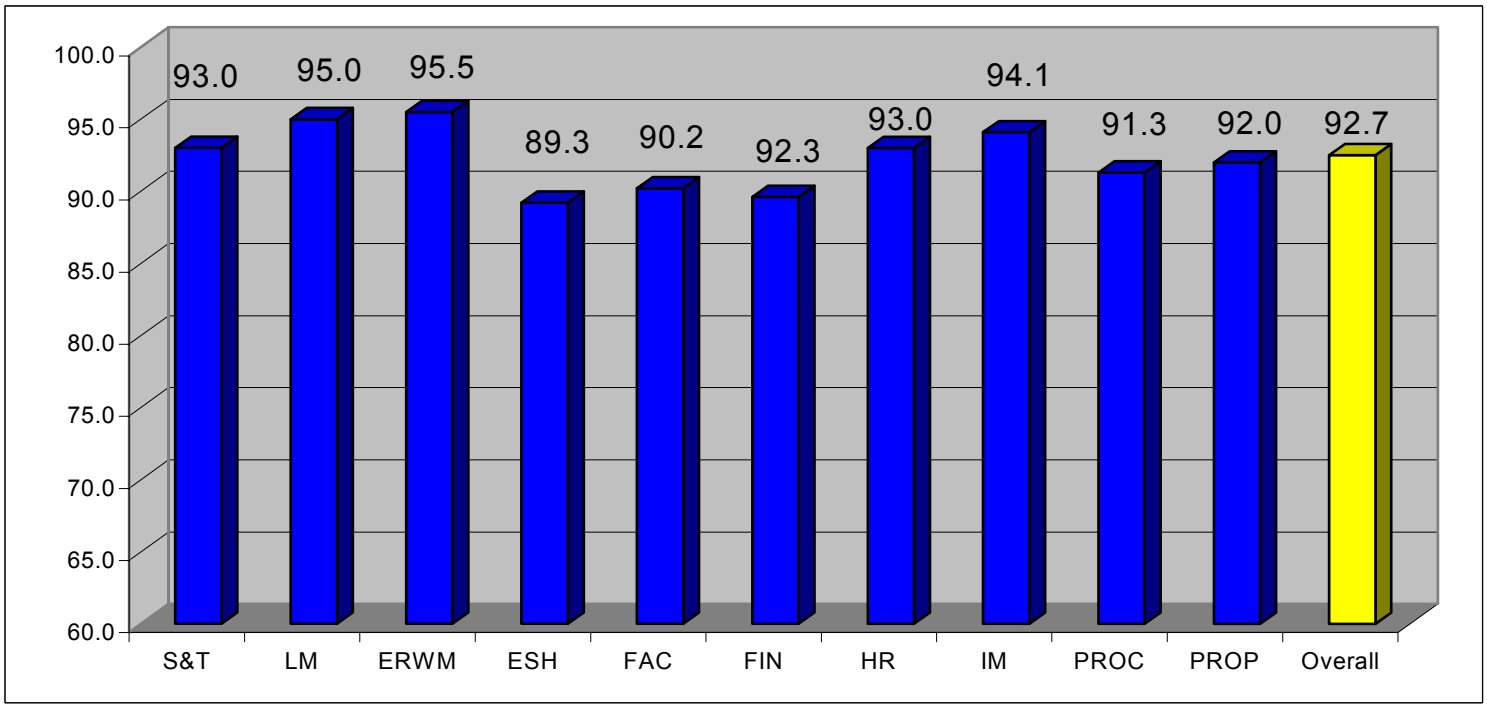
- Provide the basis for determination of the Contractor’s Program Performance fee.

FY 2002 Appraisal Results in Brief

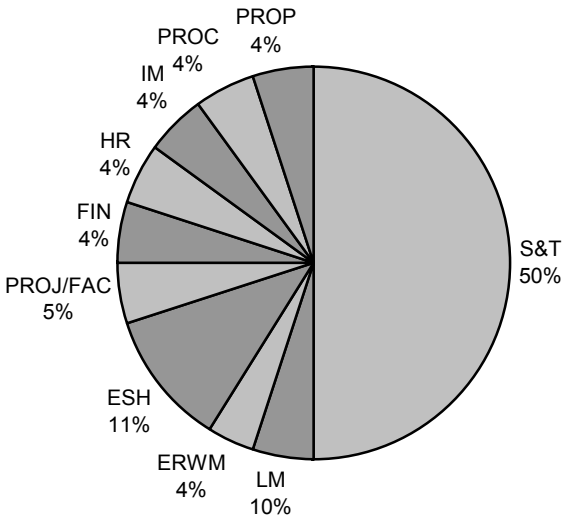
A. Overall Results FY 2002

DOE rates the overall performance of LBNL as **Outstanding** for FY 2002.

A.1 RATING SUMMARY

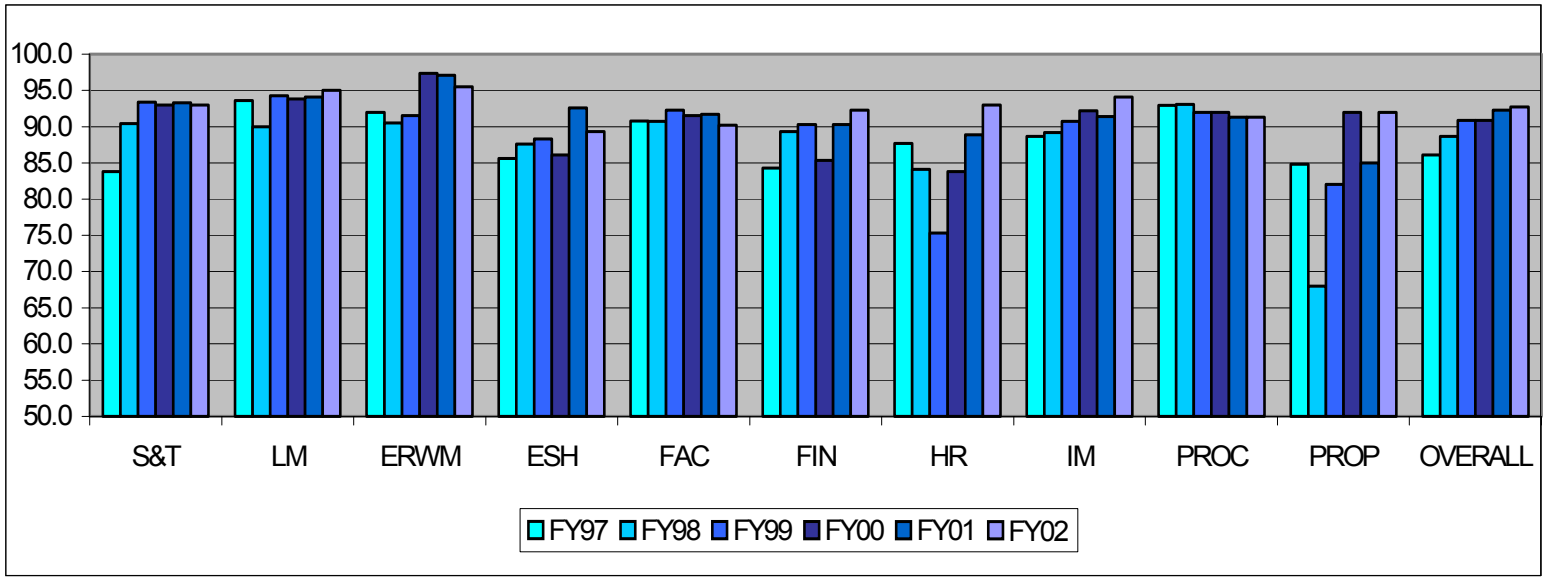


A.2 WEIGHTING SUMMARY



FY 1997-2002 Appraisal Results in Brief

B. Overall Trend Results FY 1997 – 2002



C. Science and Technology

The DOE Science and Technology program assessment of the LBNL is based upon peer reviews of its scientific divisions, corresponding self-assessments by the Laboratory and UC, and validation reviews by DOE Headquarter (HQ) Program Managers and BSO program representatives. The DOE assessment of performance for research programs is comprised of a funding weighted evaluation of the following DOE programs: Basic Energy Sciences (BES), High Energy Physics (HEP), Nuclear Physics (NP), Advanced Scientific Computing Research (ASCR), Fusion Energy Sciences (FES), Biological and Environmental Research (BER), Energy Efficiency and Renewable Energy (EERE), Civilian Radioactive Waste Management (CRWM, the Yucca Mountain Project), and Fossil Energy (FE). Within LBNL, each of these DOE programs is predominantly executed by one or two of the Laboratory's twelve scientific divisions. An exception to this is the BES program, which is primarily carried out by four Laboratory divisions, including the Advanced Light Source (ALS).

Institutional Level Assessment

LBNL's Institutional Level Assessment addresses the challenges and issues faced by the Laboratory in the last year, along with perspectives on plans for the future. The Director's statement provides insight into where the attention of LBNL's leadership has been directed during the past year. LBNL continues to excel in their ability to develop and execute scientific programs. The Laboratory's strategic planning process allows for the establishment of clear direction, priorities, and ensuring LBNL's viability in the future.

LBNL's management of the Laboratory-Directed Research and Development (LDRD) and Work for Others (WFO) programs continue to direct the Laboratory's resources toward exciting scientific challenges consistent with its mission and to keep the Laboratory on the cutting edge of science and technology. Over the past several years, the Laboratory has been funding the LDRD program at about 2.5 to 3 percent of the total LBNL funding. Recent major strategic thrusts supported with LDRD funds have included computational projects in all of LBNL's scientific divisions, and projects that apply the unique capabilities of the ALS in new scientific directions. The strength of LBNL's biosciences programs continues to be reflected in its success and growing support from National Institutes of Health for projects complimentary to the DOE-funded effort. WFO accounts for the majority of funding for Life Sciences and Physical Biosciences Divisions.

The programmatic assessment of the Laboratory is based upon the LBNL self-assessment and peer review of science and technology and the University of California overlay, and is validated by DOE-HQ program managers and their DOE-Office of Science, BSO counterparts. The assessment of performance for research programs is comprised of a combined evaluation of the following programs: BES, HEP, NP, Scientific Computing, FES, BER, and EERE, FE, and CRWM.

Basic Energy Sciences

BES research programs support at the Laboratory in materials sciences, chemical sciences, geosciences, and biosciences continue to produce **outstanding** scientific results that support the needs of the various DOE missions and technology programs. LBNL's operation of research facilities such as the ALS is also resulting in quality science being conducted by the Laboratory and external researchers.

High Energy Physics

HEP receives an **excellent** rating for FY 2002. The ratings are unchanged from last year's performance of the Physics Division (PD) and Accelerator and Fusion Research Division (AFRD) with regard to the HEP programs. The qualities of LBNL work for HEP has continued to be first rate. Progress has been made on all of the HEP activities at the Laboratory, but no significant programs have completed or started. Unfortunately, as noted in the S&T HEP performance area write-up, the only criticism from last year was not resolved.

Nuclear Physics

LBNL performance is rated **excellent**. The Laboratory plays a lead role in the Sudbury Neutrino Observatory (SNO) experiment and achieved notable physics results this past year by providing strong evidence for solar neutrino oscillation, which implies that neutrinos have mass. The group also collaborates in measurements of reactor neutrino oscillations at KamLAND in Japan, which began taking data this year. In the area of heavy elements, LBNL confirmed the production of element 110, and measured the chemical properties of element 108 (Hassium). The Laboratory continues to make substantial contributions to the STAR experiment at the Relativistic Heavy Ion Collidor (RHIC) in Brookhaven, a priority of the national program. A two-year research campaign on the Gammasphere at the 88" Cyclotron was completed this year. LBNL continues to play leadership roles in the national program including developing components for the proposed Rare Isotope Accelerator (RIA), the next generation gamma-ray detector array (GRETA), and participation in long-range planning through the Nuclear Sciences Advisory Committee (NSAC). The issue surrounding the retraction of the discovery of element 118 was unfortunate, but LBNL is to be commended for using scientific methods to ferret out the problem and taking decisive actions on the matter of scientific integrity.

Computing Sciences

The overall performance of Computing Sciences and network research at the Lawrence Berkeley National Laboratory is rated **outstanding.** Mathematics continues to be one of the strongest applied math efforts in the nation. LBNL and its collaborators continue to produce new understandings of fluid turbulence and multi-scale mathematics. The Laboratory has the coordinating lead for the Scientific Discovery through Advanced Computing (SciDAC) performance evaluation Integrated Software Infrastructure Centers (ISIC), and is making outstanding progress. Work being done by the Laboratory in four national collaboratory pilots and eight collaboratory and grid middleware projects is outstanding and very valuable to the DOE Mathematical, Information and Computational Sciences Program. The National Energy Research Scientific Computing Center (NERSC) is the premier high performance center in the United States for unclassified computing. NERSC has continued to provide world-class hardware, timely technology upgrades and services virtually unsurpassed by any other computer center in the world. The Energy Sciences Network (ESnet) is a critical item to the DOE scientific research, computing and nuclear stewardship missions and provides the mechanism at DOE to enable worldwide collaborations and data exchange. Its work on the DOE science grid support and public key infrastructure is to be commended.

Fusion Energy Sciences

LBNL continues to carry out an **outstanding** research program within the Virtual National Laboratory (VNL) for Heavy Ion Fusion. The VNL has demonstrated vision, during and after the 2002 Fusion Snowmass meeting, in developing long range planning and providing a roadmap for the development of heavy ion inertial fusion energy. Scientific achievements at LBNL have been excellent, with new results from the High Current Experiment (HCX) and the completion of the ion source to be used in future beam-focusing experiments.

Biological and Environmental Research

Overall, the Laboratory's Life Sciences Division's performance is **outstanding.** The Laboratory's research had a significant impact on the scientific community during the current rating period. As part of the DOE Joint Genome Institute, LBNL continues to contribute to the development of research tools and to the completion of the human DNA sequence and to the sequencing of numerous microbes and other organisms important for DOE mission needs in energy and the environment and to our understanding the human genome.

Clearly, the Laboratory is placing a great deal of its future emphasis on quantitative biology and genome studies. The Laboratory has appropriately capitalized on the Advanced Light Source crystallography beam lines to advance structural biology and structural genomics, and it has also leveraged the National Energy Research Scientific Computing Center to advance biology at the Laboratory. The DOE Office of Science (SC) has recently launched a "Genomes to Life" program which will be the DOE's strategic post-sequencing program. The largest element of that program will be an LBNL-led virtual institute to understand microbial stress and survival.

The Department of Nuclear Medicine and Functional Imaging collaborates with other Divisions within the Laboratory, with UC Berkeley and other universities, and with industry to examine medical issues with large societal impacts. The program has an "international reputation" in the theoretical framework of imaging and the design of new instruments for specialized medical applications.

Energy Efficiency and Renewable Energy

LBNL performance in this area is **excellent.** The knowledge, experimental ingenuity and enthusiasm of all the LBNL staff, as well as their technical achievements, are impressive. The geothermal program continues to show strength and vitality, which continues to sustain it as one of the top geothermal programs worldwide. LBNL's energy programs are at the center of key energy policy debates, are extremely valuable to policy makers, and have worldwide visibility.

Civilian Radioactive Waste Management

The Laboratory's overall performance has been **outstanding.** LBNL has provided high quality cutting edge research, has been responsive to the customer, is well published and has made many presentations to the scientific community.

Fossil Energy

The Lawrence Berkeley National Laboratory's performance in this area is **excellent.** The knowledge, experimental ingenuity and enthusiasm of all the Lawrence Berkeley National Laboratory (LBNL) staff, as well as their technical achievements, are impressive. The science performed by LBNL is of excellent quality and consistently satisfies the needs and goals of DOE. It is impressive that LBNL has been able to extract and conduct first-rate, basic research experiments in support of applied projects.

D. Laboratory Management

The LBNL overall Laboratory Management rating for FY 2002 is **outstanding** at 95 percent.

LBNL continued to build upon a strong and integrated set of planning activities in FY 2002, and to advance the Department's and its strategic vision. Laboratory strategic directions and competencies remain well-aligned with plans and directions of DOE SC programs. LBNL continues to be a well-spring of initiatives and innovation to pursue frontier research opportunities across a broad range of DOE SC programs. LBNL leadership continued to articulate the importance of SC to the nation's research in the physical sciences and the value of the DOE system of laboratories to the nation. A timely major initiative this past year was the conduct of a Best Practices Pilot Study aimed at developing a set of principles to guide the next generation of contracts for the DOE SC laboratories with greater management efficiency and focus on delivering results.

Program Results included: planning and technical development of the "Molecular Foundry" project which was successfully peer-reviewed by the SC Office of Basic Energy Sciences and on-track to become among the first DOE facilities constructed under the National Nanoscience and Technology Initiative; continued expansion in the user base and scientific productivity of the Advanced Light Source to 1200 users; successfully relocating the National Energy Research Supercomputing Center to the Oakland Scientific Facility and expanding its peak capacity to five (5) teraflops, making it one of the largest unclassified supercomputers in the world; further development of a path-breaking astrophysics program, particularly the proposed Supernova Acceleration Probe (SNAP) satellite, to measure fundamental properties of the universe; utilizing the Joint Genome Institute (JGI)/Production Genomics Facility (PGF) for the DNA-sequencing of numerous microbes, fugu fish, sea-squirt, and working to finish the sequencing of its part of the public Human Genome Project (chromosomes 5, 16, 19); significant initiation of a design for an advanced Energy Efficiency and Electricity Reliability (EEER) laboratory – proposed to the DOE Office of Energy Efficiency and Renewable Energy (EERE) for a facility that would provide space, integration, and the first EERE "showcase" facility at LBNL; development of several useful websites to assist the State of California during the western regional energy crisis; critical geological analysis and other contributions to the DOE Yucca Mountain project during the final year of scientific characterization of the site as a potential national repository for high-level radioactive waste from the nation's commercial nuclear reactors; and new applications of LBNL research, technologies and capabilities for homeland security.

Laboratory Management remains performance/results-driven, and supportive of partnership and engagement with customers and stakeholders. The Berkeley Laboratory continued its strong support to the DOE "integrated system of laboratories" by contributing its expertise in accelerators, detectors, and other areas through collaborations on a number of major facilities and projects around the DOE complex. The Laboratory continues to successfully respond to new DOE and Congressional

requirements related to Laboratory Directed Research and Development (LDRD), security, project management, travel costs, and others.

Operations Results included: completion of a Best Practices Pilot Study of federal governance of three national laboratories by different agencies; advancing the deconstruction of the Bevatron, cleaning out approximately one-sixth of the overall space, and development of budget plans for complete removal; closure and facility clean-up of the formerly NIH-funded National Tritium Labeling Facility (NTLF), and continuation of environmental sampling for possible tritium contamination; EPA delisting LBNL as a potential Superfund site; further institutionalization of an Integrated Safeguards and Security Management (ISSM) program, including cybersecurity, and of diversity awareness and practice, including the establishment of related personnel performance elements; maturation of the Integrated Safety Management (ISM) program in consideration for external certification; adoption of a new lab-wide Performance Review and Development program integrating employee development with supervisory assessment; and the implementation of several new Community Relations initiatives, and hosting of a Laboratory Open House attended by approximately eight-thousand visitors.

LBNL held its institutional indirect burden rates in FY 2002. The ratio of research to support staff funding also remained approximately level at 2.2. The LDRD program continues to fund leading-edge projects built upon institutional competencies and advancing DOE strategic directions. The Laboratory continues to make investments in its management information systems. These systems are utilized effectively to minimize overhead costs, improve services to research programs, plan the use and stewardship of facilities and other capital assets, and prioritize site investments.

The Berkeley Laboratory realigned its community relations program under a new Public Affairs Department established in FY 2001. The new organization was finalized and a new director selected in FY 2002, consolidating community relations, government relations, communications, and education outreach programs. To improve the community's understanding of the Laboratory, its diverse people and its diverse work, an innovative shuttle bus poster/webpage campaign entitled "Did You Ever Wonder…?" and a quarterly newsletter, "Science on the Hill," were initiated. The former was integrated into planning for the well-attended 2002 LBNL Open House, which converted the Laboratory into a public science 'Wonderland' for a day. In addition to an active Speaker's Bureau, the Laboratory now also conducts a "Friends of Science" forum. The Center for Science and Engineering Education (CSEE) continues to work in partnership with a variety of local and national educational institutions and to engage Laboratory divisions and staff in science education, research mentoring, and outreach activities across all levels of students and teachers. New efforts are seeking to leverage limited DOE SC funding with other resources, including National Science Foundation (NSF) grants.

Laboratory Management continued an effective system of line-management accountability to promote a culture of follow-through and meeting commitments. LBNL continues to employ several internal systems to track commitments, assure follow-up, and enforce accountability on actions resulting from reviews, audits, and other venues. LBNL utilizes a senior-level Project Integration Management Board (PIMB) to assure communications on projects and project commitments, and all major scientific projects are reviewed regularly. All major scientific, cost and schedule milestones continue to be met on LBNL's numerous external collaborations.

E. Operations and Administration

Environment Restoration and Waste Management

LBNL's performance in the area of environmental restoration and waste management continues to be **outstanding** at 95.5 percent. The Laboratory executed the approved technical scope of their FY 2002 Baselines in accordance with the approved budget. LBNL Waste Management successfully disposed of its lead waste inventory. LBNL's performance in the area of environmental restoration and waste management continues to perform to high standards in accordance with the approved overall schedule. Three LBNL developed clean-up technologies continue to be used by LBNL and other sites realizing substantial cost savings.

Environment, Safety and Health

The Laboratory's performance in Environment, Safety and Health (ES&H) declined slightly during the FY 2002 performance period. The overall rating this year is **excellent** (89.3 percent) compared to outstanding (92.6 percent) last year. It is recognized that it is a struggle to maintain such a high level of performance. Integrated Safety Management systems are effective. There has been steady progress in improving the institutional issues involving chemical inventory and matrixed employees. The Laboratory's self assessment report and the BSO Operational Awareness observations indicate that problems related to these issues continue to be visible and persisted during the performance period.

Management of legacy radioactive materials and waste was identified in the LBNL ES&H Self-Assessment as an opportunity for improvement. Currently, there is not a single point-of-contact to address the problems that legacy material present.

Five (5) divisions were rated by the LBNL Self-Assessment at 100 percent for all performance criteria. Only two (2) divisions fell slightly below an overall outstanding rating. Environmental Energy Technologies Division has achieved this level for three consecutive years. Although still at outstanding, Facilities and ES&H Divisions' performance this year were at the low end of outstanding compared to high outstanding last year. Some of the decline was in work performance. Non-compliance with work authorizations and following procedures resulted in a slight increase in the number of reportable incidents. Several incidents involved subcontractors. In FY 2003 there will be increased number of subcontractors on-site. The Laboratory needs to assure that systems safely provide adequate oversight for these workers.

During this performance period, and in prior years, it was observed that the root cause analysis and the development of corrective actions processes need improvement. These problems were observed by the BSO during the accident investigations of the Hazardous Waste Handling Facility (HWIF) and several facility near-miss incidents. There were also issues with the effectiveness of corrective actions to eliminate the inappropriate disposal of hazardous material in waste bins with non-hazardous material. The BSO will work with the Laboratory to improve the root cause analysis and methods to develop better corrective actions in the FY 2003 performance year.

A long standing problem with chemical inventory persists. Although progress has been made with a more user friendly chemical inventory database, it is at the pilot stage of development after the issue was identified as an institutional issue more than three years ago. Also, the lack of clear guidance on the safety responsibility of divisions with matrixed employees continues to require improvements.

The self-assessment recognizes these as institutional problems and recommends that the Regulations and Procedures Manual (RPM) and deficiencies in the Memorandum of Understanding between LBNL and the UC Berkeley campus be addressed. Accident and injury statistics remain at the excellent performance level.

Identification of hazards at the division level is outstanding. There does appear to be a trend of reoccurrence of minor hazards such as electrical safety, chemical storage and labeling, lack of seismic restraints. This may be due to corrective action that are not sufficient to eliminate these hazards or due to the work environment conditions. During the performance period, limited progress was made with hazards analysis at the facility level. This is a requirement of DOE Directive 5481.1b. Currently, LBNL and the BSO have agreed to use the safety analysis best practice study results resolve this matter.

Project/Facilities and Construction Management

LBNL's overall performance for Project, Facilities and Construction Management is rated **outstanding** at 90.2 percent.

Of the five (5) functional areas, Real Property Management, Physical Asset Planning, and Maintenance Management were rated outstanding, while Project Management and Utilities/Energy Conservation were rated excellent. The overall outstanding performance accomplished by LBNL is noteworthy considering the breadth and scope of the initiatives planned and achieved during the performance year. These initiatives were established in partnership with DOE and designed to provide improved services to customers internal and external to LBNL.

Real Property Management has completed all twenty-three (23) tasks planned for the year, including a) populating their Facilities Information Management System database and validating its accuracy, b) renovating or demolishing over 33,000 sq. ft. of substandard space, and c) preparing well engineered site plans for the Molecular Foundry, Research Support Building, E-Lab and Bldg 50X. Performance rating for this objective is outstanding.

Physical Asset Planning completed fifty-six (56) of the fifty-eight (58) tasks planned in their original site plan for the year. The remaining two (2) tasks were deferred with DOE concurrence. Completed tasks included an update to the LBNL Comprehensive Facilities Plan, conducting parking analysis studies in support of new construction projects, improving signage for building identification and emergency evacuation maps and revising the Facilities Planning website. Several new and significant goals were added during the performance year, including development of a new site with supporting analysis for the Molecular Foundry and providing Site Planning support for Buildings 51 and 50X. Performance rating for this objective is outstanding.

LBNL's Project Management rating is based upon schedule and cost performance. LBNL was scheduled to complete eighteen (18) project management milestones associated with three (3) construction line item projects, seven (7) General Plant Projects and one (1) General Plant Equipment project. Two of the original eighteen (18) milestones were missed (one for the Molecular Foundry and the other for the Building 2 Ventilation Improvements) while the remaining sixteen (16) milestones were completed on or ahead of schedule. DOE is also providing credit for two additional milestones (a Building 77 Rehabilitation project and a Building 6 Expansion project), which results in a rating of

excellent for the schedule measure (18/20 milestones met). LBNL's construction line item projects had "Total Estimated Costs" equal to their "Performance Baseline Costs" at the end of FY 2002. Total Estimated Costs equal to Performance Baseline Costs in FY 2002 coupled with adherence to Performance Baseline Costs in the previous three years results in a rating of outstanding for the cost measure. Performance rating for the overall Project Management objective is excellent.

LBNL's Maintenance Management rating is based upon completion of mutually agreed upon tasks and a comparison of LBNL's performance with that of Energy Facility Contractors Group's (EFCOG) for selected performance indicators. All twenty-two (22) tasks were completed as planned with special emphasis placed on improving the quality of LBNL's procedures and maintenance practices. Significant completed tasks included: a) implementation of Maximo's condition monitoring application, b) a Property Outsource Inspection Report, and c) development of a five-year inspection program. Of the seven (7) EFCOG performance indicators, LBNL was "best in class" for the indicator "Total Number of Maintenance Caused Operational Incidents" and above average in the remaining six (6). Considering FY 2002 milestone selection, effectiveness and overall performance, LBNL's maintenance program rating is outstanding.

LBNL's Utilities/Energy Conservation rating is based upon: a) reliable electric service, b) energy consumption, and c) completion of mutually agreed upon tasks. Electric service (excluding planned outages) was provided to LBNL customers at a twelve (12) month average rate of 99.986 percent or a rating of good for this measure. Energy consumption at LBNL in FY 2002 was 21.1 percent below the 1990 baseline year and well ahead of DOE's Year 2005 goal of 20 percent reduction, which equates to an outstanding rating for this measure. All nineteen (19) of LBNL's Energy Management Plan tasks were completed as scheduled, which is an outstanding rating for this measure. These tasks included energy and water conservation studies, meeting energy efficiency design requirements, development of operating plans for a new 2 MW emergency generator and numerous employee energy awareness activities. In addition, LBNL received the 2002 DOE Energy Saver Showcase Award. The overall performance rating for this objective is excellent**.**

Financial Management

The Laboratory accomplished an **outstanding** rating at 92.3 percent. Areas of concern were addressed this year and improvements noted. Specifically, more emphasis was placed on monitoring accounts receivables and the number and amounts of past due accounts decreased during the year. Accuracy of financial statements was good. Laboratory management and staff have had to work very hard to meet DOE requirements and OAK commends the effort. During FY 2002 LBNL indirect rate submissions were generally timely, accurate and in conformance with cost accounting standards. FY 2002 cost accounting changes and applicable changes to the Cost Accounting Standards disclosure statement were also submitted to OAK timely. LBNL Financial Services Department (FSD)/Cost Accounting has demonstrated an effective, comprehensive approach to disseminating cost accounting information to internal laboratory customers in a timely manner. In addition, LBNL Financial Management took proactive steps to ensure the Operating Plan (Management Report) met the needs of Laboratory management.

LBNL has done an excellent job overall in on-time reports to OAK. The reports were submitted timely and met DOE requirements. LBNL took proactive steps to ensure that the DOE field budget submission and validation, exhibits and schedules were timely, accurate, and complete.

LBNL maintained costs and commitments within authorized funding levels (ECOR) and has a process in place to monitor and control costs. No reportable violations occurred. LBNL in the last two years has taken proactive steps to improve the effectiveness of funds control. All ad-hoc and miscellaneous budget execution and cost management reports were prepared in an accurate and complete manner.

Overall LBNL has appropriately targeted and resolved audit findings. Specifically, 89 percent of the target dates were appropriately set and 80 percent of the target resolution dates were met. Internal controls are adequate and the FSD maintains a strong commitment to maintaining effective internal controls through improving systems for identifying, reviewing, and correcting financial management internal control/compliance processes.

Effectiveness in accounting processes, i.e. smooth flow of data, accuracy of financial records, and quick analysis in support of agency accounting and financial statements warrants added emphasis to assure continuous improvement in this area

Human Resources

LBNL has achieved an overall **outstanding** at 93 percent for its FY 2002 performance in Human Resources (HR), with six of its eight individual measures rated outstanding. Its successes are primarily attributable to its commitment to fulfilling the goals outlined through the 5-Year Strategic Plan for Human Resources, developed within FY 2002. Under the Strategic Plan, recruitment, work climate, development and continuous improvement are identified as the areas of focus, with strategic initiatives developed under each area. The FY 2002 performance measures are aligned with the Strategic Plan, with LBNL's performance rating for FY 2002 reflecting the accomplishments achieved through the Plan. One of the most significant accomplishments is evident through LBNL's implementation of the Recruitment Best Practices Model. The Model provides integration of recruitment efforts among HR, the Work Force Diversity Office, and the hiring managers, as well as an applicant tracking system with the capability to provide status of the hiring process to the applicant, improve the rate of race/gender self-identification, and streamline the transmittal of resumes and applicant materials to the managers. In addition, LBNL has implemented the REWARD system for calculating market position by individual and functional structure, further establishing HR as a resource for work force planning within the Laboratory, initiated systems to track training costs, and has implemented a new performance management program, "Performance Review and Development".

Information Management

The Laboratory's overall performance in Information Management (IM) is rated outstanding at 94.1 percent for FY 2002.

LBNL's rating is based on their continuous goal of providing quality information management and technology services in a cost effective and efficient manner. LBNL is managing Information technology in a manner consistent with capital investment planning requirements and operational effectiveness and benchmarks to "best-in-class" operations. The Laboratory worked with Site Security to develop the Integrated Safeguards and Security Management model to increase the robustness of intrusion detection and incident response. The Laboratory's Records Management, Archives, and Printing and Reproduction services have consistently exceeded performance expectations. Institutional efficiency, improved operations, and cost savings realized over $530 thousand in FY 2002 avoidances.

Procurement

LBNL's Procurement, measured against the objective standards in Appendix F, earned the Laboratory a rating of **outstanding** at 91.3 percent for FY 2002. The effort throughout the year resulted in five (5) outstanding performance measures. For example, the cost-to-spend ratio continues to be one of the lowest within DOE at 1.36 percent, which clearly demonstrates that Procurement is operating at optimum level. The most notable achievement for the year is in the outstanding program for assessing system operations. An area for improvement continues to be Supplier Management. LBNL has tried to achieve a goal of 90 percent, going as far as FY 1997. Attention needs to be placed in this area.

Property

The Laboratory earned 483 points equating to an adjectival rating of **outstanding** or 92 percent for FY 2002, an improvement from FY 2001's rating of excellent.

In FY 2002, LBNL performed a wall-to-wall inventory of both Sensitive and Equipment items. The inventory results were noteworthy at 99.2 percent and 99.5 percent, respectively. A validation conducted following the inventory completion verified the results. In addition, all precious metals were accounted for, without unexplained loss. Results in areas supporting strong inventory performance such as tagging of new property received, and timeliness and accuracy of custodial assignments were also outstanding. Other strong areas of performance for FY 2002 included motor vehicle utilization, and customer alignment.

LBNL's FY 2002 selection for addressing cost and performance was the precious metals inventory. The initiative is to span two years, with results of the effort to be reported in FY 2003.

The outstanding performance results are attributable, in large part, to the Laboratory's executive management support and recognition of the property management program.

Conclusions and Recommendations

The Laboratory performed at an overall **outstanding** level of performance for the fourth consecutive year in FY 2002. The Laboratory earned overall "outstanding" ratings in Science and Technology, Laboratory Management, and seven of the eight Operations and Administration areas assessed during the year. There are no significant recommendations. The Laboratory is encouraged to continue pursuing scientific initiatives contributing to its strategic vision and excellence in all areas of operations and administrative support to its mission.

Laboratory Management

Performance Area: LABORATORY MANAGEMENT

Performance Objective: #1.0 Laboratory Leadership

Laboratory leadership, in support of Laboratory missions, ensures the stewardship and viability of the institution. **(Weight = 100%)**

Note: The Gradient for each measure is shown in the attachment and the weighting between Approach/Deployment and Results is A/D=40 percent and R=60 percent.

Criterion: #1.1 Institutional Stewardship and Viability

Evaluation of Laboratory senior management's approach, deployment and results for ensuring that the institution is capable of executing its current and future missions. **(Weight = 100%)**

Performance Measures: #1.1.a Planning

Evaluation of management's approach for strategic planning that aligns Laboratory missions, core competencies, strategic direction, and funding sources with DOE strategic plans and objectives. The assessment will focus on achievement of the key objectives contained in the Laboratory's plans and how this information is reviewed with DOE. **(Weight = 14.3%)**

Performance Narrative:

Lawrence Berkeley National Laboratory's leadership continued a strong set of planning activities in FY 2002, and affirmed and refined the Laboratory's strategic vision. Each year the Laboratory's Director and senior-management team hold an off-site planning retreat to identify challenges, target opportunities and key management objectives, and to set priorities and strategic directions built upon the Laboratory's core competencies and national role in the DOE Laboratory system. With a new contract for the Laboratory expected in FY 2003, LBNL was timely in working with DOE and conducting a Best Practices Pilot Study in early FY 2002 directed toward gaining management efficiencies and a greater focus on delivering results under the new contract. The study compared the governance and management of UC-LBNL under DOE with that of federal research laboratories under NASA and NSF, and identified six best management practices that were briefed to leadership in the DOE Office of Science, to the DOE Laboratory Operations Board (LOB), and to the DOE Undersecretary.

LBNL continued to advance a Strategic Planning activity for its Operations and Administrative organizations, including regular peer reviews of these units by external experts analogous to the long-standing practice of the scientific divisions. This will assist the implementation of best practices under

the new contract, with its planned move toward national standards, certified or accredited business and operations systems, and assurance reviews by external experts. Infrastructure and Strategic Facilities Planning remained important priorities given the continued aging of facilities and growth in the mission and scientific opportunities at the Laboratory.

Security, including cybersecurity, workforce diversity, and community relations also remained important planning priorities of the Laboratory. Building on its success in instituting and maturing an effective Integrated Safety Management (ISM) program at the Laboratory, LBNL was proactive in developing an Integrated Safeguards and Security Management (ISSM) Plan in FY2001 that was substantially instituted in FY 2002. The Laboratory also continues to plan, communicate and apply its counter-terrorism capabilities for U.S. homeland security. A new Human Resources (HR) initiative within the Laboratory is working to support line organizations achieving their workforce staffing goals. LBNL remains actively engaged with officials, groups, and citizens in the local community, and, in FY 2002, named a new director of Public Affairs and implemented several new initiatives aimed at improving the public's understanding of science, scientists, and the work of the Laboratory.

Laboratory-wide planning systems are used to guide and manage the Laboratory and to support DOE oversight and management by the University of California (UC). These include Institutional Planning (and the associated annual SC onsite review); Strategic Facilities Planning; Facilities and Capital Planning; Environment, Safety, Health and Infrastructure Planning; Integrated Safeguards and Security Planning (including Cybersecurity); Communications Planning; Community Relations Planning; Diversity Planning; Indirect Cost Planning (including maintenance and LDRD budgets), and others. These plans are coordinated within the Laboratory through the use of a Comprehensive Planning Calendar.

DOE Interfaces

The annual Institutional Plan, Laboratory-Directed Research and Development (LDRD) Plan, Strategic Facility Plans, Project Plans, ES&H and Infrastructure Plan, field budget/work proposals, and other planning documents are communicated to and reviewed by the DOE-SC Berkeley Site Office (BSO), Oakland Operations Office (OAK), and in DOE-HQ. Laboratory Management also meets regularly with DOE officials through a variety of communications forums (see measure 1.1.b). Laboratory managers and senior scientific staff also participate on several DOE-SC advisory committees and panels that define the requirements and directions of national research frontiers.

Mission Integration

The Berkeley Laboratory's strategic vision and Institutional Plan (IP) for FY 2003-2007 continue to be well integrated and aligned with the major elements and goals of the DOE Office of Science. The table below shows the alignment of LBNL's five strategic vision elements with current SC strategic thrusts outlined in "Occasional Papers" that will form the basis of a new SC Strategic Plan in mid-FY 2003. The vision elements also largely correspond to the Laboratory's internal program line organizations: General Sciences, BioSciences, Physical Sciences, Energy Sciences, and Computing Sciences. Other major LBNL sponsors include the DOE Office of Energy Efficiency and Renewable Energy (EERE) and the National Institute of Health (NIH).

LBNL Science Vision Elements	SC Strategic Thrusts	Others
Nanoscience	Nanoscience	
Astrophysics	Dark Energy	
Genomes to Life	Genomes to Life, Energy Biotech	NIH
Energy Efficiency and Security	Fusion	EERE
Scientific Computation	Scientific Computing Leadership	

All of the laboratory's science and technology programs will contribute to and benefit from additional SC strategic thrusts into: Scientific Foundations for Counter-Terrorism; Facilities and Infrastructure; and Workforce for the 21st Century.

External Collaborations

LBNL continued strong support to DOE's integrated system of laboratories by contributing expertise, especially in accelerators and detectors, and collaborating in major DOE projects and research activities at other DOE labs and around the world, including:

- Spallation Neutron Source (SNS) at ORNL (front-end)
- Asymmetric B-Meson Factory at SLAC (BaBar detector, low energy ring)
- Relativistic Heavy-Ion Collider (RHIC) facility at BNL (STAR detector)
- CDF and D0 detectors at Fermilab
- Supernova Observations at Telescopes world-wide
- ATLAS detector for the Large Hardron Collider (LHC) at CERN (Switzerland)
- Sudbury Neutrino Observatory (SNO) (Ontario)
- Antarctic Muon and Neutrino Detector Array (AMANDA) at the South Pole
- Dual-Axis Radiographic Hydrodynamic Test (DARHT) at LANL (2nd axis front-end)
- Yucca Mountain Project (YMP) for reactor waste at Nevada Test Site (geophysics, hydrology)
- DNA sequencing at the DOE Joint Genomics Institute (JGI)/Production Genomics Facility (PGF) – in collaboration with LLNL and LANL.

Results

LBNL's planning and leadership efforts resulted in a number of scientific and operational successes that contributed to achieving DOE objectives in FY 2002. Some FY 2002 program highlights include:

- Continued advancement of "the Molecular Foundry" (TMF) project through Critical Decisions Zero and One, and into the architecture and engineering phase, in support of the National Nanoscience and Technology Initiative.

- Continued expansion in the user base and scientific productivity of the ALS with growth to 1400 users; completion of six new structural biology beamlines, and commissioning of superbend magnets; and installation of superbend beamlines (which will increase the photon energy and operating range of the facility).

- Operation of the National Energy Research Supercomputing Center (NERSC) in the Oakland Scientific Facility at record levels of production performance, and substantial acquisition planning and evaluation for the next generation of this system.

- Further development of a path-breaking astrophysics program to measure fundamental properties of the universe, which included a DOE (Lehman) review of the proposed Supernova Acceleration Probe (SNAP) satellite in July 2002 that concluded the need for the mission had been "convincingly established" and that LBNL has a technical approach and capability to achieve the scientific goals of the mission (explore the "dark energy" force causing an acceleration in the expansion rate of the universe).

- Utilizing the Joint Genome Institute (JGI)/Production Genomics Facility (PGF) for the DNA-sequencing of numerous microbial pathogens/biothreat agents for homeland security, the fugu fish and ciona (sea-squirt) for work in comparative genomics, and finished sequencing of its part of the public Human Genome Project (chromosomes 5, 16, 19).

- Technical coordination of the Consortium for Electric Reliability Technology (CERTs) which completed a National Transmission Grid Study reported to the DOE Secretary and the Nation with the aim of improving the reliability of regional and national electrical grids.

- Critical geological and hydrological experiments and analysis in support of the scientific characterization of the DOE Yucca Mountain site, enabling the DOE Secretary and the President to recommend it as the preferred location for a national repository for high-level radioactive waste.

FY 2002 Operational highlights included:

- Completion of a Best Practices Pilot Study that identified a set of principles for the more efficient and effective governance of the DOE laboratories, that was endorsed by a study team of the DOE Laboratory Operations Board (LOB) and largely adopted by the DOE Undersecretary in guidance regarding the next generation of contracts for the SC laboratories;

- Advanced work towards deconstruction and waste disposal work on the Bevatron, resulting in the clearing of approximately one-sixth of the facility's space, and the submission of plans and budgets to complete the estimated $60-85M (depending upon material recycling options) project by the end of the decade

- Closure and decontamination of the National Tritium Labeling Facility (NTLF) previously operated for the National Institute of Health (NIH);Completion of an Environmental Sampling Plan after substantial community interactions via the Environmental Sampling Task Force, progress on environmental sampling, and official EPA delisting of LBNL as a potential Superfund site;

- Outsourcing of the Laboratory's fire protection services to the Alameda County Fire Department, with the concomitant transfer of personnel and improved prospects for cost savings; Implementation of an Integrated Safeguards and Security Management (ISSM) Plan, including a site-wide Cybersecurity Program Plan based on the Laboratory's own state-of-the-art intrusion detection software, and a Counterintelligence Plan for overseas travelers and foreign visitors and assignees;

- Demolition and removal of Building 29 due to termite damage, and planning to reuse the site for a Research Support Building, LBNL's top Science Laboratory Infrastructure (SLI) project proposed as a new start for FY 2004;

- Addressing last year's western regional energy crisis by instituting Laboratory conservation measures and installing a 2MW backup generator;

- Building upon division-level Diversity Plans, a new Diversity Best Practices Council was established to provide a forum for senior management forum to communicate, leverage and integrate divisional best practices across the Laboratory;

- Hiring of a new Head of Laboratory Public Affairs, and the initiation of several new public outreach and education efforts including the Friends of Science, *Science on the Hill* quarterly newsletter, "Did You Ever Wonder…?" campaign and related Science Wonderland theme for the Laboratory's Open House in October 2002;

- Managing travel costs below the DOE-CFO assigned cost ceiling, and controlling indirect costs to maintain flat labor burden rates and a steady ratio of 2.2 in number of science and technology to administrative and operations staff.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: #1.1.b Establishing and Communicating Performance Expectations

Evaluation of management's effectiveness in establishing and communicating performance expectations. Assessment will focus on communication with Laboratory line management and senior management at the DOE Headquarters, Operations Office, and UC that reinforces performance goals.

(Weight = 14.3%)

Performance Narrative:

Berkeley Laboratory leadership communicates with DOE at all levels, UC, internal staff, and key constituencies across a broad range of programs and functions to effectively establish and communicate performance expectations. Numerous formal and informal means and forums are used to accomplish these objectives. The Laboratory remains performance/results-driven, committed to continuous quality improvement, and supportive of partnering with DOE and external stakeholders. The DOE-UC contract Appendix F performance assessment process is utilized effectively as a means to further performance improvements and focus interactions with DOE, UC, and others.

Customer/Stakeholder Engagement

LBNL management continues to support the importance of partnership and proactive engagement with the Laboratory's external customers and stakeholders, including DOE (HQ, OAK, and SC-BSO), other DOE laboratories and research institutions across the U.S. and around the world, and the local community. There are effective, standing communication forums between the Laboratory Management and DOE (HQ, OAK and SC-BSO), between Laboratory Management and UC, and jointly between the Laboratory, UC and DOE. These forums facilitate two-way communications on policies, funding, operational issues, progress/plans, and other matters that impact programs, projects and/or the institution. These include: the Director's participation in Laboratory Directors' meetings with the Secretary of Energy, the Deputy and Undersecretary, and the SC Director; the annual DOE/SC Institutional Planning On-Site Review (held June 18, 2002); and frequent management meetings between top Laboratory, SC-BSO, and OAK managers. LBNL senior managers also participate in a number of DOE inter-lab committees and groups dealing with laboratory operations, computing, facilities, and planning. Quarterly operational awareness meetings between ES&H officials at the Laboratory, SC-BSO, OAK and UC continue. There are also regular teleconferences between public affairs officials in the Laboratory, OAK, and DOE/HQ.

Internal Communications

Within LBNL, Laboratory leadership uses several mechanisms and forums to convey priorities and expectations within the Laboratory. Communications with line managers and division management occurs through regularly scheduled meetings including: weekly Director's Action Committee (DAC), monthly Division Directors Meeting (DDM), weekly Operations meetings, and daily "Headlines" meetings with the four directorate senior managers and others as issue warrant. Various venues are also used to communicate directly with employees, including: Director Shank's annual State of the Laboratory address which highlights past progress and future directions, topical forums hosted by the Director or Laboratory Managers (sometime web cast); dissemination of "level-1" e-mails to all employees regarding behavioral or operational expectations; management "stand-downs" as urgent

issues warrant (e.g., regarding security or safety); senior management messages transmitted via the Laboratory's bi-weekly *Currents* newspaper and in the weekly *Headlines* electronic newsletter; and ever-increasing use of postings on the Lab's webpage. In FY 2002, the Laboratory debuted "Today at Berkeley Lab" which includes daily lab news updates and calendar announcements on the web homepage and plasma displays in public locations. Performance expectations formally reach individual employees through the Laboratory's personnel system, which was substantially modified in FY 2002. The long-standing process for Performance/ Progress Reviews (P2Rs) between supervisors and staff to annually convey expectations and assess individual performance was superceded by the new Performance Review and Development (PRD) process, which holds supervisors responsible for advancing the goals of the Laboratory and their programs into the performance expectations of all staff.

Results

Communications between the Laboratory Director, UC management, the DOE Undersecretary, SC leadership, and the SC-BSO were instrumental in the selection of LBNL to initiate, conduct, and communicate a Best Practices Pilot Study in support of the next generation of SC laboratory contracts.

Communications of the Laboratory's capabilities and initiatives to the new leadership in the Office of Science have resulted in a series of SC "occasional papers" that will form the basis of a new SC Strategic Plan next year in which LBNL play a lead or key role in nearly all areas.

In the wake of September 11, 2001, LBNL was prompt in communicating it capabilities to assist in homeland security to DOE-HQ. It also provided displays on these capabilities for two special exhibits provided to the DOE Secretary, the Director of Homeland Security, and the President, including nuclear detection, genetic sequencing (of pathogens), and guidelines for first responders in a building attack. The Laboratory also hosted speakers, such as former FBI and counter-intelligence experts, to raise security awareness. LBNL participated in a coordinated emergency response exercise with the City of Berkeley and other local institutions.

The Laboratory's focus on and communication of the expectation for effective project management helped to assure further mission successes: the on-time, on-budget completion and delivery of the first major "front-end" subsystem of the SNS to ORNL in June 2002; and the on-schedule, on-budget advancement of the Molecular Foundry project through Critical Decision-1 and into preliminary design; and the continued on-schedule, on-budget completion of beamlines at the ALS.

The recent case of scientific fraud at the Laboratory resulted in appropriate leadership follow-up in broadly communicating the criticality of research integrity and the responsibility of publishing co-authorship. The importance of this, especially in a public institution, cannot be overstated since any reoccurrence might cause lasting or irrevocable damage to the perceptions and prestige of the Laboratory.

LBNL named a new head of Public Affairs in FY 2002 who reports directly to the Laboratory Director. The relationship building with the City of Berkeley was successful in avoiding a tritium-related lawsuit by the City proposed by local citizens group. The City also supported the Laboratory's contract and partnership with Alameda County for fire protection services. The Laboratory's long-

standing communications on tritium with its environmental regulator, the Environmental Protection Agency (EPA), were successful in finally delisting LBNL as a prospective Superfund cleanup site. LBNL also initiated several new activities in FY 2002 aimed at enhancing communications with the local community and key stakeholders about the Laboratory, its people, and its work; these are highlighted below in performance measure 1.1.f (Community Relations).

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: 1.1.c Stewardship of Assets

Evaluation of Laboratory management systems for making decisions that address stewardship of programmatic and institutional assets. Assessment will include the impact of planning on decision making, the use of prioritization processes, asset management, resource allocation, etc.

(Weight = 14.3%)

Performance Narrative:

The Laboratory's unique assets include human resources, facilities, equipment, administrative and operational support systems, and LDRD funding. The LBNL Director employs a systematic approach to ensure senior management attention to unified asset stewardship. The Deputy Director for Research has responsibility for the stewardship of research program assets (scientific and engineering personnel, LDRD), and the Deputy Director for Operations is responsible for the stewardship of operational and administrative infrastructure (facilities, equipment, institutional systems, administrative and operations support personnel). Under the Deputy Director for Operations, the Laboratory Project Management Officer heads the Integrated Project Management Office (IPMO), which oversees the development of project management systems for scientific projects. Together with the IPMO, the Project Integration and Management Board (PIMB) conducts semiannual reviews of major science projects, pre-project vetting, and briefings to the Laboratory Directorate. The Director's Action Committee (DAC) is the Laboratory's final planning approval and decision-making group. The DAC annually reviews plans and recommends priorities in the Institutional Plan, the Strategic Facilities Plan, facility and capital resource allocation, for human resources, the level of LDRD, and indirect costs (including maintenance budgets). A second senior-level decision forum, DAC II, is used for in-depth analyses of specific issues. Annual activities that contribute to the stewardship of assets include: field budget call and review (for research programs and projects), the corollary facilities project call, the LDRD call, review and allocation process, and the indirect (overhead) budget review. LBNL continues to use a Risk-Based Priority Matrix (RPM) for integrated review and ranking of all capital and infrastructure project needs.

LBNL successfully recruited a new Human Resources (HR) Director in FY 2002 and the HR Department established a Strategic Plan with defined goals and specific actions in the areas of recruitment, work climate, development, and continuous improvement. A communication plan to implement a best practices recruitment model is being developed. Specifications for procurement of an Applicant Tracking System (ATS) are being prepared. Implementation of a Performance Review and Development program, begun in FY 2001, was completed. The tuition reimbursement program was improved, covering 100 percent of tuition for degree and professional certification programs.

Stewardship of physical assets includes planning for facilities, space utilization, and maintenance. LBNL has a 10-year Strategic Facilities Plan and a Comprehensive Facilities Plan (20-year Master Plan updated every 5 years) to describe investments needed to develop land and capital assets and sustain future scientific productivity. The Laboratory drafted a 20-year Long Range Development Plan (LRDP) and is preparing an associated Environmental Impact Report (EIR), scheduled for completion in FY 2003. Maintenance plans and budgets are developed annually in the context of a 5-year Maintenance Plan. A Laboratory space database (Odyssey) and a DOE database, Facilities Inventory Management System (FIMS), are used to track all assets such as buildings, trailers, equipment and roads, and to assist in decision-making regarding building utilization and space charges. A multifunctional, integrated resource management application named MAXIMO is used to

support plant operations functions including: work orders for maintenance, crafts and labor; purchasing inventory management; capital equipment management and maintenance scheduling; vehicle fleet management; and others. MAXIMO was upgraded in FY 2002 including implementation of MAXIMO Project, providing integrated work order and project management systems.

Results

Human Resources

In FY 2002, LBNL hired a new HR Director. An HR Strategic Plan was established to address continuing HR issues. The Performance Review and Development program (PRD) process was established. The tuition reimbursement program was improved.

Laboratory Directed Research and Development

LBNL implemented its FY 2002 LDRD program consistent with the requirements of DOE Order 413.2, seed funding frontier projects built upon core competencies and capabilities, and focusing on emerging opportunities and strategic directions of the Laboratory. LDRD projects continue to make strong contributions to the ALS program, Computing Science, Physical Biosciences, astrophysics, and other areas.

Site and Facilities Planning and Stewardship

LBNL continues to make excellent use of facility plans and information management systems to steward its physical assets, identify infrastructure needs, and prioritize resource investments. The Laboratory's Comprehensive Facilities Plan remains a model within DOE. As a result of issues raised concerning certain FIMS definitions, DOE asked the Laboratory to develop a new Condition and Suitability model which would better represent actual conditions. This model has been adopted throughout the complex and the subsequent more meaningful FIMS information serves to support recent infrastructure initiatives. LBNL's Institutional Plan and Strategic Facilities Plan were revised in June 2002. The Project Implementation Management Board (PIMB) was established. The Project Coordination Committee was expanded to include the Laboratory Project Management Officer. The Request for Proposal (RFP) was issued for "Building 50X", a third-party financed 50,000 gross square feet office building project, with award expected in FY 2003. Significant progress has been achieved in the cleanup of the Bevatron, Building 51, with the financial participation of the Laboratory in addition to DOE funding.

Other Stewardship Results

Energy consumption levels have been maintained at a 35 percent reduction from 1985 levels. Installation of a new two megawatt generator was completed; the generator was installed in response to threats of unplanned rolling blackouts which did not materialize. The DOE database Active Facility Data Collection System (AFDCS), which tracks environmental liabilities, was reviewed and an independent audit team found less than 0.5 percent error in the Laboratory's data. The FY 2002 100 percent property inventory was successfully completed resulting in improvement to a 99.5 percent accountability rate for sensitive assets, with a 98.6 percent accuracy rate by items.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: #1.1.d Effective Resource Management

Evaluation of management's efforts to effectively manage funding and staff resources consistent with DOE and Laboratory goals. Assessment will focus on performance results which may include improvements in cost effectiveness such as the ratio of S&T to A&O staff, travel funds management, and other productivity or re-engineering indicators**.** **(Weight = 14.3%)**

Performance Narrative:

The Laboratory continues to effectively manage resources to maximize available funding in order to execute the Laboratory's R&D goals. The Deputy Director for Operations is responsible for all operations and administrative funding and staff that support the execution of the Laboratory's mission. LBNL also remains focused on overhead control and reduction. Opportunities to reengineer and streamline administrative processes and improve the service while reducing overhead costs have continued to be evaluated. The Deputy Director has launched a new initiative to employ an activity-based budgeting process for the FY 2003 Indirect Budget Submission.

The Laboratory has maintained good working relationships with BSO and DOE OAK to maintain effective resource management and cost controls. The FY 2002 indirect rates for the Laboratory were approved by DOE OAK after both offices participated in the annual budget review process. The Laboratory also participated in the DOE Financial Management System Improvement Council which is an organization that endeavors to improve financial systems, policies, and processes to efficiently utilize resource and reduce costs.

In response to the DOE Undersecretary and the Office of Science, LBNL participated in the planning of a DOE pilot study on best practices and effective and efficient operation and administration of government-owned, contractor operated research facilities. The result of the pilot study has been approved by DOE and is being used as the basis for the next generation of SC Laboratory contracts.

Performance Rating (Adjectival)**: Outstanding** 95.00%

Performance Measure: #1.1.e Diversity Leadership and Awareness Evaluation of senior management's effectiveness in increasing the awareness of diversity in all divisions of the Laboratory.

The assessment will focus on the development and implementation of diversity plans and their innovative actions to enhance the work environment for all employees and to engage in proactive methods of diversity outreach and recruitment designed to promote equality of opportunity.

(Weight = 14.3%)

Performance Narrative:

FY 2002 was the second year of LBNL's implementation of diversity management as a lab-wide objective. The Laboratory Director has sustained his expectation that each division/department develop a Diversity Plan for its organization reflecting the Laboratory's best-practices diversity model, which is based on the following principles: Promote fairness and produce noteworthy results; manifest management commitment and accountability; highlight diversity practices that are priorities for accomplishing Laboratory results; promote equal employment opportunity, and address one or more barriers that adversely affect equal employment opportunity; and, ensure communication between management and staff. Additional efforts to reinforce the commitment to diversity are reflected in the establishment of a Diversity Best Practices Council (DBPC), with the purpose of integrating and highlighting the various activities from division diversity plans, and in the extension of the requirement for a diversity performance expectation from just supervisors/managers to all staff.

Results

In FY 2002, each division/department had a Diversity Plan posted on the web, addressing organizational goals for diversity, accomplishments realized in 2001, and action plans for 2002. Each plan demonstrates that the organization's management is fully aware of its diversity and needs for improved representation, and outlines a variety of activities which the organization will undertake. Although many of the activities are focused on promoting the Laboratory and its programs as a workplace of choice, many of the organizations have engaged in direct recruitment, generally of students and interns. Specific results for FY 2002 include:

- 100 percent tuition reimbursement program for employee advancement
- Engineering Division internships with minority-serving institutions
- Support for minority national science associations and UC Berkeley minority graduate recruitment efforts
- School-to-Career internships and Laboratory mentorships in biotechnology, other science areas and engineering have doubled to 25 participants.
- Special training instituted for supervisory personnel.

As a result of the Director's requirement for diversity performance expectations at all levels of the organization, accountability for providing an environment of respect is owned by all employees. This effort also broadens the scope of diversity beyond the profile of new-hires to developing an appreciation of the existing workforce and their development and needs.

Performance Rating (Adjectival)**: Outstanding** 95.00%

Performance Measure: #1.1.f Community Relations

Evaluation of management's awareness of public concern regarding Laboratory operations. Assessment will focus on management's effectiveness in addressing community issues in a proactive manner. **(Weight = 14.3%)**

Performance Narrative:

The new Public Affairs Department established in FY 2001 was finalized in FY 2002, consolidating community relations, government relations, communications, and education outreach programs. The Public Affairs Head holds weekly Public Affairs Council meetings, composed of professional staff from the Public Affairs Department organizations. The Public Affairs Council collaborated on strategy and policy for Laboratory/community issues including neighborhood tritium emission concerns, fire safety, noise, traffic, parking, vegetation management, diesel generator use, and community educational activities. Specific management strategies were identified and coordinated through this mechanism.

In FY 2002, Laboratory Management continued to review and receive feedback on its public outreach and community relations efforts. A second Community Relations survey was completed in the fall of 2001. The information from this survey gave the Laboratory's Public Affairs Department and its Community Relations Office the basis for continued direction in two areas: (1) efforts to promote ongoing information and education to the local communities about the Laboratory's research, and (2) a focus on science education as an effective resource for the Laboratory to offer in support of community goals and objectives.

Laboratory Management was actively involved in community service in FY 2002 including participation on local boards and commissions, educational organizations, Chambers of Commerce, community foundations, environmental groups, as well as service clubs. It also endorsed improved communication with community groups through a more widely distributed community newsletter, *Science on the Hill;* an active Speaker's Bureau, and the implementation of a new Community Relations/Science Education outreach program, Berkeley Laboratory Friends of Science.

Results

<u>New Berkeley Laboratory Friends of Science Outreach Program</u>

In January 2002 the Public Affairs Department launched the Berkeley Laboratory Friends of Science outreach program including membership, lectures, tours, website, and electronic news updates to facilitate the exchange of information on research and the Laboratory with educators, students, community members and laboratory employees. Also, the Community Relations Office integrated the featured scientific research from the Communications Department "Did You Ever Wonder?" campaign launched in FY 2001 into monthly speakers at evening presentations of its Berkeley Laboratory Friends of Science program.

Science on the Hill Newsletter

Laboratory management endorsed extended community outreach through a wider distribution of the quarterly community newsletter, *Science on the Hill*, which provides information on Berkeley Laboratory's scientific achievements to the lay audience.

Environmental Sampling Project Task Force

In January 2000, the Laboratory convened a twenty-one (21) member, community-based Environmental Sampling Project Task Force for an environmental survey of tritium levels. In FY 2002, Laboratory senior representatives continued active representation and dialogue in meetings with key stakeholders and regulators about the progress and results of environmental sampling. In July 2002, U.S. Environmental Protection Agency (EPA) issued a decision not to list the Laboratory on its National Priorities List (Super Fund List) and that it would take no further action on the listing issue and viewed the Laboratory as safe for workers and nearby visitors and residents. The Task Force is scheduled to meet towards the end of this year to discuss the sampling results and the EPA decision.

Center for Science and Engineering Education (CSEE)

In FY 2002, CSEE sponsored eighty-seven (87) summer undergraduate interns, twenty-seven (27) high school interns, and fifteen (15) science teachers for curriculum training and development. The Laboratory continued its support of the bio-technician training program of Berkeley Biotechnology Education, Inc., with six (6) interns annually in the East Bay. The Laboratory might also consider sponsoring an annual Science Bowl for local high school students.

Tour Program

The Laboratory offered forty-eight (48) public and student tours of its facilities in FY 2002 through June 2002, averaging over 100 visitors per month. Six (6) graduate students, one (1) undergraduate student, and two (2) post-doctoral associates, representing the various scientific divisions of the Laboratory, served as tour guides for these activities.

East Bay Hills Emergency Forum (HEF)

LBNL remained active in HEF, a regional body established after the 1991 East Bay firestorm. Through this forum and its Vegetation Management Consortium, Berkeley Laboratory initiated extensive vegetation management protocols and set the standard for regional practices in fire-risk reduction. Senior Laboratory managers gave talks at a Ten-Year Anniversary (Firestorm) Conference on the lessons of the 1991 Oakland-Berkeley Hills Firestorm.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: #1.1.g Accountability and Commitments

Evidence that systems ensure major commitments are met and information on status is timely and complete and that these systems allow informed management action. **(Weight = 14.3%)**

Performance Narrative:

LBNL management continued its effective system of line management responsibility for identifying and tracking major commitments, assuring follow-up, and allowing informed management action to support implementation. Laboratory Management focuses on a culture of follow-through on commitments. The Deputy Director for Research and the scientific divisions are responsible for R&D program and project commitments. The Deputy Director for Operations and support division and departments are responsible for tracking and follow-up on operational and administrative commitments. Security/cybersecurity, human resources, and Bevatron D&D planning remained areas receiving special attention in FY 2002. These operations and research groups hold regular meetings at which their respective open commitments are reviewed. Significant issues from these groups may also enter onto the DAC's agenda and actions tracker. The Laboratory's Office of Contract Management (OCM), under the Deputy Director for Operations, serves as the institutional contact to track and assure commitments are met regarding the prime contract for LBNL between DOE and UC. These include such M&O contract related requirements as: performance-based management requirements, institutional compliance (directives, Price-Anderson Act), make-or-buy planning and determinations, outside employment/conflict-of-interest issues, and institutional memberships.

The Berkeley Laboratory maintains several noteworthy data systems that serve both its own management commitments, and also support DOE/OAK and the BSO in their oversight roles. These include the Laboratory Corrective Action Tracking System (LCATS) for tracking commitments related to ES&H, directives/rules/contract changes and Appendix F performance appraisals, and Internal Audit Services (IAS) Department systems for follow-up actions resulting from GAO audits or Inspector General (IG) reviews. Databases for tracking corrective actions resulting from inspections and assessment have been consolidated into one database and reprogrammed as a Web based application.

In addition to divisional peer reviews of its scientific work, the Berkeley Laboratory now conducts periodic peer reviews of its Operations and Administrative departments as a means to achieve continuous quality improvement toward best practices. An administrative review was conducted of the facilities Department this year, with the team evaluating the effectiveness of departmental management, staff quality and capabilities, and overall responsiveness the Lab needs. Reviews of Human Resources and Administrative services are scheduled for FY 2003.

Results

Project Management

LBNL has a full-time senior project management specialist in the General Sciences group to help assure the effective oversight and management of LBNL projects (some of the major external project collaborations are listed in 1.1.a) in accordance with the requirements of the DOE Project Management order (DOE O413.3). The Laboratory has also developed a uniform set of project

management tools for scientific projects. A senior-level Project Integration Management Board (PIMB) is used to communicate and track of project commitments, ensure a quality project management discipline at the LBNL, and advise Laboratory management. The integrated Project Management Office (IMPO) was formed in FY 2002, with the obligation to ensure development of quality project management at the Berkeley lab. It supports project management for the Information Technology Services Division and cross-departmental operations, has implemented pre-project vetting requirements, has begun to evaluate and enhance Engineering Division QA procedures, and has examined completed projects to capture Lessons Learned. All major scientific projects are reviewed semi-annually. The Laboratory met all its major cost and schedule milestones for its contributions to the hardware "front-end" of the SNS project, and the subsystem was shipped to ORNL in June 2002 becoming the first major component installed on that major SC project. LBNL is also on track to deliver on its hardware contributions (cryogenic feedboxes, ATLAS detector) to the LHC project at CERN beginning in FY 2003.

ISM/WSS

LBNL remains a leader within the DOE complex on Integrated Safety Management (ISM) implementation. ISM is now well institutionalized and implemented throughout the Berkeley Laboratory, with ongoing commitment and involvement from the Director and senior Laboratory management. Management attention directed towards Laboratory statistics for lost workdays associated with accidents and injuries has sustained a turn-around and these statistics continue trending downward. The Work Smart Standards (WSS) again received a comprehensive annual review and update to comply with DOE contractual requirements, and the updated set was amended into the DOE UC contract.

Security/ISSM

LBNL was early in developing an Integrated Safeguards and Security Management (ISSM) Plan (implemented in FY 2001), tailored to its status as an open "Tier III" (no classified work onsite) laboratory. New and modified DOE security requirements continue to be effectively implemented. An ISSM Self-Assessment, similar to the ES&H Self-Assessment program has been developed and tested, with full implementation scheduled for FY 2003. A Cyber-Security Program Plan (CSPP) per DOE Notice N205.1 is being successfully implemented employing a state-of-the-art, Laboratory – developed intrusion detection system. The LLNL Counter-Intelligence Officer continues to assist LBNL in fulfilling the requirements of DOE Notice/ Order 142.1, Unclassified Visits and Assignments, for those small number of Laboratory employees holding security clearances who may host visitors from sensitive countries, requiring background checks and counterintelligence briefings.

Performance Rating (Adjectival)**: Outstanding**	95.00%

ATTACHMENT

The performance expectation for each performance measure will use the scoring criteria indicated in Table 1 below. Each performance measure indicates the relative weights between the Approach/Deployment criteria and the Results criteria.

Table 1, Appraisal Scoring Guidelines for Laboratory Management

Narrative Rating (Score Range)	Approach/Deployment	Results
Unsatisfactory (59% and Below)	Little or no systematic approach evident; anecdotal information	Little or no results in key mission and business areas.
Marginal (60 to 69%)	Beginning of a systematic approach to the key mission and business areas. 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 key mission and business objectives.	Early stages of developing; some improvements and/or early good performance level in a few key mission and business areas.
Good (70 to 79%)	A sound systematic approach, responsive to the key mission and business areas. 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 may be in the very early stages of deployment.	Improvement trends and/or good performance levels reported for most key mission and business areas. No pattern of adverse trends and/or poor performance levels in the key mission and business areas. Some trends and/or current performance levels show areas of strength and/or good to very good relative performance levels.
Excellent (80 to 89%)	A sound systematic approach, responsive to the key mission and business areas. 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 developed, with no major gaps; deployment may vary in some areas.	Current performance is Excellent in most key mission and business areas. Most improvement trends and/or current performance levels are sustained in most other areas. Many to most trends and/or current performance levels show areas of leadership and very good relative performance levels.
Outstanding (90 to 100%)	A sound systematic approach, fully responsive to key mission and business areas. 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 significant weaknesses or gaps in the key areas.	Current performance is Outstanding in most key mission and business areas. Excellent performance levels in most other areas. Strong evidence of industry and benchmark leadership demonstrated in many areas.

Science & Technology

Science and Technology / Programmatic Performance

The Institutional-level Assessment for the Lawrence Berkeley National Laboratory (LBNL) highlights strategic laboratory plans and directions, and major program and institutional challenges and issues. LBNL continues to excel in its ability to plan, develop and execute scientific programs. The Laboratory's institutional planning process is aimed at establishing research directions and priorities, and ensuring the future viability of vitality of the institution. The Director's statement in the Laboratory's FY 2003 – FY 2007 Institutional Plan and the Director's 'State of the Laboratory' address provided in June 2002 both highlight significant research progress during the past year, where Laboratory Management's attention has been directed, and outline strategic directions and initiatives for the future. LBNL's strategic vision remains comprised of five broad thrust areas built upon its core competencies and directed toward current DOE and national research needs and scientific opportunities:

- Nanoscience
- Astrophysics
- Quantitative Biology / Genomes to Life
- Energy Efficiency and Security
- Scientific Computation

The Laboratory has current program activities and proposed new initiatives under each of these areas. They remain well-aligned and integrated with the emerging new Strategic Plans of DOE and the Office of Science. Programs in the physical and energy sciences continue to struggle to keep pace with inflation, while research in the life and computing-sciences has thrived and LBNL's work in these areas has grown accordingly.

LBNL's management of the Laboratory Directed Research and Development (LDRD) and Work for Others (WFO) programs continue to direct the Laboratory's resources toward new scientific opportunities and to keep the Laboratory at the forefront of science and technology within its mission profile. The Laboratory continues to support the LDRD program at about 2.5-3.0 percent of the total funding. WFO continues to comprise about 20 percent of total annual funding at LBNL, and is especially in strong in the life science research divisions. The National Institute of Health (NIH) now provides about half of LBNL's WFO sponsorship, and about 10 percent of the Laboratory's total annual budget.

LBNL continued to operate four user centers open to qualified researchers in the U.S. and from around the world:

- Advanced Light Source (ALS) - ~1400 users
- National Center for Electron Microscopy (NCEM) - ~200 users
- 88" Cyclotron - ~250 users
- National Energy Research Supercomputer Center (NERSC)/Energy Sciences Network (ESnet) - ~2200 users

All of these user facilities continue to operate at or near record levels of scientific productivity. The functionality of the ALS continues to expand and the user base has now grown to over 1400. Six new beamlines were added in FY 2002, and the ALS "superbend" magnet beamlines was commissioned extending operations into the intermediate X-ray regime. NCEM continues to house the most powerful electron microscopes in the world, and among the few capable of sub-angstrom imaging. The ALS and NCEM are two unique measurement and characterization facilities that will complement the planned "Molecular Foundry" nano-fabrication facility now undergoing design and development at LBNL.

The current NERSC-3 system (5Tflops peak capacity), which was the largest unclassified supercomputing facility in the world until last year, is effectively already fully utilized. Acquisition planning for NERSC-4 led instead to a near-term strategy to double the existing system under the existing IBM subcontract for NERSC-3E (extended) by mid-FY 2003. LBNL has partnered with another DOE-SC laboratory and IBM to propose a new generation of supercomputing architecture aimed at recapturing U.S. leadership in scientific computing c.2006. The 88" Cyclotron is one of three low-energy nuclear physics facilities operated in the DOE laboratory complex, and it completed its most recent experimental campaign on the Gammasphere in FY 2002. The formerly NIH-funded National Tritium Labeling Facility (NTLF) was closed and cleaned-up in FY 2002 after a productive 20-year history of biomedical research and training using tritium as a metabolic tracer element.

Space needs remain a long-standing issue at LBNL, but progress is being realized on several facility initiatives in the Laboratory's Strategic Facilities Plan. The BES Molecular Foundry nanoscience facility was re-sited adjacent to the advanced into preliminary design is being completed and this major project is on-track for construction over the next several years. With new funding for excess facility disposition, approximately one-sixth of the space of the Bevatron was cleaned out in FY2002 with some shielding blocks sent to the SNS at ORNL, and waste shipped to local landfills and the Nevada Test Site. The termite-infested Building 29 was demolished, freeing up the site for the planned research support building, targeted to be a new start in FY 2004. The rapid growth in ALS users has prioritized the need for planning a new User Support Building, which is expected to be new start in FY2005. The Laboratory is evaluating bids from qualified offerors for the third-party financed "50-X" office building for about 200 occupants near the entrance to the Laboratory. LBNL is also exploring a third-party financed dormitory-type facility onsite for ALS users. LBNL developed an innovative proposal for an Energy Efficiency and Electricity Reliability (E-Lab) office/laboratory facility to the Office of Energy Efficiency and Renewable Energy (EERE), but it has been deferred as a new start due to funding constraints.

LBNL continues to successfully preserve its open environment as a "Tier III" status as a DOE site, i.e., a fully open institution with no classified work or information on-site. This remains critical to all S&T programs given the Laboratory's close ties with the UC Berkeley campus and other universities, and given that a significant fraction of its research staff are foreign nationals. LBNL remains extensively involved in major collaborations at research facilities being constructed and operated across the DOE complex and around the world. LBNL's Engineering Division, which includes the machine shops, continues to modernize its inventory of capital computer-controlled machine-tools, which increasing allows virtual engineering and automated precision machining.

DOE's science and technology/program assessment of the Laboratory is based upon individual peer reviews of its thirteen scientific divisions, corresponding self-assessments by LBNL and the University of California, and validation reviews by DOE HQ program managers and their DOE BSO counterparts. The DOE assessment of performance for research programs is comprised of a *funding-weighted* evaluation of the following DOE programs: Basic Energy Sciences (BES), High Energy Physics (HEP), Nuclear Physics (NP), Scientific Computing Research (SCR), Fusion Energy Sciences (FES), Biological and Environmental Research (BER), Energy Efficiency and Renewable Energy (EERE), Civilian Radioactive Waste Management (the Yucca Mountain Project-YMP), and Fossil Energy (FE). The cross-walk between LBNL divisions and their primary DOE program sponsor is generally direct except for two multi-program sponsored divisions: the Accelerator and Fusion Research Division (funded by HEP, FES, et al.), and the Earth Sciences Division (funded by BES, BER, YMP, and FE).

The overall FY 2002 rating of these Science and Technology programs is **outstanding.**
LBNL, UC and DOE evaluated the programs against the following four criteria:

Criteria 1: Quality of Science

Reviewers will consider recognized indicators of excellence, including impact of scientific contributions, leadership in the scientific community, innovativeness, and sustained achievement. As appropriate, they may also evaluate other performance measures such as publications, citations and awards.

Criteria 2: Relevance to National Needs and Agency Missions

Committees will consider the impact of Laboratory research and development on the mission needs of the Department of Energy and other agencies funding the programs. Such considerations include national security, energy policy, economic competitiveness, national environment goals, as well as the goals of DOE and other Laboratory funding agencies in advancing fundamental science and strengthening science education. Committees will assess the impact of Laboratory programs on industrial competitiveness and national technology needs. In this assessment, committees will assess characteristics that are not easily measured, including relevance of research programs to national technology needs and effectiveness of outreach to industry. As appropriate, they may consider such performance measures as licenses and patents, collaborative agreements with industry, and the value of commercial spin-offs.

Criteria 3: Performance in the Technical Development and Operation of Major Research Facilities

Performance measures include success in meeting scientific and technical objectives, technical performance specifications and user availability goals. Other considerations may include the quality of user science performed, extent of user participation and user satisfaction, operational reliability and efficiency, and effectiveness of planning for future improvements, recognizing that DOE programmatic needs are considered to be primary when balanced against user goals and satisfaction. This includes, but is not necessarily limited to, LBNL's performance related to aspects of the Spallation Neutron Source (SNS) Project, in accordance with the inter-Laboratory Memorandum of Agreement and approved work plans.

Criteria 4: Programmatic Performance and Planning

The assessment should focus on the achievement of broad programmatic goals, including meeting established technical milestones, carrying out work within budget and on schedule, satisfying the sponsors, providing cost-effective performance, and planning for the orderly completion or continuation of the programs, and appropriate publication and dissemination of scientific and technical information. In assessing the effectiveness of programmatic and strategic planning, the reviewers may consider the ability to execute projects in concert with overall mission objectives, programmatic responsiveness to changes in scope or technical perspective, and strategic responsiveness to new research missions and emerging national needs. In the evaluation of the effectiveness of programmatic management, consideration may include morale, quality of leadership, effectiveness in managing scientific resources (including effectiveness in mobilizing interdisciplinary teams), effectiveness of organization, and efficiency of facility operations.

Performance Area: Basic Energy Sciences

FY 2002 Overall Performance Summary:

The Basic Energy Sciences (BES) research programs support at LBNL in materials sciences, chemical sciences, geosciences, and biosciences continue to produce **outstanding** scientific results that support the needs of the various DOE missions and technology programs. LBNL's operation of research facilities such as the Advanced Light Source (ALS) is also resulting in quality science being conducted by the Laboratory and external researchers.

Overall Performance Rating: Outstanding

Criteria 1: Quality of Science
Rating: Outstanding

The Materials and Engineering Physics Team last conducted a peer review at LBNL on September 11-12, 2000. The reviewers found that the National Center for Electron Microscopy (NCEM) and the program on electronic materials produced outstanding science. Although many of the topics under the High Performance Metals program were considered to be technically important, reviewers expressed the concern that the large number of topics being pursued with too few personnel would yield superficial results. Results since then were consistent with this concern. The Non-destructive Evaluation Superconducting Quantum Interference Device program was not productive and was not funded after September 30, 2001.

Examples of outstanding science in the Materials and Engineering Physics program include:

- A new technique was developed in which a controlled indentation is made on a surface within an operating electron microscope, which permits the atomic-scale changes as a metal deforms to be observed in real time. The ability to precisely control the location of the applied load while simultaneously imaging the sample is a major advance and has shed light on the ultimate limits of strength and the mechanisms by which metals fail.

- A fundamental breakthrough was achieved in understanding the mechanism by which a molten metal spreads on a surface. Investigations of the microscopic structure, at the droplet edge, showed that enhanced atomic transport underneath the liquid metals, changes the solid ceramic surface's shape. The behavior at these metal-ceramic interfaces is critical in various industrial processes including soldering, brazing, coating, and composite processing.

The research programs supported by the Condensed Matter Physics and Materials Chemistry program at LBNL were reviewed on-site on October 8-10, 2001. Overall, the quality of science was felt to be outstanding. In a few projects where the quality appeared to be less than outstanding, adjustments have been made following this review.

The operation of the Advanced Light Source (ALS), was reviewed in February 2002. The review demonstrated that the ALS operations are in tune with the needs of its users, and that superb science is being done.

The Fundamental Interactions programs at LBNL includes Photochemistry and Radiation Sciences; Chemical Physics; and Atomic, Molecular, and Optical (AMO) Physics. These programs are "world-class" and widely recognized - for example, the American Chemical Society recently awarded a researcher of the Chemical Sciences Division, for his theoretical chemistry research. The programs are quite relevant and, in certain cases, have been reorganized to encourage additional interaction between members of different groups, for example, the intense interaction between a researcher and the combustion group. The researcher is a theoretician who uses a quantum Monte Carlo approach, an approach that is now being applied directly to significant problems in combustion chemistry and dynamics. Another example is the computational modeling of electron-molecule scattering, particularly those events that result in molecular fragmentation. This remains a formidable challenge because of the complex interaction between electronic and nuclear motion that must be accurately described. LBNL scientists are devising new computational tools for electron-molecule processes that couple recent advances in quantum chemistry with new formalisms in continuum scattering and massively parallel computations. Regarding the AMO physics program, an on-site review was held early this year. The review noted the addition of several theorists, and their investigations of electron-driven processes that are expected to have major impact in many diverse fields. Several concerns were also identified, and an immediate follow-up meeting showed that LBNL management would aggressively address these issues.

The Molecular Processes and Geosciences programs were reviewed in March 2001. Overall, the quality of the programs was excellent. There are a number of "world class" scientists in their respective fields. LBNL researchers in geomechanics, geochemistry, and geophysics continue their outstanding research with significant contributions in the peer-reviewed literature. The geophysics program supports high quality experimental and computational research on rock physics of porous and fractured rock, subsurface imaging through both seismologic and electromagnetic methods, and hydrologic research on fluid flow through both pores and fractures. Geochemical studies focus on advanced interpretations of low-temperature flow processes, innovations in analytical geochemistry, isotope and trace element chemistry with mass spectrometric and synchrotron-based analyses. In addition, the Earth Sciences Division is expanding a program in biogeochemistry using the ALS among other facilities.

In general, the Energy Biosciences programs at LBNL are doing well. The concentration of work in photosynthesis and photobiology is transitioning into photochemistry, which is the direction the Laboratory wants to go. The effort associated with biological materials is being redirected to energy related missions.

Criteria 2: Relevance to National Needs and Agency Mission
Rating: Outstanding

The BES materials sciences, chemistry, and geosciences core research programs at LBNL continue to be very responsive to the energy security, environmental, and other mission needs of DOE.

Criteria 3: Performance in the Technical Development and Operation of Major Research Facilities
Rating: Outstanding

The peer review of September 11-12, 2000 found that the National Center for Electron Microscopy (NCEM) is quite effective as a user facility, operates well, and provides its users with great

satisfaction. Its scientific output and user satisfaction continues to be outstanding, not withstanding the long-standing and unresolved difficulties in repairing the foreign made high-voltage transformer and power supply that were compounded by the manufacturer's discontinuance of this item. The NCEM has developed and provided software for high-resolution, electron-optical characterization of defects. This software permits the reconstruction of electron wave amplitude and phase from an out-of-focus series of images, thus yielding a level of useful information that exceeds that attainable from a single perfectly focused image. The NCEM continues to make important contributions to the research areas of atomic level spectroscopy, electron beam holography, electron nano-crystallography, nanoscale deformation, and the atomic structure of interfaces.

The ALS has done a remarkable job of raising the level of research quality of experiments that use the ALS, and in accommodating the needs of its users. The Chemical Physics and the AMO Physics programs both use the ALS and have devoted end-stations. The former program has recently attracted a scientist of outstanding reputation, to manage and use the Chemical Dynamics beamline. The outstanding science performed using this facility will certainly continue. LBNL reviews of the AMO Physics facility have been very favorable.

In May 2002, LBNL's Ion Beam Technology Program successfully completed the Front End System for the linear accelerator portion of the Spallation Neutron Source (SNS) Facility currently under construction at the Oak Ridge National Laboratory (ORNL). The Front End System met all its requirements, was completed on schedule and within budget and has been shipped to ORNL. LBNL's successful design, fabrication, and installation of this system will be the first part of the SNS to be commissioned.

The Center for Isotope Geochemistry is a core activity of LBNL and of the Geosciences program. Excellent science is conducted at the Center, and its staff has established strong efforts of working with others.

Criteria 4: Programmatic Performance and Planning
Rating: Outstanding

LBNL management is complemented for their vision to extend the limits of electron beam micro-characterization with a new generation of unprecedented capabilities for dynamic in-situ microscopy. These capabilities will include energy-filtered imaging, holography, and highly localized spectroscopy with high spectral resolution.

The Materials Chemistry and Condensed Matter Physics programs were reviewed at LBNL in October 2001. It was difficult getting LBNL to set up this review even though it had been a few years since the previous reviews: October 1997 for the Condensed Matter Physics program and September 1998 for the Materials Chemistry program. In addition, the review was not well organized, e.g., materials that should have been available to the reviewers in advance were often provided during the presentation by the investigator, or in some cases, afterwards. This affected presentations of the science being performed. It appeared that the Materials Sciences Division Director had many competing responsibilities, i.e., the ALS and the Molecular Foundry (Nanoscience Center). In contrast, a review of the ALS was carried out in a superb manner. Laboratory management is applauded for efforts to recruit high quality, young investigators.

For the Fundamental Interactions program, issues related to programmatic goals and objectives have been discussed and evaluated through the on-site peer review mechanism that includes the Laboratory management. Immediately following the reviews, suggestions for modifications to plans were offered to management. They have been quite responsive, supportive, and understanding in these situations. Recent changes in the Heavy Element program management represent a speedy and substantive response to criticisms from the external review and are viewed as very positive and appropriate management at the Laboratory.

LBNL has developed multiple funding sources for the Earth Science Division activities that "raise all boats." Strategic planning has placed LBNL in the forefront of participants in research activities for Yucca Mountain and Carbon Sequestration research.

The DOE Office of Scientific and Technical Information (OSTI) listing of technical and scientific journal articles and reports provided to that office by LBNL in FY 2002 from BES-supported programs is extensive. The ALS has taken additional steps to make a more complete list of publication citations collected for the facility accessible to OSTI for their inclusion in Pub-SCIENCE.

Performance Area: High Energy Physics

FY 2002 Overall Performance Summary:

The Lawrence Berkeley National Laboratory's performance in this area is **excellent.** The ratings are unchanged from last year's Performance of the Physics Division (PD) and Accelerator and Fusion Research Division (AFRD) with Regard to the High Energy Physics (HEP) Programs. The qualities of LBNL work for HEP has continued to be first rate. Progress has been made on all of the HEP activities at LBNL but no significant programs have completed or started. Unfortunately, as noted below, the only criticism from last year was not resolved.

Overall Performance Rating: Excellent

Criteria 1: Quality of Science
Rating: Outstanding

PD has groups contributing to the construction, maintenance, and operations of critical systems of three major high-energy physics experiments, A Toroidal LHC Apparatus (ATLAS), B/B-bar systems of mesons detector (Babar), and Collidesr Detector at Fermi Laboratory (CDF). They also provide substantial scientific leadership to those experiments; for example, the physics and silicon-detector construction coordinators for US ATLAS. LBNL is also represented on the U.S. Linear Collider Steering Group, which is leading the effort to bring an e^+e^- linear collider to the U.S.

The astroparticle physics group has the leaders of the measurement of the acceleration of the universe using supernovae. Innovative detectors that improve the physics capability for many experiments have been developed at LBNL, with the new infrared sensitive Charge Coupled Devices (CCDS) being the most recent example.

Accelerator and Fusion Research Division (AFRD) conduct world-class research into the acceleration of particles, using lasers and plasmas. The facility for this research has been successfully upgraded this year and promises continuing progress. The potential applications lie both in HEP and outside.

Criteria 2: Relevance to National Needs and Agency Mission
Rating: Outstanding

LBNL has concentrated its efforts on the most important experiments in high-energy physics. In addition, they provide strong services to the high-energy physics community. The Particle Data Group based at LBNL, collects, organizes, and distributes the most current information on experimental particle physics. This work is now available through the web, in addition to the printed book.

The superconducting magnet program has two facets: an effort to build higher field magnets, and the development with industry of better superconducting wire. The high field magnet program has

achieved a world record for field strength in a dipole magnet. New superconducting wire developments have benefited many areas within the DOE program.

Criteria 3: Performance in the Technical Development and Operation of Major Research Facilities
Rating: Outstanding

AFRD is participating in the construction of the Large Hadron Collider (LHC) at European Organization for Nuclear Research (CERN). They have responsibility for producing the superconducting wire used in the quadrapole magnets being built by Fermilab, components needed to construct the interaction regions, and luminosity instrumentation. In the recent past, LBNL was a major contributor to the design and construction of the B factory, which has had a spectacularly successful run so far.

Criteria 4: Programmatic Performance and Planning
Rating: Excellent

The PD division has been under financial stress due to flat or declining budgets, but has successfully preserved its leading programs. Cuts have been made intelligently.

Management has made regular investments into the Microsystems Laboratory. This has made LBNL a forefront producer of specialized electronics components and detectors. All of the major HEP experimental efforts at LBNL, ATLAS, Babar, CDF, and Super Nova Accelerator Probe SNAP, have been benefited from this.

There have been problems with the engineering of the cryogenic feed boxes being built for the LHC. This same criticism was made last year, and we believed that it had been corrected, but the project failed its preproduction readiness review. This failure detracts from an otherwise outstanding program and planning effort.

HEP results from LBNL have been easily obtained by program managers in the Division of High Energy Physics (DHEP) through the standard HEP outlets such as the SLAC SPIRES preprint server, and the arXiv.org eprint server. HEP has not made use of the Office of Scientific and Technical Information (OSTI), and a check of that service has shown that HEP results are not as available there as they are elsewhere. DHEP is satisfied with the LBNL's publication and dissemination of scientific and technical information.

Performance Area: Nuclear Physics

FY 2002 Overall Performance Summary*:*

The Laboratory's performance in this area is **excellent**. LBNL plays a lead role in the Sudbury Neutrino Observatory (SNO) experiment and achieved notable physics results this past year by providing strong evidence for solar neutrino oscillation, which implies that neutrinos have mass. The group also collaborates in measurements of reactor neutrino oscillations at KamLAND in Japan, which began taking data this year. In the area of heavy elements, LBNL confirmed the production of element 110, and measured the chemical properties of element 108 (Hassium). The Laboratory continues to make substantial contributions to the STAR experiment at RHIC in Brookhaven, a priority of the national program. A two-year research campaign on the Gammasphere at the 88" cyclotron was completed this year. LBNL continues to play leadership roles in the national program including developing components for the proposed Rare Isotope Accelerator (RIA), the next generation gamma-ray detector array (GRETA), and participation in long-range planning through the Nuclear Sciences Advisory Committee (NSAC). The issue surrounding the retraction of the discovery of element 118 was unfortunate, but LBNL is to be commended for using scientific methods to ferret out the problem and taking decisive actions on the matter of scientific integrity.

Overall Performance Rating: Excellent

Criteria 1: Quality of Science
Rating: Outstanding

The low energy nuclear physics research program has produced significant results in the studies of nuclear structure, neutrino physics, fundamental interactions, and the physics and chemistry of heavy elements. Notably, Gammasphere has carried out a successful two-year research campaign in nuclear structure at high angular momentum, and a fundamental interactions program studying ^{14}O decay has begun to test aspects of the quark-mixing model.

The LBNL group plays a lead role at the Sudbury Neutrino Observatory that has published its second major result, significantly strengthening support for the neutrino oscillation hypothesis, and in the KamLAND experiment in Japan, that measures neutrino oscillations at a large distance from reactors and has began its data-taking phase in January 2002. The LBNL group is playing a leading role in the chemistry and physics of the heaviest elements. Recent accomplishments include the confirmation of production of element Z = 110, and the measurement of chemical properties of Hassium (Z = 108).

The relativistic heavy ion group at LBNL, continues to play a substantial and outstanding role in the Solenoidal Tracker at RHIC (STAR) experiment at Relativistic Heavy Ion Colllider (RHIC) at Brookhaven Laboratory, with members of the group holding leadership positions in several STAR physics analysis-working groups, and responsible for writing several of the first publications from RHIC. An important recent result is the observation of the suppression of particles with high momenta traversing the hot medium created in central Au+Au collisions, in particular through studies of correlations of leading particles from "jets."

The nuclear theory group mounts an excellent effort into the studies of the physical properties of nuclei, such as superdeformed and superheavy elements, and nuclear matter under extreme conditions, from the formation of the quark-gluon plasma to neutron stars. With the addition of a divisional fellow, the group has significantly enhanced its efforts to study many-body interactions using modern effective field theories. Important recent results include calculations of the "elliptical flow" of high-transverse momentum particles, particularly modifications resulting from high-energy loss of these particles in the hot medium.

Criteria 2: Relevance to National Needs and Agency Mission
Rating: Outstanding

The experimental program in nuclear physics supports and provides leadership in areas identified as priorities in the NSAC 2002 Long Range Plan. The LBNL researchers are leaders in the study of nuclei at extreme conditions, especially high angular momentum, deformation, and excitation energy with Gammasphere. They also are leading the U.S. effort in the development of the next generation of gamma-ray detector arrays. The relativistic heavy-ion physics at RHIC is a high-priority of the national program. The nuclear theory group is playing a significant role in interpreting the data from the new DOE nuclear physics facilities. In addition, a small group of LBNL scientists plays a significant role in the national nuclear data effort that provides evaluated nuclear structure and decay data to the basic research and applied physics communities. The importance of this effort has been recently reaffirmed, as the nuclear data activities are important for counter-terrorism efforts.

Criteria 3: Performance in the Technical Development and Operation of Major Research Facilities
Rating: Outstanding

The operation of the 88-Inch Cyclotron continues to provide significant research opportunities in nuclear physics, providing about 5000 hours of beam time with a wide range of stable beams. The most recent two-year research campaign with Gammasphere is just successfully concluding at LBNL. The ion source group at LBNL is a world leader in the development of electron cyclotron resonance (ECR) ion sources, and is developing a source that is the prototype for the Rare Isotope Accelerator (RIA). LBNL researchers have developed a concept for a next-generation gamma-ray tracking spectrometer, Gamma Ray Tracking Array (GRETA), and are carrying out successfully the necessary Research and Development (R&D). In KamLAND, the laboratory fulfilled its commitment to timely produce the electronic readout system.

Criteria 4: Programmatic Performance and Planning
Rating: Excellent

The scientific staff has shown substantial insight into the identification of the important questions in nuclear physics, and developed the initiatives to address them. LBNL staff members are providing both formal and informal leadership in a number of areas important to the national program. The chairman of the DOE/National Science Foundation NSAC that developed the 2002 Long Range Plan for the community is completing his term.

The Laboratory and Nuclear Science Division management responded appropriately and decisively when questions of data integrity became apparent in the superheavy element search program. The Laboratory did an excellent job of ferreting out the problem, but the experimental group itself should have analyzed the data much more thoroughly before going public. The investigations showed the situation was an aberration caused by one individual, but it should not have slipped past the vigilance of all colleagues. Unfortunately, the negative publicity affects the entire program and detracts from the outstanding work done by the Laboratory in all other areas of the program.

Performance Area: Computing Sciences

FY 2002 Overall Performance Summary:

The overall performance of Computing Sciences and Network Research at the LBNL is rated **outstanding**. Mathematics continues to be one of the strongest applied math efforts in the nation. LBNL and its collaborators continue to produce new understandings of fluid turbulence and multi-scale mathematics. The Laboratory has the coordinating lead for the Scientific Discovery through Advanced Computing (SciDAC) performance evaluation Integrated Software Infrastructure Centers (ISIC), and is making outstanding progress. Work being done by the Laboratory in four national collaboratory pilots and eight collaboratory and grid middleware projects is outstanding and very valuable to the DOE Mathematical, Information and Computational Sciences Program. The National Energy Research Scientific Computing Center (NERSC) is one of the premier high performance centers in the United States for unclassified computing. NERSC has continued to provide world-class hardware, timely technology upgrades and services virtually unsurpassed by any other computer center in the world. The Energy Sciences Network (ESnet) is a critical item to the DOE scientific research, computing and nuclear stewardship missions and provides the mechanism at DOE to enable worldwide collaborations and data exchange. Its work on the DOE science grid support and public key infrastructure is to be commended.

Overall Performance Rating: Outstanding

Criteria 1: Quality of Science
Rating: Outstanding

Mathematics

This continues to be one of the strongest applied mathematics efforts in the nation. LBNL and its collaborators continue to produce significant new understanding of fluid turbulence and multi-scale mathematics. Continuing work on Level Set Methods and Fast Marching algorithms has been applied in a range of new applications, including control problems, semiconductor etching, and tomography and seismic exploration. Work on adaptive grids and problems of fluid turbulence coupled with chemistry continue to yield significant new insights into combustion.

LBNL's focus for this element of computer science research includes benchmarking, performance evaluation and prediction, scalable system software, and programming models and languages. This work, individually and collectively, is at the forefront of national and international activities in these areas, and LBNL researchers are widely recognized for their contributions. They have the coordinating lead for the Scientific Discovery through Advanced Computing (SciDAC) performance evaluation Integrated Software Infrastructure Centers (ISIC), and this effort is making outstanding progress.

The Laboratory is involved in four National Collaboratory Pilots and eight collaboratory and grid middleware projects. The pilots are the Earth System Grid, the DOE Science Grid, the Particle Physics Grid, and the National Fusion Grid. The work done by LBNL on all these projects is outstanding and the contribution to the MICS program in the respective project areas is very valuable. The Laboratory has lead on the DOE Science Grid (DSG) which is focused at defining, integrating,

deploying, supporting, evaluating, refining, and developing (as necessary), the persistent Grid services needed for a scalable, robust, high-performance grid. The DSG will provide DOE science applications and workflow systems persistent services for security, resource discovery, resource access, system monitoring. It is a collaboration of four laboratories Argonne National Laboratory (ANL), Lawrence Berkeley National Laboratory (LBNL), Pacific Northwest National Laboratory (PNNL), and Oak Ridge National Laboratory (ORNL). Over the past year, the project has focused on one of the biggest problems in large-scale collaborations, a common authentication and security approach that allows researchers from all over the world to securely collaborate and share resources. The project, in collaboration with Energy Sciences Network (ESnet), has developed a formal and scalable approach to issuing and managing identity certificates in order to support worldwide science collaborations. This approach has been implemented for several science applications.

Another example of a project the laboratory participates in is The Earth System Grid (ESG). ESG is providing a foundation for next-generation analysis applications, web-based data portals, and collaborative problem-solving environments for the climate community. This is vital, enabling infrastructure for sustaining and advancing climate research. The project brings together climate researchers and computer scientists from six institutions ANL, Lawrence Livermore National Laboratory (LLNL), LBNL, National Center for Atmospheric Research (NCAR), ORNL and the University of Southern California (USC) with leadership being provided by NCAR, LLNL, and ANL. LBNL's contribution lies in the area of data management. The magnitude and complexity of climate model datasets is a formidable barrier to research progress. To surmount these barriers, fundamentally new methodologies for managing, accessing, recombining, analyzing and intercomparing distributed data are required.

ESG provides a next-generation environment that harnesses the combined potential of massive distributed data resources, remote computation, and high-bandwidth wide-area networks as an integrated resource for the research scientist. The development of use cases has been an effective approach for defining requirements. An example of scientific leadership is the participation by individuals in the Global Grid Forum (GGF), a forum where individual researchers and practitioners working on distributed computing, or "grid" technologies. GGF meets as a community and focus is on the promotion and development of Grid technologies and applications through the development and documentation of "best practices," implementation guidelines, and standards. A key LBNL manager was instrumental in driving the formation of this forum and serves as a member of the steering group. A number of LBNL staff members are key leaders in the various research and working groups.

National Energy Research Scientific Computing Center

NERSC aspires to be a world leader in accelerating scientific discovery through computation. Its goal is to provide high-performance computing tools to tackle science's biggest and most challenging problems, and to play a major role in advancing large-scale computational science and computing technology. As a national facility for scientific research funded by the Department of Energy, Office of Science (DOE SC), NERSC served over 2,000 scientists throughout the United States in FY 2002. These researchers work in DOE laboratories, universities, industry, and other Federal agencies. A portion of the NERSC Center staff either collaborate or are directly involved in these research efforts.

The NERSC Center is one of the premier High Performance Centers in the U.S. for unclassified computing and possibly in the world. It is usually within the top five largest unclassified computing centers in terms of computer resources.

Energy Sciences Network

The Energy Sciences Network (ESnet) supports a research community numbering in the thousands, both domestically as well as internationally. ESnet enables the DOE science mission to excel in the time of rapid prototyping and deployment by providing the required reliable connectivity and network related services to the DOE scientific community. Its work on the GRID support and Public Key Infrastructure (PKI) is to be commended.

Criteria 2: Relevance to National Needs and Agency Mission
Rating: Outstanding

Mathematics

The applied mathematics research focuses on problems that are important to DOE missions. In addition, many of these results have generated significant commercial interest.

Understanding the performance characteristics of scientific applications on new high performance architectures is critically important to the Office of Science because of the increasing capabilities of high performance systems to advance scientific discovery. Also, new programming models and languages are needed to increase the scientific productivity of users of high performance systems, and to enable new applications to be developed more effectively than can be done with existing complex programming models and tools.

Partnering across science and technology programs is an important element to the structure and goals of the MICS program that supports these projects. LBNL fully supports this partnering and provides effective championing of this goal within the broader community.

Large-scale science projects such as those found in high energy physics, observational astronomy and astrophysics, multi-disciplinary problems, national user facilities such as synchrotron light sources, etc., share the problems of accommodating collaborators from all over the country and around the world, and of managing and sharing huge amounts of data, sharing computing resources, etc. "Grids" are intended to provide a common infrastructure to support large-scale, collaborative, and widely distributed science, and are the result of an international effort to define the basis of such infrastructure. The DOE Science Grid project is providing the research, development, and deployment of a "Grid", in support of DOE's Office of Science programs.

Another project example is the ESG. High-resolution, long-duration simulations performed with advanced climate models will produce tens of petabytes of output. To be useful, this output must be made available to global change impacts researchers nationwide, both at national laboratories and at universities, other research laboratories, and other institutions. The creation is a virtual collaborative environment that links distributed centers, users, models, and data by the ESG, will significantly increase the scientific productivity of U.S. climate researchers by turning climate datasets into community resources.

National Energy Research Scientific Computing Center

As one of the world's largest, unclassified, high performance computing facilities (in terms of resources) and with a policy to support research and development pertinent to the DOE missions, the relevance to DOE missions is assured. A small portion of NERSC resources are open to investigators funded by sources other than the DOE, to broaden the user base and to ensure the use of NERSC resources to meet needs that support DOE science, as well as other national science objectives. The NERSC Center also supports the U.S. industrial competitiveness and national technology needs. Numerous computational simulations run on NERSC probe advanced energy systems, concepts and utilization. After several years of planning, computational science in the DOE SC finally received a big boost in 2001 through the funding of the Scientific Discovery through Advanced Computing (SciDAC) program. SciDAC opens up the opportunity to further develop and then deploy the results of recent computer science research. Also, NERSC interacts closely with the vendors of the high performance computing systems. NERSC computer hardware systems are typically the first-of-its kind, when acquired. However, the basic building blocks of these systems consist of commercially available computer hardware.

Energy Sciences Network

The ESnet is a critical item to the DOE scientific research, computing, and nuclear stewardship missions. ESnet provides the mechanism for DOE to enable worldwide collaborations and data exchange, whether it is simple email, or massive accelerator data sets. Its ease of use and reliability has made it a mainstay for the performance of the DOE mission.

Criteria 3: Performance in the Technical Development and Operation of Major Research Facilities
Rating: Outstanding

National Energy Research Scientific Computing Center

The NERSC Center has met all expectations of the user community in providing massively parallel processor (MPP) resources, as well as the High Performance Storage System (HPSS) capabilities to the scientific community. NERSC conducts annual user surveys and performs self-assessments of the quality of its services and systems. The breadth of scientific disciplines being addressed at NERSC can be seen in the 2001 Annual Report (LBNL-49186, December, 2001, http://www.nersc.gov/research/annrep01/). Another report that documents the computational science being done at NERSC, from the users' perspective, is the DOE Green Book (UCRL-LR-147890, April 2002, http://www.nersc.gov/research/annrep01/).

LBNL submitted a proposal for the management and operation of the NERSC Center for FY 2002-2006. Many features of the proposal build upon key NERSC Center strengths; enabling the advancement of high-quality DOE science, providing a broad, user base with high-performance scientific computing resources and services, and working closely with computer vendors to ensure that future system upgrades can be achieved cost-effectively. The proposal received excellent reviews and the decision to fund the proposal was announced on November 8, 2001.

NERSC has an excellent acquisition group and has worked closely with DOE-Oakland on acquisitions of computer systems. NERSC uses the 'Best Value' approach to acquisition based on benchmarks developed from actual user codes, as well as traditional benchmarks known throughout the industry. In order to maintain state of the art hardware on the floor, NERSC procures new hardware approximately every three years. With NERSC-3 providing over 50 million massively parallel processors (MPP) hours in FY 2002, the older Cray systems are being terminated.

Energy Sciences Network

ESnet is a critical item in the development and technical operations of the DOE research facilities. The user satisfaction, as evidenced at the face-to-face ESnet Steering Committee (ESSC) meetings and the ESnet Site Coordinating Committee (ESCC) meetings, is a tribute to the technical development and operation of this major facility. As the needs of DOE and the worldwide scientific research community have grown, ESnet has met the challenge and designed a plan whereby it will upgrade the network to meet the challenges for the next three years in a very cost effective manner. This upgrade started in late FY 2002 and will be completed in early FY 2005.

Criteria 4: Programmatic Performance and Planning
Rating: Outstanding

Mathematics

This is a basic research program; however, LBNL has been effective in collaborations with researchers at other DOE facilities and industry. The mathematicians have also been successful in establishing collaborations with users of these technologies.

LBNL hired two new research managers during the past year, and the new managers are working closely with DOE program management.

All of the pilot collaboratory projects and part of the middleware projects involve planning across multiple organizations. This is done well and appropriate milestones are met. Even projects for which the Laboratory is solely responsible have significant coordination and interfaces with other national collaboratory projects. From a management perspective, the performance is outstanding. Strong leadership from their participation has been invaluable in helping maintain a cohesive collaboratory effort across the R&D middleware projects and the pilots. Their collaborative activities within DOE are a positive contribution and they also interface well with others in the research community outside of DOE, who are pursuing R&D in the same or similar areas.

National Energy Research Scientific Computing Center

The NERSC management proposal presented a sound strategy for providing high-performance scientific computing hardware and services in a manner commensurate with the near-term expectations of the DOE Office of Science and within available budgets. NERSC has continued to provide world-class hardware, timely technology upgrades and services virtually unsurpassed by any other computer center in the world. NERSC cost-effectiveness is high and is expected to remain so.

Energy Sciences Network

Although ESnet personnel provide excellent programmatic performance and have great success in meeting the technical and scientific objectives, the long range planning and external public relations (within the other Federal agencies) could use some improvement. Specific areas recommended for improvement are generally centered around ESnet taking a proactive approach to: keeping the other federal agencies involved in the loop on transition planning and current status on a frequent basis (i.e. Joint Engineering Team (JET), Network Research Team (NRT); advising the DOE of any potential problems and changes in schedule on a more frequent basis; providing DOE information for public relations material and presentation to top management (i.e. video clips, making presentations given by LBNL personnel more available); and developing a written operation plan and disaster recovering plan and providing a copy to DOE. Many times DOE personnel are required to answer detailed questions on very short time frames, and having ESnet take a proactive approach would assist in this endeavor since, due to the differences in time zones, it is not always feasible to have the luxury of email or phone call exchanges with ESnet personnel.

Performance Area: Fusion Energy Sciences

FY 2002 Overall Performance Summary:

The Laboratory continues to carry out an **outstanding** research program within the Virtual National Laboratory (VNL) for Heavy Ion Fusion. The VNL has demonstrated vision, during and after the 2002 Fusion Snowmass meeting, in developing long range planning and providing a roadmap for the development of heavy ion inertial fusion energy. Scientific achievements at LBNL have been excellent, with new results from the High Current Experiment (HCX) and the completion of the ion source to be used in future beam-focusing experiments.

Overall Performance Rating: Outstanding

Criteria 1: Quality of Science
Rating: Outstanding

The leadership of the development of heavy ion drivers for Inertial Fusion Energy (IFE) is now coordinated through the Virtual National Laboratory (VNL) for Heavy Ion Fusion. The VNL consists of three laboratories (LBNL, Lawrence Livermore National Laboratory (LLNL) and Princeton Plasma Physics Laboratory (PPPL), and has been instrumental in contributing to a cost effective coordination of research efforts across the three laboratories. Within the VNL, LBNL continues the excellent program that the Laboratory has carried out for many years. The program quality has been recognized by both the national and international scientific communities that have interests in fusion energy and is demonstrated by conference presentations and journal publications. A Program Advisory Committee (PAC) for the VNL was in general, complimentary about the work at LBNL.

Criteria 2: Relevance to National Needs and Agency Mission
Rating: Outstanding

Within the VNL, LBNL supports DOE's long term energy goals as well as the commitment of the Office of Science to quality science. The scientific work carried out at LBNL is preparing the basis for the future facilities needed to achieve an IFE powerplant.

Criteria 3: Performance in the Technical Development and Operation of Major Research Facilities
Rating: N/A

Criteria 4: Programmatic performance and planning
Rating: Outstanding

Improved planning was evident in the LBNL field work proposals. Personnel from LBNL were active participants at the 2002 Fusion Snowmass meeting. There, along with colleagues from the National Nuclear Security Agency (NNSA) high average power laser program, they extended and enhanced a road map for the development of IFE. One aspect of this work that was continued at LBNL after the Snowmass meeting, was defining and clarifying goals for the next facility needed to develop heavy ion IFE, an Integrated Beam Experiment (IBX). This type of detailed and careful planning is necessary within the context of the goals of the fusion energy program.

Performance Area: Biological and Environmental Research

FY 2002 Overall Performance Summary:

Overall Lawrence Berkeley National Laboratory's Life Sciences Division's performance is **outstanding.** The Laboratory's research had a significant impact on the scientific community during the current rating period. As part of the DOE Joint Genome Institute, LBNL continues to contribute to the develop of research tools and to the completion of the human DNA sequence and to the sequencing of numerous microbes and other organisms important for DOE mission needs in energy and the environment and to our understanding the human genome.

Clearly, the Laboratory is placing a great deal of it's of its future emphasis on quantitative biology and genome studies. The Laboratory has appropriately capitalized on the Advanced Light Source crystallography beam lines to advance structural biology and structural genomics, and it has also leveraged the National Energy Research Scientific Computing Center (NERSC) to advance biology at the Laboratory. SC has recently launched a "Genomes to Life" program which will be the DOE's strategic post-sequencing program. The largest element of that program will be an LBNL-led virtual institute to understand microbial stress and survival.

The Department of Nuclear Medicine and Functional Imaging collaborates with other Divisions within the Laboratory, with UC Berkeley and other universities, and with industry to examine medical issues with large societal impacts. The program has an "international reputation" in the theoretical framework of imaging and the design of new instruments for specialized medical applications.

Overall Performance Rating: Outstanding

Criteria 1: Quality of Science
Rating: Outstanding

In FY 2002, LBNL Life Science Division continues to have a significant and substantial impact on the scientific community. As part of the DOE Joint Genome Institute, LBNL contributes leadership and scientific expertise to the sequencing of human chromosomes 5, 16, and 19 and the sequencing of numerous microbes and other organisms important in understanding the human genome. LBNL scientist continue to make substantial contributions to the DOE Low Dose Radiation Research Program and to our understanding of the role that tissue complexity plays in overall gene function and the biological responses to the environment. LBNL is currently a major participant in the development of the Genomes to Life program.

In the Medical Science Division, LBNL programs in the areas of radiopharmaceutical development, medical imaging instrumentation, accelerator-base neutron beam, and clinical feasibility studies of basic science technologies for potential human use, generally: met the high standards of panel and peer-review, have an excellent track-record of productivity and scientific publications, and are well-regarded nationally and internationally. The structural biology research projects at the Advance Light Source (ALS) are of high quality and are seeking significant advances in techniques for biological research.

In the environmental sciences, LBNL's Environmental Remediation Sciences Divisions are publishing results in high profile, peer-review scientific journals. Technical approaches are state-of-the-art and are addressing important issues such as improving microbial capabilities and addressing the "scaling gap" between laboratory and field studies.

LBNL's Climate Change research Division team has been outstanding and has developed a new model to address scientific questions dealing with the carbon cycle.

Criteria 2: Relevance to National Needs and Agency Mission
Rating: Outstanding

Overall, LBNL Life Science research contributes substantially to DOE mission and national needs. LBNL genomics research, including Genomes to Life research, contributes broadly to biotechnology research, well beyond the direct benefits that come from its role in sequencing the human genome. The core capabilities and knowledge being developed in the LBNL genomics research program contribute to a growing national laboratory and U.S. biotechnology infrastructure that can be used to address DOE mission needs in these areas. LBNL Life Science research also contributes to the science base that will underpin future development of radiation risk regulatory policy. Finally, LBNL Life Sciences research continues to make seminal contributions to the important, but understudied field of gene regulation and function at the tissue level; information that will have significant impacts in medicine and radiation risk regulatory policy.

The Medical Sciences Divisions' programs at the Center of Functional Imaging support nuclear medicine research including positron emission tomography (PET), imaging technology development activities, that promote the Department's mission to develop applications of radioisotopes for diagnosis and therapy, and offer to improve health care and medical research in the country. The compact tandem Electrostatic Quadrapole (ESQ) accelerator will have the capability to deliver the highest quality epithermal neutrons for Boron-Nuetron Capture Therapy (BNCT) within shortest treatment times, among all accelerators considered by various research groups in the USA. The structural biology technological research at the ALS is seeking new techniques that would enable progress in mission areas such as bioremediation.

LBNL's Environmental Remediation Sciences is highly relevant to DOE mission and national needs, particularly in the areas of cleanup of legacy wastes and carbon sequestration. Innovative approaches are being developed for autonomous sampling of ocean carbon flux. The Natural & Accelerated Bioremediation Research (NABIR) Program Office continues to provide outstanding technical support to the overall NABIR program, and deserves special recognition for their valuable contributions.

The Global Change Program is a major DOE program. The carbon question is of high policy importance, and the resolution of the open scientific questions will be critical in supporting future policy decision. More accurate measurements and improved analyses are critical for meeting this goal.

Criteria 3: Performance in the Technical Development and Operation of Major Research Facilities
Rating: N/A

Criteria 4: Programmatic Performance and Planning
Rating: Outstanding

LBNL continues to have strong management for its Life Sciences research, an overall research priority at the laboratory. They have made substantial contributions to the development of broad research goals and strategies for the DOE Genomes to Life program. Its successful Genomes to Life proposal combined the expertise of a number of laboratory and non-laboratory scientists that illustrates the kind of coordinated laboratory management that typifies work at LBNL. LBNL's high quality or research and success across the range of BER Life Sciences programs, is a testament to the high priority placed on good science management.

LBNL's Medical Sciences Divisions' programs at the Center for Functional Imaging are generally well managed. The investigators have forged successful intramural and extramural collaborations for effective management and productivity of research programs, and optimum use of resources and facilities. The structural biology technological research projects at the ALS are well managed and coordinated, despite being in three different divisions. They are effective in serving collaborators from outside Berkeley and in the case of the macromolecular crystallography program, attracting a national user base. In all programs, LBNL's management continues to be responsive to DOE programmatic needs in a timely fashion. The DOE BER staff continues to be informed by the laboratory principal investigators on major research highlights and or scientific achievements. Publications for the projects were reported to the Office of Scientific and Technical Information (OSTI) in a timely way in FY 2002.

In the environmental sciences, LBNL's NABIR Program Office has been extremely responsive to needs of the program, and has performed on time, within budget, with high quality products. The leadership and coordination provided by LBNL for the Field Research Advisory Panel for the NABIR Field Research Center has been outstanding. The ocean research is making excellent progress, and has greatly improved interactions with headquarters over the past year.

LBNL's climate research Principle Investigators have been effective in working with the team that is planning the North American Carbon Project campaign, a major effort in the interagency Carbon Cycle Program.

Performance Area: Energy Efficiency & Renewable Energy

FY 2002 Overall Performance Summary:

LBNL performance in this area is **excellent**. The knowledge, experimental ingenuity and enthusiasm of all the LBNL staff, as well as their technical achievements, are impressive. The geothermal program continues to show strength and vitality, which continues to sustain it as one of the top geothermal programs worldwide. LBNL's Energy programs are at the center of key energy policy debates, are extremely valuable to policy makers, and have worldwide visibility.

Overall Performance Rating: Excellent

Criteria 1: Quality of Science
Rating: Excellent

LBNL remains a national leader in energy efficiency research and technologies for the Buildings sector. The Laboratory is an internationally recognized knowledge center on energy scenario development and greenhouse gas emission reduction. LBNL's electrochemistry group makes important basic research contributions to advanced transportation technologies such as batteries and fuel cells. The Laboratory also makes unique niche contributions in the utility and industry sectors. For example, LBNL excels in both fundamental and field geothermal work such as the modeling and experimental verification of flow in fractures.

LBNL's analytical work on the product marketplace and of government purchase decision-making has helped pull the market with increased purchases of efficient products. The appliance standards program continues to have national and international impacts in raising energy efficiency, with notable work this past year on developing and working with industry for a new one-watt standard for standby power losses ("energy vampires" responsible for ~$4 billion in U.S. costs and ~1 percent of global carbon dioxide emission each year). Recent research into vehicle inspection and maintenance programs has made important contributions to understanding the program's role in mobile source emissions control. The Laboratory's analysis related to energy use by information technology and equipment helped to correct a popular misconception that these were significantly responsible for electrical demand growth in the U.S.

Of note in FY 2002 was the homeland security-related effort by the Indoor Air Quality group to develop analyses and information tools for first responders and building owners, managers and occupants based on modeling of indoor dispersion of and exposures to chemical/biological agents released in or near different types of buildings. Further work is ongoing to quickly analyze and report sensor data to pinpoint the release of such materials so that proper actions can be taken.

Criteria 2: Relevance to National Needs and Agency Mission
Rating: Outstanding

LBNL served as the technical lead for the Consortium for Electric Reliability Technology Solutions (CERTS) which provided critical support to National Transmission Grid Study submitted by the DOE Secretary to the President in May 2002. The report's 51 recommendations are aimed at bolstering the reliability and flexibility of the U.S. electrical grid, key elements within the National Energy Plan. LBNL has an important role in the development of national appliance standards, which have had significant impact on the nation's energy savings and are highly relevant to DOE's mission. The LBNL appliance standards program has done better work in gaining industry and other stakeholder support than any other organization in the U.S. in terms of implementing new or raised efficiency standards. In FY 2002, the Laboratory's work in standby power loses received recognition by the DOE Secretary and the President, and led to an Executive Order directing federal agency product purchases meeting the new standard. LBNL's analytical work on the product marketplace and of government purchase decision-making is important to federal needs and the success of the Federal Energy Management Program. In the lighting program, over four-hundred Berkeley Lamps were deployed in the local area, including City of Berkeley offices, providing substantial energy savings.

The Laboratory contributed to the Clean Energy Futures study which is among the most careful and detailed national policy analyses in the world. LBNL work also continues to support the ongoing efforts of the Intergovernmental Panel on Climate Change. LBNL's China Energy Studies group is unique in the Nation, and the best source of reliable energy data and analysis for this, the world's second largest energy using country (after the U.S.). The group continues to be effective in assisting China to institute building codes and appliance efficiency standards, and to realize other efficiency gains in their economy, with large positive impacts on air quality, health, reductions in greenhouse gas emissions, and market growth for energy efficient products.

This program also continues to be successful in securing external funding from the Environmental Protection Agency (EPA), the California Energy Commission (CEC) and others, a testament to its broad relevancy and impacts.

Criteria 3: Performance in the Technical Development and Operation of Major Research Facilities
Rating: N/A

Criteria 4: Programmatic Performance and Planning
Rating: Excellent

LBNL remains successful in targeting opportunities to apply its capabilities to improve energy efficiency, reduce the environmental impacts of energy use, and to otherwise serve the program and DOE mission. Overall, the Laboratory completed its program deliverables and milestones on schedule, and worked with HQ to adapt and adjust to funding changes. In geothermal research, LBNL has taken the lead in many initiatives and has helped define the DOE research agenda. The Environmental Energy Technologies Division (EETD) is encouraged to develop/update its Strategic Plan and Vision taking the current policy environment into account.

Performance Area: Civilian Radioactive Waste Management

FY 2002 Overall Performance Summary:

LBNL's overall performance has been **outstanding**. LBNL has provided high quality cutting edge research, has been responsive to the customer, is well published and has made many presentations to the scientific community.

Overall Performance Rating: Outstanding

Criteria 1: Quality of Science
Rating: Outstanding

The support provided to the Project by LBNL during FY 2002 has been outstanding because of a combination of high quality, cutting-edge research and a willing attitude to provide the client, the Department of Energy (DOE), with responsive, capable technical support. Areas dealing with in-situ testing at the Yucca Mountain site, model development, and various interactions with the National Regulatory Commission (NRC) and the Project's licensing efforts, has been well served by LBNL support.

LBNL participated in several special technical sessions the Project is sponsoring, at the Annual Meeting of the Geological Society of America. LBNL scientists have provided approximately twenty (20) abstracts that will be presented at this forum. LBNL has also been instrumental in coordinating the publication of a Special Issue of the Journal of Contaminant Hydrology that highlights recent advances in areas related to the disposal of high-level radioactive waste. Additionally, LBNL published a third in the series, on worldwide reviews on Geological Challenges in Radioactive Waste Isolation. This review is referenced extensively in an international forum.

During fiscal 2002 LBNL became a participating member of the International Atomic Energy Agency (IAEA) Network of Centres of Excellence for training in and demonstration of waste disposal technologies, in underground research facilities. Interactions through this International agency will help the international community, especially developing nations, become better versed in nuclear waste technologies. Additionally, LBNL will assist in training participants from these developing countries.

Criteria 2: Relevance to National Needs and Agency Mission
Rating: Excellent

The support supplied by LBNL to the DOE's Yucca Mountain Project has been specifically tailored to the unique nature of the tasks with which the Project is concerned. Consequently, scientific approaches and techniques employed by the LBNL scientists often do not have applications beyond the scope or purposes dictated by the Project, and are not generally useful for adoption by industry-at-large. However, the development and application of these unique techniques (i.e., seepage testing and quantification), is absolutely essential to the successful licensing of the Yucca Mountain site. In these efforts, LBNL performance has been excellent.

Criteria 3: Performance in the Technical Development and Operation of Major Research Facilities
Rating:N/A

Criteria 4: Programmatic Performance and Planning
Rating: Outstanding

LBNL has been a principal player in the achievement of broad programmatic goals established by the Project. LBNL scientists have shown an ability to remain engaged and productive despite changes in schedule, funding profiles, and Project focus. The orderly and timely completion of deliverables for Project use and dissemination of scientific and technical information through the publication of results in peer-reviewed journals has been outstanding.

LBNL has been very successful in assessing and managing their scientific resources to best benefit the Project. Much of this is due to the efficient organization and internal coordination of the LBNL Nuclear Waste Division. LBNL has been outstanding in this area.

Performance Area: Fossil Energy

FY 2002 Overall Performance Summary*:*

The Laboratory's performance in this area is **excellent.** The knowledge, experimental ingenuity and enthusiasm of all the LBNL staff, as well as their technical achievements, are impressive. The science performed by LBNL is of excellent quality and consistently satisfies the needs and goals of DOE. It is impressive that LBNL has been able to extract and conduct first-rate, basic research experiments in support of applied projects.

Overall Performance Rating: Excellent

Criteria 1: Quality of Science
Rating: Excellent

LBNL's geophysicists and geologists, together with industry and universities, bring together partnerships that conduct cutting edge research. LBNL is a recognized leader in the scientific community, and exhibits a strong commitment to quality and excellence. LBNL continues a long tradition of identifying and solving important scientific problems derived from large-scale, mission-oriented projects. Research in areas of research Fractured Hydrology and Coupled Processes has been pioneering. The modeling and experimental verification of flow in fractures, are high quality and cutting edge.

Criteria 2: Relevance to National Needs and Agency Mission
Rating: Excellent

LBNL fulfills an important role for DOE by carrying out a diverse and valuable portfolio of research projects ranging from basic science to applied technology development. LBNL's participation in the "Partnership" program, which directly involves energy industry, ensures that the science conducted at LBNL supports the nation's energy technology needs. LBNL's development of a gas hydrates module to Tough2 is a required tool to meet many of the objectives of many of the currently funded DOE hydrate projects. LBNL fuel cell effort is relevant to the DOE and is responsive to DOE Solid State Energy Conversion Alliance (SECA) program goals. LBNL's research into CO_2 sequestration is another area of important national need and directly supports the core of DOE's mission.

Criteria 3: Performance in the Technical Development and Operation of Major Research Facilities
Rating: N/A

Criteria 4: Programmatic Performance and Planning
Rating: Excellent

LBNL has taken the lead in many initiatives and has helped define some of the research agenda for DOE. LBNL has the ability to lead major multi-institutional efforts in GEO-SEQ research, including major involvement with industry. The low staff turnover and management's ability to work well with staff is quite impressive. The gas exploration project is consistently on schedule and within budget. LBNL in general, has shown a willingness to cooperate in managing the accountability and cost/benefit of funds expended. LBNL has been very successful in meeting the scientific and technical objectives set forth. LBNL has provided good milestones representing significant scientific advances and has shown that it can successfully reach those milestones. LBNL has been exceptionally effective at leading the "Partnership" project forward; managing each subcontractor and their respective tasks, assuring top-notch science is accomplished, and reporting on accomplishments at major technical meetings.

Operations & Administration

Performance Area: ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

Performance Objective: #1.0 Environmental Restoration and Waste Management

The Laboratory will conduct 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 (EM) Program; and the Laboratory's Environmental Restoration Program will continually strive to improve efficiency and maximize remediation. **(Weight = 100%)**

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 and SC funds. The Laboratory will operate its waste facilities to continually strive to improve efficiency and reduce the waste inventory. **(Weight = 25%)**

Performance Measures: #1.1.a Waste Management Newly Generated Waste, Productivity

The Laboratory will collect data on the volume of newly generated waste shipped offsite plus made "road ready" per total SC operations dollar costed per fiscal year. This data will be compared to approved Work Authorization System and Technical Baseline documents to measure program efficiency. **(Weight = 15%)**

Assumptions:

- The performance period is for a single fiscal year.
- Newly generated waste consists of all waste managed by the Waste Management Group, excluding that defined as "legacy" and funded by EM.
- Total operations dollars are determined by the Work Authorization System (WAS) document. Planned disposal volumes are determined by the final (DOE/BSO approved) Technical Baseline.
- Total operations dollars for Performance Year is actual funding costed at end of fiscal year for operating expense and capital equipment, relegated to the Base Program.
- Waste volumes shall be limited to those funded and tracked by SC. Transuranic (TRU) waste is excluded as a waste type for the performance measure.

- "Road Ready" waste volumes are wastes that have an intended disposal site, are certified to that site's waste acceptance criteria (WAC), and its waste profiles are accepted by that disposal site, but have yet to be shipped due to circumstances beyond the Laboratory's control. The waste profile acceptance requirement may be revisited on a case-by-case basis and is not applicable for TRU waste.
- Waste identified as "road ready" will be considered disposed. Disposal credit for shipped "road ready" waste volumes is not allowed in subsequent performance period(s).
- Mixed wastes (MW)treated and subsequently managed as low-level (LLW) or hazardous wastes (HW) are considered removed from the mixed waste inventory.
- Low-level and mixed wastes decayed in place and disposed of are counted as both treated and disposed.
- Conversion factor of the specific density of water (1.0) will be used to convert the weight of aqueous waste to volumetric measurements.
- LLW with California-regulated constituents may be allocated to either LLW or MW categories.
- Toxic Substances Control Act (TSCA) and medical waste volumes will be included with HW inventory.
- Success Criteria and Waste Type Matrix Elements will be renegotiated to account for any significant programmatic, regulatory, and/or fiscal changes.

Gradients:

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

Success Criteria

Rating	Range
Unsatisfactory	<40%
Marginal	40-49%
Good	50-65%
Excellent	66-84 %
Outstanding	85-100%

The Success Criteria Gradient is calculated using the following formula:

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

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

$$PI = \frac{\text{Performance Year Commitment Factor} - \text{Performance Year Actuals Factor}}{\text{Performance Year Commitment Factor}} \times 100\%$$

Where:

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

$$\text{Performance Year Commitment Factor} = \frac{\text{Total Operations Funding Costed for Performance Year per WAS}}{m^3 \text{ Waste Type Disposed per Technical Baseline}}$$

Waste Type Matrix

Waste Type	PI≤-4%	-4%<PI≤0%	0%< PI≤2%	2%<PI ≤4%	PI>4%
HW	0	1	1	1	1
LLW	0	0.25	0.5	0.75	1
MW	0	0.25	0.5	0.75	1
Other	0	1	1	1	1

Performance Narrative:

Lawrence Berkeley National Laboratory's performance is rated **outstanding** for the reasons discussed below. This performance measure is designed to assess the Laboratory's cost efficiency in disposing of newly generated waste. The data reported by LBNL on this performance measure reflects an adjustment to the technical baseline for two parameters that were not discussed with Department of Energy as provided under assumption thirteen (13) of this performance measure. Because LBNL did not discuss some proposed changes in the technical baseline with the Berkeley Site Office (BSO) until after the rating period; and because BSO is now satisfied that adjustments to the technical baseline are reasonable; we believe that a score in the lower range of outstanding is justified.

DOE Berkeley Site Office discussed this performance measure and the justification for adjusting the baseline with LBNL, and agreed with the adjustments. The basis for the initial Mixed Waste (MW) baseline volume estimate was not rigorous. The other baseline estimate that was changed by LBNL was the amount of Hazardous Waste (HW) generated [primarily HW treated by the Fixed Treatment Units (FTUs)]. LBNL's records show that this volume changes unpredictably. In addition, LBNL installed a Waste Minimization project on one FTU and there also were work disruptions due to building upgrades.

In the spirit of this performance measure, LBNL has taken steps to reduce disposal costs where opportunities exist. They regularly examine disposal options to determine the most cost effective choice. For example, they were able to work an arrangement with Nevada Test Site to take Building 51 Low Level Waste (with the assistance of LLNL) that saved the government a significant amount compared to the other option of Hanford disposal. They also have an ongoing program to assist the generators to reduce waste via their Pollution Prevention and Waste Minimization programs. They shipped all of the wastes promised by their delivery plan with the exception of some low level waste they plan to ship to Hanford. The Hanford shipment was held to wait for enough additional material to make an economical shipment size. LBNL reduced the total operating costs of the WM group by ~$440K (7.5 percent below their baseline).

Performance Rating (Adjectival)**: Outstanding**	91.00%

Performance Measure: #1.1.b Waste Management, Legacy Waste Inventory Workoff

The Laboratory will reduce legacy low-level waste inventories through treatment and disposal activities. Treatment and disposal volumes will be tracked and compared to the EM Current Year Work Plan (CYWP). **(Weight = 10%)**

Assumptions:

- The performance period is for a single fiscal year. However, treatment/disposal volumes not claimed in the last performance period may be used in the current performance period not to exceed 25% of the performance year EM CYWP.
- Waste volumes shall be limited to those funded and tracked by EM-30.
- Planned disposal volumes are determined by the final (DOE/OAK approved) CYWP as amended by the Baseline Change Control process. Baseline Change Proposals are reviewed and, if determined to be acceptable, approved by DOE/OAK within 30 days of receipt.
- Low-level wastes decayed in place and disposed of are counted as both treated and disposed.
- Conversion factor of the specific density of water (1.0) will be used to convert the weight of aqueous waste to volumetric measurements.
- Success Criteria and Waste Type Matrix Elements will be renegotiated to account for any significant programmatic, regulatory, and/or fiscal changes.

Gradients:

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

Success Criteria

Rating	Range
Unsatisfactory	<65%
Marginal	65-77%
Good	78-89%
Excellent	90-95 %
Outstanding	>95%

The Success Criteria Gradient is calculated using the following formula:

$$\text{Score} = \frac{\text{Amount Legacy Waste Treated and Disposed}}{\text{Legacy Waste Treatment and Disposal Commitment from CYWP}} \times 100 \ \%$$

Performance Narrative:

Lawrence Berkeley National Laboratory successfully worked off 100 percent of the legacy waste inventory of lead. LBNL performance is rated **outstanding**. A baseline change proposal was approved to accommodate commitments to work on the National Tritium Labeling Facility and Bevatron decommissioning projects this year. FY 2003 is the final year of the Environmental Management Legacy waste program at LBNL and no new funding will be available in subsequent years; therefore all EM low-level legacy waste must be disposed of by the end of FY 2003.

Performance Rating (Adjectival)**: Outstanding**	96.00%

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%)**

Performance Measures: # 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 (Category 3) 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.

Gradients:

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 which receive credit in one performance indicator category may also receive credit for any costs savings realized (Category 3), but may not receive credits in all three categories. The performance indicators and associated award points will be as follows:

Category 1
Advance the state of the art technologies by implementing the usage of Laboratory technologies at DOE or other Government sites, or utilize other EM technologies at the Laboratory.

1a - Use of an innovative environmental technology at LBNL (including one developed by LBNL).	1 point each technology
1b- Use of an LBNL EM-developed technology at other government sites	1 point each technology
1c- Use of an LBNL EM-developed technology at any DOE site	2 points each technology
1d- Non-DOE funded use of LBNL EM developed technology at industrial sites	1 point each technology

Category 2
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:

2a- Cost savings

2b- Efficiency improvement (i.e., quicker, better quality, etc.)

2c- Liability or risk reduction

2d- 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.)

Category 3
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.

- LBNL will be awarded 1 point for every $100,000 saved, but no more than 3 points per technology
- LBNL will be awarded 1 point for incorporation of innovative technologies into a Program Baseline System (PBS) with adjusted baseline

Rating	Range (LBNL)
Unsatisfactory	0-1
Marginal	2
Good	3-5
Excellent	6-8
Outstanding	$\geq$9

Performance Narrative:

Laboratory performance is rated **outstanding**. LBNL earned a good portion of their points from the extended cost savings realized from three innovative technologies deployed in the previous fiscal years. Additional points were earned by use of technologies developed at the Laboratory to assist others, and providing technical assistance to projects at other DOE sites. LBNL achieved an outstanding rating by earning twenty points.

Category 1 Advancing the state-of-the-art technologies by implementing the usage of Laboratory technologies at DOE or other government sites (7 points):

- Use of the groundwater trench at Buildings 25A and 58E.
- Use of seismic geophysics for DNAPL mapping at Pinellas.
- Use of isotropic analysis of groundwater for source area mapping at Idaho National Engineering and Environmental Laboratory.
- Use of isotropic analysis of groundwater for geochemical and fate transport studies at Hanford.

Category 2 Participation in the corporate advancement of the EM program by providing assistance on projects at other DOE sites (5 points):

- Technical assistance to Pantex.
- Technical assistance to Fernald (Quonset hut soil).
- Technical assistance to Ashtabula.
- Technical assistance to Y-12.
- Technical assistance to Fernald on leachate.

Category 3 Cost savings through on-site implementation of innovative technologies (8 points):

- The Laboratory's cleanup program of its "Old Town" area using a "trench methodology (savings equal $200K).
- National Tritium Labeling Facility catalytic oxidation system. Treatment of highly tritiated solvents to Land Disposal Restriction standards (savings equal $300K).
- Thermally Enhanced Vapor Extraction technology in use at "Old Town" area (savings equal $300K).

The DOE OAK Technical Program Officer concurs in the finding of the self assessment conducted by LBNL and the DOE OAK Environmental Restoration Project Manager for LBNL concurs with the points earned by the various cost savings in this program.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Criterion: #1.3 Environmental Restoration, Schedule Variance

The Laboratory's Environmental Restoration Program will be managed to improve project/program performance. The Laboratory measures its performance of projects/programs against schedule baselines **(Weight = 25%)**

Performance Measure: #1.3.a Environmental Restoration

The schedule measure will track the Laboratory's Environmental Restoration Program performance in executing projects in accordance with an approved overall schedule. Three components, the schedule variance and completion of regulatory and non-regulatory milestones, will be tracked to evaluate overall performance. **(Weight = 25%)**

Assumptions:

1. Cumulative percent schedule variance (%SV) will be obtained from the September Integrated Planning, Accountability, and Budgeting System (IPABS) Project Execution Module (PEM) Report. The Cumulative SV value will be for the fiscal year being evaluated.

2. Baseline change proposals are reviewed and incorporated, if approved, by DOE in 30 days.

3. If the Management Analysis and Reporting Systems **(**MARS) Report contains an accounting error, SV values provided by LBNL and verified by the respective DOE Site Representative may be used.

4. Includes DOE-HQ (EM)-funded activities for PBS No. OK-003.

5. On an annual basis, representatives from LBNL and DOE will review and develop a list of both regulatory and non-regulatory milestones that will be included to evaluate performance under this measure.

6. All regulatory required milestones (milestones required by Federal, State, or local statute and/or permit conditions) must be completed on the due date to be considered complete. All other milestones must be completed not later than September 30 of the evaluation period. Additionally, on a quarterly basis, the DOE and LBNL managers will review the status of the milestones. Milestones may be added and/or deleted if project conditions warrant a change as agreed to by DOE and LBNL.

7. Standard *Force Majeure* items (including but not limited to acts of God, nonreceipt of the President's Target Level Funding, funding rescissions, scope redirection by DOE, discovery of new, high risk site conditions that warrant immediate action and change to the (MYWP), programmatic impediments) will apply and will require special considerations up to and including re-baselining.

Gradient Rating:	**Range for LBNL:** (Total Points)
Outstanding	13-15
Excellent	10-12
Good	7-9
Marginal	5-6
Unsatisfactory	≤4

Available Points for LBNL:		
SV	Regulatory Milestone Completed	Non-Regulatory Milestones Completed
SV ≥ 3% (5 Points)	All (5 Points)	All (5 Points)
-3% ≤ SV < 3% (4 Points)	All except l (2 Points)	All except 1 (4 Points)
-6% ≤ SV < -3% (3 Points)	All except 2 (1 Point)	All except 2 (3 Points)
-9% ≤ SV < -6% (2 Points)	More than 2 missed (0 Points)	All except 3 (1 Point)
SV < -9% (1 Point)		More than 3 missed (0 Points)

Each condition (SV, Regulatory Milestones Completed, and Non-Regulatory Milestones Completed) shall be evaluated independently based on the table above. The Gradient Rating for Performance Measure 1.3.a will be based on the total points achieved by combining the individual points achieved for each condition.

The schedule measure will track the Laboratory's performance in executing projects in accordance with an approved overall schedule.

$$\% \text{ SV} = \frac{(\text{Annual BCWP} - \text{Annual BCWS})}{\text{Annual BCWS}} \times 100$$

SV = Schedule Variance
BCWS = Budgeted Cost of Work Scheduled
BCWP = Budgeted Cost of Work Performed

Example: SV = 0%, all regulatory milestones completed, two non-regulatory milestones missed. Total of 12 points, overall gradient rating: Excellent.

Performance Narrative:

This schedule measure tracks the Laboratory's Environmental Restoration Program performance in executing projects in accordance with an approved overall schedule. Three components, the schedule variance, and completion of regulatory and non-regulatory milestones, will be tracked to evaluate overall performance. The sum of the three criteria results in a total point score of 14 points, which equates to an **outstanding** rating.

The Resource Conservation and Recovery Act (RCRA) requires LBNL complete investigation and cleanup activities in areas where contaminants are suspected to have been released. 163 areas of potential contamination were identified in the RCRA Facility Assessment. The main function of LBNL's Environmental Restoration Program is to complete restoration activities in accordance with RCRA requirements. As stated in the assumptions of this performance measure, LBNL and DOE established a list of milestones at the beginning of the fiscal year that would be tracked to evaluate performance under this measure. Six regulatory milestones and seven non-regulatory milestones were identified for completion in FY 2002.

LBNL completed all regulatory milestones identified. All Quarterly Progress Reports were submitted on schedule. The resubmission of the Corrective Measures Plan and Risk Assessment Work Plan & Scoping Document was completed on February 15, 2002 as required. The RCRA permit established due dates for the original documents based on approval of the RCRA Facility Investigation. A notice of deficiency was issued by the Department of Toxic Substances Control that established the due date for the resubmission of the Corrective Measures Plan and Risk Assessment Work Plan & Scoping Document. LBNL did submit the documents by the date prescribed in the notice of deficiency. As outlined in the performance measure, LBNL was entitled to five points based on the completion of all regulatory milestones.

Of the seven non-regulatory milestones identified, six were completed. The Radiological Ecological Risk Assessment was submitted to DOE on January 17, 2002. The report was approved by DOE on May 7, 2002. The Regulatory Request to Proceed to CMS (51L) was submitted to DTSC on April 15, 2002. The request was approved on August 30, 2002. The *draft* Chemical Ecological Risk Assessment and *draft* Human Health Risk Assessment were submitted to DTSC on September 3, 2002 and September 16, 2002, respectively. Neither document has been approved to date. Two additional milestones were also included in the non-regulatory list of milestones, Source Investigations and Interim

Corrective Measures (ICMs). The source investigation milestone required LBNL to complete three of five investigations. Source investigations were completed at four out of the five identified areas as outlined in the FY 2002/FY 2003 Multi-Year Work plan. It was decided that the fifth area, the Slope West of Building 53, did not require additional characterization. The Interim Corrective Measures milestone required LBNL to complete four out of six ICMs. Three ICMs were completed by the end of the fiscal year. The Building 51L ICM was postponed due to logistics and the National Tritium Labeling Facility is being evaluated for need. The Building 75 Polychlorinated Biphenyls (PCBs) removal was partially completed, but still requires additional investigation. Approval of the well abandonment plan was not obtained as assumed on April 15, 2002. Irregardless, LBNL completed abandonment of nine out of the ten wells proposed. As a result, based on the criteria established in the performance measure, LBNL was entitled to four points for the completion of all non-regulatory milestones.

The schedule measure tracks the Laboratory's Environmental Restoration Program performance in executing projects in accordance with an approved project schedule baseline. The baseline was established and outlined in the FY 2002/FY 2003 Multi-Year Work plan dated March 2002. Upon review of the input to the September Integrated Planning Accountability Budgeting System report for the end of the fiscal year (September 2002) and review of additional data provided by LBNL, it was determined that the Budgeted Cost Work Performed was $3,711,187 and Budgeted Cost Work Scheduled was $3,407,000, resulting in a total Schedule Variance of $304,187 or 8.9 percent. As a result, based on the criteria established in the performance measure, LBNL was entitled to five (5) points for a schedule variance greater than or equal to three (3) percent.

Performance Rating (Adjectival)**: Outstanding**	97.00%

Criterion: #1.4 Cost Variance

The Laboratory's Environmental Management Programs will be managed to improve project/program performance. The Laboratory measures its performance of projects/programs against cost baselines. **(Weight = 25%)**

Performance Measures: # 1.4.a EM Projects, Environmental Restoration Program

The cost measure will track the Laboratory's Environmental Restoration Program performance in executing projects in accordance with an approved project cost baseline. **(Weight = 12.5%)**

Assumptions:

- Cumulative percent cost variance (%CV) will be obtained from the September Integrated Planning, Accountability, and Budgeting System (IPABS) Project Execution Module (PEM) Report. The Cumulative CV value will be for the fiscal year being evaluated.

- Baseline change proposals are reviewed and incorporated, if approved, by DOE in 30 days.
- If the Management Analysis and Reporting System (MARS) Report contains an accounting error, CV values provided by LBNL and verified by the respective DOE Site Representative may be used.
- Includes DOE-HQ (EM)-funded activities by Project Baseline Summary (PBS) No.OK-003.

Gradient Rating	Range for LBNL:
Outstanding	$CV \geq 5\ \%$
Excellent	$1\% \leq CV < 5\%$
Good	$-1\% \leq CV < 1\%$
Marginal	$-5\% \leq CV < -1\%$
Unsatisfactory	$CV < -5\%$

The cost measure will track the Laboratory's performance in executing projects in accordance with an approved project cost baseline.

$$\%\ CV = \frac{(\text{Annual BCWP} - \text{Annual ACWP})}{\text{Annual BCWP}} \times 100$$

Where:
CV = Cost Variance
BCWP = Budgeted Cost of Work Performed
ACWP = Actual Cost of Work Performed

Performance Narrative:

The cost measure tracks the Laboratory's Environmental Restoration Program performance in executing projects in accordance with an approved project cost baseline. The baseline was established and outlined in the FY 2002/2003 Multi-Year Work plan dated March 2002. As a result, based on the criteria established in the performance measure, the Laboratory is entitled to an **outstanding** rating for this performance measure.

Upon review of the input to the September Integrated Planning Accountability Budgeting System report for the end of the fiscal year (September 2002) and review of additional data provided by the Laboratory, it was determined that the Budgeted Cost Work Performed was $3,711,187 and Actual Cost Work Performed was $3,481,389, resulting in a total Cost Variance of $229,798 or 6.2 percent.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: #1.4.b EM Projects, Waste Management

The cost measure will track the Laboratory's EM Waste Management Program performance in executing projects in accordance with an approved project cost baseline. **Weight = 12.5%)**

Assumptions:

- Cumulative percent cost variance (%CV) will be obtained from the September Integrated Planning, Accountability and Budgeting System (IPABS). The Cumulative CV value will be for the fiscal year being evaluated.
- If the Management Analysis and Reporting System (MARS) Report contains an accounting error, CV values provided by LBNL and verified by the respective DOE project manager may be used.
- Baseline change proposals are reviewed and, if determined to be acceptable, approved by DOE/OAK within 30 days of receipt.
- Includes EM-funded activities under Project Baseline Summary (PBS) OK-015.

Gradients:

Gradient Rating	Range for LBNL:
Unsatisfactory	CV> 8% or CV < 0%
Marginal	CV = 8%
Good	CV > 5% and < 8%
Excellent	CV $\leq$ 5% and > 2%
Outstanding	CV $\leq$ 2% and $\geq$ 0%

The cost measure will track the Laboratory's performance in executing projects in accordance with an approved project cost baseline.

$$\%\ CV = \frac{(\text{Annual BCWP} - \text{Annual ACWP}) \times 100}{\text{Annual BCWP}}$$

Given:

CV = Cost Variance
BCWP = Budgeted Cost of Work Performed
ACWP = Actual Cost of Work Performed

Performance Narrative:

LBNL performance is rated **outstanding**. LBNL Legacy Waste Management has managed their program in a fiscally responsible manner. The program effectively used the lowest cost contractual vehicles for commercial waste treatment and disposal. They successfully worked off 100% of the legacy waste inventory of lead. A baseline change proposal was approved to accommodate commitments to work on the National Tritium Labeling Facility and Bevatron decommissioning projects this year. FY 2003 is the final year of the EM Legacy Waste program at LBNL and no new funding will be available in subsequent years; all EM low-level legacy waste will be disposed of by the end of FY 2003.

Performance Rating (Adjectival)**: Outstanding**	98.00%

Performance Area: ENVIRONMENT, SAFETY AND HEALTH

Preamble: The Laboratory's goal is to accomplish its mission cost-effectively while striving for an injury-free workplace, minimizing waste streams and adverse impacts to the public and environment from its operations.

The following Performance Objective, Criteria and Measures are linked to the Guiding Principles and Key Functions of Integrated Safety Management (ISM). They include a process-oriented measure that is intended to assess key elements of the Laboratory's integrated safety management system. They also include a total system outcome measure, which is intended to be a key indicator of the performance of the Laboratory's integrated safety management system as a whole.

Performance Period: Unless otherwise specified in the measures, the performance period is October 1, 2001 through September 30, 2002.

Performance Objective: #1.0 Do Work Safely

The Laboratory systematically integrates Environment, Safety and Health (ES&H) into management and work processes at all levels so those missions are accomplished while protecting the worker, the public and the environment.

(Weight = 40%)

Criterion: #1.1 ISM System Process Measure

The Laboratory uses the five core functions and seven principles of Integrated Safety Management (ISM) in its management and work processes.

- The Laboratory has an active and sustainable ISM system.
- The Laboratory uses the functions and principles of ISM to maintain a safe work environment.
- Successful implementation of ISM is consistent with ES&H outcome measures.

Performance Measure ISM Leading Indicators Leading indicators are used to measure the implementation and effectiveness of ISM. **(Weight = 40%)**

Assumptions:

1. Supplemental information on the quality and effectiveness of the Laboratory's ISM program can be provided through the BSO/LBNL Operational Awareness (OA) Program. To support the gathering of information, the Laboratory shall prepare written reports on significant changes in ES&H systems and processes to be presented at the quarterly OA meetings. Examples of significant changes include modifications of any ISM plans; changes to ES&H policies and requirements in the Regulation and Procedures Manual (RPM), PUB 3000, Operating and Assurance Plan (OAP), and Work Smart Standard (WSS) set; and alterations in ES&H Division

staffing patterns, allocation of resources, and/or organizational structure. OA input that affects the performance rating for the process measure shall be based on first-hand knowledge, valid sampling and be adequately documented for the purpose of inclusion in the Appendix F performance reports (done quarterly and annually).

2. The Laboratory's Self-Assessment Program is a major component for evaluating ISM at the site. BSO personnel are invited to participate as observers in self-assessment activities, including but not limited to: validation of Division self-assessments, Integrated Functional Appraisals, and ISM Work Reviews. DOE observers can provide feedback on the Laboratory's self-assessment activities. Such feedback can be used as supplemental information (see assumption #1) to address the quality and effectiveness of the Laboratory's Self-Assessment Program.
3. ISM Plans refers to the Laboratory's Institutional Safety Plan, each division's ISM Plan, and the Operations departmental (Facilities and Directorate) ISM Plans.
4. In addition to other evaluation methods to be used, the Laboratory shall use ISM work reviews (jointly selected by November 30, 2001) to sample the effectiveness of ISM for driving continuous improvement or sustain safety performance in (i) mature research and research support operations and activities, (ii) infrastructure projects, and (iii) institutional equipment and instrumentation maintenance. Work reviews verify the implementation of the principles and tenets of ISM in the three operational areas.
5. Annual peer review of effectiveness of interactions between worker safety management system and occupational medicine in support of integrating safety into the workplace is a standing requirement.
6. Subcontractor operations/personnel are included in implementation of ISM if the subcontractor is performing part of the Laboratory's operations and reporting its hours to the Laboratory. To this end, the Laboratory's contracting process evaluates and considers the safety record of prospective subcontractors and, once selected, subcontractor statistics are gathered and performance tracked separately. Subcontractors are excluded from LBNL OSHA reporting if they are "servicing" the Laboratory (e.g., copy machine vendors or other transient workers).
7. Peer reviews, existing procedures, implementing memoranda, Laboratory tracking system data and other work process products shall serve as demonstrable evidence in contribution to satisfaction of measure gradients. Successes and difficulties associated with these processes will be included in the report. It is not the intention of this measure to foster the generation of supportive or demonstrable documents other than those needed or necessary to perform the work.
8. The evaluation of the process measure is the DOE validation of the effectiveness of ISM implementation.

Performance Measure: #1.1.a Leading Indicators for Defining Work

(A) Line management provides evidence that the ISM Division Plans and work planning adequately identify and prioritize resources to address programmatic needs and work safety. **(Weight = 4%)**

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is demonstrated, however, results fall short of the expectations for the Good gradient.

Good More than 70% of Division ISM plans have been reviewed and updated within past year. ISM plans are evaluated for quality of content to address the Division scope of work and for consistency with institutional ISM requirements Work planning demonstrates that work and safety priorities are adequately balanced. The institutional ISM plan has been reviewed and updated for changes in site-wide scope of work.

Excellent More than 80% of Division ISM plans have been reviewed and updated within past year. ISM plans are evaluated for quality of content to address the Division scope of work and for consistency with institutional ISM requirements. Work planning demonstrates that work and safety priorities are adequately balanced. The institutional ISM plan has been reviewed and updated for changes in site-wide scope of work.

Outstanding More than 90% of Division ISM plans have been reviewed and updated within past year. ISM plans are evaluated for quality of content to address the Division scope of work and for consistency with institutional ISM requirements. The institutional ISM plan has been reviewed and updated for changes in site-wide scope of work.

Performance Measure: #1.1.a Leading Indicators for Defining Work

(B) Laboratory management regularly communicates ES&H policy and procedure and lessons learned. **(Weight = 4%)**

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is, demonstrated, however results fall short of the expectations for the Good gradient.

Good More than 70% of Divisions have at least one all-hands meeting or equivalent forum where ES&H issues, policies, and lessons learned are addressed.

Excellent More than 80% of Divisions have at least one all-hands meeting or equivalent forum where ES&H issues, policies, and lessons learned are addressed. There is documented

evidence of Division management communicating significant ES&H issues to Division personnel.

Outstanding — More than 90% of Divisions have at least one all-hands meeting or equivalent forum where ES&H issues, policies, and lessons learned are addressed. There is documented evidence of Division management communicating significant ES&H issues to Division personnel. Laboratory Director issues Level 1 ES&H policy statement.

Performance Narrative:

Laboratory performance is rated overall **excellent**. All divisions except one have provided documented evidence that their Integrated Safety Management (ISM) Plans are updated and approved. These plans adequately address work planning and hazards to assure that work is performed safely. Several divisions have made significant improvements to their ISM plans. The ISM plans have matured over time. Implementation of ISM plans is generally outstanding, but there are examples of work performance that requirements are not adhered to.

Each division has systems in place to communicate policies, issues and lessons learned. In most instances these are effective. Several divisions have added ES&H communications to their webpage. All divisions have active safety committees.

It was identified that the Chemical Sciences Division employees who work exclusively on the UC Berkeley campus rely almost solely on the campus ES&H safety program. This is the result of an institutional safety program deficiency that exists in the current UC Berkeley and Laboratory Memorandum of Understanding. This was identified in the MESH review. It was further noted that there is no institutional policy on matrixed employees to clearly define the ES&H responsibilities of the divisions involved. Two divisions have addressed the shortcomings revealed in recent years.

LBNL Director Shank conducted two stand downs with two divisions to re-emphasize the importance of doing work safely as result of the P-32 student contamination and several near-miss incidents which could have resulted in very serious injuries to workers. However, there were no ES&H Level One Policy Statements issued during the performance period which is a requirement for outstanding in communications of ES&H issues.

Performance Rating (Adjectival)**: Excellent**	88.15%

Performance Measure: #1.1.b Leading Indicators for Identifying Hazards

(A) Divisions have a process to appropriately identify, analyze, and categorize the hazards and identified the appropriate requirements to mitigate the risks associated with the division's work. **(Weight = 4%)**

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however results fall short of the expectations for the Good gradient.
Good	Hazards have been appropriately identified for more than 70% of the division's self authorized work and more than 90% of work requiring formal authorizations (i.e., RWAs, RWPs, AHDs, SSAs)
Excellent	Hazards have been appropriately identified for more than 80% of the division's self authorized work and more than 95% of work requiring formal authorizations.
Outstanding	Hazards have been appropriately identified for more than 90% of the work requiring division self-authorization and 100% of work requiring formal authorizations.

Performance Measure: #1.1.b Leading Indicators for Identifying Hazards

(B) Work spaces are inspected and evaluated on a regular basis, and hazard and safety issues are appropriately identified. **(Weight = 4%)**

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however, results fall short of the expectations for the Good gradient.
Good	More than 70% of work spaces are inspected as scheduled, and hazard and safety issues are appropriately addressed.
Excellent	More than 80% of work spaces are inspected as scheduled, and hazard and safety issues are appropriately addressed.
Outstanding	More than 90% of work spaces are inspected as scheduled, and hazard and safety issues are appropriately addressed.

Performance Narrative:

The Laboratory's performance is rated **outstanding**. All divisions have systems in place to identify hazards associated with the work conducted. In most cases hazards are mitigated, and work is performed safely. Efforts to address ergonomic issues are generally successful and reduced in most divisions. The reduction in accident/injury statistics is excellent. Issues associated with legacy waste continue to be an institutional problem.

The systems for formal authorization of work are effective.

It is difficult to assess the adequacy of self authorization of work for some divisions because of the variation level of detail in the authorization documentation. One reportable occurrence was the result of the informality of self authorization of work.

As a result of the FY 2001 Work Smart Standards review, the Laboratory made a commitment to develop a schedule to address deficiencies in the implementing safety analysis requirements in agreed upon sections of DOE Order 5481.1b. The deficiencies related primarily to hazards analysis at the facility level. Limited progress was made during the performance period. It was almost at the end of the FY 2002 performance period that LBNL obtained an agreement with the Department of Energy, Berkeley Site Office to conduct a best practices study to identify best practices in safety analysis to determine what the gaps are in the existing program.

All workspaces have been inspected during the performance period. Five divisions performance was at the outstanding level for all Division Self-Assessment Performance criteria.

Performance Rating (Adjectival)**: Outstanding**	90.00%

Performance Measure: #1.1.c Leading Indicators for Controlling Hazards

(A) Engineering and administrative controls are in place and maintained to control hazards.

(Weight = 4%)

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however results fall short of the expectations for the Good gradient.
Good	More than 70% of fume hoods, biocabinets, glove boxes, interlocks, generators, and fire suppression systems are checked within the required schedule to ensure that equipment specifications are being met
Excellent	More than 80% of fume hoods, biocabinets, glove boxes, interlocks, generators, and fire suppression systems are checked within the required schedule to ensure that equipment specifications are being met. There are no systemic deficiencies in the Laboratory's administrative controls.
Outstanding	More than 90% of fume hoods, biocabinets, glove boxes, interlocks, generators, and fire suppression systems are checked within the required schedule to ensure that equipment specifications are being met. There are no systemic deficiencies in the Laboratory's administrative controls.

Performance Measure: #1.1.c Leading Indicators for Controlling Hazards

(B) Managers and staff are regularly involved in ES&H activities.

(Weight = 4%)

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is, demonstrated, however results fall short of the expectations for the Good gradient.
Good	Both managers and staff are involved in documented self-assessments. Supervisors investigate accidents and injuries pertaining to their staff through the SAAR process.
Excellent	Grade for "Good" is met. Division directors and group/program leaders participate in walkthroughs.
Outstanding	Grade for "Excellent" is met. Laboratory Director participates in walkthroughs.

Performance Narrative:

The Laboratory's performance is rated **outstanding**. Engineering and administrative systems are in place to control hazards. Engineering controls are checked to assure that they are maintained. These include fume hoods, biocabinets, glove boxes, emergency generators, fire suppression systems, and safety interlocks.

All divisions have demonstrated that senior management, principal investigators, supervisors and staff are involved in ES&H activities as part of their ISM system.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: #1.1.d Leading Indicators for Performing Work

(A) Work is performed within the conditions and requirements for ES&H specified by Laboratory policies and procedures. **(Weight = 4%)**

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is demonstrated, however, results fall short of the expectations for the Good gradient.

Good More than 70% Sealed Source Authorization (SAA) compliance. More than 70% RWA compliance (measured against major and significant deficiencies). More than 90% serious and imminent danger situations as defined by The Berkeley Lab Corrective Action Tracking System (LCATS) Hazard Level 1 and 2 are identified, analyzed for root causes, and mitigated within the specified timeframe.

Excellent More than 80% SAA compliance. More than 80% RWA compliance (measured against major and significant deficiencies). More than 95% serious and imminent danger situations as defined by The Berkeley Lab Corrective Action Tracking System LCATS Hazard Level 1 and 2 are identified, analyzed for root causes, and mitigated within the specified timeframe.

Outstanding More than 90% SAA compliance. More than 90% RWA compliance (measured against major and significant deficiencies). 100% serious and imminent danger situations as defined by The Berkeley Lab Corrective Action Tracking System (LCATS) Hazard Level 1 and 2 are identified, analyzed for root causes, and mitigated within the specified timeframe.

Performance Measure: #1.1.d Leading Indicators for Performing Work

(B) Employees are proficient to perform their work safely. **(Weight = 4%)**

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is demonstrated, however, results fall short of the expectations for the Good gradient.

Good	More than 70% rate for completing required ES&H training, passing course exams, and satisfactory responses from course evaluations. Employees who have not completed their required training must be under direct supervision as per PUB 3000 requirements.
Excellent	More than 80% rate for completing required ES&H training, passing course exams, and satisfactory responses from course evaluations. Employees who have not completed their required training must be under direct supervision as per PUB 3000 requirements.
Outstanding	More than 90% rate for completing required ES&H training, passing course exams, and satisfactory responses from course evaluations. Employees who have not completed their required training must be under direct supervision as per PUB 3000 requirements.

Performance Narrative:

The Laboratory's performance is rated **outstanding**. Work is generally performed within the conditions and requirements for Environment, Safety and Health (ES&H) as specified by Berkeley Laboratory policies and procedures.

Although administrative controls are generally adequate, procedures are not always followed and have been identified as either root, direct or contributing cause in eight (half) of the ORPS reportable incidents. Five (5) incidents came close to causing serious injuries to the workers.

There were two ORPS reportable incidents which involved noncompliance with the RWA, a formal authorization system. Noncompliance which results in a reportable occurrence is considered serious. The C-14 contamination incident, also involved three (3) major RWA non-compliances. This RWA was suspended in April and will remain suspended until all of the corrective actions are completed. The other incident was a P-32 contamination.

Berkeley Laboratory personnel have completed 91.3 percent of the required ES&H training. There were two reportable incidents (P-32 contamination and the Safety Concern for the Reaction in a Glass Vessel) where the employees had not received all required safety training. Also, one of the corrective actions for the C-14 contamination at the HWHF was to improve the radiological knowledge of both management and staff.

There were other ORPS incidents in which training was not the root, direct or contributing cause, but retraining or additional training was included in the corrective actions.

Performance Rating (Adjectival)**: Outstanding**	93.00%

Performance Measure: #1.1.e Leading Indicators for Feedback and Improvement

(A) ES&H deficiencies identified from workspace inspections, self-assessments and external appraisals are corrected in a timely manner. A downward trend of repeat deficiencies is established.

(Weight = 2.67%)

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however, results fall short of the expectations for the Good gradient.
Good	More than 70% of site-wide deficiencies are corrected or are on-schedule for completion.
Excellent	More than 80% of site-wide deficiencies are corrected or are on-schedule for completion. There is a downward trend of Level 2 repeat deficiencies.
Outstanding	More than 90% of site-wide deficiencies are corrected or are on-schedule for completion. There is a downward trend of Level 2 repeat. The Laboratory shall analyze LCATS for downward trending of Level 3 repeat deficiencies.

Performance Measure: #1.1.e Leading Indicators for Feedback and Improvement

(B) Because self-assessment is the cornerstone for ISM validation, the Laboratory has a robust self-assessment program to evaluate ISM effectiveness.

(Weight = 2.67%)

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however, results fall short of the expectations for the Good gradient.
Good	More than 70% completion of Division self-assessment, Management of Enviroment, Safety and Health (MESH), Integrated Functional Appraisal (IFAs,) and ISM Work Reviews. Quality of the assessments is linked to the overall Appendix F outcome measures (PM 1.2) so that the rating for Performance Measure 1.1.f.(B) cannot be higher than the overall rating of the outcome measures.
Excellent	More than 90% completion of Division self-assessment, MESH, IFAs, and ISM Work Reviews. Quality of the assessments is linked to the overall Appendix F outcome measures (PM 1.2) so that the rating for Performance Measure 1.1.f.(B) cannot be higher than the overall rating of the outcome measures.

Outstanding More than 95% completion of Division self-assessment, MESH, IFAs, and ISM Work Reviews. Quality of the assessments is linked to the overall Appendix F outcome measures (PM 1.2) so that the rating for Performance Measure 1.1.f.(B) cannot be higher than the overall rating of the outcome measures.

Performance Measure: #1.1.e Leading Indicators for Feedback and Improvement

(C) Opportunities for institutional improvements are identified in the Laboratory's annual ES&H Self-Assessment Report. Milestones for implementing improvements are met.

(Weight = 2.66%)

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is demonstrated, however, results fall short of the expectations for the Good gradient.

Good Opportunities for institutional improvements are identified in the Laboratory's annual ES&H Self-Assessment Report. Plan of action with milestones for each improvement target has been developed.

Excellent More than 80% of the milestones have been met.

Outstanding More than 90% of the milestones have been met.

Performance Narrative:

The Laboratory's performance is rated **outstanding**. All milestones were met except one MESH review. The Laboratory's self assessment program is well defined, robust and well implemented. There are opportunities for improvement in root cause analysis of incidents both reportable and non-reportable to avoid reoccurrence. Also, timely completion of longstanding institutional issues needs improvement.

There were minor hazards identified in six divisions during the IFA walkthroughs. These were similar to the hazards identified during the division walkthroughs. Hazards such as electrical safety, seismic restraints, housekeeping, chemical storage and labeling are persistent problems and occur throughout the site. They are generally promptly addressed when discovered. However, some of the lowest level hazards are not fixed due to available funding according to the ES&H Self-Assessment FY 2002 Report. No effective mechanism to reduce reoccurrence of these low level hazards exist. Chemical inventory remains an issue which was identified prior to FY 2000. Although progress has been made on a less labor intensive system it is still in the pilot stage. It has not been rolled out.

Improvements are needed in the root cause analysis. Last year there was an ORPS reportable incident involving hazardous material mixed with non hazardous material for disposal. The corrective actions

related to this incident have not been effective and in some instances have not been completely implemented. Problems were found to still persist based on Berkeley Site Office Operational Awareness observations. Initial investigations of the HWHF which involved a serious contamination incident involving four (4) individuals did not identify the root cause and deficiencies in the operation. The Lessons Learned investigation covering three (3) ORPS reportable near misses and one other incident was not very effective in identifying root cause and corrective actions. The performance rating for 1.1.e (B) cannot exceed the overall outcome measure score which is 87.9. This score has been averaged with 1.1.e (A) and (C).

Performance Rating (Adjectival)**: Outstanding**	90.00%

Criterion: #1.2 ISM System Outcome Measures

System outcome measures are linked to the ISM process measure. System outcomes are used to validate and drive ISM excellence. **(Weight = 60%)**

Performance Measures: #1.2.a Routine Exposures from Routine Activities

Occupational radiation doses to individuals (excluding accidental exposures) from DOE operations will be managed to assure that applicable 10 CFR 835 limits are not exceeded**.** **(Weight = 7.5%)**

Assumptions:

1. The performance period for this measure is from July 1, 2001 to June 30, 2002.
2. Any actual or anticipated significant changes in workloads or badged worker population (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.
3. Some variability is expected which may not be indicative of a trend.
4. This measure is directed toward current management and control of radioactive materials.
5. Outcome Measure reports demonstrate how results are used to drive improvement or maintain current best management practices.

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however, results fall short of the expectations for the Good gradient.
Good	No individual exposures in excess of 500 millirem without an increase in workload (unless specifically authorized in writing and approved by the Radiological Control Manager).
Excellent	Qualify for Good, plus the number of individual exposures exceeding 100 millirem is less than or equal to the control level of 10, without an increase in workload
Outstanding	Qualify for Excellent, plus the average individual positive dose is less than the control level of 50 millirem, without an increase in workload.

Performance Narrative:

All gradients have been met for the **outstanding** rating. The average individual positive dose was 30 mrem, versus the control level of 50 mrem. There was one individual with a dose exceeding 100mrem, versus the control level of less than or equal to ten (10). There were no individuals who received a dose above 500 mrem.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: #1.2.b Radiation Protection of the Public and the Environment

Public radiation doses to the maximally exposed individual (member of the public) and radiological emissions to the environment, from all Laboratory operations, will be managed to assure that all applicable regulatory limits are not exceeded, and that radiological dose is as low as reasonably achievable.

(Weight = 7.5%)

Assumptions:

Any actual or anticipated significant change in workloads during the period for which the dose is calculated that would affect radiation dose (interpreted to be an increase or decrease of 0.1 mrem/yr or more) will be brought to the attention of UC and DOE, and appropriate adjustments in the performance measure will be made.

Outcome Measure reports demonstrate how results are used to drive improvement or maintain current best management practices.

Radiological emissions to the environment are defined as air emissions and sanitary sewer discharges.

For the sanitary sewer discharge component of radiological emissions, only discharges of tritium will be reported and compared to the regulatory limit, since discharges of other radionuclides are relatively small.

To achieve a good, excellent, or outstanding gradient, LBNL will demonstrate to DOE, through operational awareness activities, that all reasonable efforts have been made to minimize dose and emissions to ALARA levels, and DOE will document its agreement.

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however results fall short of the expectations for the Good gradient.
Good	Radiation dose to the maximally exposed individual (member of the public) is greater than 4% and less than or equal to 10% of applicable regulatory limits. Radiological emissions to the environment are greater than 10% and less or equal to 20% of applicable regulatory limits.
Excellent	Radiation dose to the maximally exposed individual (member of the public) is less than or equal to 4% of applicable regulatory limits. Radiological emissions to the environment are less than or equal to 10% of applicable regulatory limits.

Outstanding Radiation dose to the maximally exposed individual (member of the public) is less than or equal to 1 % of applicable regulatory limits.

Air emissions to the environment are less than or equal to 1% of applicable regulatory limits.

Sewer discharges are less than or equal to 4% (0.2 Ci) of the applicable regulatory limit.

Performance Narrative:

All gradients have been met for the **outstanding** rating.

The radiation dose to the maximally exposed member of the public for FY 2002 is 0.0012 mSv (0.12 mrem). This public dose is less than one (1) percent of the allowable federal annual limit of 1 mSv/yr (100 mrem/yr).

Cumulative air emissions for FY 2002 are about 15.1 Ci. The resulting dose to a maximally exposed individual from this release is about 0.0003 mSv/yr (0.03 mrem/yr). This too is less than one (1) percent of the allowable federal annual limit of 0.1 mSv/yr (10 mrem/yr)

The cumulative sanitary sewer discharge FY 2002 is about 0.04 Ci. This is about one-third of the releases from last year, due in large part to the closure of the NTLF. This release puts LBNL at slightly less than one (1) percent of the permitted limit of 5 Ci/yr.

LBNL has demonstrated a continuing commitment to controlling radiological releases and radiation dose to the public. Their performance places them in the outstanding rating, which represents an improvement over last year. For this reason a rating in the mid range of outstanding is justified.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: #1.2.c Prevention of Unplanned Radiation Exposures

Unplanned radiation exposures and ORPS reportable occurrences of skin or personal clothing contamination are managed and minimized. **(Weight = 7.5%)**

Assumptions:

For the purpose of this measure, unplanned radiation exposures are considered to be greater than 100 mrem. If the ORPS event is classified as an Unusual Occurrence, the weighting factor is increased by a factor of 1.5.

Some variability is expected which may not be indicative of a trend.

The number of individuals contaminated is counted.

Outcome Measure reports demonstrate how results are used to drive improvement or maintain current best management practices.

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however results fall short of the expectations for the Good gradient.
Good	The weighted number of contaminated individuals is more than 6.0 but less than or equal to 8.0.
Excellent	The weighted number of contaminated individuals is more than 4.0 but less than or equal to 6.0.
Outstanding	The weighted number of contaminated individuals is less than or equal to 4.0.

Performance Narrative:

Performance during the reporting period met the gradient for the **excellent** rating. There were two instances of ORPS-reportable personnel skin and/or clothing contamination in the reporting period, resulting in five (5) contaminated individuals. The contaminations were all off-normal, with a weighting factor of one (1). One contamination involved an unqualified student whose arm was contaminated by P-32 while doing unauthorized work. The other four (4) contaminations occurred over a two-day period at the Hazardous Waste Handling Facility (HWHF), when improper work procedures resulted in widespread area and personnel contamination with C-14. There was a near-miss event involving three (3) maintenance workers who entered a posted radiological area in violation of radiation work permit, which required a Radiological Control Technician escort (not present) and the use of personal protective equipment (which they did not use). Based on the gradient, five (5) events earned an "excellent" rating. The two (2) events which resulted in reportable contaminations were both serious enough to require Noncompliance Tracking System reports,

although the radiation doses were low. The HWHF event was a potentially very serious one, with site-wide and off-site involvement potential.

Performance Rating (Adjectival)**: Excellent**	84.00%

Performance Measure: #1.2.d Control of Radioactive Material

Radioactive material, including radioactive sources and contaminated articles, is not found outside of Controlled areas. **(Weight = 7.5%)**

Assumptions:

Off-normal occurrences have a weighting factor of 1 and unusual occurrences have a weighting factor of 1.5.

Some variability is expected which may not be indicative of a trend.

This measure is directed toward current management and control of radioactive materials.

Outcome Measure reports demonstrate how results are used to drive improvement or maintain current best management practices.

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however results fall short of the expectations for the Good gradient.
Good	The weighted number of occurrences is equal to 4.0.
Excellent	The weighted number of occurrences is more than 2.0 but less than 4.0.
Outstanding	The weighted number of occurrences is less than or equal to 2.0.

Performance Narrative:

Performance during the reporting period met the gradient for the **good** rating. There were four reportable occurrences of loss of control of radioactive material in the reporting period, all at the off-normal level. These were the event at the Hazardous Waste Handling Facility which resulted in widespread C-14 contamination at Building 75 and a government vehicle, finding an object contaminated with Cf-249 in Building 70A, a contaminated hallway in Building 75, and a Ra-226 source found in an uncontrolled area at the Advanced Light Source (ALS).

The last event, the source at the ALS, was not reported by the Laboratory as a loss of control event, although the DOE BSO considers it as one. The source, at a level that exempts it from requiring a leak testing and 10 CFR 835 controls, nevertheless exceed the ORPS reporting threshold and falls under the Laboratory's sealed source program and is required to have a Sealed Source Authorization issued for it by the LBNL Radiation Protection Group. By not being entered into the LBNL radioactive material control program and by being stored in a radiological uncontrolled area, this event violated LBNL requirements. EHS Procedure 711 (Sealed Radioactive Source Program) states "Exempt sealed

radioactive sources …are subject to other administrative controls and annual inventory (Sec. 2), "exempt radioactive sources must be stored in an RSA" (Sec 4.4), and "sealed radioactive sources shall be stored in a locked cabinet or storage room posted as an RSA" (Sec. 4.4). PUB-3000 (LBNL Health and Safety Manual) states "RPG is responsible for approving all procurement and use of radioactive sealed sources" (Sec. 21.10.12), as well as other requirements. The expectation is that LBNL will follow its internal radioactive material control requirements, and formally change them if that is found necessary.

Based on the gradient, four (4) reportable events earned a "good" rating. The low-hazard nature of three (3) of these occurrences justify a rating at the high end of the "good" gradient.

Performance Rating (Adjectival)**: Good**	79.00%

Performance Measure: #1.2.e Exposure to Chemical, Physical, and Biological Agents

Personal exposure measurements, and the appropriate corrective action to reduce the exposure potential for operations with high or medium potential hazards, and for substance-specific sampling (operations required by law to be sampled), are completed during the performance period.

(Weight = 7.5%)

Assumptions:

Operations with "high or medium potential hazard" are determined by the LBNL Integrated Functional Appraisal process.

An exposure measurement shall be defined as "one or more samples associated with an operation that gives a value which can be compared with an Occupational Exposure Limit."

Exposure measurements will be corrected by the protection factor of the personal protective equipment in use.

When an exposure measurement is not possible, a qualitative assessment which determines the probable exposure (comparison to Occupational Exposure Limit) and level of risk (high, medium, or low as defined by the LBNL Integrated Functional Analysis process) shall be documented.

An operation is an activity comprised of one or more tasks performed at a single location that generates a hazard(s). "Hazard" includes all stressors associated with an operation; i.e., noise, lead, etc. Note: Any significant process changes constitute a new operation.

An exceedance is one or more high results (measurements above the current tiered approach of Action Level, TLV, and then PEL) associated with an operation. When no standard has been developed for an agent, another published occupational health standard will be agreed upon and utilized.

Action Level is defined as one-half of the 8-hour TWA, STEL, and CEILING limits for OSHA PELs and ACGIH TLVs, unless a different action level is specified by OSHA.

Types of measurements to be considered are: chemicals, gases, particulates, fibers, biological agents, physical agents such as noise, magnetic fields, non-ionizing radiation, and thermal stress. Note: bulk samples, swipe samples, drinking water samples, and indoor air quality measurements are not to be included.

Exposure measurements that result in an "exceedance", along with the corrective action taken, will be discussed in the Appendix F Quarterly Report.

Per OSHA definition, the Laboratory Standard (29 CFR 1910.1450) supercedes substance-specific sampling standards for laboratory operations. Therefore, only non-Laboratory activities, such as shops and crafts, are subject to the substance-specific standards referenced in 29 CFR 1910.1001-1052.

Outcome Measure reports demonstrate how results are used to drive improvement or maintain current best management practices.

The severity of events is to be considered in the evaluation. Higher severity events include (but are not limited to): imminent danger situations [as defined by the Occupational Safety and Health Administration (OSHA)], worker exposures above OSHA Permissible Exposure Limits, biological exposures above the OSHA medical removal levels, and substantial property damage or personal injury due to fire. Performance will consider all aspects of the program that enhance and promote program objectives and overall compliance.

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however results fall short of the expectations for the Good gradient.
Good	A list of operations with “high” or “medium” potential hazards is prepared by October 31, 2001. This list is developed from all Integrated Functional Appraisals conducted during FY01. A list, specific to LBNL operations, of all substance-specific sampling required by 29 CFR 1910 is prepared by October 31, 2001. All "substance-specific" exposure measurements are completed as required by 29 CFR 1910 during the contract period. IH exposure measurements (and corrective action) are completed for 90% of operations with "high" potential hazards. IH exposure measurements (and corrective action) are completed for 80% of operations with "medium" potential hazards.
Excellent	IH exposure measurements (and corrective action) are completed for 95% of operations with "high" potential hazards. IH exposure measurements (and corrective action) are completed for 90% of operations with "medium" potential hazards.
Outstanding	IH exposure measurements (and corrective action) are completed for 100% of operations with "high" potential hazards. IH exposure measurements (and corrective action) are completed for 100% of operations with "medium" potential hazards. The results of the completed sampling plan/yearly monitoring (for both Integrated Functional Appraisal sampling and substance-specific sampling) are used to update the Integrated Functional Appraisal hazard assessments and the Substance-specific Annual Sampling Plan.

Performance Narrative:

The Industrial Hygiene group is meeting the requirements at the **outstanding** level of the performance measure. They are protecting workers and are reviewing and correcting deficient/higher hazard conditions found in previous LBNL inspections. However, additional aggressive approaches could be utilized. For example, renovation/removal projects involving asbestos materials regularly produce airborne sample results higher than allowable limits. The LBNL Industrial Hygiene group is relying on respiratory protection and a calculated conclusion that most of the fibers are sheetrock to demonstrate that employees are being protected, rather than conclusively testing the fibers to prove that they are not asbestos. The higher levels of performance within the outstanding rating band have not been achieved.

Performance Rating (Adjectival)**: Outstanding**	90.00%

Performance Measure: #1.2.f Accident Prevention

The baseline period for comparison is CY 1997 data. The Laboratory's Severity and frequency (defined as Lost Workday Case Rate (LWC) and Total Recordable Case Rate (TRC) respectively) of accidents during the performance period will be compared to the baseline period. 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 year. The overall performance rating for this measure will factor in LWC and TRC rates and other accident prevention information identified below.

(Weight = 7.5%)

Assumptions:

Laboratory statistics will be collected for the baseline for all Laboratory incidents including subcontractors as reported to CAIRS.

For FY 2002 and future years, baseline assumptions will be reviewed and if appropriate updated by mutual agreement of the local DOE office and the Laboratory.

Subcontractor operations/personnel are included for all subcontractors whose injury data are reported to CAIRS. Subcontractors are excluded if they are "servicing" the Laboratory (e.g., copy machine vendors or other transient workers).

The Laboratory's 5 year goal for reduction of LWC and TWC is derived from industry best in class Benchmarking Study completed in 1998 and in agreement with DOE.

Consideration will be given to the Laboratory's rank for LWC and TRC within the best in class peer group.

Establishment and reporting of upper and lower control limits to determine the significance of accident rate variation (caused variation vs. random variation) will be examined.

Consideration will be given if any targeted/focused accident prevention program to a sub-population within the Laboratory demonstrates effective intervention and/or improvement in the combined LWC and TRC score.

Consideration will be given upon demonstration of quantifiable return of investment (ROI) from implementation of accident prevention program initiatives.

Consideration will be given to the rate of annual rate of reduction for LWC and TRC using best in class as the benchmark and 1997 as the baseline year.

Overall rating of accident performance should be weighted towards higher recognition and credit for managing and reducing severity (LWC) of DOE recordable cases, due to LBNL's efforts to develop and implement multiple accident prevention initiatives early in the performance contract period. Therefore, the LWC has a weighting factor of 2 to 1 in comparison to the TRC.

If the DOE CAIRS reporting system changes during the performance year, data reported under the new system will be used to after the effective date of the change. If the changes in the CAIRS system have an inequitable impact on this measure, the measure will be renegotiated at that time.

Progress toward reduction goals is evaluated using the following scoring system:

Performance Year FY2002:

TRC between 3.00 and 2.32 = 1 point
TRC between 2.32 and 1.72 = 2 points
TRC below 1.72 = 3 points

LWC between 1.54 and 1.14 = 2 points
LWC between 1.14 and 0.74 = 4 points
LWC below 0.74 = 6 points

Performance Year FY 2003:
TRC between 3.00 and 2.25 = 1 point
TRC between 2.25 and 1.50 = 2 points
TRC below 1.50 = 3 points

LWC between 1.50 and 1.00 = 2 points
LWC between 1.0 and 0.50 = 4 points
LWC below 0.50 = 6 points

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however results fall short of the expectations for the Good gradient.
Good	Performance for LWC and TRC is scored and then summed. The sum for this gradient is 2 to 4 points, with consideration for demonstrated achievements identified within the list of assumptions.
Excellent	Performance for LWC and TRC is scored and then summed. The sum for this gradient is 5 to 7 points, with consideration for demonstrated achievements identified within the list of assumptions.
Outstanding	Performance for LWC and TRC is scored and then summed. The sum for this gradient is 8 or more points, with consideration for demonstrated achievements identified within the list of assumptions.

Performance Narrative:

The Laboratory's performance is rated **excellent**. The Total Recordable Case Rate and the Lost Workday Case Rate continued on a downward trend this fiscal year. When factored together the rates result in a score of six (6) points. Several initiatives aimed at preventing accidents and injuries were introduced this year. A program called Zero Accident Process (ZAP) was piloted in the Facilities Division after training employees on the process and is now available to all divisions site-wide. Accident Review Boards have been established in three (3) more divisions this year. These Boards promote direct communication between employees and management about better ways to achieve accident prevention tailored to the division's activities. These efforts have contributed to a dramatic decrease in first aid cases and in the decreasing accident rates for the Laboratory and should continue to show positive results over time.

Performance Rating (Adjectival)**: Excellent**	87.00%

Performance Measure: #1.2.g Tracking Environmental Incidents

The number of environmental incidents will be measured. Environmental incidents include:

- violations resulting from regulatory inspections or regulatory reporting
- reportable occurrences of environmental releases exceeding regulatory or permitted levels established by Federal, State or Local agencies (authorized by Federal or State agencies to implement Federal or State environmental statutes). **(Weight = 7.5%)**

Assumptions:

Audit is defined as an external review of a program that results in a formal report to the Laboratory, with any findings tracked by the appropriate organizational group (e.g., LBNL-OAA).

Environmental releases or excursions that remain within compliance limits will not be counted as incidents by this measure.

The Laboratory has the option to apply a weighting factor to each incident, depending on its severity and magnitude. All environmental incidents that are serious will be given a weighing factor of 1, on a scale of 0 to 1. A release or violation is considered serious unless an alternate weighting factor is proposed by LBNL. The Laboratory and DOE technical counterparts will jointly agree upon the assignment of an appropriate weighting factor for non-serious releases.

Percent increase is based upon comparisons made to the average of the 3 previous years.

When the number of incidents is less than or equal to 3, scoring will be based solely on this number.

Outcome Measure reports demonstrate how results are used to drive improvement or maintain current best management practices

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however results fall short of the expectations for the Good gradient.
Good	More than 3 incidents and an increase in incidents by less than or equal to 50%
Excellent	More than 1 and less than or equal to 3 incidents
Outstanding	1 incident or less.

Performance Narrative:

The Laboratory's performance is rated **outstanding**. LBNL had three (3) environmental incidents during the performance period. None of these incidents resulted in a release of contaminants to the environment. All of the incidents were minor in nature and each was weighted at 1/3 point for a total of one point. This is a relatively small number but it is more than last year and is just enough to qualify LBNL for an outstanding rating in this performance measure. As a result, a rating at the low end of outstanding is justified.

Performance Rating (Adjectival)**: Outstanding**	90.00%

Performance Measure: #1.2.h Waste Reduction and Recycling

The Laboratory continues to progress towards meeting the DOE's pollution prevention goals for the year 2005. **(Weight = 7.5%)**

Assumptions:

By the year 2005, reduce sanitary, hazardous, low-level radioactive, and low-level mixed waste generation from routine operations by the following amounts, using 1993 as a baseline. The performance period is the DOE fiscal year (October 1-September 30).

Reduce sanitary waste by 67%. Parameter measured is routine sanitary waste sent to landfill (total minus recycled amount). Measured generation rate is adjusted annually for changes in the total LBNL operating budget. Includes low-level radioactive waste reclassified to sanitary waste after decay in place.

Reduce hazardous waste by 75%. Parameter measured is routine hazardous waste (RCRA and non-RCRA) shipped off site, regardless of destination. Includes secondary hazardous waste from decay in place of mixed waste or combined waste. Does not include TSCA, site restoration, site renovation, or other one-time wastes. Generation rates are adjusted annually for changes in the operating budgets of divisions or departments that generate routine hazardous waste.

Reduce low-level radioactive waste by 75%. Parameter measured is waste volumes/weights entering the HWHF, based on Shoebox reports. Excludes waste reclassified to sanitary after decay in place. Includes secondary radioactive waste from successful treatment of the hazardous constituents of low-level mixed wastes. Generation rates are adjusted annually for changes in the operating budgets of divisions or departments that generate routine low-level radioactive waste.

Reduce low-level mixed waste by 75%. Parameter measured is waste volumes/weights entering the HWHF, based on Shoebox reports. Excludes waste reclassified to hazardous after decay in place and waste reclassified to radioactive or combined after successful treatment to remove RCRA hazardous constituents. Generation rates are adjusted annually for changes in the operating budgets of divisions or departments that generate routine low-level mixed waste.

When a calendar year 2005 goal is met for any waste type, the new goal will be continuous improvement for that waste type.

Performance points will be awarded in the same fashion as for the FY1993-2000 Performance Measure, as shown in the charts below.

Outcome Measure reports demonstrate how results are used to drive improvement or maintain current best management practices.

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

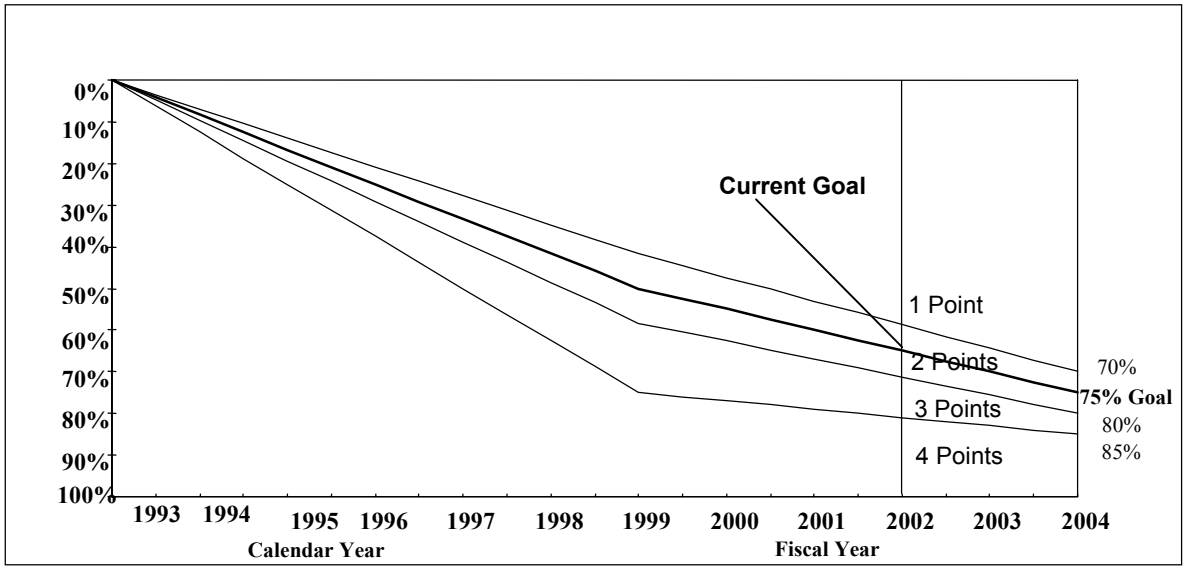


Figure 1. Chart to be used for routine hazardous, low-level radioactive, and low-level mixed waste reductions.

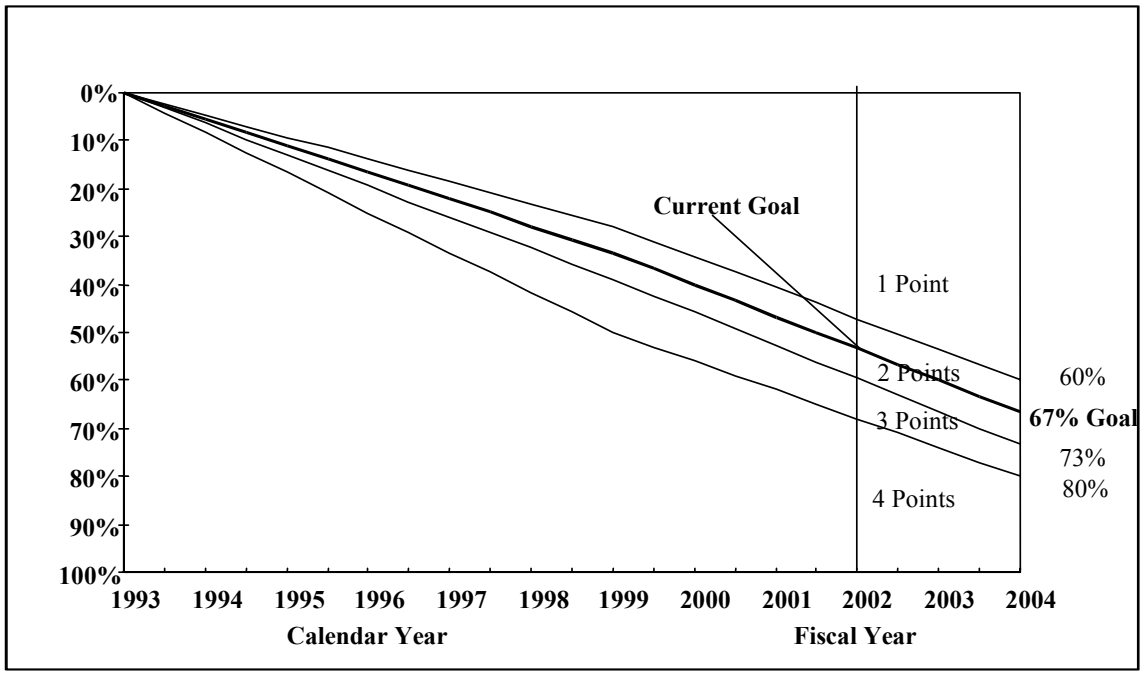


Figure 2. Chart to be used for routine sanitary waste reduction.

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards achievement of the performance measure.
Marginal	Some effort is demonstrated, however results fall short of the expectations for the Good gradient.
Good	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.
Excellent	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.
Outstanding	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 equal to or 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 (after adjustment for source reduction).

Performance Narrative:

During FY 2002 (based on the first three (3) quarters of waste generation data), Lawrence Berkeley National Laboratory (LBNL) reported a reduction in routine waste generation of low level radioactive waste by 79 percent, low level mixed waste by 67 percent, hazardous waste by 74 percent, and non-hazardous waste by 56 percent compared to the FY 1993 baseline. The quantities of waste generated for hazardous, low level, and non-hazardous waste have slightly increased based on the FY 2002 waste generation. However, LBNL continues to make some progress towards meeting the Department of Energy (DOE) pollution prevention goals for 2005. DOE Oakland (DOE OAK) agrees with the LBNL rating of **excellent** for the FY 2002 rating period. It should be noted that LBNL takes credit for recycling when reporting non-hazardous waste generation. Operational awareness activities during FY 2002 indicate LBNL continues to make decent progress in identifying and pursuing pollution prevention opportunities in sources of low level and low level mixed waste and recycling of non-routine waste. However, more aggressive evaluation and implementation of pollution prevention opportunities needs to take place at sources non-hazardous and hazardous waste generation. DOE OAK is concerned regarding the reduction in LBNL staff working on identifying and implementing pollution prevention opportunities at the Laboratory.

DOE OAK assigns an excellent rating to this measure.

Performance Rating (Adjectival)**: Excellent**	85.00%

Performance Area: FINANCIAL MANAGEMENT

Lawrence Berkeley National Laboratory (LBNL) will pilot the Financial Management Performance Assessment Plan (FMPAM) for Fiscal Year 2002. The Financial Management organization will finalize its final assessment plan with DOE and UC by October 1, 2001. This plan will cover performance thresholds, performance ranges, specific scoring criteria, and frequency of reporting.

In this Model, points are used to determine the score for each activity. Weights and the corresponding points are shown below at the Objective, Criteria, and Performance Measure Levels. Exhibit I summarizes the activities to be measured, performance ranges, and point value for each activity. The final rating will be based on the total activity points earned. The rating percentage will be calculated as a ratio of total points earned to total points possible (where a total weight of 100 percent is equal to 1,000 points).

General Note Regarding Gradients:

All performance measures are rated as composites of numerous sub-measures described in the protocol document. Points are earned for each sub measure. The sub measure points earned are totaled for each associated performance measure. The resulting performance measure score will be calculated as a percentage of total points possible. The following table illustrates the appropriate adjectival rating associated with percentage of points earned.

Percent of Points Earned	Rating
90-100%	Outstanding
80-89%	Excellent
70-79%	Good
60-69%	Marginal
59% or less	Unsatisfactory

Performance Objective: #1.0 Effective Accounting Practices

The Controller's Organization shall ensure the accounting practices are effective, efficient, and according to generally accepted standards and principles. **(Weight = 12%)**

Criterion: #1.1 Cash Management

The Controller's Organization shall have effective processes to disburse and collect government funds. **(Weight = 2%)**

Performance Measure: #1.1.a Effectiveness of Disbursements

The improvement trends for payment processes to vendors and employees will be measured.

(Weight = 1%)

Gradients: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

Factors considered in this measure are: discounts taken, payments to vendors according to terms, payments via electronic funds transfer to vendor and employees, and customer satisfaction. The Laboratory has reached a high maintenance level for discounts and timeliness of payments to vendors. These averaged over 98 percent which was slightly better than last year. LBNL is performing at a sustained high level in these areas.

A good start was made to increase electronic payments to vendors and employees. These were set at realistically low benchmarks this year because they are new measures. The performance results were at the outstanding range – 26.4 percent for vendors and 89.2 percent for employees. The Laboratory should strive to increase the proportion of electronic payments as this is a major objective for the Department.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Performance Measure: #1.1.b Effectiveness of Collections

The improvement trends for collection of accounts receivable will be measured. **(Weight = 1%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

This measure addresses how efficiently LBNL processes and collects its accounts receivable. The measure includes a requirement not to have any Federal receivables over 160 days past due. The Laboratory did not meet the absolute requirement to have no Federal receivables over 160 days, but the number and amount of past due accounts decreased during the year. More emphasis was placed on monitoring accounts receivable. The Laboratory has a new Accounts Receivable manager and there is evidence based on the Laboratory's quarterly aging report that receivables are monitored regularly.

Performance Rating (Adjectival)**: Good**	79.00%

Criterion:	**#1.2**	**Account Management**	
Ensure that the Controller's Organization effectively manages high risk accounts.			**(Weight = 8%)**

Performance Area:	**#1.2.a**	**Work For Others (WFO) Accounts - Use of UC Bridge Funding**
The Controller's Organization shall demonstrate effective management of UC financing of WFO.		**(Weight = 2.4%)**

Gradients: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

This measure covers how effectively the Laboratory manages work for non-DOE entities that are temporarily financed by UC funds, "bridge funding", because the project is continuing beyond the available funding or for some reason funding has not been received in advance. Funding is normally withheld from the UC management fee. Such financing is to be kept to minimum in amount and time. The Laboratory is to provide timely reports to DOE and UC Performance for the measure of time and amount on average exceeded the set standard; however, individually some projects have stayed on the bridge funding list for more than five months. The Laboratory provided timely reports to UC and DOE OAK.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Performance Measure: #1.2.b High Risk Account Reconciliations

The Controller's Organization shall demonstrate effective accounting processes/results for high-risk account reconciliations. **(Weight = 3.2%)**

Gradients: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

This measure addresses how timely the Laboratory reconciles its bank accounts and resolves reconciling items. According to its self-assessment the Laboratory met the criteria completely. The accounts are consistently reconciled very quickly after each month-end and reconciling items are resolved.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Performance Measure: #1.2.c Asset Management

The Controller's Organization shall demonstrate effective accounting processes/results for asset management. **(Weight = 2.4%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

The specific gradients for this measure address the timely capitalization of construction work in process account and timeliness of funding determinations by Berkeley Accounting. Based on the Laboratory's self assessment, transactions flowing through the plant and capital equipment accounts, and year-end edits of plant and equipment transactions, the Laboratory's performance was outstanding. However, the Laboratory capitalized assets acquired in prior years for the Human Genome and the Oakland Computing Center this year because it had missed doing so before.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Criterion:	**#1.3**	**Cost Effective**	
Cycle times and/or costs of identified accounting processes shall be reduced.			**(Weight = 2%)**

Performance Measure:	**#1.3.a**	**Demonstrated Cost Effectiveness of Accounting Processes**	
Improvement trends for identified accounting processes shall be evaluated.			**(Weight = 2%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

This measure includes the six gauged gradients below with results and score based on pre-established ranges per Laboratory self assessment:

1. Accounts payable cost as percent of total procurement/payable costs
2. Payroll cost per W2
3. Accounts receivable cost as percent of Laboratory Work for Others revenue
4. Travel cost per claim processed
5. Travel – average days to process claims
6. Controller accounting process cost compared to Laboratory Indirect budget

While the performance measures are similar to last year's most of the specific gradients and gauges have changed, so that they are not completely comparable to previous years. It appears the benchmarks need to be adjusted up for next year. OAK concludes overall performance was about same as last year.

Performance Rating (Adjectival)**: Outstanding**	92.00%

Performance Objective: #2.0 Financial Stewardship

The Controller's Organization practices provide for financial stewardship, including compliance, data integrity and reporting. **(Weight = 30%)**

Criterion: #2.1 Financial Compliance

The Controller's Organization shall demonstrate stewardship and compliance with DOE and federal accounting standards and policies. **(Weight = 15%)**

Performance Measures: # 2.1.a Audit Results and Resolution

The Controller's Organization will be measured on the audit results and resolution of audit findings. **(Weight = 1.8%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

Overall, LBNL has appropriately targeted and resolved audit findings. During our validation review, LBNL provided sample tracking sheets identified as "Audit Action Item Due Dates" for the FY 2002 reports being tracked by Financial Services Department (FSD). The sheet identifies the following:

- Due Date
- Task(s)
- Assigned To
- Date Completed

DOE OAK's record of reports issued in FY 2002 is summarized as follows:

- Billing & Accounts Receivable, IAS Project No. 2286, dated November 2001
- Review of Stores Inventory System, IAS Project No. 2293, dated November 2001
- Travel, IAS Project No. 2252, dated November 2001
- Resource Adjustments, IAS Project No 2301, dated March 2002
- Bank Account Administration, IAS Project No. 2287, dated May 2002
- Cost Allowability, IAS Project No. 2316, dated May 2002
- Maintenance Department, IAS Project No. 2285, dated June 2002

- Check Requests, IAS Project No. 2323, dated July 2002
- Supplemental Review of Site Operating Contractor Overhead for Fiscal Year 1999 at LBNL, dated August 2002

In addition, LBNL FSD had a schedule for tracking prior audit findings requiring corrective actions. This schedule however does not readily identify the target resolution dates. However, it does identify the status of the corrective actions. During, our validation review, LBNL provided a revised action item tracker listing. The listing was complete except that it did not include the "Supplemental Review of Site Operating Contractor Overhead for Fiscal Year 1999 at LBNL, dated August 2002."

Accordingly, our rating is based on LBNL setting appropriate target dates for 89 percent (48 out of 54) of the audit findings and for meeting 80 percent (37 out of 46) of the target resolution dates.

.

Performance Rating (Adjectival)**: Excellent**	80.00%

Performance Measure: #2.1.b Internal Controls and Compliance on Subject Areas

The Controller's Organization will be measured on the adequacy of their internal controls environment. **(Weight = 3.6%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

LBNL completed an internal control self-assessment or relied upon a recent review for each area agreed upon with DOE OAK. Based upon the gradient for this measure assessing the completeness of each self-assessment report and related documentation, during our validation review, we requested and reviewed each self-assessment report and related documentation.

As discussed with LBNL Financial Services Department (FSD) staff during our validation review, the self-assessment reports did not always clearly identify:

- Purpose and/or Objectives of Self-Assessment Review (SAR)
- Scope and/or Methodology of SAR
- Results and/or Conclusions SAR
- Findings and Recommendations of SAR

For example, the report would provide a description of the control processes but not clearly identify the scope of the review (e.g., whether or how many transactions were tested) as a basis for arriving at the conclusions and recommendations reached.

Based on LBNL's self-assessments there were no findings that required resolution for the following areas:

- Capitalization of Internal Use Software
- Capitalization or Write Down of Completed Projects and/or Surplus Facilities
- Travel Cards

For the remaining self-assessment areas (Environmental Management Liability, Procurement Cards, Check Requests, and Administrative Controls for Programs) LBNL has appropriately set target dates and met 100 percent of those targeted for completion in FY 2002. The remaining open items are targeted for completion during FY 2003 and we will include those in our FY 2003 assessment of performance.

Performance Rating (Adjectival)**: Outstanding** 90.00%

Performance Measure: #2.1.c Cost Accounting Practices

The Controller's Organization compliance with Cost Accounting Standards will be measured.
(Weight = 4.8%)

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

Overall, during FY 2002 LBNL's indirect rate submissions were generally timely, accurate and in conformance with Cost Accounting Standards.

The FY 2002 rate submission was approved by OAK on October 23, 2001. LBNL rate revisions dated January 10, 2002 and May 15, 2002 were submitted and approved based on changes in cost estimates and/or changes in cost accounting practices.

The FY 2003 rate submission was submitted by LBNL on September 3, 2002. The FY 2003 submission required some changes prior to approval by OAK as a result computation adjustments, revised budgetary estimates and revisions to proposed accounting practice changes.

During, FY 2002 LBNL submitted proposals for changes to cost accounting practices on January 10, 2002 and March 14, 2002. In addition, while a cost accounting practice change proposal was not submitted, LBNL's FY 2003 Provisional/Forward Pricing rate submission included accounting practice changes.

Contract Clause 3.9, Administration of Cost Accounting Standards, indicates LBNL should submit a description of the proposed cost accounting practice changes, the potential impact and a general dollar magnitude of the changes sixty (60) days prior to the effective date of the proposed change. As a result of LBNL not submitting and obtaining approval of proposed accounting practice changes prior to the FY 2003 rate submission; it resulted in numerous changes to the provisional rates submitted by LBNL.

As discussed with LBNL during our validation effort, cost changes should be discussed with OAK at our periodic or special meetings so that we have an opportunity to discuss the changes once lab management has agreed on an approach but prior to submitting the proposal to OAK for official approval. This approach has worked well in prior years and resulted in a streamlined approval process with less time needed to respond to questions and data requests. Also, the absence of this process has resulted in LBNL withdrawing various change proposals that had been formally submitted to OAK for approval.

In addition, during FY 2002 LBNL submitted a revised and updated Disclosure Statement to reflect the cost accounting practice changes approved by OAK in its major FY 2002 indirect rate

restructuring. Additional FY 2002 cost accounting practice changes and the applicable changes to the Cost Accounting Standards Disclosure Statement were also submitted to OAK timely by LBNL.

While OAK has not yet completed a comprehensive review of the FY 2002 Disclosure Statement submission, we believe it is generally current, accurate and complete. We believe, as has been discussed with LBNL, that some disclosures may need to be modified to more accurately and completely describe LBNL's accounting practices. For example, direct charging of electricity and the computation of the On-Site General and Administrative rate.

Financial Services Department/Cost Accounting has demonstrated an effective, comprehensive approach to disseminating cost accounting information to internal laboratory customers in a timely manner. The approaches used are e-mail notification, posting to web-sites, discussion and/or hard copies at Financial Network Group or individual meetings. During our validation effort, we confirmed the information was made available well within the ten (10) workdays after DOE approval.

Performance Rating (Adjectival)**: Good**	75.00%

Performance Measure: #2.1.d Accuracy of DOE Financial Statements

Demonstrate effective accounting processes/results for accuracy of DOE financial statements.
(Weight = 4.8%)

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

This measure addresses LBNL's support of DOE financial systems and accuracy of DOE Financial Statements in addition to Laboratory internal reports. It is important to DOE that LBNL maintain accurate accounts based on DOE chart and codes and provide information that merges into the DOE system which is the source for DOE financial statements. OAK also relies on the Laboratory to analyze statements at year-end and provide explanations and footnote disclosures.

Even though LBNL's performance in this area is rated outstanding, the Laboratory's data did not consistently flow seamlessly into DOE's system, and reports, analyses, or supplemental information have not included adequate detail. Requests for clarification or back up on what makes up DOE account balances are not always quickly identified and explained. For example, explanations of miscellaneous other accounts, or catch-all other party identification codes have been slow and sometimes incomplete. Analysis and plans to address DOE required updates tend to be slow. There seems to be a disconnection between Laboratory Budget and Finance in getting BNR recasts completed.

Laboratory management and staff have had to work very hard, keeping long and unusual hours to meet DOE requirements and OAK commends the effort. However, in order to achieve effectiveness in accounting processes, i.e. smooth flow of data, accuracy of DOE financial records, and quick analysis and support of agency statements, improvements are encouraged.

Performance Rating (Adjectival)**: Outstanding** 100.00%

Criterion: #2.2 Financial Reporting

The Controller's Organization will demonstrate effective reporting of financial information.
(Weight = 10%)

Performance Measures: #2.2.a Internal Financial Management Reporting

The Controller's Organization will be measured on the reporting of financial information to internal customers. **(Weight = 3.6%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

Based on information in LBNL's self assessment, the Chief Financial Officer's (CFO) web site, and awareness of the Laboratory's CFO outreach to program organizations, OAK concurs the Laboratory has effective reporting of financial information to internal organizations. Financial Services Management put on a very informative presentation in preparation for Fiscal Year 2002 close.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Performance Measure: #2.2.b DOE and Other External Laboratory Reporting

The Controller's Organization will be measured on the reporting of financial information to DOE and other external customers. **(Weight = 6.4%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

The good rating is based on LBNL's overall on-time reports to OAK. A number of reports, as listed below, are submitted at regular intervals:

1. Monthly electronic file of cost and other financial activity
2. Accounts Receivable
3. Erroneous Payment
4. Functional Cost
5. Personal Property Sales
6. Unbilled Work for Others
7. Cash/Banking Information
8. Financial Statement Analyses
9. Statement of Costs Incurred and Claimed

These reports were submitted timely.

However, there were occasions during the year that information was not complete or correct at first submission. This is especially applicable to the monthly electronic financial activity file. Several months there were variances in the deposits information included in the file and the actual transactions or the summary of the transactions. While it is expected that errors or discrepancies will occur in the normal course of business, Laboratory staff are not always readily available or able to work out the issues quickly. Expedient resolution of differences is extremely important due to OAK's need to forward data to HQ and to meet Treasury and Agency closing schedules.

One example of a problematic monthly electronic file submission was the October submission covering September cost and other financial activity. The first submission had numerous errors and was not in balance. The Laboratory made a second submission of all costs and financial activities. The Laboratory's second submission should include only corrections. The Laboratory was contacted but was unable to timely resubmit the second electronic file. OAK was required to adjust over a thousand duplicate entries. This is the second year the Laboratory has had major problems with the end of the year submission.

Performance Rating (Adjectival)**: Good** 75.00%

Criterion: #2.3 Standards and Principles

The Controller's Organization shall have documented, effective internal controls and policies and procedures. **(Weight = 5%)**

Performance Measure: #2.3.a Financial Controls

The Controller's Organization shall demonstrate the effectiveness of internal controls in primary accounting processes as identified with DOE**.** **(Weight = 3%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

Licensing/Royalty Collection and Distribution

Financial Service Department's (FSD) self-assessment indicated adequate segregation of duties exists between the Financial Services staff that handles the functions of: royalty income, royalty distributions and the invoicing for re-billable patent expenses.

The applicable policies and procedures are contained in the Regulations and Procedures Manual, Section 5.05, Licensing Income Distribution.

FSD identified the alert mechanisms as monthly review FMS aging reports and the annual review of the File Maker Pro database.

Computer security is maintained as part of the laboratory Financial Management System (FMS) and the File Maker Pro databases which are both password/access protected.

WFO Account Management

FSD's self-assessment indicates adequate segregation of duties exists between the Financial Services staff in the Financial Analysis unit that open project accounts and the General Accounting unit responsible for opening WFO contracts and billing in FMS.

The applicable FMS project set-up policies are documented in desk procedures.

FSD identified the alert mechanisms as project setup validation of data and edit checks. In addition LBNL is developing new capabilities in the Research Administration/Proposal/Project Information Database (RAPID) which is under development.

Computer security is maintained for Project Set-up via security tables which are password/access protected.

UCDRD Account Management

FSD's self-assessment indicated adequate segregation of duties exists among the Laboratory Directorate (authorizes use of funds), Financial Services Management (approves accounting reports) and General Accounting (prepares draw down requests, issues checks, prepares bank reconciliations and the monthly status report).

The applicable policies and procedures are contained in the DOE/UC Contract Funds manual and desk procedures.

FSD identified the alert mechanism as the review and approval process.

Computer security is maintained as part of the laboratory Financial Management System which is password/access protected.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Performance Measure: #2.3.b Financial Policies and Procedures

The consistency, accuracy, completeness, and currency of financial policies and procedures will be measured. **(Weight = 2%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

This measure evaluates financial policies and procedures and the extent that they are accurate, complete, updated, available and used by staff. Based on the Laboratory's responses to DOE, feedback or requests for information, LBNL seems to have a system in place to revise procedures and effect necessary changes. Actions in FY 2002 included capitalization of assets acquired with operating funds including software and other assets. The Laboratory indicated that other procedures were revised during the year and made available to staff on the Financial Services website along with other instructions. There are e-mail communications and presentations to train and inform staff.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Performance Objective: #3.0 External Budget Products and Services

The Controller's Organization provides quality and appropriate budget formulation and execution products and services to external customers in support of their financial management systems, policies, and procedures. **(Weight = 20%)**

Criterion: #3.1 Budget Formulation and Validation

The Controller's Organization shall provide budget formulation and validation products and services that facilitate effective financial management and stewardship of resources. **(Weight = 5%)**

Performance Measures: # 3.1.a DOE Budget Submission and Validation

The Laboratory's DOE budget submission and validation activities will be measured for proactiveness, timeliness, accuracy, completeness, and customer satisfaction. **(Weight = 5%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

LBNL has taken proactive steps to insure that the DOE field budget submission and validation is timely, accurate, and complete and meets DOE OAK's needs. LBNL financial services held a kick-off meeting in December for all laboratory financial personnel to present the guidelines and review the FY 2004 budget formulation and validation process well in advance of the deadline. All financial employees were given budget formulation binders which included detailed instructions, sample materials, and a budget formulation calendar as a reference.

Information regarding an additional initial request from DOE for forecasted budgets by Field Work Proposals (FWP) through FY 2008 to be included in the FY 2004 field budget submission was also disseminated to financial personnel in a timely manner.

LBNL continues to use the Project Management Tracking System (PMTS) to help streamline the process and consolidate the data. Financial Services Management took proactive steps to communicate with the Divisions so that the field budget submission was delivered to DOE on time. The submission was also reviewed for accuracy and completeness.

LBNL submitted the DOE field budget submission exhibits and schedules to DOE timely, accurately and with all schedules completed as prescribed in DOE's guidance.

Overall LBNL Financial Services Management, through good communication, guidance and support, ensured the field budget estimates were prepared in a reasonable and supportable manner. Each proposal required a completed checklist to ensure all data elements were included. Rates and formats reviewed for appropriateness and completeness. A review to prevent significant mathematical errors was conducted. The field budget estimates were accurately prepared based upon DOE requirements and guidelines.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Criterion: #3.2 Budget Execution and Cost Management

The Controller's Organization shall provide budget execution products and services that facilitate effective financial management and stewardship of resources. **(Weight = 15%)**

Performance Measures: # 3.2.a Control of Funds

The Laboratory's costs and commitments are controlled within established limits. **(Weight = 9%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

LBNL has maintained costs and commitments within authorized funding levels (ECOR) and has the processes in place to monitor and control costs at the B&R level 9 during the entire fiscal year. No reportable violations occurred. LBNL in the last two years has taken proactive activities and controls to improve the effectiveness of funds controls. Communication between the Controller's staff and the programmatic administrators has improved, along with increased report analysis. With the joint effort of the divisions, the Chief Financial Officer is now able to more efficiently control costs.

LBNL has met this measure by controlling costs and commitments within the identified funding levels. LNBL continues to improve the development of cost management reports and provide training and development program for financial managers and customers at the lab, the resource administrators have become more efficient managers of their funds. The enhanced financial systems and updated reports lead to better cost decisions and control.

The only area that LBNL did not meet requirements was in Performance Measure 3.2.a.5. "Laboratory costs are within cost control levels for Reimbursable WFO funding throughout the year." In this area, Laboratory costs were within cost control levels for Reimbursable funding at year-end, however, not throughout the entire year.

Performance Rating (Adjectival)**: Excellent** 88.00%

Performance Measure: #3.2.b Reports, Submissions, and Requests

The Controller's Organization's reporting of budget execution and cost management to DOE will be measured. **(Weight = 6%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

The LBNL Functional Cost Report was submitted on time and in accordance with DOE guidelines. Financial Services Management worked closely with DOE OAK to review the report in detail prior to submission. The final report was accurate, complete, and in compliance with DOE guidelines. It was submitted one day earlier than the due date. Financial Services Management also supports DOE by serving on the Functional Cost Report peer review team.

The Uncosted Balance Report was submitted ahead of the deadline. It was prepared in an accurate and complete manner, in accordance with DOE guidelines.

For FY 2002, all ad-hoc and miscellaneous budget execution and cost management reports were prepared in an accurate and complete manner, in accordance with DOE guidelines. The reports contained correct and factual statements with no significant factual errors. All reports were submitted on time or early.

Performance Rating (Adjectival)**: Outstanding** 100.00%

Performance Objective: #4.0 Effective Decision Support

The Controller's Organization provides appropriate business information and intelligence, expertise, analysis, and reports that enable effective internal and external decision making processes and outcomes. **(Weight = 18%)**

Criterion: #4.1 Internal Planning, Reporting, and Analyses

The Controller's Organization shall provide effective planning, reporting, and analytical decision support to its internal customers. **(Weight = 18%)**

Performance Measures: #4.1.a Cost Plan Development

The Controller's Organization Cost Plan development activities will be measured. **(Weight = 9%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

LBNL Financial Management took proactive steps to ensure the Operating Plan (Management Report) met the needs of Laboratory Management. Early in the year, the Management Report was reviewed in detail to improve the reporting of key data to Senior Management. Format changes were implemented to enhance the report and received the approval of Senior Management, such as drill down capability. Due to the rate restructure in FY 2001, changes were required in the worksheet used by the Divisions to report forecasts. Revised worksheets were developed, tested and provided to Division Analysts and Business Managers for use in the reporting process. Meetings were held with each Division to review the changes and provide support.

To assist management, a reference guide (Red Book) was developed. The guide serves as a convenient source of additional information for current financial data and cost projections. Cross training in the development of the Management Report has also been initiated.

Another activity that was developed during the year was the integration of the Management Report onto an interactive, audio-visual CD-ROM which provided senior management an alternative to the normal paper copy of the report.

The Operating Plan (Management Report) was presented to Senior Laboratory Management in a timely manner in the second quarter. The report included year-to-date costs as well as projections for the balance of the year. The revised format and reporting detail provided Senior Management with value-added information in which to make sound decisions in areas such as hiring, rate structures and budgeting. The Operating Plan is included as part of the institutional documentation for management support.

The Operating Plan has been an essential tool in making sound financial decisions. The plan includes Divisional forecasts which are compared to trends based on prior year costs. The current cost plan is considered an accurate and complete product.

The Operating Plan Divisional forecasts are prepared and analyzed three (3) times a year. Forecasts compared to actual costs, as well as rate management, budgets, and plan feasibility is reviewed with Senior Management. Any significant variances between cost plans and projected actual costs are discussed with the respective Divisions to facilitate any appropriate updates to the plan.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Performance Measure: #4.1.b Institutional Distributed/Indirect Budget and Rate Management

The Controller's Organization institutional distributed/indirect budget and rate management activities will be measured. **(Weight = 9%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

The Financial Services Department (FSD) ensures the institutional indirect budget formulation and execution submissions are timely, accurate, and complete and meet management needs by issuing formulation guidance, determining management requirements and ultimately obtaining approval by the Director's Action Committee (DAC).

During FY 2002, FSD issued the FY 2003 Indirect Budget Call. Laboratory Management changed and expanded tracking requirements for FSD to include beginning budget, increments and a comparison to actual cost. Monthly updates are provided in a new "Red Book," which contains additional management requested data on FTEs, staffing levels and recoveries.

LBNL institutional indirect cost rates for FY 2003 were submitted to OAK for approval on September 3, 2002, in advance of the fiscal year. LBNL did subsequently discover some payroll burden/fringe benefit spread sheet computational errors which required adjustment to bring the rates more in line with recent cost trends and rate variances. In addition, the G&A proposed contained a cost recovery deficit because laboratory management imposed a rate 45 percent rate cap without reducing forecasted costs.

During FY 2002 LBNL Senior Management approved a variance policy for implementation and use in determining when a rate change should be made for compliance with cost accounting standards purposes. OAK's review of the final LBNL policy, believes it is not in compliance with Cost Accounting Standard 418, LBNL's disclosure statement, and we are unsure as presently constructed, how it could be implemented. Overall, the variance policy does not address the indirect cost rates on the same basis as they are calculated and applied in your financial management system. We believe, failure to apply material rate variances back to beneficial projects could result in violation of appropriation mandates and is contrary to actual job order costing principles under a cost reimbursement contract type. In addition, we noted LBNL's policy focused only on the cost pool and changes to it, usually at an aggregated level, which had no discernible relationship to how the actual rates were calculated and applied to final cost objectives.

Generally, LBNL develops its institutional rates based on input gathered from divisions which are collected and summarized in the "Management Report." The Management Report is now done three times a year in January, March and June. An "update" to the Management Report is done in August.

The June Management Report looks at the current year as well as the forecast for the next fiscal year, which is the basis for the provisional/forward pricing rate submission. Recharge rate forecasts by divisions are reviewed by FSD/Cost Accounting staff.

LBNL Management demonstrated satisfaction with the FSD budget formulation and execution process based on positive feedback from senior management to improved communications and enhanced responsiveness to management needs.

Performance Rating (Adjectival)**: Excellent**	80.00%

Performance Objective: # 5.0 Effective Financial Management Systems

The Controller's Organization will provide proactive leadership in improving financial information systems and decision support tools, in support of DOE and Laboratory initiatives. **(Weight = 10%)**

Criterion: #5.1 Effective Internal Systems

The Controller's Organization will provide proactive leadership in improving financial information systems and decision support tools. **(Weight = 5%)**

Performance Measure: # 5.1.a Evolving to Meet Technology Advances

The Controller's Organization will demonstrate the effectiveness of the Laboratory's financial information systems and decision support tools in support of internal customer's needs.
(Weight = 5%)

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

This section consists of seven (7) sub-elements designed to measure how well the Laboratory plans for, maintains current, evaluates and improves financial systems and takes advantage of technology developments:

1. Customer driven priorities
2. Ease of use and accuracy of data.
3. Systems strategic planning
4. Improvements to processes
5. Use of off-the-shelf upgrades and implementations
6. Software security effectiveness
7. Effective use of electronic data interchange

OAK's assessment is based on the Laboratory's annual plan for the year. The Laboratory evaluates its systems and plans changes annually. The plan submitted to OAK early in the calendar year indicates appropriate consideration of customer needs and review of business processes. An integrated procurement/receiving/payables system was developed during the fiscal year and systems requirements for a new Grants system were formulated with appropriate consideration of customer needs, business processes and security. The Laboratory gives adequate consideration to off- the-shelf systems and maintains updated software. There was about a ten (10) percent increase in use of electronic data interchange with vendors which contributes to accuracy and efficiency.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Criterion: #5.2 Support for DOE Initiatives

The Controller's Organization shall provide support to DOE initiatives related to relevant DOE Councils and major financial information systems. **(Weight = 5%)**

Performance Measure: # 5.2.a Effectiveness of Support of DOE Initiatives

The Controller's Organization shall demonstrate the effectiveness of the Laboratory's support to DOE management and information systems initiatives. **(Weight = 5%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

Laboratory CFO Managers have shown support for DOE's Financial Management Systems Improvement Council (FMSIC) and declared their support of DOE initiatives at meetings with OAK management. However, the Laboratory has had difficulty in successfully making various accounting changes in preparation for government Standard General Ledger (SGL) implementation. For example, more than a year after DOE initiated a requirement to have valid other agency codes (OPI) on Accounts Receivable, LBNL still used some substitution codes that originated several years ago and could not readily identify the correct code or explain why a substitution code was still used. We observed problems with BNR recasts and quickly addressing unusual transactions. LBNL did not fully implement a new requirement for recording deposit transactions (Acct. 4211, Unexpended Allotments Account) with the appropriate codes; consequently OAK continued to record the once-a-month transactions. Notwithstanding these technical shortcomings, we credit the Laboratory for its commitment to DOE initiatives.

Performance Rating (Adjectival)**: Outstanding**	100.00%

Performance Objective: #6.0 Organizational Vitality

The Controller's Organization shall manage the organization in a manner that ensures effective results and the work force is qualified and effective. **(Weight = 10%)**

Criterion: #6.1 Organizational Management

The Controller's Organization shall develop and maintain an effective Organization Management structure in support of Laboratory and DOE requirements. **(Weight = 5%)**

Performance Measure #6.1.a Organization Management

The effectiveness of the Controller's Organization and processes shall be evaluated. **(Weight = 5%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

LBNL's Controllers Organization, the Financial Services Department (FSD), cost as a percentage of total Laboratory revenue for FY 2002 was .78 percent. This was computed based on the total FSD costs of $3,722k compared to total LBNL revenue of $477,492k.

FSD's headcount as a percentage of total Laboratory headcount for FY 2002 was 1.04 percent. This was computed based on the average FSD headcount of 35 compared to the average LBNL headcount of 3,355.

FSD's decision support staff as a percentage of total FSD staff for FY 2002 was 71.1 percent. This was computed based on the average Controller's Organization decision support staffing of 24.8 compared to the average LBNL's Controllers Organization staffing of 34.9.

FSD's strategic plan is linked to the Operations Organization Strategic plan. We validated FSD strategic priorities which are summarized as follows:

1. Organizational Structure
   - Cross-functional business process with integration of financial services

2. Infrastructure Enhancement
   - Streamline and improve financial reporting through cross functional Process Improvement Teams
3. Operational Efficiency and Effectiveness
   - Business process re-engineering

The Laboratory Operations Organization strategic objectives are:

1. Increase Operational Efficiency and Effectiveness
2. Enhance Laboratory Infrastructure
3. Improve Employee and Organizational Development
4. Improve External Relations

FSD has an internal communications program. During FY 2002 the program consisted of the Performance Measure Awareness Campaign, Financial Network, Clarity Link, Financial Services Management Website, and publications and newsletters.

FSD doesn't have a sanctioned succession planning program. Currently, HR is studying this area. LBNL FSD is very cautious in this area due to the perception of pre-selection for positions. However, FSD does have a comprehensive cross-training program within each unit of the organization.

LBNL's senior management has demonstrated its satisfaction with FSD. This was demonstrated by positive feedback received for quality reports and services as well as innovative presentations.

FSD meets the Laboratory's Performance Management Program. In addition, FSD is participating in developing performance metrics for Operations units that will be self-assessed using customer and division surveys. The metrics will address customer service, finance, employee development and operational integrity.

Performance Rating (Adjectival)**: Outstanding**	90.00%

Criterion: #6.2 Work Force Development

The Controller's Organization shall develop and maintain an effective work force. **(Weight = 5%)**

Performance Measure: #6.2.a Controller's Organization Work Force Management

The effectiveness of the Controller's Organization work force and the ability to address work force expectations shall be evaluated. **(Weight = 3.6%)**

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

FSD met the established training guideline of an average of twenty (20) hours per employee per year. FSD staff averaged twenty-seven (27) hours during FY 2002.

FSD has an adequate cross-training program in place. Each FSD unit has a detailed listing of the primary and secondary back-up staff by name for specific daily, weekly and monthly activities.

FSD provides adequate continuing education opportunities. The Laboratory offers a Tuition Reimbursement Program for educational opportunities outside of LBNL.

FSD indicated employees are satisfied with the training opportunities based on discussions held during the annual appraisal and development process.

FSD has an active employee recognition program. The program consists of "Outstanding Performance Awards" and "Spot Awards." FSD issued thirty (30) awards during FY 2002. In addition, FSD provided numerous examples of non-monetary employee recognition.

FSD has an adequate method for handling employee concerns. The Laboratory Regulations and Procedures Manual Section 2.05 address Management/Employee Relations.

FSD completed its performance appraisals and development plans according to Laboratory policy. The annual rating period ended June 30, 2002, and LBNL policy required appraisals be completed by August 16, 2002. FSD appraisals and development plans were completed by the due date.

FSD has an adequate Environment, Safety and Health program. LBNL's Chief Financial Officer prepared an "Assurance Letter for FY 2002 DIR/OPS Administrative Units Environment, Health and Safety Self-Assessment" dated July 31,2002. The letter provided assurance that all FSD staff

performs work safely, in a manner that strives for the highest degree of protection for employees, guests, visitors, the public and the environment. FSD employees are responsible for knowing the ES&H requirements that apply to their work.

LBNL Internal Audit Services performed a review in FY 2002 which confirmed low employee morale and turnover in FSD were a consequence of dissatisfaction with the work environment. Laboratory and FSD management are working to improve the work environment. For example, FSD is the only department at LBNL that offers the 9/80 alternative work schedule and it is an extremely successful program.

Performance Rating (Adjectival)**: Excellent**	89.00%

Performance Measure: #6.2.b Laboratory Work Force Management

The effectiveness of the Controller's Organization in educating the Laboratory work force and the ability to address Laboratory work force expectations related to Finance shall be evaluated.

(Weight = 1.4%)

Gradient: Basis for Rating
Exhibit I, LBNL Financial Management, FY 2002 Sub Measures, summarizes the activities to be measured, performance ranges, and point value for each activity.

Performance Narrative:

Overall, FSD provides adequate financial training to the Laboratory. Noteworthy during FY 2002 was the establishment of the Financial Network Group to serve as a regular platform for training and communication to Laboratory personnel on financial matters. In addition, FSD offers numerous training courses through live classes and web-based instruction.

The Laboratory is satisfied with the financial training provided by the FSD. FSD demonstrated this based on notes of appreciation and positive feedback received at training sessions.

FSD has an adequate external communication program. The program consists of the FSD website and active participation in conferences and workshops such as the following:

- FMSIC
- BMIS
- Budget Officers' Workshop
- OAK Budget Conference
- Business Officer Institute

Performance Rating (Adjectival)**: Outstanding** 100.00%

EXHIBIT I
LBNL FINANCIAL MANAGEMENT
FY 2002 SUB-MEASURES

Note: Gauge gradients are scored based on results during the assessment year. A percentage of points, from 100% to 50%, are earned based upon these results. Below a certain performance level, zero points are earned. The summary gauge gradients below show the performance levels to earn 0%, 50%, 60%, 70%, 80%, and 90% of points.

MEASURE	ACTIVITY	GRADIENTS	POINT VALUE
1.1.a	**Effectiveness of Disbursements**		**10**
1.1.a.1	Discounts taken monthly and cumulative. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (%)* ≤54.40/54.41/63.51/72.61/81.71/≥90.81	2
1.1.a.2	Vendor payments made on time. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (%)* ≤59.99/60.00/68.00/76.00/84.00/≥92.00	2
1.1.a.3	% of payments made by Electronic Funds Transfer (EFT). (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (%)* ≤13.49/13.50/16.00/18.50/21.00/≥23.50	2
1.1.a.4	% of employees using electronic payroll deposit. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (%)* ≤66.89/66.90/71.90/76.90/81.90/≥86.90	2
1.1.a.5	Customer satisfaction results.	Meets/Does Not Meet	2
1.1.b	**Effectiveness of Collections**		**10**
1.1.b.1	Effective receivables process. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (Days)* ≥15.01/15.00/12.50/10.00/7.50/≤5.00	2
1.1.b.2	No delinquent non-federal receivables (>160 days).	Meets/Does Not Meet	4
1.1.b.3	No delinquent federal receivables (>160 days).	Meets/Does Not Meet	4
1.2.a	**Work For Others (WFO) Accounts – Use of UC Bridge Funding**		**24**
1.2.a.1	Average duration of projects using UC bridge funding. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (Months)* ≥9.10/9.09/8.09/7.09/6.09/≤5.09	8
MEASURE	**ACTIVITY**	**GRADIENTS**	**POINT VALUE**
1.2.a.2	Average % of UC bridge funding to total WFO invoicing. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (%)* ≥2.26/2.25/2.05/1.85/1.65/≤1.45	8

1.2.a.3	The Laboratory provides UC with timely information on UC bridge funding.	Meets/Does Not Meet	4
1.2.a.4	The Laboratory provides DOE-OAK with timely information on UC bridge funding.	Meets/Does Not Meet	4
1.2.b	**High Risk Account Reconciliations**		**32**
1.2.b.1	Payroll bank account is reconciled within 20 workdays after receipt of the Account Reconcilement Report from the bank.	Meets/Does Not Meet	8
1.2.b.2	Payroll bank account - Controllable reconciling items over 60 days old will not exceed 25% of the total controllable reconciling items. The 60-day time period will begin from the date that the reconciliation is completed.	Meets/Does Not Meet	8
1.2.b.3	Vendor bank account is reconciled within 20 workdays after receipt of the Account Reconcilement Report from the bank.	Meets/Does Not Meet	8
1.2.b.4	Vendor bank account - Controllable reconciling items over 60 days old will not exceed 25% of the total reconciling items. The 60-day time period will begin from the date that the reconciliation is completed.	Meets/Does Not Meet	8
1.2.c	**Asset Management**		**24**
1.2.c.1	Capitalization of all completed capital construction projects no later than the next monthly accounting period after beneficial occupancy.	Meets/Does Not Meet	8
1.2.c.2	Review all funding determination requests (GPE & GPP) within 15 workdays.	Meets/Does Not Meet	8
1.2.c.3	Customer satisfaction results.	Meets/Does Not Meet	8
1.3.a	**Demonstrated Cost Effectiveness of Accounting Processes**		**20**
1.3.a.1	Accounts Payable - Costs as % of total procurement/receiving/payables process. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (%)* ≥20.51//20.50/18.00/15.50/13.00/≤10.50	4
1.3.a.2	Payroll - Cost per employee (W2). (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level ($)* ≥62.56/62.55/57.35/52.15/46.95/≤41.75	3

MEASURE	ACTIVITY	GRADIENTS	POINT VALUE
1.3.a.3	Accounts Receivable - Cost as % of Laboratory WFO revenue. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (%)* ≥0.475/0.474/0.444/0.414/0.384/≤0.354	3
1.3.a.4	Travel - Unit cost per claim processed. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level ($)* ≥33.56/33.55/30.35/27.15/23.95/≤20.75	3
1.3.a.5	Travel – Average number of days to process claims. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (Days)* ≥7.75/7.74/6.24/4.74/3.24/≤1.74	3
1.3.a.6	Controller accounting process costs compared to total Laboratory indirect budget (i.e., general, procurement, and facilities use). (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (%)* ≥3.76/3.75/3.55/3.35/3.15/≤2.95	4
2.1.a	**Audit Results and Resolution**		**18**
2.1.a.1	Appropriate targeting and resolution of findings. (Appropriate target dates were set for all audit findings. Points are assigned based on percentage of target resolution dates that were met.)	*Percentage of Points Earned* 0/50/60/70/80/90/100 *Performance Level (% Target Resolution Dates Met)* <49/50/60/70/80/90/100	18
2.1.b	**Internal Controls and Compliance on Subject Areas**		**36**
2.1.b.1	Self-assessment reports and related documentation, as determined in conjunction with DOE-OAK. (DOE-OAK will determine if self-assessment reports and related documentation were complete.)	*Percentage of Points Earned* 0/50/60/70/80/90/100 *Performance Level (% of Self-Assessment Reports and Related Documentation Requiring Additional Information)* ≥51/50/40/30/20/10/0	18
2.1.b.2	Appropriate targeting and resolution of self-assessment findings. (DOE-OAK will determine if appropriate target dates were set and met for all self-assessment findings.)	*Percentage of Points Earned* 0/50/60/70/80/90/100 *Performance Level (% of Target Resolution Dates Not Met)* ≥51/50/40/30/20/10/0	18

MEASURE	ACTIVITY	GRADIENTS	POINT VALUE
2.1.c	**Cost Accounting Practices**		**48**
2.1.c.1	Indirect rate submissions are timely, accurate, complete, and in conformance with Cost Accounting Standards (CAS), as determined by DOE-OAK.	Meets/Does Not Meet	12
2.1.c.2	CAS change proposal submissions are timely, accurate, complete, and in conformance with the agreed upon requirements as determined by DOE-OAK.	Meets/Does Not Meet	12
2.1.c.3	CAS Disclosure Statement is current, accurate, and complete and in conformance with the agreed upon requirements as determined by DOE-OAK.	Meets/Does Not Meet	12
2.1.c.4	Internal customer information distribution process is in place. Information is distributed to customers on timely basis (i.e., within 10 workdays after notification of DOE approval).	Meets/Does Not Meet	12
2.1.d	**Accuracy of DOE Financial Statements**		**48**
2.1.d.1	DOE balance sheet codes reconciliations.	95% = Meets	16
2.1.d.2	The Laboratory is free of material GMRA audit findings.	Meets/Does Not Meet	16
2.1.d.3	Financial Statement reports address the information requirements specified in the appropriate Federal Accounting Standard and/or DOE guidance.	Meets/Does Not Meet	16
2.2.a	**Internal Financial Management Reporting**		**36**
2.2.a.1	Monthly and periodic financial management reports are accurate, complete and meet user needs	Meets/Does Not Meet	18
2.2.a.2	Monthly and periodic financial management reports are timely.	95% = Meets	18
2.2.b	**DOE and Other External Laboratory Reporting**		**64**
2.2.b.1	Timeliness of MARS transmission.	Meets/Does Not Meet	16
2.2.b.2	Monthly MARS transmissions pass DOE-OAK's local balancing and validation edits.	95% = Meets	16
2.2.b.3	MARS reporting requirement changes implemented as required by the DOE schedule (B&R recasts, OPI codes, etc.).	95% = Meets	16
2.2.b.4	Timeliness, accuracy and completeness of periodic and ad hoc DOE financial reports.	95% = Meets	16
2.3.a	**Financial Controls**		**30**
2.3.a.1	Licensing/Royalty collection and distribution.	Meets/Does Not Meet	10
2.3.a.2	WFO account management.	Meets/Does Not Meet	10
2.3.a.3	UCDRD account management.	Meets/Does Not Meet	10

MEASURE	ACTIVITY	GRADIENTS	POINT VALUE
2.3.b	**Financial Policies and Procedures**		**20**
2.3.b.1	Financial policies and procedures are accurate, consistent, complete, and current in areas assessed.	*Percentage of Points Earned* 0/50/60/70/80/90/100 *Performance Level* *(% of Financial Policies and Procedures Accurate, Consistent, Complete and Current)* ≤49/50/60/70/80/90/100	10
2.3.b.2	Financial policies and procedures are available to Laboratory organizations. Changes and/or updates are communicated in a timely manner (i.e., within 10 workdays of final publication).	Meets/Does Not Meet	10
3.1.a	**DOE Budget Submission and Validation**		**50**
3.1.a.1	Proactivity and customer satisfaction.	Meets/Does Not Meet	10
3.1.a.2	DOE field budget submission; timeliness, accuracy, and completeness.	Meets/Does Not Meet	20
3.1.a.3	DOE field budget estimates; timeliness, accuracy, and completeness.	Meets/Does Not Meet	20
3.2.a	**Control of Funds**		**90**
3.2.a.1	Laboratory costs are within cost control levels at the end of each monthly accounting period for DOE direct funding.	Three and one half points will be awarded for each month where there are no instances of costs exceeding available funds at the cost control level.	42
3.2.a.2	The sum of the Laboratory's DOE funded costs and commitments do not exceed available funds at the B&R Obligational Control Level (OCL) at year-end.	Meets/Does Not Meet	15
3.2.a.3	The Laboratory's Reimbursable WFO costs do not exceed available funds at the Reimbursable Work Order (RWO) Obligational Control Level (OCL) at year-end.	Meets/Does Not Meet	15
3.2.a.4	Laboratory Costs are within cost control levels for all DOE funding -throughout the year.	Nine additional points will be awarded at year-end if no instances of costs exceeding available funds at the cost control level occurred during the entire fiscal year.	9
3.2.a.5	Laboratory costs are within cost control levels for Reimbursable WFO funding throughout the year.	Nine additional points will be awarded at year-end if no instances of costs exceeding available funds at the cost control level occurred during the entire fiscal year.	9

MEASURE	ACTIVITY	GRADIENTS	POINT VALUE
3.2.b	**Reports, Submissions, and Requests**		**60**
3.2.b.1	Functional Cost Report is timely, accurate, and complete as determined by DOE.	Meets/Does Not Meet	20
3.2.b.2	Uncosted Balance Reports are timely, accurate, and complete as determined by DOE.	Meets/Does Not Meet	20
3.2.b.3	Ad hoc and miscellaneous budget execution and cost management reports are timely, accurate, and complete as determined by DOE.	Meets/Does Not Meet	20
4.1.a	**Cost Plan Development**		**90**
4.1.a.1	Proactiveness.	Meets/Does Not Meet	15
4.1.a.2	Timeliness/frequency of updates.	Meets/Does Not Meet	25
4.1.a.3	Accuracy/completeness.	Meets/Does Not Meet	25
4.1.a.4	Monitoring systems in place.	Meets/Does Not Meet	25
4.1.b	**Institutional Distributed/Indirect Budget and Rate Management**		**90**
4.1.b.1	Proactiveness.	Meets/Does Not Meet	20
4.1.b.2	Timeliness.	Meets/Does Not Meet	25
4.1.b.3	Accuracy and completeness.	Meets/Does Not Meet	25
4.1.b.4	Customer satisfaction.	Meets/Does Not Meet	20
5.1.a	**Evolving to Meet Technology Advances**		**50**
5.1.a.1	Customer driven priorities.	Meets/Does Not Meet	8
5.1.a.2	Ease of use and accuracy of data.	Meets/Does Not Meet	6
5.1.a.3	Internal systems strategic planning.	Meets/Does Not Meet	6
5.1.a.4	Improvement of financial processes.	Meets/Does Not Meet	6
5.1.a.5	Commercial Off The Shelf (COTS) upgrades and implementations.	Meets/Does Not Meet	6
5.1.a.6	Software security effectiveness.	Meets/Does Not Meet	6
5.1.a.7	Effective use of Electronic Data Interchange (EDI) technology.	Meets/Does Not Meet	6
5.1.a.8	Timely use of current generation of technology.	Meets/Does Not Meet	6
5.2.a	**Effectiveness of Support of DOE Initiatives**		**50**
5.2.a.1	Support of Financial Management Systems Improvement Council (FMSIC).	Meets/Does Not Meet	6
5.2.a.2	Timeliness of Financial Management Systems (FMS) Plan submission.	Meets/Does Not Meet	8
5.2.a.3	DOE satisfaction with FMS Plan submission.	Meets/Does Not Meet	8
5.2.a.4	Support of Business Management Information System (BMIS).	Meets/Does Not Meet	8
5.2.a.5	Progress on long-term DOE systems initiatives.	Meets/Does Not Meet	8
5.2.a.6	Coordination of priorities with DOE.	Meets/Does Not Meet	6
5.2.a.7	DOE satisfaction with the Laboratory's support of DOE initiatives.	Meets/Does Not Meet	6

MEASURE	ACTIVITY	GRADIENTS	POINT VALUE
6.1.a	**Organization Management**		**50**
6.1.a.1	Controller's Organization cost trends. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (%)* ≥1.59/1.58/1.38/1.20/1.00/≤0.80	8
6.1.a.2	Organization staffing trends. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (%)* ≥1.98/1.97/1.77/1.57/1.37/≤1.17	8
6.1.a.3	Organization staffing mix. (Gauged Gradient)	*Percentage of Points Earned* 0/50/60/70/80/90 *Performance Level (%)* ≤23.99/24.00/34.00/44.00/54.00/≥64.00	8
6.1.a.4	Organization strategic plan is current and linked with Laboratory's.	Meets/Does Not Meet	6
6.1.a.5	Internal communication program.	Meets/Does Not Meet	6
6.1.a.6	Succession planning program.	Meets/Does Not Meet	4
6.1.a.7	Laboratory Management's satisfaction with Controller's Organization.	Meets/Does Not Meet	6
6.1.a.8	Performance management program.	Meets/Does Not Meet	4
6.2.a	**Controller's Organization Work Force Management**		**36**
6.2.a.1	Effective internal training provided. Organization meets established guidelines of an average of 20 hours per employee per year.	Meets/Does Not Meet	4
6.2.a.2	Cross-training systems exist.	Meets/Does Not Meet	4
6.2.a.3	Continuing education.	Meets/Does Not Meet	4
6.2.a.4	Employee satisfaction with training opportunities.	Meets/Does Not Meet	4
6.2.a.5	Employee recognition program.	Meets/Does Not Meet	4
6.2.a.6	Method for handling employee concerns.	Meets/Does Not Meet	4
6.2.a.7	Completion of performance appraisals and development plans.	Meets/Does Not Meet	4
6.2.a.8	ES&H program.	Meets/Does Not Meet	4
6.2.a.9	Effective work environment.	Meets/Does Not Meet	4
6.2.b	**Laboratory Work Force Management**		**14**
6.2.b.1	Financial training provided to the Laboratory.	Meets/Does Not Meet	6
6.2.b.2	Laboratory satisfaction with financial training.	Meets/Does Not Meet	4
6.2.b.3	External communications program.	Meets/Does Not Meet	4

Performance Area: HUMAN RESOURCES

Performance Objective: #1.0 Effectiveness of HR Operations

Human resources programs, systems and processes support the Laboratory's programmatic and business needs. **(Weight = 100%)**

Criterion: #1.1 Compensation Programs

Compensation programs support the objectives of the institution and are administered in a manner that takes into account market considerations and internal equity. **(Weight = 15%)**

Performance Measure: #1.1.a Cost Competitive Compensation

The Laboratory has a cost competitive compensation system which contributes to attracting and retaining a quality workforce. **(Weight = 15%)**

Assumptions:

Human Resources (HR) will continue the validation process begun in FY 2000. The process will continue by completing the map over of targeted job families. (Note: Map over is defined as the implementation of competitively priced, function specific salary structures, with all affected employees mapped from the current to the new pay structure. Components of function specific structures may include new or revised job titling and coding schemes, new or revised functional definitions and job leveling criteria, etc). If agreed to by senior management, HR will develop and execute a communications plan to educate affected workforces on these changes. Additionally, HR will initiate a process to identify and validate the competitiveness of remaining jobs or job families not already addressed as part of the initial validation process. (Note: This may include migration of certain S&E functional areas off the Davis curve.)

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards the achievement of the performance measure.
Marginal	Some effort is demonstrated however results fall short of the expectations for the good gradient.
Good	All map over for targeted job families validated in FY 2000 and FY 2001 are completed.

Excellent In addition to the good gradient, HR identifies and begins the process to validate the competitiveness of any remaining jobs or job families not already addressed as part of the initial validation process. HR, in collaboration with Division Management, executes a communication program in at least two functional areas.

Outstanding In addition to the excellent gradient, project plans or strategies are identified for new or improved programs, processes, or validation measures based on Laboratory needs. This may include, but not be limited to, validation of executive pay, developing a proposal for variable pay, migration of certain S&E disciplines off the Davis Curve, obtaining and incorporating additional survey references, market tracking analyses, implementation of compensation software, etc.

Performance Narrative:

LBNL has sustained its **outstanding** level of performance under this measure in the third year of validating the accuracy of its market pricing. During this appraisal period, LBNL has established functional salary structures, and thereby completed the validation process for Administrative Services, Environmental Health and Safety, Human Resources, Financial Services, Engineering and Internal Audit. The installation of REWARD has enabled LBNL to access online survey data and calculate Estimated Market Values (EMVs) for each individual in these functional structures, as well as calculate the data required for the annual Compensation Increase Plan. To ensure impacted employees were fully informed of the new functional structure, all-hands meetings were held for the affected divisions and each employee was individually provided with a notice containing their new job code and classification title. LBNL has also initiated the validation process for some of those smaller job groups not previously reviewed. Through completion of these early in FY 2003 LBNL will have achieved validation of all job groups.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Criterion: #1.2 Employment of Minorities and Women

Undertake good-faith recruitment efforts to improve the representation of minorities and/or women in the workforce. **(Weight = 10%)**

Performance Measure: #1.2.a Employment of Minorities and Women

An assessment of planning and implementation of good faith efforts designed to improve recruitment and selection of minorities and/or women in high priority underutilized job groups. **(Weight = 10%)**

Assumptions:

"High priority" underutilized groups will be selected at the beginning of the assessment period by each laboratory. The following factors may be utilized for the designation of "high priority" areas: underutilization levels, availability levels, projected placement opportunities and typical size and diversity of applicant pools.

The Laboratory will continue to implement the principles set forth in its General Plan for Targeted Recruitment. Also, the Laboratory will develop targeted recruitment plans for each high priority, underutilized group that are designed to enhance the Laboratory's ability to recruit and select minorities and/or women in high priority, underutilized job groups.

Assessment Period: The assessment period for LBNL: for this Performance Measure will be July 1, 2001 through June 30, 2002. FY 2002 marks the transition of the assessment period from a fiscal year to a July to June timeframe. The quarterly analyses discussed in the outstanding gradient will be conducted for Quarter 3 and Quarter 4 during this transition year.

Targeting of High Priority Underutilized Groups: High priority underutilized groups for the Laboratory will be selected by the Laboratory no later than one month after availability data is available.

"Applicant" is defined as anyone who submits a resume and/or application that meets the minimum qualifications for any open high priority, underutilized position.

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is demonstrated however results fall short of the expectations for the Good gradient.

Good Targeted recruitment plans for each high priority, underutilized group(s) are developed.

Excellent Targeted recruitment plans were carried out substantially in the manner identified.

Outstanding In addition to Excellent gradient, the Laboratory will conduct quarterly analyses of applicant, offer, hire, and source data for the high priority underutilized job groups. The Laboratory will also conduct quarterly analyses of current representation vs. availability in conjunction with job openings. If applicable, the Laboratory will refine its targeted recruitment plans and/or high priority underutilized job groups.

Performance Narrative:

The Laboratory has achieved an **outstanding** under this performance measure. Office Services – Asians – and Computer Scientists – Women – were identified as the High Priority Job Groups (HPJGs) for this appraisal period, and targeted recruitment plans were developed and implemented. Progress was made toward full utilization in the hiring of three Asians in Office Services and four women Computer Scientists. With the establishment of new job groups resulting from the validation described under performance measure 1.1.a, reanalysis was conducted of representation within those job groups against new availability data. This resulted in the elimination of the FY 2002 HPJGs on the basis that they no longer met the criteria for HPJGs, nor did reanalysis result in the identification of new HPJGs.

LBNL's effort to integrate its recruitment program among Human Resources, the Work Force Diversity Office (WFDO), and the hiring departments, the "Recruitment Best Practices Model", constitutes its greatest accomplishment relative to Department of Energy's expectations under this measure. It is through this approach that hiring organizations will develop recruitment strategies targeted to be responsive to its diversity needs as well as its immediate hiring needs. This will eliminate the necessity for LBNL to identify HPJGs and develop and implement targeted recruitment plans for hiring that is simply projected and often does not materialize. Another initiative with high level of potential for success includes implementing an applicant tracking system that will provide more reliable data on the effectiveness of recruitment strategies, as well as provide a more user-friendly process that will improve the willingness of applicants to submit gender and ethnicity information.

Performance Rating (Adjectival)**: Outstanding**	92.00%

Criterion: #1.3 HR Systems and Processes

Human resources systems and processes optimize the delivery of services with respect to quality and life-cycle costs. **(Weight = 15%)**

Performance Measure: # 1.3.a

Identify HR systems and/or processes for improvement and describe implementation results. **(Weight = 15%)**

Assumptions:

The Laboratory will use a variety of approaches for identifying HR systems and processes for improvement. These approaches may include customer feedback, employee surveys, cost-benefit analysis, work flow analysis, process mapping and/or benchmarking, etc. The purpose of the measure is to improve existing systems and processes, or implement new initiatives. Results may include accomplishments made in multi-year projects.

A HR System is defined as being a program within a major HR functional area, e.g., within the functional area of Employee Relations there is a number of systems performance management, grievance resolution, etc. A HR Process is defined as being a series of specific steps and decision points which carry out the activities associated with a HR system. A HR System can also include automated approaches which support a major HR functional area and assist in the automation, either entirely or partially, of a HR Process, e. g., implementation of new systems.

The Laboratory will discuss with DOE/OAK the systems/processes identified for review.

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is demonstrated however results fall short of the expectations for the Good gradient.

Good Identify one or two major systems and/or processes for review; action is initiated; and there is measurable progress or action taken.

Excellent As a result of the above, efforts are undertaken to streamline, outsource, enhance, or eliminate systems and/or processes identified for review.

Outstanding In addition to the excellent gradient, significant improvements are achieved, such as completion ahead of schedule, or conclusion of unusually complex projects.

Performance Narrative:

LBNL's performance under this measure supports an **outstanding** for the appraisal period given the significant improvements realized through its efforts in FY 2002. The Laboratory identified the recruitment program for review for FY 2002, as well as the upgrade of the PeopleSoft information system. As a result of its analysis on the effectiveness of its recruitment program, LBNL has implemented its "Recruitment Best Practices Model". In addition to the integrated recruitment plans and initiative for an applicant tracking system, as discussed under performance measure 1.2.a., the model provides for enhanced communication with job applicants to provide them with the status of the hiring process and significant improvement to the new employee orientation program. Implementation of this Model was identified as a priority for the Human Resources Department, requiring a significant amount of man-hours to formulate the concepts and begin the implementation. The PeopleSoft upgrade was also a highly complex, technically challenging initiative requiring extensive coordination with the Information Systems and Services Department. Through conversion to PeopleSoft 8.3, LBNL will have achieved an entirely Web-based system.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Criterion: #1.4 Labor Relations

The Laboratory has effective labor relations programs. **(Weight = 15%)**

Performance Measure: #1.4.a

The Laboratory will timely process labor grievances and Public Employees Relations Board (PERB) complaints. **(Weight = 15%)**

Assumptions:

The following will be addressed in LBNL's self-assessment for this measure:

- Analysis of the timeliness of labor grievance and PERB complaint processing.

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is demonstrated however results fall short of the expectations for the Good gradient.

Good Timeframes for processing of grievances and PERB complaints are met at least 85 percent of the time.

Excellent In addition to the good gradient, there is an analysis of the processing and quality of these activities to determine the need, if any, for corrective action. If corrective action is necessary, it is effectively advocated.

Outstanding In addition to the excellent gradient, the Laboratory effectively concludes PERB cases and union grievances.

Performance Narrative:

The Laboratory has continued to sustain **outstanding** performance in the Labor Relations function. LBNL has continued to demonstrate timeliness in its grievance handling, as well as to responses to the information requests received in FY 2002, despite the steady increase over the past few years. No adverse arbitration awards were received, reflecting well on LBNL's effectiveness in handling issues, and the one PERB complaint received was successfully settled at the informal stage. The various means by which LBNL analyzes the processing and quality of it Labor Relations activities has not disclosed the necessity of any corrective action. In addition, LBNL has successfully completed negotiation of four bargaining agreements, one of which preserved the merit-pay system despite intense pressure to move to a step structure.

Performance Rating (Adjectival)**: Outstanding** 95.00%

Criterion: #1.6 Workforce Excellence

Human resources contributes to the Laboratory's workforce excellence. **(Weight = 35%)**

Performance Measure: 1.6.a Workforce Planning/Staffing

HR provides the Laboratory with data about workforce demographics. **(Weight = 10%)**

Assumptions:

HR will collect data about workforce demographics (job classification, appointment status, gender, age, reported reasons for termination, and tenure by division/department) and analyze this data for current and potential turnover. This information will be given to Laboratory Management and the major programmatic divisions.

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is demonstrated however results fall short of the expectations for the Good gradient.

Good Workforce analyses are conducted on a semiannual basis for Scientific Divisions and Operations Divisions.

Excellent In addition to the good gradient, HR will partner with at least two Divisions to address issues identified as a result of the workforce analyses.

Outstanding In addition to the excellent gradient, the issues identified will be reflected in the Divisions' recruiting objectives.

Performance Narrative:

Lawrence Berkeley National Laboratory achieved an **outstanding** for its FY 2002 performance under this measure. The Human Resources Department (HR) has further developed itself as a workforce planning resource for the Laboratory through continuing to provide semi-annual workforce analyses to division directors, HR Center managers and the Recruitment Manager, and through its partnering with divisions to address their specific workforce needs. In FY 2002, Human Resources continued the partnering efforts begun in FY 2001 with the Engineering Division, and resulted in initiatives to

counter the aging population and outdated skills by identifying students and recent graduates as potential entry-level candidates. To address obstacles the division had previously experienced in maximizing the consideration of students, HR and Engineering revised the process for routing resumes/applications, acknowledging receipt of resumes, and providing a forum for forwarding materials required in the application process. In addition, the partnering resulted in the identification of and participation in recruitment sources for students/interns. With Earth Sciences, partnering continued relative to promoting the Post-Baccalaureate Fellowship Program, in conducting a gender analysis that led to the formulation of a division diversity committee with a charter to address recruitment of women scientists, and plans to broaden the age span and diversity of the division, as well as to develop a rotational assignment program for managerial experience.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Measure: #1.6.b. Performance Management

The Laboratory will have a performance management program that aligns with the culture and values of the organization. In addition, the program allows for employee feedback, counseling and development opportunities, and links employee contribution to pay. **(Weight = 15%)**

Assumptions:

HR will organize and facilitate a committee(s) of senior Division/Department management with the purpose of developing a new or revised performance management process.

Gradients:

Unsatisfactory	Little or no effort has been demonstrated towards the achievement of the performance measure.
Marginal	Some effort is demonstrated however results fall short of the expectations for the good gradient.
Good	An analysis of the current performance management process is developed and presented to management for review and consideration. A project plan is developed to begin the design of new or revised performance management program.
Excellent	A model or variety of models for a new or revised performance program is developed and presented to management for review and approval. Action may or may not be taken based on the results of this process.
Outstanding	A new or revised performance management program is implemented in time for the FY 2003 review cycle.

Performance Narrative:

LBNL has demonstrated **outstanding** performance in its implementation of a new performance management process, the Performance Review and Development process (PRD). The Laboratory began reviewing the existing performance management system in FY 2001, formulating teams to develop prototype models and provide critical feedback. At the end of the FY 2001 appraisal period, a straw man had been approved by Laboratory management, with implementation slated for FY 2002. The Laboratory achieved full implementation, as required for the outstanding rating, through extensive supervisory training and the initial establishment of goals in the spring of 2002, supervisory assessments of employee performance in the summer, and establishment of individual goals and a development plan for the following performance period.

Performance Rating (Adjectival)**: Outstanding** 92.00%

Performance Measure: #1.6.c Training

The Laboratory has an effective system of tracking training costs. **(Weight = 5%)**

Assumptions:

The tracking system is intended to allow the Laboratory to enroll, track, analyze and report training costs of employees.

Definition of training: it does not include on-the-job, tuition reimbursement, or conference fees except in circumstances when attending the conference is part of maintaining professional certificates or licenses, e.g., medical doctor.

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is demonstrated however results fall short of the expectations for the Good gradient.

Good A plan is developed to implement a tracking system.

Excellent A framework is established for a tracking system that enables the Laboratory to culminate training costs paid through a variety of methods.

Outstanding In addition to the excellent gradient, the tracking system is fully implemented and capable of sorting costs and instances of training.

Performance Narrative:

The Laboratory achieved the requirements for an **excellent** rating under this measure. The Human Resources Department (HR) has made a commitment to the establishment of an employee development program through its inclusion as one of the four strategic objectives under its 5-year HR Strategic Plan. LBNL's efforts under this measure are one of the first steps toward achieving HR's strategic goals. During the appraisal period, HR established a manual tracking system for offsite training costs, which provides them with the ability to validate a significant portion of the total training costs. In addition, they now have the capability to track the training costs of software training classes through the upgraded PeopleSoft system, and have implemented a mechanism for tracking the training costs in several divisions for classes provided by outside consultants.

Performance Rating (Adjectival)**: Excellent** 82.00%

Performance Measure: 1.6.d Recruitment

HR contributes to the development and implementation of an effective recruitment program.

(Weight = 5%)

Assumptions:

HR will develop a Communication and Training Plan in conjunction with the design and implementation of a new Recruitment system (as defined in 1.3.a). The Plan will define the roles and responsibilities of hiring managers, HR Field staff, HR Recruitment staff, and the Work Force Diversity Office as they pertain to the new Recruitment system's five major process steps: Open Position, Sourcing, Screening, Selection, and Placement.

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is demonstrated however results fall short of the expectations for the Good gradient.

Good A Communication and Training Plan is developed which adequately describes the roles and responsibilities of all participants in the recruitment process.

Excellent In addition to the good gradient, the plan is implemented as described and the training is initiated.

Outstanding In addition to the excellent gradient, the effectiveness of the plan implementation and the training conducted is determined by having recruitment plans for no less than half of new openings that occur during the final quarter of FY 2002.

Performance Narrative:

LBNL performed at the **excellent** level during the FY 2002 appraisal period. The measure required a Communication and Training Plan associated with the Recruitment Best Practices Model described in measures 1.2.a and 1.3.a that would clarify the roles/responsibilities under the Model. LBNL achieved this through the development of a series of eleven training courses, two of which specifically address the roles in recruiting. The Human Resources Manager also distributed a general announcement of the Model to managers and supervisors and announced the initiation of the training available. Training courses were initiated in September, 2002, with anticipated completion by the end of March 2003.

Performance Rating (Adjectival)**: Excellent** 82.00%

Criterion: #1.7 Employee Relations

The Laboratory has an effective employee relations program. **(Weight = 10%)**

Performance Measure: #1.7.a Employee Relations

The Laboratory has an effective approach to address employee relations cases. **(Weight = 10%)**

Assumptions:

Data on employee relations cases will be summarized and reported to management on a regular basis. HR staff will review and evaluate the information collected to determine whether problem areas exist and whether proactive interventions are required. Interventions including supervisory and management training and/or corrective action will be developed and implemented as appropriate.

The Laboratory will trend cases from employees by type of complaint and division/department, in order to identify the possibility of problem areas in need of corrective action. If statistically significant, the Lab will identify other demographic factors. Trending may include data from previous fiscal years for which data is available. Formal complaints include administrative reviews, grievances, formal mediation, litigation and external agency charges. It is acknowledged that formal complaints may result from multiple causes.

Gradients:

Unsatisfactory Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal Some effort is demonstrated however results fall short of the expectations for the Good gradient.

Good Summary and Trend Data is collected in a formal manner and presented to management.

Excellent The data will be analyzed for trends that may reflect problems, e.g., poor business practice, or liability exposure.

Outstanding Based on the trend analysis, feedback is provided to Laboratory Management, and if applicable, Division/Department Management. Also, if applicable, HR will develop a recommendation for corrective action.

Performance Narrative:

Lawrence Berkeley National Laboratory continues in FY 2002 to demonstrate **outstanding** performance under this measure. Cases are tracked by issue and division, and reviewed on a quarterly basis by the Human Resources Department Manager. The most frequent issues raised in FY 2002 were performance and lay-off, attributable to twenty-two (22) percent and nineteen (19) percent of the total cases filed, respectively. The increase in lay-off cases is attributed to flat budgets necessitating lay-offs in some divisions, and the completion or discontinuance of programs at the Laboratory. Corrective action was not considered necessary to address the increase in lay-off cases. The Laboratory has continued to offer an extensive cadre of supervisory training as a preventative action for future trends and intends to provide additional training to supervisors to assist them in accomplishing goals within an organizing environment.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Area: INFORMATION MANAGEMENT

Performance Objective: #1.0 Information Management Program

The Laboratory manages information resources on a corporate basis to improve the quality of its products, to add value to scientific programs and customer services, and to improve the Laboratory's work processes. **(Weight = 100%)**

Criterion: #1.1 Operational Effectiveness

The Information Management (IM) program provides cost-effective products and improved services. **(Weight = 30%)**

Performance Measure: #1.1.a Operational Effectiveness

Evaluation of measurable improvements and cost-effective delivery of products and services. **(Weight = 30%)**

Assumptions:

Measurement deliverable - metrics indicating the information management program's accomplishments which have resulted in measurable improvements in the provision of cost-effective products and services. Additional description may be accomplished through reference to accessible work products or other existing Laboratory documentation.

The agreed to Information Management (IM) areas to be addressed by this Performance Measure:

- CIS-Desktop Support (Weight =15%)
- Average time to resolve/complete help requests (non-project calls) - Decreasing
- Percentage of MPSG help requests resolved/completed in 3 days. - Increasing

- Telephone Services (Weight =15%)
- The telephone system will be maintained at an operational level 99%
- TSC will resolve 98% all repair calls on the first attempt
- TSC will maintain 98% customer satisfaction
- TSC will realize a cost savings/avoidance of $400k
- TSC will maintain a service order proficiency average of 1.5 hours per order and an average cost of $75.00 per order

Gradients:

Unsatisfactory	No results are demonstrated and little or no effort has been expended in establishing effective processes towards achievement of the performance measure.
Marginal	Results fall short of the expectations for the "good" gradient however some effort has been made to establish effective processes
Good	Examples that demonstrate measurable improvement and cost-effective, IM services and products.
Excellent	Demonstrated results that contribute to institutional cost-efficiencies, savings, and improved operations.
Outstanding	External recognition of operational effectiveness or benchmarking that indicates best-in-class performance.

Performance Narrative:

LBNL Information Management consistently does an **outstanding** job reducing cost, while enhancing Information Technology Capital investment opportunities. In the two focus areas for this performance measure: Computing Infrastructure Support Department (CIS) Desktop Support, and Telephone Services, the Laboratory has demonstrated outstanding improvements in services and provision of cost-effective services and products. Telecommunications reports $530K in cost savings/avoidance for this rating period.

During the FY 2002 rating period, the Laboratory's Telecommunications Services Center surpassed all prescribed required objectives, which included the support of LBNL's institutional mission of providing efficient, reliable, cost effective, and quality telecommunications services. Primary focus points of this rating period were four Telecommunications Service areas that resulted in the following outstanding achievements provided below:

- LBNL's Telecommunications System exceeded performance requirements and maintained a constant reliability and operational factor of 100 percent throughout the entire rating period.
- LBNL's Telecommunications service repairs sustained a high customer satisfaction rate by completing repairs on the first attempt 99.47 percent of the time.
- LBNL's Telecommunications cost-per-service call diminished from $99.96 in the first quarter of FY 1997 to $57.17 in FY 2002, resulting in a 43 percent cost avoidance performing moves, adds, and changes.
- LBNL's FY 2002 Telecommunications costs savings of $530K is a direct result of renegotiating contracts with local/long distance carriers, establishing standards for contractor installation, establishing internal repair of telephone sets, reducing the number of paper

telephone directories, the implementation of an internal telephone conferencing bridge, continued re-engineering of the Laboratory's call distribution. In addition, Telephone Services negotiated the inclusion of EPABX maintenance during the upgrade process at no additional cost.

In addition, the CIS Desktop Support continued to make significant strides in providing products and services effectively. The CIS Department increased their use of remote monitoring software enhancing customer satisfaction by reducing travel time for desktop support. The software allowed support staff the opportunity to resolve desktop problems without having to travel to the user's location. Support calls have averaged an approximate improvement of 65 percent over last year's 10 percent due largely to a lack of turnover of the support staff, continued emphasis on internal training and a better electronic knowledge base.

As a result, LBNL was able to provide outstanding contributions to institutional efficiency, improved operations, and cost savings in the Telecommunications Services Center and Desktop Support.

LBNL's Telecommunications Services, Systems and Network Department's operational effectiveness was outstanding, and exceeded the required performance objectives established between OAK, UC and LBNL during this rating period. As a result of their institutional efficiency, LBNL realized a $530K cost avoidance and savings.

Performance Rating (Adjectival)**: Outstanding**	96.00%

Criterion: #1.2 Customer Focus

IM products and services meet customer requirements. **(Weight = 30%)**

Performance Measure: # 1.2.a Level of Customer Service

Evaluation of customer service reviews and implementation of activities toward improvement. **(Weight = 30%)**

Assumptions:

Measurement deliverable: results of the customer service metrics.

The agreed to Information Management areas to be addressed by this Performance Measure:

- CIS-Desktop Support
- Average satisfaction overall from Help Desk ticket survey – Stable above 9.0 out of 10 or increasing
- % of tickets with response to any survey question of 5 or lower out of 10. - Decreasing
- % of help tickets resolved by Help desk at "first touch" - Increasing

Gradients:

Unsatisfactory No results are demonstrated and little or no effort has been expended in establishing effective processes towards achievement of the performance measure.

Marginal Results fall short of the expectations for the "good" gradient however some effort has been made to establish effective processes.

Good A systematic approach to the measurement of customer service. Evidence of meeting commitments to customer's requirements.

Excellent Cost effective and/or innovative approaches to measuring customer satisfaction, customer involvement throughout life cycle of information management activities, and evidence of improvement in customer service.

Outstanding Sustained high level of customer service.

Performance Narrative:

The IM Organization met the objectives for customer service by following cost effective and innovative approaches to measure customer satisfaction, and demonstrate evidence of improvement in customer service. This resulted in a sustained high level of customer service.

CIS effort to improve their level of service has progressed significantly. There has continued to be a steady improvement throughout FY 2002 to the average customer satisfaction statistics in all measured areas of desktop support. This year, CIS was able to implement all four measures. The average satisfaction overall increased, while the percentage of survey responses with a rating lower than five decreased.

The "Trouble Busters" approach to ticket follow-up has decreased the number of marginal customer responses. This approach declares a ticket bad if any one category receives a rating of five (5) or less. A total of 3,632 surveys were submitted in response to 21,719 helpdesk tickets or 16.7 percent. Of the tickets for which a survey was submitted, 5.3 percent were classified as bad, a decrease to 0.83 percent overall. CIS continues to make progress in improving customer satisfaction in all areas.

The customer response mechanisms used in the IM Departments resulted in feedback that was subsequently used to adjust activities and create better plans. Several improvements in the customer satisfaction area were realized including more cost effective products and services.

Performance Rating (Adjectival)**: Outstanding**	93.00%

Criterion: # 1.3 IM Stewardship

The IM program manages compliance to requirements and negotiated commitments. **(Weight 20%)**

Performance Measure: # 1.3.a Effective Management of Compliance and Commitments.

Evaluation of effectiveness of compliance management for contractual, legal and regulatory requirements, operational practices and internal controls. **(Weight 20%)**

Assumptions:

Measurement Deliverable
Metrics demonstrating compliance with requirements of law, regulations, and applicable DOE directives.

The agreed-to Information Management areas to be addressed by this Performance Measure:

- Unclassified Computer Security (Weight=15%)
  Achieving expectations in completing all aspects of DOE required format for CSPPs.
- Completing scans identified in the LBNL CSPP.
- Completing corrective actions identified after conducting scans.

- Printing/Reproduction (Weight=3%)
- % of total TEID jobs vended to GPO
- % of total in-house duplicating on recycled paper
- % of total in-house duplicating two-sided

- Records Management (Weight=2%)
- % of total inactive R&D records stored at the Federal Records Center that have been reprocessed and rescheduled.
- % of increase in total number of containers permanently removed from the Federal Records Center under authorized retention schedules.

Gradients:

Unsatisfactory No results are demonstrated and little or no effort has been expended in establishing effective processes towards achievement of the performance measure.

Marginal Results fall short of the expectations for the "good" gradient however some effort has been made to establish effective processes.

Good	Management techniques are employed to assess the effectiveness of IM Focus Areas performance in support of programmatic and institutional information management needs including internal process controls. Objective evidence demonstrates progress in identifying and correcting performance and compliance issues. Previous deficiencies have been corrected or have corrective action plans in place.
Excellent	There is a sound, systematic approach responsive to the overall purpose of managing assessment processes and implementing corrective actions. Deficiencies in compliance and performance are self-identified and all corrective actions are completed or planned.
Outstanding	The Laboratory has institutionalized an evaluation process that effectively identifies performance and compliance issues and corrects weaknesses. Compliance and performance deficiencies are identified and corrected on schedule.

Performance Narrative:

The Unclassified Computer Security Department, and the Technical and Electronic Information Department's (TEID) Archives and Records Office (ARO) have done an **outstanding** job in institutionalizing an evaluation process to identify performance and compliance issues and correct weaknesses. In FY 2002, a new staff member was hired to work in conjunction with the Site Security Manager to develop an Integrated Safeguards and Security Management (ISSM) Self-Assessment. The assessment is a Web-based process for collecting security-related data throughout the Berkeley Laboratory, and the information gathered will be summarized into a Laboratory security status report. Steps will be taken to protect specific pockets of information that require additional protection.

LBNL has made excellent progress in the evaluation of compliance management for Unclassified Computer Security (UCS) in the following areas:

- CIS has created an in-house backup capability and encourages users to sign up for the service.
- LBNL has started an extensive computer protection training program, with lunchtime seminars and a monthly "Virus Update" section in the Computer News newsletter, and additional computer protection articles.
- LBNL has targeted two specific types of misuse of the computer; downloading copyrighted material, and sexually explicate material, to discourage unacceptable use.
- The CIS Department has created new in-house backup capability and currently the service is operating in full production mode for UNIX and MAC users, and beta test mode for PCs.

In addition, the ARO has processes in place to maintain intellectual control of documents under its purview. The agreed to areas for ARO resulted in:

- ARO reduced the number of Research and Development (R&D) records stored at the Federal Records Center by almost one-third.
- ARO has made significant process in reprocessing and rescheduling 93 percent of the 9,111 containers of R&D records stored at the Federal Records Center.
- ARO ensures legal retention and timely destruction of Laboratory records by assigning officially approved Department of Energy and National Archive schedules to documents.

ARO has made outstanding progress in reprocessing and rescheduling R&D records and non-R&D records stored at the Federal Records Center, to effectively comply with their requirements and negotiated commitments.

LBNL's TEID department is doing an outstanding job in ensuring that the Laboratory complies with the Joint Committee on Printing (JCP) regulations. The annual three-year printing report to DOE addresses those compliance issues. LBNL has been exceptional in outsourcing 79 percent of jobs to the Government Printing Office (GPO), completing 96 percent of duplication jobs using Two-Sided Duplicating, and purchasing 79 percent of recycled paper in accordance with Section 101 of Executive Order 13101 of September 14, 1998.

LBNL continues to be in compliance with contractual, legal, and regulatory requirements.

Performance Rating (Adjectival)**: Outstanding**	94.00%

Criterion: # 1.4 Strategic and Tactical Planning

IM plans and practices are aligned with Laboratory strategic and tactical requirements.

(Weight = 20%)

Performance Measure: # 1.4.a Planning Initiatives

Evaluation of evidence that Information Management is aligned with the Laboratory's missions.

(Weight = 20%)

Assumptions:

Measurement deliverable: IM plans or descriptions of IM initiatives that support the mission and plans of the Laboratory. Reference may be made to accessible work products or other existing Laboratory documentation.

The agreed to Information Management areas to be addressed by this Performance Measure:

- Information Architecture
- Revised Long Range IM Strategic Plan for LBNL--Information Architecture defining the standards for information sharing, technology standards, and data security and protection for operational information.
- Measurement of progress toward meeting these objectives with particular emphasis on the most critical objectives.
- Methodologies for obtaining user and management input to the planning process to assure agreement with the needs and objectives of the Laboratory.
- Methodologies for establishing funding to assure optimum use of resources toward meeting the critical objectives.

Gradients:

Unsatisfactory No results are demonstrated and little or no effort has been expended in establishing effective processes towards achievement of the performance measure.

Marginal Results fall short of the expectations for the "good" gradient however some effort has been made to establish effective processes

Good	Evidence of a planning process exists that drives IM practices to align with the Laboratory's missions.
Excellent	Objective evidence has been provided to demonstrate that IM activities provide effective support for the Laboratory's missions.
Outstanding	Evidence that the IM planning process can adapt to changing conditions, employs sophisticated methods or planning tools, and has received external recognition or benchmarking that indicates best-in-class performance.

Performance Narrative:

LBNL has made **outstanding** progress in this rating area. The Information Technologies and Services Division (ITSD)/Information Systems & Services (ISS) successfully completed the Strategic Plan for FY 2003 – FY 2005 ensuring the future computing direction of the Laboratory. Essential components of the ITSD/ISS plan have become a part of the Operations Strategic Plan. Executive level project proposals were presented to the Enterprise Computing Steering Committee (ECSC), who assured through deliberations, that IM projects would be integrated and prioritized from an institutional perspective. As a result, fourteen (14) projects were prioritized and recommended for FY 2003 institutional funding.

The Laboratory achieved a major goal by consolidating computing technology offerings in one division to create greater synergy. The Technical Architecture was expanded to include computing technologies used by the Networking and Telecommunications Department and TEID. This represented a great advance from the previous IM Strategic plan, issued in 1995.

The Laboratory is close to full completion of the 1995 Strategic Plan and the subsequent modernization of the financial systems. The PeopleSoft Accounts Payable, Purchasing, and eProcurement systems were implemented in August 2002 and the new PeopleSoft Grants (Phase I) and Travel systems implementations are planned for this fall.

User and management input were integrated in the system planning and implementation processes through the Enterprise Computing Steering Committee's deliberations, the Computing and Communications Services Advisory Committee's discussions and a broad range of users participating in systems life cycle activities. This broad base of participation in the strategic planning and system activities has produced a strategic direction that has helped in assuring the best return on investment for the LBNL.

Performance Rating (Adjectival)**: Outstanding**	93.00%

Performance Area: PROCUREMENT

Performance Objective: #1.0 Management of Internal Business Processes

The Laboratory shall have systems in place to ensure Procurement programs operate in accordance with policies and procedures approved by DOE and the requirements contained in Prime Contract Clause 8.1, Contractor Purchasing System. **(Weight = 65%)**

Criterion: #1.1 System Evaluation

The Laboratory conducts, documents, and reports, the results of a successful assessment of its purchasing system against established evaluation criteria. **(Weight = 30%)**

Performance Measure: #1.1.a Assessing System Operations

The Laboratory shall have a risk-based system evaluation plan (protocol) approved by DOE and UC no later than October 1, 2001. 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 assessment shall be evaluated. System deficiencies will include those identified by the Laboratory, internal Laboratory organizations, and external organizations. **(Weight = 30%)**

Assumptions:

Gradients:

Unsatisfactory There is not an approach to the primary purpose of the system evaluation and there are major gaps in deployment of the assessment process. Cost benefit analyses and risk assessments are not accomplished and opportunities for improvement are not addressed. Leadership involvement is not evident.

Marginal There is a basic approach to the primary purpose of the system evaluation. Cost benefit analyses and risk assessments are applied to some deficiencies and opportunities for improvement are generally addressed. Remedial actions are pursued and leadership involvement is evident in some cases.

Good — 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. Remedial actions are appropriate and demonstrate responsible leadership in many to most cases.

Excellent — The requirements for a "Good" rating are met. In addition, the approach is responsive to the overall purpose of the system evaluation and cost benefit analyses and risk assessments are good to excellent when addressing deficiencies and/or opportunities for improvement. Remedial actions are sound and demonstrate responsible leadership in most cases.

Outstanding — The requirements for an "Excellent" rating are met. In addition, the approach is fully responsive to all the requirements of the system evaluation and cost benefit analyses and risk assessments are excellent when addressing deficiencies and/or opportunities for improvement. Remedial actions are sound and demonstrate strong leadership in most cases.

Performance Narrative:

The Laboratory met the criteria for an **outstanding** rating. The Laboratory continues to ensure that all purchasing activities comply with applicable laws, regulations, terms and conditions, ethical standards, and good business management practices.

LBNL submitted the FY 2002 System Evaluation Plan (SEP) on August 31, 2001, and the plan was revised on September 24, 2001. The Contracting Officer approved the SEP on September 27, 2001. The SEP detailed LBNL's approach and methodology for implementing procurement self-assessments during FY 2002, while incorporating elements of the Balanced Scorecard. The program this year evidenced clear, concise documentation of system audits, cost/benefit risk assessments, improvement opportunities, and prioritized corrective action management.

During FY 2002, the procurement system evaluation continued with the phased 36-month cycle approach for coverage of all areas to be reviewed. The areas reviewed this fiscal year included the following: Policies and Procedures/Standard Clauses, Procurement Card Purchases, and Miscellaneous Subcontracts.

Policies and Procedures/Standard Clauses:

The self-assessment occurred on November 15, 2001, with no major findings and several observations. Observations were made regarding policies and procedures and standard clauses not being current with regulatory updates. In addition, duplicate provisions were found in subcontractor master documents. A full-fledged risk assessment was not performed as the corrections were administrative in nature. A corrective action plan was implemented to update the necessary clauses with a completion date of January 31, 2002. Validation occurred on June 19, 2002, with no reoccurrence found.

Procurement Card Results:

The self-assessment occurred on January 29, 2002. A small percentage of transactions were found to be in violation of Laboratory policy regarding the obtaining of signature authorization from an approver in advance of making a purchase. A risk assessment was performed and a corrective action plan implemented. Validation occurred on August 29, 2002, with no reoccurrence found. DOE also conducted a review of the credit card program with the following objectives: (1) assess internal controls and evaluate their adequacy for preventing abuses; (2) identify best practices; (3) identify significant control weaknesses; and finally, (4) develop recommendations for corrective actions. Several recommendations were made to the Laboratory, however, no fraud, waste, or abuse was discovered.

Miscellaneous Subcontracts:

The self-assessment occurred on March 28, 2002 with no systemic findings.

Performance Rating (Adjectival)**: Outstanding**	98.00%

Criterion: #1.2 Pursuing Best Practices

The Laboratory compares its operational effectiveness to benchmarking data and industry standards and establishes goals and gradients accordingly. **(Weight = 20%)**

Performance Measure: # 1.2.a Measuring Effectiveness

The Laboratory will be measured against benchmarks and industry standards for cycle time results for transactions (i.e., new purchase orders, task orders, and subcontracts) > $100,000 and utilization of rapid and alternative procurement approaches/techniques [e.g. Purchasing Cards, Verbal Orders, Just-in-Time (JIT) Contracts, Material Release System (MRS), Electronic Data Interchange (EDI), E-Commerce, Blanket Orders, Leveraged Buys, Integrated Contractor Purchasing Team (ICPT) National Agreements, Stores, and Low Value Purchases]. **(Weight = 20%)**

Assumptions:

The Procurement organization will also provide in its annual self-assessment report, for information purposes only, overall average cycle time results and average cycle time results for transactions <= $100,000. Such input will not be part of the rating process and will be used for Balanced Scorecard reporting purposes.

The following formula shall be applied to measure the utilization of rapid and alternative procurement approaches/techniques:

Utilization of Rapid and Alternative Procurement Approaches/Techniques =

$$\frac{\text{Number Of Transactions Using Rapid and Alternative Procurement Approaches/Techniques}}{\text{Total Number of Transactions}}$$

Gradients:

Average Cycle Time - Transactions > $100,000
(Weight = 10%)

Unsatisfactory	> 45.0 Days
Marginal	40.0 – 45.0 Days
Good	35.0 – 39.9 Days
Excellent	30.0 – 34.9 Days
Outstanding	< 30.0 Days

Rapid and Alternative Procurement Approaches/Techniques
(Weight = 10%)

Unsatisfactory	< 80.0%
Marginal	80.0% – 84.9%
Good	85.0% – 89.9%
Excellent	90.0% – 92.9%
Outstanding	≥93.0%

Performance Narrative:

LBNL achieved a cycle time of 20.3 days for transactions >$100,000, which meets the criteria for **outstanding**. The Laboratory continues to reduce cycle time and this year's performance compared extremely well with last year's. This is a noteworthy accomplishment given that with the decentralization of the small value procurements, the number of days to place a procurement increases as the focus shifts to issuing more complex subcontracts.

FY 2001 Results:
Actions > $100,000 = 27.9 days
Actions ≤ $100,000 = 5.6 days (Balanced Scorecard Reporting)
Cycle time for all orders 6.4 days (Balanced Scorecard Reporting)

FY 2002 Results:
Actions > $100,000 = 20.3 days
Actions ≤ $100,000 = 4.9 days (Balanced Scorecard Reporting)
Cycle time for all orders 5.5 days (Balanced Scorecard Reporting)

Rapid and Alternate Procurement Approaches/Techniques (RAPT):

The percent of transactions placed using RAPT for this review period was 93.8, which meets the criteria for outstanding. The DOE benchmark is 73.8 percent.

FY	Total Transactions	Transactions Awarded using RAPT
2000	63,139	56,984 (90.3 percent)
2001	62,343	56,868 (91.2 percent)
2002	88,144	82,659 (93.8 percent)

(Note: The results for FY 2000 and FY 2001 are not comparable to FY 2002 results. In FY 2002, for the first time, RAPT transactions placed by the Procurement organization were included in the measure.)

Performance Rating (Adjectival)**: Outstanding**	95.00%

Criterion: # 1.3 Supplier Performance

The Laboratory shall manage its suppliers in such a manner as to ensure that the goods and services provided meet the Laboratory's requirements. **(Weight = 15%)**

Performance Measure: # 1.3.a Measuring Supplier Performance

The Laboratory shall measure the performance of its key suppliers. Supplier performance will be measured against goals and gradients agreed to below. **(Weight = 15%)**

Assumptions:

Gradients:

The following formula shall be applied to measure and report quarterly, the percentage of on-time deliveries of purchased goods from key suppliers of commodities:

Percentage of On-Time Deliveries of Purchased Goods by Key Suppliers =

$$\frac{\text{Number of On-Time Deliveries of Purchased Goods by Key Suppliers}}{\text{Total Number of Deliveries of Purchased Goods by Key Suppliers}}$$

Year-end performance will be based on cumulative results.

Unsatisfactory	$< 76.0\%$
Marginal	76.0% – 80.9%
Good	81.0% – 85.9%
Excellent	86.0% – 90.9%
Outstanding	$\geq 91.0\%$

Performance Narrative:

LBNL achieved an 82.8 percent on-time delivery rate from key suppliers, which meets the criteria for **good**. This rate was a slight increase from last year's result of 82 percent. The Laboratory sought to manage its key suppliers (i.e. commodity vendors who receive a minimum of ten (10) orders and over $50,000 worth of Laboratory business) to a higher level of performance, using the percentage of on-time deliveries (percent of deliveries meeting the subcontract promised date) as the criteria. During FY 2002 the definition was expanded, and a total of fifteen (15) key suppliers were identified, an increase of six (6), compared to FY 2001.

The Laboratory continued to pursue an on-time delivery goal of 90 percent, however, results were impacted during the final two months of the fiscal year due to the lack of supplier performance reports for buyers as a result of the transition to the new Procurement System. The end result is a minimal change from last year's results of 82 percent.

Performance Rating (Adjectival)**: Good**	72.00%

Criterion: # 1.4 Socioeconomic Subcontracting

The Laboratory shall support and promote socioeconomic subcontracting programs. **(Weight = 0%)**

Performance Measure: #1.4.a Meeting Socioeconomic Commitments

The Procurement organization will provide in its annual self-assessment report, for information purposes only, the percentage of actual subcontract dollar obligations (not subcontract face value) in the following five categories: Small Business, Small Disadvantaged Business, Veteran-Owned Small Business, Women-Owned Small Business, and HUBZone Awards. Self-assessment reports will describe annual activities in support of the socioeconomic program. Such input will not be part of the rating process and will be used for Balanced Scorecard reporting purposes. **(Weight = 0%)**

Assumptions:

Obligations qualifying in more than one category may be counted in more than one category, e.g., Small Business and Small Disadvantaged Business. Lower tier subcontracts cannot be counted toward the primary goal, but may be goaled and reported separately.

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 and GSA Orders to large businesses when all terms of the GSA contract apply; (4) Agreements with DOE management and operating contractors and University campuses; (5) Federal government and DOE mandatory sources of supply; Federal prison industries, industries of the blind and handicapped; and (6) Procurement card purchases.

Gradients:

In that this measure has zero weight, there is no gradient.

Performance Narrative:

The LBNL socioeconomic goals for FY 2002 were identified and mandated by DOE based on the Laboratory's previous year's performance. The socioeconomic goals were not achieved in three areas: Small Business, Small Disadvantaged Business, and Women-Owned Small Business.

Prior Year (FY 2001) History

Category	Goal	Results	Dollars
Small Business	51.8 percent	46.6 percent	$60.4M
Small Business Set-Asides	21.0 percent	21.8 percent	$28.2M
Small Disadvantaged Business	12.0 percent	6.9 percent	$ 8.8M
Women-Owned Small Business	5.9 percent	5.1 percent	$ 6.6M
Hubzone SBC	- 0 -	Nothing to report	

Actual Procurement Base: $129,655,264
Proposed Procurement Base: $120,000,000

FY 2002 Results:

Category	Goal	Results	Dollars
Small Business	51.8 percent	39.0 percent	$61.5M
Small Business Set-Asides	21.0 percent	17.6 percent	$27.8M
Small Disadvantaged Business	12.0 percent	4.3 percent	$ 6.8M
Women-Owned Small Business	5.9 percent	3.5 percent	$ 5.5M
Hubzone SBC	-0-	0.1 percent	$91.55K
Veteran-Owned Small Business:	-0-	-0-	$ -0-

Actual Procurement Base: $157,523,278
Proposed Procurement Base: $138,000,000

Note: This area does not receive adjectival/numeric ratings.

Performance Rating (Adjectival)**:**	00.00%

Performance Objective: #2.0 Customer Satisfaction

The Laboratory shall assess the degree of satisfaction with Procurement's ability to meet customer needs in terms of timeliness, quality, and communications. **(Weight = 10%)**

Criterion: # 2.1 Customer Feedback

As a continuous indicator of overall customer satisfaction, the Procurement function shall survey the needs and satisfaction of its Laboratory customers relative to its purchasing systems and methods. **(Weight = 10%)**

Performance Measure: # 2.1.a Customer Satisfaction Rating

A customer satisfaction rating for the Procurement function shall be calculated from the results of transactional surveys. The customer satisfaction rating is to be tracked and trended. The Laboratory/UC/DOE will coordinate on the acceptability of the surveying process and contents. **(Weight = 10%)**

Assumptions:

Included in the evaluation will be a summary describing the activities that support the score achieved. Consideration will be given to activities/efforts taken to improve customer satisfaction.

The following formula shall be applied to measure customer satisfaction using transactional surveys:

$$\text{Customer Satisfaction Rating} = \frac{\text{Number of Satisfied Customers}}{\text{Total Number of Customers Responding to Survey}}$$

Gradients:

Unsatisfactory $< 62.0\%$ of customers responding to survey are satisfied.
Marginal 62.0% - 71.9% of customers responding to survey are satisfied.
Good 72.0% - 81.9% of customers responding to survey are satisfied.
Excellent 82.0% - 91.9% of customers responding to survey are satisfied.
Outstanding $\geq 92.0\%$ of customers responding to survey are satisfied.

Performance Narrative:

The Laboratory achieved a 95.8 percent customer satisfaction rate, which meets the criteria for **outstanding**. LBNL submitted a survey plan, and DOE subsequently approved the submittal. The plan details LBNL's approach and methodology for conducting the survey process. The Laboratory continued with the use of verbal transactional surveys, which incorporate elements of timeliness, responsiveness, communication, and ethical practices elements contained within the Balanced Scorecard Model. Requestors associated with forty-eight (48) randomly selected transactions were surveyed. The customer survey asked the customer to answer four (4) questions and to provide an overall satisfaction rating for the service received.

History:

2000	93.8 percent	Transactional Survey (number of satisfied customers 45 out of 48)
2001	95.8 percent	Transactional Survey (number of satisfied customers 46 out of 48)
2002	95.8 percent	Transactional Survey (number of satisfied customers 46 out of 48)

Performance Rating (Adjectival)**: Outstanding**	92.00%

Performance Objective: #3.0 Learning and Growth

The Laboratory shall ensure that information and feedback mechanisms are available to procurement employees to enhance continued successful procurement operations. **(Weight = 15%)**

Criterion: #3.1 Employee Feedback

The Laboratory shall foster improvement of processes and performance by assessing and pursuing improvements in employee satisfaction. **(Weight = 5%)**

Performance Measure: # 3.1.a Employee Satisfaction Rating

A Procurement employee satisfaction rating shall be calculated from the results of an employee survey. The employee satisfaction rating is to be tracked and trended. The Laboratory/UC/DOE will coordinate on the acceptability of the surveying process and contents. **(Weight = 5%)**

Assumptions:

Included in the evaluation will be a summary describing the activities that support the employee satisfaction rating achieved. Consideration will be given to activities/efforts taken to improve employee satisfaction.

The following formula shall be applied to measure employee satisfaction:

$$\text{Employee Satisfaction Rating} = \frac{\text{Number of Satisfied Employees}}{\text{Total Number of Employees Responding to Survey}}$$

The Procurement organization will provide in its annual self-assessment report, for information purposes only, percent of employees aligned. Such input will not be part of the rating process and will be used for Balanced Scorecard reporting purposes.

Gradients:

Unsatisfactory	< 60.0% of employees responding to survey are satisfied.
Marginal	60.0% - 69.9% of employees responding to survey are satisfied.
Good	70.0% - 79.9% of employees responding to survey are satisfied.
Excellent	80.0% - 89.9% of employees responding to survey are satisfied.
Outstanding	≥ 90.0% of employees responding to survey are satisfied.

Performance Narrative:

The Laboratory achieved an employee satisfaction rate of 92 percent, which meets the criteria for **outstanding**. LBNL submitted a survey plan for FY 2002, and DOE subsequently approved the submittal. The plan detailed LBNL's approach and methodology for conducting the survey process. The employee survey asked employees to rate their degree of agreement with twelve (12) questions on a scale of 1 (strongly disagree) to 5 (strongly agree) and to provide an overall satisfaction rating. Surveys were distributed to thirty-three (33) employees. Of the twenty-five (25) responses received, twenty-three (23) employees were determined to be satisfied.

Employee Alignment: 100 percent of Berkeley Laboratory Procurement employees are aligned.

History
2000 90.0 percent (number of satisfied employees 27 out of 30)
2001 95.2 percent (number of satisfied employees 20 out of 21)
2002 90.0 percent (number of satisfied employees 23 out of 25)

Performance Rating (Adjectival)**: Outstanding**	92.00%

Criterion: #3.2 Information Availability

The Laboratory shall make readily available to its employees current information important to the successful performance of their procurement related functions. **(Weight = 10%)**

Performance Measure: #3.2.a Measuring Availability of Information

The Laboratory will track, trend, and report the level of information available to Procurement employees. **(Weight = 10%)**

Assumptions:

Information is considered available if it is current or requires only minor revision and the information is in compliance with Prime Contract requirements.

The following formula shall be applied to measure the level of information availability on a quarterly basis:

$$\text{Level of Information Availability} = \frac{\text{Number of Information Items Available (End of Quarter)}}{\text{Number of Information Items Needed (End of Quarter)}}$$

The following formula shall be applied to measure the level of information availability for year-end reporting:

$$\text{Level of Information Availability} = \frac{\text{Sum of Number of Reported Information Items Available (Four Quarters)}}{\text{Sum of Number of Reported Information Items Needed (Four Quarters)}}$$

Gradients: (Year-End Reporting)

Unsatisfactory	$< 85.0\%$
Marginal	85.0% - 87.9%
Good	88.0% - 90.9%
Excellent	91.0% - 93.9%
Outstanding	$\geq 94.0\%$

Performance Narrative:

LBNL achieved a 92.7 percent rate for information availability which meets the criteria for **excellent**.

(Note: The results for FY 2000 and FY 2001 are not comparable to FY 2002 results.)

2001 Total of 225 items available out of 245 needed (91.8 percent).
2002 Total of 922 items available out of 995 needed (92.7 percent)

Performance Rating (Adjectival)**: Excellent**	88.00%

Performance Objective: #4.0 Managing Financial Aspects

The Laboratory shall ensure optimum cost efficiency of purchasing operations. **(Weight = 10%)**

Criterion: # 4.1 Process Cost

The Laboratory compares its operating costs as a percentage of total procurement dollars obligated to benchmarking data and industry standards and establishes goals and gradients accordingly.
(Weight = 10%)

Performance Measure: #4.1.a Cost to Spend Ratio

Operating costs as a percentage of total procurement dollars obligated will be computed. The Laboratory's operating costs (labor plus overhead) shall be divided by purchasing obligations.
(Weight = 10%)

Assumptions:

The following formula shall be applied to measure the cost to spend ratio:

$$\text{Cost to Spend Ratio} = \frac{\text{Purchasing Organization Cost}}{\text{Total Purchasing Obligations}}$$

Gradients:

Unsatisfactory	> 2.50%
Marginal	2.21% – 2.50%
Good	1.96% – 2.20%
Excellent	1.70% – 1.95%
Outstanding	< 1.70%

Performance Narrative:

LBNL achieved a cost-to-spend ratio of 1.36 percent which meets the criteria for **outstanding**. The Laboratory continues to do extremely well in this area when compared to the DOE contractor benchmark of 2.3 percent. The Laboratory did experience a moderate increase from last year's performance; however, this increase is not significant.

Cost-to-Spend Ratio:
2000 1.13 percent
2001 1.26 percent
2002 1.36 percent

	Procurement Operating Expenses	Procurement Commitments
2000	$2,396,738	$212,406,648
2001	$2,422,354	$191,618,889
2002	$2,790,582	$205,388,813

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Area: PROJECT/FACILITIES AND CONSTRUCTION MANAGEMENT

The University of California, in partnership with the Department of Energy, shall plan, acquire, operate, maintain, lease, and dispose of physical assets as valuable national resources. The management of physical assets from acquisition through operations and disposition shall be an integrated and seamless process linking the various life cycle phases. Stewardship of these physical assets during all phases of their life cycle shall be accomplished in a safe and cost-effective manner to meet the DOE mission and to ensure protection of workers, the public and the environment. This management of physical assets shall incorporate industry standards, a graded approach and these performance objectives.

General Note: Plans, lists and milestones will be made a matter of record in the first month of the fiscal year. These plans, lists and milestones may be revised during the year by mutual agreement between the Laboratory and DOE Facility Functional Managers.

Performance Objective: #1.0 Real Property Management

The Laboratory will effectively manage Real Property. **(Weight = 5%)**

Criterion: #1.1 Real Property Management

Real property is effectively managed consistent with mission, requirements, and DOE direction. **(Weight = 5%)**

Performance Measure: # 1.1.a Program Implementation

Number of completed milestones/milestones scheduled for completion. **(Weight = 5%)**

Assumptions:

Intent is to measure the effectiveness, completeness, and timeliness of implementation of Real Property management actions. Milestones will be established in partnership with DOE and made a matter of record. Milestones may be established for Facilities Information Management System completeness, office space utilization, substandard building space conversion, real property leases, etc.

Gradients:

Unsatisfactory	less than 0.60
Marginal	0.60
Good	0.70
Excellent	0.80
Outstanding	0.90

Performance Narrative:

All established milestones for the Laboratory concerning management or improvement of real property were completed on a timely basis for FY 2002 which justifies a rating of **outstanding**. The milestones included production of the annual Facilities Information Management System (FIMS) Quality Assurance Plan along with verification of population and accuracy of the LBNL portion of the FIMS database, reconciliation between FIMS and the Management Analysis and Reporting System (MARS), annual updating and validation of the Active Facilities Data Collection System (AFDCS), optimizing of LBNL office and laboratory space, produce suitability report for all LBNL buildings, eliminate or develop and convert substandard building space, and completion of a DOE HQ special project to create a Building Condition and Suitability Assessment (BCSA) model for use DOE complex-wide. The completion of all established milestones justifies a score of 96 percent.

In the area of FIMS, validation of the data has shown 100 percent population and corresponding accuracy. Updating of FIMS is an ongoing project and LBNL has been working with DOE HQ and Lawrence Livermore National Laboratory on the creation and development of the methodology for BCSA for complex-wide use in FIMS.

Space Planning has been working to resolve space-planning problems on site. Crowding is a serious and continuing concern, as well as the rehabilitation or demolition of substandard excess space. For FY 2002 there was 17,800 square feet of space renovated, 15,639 square feet of space demolished, 33,012 square feet of space placed in re-use, and office utilization now stands at 112 square feet per person (GSA standard at 135 square ft per person). Relocation plans were developed and put into place to create space for the Advanced Material Science scientist and associates group from Colorado.

Leasing efforts were initially focused upon further expansion into off-site office space to accommodate over crowding conditions on the laboratory site. Planning and siting for third-party construction of a new facility (Building 50X) to help relieve overcrowding continues with selection of a builder now underway. Demolition of the Building 29 complex continues for the construction of a Research Support Building to further relieve overcrowding. Several other noteworthy projects include: the start of the project for construction of the Molecular Foundry (selection of location and a draft design); as well as future planning for an off-site laboratory science location in the Richmond area.

Performance Rating (Adjectival)**: Outstanding**	96.00%

Performance Objective: #2.0 Physical Assets Planning

The Comprehensive Integrated Planning Process should reflect current and future Laboratory needs. **(Weight = 14%)**

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 = 14%)**

Performance Measure: #2.1.a Effectiveness of Planning Process

Assess how the planning process is implemented to achieve maximum effectiveness in anticipating and articulating DOE and Laboratory needs. **(Weight = 14%)**

Assumptions:

The Laboratory will work with DOE counterparts in a cooperative effort to continuously evaluate the effectiveness of the comprehensive integrated planning process through the development of Laboratory specific planning elements/milestones. Site specific planning elements/milestones will be made a matter of record.

Gradients:

Unsatisfactory	less than 0.60
Marginal	0.60
Good	0.70
Excellent	0.80
Outstanding	0.90

Performance Narrative:

The Oakland Operations Office rates the LBNL activities in the area of Comprehensive Integrated Planning (CIP) as **outstanding**, (95 percent), for FY 2002. LBNL maintains its leadership in the DOE science community and locally in user groups, commercial and public partnerships and to the University of California. Continuing its effective physical asset and land use planning will assure the LBNL's value to DOE and to the scientific community. This evaluation utilized the FY 2002 Appendix F Performance Objectives, Criteria and Measures (POCM), the FY 2002 work plan, associated milestones, operational awareness activities and the LBNL and University of California Office of the President (UCOP) self-assessments.

LBNL's Facilities Planning Office included seven major topical areas in the FY 2002 POCM's for Physical Assets Planning (Performance Objective Number 2). A work plan consisting of progress categories, goals milestones and due dates, was developed for each topical area designed to measure performance, progress and improvements. The original work plan identified fifty-eight (58) milestones that were linked to a goal and progress category. The work plan represented the most significant activities under the responsibility of the LBNL Facilities Planning Office.

Most of the milestones were completed on a timely basis and all on-going activities were satisfied. Significant accomplishments, with respect to the work plan, included:

1. Site and Long Range Development Planning (LRDP):
    - Updating the LBNL Comprehensive Facilities Plan;
    - Updating LBNL Institutional Plan, Site and Facilities Section
    - Continuing improvement of the Strategic Facilities Plan.

2. Vegetation Management/Wild land Fire Risk Management:
    - Developing the vegetation management almanac for LBNL;
    - Evaluating the effectiveness of the vegetation program with the continued monitoring of plant transects.

3. National Environmental Policy Act/California Environmental Quality Act (NEPA/CEQA) Compliance:
    - Preparing an Environmental Assessment (EA) for the Molecular Foundry Project;
    - Preparing NEPA requirements for the proposed Building 50X Project;
    - Preparing and obtaining the approval of the categorical exception (CX) for the removal or transfer of shielding blocks and the deconstruction of Buildings 51 and 71.

4. Geographical Information System (GIS):
    - Transitioning to a Universal Transverse Mercator (UTM) coordinate-based data set in support of the Geographical Information System (GIS).

5. Parking and Transportation Analyses:
    - Preparing evaluations of options for mitigating parking impacts due to constructions projects (e.g. Site wide Water Upgrade, Deconstruction of Buildings 29 and 51)

6. Signage:
    - Improving signage for building identification and emergency evacuation maps.

7. Facilities Planning Web Site:
    - Revising and simplifying the Facilities Planning website.

Several new and significant goals and milestones were added to during FY 2002. The most significant would be the re-siting and environmental assessment for the Molecular Foundry Project and the NEPA requirements for the Building 51 and 50X projects. The LBNL Facilities Planning Group Office was very flexible, responsive and completed these additional major tasks while maintaining their existing workload. Two milestones involving the preparation of the LRDP and the LRDP EIR (Health Risk Assessment) were delayed due to conditions beyond the control of the LBNL Facilities Planning Office. This situation of not having direct control of a milestone was recognized by DOE and LBNL after the plan was established and similar milestones will be limited in the future.

LBNL also addressed activities/issues that were not identified on the work plan. Issues identified were via operational awareness as a result of quarterly meetings, visits to LBNL and periodic participation at the Facilities Planning Office weekly meetings. Significant activities include the Planning Office's participation in developing the suitability index for DOE (to be utilized in FIMS), participating in a peer review of the Los Alamos National Laboratory planning department, and support of the LBNL Institutional Plan. These activities effectively utilize the core competencies possessed by the Facilities Planning Office.

In FY 2002, LBNL continued to execute both the intent and spirit of the Life Cycle Asset Management Partnering Agreement and the Assessment Management Plan. Both documents represent the commitment to performance-based contracting. The method currently utilized for instituting the Appendix F POCM and evaluation processes remains viable. Quarterly reporting and operational awareness meetings need to continue to assure the implementation of the work plan, to assure process improvements occur, to effectively change or revise goals/milestones when appropriate and to assure effective asset and land use planning.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Objective: #3.0 Project Management

The Laboratory will complete construction projects within approved budgets, schedules and scopes. **(Weight = 33%)**

Criterion: #3.1 Construction Project Performance

Construction projects greater than $500K (regardless of type of funds) achieve project performance objectives. **(Weight = 20%)**

Performance Measure: # 3.1.a Work Performed

Number of 2 objectives completed/number of objectives planned for completion. **(Weight = 20%)**

Assumptions:

The intent is to measure actual progress against that planned for the fiscal year and for the Laboratory to execute projects and cost project funds in a timely manner. An objective list for all active projects will be negotiated with DOE and made a matter of record. Only meaningful objectives will be listed, but each active project will have at least one objective per year. By mutual agreement between the Laboratory and DOE, objectives may be weighted for project significance, for project size/cost, for late/early completion, for improved/diminished scope, etc. Negotiated objectives are not to be interpreted as baseline change approval.

Gradients:

Unsatisfactory	less than 0.70
Marginal	0.70
Good	0.80
Excellent	0.90
Outstanding	1.00

Performance Narrative:

LBNL's performance in this area is rated as **excellent** for FY 2002 compared to outstanding in the previous five years. Originally, eighteen milestones were selected to measure the performance against baselines for construction projects greater than $500,000. Milestones for the following three Line Item projects, seven General Plant Projects (GPPs) and one General Plant Equipment (GPE) project, respectively, were used:

1. Building 77 Rehabilitation
2. Site wide Water Distribution Upgrade
3. Molecular Foundry
4. Radio Communications System Upgrade
5. Building 2 Ventilation Improvements
6. Building 71 Modifications to L&M Caves
7. Building 71 Clean Room
8. Building 74 Expansion of Animal Holding Facility
9. Building 90 HVAC Upgrade
10. Building 2 Laser Laboratory Upgrade
11. Install 2000 kw Diesel Generator Set

LBNL missed two milestones:

The first missed milestone, to submit Critical Decision-1 (CD-1) Supporting Documentation to DOE for Approval in conjunction with the Molecular Foundry project, resulted when LBNL prepared Conceptual Design Report (CDR) documentation for the Molecular Foundry and presented this information to the DOE CDR Review Board on December 13-14, 2001. However, the documentation did not support CDR approval by DOE which is a prerequisite for CD-1 approval. The DOE CDR Review Committee's report of December 2001 documented findings and recommendations in the following areas: Scientific Program, Conventional Facilities, ES&H, Cost Estimate, Schedule and Funding, and Management. LBNL provided a complete and well engineered response to all of the Review Committee's recommendations and CDR approval was received in April 2002. CD-1 documentation was prepared in April 2002, four months after the milestone date of December 2001, with CD-1 approval following in June 2002. There are a number of valuable lessons to be learned from this project in the areas of project management staffing, site selection, cost and schedule baselines and project scope which should be applied to future line item projects.

The other missed milestone concerned the Building 2 Ventilation Improvements project where the subcontractor failed to install and test controls for the variable air volume system in a timely manner. The subcontractor's failure to perform resulted in the missed milestone.

Several new and significant goals and milestones were not identified on the work plan. The most significant were:

- The preparation and submittal of the CD-1 documentation (e.g. Acquisition Execution Plan, Preliminary Project Execution Plan, and others) for the Research

Support Building (RSB) and Building 77 – Rehabilitation of Building Structure and System Phase II (Building 77 Rehab Phase II). The final CD-1 documentation for the Building 77 Rehab Phase II project was submitted to SC-82 in September 2002 and the Preliminary Hazards Analysis Report (PHAR) was deemed a model for the Science (SC) complex.

- The Facilities Project Management Group/Department provided support to programmatic projects which included: Building 6 Addition Sector 4 Support Building, Building 6 Southside Expansion, and Building 943 Oakland Scientific Facility Computer Room Build out.

DOE subsequently provided credit for these two milestones, bringing the total milestones to twenty (20).

Therefore, LBNL met eighteen (18) out of twenty (20) milestones. Project milestones completed on schedule / Project milestones scheduled for completion = 18/20 = 0.90. A rating of 80 percent is justified for this performance measure.

LBNL has always maintained and should continue their proactive approach to project management. The lines of communication continue to be open during the monthly project status meetings.

Performance Rating (Adjectival)**: Excellent**	80.00%

Criterion: #3.2 Construction Project Cost

Line-Item projects (including any project $5M and over regardless of type of funds) meet cost baselines. **(Weight = 13%)**

Performance Measure: #3.2.a Total Estimated Cost (TEC)

Estimated cost at completion for all active projects/performance measure baseline TEC for all active projects. **(Weight = 13%)**

Assumptions:

The intent is to measure Laboratory performance in executing projects within the approved TEC. The performance measure baseline is the original approved baseline adjusted informally for allowed cost or work scope changes. The performance measure baseline may differ from the DOE formally approved baseline. DOE determines whether changes are allowed in the performance measure baseline. The method of calculating estimated cost at completion, including or excluding contingency, will be made a matter of record. Contingency and cost reductions will be reflected in the estimated cost at completion. The estimated cost at completion used for this performance measure will be determined by the Laboratory and confirmed by DOE. Disposition of pending Baseline Change Proposals, for the purposes of this measure, will be made by mutual agreement. By mutual agreement, projects may be weighted for significance.

Gradients:

Unsatisfactory	greater than 1.01
Marginal	1.01
Good	1.00
Excellent	0.99 or current year and two preceding years at 1.00 or better
Outstanding	0.98 or current year and three preceding years at 1.00 or better

Performance Narrative:

Two projects were rated for FY 2002. The baseline estimated cost, the actual/estimated cost at completion and the performance measure baseline total estimated cost (TEC) for all active projects were as follows:

Project	Baseline TEC	Actual/Est
Building 77 Rehabilitation	$8,000,000	$8,000,000
Site wide Water Distribution Upgrade	8,300,000	8,300,000
Totals:	**$16,300,000**	**$16,300,000**

Estimated cost at completion for all active projects / Performance baseline TEC for all active

projects = $16,300,000 / $16,300,000 = 1.00.

In previous years, the adjectival rating for FY 2002 would have been good. However, as revised last year, the requirement for a rating of **outstanding**, as stated under the gradient, reads: "0.98 or current year and three preceding years at 1.00 or better".

LBNL achieved past gradient ratings as follows:

FY 1999 = 0.999
FY 2000 = 1.000
FY 2001 = 1.000
FY 2002 = 1.000

Based on this criterion, LBNL achieved a rating of outstanding for FY 2002. With only two projects eligible for rating, it is difficult to ascertain a precise assessment of LBNL staff's acumen in managing project costs for FY 2002. However, LBNL has continued to be supportive of OAK at the monthly project status meetings and all other aspects of project management.

Performance Rating (Adjectival)**: Outstanding**	90.00%

Performance Objective: #4.0 Maintenance

The Laboratory will maintain capital assets to ensure reliable operations in a safe and cost-effective manner. **(Weight = 33%)**

Criterion: #4.1 Facility Management

Facility operations and maintenance are effectively managed consistent with mission, risks, and costs. **(Weight = 13%)**

Performance Measure: #4.1.a Program Implementation

Sum of completion percentages for all milestones worked/milestones scheduled for completion. **(Weight = 13%)**

Assumptions:

Intent is to measure the effectiveness and timeliness of the Laboratory's facility maintenance program. A list of mutually agreed milestones will be made a matter of record. For multiple-facility milestones, completion percentage will be an average of the completion percentages for each facility included in the milestone. If no milestones are selected for the fiscal year, the weight of Performance Measure 4.1.a will be added to Performance Measure 4.2.a.

Gradients:

Unsatisfactory	less than 60%
Marginal	60%
Good	70%
Excellent	80%
Outstanding	90%

Performance Narrative:

LBNL's performance in the area of facility operations and maintenance was rated **outstanding** in FY 2002. LBNL Maintenance Program Plan included twenty-two maintenance milestones. All twenty-two maintenance program milestones were completed as agreed for a performance ratio of 1.00.

FY 2002 milestone list:

- FY 2002-01 Complete FY 2001 By-Building Maintenance Actuals Report
- FY 2002-02Complete Actuals By-Building Maintenance Cost Report for Selected Building(s)
- FY 2002-03 Complete FY 2002 Annual and 5 yr. Maintenance Projects Plan
- FY 2002-04 Complete FY 2002 Beginning Backlog Projects Reconciliation List
- FY 2002-05 Complete Updated 5-year Property Inspection Plan
- FY 2002-06 Develop Maximo Safety Project Plan
- FY 2002-07 Develop Work Order Process Improvement Project Plan for Repair, Replacement, and Facilities-Related Operation Activities
- FY 2002-08 Develop Work Order Process Improvement Project Plan for Construction Jobs
- FY 2002-09 Complete Property Inspection Outsource Requisition
- FY 2002-10 Complete FY 2002 By-Building Maintenance Requirements Report
- FY 2002-11 Update Deferred Maintenance program administration procedure ADMN-102 to reflect changes in Deferred Maintenance reporting
- FY 2002-12 Develop Equipment Types Candidates and Associated Failure Hierarchies for Equipment Failure Analysis
- FY 2002-13 Complete FY 2001 LBNL Annual Maintenance Executive Summary Plan
- FY 2002-14 Develop Project Plan for Maximo's Condition Monitoring Application (set measurement point's action limits for pieces of equipment with large filter banks)
- FY 2002-15 Complete Property Outsource Inspection
- FY 2002-16 Schedule/Complete DOE/OAK informal operation awareness site visit of maintenance program activity
- FY 2002-17 Implement Maximo Safety on Proposed Building
- FY 2002-18 Complete Property Outsource Inspection Report
- FY 2002-19 Complete Property Inspection Summary Report
- FY 2002-20 Complete Backlog Summary Report
- FY 2002-21 Develop Process Map of Deferred Maintenance Information for FIMS
- FY 2002-22 Implement Maximo's Condition Monitoring Application for Large Filter Banks

This year, LBNL's facility management team focused on activities designed to improve the quality of procedures and maintenance practices. The milestones included further development of five-year inspection program, requirements and project plans, property inspection plans, and control of maintenance backlog.

Noteworthy accomplishments related to LBNL's effort to improve maintenance work practices. Specifically, development and implementation of Maximo's condition monitoring application for large filter banks led to more effective Preventive Maintenance (PM) program. In the past, the LBNL Maintenance Team was required by ES&H to change all filters at least every two years. Investigation showed that there was no basis for this requirement. The PM program was subsequently reassessed for high cost replacements. As a result, Maximo's Condition Monitoring application was implemented on fifteen units with filter replacement costs ranging from $1.4K to $4K. A measurement point record now defines the limits of the acceptable condition and these filters are replaced only when needed. Also of note is the property outsources inspection and maintenance planning accomplishments. LBNL Maintenance Team is working with their out source inspection group AME to build a Multi-Year Maintenance and Repair plan, generated from the Facility Condition Information System (FCIS) software, used to forecast all work required to maintain and repair the facilities over the next five years (unconstrained of available funding limitations). This will lead to more accurate and defendable "Annual Required Maintenance" reporting.

Considering the aggressive FY 2002 milestone selection and their overall effectiveness, a rating of 95 percent is justified for this performance measure.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Criterion: #4.2 Maintenance Program

The facility maintenance program is effectively managed and performed. **(Weight = 20%)**

Performance Measure: # 4.2.a Maintenance Index

Performance index based on selected Maintenance Performance Indicators. **(Weight = 20%)**

Assumption:

A composite index will be calculated using a weighted average for selected performance indicators. The list of performance indicators, and the calculation algorithm will be made a matter of record. Performance gradient calculations will consider Best-in-Class for comparable Energy Facility Contractors Group (EFCOG) benchmarking participants and the EFCOG average for comparable activities/sites.

Gradients:

Unsatisfactory	less than 0.60
Marginal	0.60
Good	0.70
Excellent	0.80
Outstanding	0.90

Performance Narrative:

LBNL's overall maintenance performance is rated **outstanding** comparable to the "Best-in-Class" among the Energy Facility Contractors Group (EFCOG) benchmarking participants for the selected performance indicators.

The Maintenance Performance composite index score rates LBNL performance compared to the EFCOG benchmarking participants for the following performance indicators:

1. Janitorial (Dollars/Gross Square Feet)
2. Recordable Injury/Illness (Cases/200k Man-hours)
3. Maintenance-Caused Operational Accidents (Maintenance-Caused Incidents/Total Occurrence Reports)
4. Proactive-ness of Craft Hours (Planned Preventive Maintenance Hours/Total Maintenance Craft Hours)

5. Total Annual Maintenance Costs (Direct Maintenance Dollars/Total Replacement Plant Value Dollars)
6. PMs Completed on Schedule (Percent PM on Schedule)
7. Plant Stewardship (Total Estimated Maintenance Costs / Estimated Replacement Plant Value Dollars)

Note: The composite index score is based on the summation of weighted performance element indicators (PEI) which compare LBNL performance to EFCOG average and best benchmark data using the following algorithm:

SCORE = Sum (Weight *PEI)
PEI= [0.3{(LBNL-AVE) / (BEST-AVE)}] +0.7
Ave. = EFCOG Average Value
Best = EFCOG Best Value

LBNL's Facility Maintenance Program composite index score was 93 percent in FY 2002 for the selected Maintenance Index Performance Element Indicators which ranks LBNL's maintenance program with the best throughout the DOE Complex.

Of particular noteworthiness is that no maintenance caused operational accidents occurred at LBNL in FY 2002 which was EFCOG's best. LBNL's performance in janitorial, recordable injury/illness, proactive-ness of maintenance craft hours and plant stewardship remains competitive with EFGOG's best participants. Both total annual maintenance Costs and PM completion on schedule are at well above average performance. In addition, LBNL continues to contribute to the EFCOG Benchmarking committee's improved definitions and calculation algorithms to further enhance the validity of index values.

LBNL's overall maintenance performance and proactive membership in the EFCOG committee warrants an overall rating of 95 percent for this performance period.

Performance Rating (Adjectival)**: Outstanding**	95.00%

Performance Objective: #5.0 Utilities/Energy Conservation

The Laboratory will maintain a reliable utility system and conserve energy. **(Weight = 15%)**

Criterion: #5.1 Reliable Utility Service

Maintain reliable utility service. **(Weight = 8%)**

Performance Measure: #5.1.a Electric Service

Total number of customer hours of electric service less the number of customer hours of unplanned outages/total customer hours. **(Weight = 8%)**

Assumption:

Unplanned outages that are caused by occurrences outside the boundary of the Laboratory's utility system may be excluded. A 12-month running average will be reported.

Gradients:

Unsatisfactory	less than 99.974%
Marginal	99.974%
Good	99.982%
Excellent	99.990%
Outstanding	99.995%

Performance Narrative:

Expectations for electric power reliability are extremely high. LBNL achieved perfection for the first two quarters, and then experienced a construction-related outage in the third quarter that brought the running average down to 99.986. Although this percentage is very close to 100 percent reliable, it falls in the **good** range for this assessment. LBNL is given a score of 79 percent, which is the highest score within the Good range.

Performance Rating (Adjectival)**: Good**	79.00%

Criterion: #5.2 Energy Consumption

Effectively manage energy usage. **(Weight = 2%)**

Performance Measure: #5.2.a Building Energy

The reduction in energy usage from FY90 levels in BTUs per gross square feet of building expressed as a percent of FY90 energy usage. **(Weight = 2%)**

Assumption:

Current year reduction goals interpolated from the DOE goal of a 20% reduction from FY90 levels by FY2005. Utility loads associated with experimental or industrial processes may be excluded from this measure by mutual agreement.

Gradients:

Unsatisfactory	less than 14.7%
Marginal	14.7%
Good	16.0%
Excellent	17.3%
Outstanding	18.7%

Performance Narrative:

In 2002, LBNL's reduction in energy usage compared to 1990 was 21.09 percent. This percentage falls into the **outstanding** range for this assessment and indicates that the Laboratory will be able to meet or exceed the FY 2005 energy reduction goal.

Performance Rating (Adjectival)**: Outstanding** 98.00%

Criterion: #5.3 Energy Management

Energy initiatives are managed consistent with a comprehensive energy management plan.
(Weight = 5%)

Performance Measure: #5.3.a Energy Goals

Energy goals accomplished/goals scheduled to be accomplished in accordance with the plan.
(Weight = 5%)

Assumption:

The energy management plan will be made a matter of record.

Gradients:

Unsatisfactory	less than 0.60
Marginal	0.60
Good	0.70
Excellent	0.80
Outstanding	0.90

Performance Narrative:

In 2002, LBNL accomplished all nineteen (19) of its Energy Management Plan goals, for a rating of **outstanding**. These included completion of energy and water conservation studies, progress toward qualifying additional buildings for the EPA Energy Star Building Label, energy efficiency design requirements for the proposed Building 50X and the E-Lab, as well as for the Molecular Foundry, distribution of procurement guidelines for energy efficient products, identification of low cost energy retrofits, application for rebates, grants and related financial incentives, technical support to FEMP and other agencies, proposals for CNG vehicles and a photovoltaic power project, progress toward converting to a new site-wide energy management control system, coordination of peak load management during energy shortages, development of operating plans for a new 2 MW emergency generator, and numerous employee energy awareness activities. A notable achievement is the Laboratory's selection for a 2002 DOE Energy Saver Showcase Award. This award was for installation of an estimated 400 Berkeley Lamps in the Engineering Building, which reduced lighting energy use by 66 percent while improving overall lighting quality.

Performance Rating (Adjectival)**: Outstanding** 95.00%

Performance Area: PROPERTY

Property Management will employ the Property Performance Assessment Model (PPAM) for Fiscal Year 2002. The Property Management organization will finalize its final assessment plan with DOE and UC by October 1, 2001. This plan will cover performance thresholds, performance ranges (gradients), specific scoring criteria, and frequency of reporting.

In this Model, points are used to determine the score for each activity. Weights and the corresponding points are shown below at the Objective, Criteria, and Performance Measure levels. At the Basis for Rating level, the total possible points for each activity are shown. Overall ratings will be based on the following (where a total weight of 100% is equal to 500 points):

< 352 Unsatisfactory
>= 352 Marginal
>= 400 Good
>= 450 Excellent
>= 475 Outstanding

The Adjectival Rating and Contractual Score will be assigned using the following scoring table:

Property Management
Scoring Table

PPAM Points Earned	Translation to Appendix F Contractual Scoring	Adjectival Rating
304-319	52	**Unsatisfactory**
320-335	55	
336-351	58	
352-367	62	**Marginal**
368-383	65	
384-399	68	
400-416	72	**Good**
417-432	75	
433-449	78	
450-459	82	**Excellent**
460-468	85	
469-474	88	
475-483	92	**Outstanding**
484-492	95	
493-500	98	

Performance Objective: #1.0 Accountability for Equipment and Sensitive Property and for Precious Metals

The Laboratory shall ensure accountability for equipment and sensitive personal property and for precious metals **(Weight = 50%)**

Criterion: #1.1 Accountability for Equipment and Sensitive Property and for Precious Metals

The Laboratory shall conduct successful personal property and precious metal inventories as established in its inventory planning. **(Weight = 35%)**

Performance Measure: #1.1.a Property and Precious Metals Accounted For

The percentage of personal property and precious metals accounted for, as described in the inventory plans approved by DOE, will be measured. **(Weight = 35%)**

Assumptions:

Gradients:

Exhibit I LBNL Property Sub-Gauges FY2002, provides the activities to be measured, point value for each activity, and performance ranges (gradients).

Performance Narrative:

The Laboratory rates **outstanding** in this area. During FY 2002, LBNL conducted a wall-to-wall inventory of both equipment and sensitive items. From a total equipment population of 6,544 items (valued at $487,360,581) 6,410 items (valued at $485,109,471) 99.5 percent were located.

From a total sensitive property population of 8,563 items (valued at $40,999,289) 8,484 items (valued at $40,683,326) 99.2 percent were located.

An inventory validation of 102 (equipment and sensitive) items was conducted, during which all items were accounted-for. The Organizational Property Management Officer (OPMO) participated during the validation.

All (42,607 grams) precious metals were accounted-for without unexplained loss.

Performance Rating (Adjectival)**: Outstanding**	169	96.00%

Criterion: #1.2 Identification of Items Subject to Inventory

The Laboratory will ensure personal property items that are subject to inventory are accurately identified. **(Weight = 15%)**

Performance Measure: #1.2.a Accuracy of Identification

The percentage of items accurately identified in the property database will be measured. **(Weight = 15%)**

Assumptions:

Gradients:

Exhibit I LBNL Property Sub-Gauges FY2002, provides the activities to be measured, point value for each activity, and performance ranges (gradients).

Performance Narrative:

The Laboratory rates **outstanding** in this area. Three important and distinct elements contribute to this overall performance area at LBNL: 1) Property tagged when received, 2) Tagging requests completed in fifteen (15) days, and 3) Percent of property numbers correctly identified in the database (determined by floor to database sampling).

During 2002, LBNL achieved 97.1 percent for property tagged when received. This represents a slight decrease from last year's 98.1 percent. LBNL achieved 96.3 percent of property tagging requests performed within fifteen days of the request, an improvement from 94.8 percent in FY 2001. The result of the floor-to-database sampling for FY 2002 was 97.9 percent, down from 100 percent in FY 2001.

These are important performance elements in that they are effective measures for assessing the reliability and integrity of the personal property information contained in the property management database.

Performance Rating (Adjectival)**: Outstanding**	70	90.00%	

Performance Objective: #2.0 Stewardship Over Personal Property

The Laboratory shall ensure that both stewardship and custodianship for personal property is maintained. **(Weight = 20%)**

Criterion: #2.1 Organizational Stewardship and Individual Accountability

The Laboratory will ensure organizational and individual accountability (stewardship and custodianship, respectively) for property. **(Weight = 20%)**

Performance Measure: #2.1.a Timeliness of Assignment

The accountable individual is identified for equipment and sensitive property, and the timeliness of such identification is measured. **(Weight = 20%)**

Assumptions:

Gradients:

Exhibit I LBNL Property Sub-Gauges FY2002, provides the activities to be measured, point value for each activity, and performance ranges (gradients).

Performance Narrative:

The Laboratory rates **outstanding** in this area. Personal Accountability is arguably the single most critical of the Department's guiding principles for personal property management. It is recognized as the key factor which contributes to successful inventories and the on-going protection and control of property by the assigned custodians between inventory campaigns.

The initial step in achieving personal accountability is assigning individual property custodians. Accordingly, during 2002, LBNL ensured that 99.9 percent of new property received was assigned to the responsible custodian within sixty (60) days. A follow-up statistical sample validation conducted of custodial assignments revealed that 96.3 percent of the custodial assignments tested were accurate in the database.

Performance Rating (Adjectival)**: Outstanding**	94	94.00%	

Performance Objective: #3.0 Vehicle Utilization

The Laboratory shall have a program to manage its vehicle fleet.

(Weight = 5%)

Criterion: #3.1 Fleet Management

The Laboratory shall manage its fleet to ensure appropriate vehicle utilization.

(Weight = 5%)

Performance Measure: # 3.1.a Vehicle Utilization

The Laboratory shall measure the percentage of utilization for each vehicle classification measured.

(Weight = 5%)

Assumptions:

Gradients:

Exhibit I LBNL Property Sub-Gauges FY2002, provides the activities to be measured, point value for each activity, and performance ranges (gradients).

Performance Narrative:

Motor vehicle utilization at LBNL scored **outstanding** during 2002, with the discretionary and essential vehicle classes achieving 115.9 percent and 119.7 percent utilization respectively, when measured against approved utilization criteria.

Performance Rating (Adjectival)**: Outstanding**	25	100.00%

Performance Objective: #4.0 Information to Improve/Maintain Processes (Systems Evaluation)

The Laboratory ensures that Property Management programs are consistent with policies and procedures approved by DOE. **(Weight = 10%)**

Criterion: #4.1 Self-Assessment of Policies and Procedures

The Laboratory shall plan, conduct, document, and report annually, the results of a successful property management system evaluation. **(Weight = 10%)**

Performance Measure: # 4.1.a Assessing Support Processes

Selected property activities/support processes shall be assessed against identified system evaluation criteria. **(Weight = 10%)**

Assumptions:

The Laboratory will develop score sheets that identify activities/support processes to be assessed to ensure that Property Management programs are consistent with policies and procedures approved by DOE. Elements to be evaluated and evaluation criteria will be submitted to and approved by DOE as part of the annual Personal Property PPAM finalization process.

Gradients:

Exhibit I LBNL Property Sub-Gauges FY2002, provides the activities to be measured, point value for each activity, and performance ranges (gradients).

Performance Narrative:

The overall rating for this element is **outstanding**. During 2002, the LBNL Property Team assessed property management processes in order to assess compliance with DOE-approved policies and procedures. This self-assessment process is an important complement to OAK's operational awareness program. Areas addressed in the assessment include: general personal property programs (i.e. subcontractor-held property, loans/borrows, etc.), high-risk property management, excess and salvage, and the precious metals program. Under the PPAM philosophy, the assessment is conducted utilizing a self-assessment worksheet which contains mutually agreed to activities for assessment and

performance ranges. Based on the assessed performance, the Laboratory is granted a number of points for each activity. A total of fifty (50) points is allotted for the entire assessment. During FY 2002, not all excess assets were evaluated for excess and salvage within five (5) days. Therefore, LBNL earned forty-seven (47) of the possible fifty (50) point total.

Performance Rating (Adjectival)**: Outstanding**	47	94.00%

Performance Objective: # 5.0 Customer Alignment

The Laboratory shall ensure that there is a property management program for identifying and evaluating customer needs and for building and maintaining positive customer relations.
(Weight = 5%)

Criterion: # 5.1 Monitoring Customer Alignment

The Property Management organization shall ensure that the property management programs are responsive to customer expectations. **(Weight = 5%)**

Performance Measure: #5.1.a Aligning Customer Expectations

The Laboratory will have processes in place to monitor customer expectations of property management tools and products with regard to ease of use, timeliness, accuracy, and certainty.
(Weight = 5%)

Assumptions:

Gradients:

Exhibit I LBNL Property Sub-Gauges FY2002, provides the activities to be measured, point value for each activity, and performance ranges (gradients).

Performance Narrative:

This measure is rated **outstanding**. LBNL utilized customer surveys which were distributed, reviewed and tabulated by the Laboratory's independent Property Management Advisory Board. The survey was provided to a population of thirty-six (36) individuals, consisting of Property Representatives and Property Coordinators. The areas included in the survey were: communications, database, efficiency, quality and value of feedback. The advisory board verified completion of action items resulting from last year's report. For the majority of issues the responses were positive. One minor area of concern was issues raised regarding "user friendliness" of the LBNL property management database.

Customer satisfaction was computed to be 90 percent.

Performance Rating (Adjectival)**: Outstanding**	25	100.00%	

Performance Objective: # 6.0 Balancing Performance and Cost

The Laboratory ensures that property is managed appropriately to balance performance and cost. **(Weight = 5%)**

Criterion: #6.1 Balancing Performance/Cost Ratios

The Laboratory shall ensure that property processes/products are provided in the most cost efficient manner while maintaining desired levels of performance. **(Weight = 5%)**

Performance Measure: #6.1.a Measuring Cost Efficiency/ Effectiveness

The Laboratory shall measure its ability to effectively balance property management costs and performance. **(Weight = 5%)**

Assumptions:

Where properly justified and approved by DOE, the Laboratory may elect to establish a measure that extends over multiple evaluation periods. The first year the Laboratory will submit a plan outlining the approach to be employed in establishing an appropriate baseline and developing the gradients for the following evaluation period. Approach and deployment of the plan will be evaluated the first year. The final milestone of the plan will be to develop gradients for results desired by the end of the final year. These gradients will be the basis for evaluation in the subsequent evaluation periods.

Gradients:

Exhibit I LBNL Property Sub-Gauges FY2002, provides the activities to be measured, point value for each activity, and performance ranges (gradients).

Performance Narrative:

This measure is rated **outstanding**. In FY 2002, LBNL selected the precious metals management program as an opportunity for improvement. LBNL chose to address this initiative over a two-year period. Process improvement opportunities have been identified in the areas of precious metals acquisitions, tracking and inventory, and communications with users and the procurement department.

A plan of action has been developed, with a baseline representing the time expended to complete the FY 2002 precious metals inventory. LBNL will attempt to reduce the FY 2003 precious metals inventory campaign by fifty (50) percent, or two and a half months.

Performance Rating (Adjectival)**: Outstanding**	25	100.00%

Performance Objective: #7.0 Organizational Vitality

The Laboratory shall ensure that there is a program for achieving and maintaining organizational vitality in the property management organization. **(Weight = 5%/Total Points = 25)**

Criterion: #7.1 Evaluation of Organizational Agility and Employee Alignment

The Laboratory will foster organizational agility and employee alignment in its property management organization. **(Weight = 5%/Total Points = 25)**

Performance Measure: #7.1.a Measuring Organizational Agility and Employee Alignment

The Laboratory will have a process in place to measure organizational vitality as well as to understand and address workforce expectations. **(Weight = 5%)**

Assumptions:

Organizational vitality is the alignment of organizational performance goals and workforce skills (both current and future). The Laboratory will develop score sheets to evaluate elements determined necessary to ensure its workforce is ready for current and future operations and projected challenges. Elements to be evaluated and scored will be submitted to and approved by DOE as part of the annual PPAM finalization process.

Gradients:

Exhibit I LBNL Property Sub-Gauges FY2002, provides the activities to be measured, point value for each activity, and performance ranges (gradients).

Performance Narrative:

This measure is rated **outstanding.** During FY 2002, the LBNL Property Management organization addressed the area of organizational vitality in the following ways: written publications distributed to property management customers and the general Laboratory population, critical property management information reported to Laboratory management, and presentations at new employee orientations. The LBNL property management team members also actively participate in the National Property Management Association.

Performance Rating (Adjectival)**: Outstanding**	25	100.00%

EXHIBIT I

LBNL PROPERTY SUB-GAUGES – FY 2002

Measured Activities/Sub-Gauges Activity/Support Process		Gradient 60/70/80/90/100	Value of Activity
Product Goodness			
1.1.a	Property and Precious Metals Accounted For		
1.1.a.1	The Laboratory will inventory sensitive assets.	<98.0/98.0/98.7/99.2/99.5	60
1.1.a.2	The Laboratory will inventory equipment assets.	<98.0/98.0/98.7/99.2/99.5	90
1.1.a.3	The Laboratory will account for precious metals.	<98.0/98.0/99.0/99.6/99.8	25
			175
1.2.a	Accuracy of Identification		
1.2.a.1	Receiving will tag new assets when received.	<85.0/85.0/90.0/95.5/98.0	25
1.2.a.2	Property will tag assets requiring field tagging within 15 days.	<85.0/85.0/90.0/95.5/98.0	25
1.2.a.3	Property will verify if in-service assets are recorded in database.	<85.0/85.0/90.0/95.5/98.0	25
			75
2.1.a	Timeliness of Assignment		
2.1.a.1	Property will verify if assets are accurately assigned to custodians by Divisions.	<85.0/85.0/90.0/95.5/98.0	60
2.1.a.2	Property will verify if new assets are assigned to a custodian within 60 days.	<85.0/85.0/90.0/95.5/98.0	40
			100
3.1.a	Vehicle Utilization		
3.1.a.1	Do discretionary vehicles meet utilization criteria?	<85.0/85.0/90.0/95.5/98.0	13
3.1.a.2	Do essential vehicles meet utilization criteria?	<85.0/85.0/90.0/95.5/98.0	12
			25
Process Goodness			
4.1.a	Assessing Support Processes		
4.1.a.1	Property will assure that property policies and procedures are properly implemented.	Scoresheet*	50
5.1.a	Aligning Customer Expectations		
5.1.a.1	Property will assure customers are satisfied with property management services.	Per Protocol*	25
6.1.a	Measuring Cost Efficiency/Effectiveness		
6.1.a.1	Property will reengineer precious metals processing to determine if any benefits resulted from reengineering tasks.	Per Protocol*	25

EXHIBIT I

LBNL PROPERTY SUB-GAUGES – FY 2002

Measured Activities/Sub-Gauges Activity/Support Process	Gradient 60/70/80/90/100	Value of Activity
Workplace Goodness		
7.1.a Measuring Organizational Agility and Employee Alignment		
7.1.a.1 Property Management will establish a training and development environment for the Laboratory community and Laboratory management.	Per Protocol*	25

* This measure is point scored rather than being adjectivally rated. Points earned at the performance measure level contribute to the overall point total for Property Management. The overall point total is used to arrive at a final numerical score and adjectival rating based on the Property Management Scoring Table included in Appendix F of the Prime Contract and on page 239 of this document.

Report Methodology and Scoring Tables

Report Methodology

OBJECTIVE STANDARDS OF PERFORMANCE

This Annual Performance Evaluation and Appraisal Report is the Department of Energy (DOE) Contracting Officer's Fiscal Year 2002 written assessment of the Contractor's performance at the Lawrence Berkeley National Laboratory. It is based upon the DOE appraisal program and the Contracting Officer's evaluation of the Contractor's Self-Assessment. The Contractor and DOE have agreed to use a performance-based management system for oversight at the Laboratory (Contract Clause 2.6, Performance Based Management.) Annual Objective Standards of Performance under the contract, Appendix F, are used for the appraisal and evaluation of work under contract and is supported by a system that includes: (1) the utilization of self-assessment and integrated oversight methodologies, systems, and processes to enhance operational efficiency and performance effectiveness, (2) the use of peer review and self-assessment in the appraisal and evaluation of science and technology/programmatic performance and, (3) such other administrative processes and procedures as the Parties may mutually agree to, from time to time, as they deem necessary to effect the intent of Contract Clause 2.6 and Appendix-F. Self-assessments are the principal means by which the Contractor evaluates compliance with the performance objectives described in Appendix F. DOE Oakland Operations Office (OAK) and the DOE Berkeley Site Office (BSO) validate the self-assessment and evaluate the Contractor's performance. The validation effort is conducted by teams responsible for the various functional areas represented in Appendix F. These teams, with guidance from DOE OAK, BSO and DOE management, are responsible for developing an adequate, independent basis for assessing the quality, credibility, and accuracy of the Contractor's self-assessment; and a basis for DOE's written assessment and evaluation of the Contractor's performance.

This Appraisal Report meets the following contract requirements:

- Provide a summary of the results from the conduct of the DOE OAK validation program and evaluation of performance of work under contract as required by Clause 2.6.

- Provide a written assessment of the Contractor's performance under the contract based upon the DOE OAK appraisal program and the Contracting Officer's evaluation of the Contractor's self-assessment as required by Clause 2.6(e).

- Provide the basis for determination of the Contractor's Program Performance Fee, as required by Clause 5.3.

1. Components of Laboratory Evaluation Process

The first component of the performance evaluation process is the evaluation of Science and Technology/Programmatic performance. The University of California President's Council on the National Laboratories performs a comprehensive and balanced Peer Review and evaluates the quality of science and technology at the Laboratory. The Council prepares a report that the University's Laboratory Affairs Office uses to develop an adjectival and numeric rating for the evaluation of Science and Technology at the Laboratory. DOE Headquarters (DOE HQ) program managers and their DOE OAK counterparts validate the Science and Technology self-assessment.

The second component of the performance evaluation process is the annual Contractor Self-Assessment of the operations and administrative systems at LBNL included in Section C of Appendix F. The results of this Self-Assessment and proposed corrective action plans are then presented to the University of California, Laboratory Administration Office (UCLAO) by the Laboratory. This becomes the foundation for the Contractor's Self-Assessment.

UCLAO management also evaluates the administrative systems for the Laboratory using the self-assessments and corrective action plans provided by the Laboratory and the established Appendix F performance measures. UCLAO establishes an aggregate "rating" for the Laboratory based on the evaluation of each functional area and combines this result with the ratings for Science and Technology for a total adjectival and numeric rating.

DOE OAK reviews and validates Contractor performance against the established Appendix F performance objectives, the UCLAO rating of the Laboratory Self-Assessment, and corrective action plans. This effort is accomplished by teams reflecting expertise in the various functional disciplines required by the Appendix F administrative and operational systems. All teams have the opportunity to observe the Laboratory's independent evaluation of its self-assessment. This report is the product of their review and validation of the Contractor's performance. The primary objective of this report is to provide the annual Contracting Officer's written assessment of the Contractor's contract performance and results.

2. Self-Assessment Period

Designed to capture performance for Fiscal Year 2002, the self-assessment period for the Laboratory is October 1, 2001 through September 30, 2002, unless specified in the Performance Objective. Significant performance between the later date and the end of the Fiscal Year is to be assessed by the Laboratory and provided as a supplement to the self-assessment. The Laboratory provides its self-assessment to UC on October 1, 2002. On November 1, 2002, the Contractor (UC) provided the self-assessment and proposed rating of LBNL to DOE OAK.

The Contractor and DOE agreed to use the following table for adjectival graded and numeric scoring:

DOE-UC Rating Adjectives

Numerical Range	Adjectival Description	Definition
100-90	Outstanding	Significantly exceeds the standard of performance; achieves noteworthy results; accomplishes very difficult tasks in a timely manner.
89-80	Excellent	Exceeds the standard of performance; although there may be room for improvement in some elements, better performance in all other elements offset this.
79 - 70	Good	Meets the standard of performance; assigned tasks are carried out in an acceptable manner - timely, efficiently, and economically. Deficiencies do not substantively affect performance.
69- 60	Marginal	Below the standard of performance; deficiencies are such that management attention and corrective action are required.
< 60	Unsatisfactory	Significantly below the standard of performance; deficiencies are serious, and may affect overall results, immediate senior management attention, and prompt corrective action is required.

3. Methodology for Validation of Numerical Scoring for Contractor Self-Assessment - Science & Technology (S&T) FY 2002

a. Introduction

The programmatic assessment of the Contractor is based upon the use of peer review and self-assessment in the appraisal and evaluation of S&T/Programmatic Performance; and validated by DOE HQ and BSO program managers. Using the programmatic assessment, the ratings for the science and technology are decided using the rating table below. To convert the adjectival rating to an equivalent numerical (percentage) score, the methodology outlined below is utilized.

b. Methodology

For each programmatic assessment and defined by the Parties appraisal area for FY 2002, a specific number is applied, as follows:

Scoring Crosswalk Table

Adjectival Rating	Range	Score
Outstanding	100-90 %	95
Excellent	80-89 %	85
Good	70-79 %	75
Marginal	60-69 %	65
Unsatisfactory	59 ↓ %	55

Example

Science and Technology	Adjectival Rating	Numeric Score	Weight	Weighted Score
Biology and Biotechnology	**Outstanding**	**91.67**	**0.03**	**2.75**
Criteria 1	Excellent	85		
Criteria 2	Outstanding	95		
Criteria 3	N/A			
Criteria 4	Outstanding	95		

(85 + 95 + 95 = 275/3=91.67=Outstanding)

The scoring range table is used because averaging yields results other than 95, 85, 75, 65, or 55.

The overall score for the Science and Technology/Programmatic performance assessment is calculated by totaling the scores from each Research and Development (R&D) Division. All Divisions are weighted in proportion to their relative funding in the calculation of the overall Science and Technology score. Similarly, DOE S&T program evaluations are funding weighted in the overall S&T evaluation. DOE weights all applicable criteria equally within each LBNL program.

The weighted scores in the programmatic appraisal areas are totaled and the resulting percentage is assigned an adjectival rating based on the scoring range in the Scoring Crosswalk Table. Thus, for FY 2002, S&T's weighted score is 93.3 percent, which equates to an **outstanding** adjectival rating. 93.3 percent of 500 equals 466.6 points for FY 2002 when rounded. (See Scoring Table B-FY 2002 Science & Technology Scores.)

4. Appraisal Component Methodology

The DOE OAK Functional Teams validate the Contractor's self-assessment on quality, accuracy, and credibility, and consider other sources of information, reviews, or tests. From this process the teams recommend a numeric and adjectival rating of the Contractor's performance.

(i) For Science & Technology the methodology is the same with a heavy reliance on assessment from DOE HQ program offices.

(ii) Laboratory Management, Operations and Administration Functional Areas

The Parties agree that the operational areas of "Environment, Safety and Health (110 points,)" Project/Facilities/Construction Management (50 points) and Laboratory Management (100 points) are weighted higher than the other functional areas. All other operations and administration functional areas are equal at 40 points.

(iii) Performance Objectives

The Parties establish the weights to be assigned at the performance objective and criteria level within the functional teams.

(iv) Performance Objectives Not Accomplishable During the Rating Period

The methodology used by DOE OAK is to assess these performance objectives where there is enough information available to render an assessment of Contractor performance. In cases where a performance assessment can not be made, it is decided not to rate the performance objective. In such cases the performance objective's weight is maintained, if feasible, by reassigning the performance criteria weights within that performance objective. If that is not possible the weight of the objective is added proportionately to other performance objectives in the functional area.

(v) Sources of Information

The initial source of information about performance was obtained from the Contractor self-assessment and evaluation. Sources of information used by DOE to validate the credibility and conclusions of the self-assessment and the review of the self-assessment included, but were not limited to:

- Functional appraisals conducted by line and functional managers with input from Headquarters, as appropriate.
- Assessment Management Plans for Operational oversight of the Contractor that include in their scope Appendix F performance objectives.
- Daily operational awareness activities, including interactions, walk-throughs, management meetings or other modes of formal and informal contact with the Contractor.
- External and internal audits and evaluations, such as GAO/OIG reviews, ES&H assessments, Inspections and Evaluations, etc.
- Review and validation efforts of Appendix F measures during the two-week performance assessment review of the Contractor.

(vi) Factual Accuracy Check

A draft of the performance narrative of this report was provided to UC on December 16, 2002, to check the factual accuracy of its contents. The University returned its comments by December 20, 2002.

5. Laboratory Management, Operations and Administration Scoring – Tables A and C

Column 1: **POSSIBLE POINTS -** represents the total points allocated for the entire functional area. For example, the functional area of Laboratory Management is allocated 100 points and 400 points is the total for all of the operations/administration section. This is the first tier for the weightings of each functional area; all other weightings within a functional area are sub-ordinate to this overall weight [or points available.]

All functional areas are not equal to each other; they are weighted using a hierarchical method. For example, in FY 2002, the functional area of Environmental Restoration and Waste Management is allocated a total of 40 points; Project/Facilities/Construction Management is allocated 50 points, with the exception of Environment, Safety and Health, which is allocated 110 points, all other areas are allocated 40 points.

While Column 1 (possible points) represents the total points available for that functional area, the total points available are further broken down [or allocated] by performance objective(s), and within each objective, by criteria and the actual performance measure(s).

Column 2: **SCORE** - represents the total points awarded to the contractor, through the DOE evaluation process, for each functional area for the fiscal year. For example, if a functional area has

40 points available, the DOE evaluation would result in a numeric score of 40 or less. Thus, it represents the final scoring for the functional area. The summation of Column 2 from each functional area results in the overall score for Operations/Administration functional areas.

Column 3: **PERCENT** - represents the numeric score, expressed as a percentage of total points available. In the above example of a functional area with 40 points, if the functional area received 36 points, this would equate to 90 percent.

6. Unique Methodology for Property Management Scores

DOE OAK has used specific, unique methodology only applicable to the property management performance area in calculating the overall score, percent and adjectival rating for the FY 2001 performance. The Parties agree upon the use of a rating table designed to identify a range of **(PPAM)** points earned and the translation of such points to a numeric scoring for the purposes of the Appendix F performance rating for FY 2002. (See Property Scoring Table C).

FY 2002 Appendix F
Property Scoring Table

PPAM Points Earned	Translation to Appendix F Contractual Scoring	Adjectival Rating
493-500	98	Outstanding
484-492	95	
475-483	92	
469-474	88	Excellent
460-468	85	
450-459	82	
433-449	78	Good
417-432	75	
400-416	72	
384-399	68	Marginal
368-383	65	
352-367	62	
336-351	58	Unsatisfactory
320-335	55	
304-319	52	

Using the PPAM model, Property Management could earn from 0 up to 500 points in their performance. If the Contractor earns 480 points (performance in the range of 475 - 483) falls into the category of 92 percent for an outstanding adjectival rating. (Even though mathematically, the total scores for each element adds up to 43.1 out of a possible 45 points or 95.9 percent).

7. Methodology for Financial Management Scores

In this Model, points are used to determine the score for each activity. Weights and corresponding points are shown in the contract Appendix F, Section C, Objectives, Criteria, and Performance Measure Levels. The final rating will be based on the total activity points earned. The rating percentage will be calculated as a ratio of total points earned to total points possible (where a total weight of 100 percent is equal to 1,000 points.)

Table A - Laboratory Management

PERFORMANCE OBJECTIVES, CRITERIA AND MEASURES	Column 1	Column 2	Column 3
	Possible Points	SCORE	PERCENT
LABORATORY MANAGEMENT	**100.0**	**95.00**	**95.0%**
PERFORMANCE OBJECTIVE #1.0 Laboratory Leadership (Weight =100%)	**100.0**	**95.00**	**95.0%**
1.1 Institutional Stewardship and Viability (Weight = 100%)	**100.0**	**95.00**	**95.0%**
1.1.a Planning	14.3	13.58	95.0%
1.1.b Establishing and Communicating Performance Expectations	14.3	13.58	95.0%
1.1.c Stewardship of Assets	14.3	13.58	95.0%
1.1.d Effective Resource Management	14.3	13.58	95.0%
1.1.e Diversity Leadership and Awareness Eval.	14.3	13.58	95.0%
1.1.f Community Relations	14.3	13.58	95.0%
1.1.g Accountability and Commitments	14.3	13.58	95.0%

Table B - Science and Technology Scores
Lawrence Berkeley National Laboratory

SCIENCE AND TECHNOLOGY		ADJECTIVAL RATING	FUNDING ($M)	WEIGHT	NUMERIC SCORE	WEIGHTED SCORE
BASIC ENERGY SCIENCES		**OUTSTANDING**	**79.3**	**24.4%**	**95.0**	**23.20**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	Outstanding				
Criteria 4	Programmatic Performance and Planning	Outstanding				
HIGH ENERGY PHYSICS		**EXCELLENT***	**33.6**	**10.3%**	**88.5**	**9.16**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	Outstanding				
Criteria 4	Programmatic Performance and Planning	Excellent				
NUCLEAR PHYSICS		**EXCELLENT***	**19.5**	**6.0%**	**89.3**	**5.36**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	Outstanding				
Criteria 4	Programmatic Performance and Planning	Excellent				

Table B - Science and Technology Scores
Lawrence Berkeley National Laboratory

SCIENCE AND TECHNOLOGY		ADJECTIVAL RATING	FUNDING ($M)	WEIGHT	NUMERIC SCORE	WEIGHTED SCORE
COMPUTING SCIENCES		**OUTSTANDING**	**65.8**	**20.3%**	**95.0**	**19.25**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	Outstanding				
Criteria 4	Programmatic Performance and Planning	Outstanding				
FUSION ENERGY SCIENCES		**OUTSTANDING**	**5.9**	**1.8%**	**95.0**	**1.73**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	N/A				
Criteria 4	Programmatic Performance and Planning	Outstanding				
BIOLOGICAL AND ENVIRONMENTAL RESEARCH		**OUTSTANDING**	**71.5**	**22.0%**	**95.0**	**20.92**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	N/A				
Criteria 4	Programmatic Performance and Planning	Outstanding				

Table B - Science and Technology Scores
Lawrence Berkeley National Laboratory

SCIENCE AND TECHNOLOGY		ADJECTIVAL RATING	FUNDING ($M)	WEIGHT	NUMERIC SCORE	WEIGHTED SCORE
ENERGY EFFICIENCY & RENEWABLE ENERGY		**EXCELLENT**	**30.1**	**9.3%**	**88.3**	**8.19**
Criteria 1	Quality of Science	Excellent				
Criteria 2	Relevance to National Needs and Agency Missions	Outstanding				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	N/A				
Criteria 4	Programmatic Performance and Planning	Excellent				
CIVILIAN RADIOACTIVE WASTE MANAGEMENT		**OUTSTANDING**	**11.5**	**3.5%**	**91.7**	**3.25**
Criteria 1	Quality of Science	Outstanding				
Criteria 2	Relevance to National Needs and Agency Missions	Excellent				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	N/A				
Criteria 4	Programmatic Performance and Planning	Outstanding				
FOSSIL ENERGY		**EXCELLENT**	**7.5**	**2.3%**	**85.0**	**1.96**
Criteria 1	Quality of Science	Excellent				
Criteria 2	Relevance to National Needs and Agency Missions	Excellent				
Criteria 3	Performance in the Technical Development and Operation of Major Research Facilities	N/A				
Criteria 4	Programmatic Performance and Planning	Excellent				
			324.7			
ADJECTIVAL RATING		**OUTSTANDING**				
PERCENTAGE SCORE						**93.0**
APPENDIX F S&T POINT SCORE						**465.1**

Table B - Science and Technology Scores
Lawrence Berkeley National Laboratory

SCIENCE AND TECHNOLOGY	ADJECTIVAL RATING	FUNDING ($M)	WEIGHT	NUMERIC SCORE	WEIGHTED SCORE

* Overall rating and score reflects aggregated average of individual criteria scores, some at the low-end of their respective ranges, yielding the overall result shown.

Table C - Operations and Administration System Scores

PERFORMANCE OBJECTIVES, CRITERIA AND MEASURES	Column 1	Column 2	Column 3
	Possible Points	SCORE	PERCENT
ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT	**40.0**	**38.2**	**95.5%**
PERFORMANCE OBJECTIVE #1.0 Environmental Restoration and Waste Management (Weight = 100%)	**40.0**	**38.2**	**95.5%**
1.1 Waste Management (Weight = 25%)	**10.0**	**9.3**	**90.0%**
1.1.a Waste Management, Newly Generated Waste, Productivity	6.0	5.5	91.0%
1.1.b Waste Management, Legacy Waste Inventory Workoff	4.0	3.8	96.0%
1.2 EM Program Innovation (Weight = 25%)	**10.0**	**9.5**	**95.0%**
1.2.a Advancement of the EM Program	10.0	9.5	95.0%
1.3 Environmental Restoration, Schedule Variance (Weight = 25%)	**10.0**	**9.7**	**97.0%**
1.3.a Environmental Restoration	10.0	9.7	97.0%
1.4 Cost Variance (Weight = 25%)	**10.0**	**9.7**	**97.0%**
1.4.a EM Projects, Environmental Restoration Program	5.0	4.8	95.0%
1.4.b EM Projects, Waste Management	5.0	4.9	98.0%

Tables C - Operations and Administration System Scores

PERFORMANCE OBJECTIVES, CRITERIA AND MEASURES	Column1	Column2	Column3
	Possible Points	SCORE	PERCENT
ENVIRONMENT, SAFETY & HEALTH	**110.0**	**98.26**	**89.3%**
PERFORMANCE OBJECTIVE #1.0 Do Work Safely (Weight = 100%)	**110.0**	**98.26**	**89.3%**
1.1 ISM System Process Measure (Weight = 40%)	**44.0**	**40.14**	**91.2%**
1.1.a Leading indicators for Defining Work	8.8	7.76	88.15%
1.1.b Leading indicators for Identifying Hazards	8.8	7.92	90.0%
1.1.c Leading indicators for Controlling Hazards	8.8	8.36	95.0%
1.1.d Leading indicators for Performing Work	8.8	8.18	93.0%
1.1.e Leading indicators for Feedback and Improvement	8.8	7.92	90.0%
1.2 ISM System Outcome Measures (Weight = 60%)	**66.0**	**58.12**	**88.0%**
1.2.a Routine Exposures from Routine Activities	8.25	7.83	95.0%
1.2.b Radiation Protection of the Public and the Environment	8.25	7.83	95.0%
1.2.c Prevention of Unplanned Radiation Exposures	8.25	6.93	84.0%
1.2.d Control of Radioactive Material	8.25	6.51	79.0%
1.2.e Exposure to Chemical, Physical, and Biological Agents	8.25	7.42	90.0%
1.2.f Accident Prevention	8.25	7.17	87.0%
1.2.g Tracking Environmental Incidents	8.25	7.42	90.0%
1.2.h Waste Reduction and Recycling	8.25	7.01	85.0%

Table C - Operations and Administration System Scores

PERFORMANCE OBJECTIVES, CRITERIA AND MEASURES		Column1	Column2	Column3
		Possible Score	SCORE	PERCENT
FINANCIAL MANAGEMENT		**40.00**	**36.9**	**92.3%**
	Total FMPAM Points		**923**	
PERFORMANCE OBJECTIVE #1.0 Effective Accounting Practices	**(Weight = 12%)**	**4.80**	**4.65**	**96.9%**
1.1 Cash Management	**(Weight = 2%)**	**0.80**	**0.72**	**89.5%**
1.1.a Effectiveness of Disbursements		0.40	0.40	100.0%
1.1.b Effectiveness of Collections		0.40	0.32	79.0%
1.2 Account Management	**(Weight = 8%)**	**3.20**	**3.20**	**100.0%**
1.2.a Work For Others (WFO) Accounts - Use of UC Bridge Funding		0.96	0.96	100.0%
1.2.b High Risk Account Reconciliations		1.28	1.28	100.0%
1.2.c Asset Management		0.96	0.96	100.0%
1.3 Cost Effective	**(Weight = 2%)**	**0.80**	**0.736**	**92.0%**
1.3.a Demonstrated Cost Effectiveness of Accounting Processes		0.80	0.736	92.0%
PERFORMANCE OBJECTIVE #2.0 Financial Stewardship	**(Weight =30%)**	**12.00**	**10.59**	**88.3%**
2.1 Financial Compliance	**(Weight = 15%)**	**6.00**	**5.23**	**87.2%**
2.1.a Audit Results and Resolution		0.72	0.58	80.0%
2.1.b Internal Controls and Compliance on Subject Areas		1.44	1.30	90.0%
2.1.c Cost Accounting Practices		1.92	1.44	75.0%
2.1.d Accuracy of DOE Financial Statements		1.92	1.92	100.0%
2.2 Financial Reporting	**(Weight = 10%)**	**4.00**	**3.36**	**84.0%**

Table C - Operations and Administration System Scores

2.2.a	Internal Financial Management Reporting	1.44	1.44	100.0%
2.2.b	DOE and Other External Laboratory Reporting	2.56	1.92	75.0%
2.3	**Standards and Principles (Weight = 5%)**	**2.00**	**2.00**	**100.0%**
2.3.a	Financial Controls	1.20	1.20	100.0%
2.3.b	Financial Policies and Procedures	0.80	0.80	100.0%
PERFORMANCE OBJECTIVE #3.0	**External Budget Products and Services (Weight = 20%)**	**8.00**	**7.57**	**94.6%**
3.1	**Budget Formulation and Validation (Weight =5%)**	**2.00**	**2.00**	**100.0%**
3.1.a	DOE Budget Submission and Validation	2.00	2.00	100.0%
3.2	**Budget Execution and Cost Management (Weight = 15%)**	**6.00**	**5.57**	**92.8%**
3.2.a	Control of Funds	3.60	3.17	88.0%
3.2.b	Reports, Submissions, and Requests	2.40	2.40	100.0%
PERFORMANCE OBJECTIVE #4.0	**Effective Decision Support (Weight = 18%)**	**7.20**	**6.48**	**90.0%**
4.1	**Internal Planning, Reporting, and Analysis (Weight = 18%)**	**7.20**	**6.48**	**90.0%**
4.1.a	Cost Plan Development	3.60	3.60	100.0%
4.1.b	Institutional Distributed/Indirect Budget and Rate Management	3.60	2.88	80.0%
PERFORMANCE OBJECTIVE #5.0	**Effective Financial Management Systems (Weight = 10%)**	**4.00**	**4.00**	**100.0%**
5.1	**Effective Internal Systems (Weight = 5%)**	**2.00**	**2.00**	**100.0%**
5.1.a	Evolving to Meet Technology Advances	2.00	2.00	100.0%
5.2	**Support for DOE Initiatives (Weight = 5%)**	**2.00**	**2.00**	**100.0%**
5.2.a	Effectiveness of Support of DOE Initiatives	2.00	2.00	100.0%
PERFORMANCE OBJECTIVE #6.0	**Organizational Vitality (Weight = 10%)**	**4.00**	**3.64**	**91.0%**

Table C - Operations and Administration System Scores

6.1	**Organizational Management**	**(Weight = 5%)**	**2.00**	**1.80**	**90.0%**
6.1.a	Organization Management		2.00	1.80	90.0%
6.2	**Work Force Development**	**(Weight = 5%)**	**2.00**	**1.84**	**92.1%**
6.2.a	Controller's Organization Work Force Management		1.44	1.28	89.0%
6.2.b	Laboratory Work Force Management		0.56	0.56	100.00%

Table C - Operations and Administration System Scores

PERFORMANCE OBJECTIVES, CRITERIA AND MEASURES	Column1	Column2	Column3
	Possible Points	SCORE	PERCENT
HUMAN RESOURCES	**40.0**	**37.2**	**93.0%**
PERFORMANCE OBJECTIVE #1.0 Effectiveness of HR Operations (Weight = 100%)	**40.0**	**37.2**	**93.0%**
1.1 Compensation Programs (Weight = 15%)	**6.0**	**5.7**	**95.0%**
1.1.a Cost Competitive Compensation	6.0	5.7	95.0%
1.2 Employment of Minorities and Women (Weight = 10%)	**4.0**	**3.7**	**92.0%**
1.2.a Employment of Minorities and Women	4.0	3.7	92.0%
1.3 HR Systems and Processes (Weight = 15%)	**6.0**	**5.7**	**95.0%**
1.3.a Identify HR Systems/Processes for Improvements, Describe Results	6.0	5.7	95.0%
1.4 Labor Relations (Weight = 15%)	**6.0**	**5.7**	**95.0%**
1.4.a Laboratory will timely process Labor Grievanes/PERB Complaints	6.0	5.7	95.0%
1.6 Workforce Excellence (Weight =35%)	**14.0**	**12.6**	**90.0%**
1.6.a Workforce Planning/Staffing	4.0	3.8	95.0%
1.6.b Performance Management	6.0	5.5	92.0%
1.6.c Training	2.0	1.6	82.0%
1.6.d Recruitment	2.0	1.6	82.0%
1.7 Employee Relations (Weight = 10%)	**4.0**	**3.8**	**95.0%**
1.7.a Employee Relations	4.0	3.8	95.0%

Table C - Operations and Administration System Scores

PERFORMANCE OBJECTIVES, CRITERIA AND MEASURES	Column1	Column2	Column3
	Possible Points	SCORE	PERCENT
INFORMATION MANAGEMENT	**40.0**	**37.6**	**94.1%**
PERFORMANCE OBJECTIVE #1.0 Information Management Program (Weight = 100%)	**40.0**	**37.6**	**94.1%**
1.1 Operational Effectiveness (Weight = 30%)	**12.0**	**11.5**	**96.0%**
1.1.a Operational Effectiveness	12.0	11.5	96.0%
1.2 Customer Focus (Weight = 30%)	**12.0**	**11.2**	**93.0%**
1.2.a Level of Customer Service	12.0	11.2	93.0%
1.3 IM Stewardship (Weight = 20%)	**8.0**	**7.5**	**94.0%**
1.3.a Effective Management of Compliance and Commitments	8.0	7.5	94.0%
1.4 Strategic and Tactical Planning (Weight = 20%)	**8.0**	**7.4**	**93.0%**
1.4.a Planning Initiatives	8.0	7.4	93.0%

Table C - Operations and Administration System Scores

PERFORMANCE OBJECTIVES, CRITERIA AND MEASURES		Column1	Column2	Column3
		Possible Points	SCORE	PERCENT
PROCUREMENT	**(Weight=100%)**	**40.0**	**36.5**	**91.3%**
PERFORMANCE OBJECTIVE #1.0 Mgmt. of Internal Business Processes	**(Weight = 65%)**	**26.0**	**23.7**	**91.1%**
1.1 System Evaluation	**(Weight = 30%)**	**12.0**	**11.8**	**98.0%**
1.1.a Assessing System Operations		12.0	11.8	98.0%
1.2 Pursuing Best Practices	**(Weight = 20%)**	**8.0**	**7.6**	**95.0%**
1.2.a Measuring Effectiveness		8.0	7.6	95.0%
1.3 Supplier Performance	**(Weight = 15%)**	**6.0**	**4.3**	**72.0%**
1.3.a Measuring Supplier Performance		6.0	4.3	72.0%
1.4 Socioeconomic Subcontracting	**(Weight - 0%)**	**0.0**	**0.0**	**0.0%**
1.4.a Meeting Socioeconomic Commitments		0.0	0.0	0.0%
PERFORMANCE OBJECTIVE #2.0 Customer Satisfaction	**(Weight = 10%)**	**4.0**	**3.7**	**92.0%**
2.1 Customer Feedback	**(Weight = 10%)**	**4.0**	**3.7**	**92.0%**
2.1.a Customer Satisfaction Rating		4.0	3.7	92.0%
PERFORMANCE OBJECTIVE #3.0 Learning and Growth	**(Weight = 15%)**	**6.00**	**5.4**	**89.3%**
3.1 Employee Feedback	**(Weight = 5%)**	**2.0**	**1.8**	**92.0%**

Table C - Operations and Administration System Scores

3.1.a Employee Satisfaction Rating	2.0	1.8	92.0%
3.2 Information Availability (Weight = 10%)	**4.0**	**3.5**	**88.0%**
3.2.a Measuring Availability of Information	4.0	3.5	88.0%
PERFORMANCE OBJECTIVE #4.0 Managing Financial Aspects (Weight = 10%)	**4.0**	**3.8**	**95.0%**
4.1 Process Cost (Weight = 10%)	**4.0**	**3.8**	**95.0%**
4.1.a Cost to Spend Ratio	4.0	3.8	95.0%

Table C - Operations and Administration System Scores

PERFORMANCE OBJECTIVES, CRITERIA AND MEASURES		Column1	Column2	Column3
		Possible Points	SCORE	PERCENT
PROJECT/FACILITIES & CONSTRUCTION MANAGEMENT	**(Weight=100%)**	**50.0**	**45.1**	**90.2%**
PERFORMANCE OBJECTIVE #1.0 Real Property Management	**(Weight = 5%)**	**2.5**	**2.4**	**96.0%**
1.1 Real Property Management	**(Weight = 5%)**	**2.5**	**2.4**	**96.0%**
1.1.a Program Implementation		2.5	2.4	96.0%
PERFORMANCE OBJECTIVE #2.0 Physical Assets Planning	**(Weight = 14%)**	**7.0**	**6.7**	**95.0%**
2.1 Comprehensive Integrated Planning Process	**(Weight = 14%)**	**7.0**	**6.7**	**95.0%**
2.1.a Effectiveness of Planning Process		7.0	6.7	95.0%
PERFORMANCE OBJECTIVE #3.0 Project Management	**(Weight = 33%)**	**16.5**	**13.9**	**83.9%**
3.1 Construction Project Performance	**(Weight =20%)**	**10.0**	**8.0**	**80.0%**
3.1.a Work Performed		10.0	8.0	80.0%
3.2 Construction Project Cost	**(Weight = 13%)**	**6.5**	**5.9**	**90.0%**
3.2.a Total Estimated Cost (TEC)		6.5	5.9	90.0%
PERFORMANCE OBJECTIVE #4.0 Maintenance	**(Weight = 33%)**	**16.5**	**15.7**	**95.0%**
4.1 Facility Management	**(Weight = 13%)**	**6.5**	**6.2**	**95.0%**
4.1.a Program Implementation		6.5	6.2	95.0%

Table C - Operations and Administration System Scores

4.2	**Maintenance Program**	**(Weight = 20%)**	**10.0**	**9.5**	**95.0%**
4.2.a	Maintenance Index		10.0	9.5	95.0%
PERFORMANCE OBJECTIVE #5.0	**Utilities/Energy Conservation**	**(Weight = 15%)**	**7.5**	**6.5**	**86.9%**
5.1	**Reliable Utility Service**	**(Weight = 8%)**	**4.0**	**3.2**	**79.0%**
5.1.a	Electric Service		4.0	3.2	79.0%
5.2	**Energy Consumption**	**(Weight = 2%)**	**1.0**	**1.0**	**98.0%**
5.2.a	Building Energy		1.0	1.0	98.0%
5.3	**Energy Management**	**(Weight = 5%)**	**2.5**	**2.4**	**95.0%**
5.3.a	Energy Goals		2.5	2.4	95.0%

PERFORMANCE OBJECTIVES, CRITERIA AND MEASURES		Column1 Possible Points	Column2 SCORE	Column3 PERCENT
PROPERTY	**(Weight=100%)**	**40.0**	**36.8**	**92.0%**
		Total PPAM Points 483		
PERFORMANCE OBJECTIVE #1.0 Accountability for Equipment, Sensitive Property				
and for Precious Metals	**(Weight = 50%)**	**20.0**	**242.0**	
1.1 Accountability for Equipment, Sensitive Property				
and for Precious Metals	**(Weight = 35%)**	**14.0**	**169.0**	**96.0%**
1.1.a Property and Precious Metals Accounted For		14.0	169.0	96.0%
1.2 Identification of Items Subject to Inventory	**(Weight = 15%)**	**6.0**	**73.0**	**97.0%**
1.2.a Accuracy of Identification		6.0	73.0	97.0%
PERFORMANCE OBJECTIVE #2.0 Stewardship Over Personal Property	**(Weight = 20%)**	**8.0**	**94.0**	**98.0%**
2.1 Org.Stewardship and Individual Accountability	**(Weight =20%)**	**8.0**	**94.0**	**98.0%**
2.1.a Timeliness of Assignment		8.0	94.0	98.0%
PERFORMANCE OBJECTIVE #3.0 Vehicle Utilization	**(Weight = 5%)**	**2.0**	**25.0**	**100.0%**
3.1 Fleet Management	**(Weight = 5%)**	**2.0**	**25.0**	**100.0%**
3.1.a Vehicle Utilization		2.0	25.0	100.0%
PERFORMANCE OBJECTIVE #4.0 Information to Improve/Maintain Processes (Syst. Eval.	**(Weight = 10%)**	**4.0**	**47.0**	**94.0%**
4.1 Self-Assessment of Policies and Procedures	**(Weight = 10%)**	**4.0**	**47.0**	**94.0%**

4.1.a	Assessing Support Processes	4.0	47.0	94.0%
PERFORMANCE OBJECTIVE #5.0	**Customer Alignment (Weight = 5%)**	**2.0**	**25.0**	**98.0%**
5.1	**Monitoring Customer Alignment (Weight = 5%)**	**2.0**	**25.0**	**98.0%**
5.1.a	Aligning Customer Expectations	2.0	25.0	98.0%
PERFORMANCE OBJECTIVE #6.0	**Balancing Performance and Cost (Weight = 5%)**	**2.0**	**25.0**	**95.0%**
6.1	**Balancing Performance/Cost Ratios (Weight = 5%)**	**2.0**	**25.0**	**95.0%**
6.1.a	Measure Cost Efficiency/Effectiveness	2.0	25.0	95.0%
PERFORMANCE OBJECTIVE #7.0	**Organizational Vitality (Weight = 5%)**	**2.0**	**25.0**	**95.0%**
7.1	**Eval. of Organizational Agility & Employee Alignment (Weight = 5%)**	**2.0**	**25.0**	**95.0%**
7.1.a	Measuring Organizational Agility and Employee Alignment	2.0	25.0	95.0%

Table D - Total Performance Appraisal Score Summary
Lawrence Berkeley National Laboratory

FUNCTIONAL AREA	Possible Points	SCORE	PERCENT	ADJECTIVE
LABORATORY MANAGEMENT	100	95.0	95.0%	Outstanding
ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT	40	38.2	95.5%	Outstanding
ENVIRONMENT, SAFETY & HEALTH	110	98.3	89.3%	Excellent
PROJECT/FACILITIES AND CONSTRUCTION MANAGEMENT	50	45.1	90.2%	Outstanding
FINANCIAL MANAGEMENT	40	36.9	92.3%	Outstanding
HUMAN RESOURCES	40	37.2	93.0%	Outstanding
INFORMATION MANAGEMENT	40	37.6	94.1%	Outstanding
PROCUREMENT	40	36.5	91.3%	Outstanding
PROPERTY	40	36.8	92.0%	Outstanding
LABORATORY MANAGEMENT SUBTOTAL	100	95.0	95.0%	Outstanding
O&A SUBTOTAL	400	366.6	91.7%	Outstanding
S&T SUBTOTAL	500	465.1	93.0%	Outstanding
LBNL TOTAL	1,000	926.7	92.7%	Outstanding