

PART I

SECTION C

DESCRIPTION/SPECS./WORK STATEMENT

TABLE OF CONTENTS

	PAGE NO.
C.1 – INTRODUCTION	C-1
C.2 – IMPLEMENTATION OF DOE’S MISSION FOR LBNL	C-2
C.3 - PERFORMANCE EXPECTATIONS, OBJECTIVES, AND MEASURES	C-3
C.4 - STATEMENT OF WORK	C-7
C.5 - PLANS AND REPORTS	C-17

PART I

SECTION C - DESCRIPTION/SPECS./WORK STATEMENT

C.1 – INTRODUCTION

This Performance-Based Management Contract (PBMC) is for the management and operation of the Ernest Orlando Lawrence Berkeley National Laboratory (LBNL) (the Laboratory). The Contractor shall, in accordance with the provisions of this contract, accomplish the missions and programs assigned by the U.S. Department of Energy (DOE) and manage and operate the Laboratory. The Laboratory is one of the DOE's Office of Science (SC) multi-program laboratories. The Laboratory is a Federally Funded Research and Development Center (FFRDC) established in accordance with the Federal Acquisition Regulation (FAR) Part 35 and operated under this management and operating (M&O) contract, as defined in FAR 17.6 and DEAR 917.6.

This contract reflects the Department's effort to enable the Contractor to achieve more highly effective and efficient management of the Laboratory, outstanding science and technology results in a safe and secure environment, more cost effective operations, and enhanced Contractor accountability. Toward this end, this contract establishes a process for minimizing the use of unnecessary DOE orders by tailoring existing and new orders that will enable the Contractor to propose alternate standards, which rely primarily on state and federal laws and regulations, and management processes based on national standards, certified systems and best business practices. Contractor managers shall be held more accountable for maintaining risk mitigation as Laboratory processes and assurance models change.

This contract reflects the application of performance-based contracting approaches and techniques which emphasize results/outcomes and minimize "how to" performance descriptions. The Contractor has the responsibility for total performance under the contract, including determining the specific methods for accomplishing the work effort, performing quality control, and assuming accountability for accomplishing the work under the contract. Accordingly, this PBMC provides flexibility, within the terms and conditions of the contract, to the Contractor in managing and operating the Laboratory.

Desired results of this contract include improved Contractor operational efficiencies, allocations of Contractor oversight resources to direct mission work, and streamlined and more effective federal line management focused on a system-based approach to federal oversight with increased reliance on the results obtained from certified, nationally recognized experts and other independent reviewers.

Moreover, science and technology have improved peer review metrics, stretch goals, and incentives to achieve extraordinary results.

Under this PBMC, it is the Contractor's responsibility to develop and implement innovative approaches and adopt practices that foster continuous improvement in accomplishing the mission of the Laboratory. DOE expects the Contractor to produce effective and efficient management structures, systems, and operations that maintain high levels of quality and safety in accomplishing the work required under this contract, and that to the extent practicable and appropriate, rely on national, commercial, and industrial standards that can be verified and certified by independent, nationally recognized experts and other independent reviewers. The Contractor shall conduct all work in a manner that optimizes productivity, minimizes waste, and fully complies with all applicable laws, regulations, and terms and conditions of the contract.

To the maximum extent practical, this PBMC shall:

- (a) Describe the requirements in terms of outcome or results required rather than the methods of performance of the work;
- (b) Use a limited number of systems-based measurable performance standards (i.e., terms of quality, timeliness, quantity, etc.) to drive improved performance and increased effective and efficient management of the Laboratory;
- (c) Provide for appropriate financial incentives (e.g., fee) when performance standards and contract requirements are achieved;
- (d) Specify procedures for reduction of fee when services are not performed or do not meet contract requirements; and
- (e) Include non-financial performance incentives where appropriate.

C.2 – IMPLEMENTATION OF DOE'S MISSION FOR LBNL

The Contractor shall develop a compelling plan to implement the DOE's SC strategic mission for the Laboratory, as defined below in C.4(b)(1) "Laboratory Mission." Within this Plan, the Contractor will map the Laboratory's core competencies to this Laboratory mission. The Contractor will highlight the unique roles the Laboratory fills in SC's capability to accomplish its missions and, more broadly, that of the Department. Upon approval by the Department, the Plan shall be captured within the Institutional Plan, which shall be updated at least bi-annually in accordance with instructions to be issued by the BSO Site Manager.

The Performance Evaluation and Measurement Plan, as called for within the clause entitled, "Standards of Contractor Performance Evaluation", identifies performance outcomes and indicators, which are updated and agreed upon by the Parties annually, as standards against which the Contractor's overall performance of scientific, technical, operational, and/or managerial obligations under this contract shall be assessed.

C.3 - PERFORMANCE EXPECTATIONS, OBJECTIVES, AND MEASURES

C.3.1 - Core Expectations

C.3.1.1 - General

The relationship between DOE and its national laboratory management and operating contractors is designed to bring best practices for research and development to bear on the Department's missions. Through application of these best practices, the Department seeks to assure both outstanding programmatic and operational performance of today's research programs and leadership to assure the relevance to DOE's mission needs, the productivity and quality of its programs to lead the world in meeting tomorrow's needs. Accordingly, DOE has substantial expectations of the Contractor in the areas of: program delivery and mission accomplishment; laboratory stewardship; and excellence in laboratory operations and financial management.

C.3.1.2 - Program Development and Mission Accomplishment

The Contractor is expected to provide the highest quality of planning, management, and execution of assigned research and development programs. The Contractor is expected to execute assigned programs so as to achieve the greatest possible impact on DOE's mission objectives, to aggressively manage the Laboratory's science and technology capabilities and intellectual property to meet these objectives, and to initiate innovative concepts and research proposals that are in concert with DOE missions. The Contractor shall propose work that will advance DOE's mission objectives and that is aligned to Laboratory capabilities. The Contractor shall strive to meet the highest standards of scientific quality and productivity, "on-time, on budget, as-promised" delivery of program deliverables, and first-rate service to the research community through user facility operation.

The Contractor is expected to demonstrate benefit to the nation from R&D investments by transferring technology to the private sector and supporting excellence in science and mathematics education consistent with achieving continuous progress towards DOE's core missions.

C.3.1.3 - Laboratory Stewardship

The Contractor is expected to be an active partner with DOE in assuring that the Laboratory is renewed and enhanced to meet future mission needs. Within the constraints of available resources and other Contract requirements, the Contractor, in partnership with DOE, shall:

- (a) Maintain an understanding of DOE's evolving Laboratory vision and long-term strategic plan. Address the co-evolution of Laboratory capabilities to meet anticipated DOE and national needs.
- (b) Attract, develop, and retain an outstanding work force, with the skills and capabilities to meet DOE's evolving mission needs.
- (c) Renew and enhance research facilities and equipment so that the Laboratory remains at the state-of-the-art over time and is well-positioned to meet future DOE needs.
- (d) Build and maintain a financially viable portfolio of research programs that generates the resources required to renew and enhance Laboratory research capabilities over time.
- (e) Maintain a vibrant relationship with the broader research community, to enhance the intellectual vitality and research relevance of the Laboratory, and to bring the best possible capabilities to bear on DOE mission needs through partnerships.
- (f) Build a positive, supportive relationship founded on openness and trust with the community and region in which the Laboratory is located.

C.3.1.4 Operational and Financial Management Excellence

The Contractor is expected to effectively and efficiently manage and operate the Laboratory through best-in-class management practices designed to foster world-class research while assuring the protection and proper maintenance of DOE research and information assets, the health and safety of Laboratory staff and the public, and the environment. The Contractor is expected to operate the Laboratory so as to meet all applicable laws,

regulations, and requirements. The Contractor is expected to manage the Laboratory cost-effectively, while providing the greatest possible research output per dollar of research investment, and, accordingly, to develop and deploy management systems and practices that are designed to enhance research quality, productivity, and mission accomplishment consistent with meeting operational requirements.

C.3.2 - Performance Evaluation Expectations

The performance expectations of this contract are broadly set forth in this Section and reflect the DOE's minimum needs and expectations for Contractor performance. Specific performance work statements, performance standards (measures applied to results/outputs), acceptable performance levels (performance expectations), acceptable quality levels (permissible deviations from performance expectations), and related incentives shall be established annually, or at other such intervals determined by the DOE to be appropriate. The related incentives may be monetary, or where monetary incentives are not desirable or considered effective, the Contractor's performance may be used as a factor which directly affects the past performance report card, or a factor in a decision to reduce or increase DOE oversight or Contractor reporting, as appropriate.

In performance under this contract, the Contractor shall be evaluated within the following general performance goals and expectations:

- (a) Science and Technology (S&T) - The Contractor will deliver innovative, forefront science and technology aligned with DOE strategic goals in a safe, environmentally sound, and efficient manner, and will conceive, design, construct, and operate world-class user facilities.
 - (1) Quality of S&T: Produce original, creative scientific output that advances science and technology while achieving sustained scientific progress and impact that is clearly recognized by the technical community.
 - (2) Relevance to DOE Missions and National Needs: Conduct the highest quality scientific research to advance the missions of DOE and other national

programs and contributes to U.S. leadership in international scientific and technical communities.

- (3) Success in Constructing and Operating Research Facilities & Equipment: Provide quality strategic planning for facilities/equipment needed to insure the Laboratory can meet its S&T missions today and in the future, while effectively and efficiently maintaining current S&T facilities and equipment and providing effective, efficient operation of user facilities.
 - (4) Effectiveness and Efficiency of Research Program Management: Provide for effective stewardship of capabilities, expert delivery, and success in relationship and risk management.
- (b) Laboratory Leadership, Management and Operations - The Contractor will provide leadership to assure mission accomplishment and will manage and enhance operations and management processes to provide an effective and efficient work environment that enables the execution of the LBNL mission in a manner responsive to customer and stakeholder expectations.

C.3.3 - Performance Objectives and Measures

The results-oriented performance objectives of this contract are stated in the Performance Evaluation and Measurement Plan (Appendix B), and/or in the Work Authorization Directives issued annually in accordance with the special clause entitled, "Long-Range Planning, Program Development and Budgetary Administration". The Contractor shall develop a five-year Institutional Plan for the overall direction of the Laboratory and for the accomplishment of these objectives. The Plan shall be actively maintained and annually updated in accordance with Institutional Planning instructions issued by the DOE Site Manager. The objectives shall be accomplished within an overall framework of management and operational performance requirements and standards contained elsewhere in this contract. To the maximum extent practicable, these requirements and standards have also been structured to reflect performance-based contracting concepts, including the clause entitled, "Application of DOE Contractor Requirement Documents", which permits the Contractor to propose to the Contracting Officer alternative and/or

tailored approaches based on national, commercial or industrial standards and best business practices to meet the outcomes desired by the Government.

DOE's Quality Assurance/Surveillance Plan (QASP) for evaluating the Contractor's performance under the contract shall consist primarily of the Performance Evaluation and Measurement Plan (PEMP) as called for within the Part II, Section I contract clause entitled, "Total Available Fee: Base Fee Amount and Performance Fee Amount". The QASP establishes the process DOE shall use to ensure that the Contractor has performed in accordance with the performance standards and expectations. The QASP shall summarize the performance standards, expectations and acceptable quality levels for each task; describe how performance will be monitored and measured; describe how the results will be evaluated; and state how the results will affect contract payment.

The Contractor shall develop and implement a Laboratory assurance process, acceptable to the Contracting Officer, which provides reasonable assurance that the objectives of the Contractor's management systems are being accomplished and that the systems and controls will be effective and efficient. The Contractor's assurance process shall reflect an understanding of the risks, maintain mechanisms for eliminating or mitigating the risks, and maintain a process to ensure that the management systems and their attendant assurance process(es) meet contract requirements.

C.4 - STATEMENT OF WORK

(a) General.

The Contractor shall, in accordance with the provisions of this contract, provide the intellectual leadership and management expertise necessary and appropriate to manage, operate, and staff the Lawrence Berkeley National Laboratory (the Laboratory); to accomplish the research mission and roles assigned by the Department of Energy (DOE) to the Laboratory; and to perform the work described in this Statement of Work (SOW). The DOE research activities are assigned through strategic planning, program coordination, and cooperation between the Laboratory and DOE.

Because the research activities of the Laboratory are dynamic, this SOW is not intended to be all inclusive or restrictive, but is intended to provide a broad

framework and general scope of the work to be performed at the Laboratory during the term of the contract. This SOW does not represent a commitment to, or imply funding for, specific projects or programs. All projects and programs will be authorized individually by DOE and/or other work sponsors in accordance with the provisions of this contract.

All work under this contract shall be conducted in a manner that will protect the environment and assure the safety and health of employees and the public. This objective is to be accomplished by the Laboratory implementing an Integrated Safety Management System that includes an Environmental Management System. In performing the contract work, the Laboratory shall implement appropriate program and project management systems to track progress and pursue cost effectiveness in work activities; develop integrated plans and schedules to achieve program objectives, incorporating input from DOE and stakeholders; maintain sufficient technical expertise to manage activities and projects throughout the life of a program; maintain Laboratory facilities and infrastructure as necessary to accomplish assigned missions; and utilize appropriate technologies and management systems to improve cost efficiency and performance.

(b) Mission and Major Programs

(1) Laboratory Mission. In support of major DOE sponsor organizations (see C.4(b)(2)) that evaluate the Laboratory's program performance, the central mission of the Laboratory is to provide scientific leadership needed to carry out the world class science and technological innovation to support the programs and missions of SC and DOE. The Laboratory's mission addresses four distinct goals:

- To perform the highest quality multi-disciplinary research in the energy sciences, general sciences, physical sciences, biosciences and computational sciences in a manner that ensures employee and public safety and protection of the environment;
- To develop, maintain, and operate unique national experimental facilities that are available to qualified investigators;
- To educate and train future generations of scientists and engineers to promote the Department's national science and education goals; and
- To transfer knowledge and technological innovations and foster productive relationships among Laboratory research programs, universities, and industry in order to promote national economic competitiveness.

(2) Primary Program Sponsors. Work under this contract includes scientific and technical programs sponsored by major DOE organizations. Primary DOE sponsors include:

- Office of Science,
- Energy Efficiency and Renewable Energy,
- Civilian Radioactive Waste Management,
- Fossil Energy, and
- Environmental Management.

Additionally, with prior permission of the Department, the Laboratory will perform other DOE, non-DOE federal government, and other sponsored research that supports the Laboratory's missions (notably those of the National Institutes of Health, the National Aeronautics and Space Administration, the Environmental Protection Agency, and Department of Defense, state government and industry). The DOE derives the benefits from the Laboratory's mission accomplishments and the development and utilization of the Laboratory's core competencies which are supported by this work.

A summary of current Laboratory programs follows. Descriptions of major programs are updated annually in the Institutional Plan.

(c) Science Programs.

(1) Basic Energy Sciences. The Laboratory shall conduct research in materials sciences and the chemistry and physics of materials, in geosciences, in biological energy research, in applied mathematics and in other areas of chemical sciences. Programs in materials sciences emphasize new and forefront research projects for the synthesis, processing, and characterization of nanomaterials and other advanced materials. Programs in chemical sciences emphasize chemical physics, dynamics and mechanisms of chemical reactions, catalysis, electron spectroscopy, atomic physics, photochemistry, theoretical chemistry, chemistry of the actinide elements, and combustion modeling mechanisms and processes. In geosciences, a multi-disciplinary program supports the scientific basis for development of hydrocarbon and strategic-mineral resources, remediation of toxic waste sites, safe disposal of radioactive and toxic chemical wastes, and exploitation of geothermal energy. A program in energy biosciences studies the unique

features of photosynthetic organisms for collecting light energy and storing it as chemical energy. The Laboratory shall conduct research and development on advanced instrumentation and scientific user facilities improvements, such as those for synchrotron radiation studies, nuclear magnetic resonance, ultra-fast science, electron beam micro-characterization, neutron science and other scientific tools.

- (2) Scientific Computing Research. The Laboratory shall conduct computational research including the management and operation of the National Energy Research Scientific Computing (NERSC) Center; the Energy Sciences Network (ESnet); and other computational science and mathematics research units. The NERSC Center provides high-performance computing, information, and communications services for researchers. ESnet supports national and international access to the NERSC Center and, more generally, the needs of DOE scientists and collaborators for access to other DOE scientific facilities, information dissemination among scientific collaborators and widespread access to existing supercomputer facilities. Computational research at the Laboratory advances DOE's programs for Scientific Discovery Through Advanced Computing, architectures for scientific computing, and includes studies into new techniques and adaptive numerical methods and many other approaches. Other programs include the development of advanced numerical and analytical methods and their application to the most challenging problems in physics and engineering, high-speed networks and grids and related collaborative efforts to monitor complex experimental devices by electronic means, and an effort to combine state-of-the art computer equipment and scientific visualization software to provide research scientists with tools for exploring their data in new and innovative ways. In technology research, the Laboratory supports focused research projects between industry and the national laboratories.
- (3) Nuclear Physics. The Laboratory shall conduct experimental and theoretical investigations of the structure and properties of nuclei, emphasizing studies of nuclei under extreme conditions (temperature, isospin, angular momentum, and energy density) as well as studies of neutrinos and double beta decay. Research collaborations involve studies of the quark-gluon plasma at the Relativistic Heavy Ion Collider. The Laboratory shall conduct programs to educate and train young scientists, to develop technology in advanced nuclear instrumentation and to define the challenges of relativistic heavy-ion physics. The research includes the development of advanced detectors and systems to deliver high intensity beams for nuclear physics.

- (4) **High-Energy Physics.** The Laboratory shall conduct a program of experimental and theoretical research, including the development and operation of innovative detectors and research on advanced accelerator components and concepts. Experimental programs in high-energy physics focus on the discovery of the Higgs particle, and the properties of quarks and leptons and their interactions. The astrophysics effort at the Laboratory includes several components: understanding the dark energy in the universe through the study of distant supernovas, the study of cosmic microwave background measurements to examine the properties of the universe, studies of neutrinos and investigations, including the search for dark matter. The Laboratory shall also conduct studies on highly theoretical topics of interest; data compilation of high-energy physics particle properties; advanced detector development for use in proposed hadron colliders; and accelerator physics and engineering for the application of particle beams for high-energy physics facilities.
- (5) **Biological and Environmental Research.** The Laboratory shall conduct life sciences research in three program areas life sciences, medical sciences and environmental sciences. In the life sciences, this research includes genome sequencing and gene expression research, microbial genomics and Genomes to Life research, low dose radiation studies, DNA repair, and other biological studies. In the medical sciences, the research includes, nuclear medicine, functional imaging, radiopharmaceutical development and measurement technology. In environmental research studies include global change research, ocean, terrestrial and geological sequestration studies, and natural and accelerated bioremediation studies. Studies on genome structure include comparative sequencing to understand the human genome gene regulatory networks and development of instrumentation and bioinformatic tools for and comprehensive understanding of comparative genomics.
- (6) **Fusion Energy.** The Laboratory shall conduct research on accelerator systems and experimental components supporting the nation's inertial-confinement fusion energy programs. Heavy-ion fusion accelerator research focuses on the physics and technology of induction acceleration as the means for producing high-current, heavy-ion beams as drivers for inertial-confinement systems. The laboratory also has important capabilities in ion beam systems that have been applied to magnetic fusion research.
- (7) **Spallation Neutron Source (SNS) project.** The Laboratory shall be accountable for assigned project deliverables, as derived from the project technical, cost, and schedule baseline documents, and shall make available the resources necessary to execute the approved work plans

for the SNS. The Laboratory shall perform the tasks agreed to in a safe, environmentally benign, high-quality, timely, responsible, and cost-effective manner. The SNS Project Office will provide overall coordination and direction to the partner Laboratories, as described in the ["Memorandum of Agreement \(MOA\)"](#) revision 3, dated October 5, 1999, between the SNS Project and Argonne National Laboratory, Brookhaven National Laboratory, Lawrence Berkeley National Laboratory, Los Alamos National Laboratory, and Oak Ridge National Laboratory."

- (8) **Energy Efficiency and Renewable Energy Programs.** The Laboratory shall conduct research and technology development in the furtherance of national goals to reduce energy demand and cost to consumers, balance environmental concerns with economic development, and enhance energy security. The Laboratory's programs are principally in advanced buildings technology, industry energy efficiency, electrical-energy storage and distribution, transportation, utility systems and electricity systems reliability, and geothermal systems.
- (9) **Civilian Radioactive Waste Management Programs.** The Laboratory shall conduct a program of interrelated geoscience and geological engineering research supporting the underground storage of high-level nuclear wastes; including characterization of deep geologic formations, determination of the physical and chemical processes occurring in the repository rocks, analysis of hydrologic and chemical transport mechanisms, development of predictive techniques for repository performance, and technical support for a DOE licensing application to the Nuclear Regulatory Commission.
- (10) **Fossil Energy Programs.** The Laboratory shall conduct research directed toward making coal more usable, including studies on conversion to gaseous and liquid fuels and reduction of emissions and carbon sequestration. The Laboratory shall also develop advanced characterization methods for oil and gas reservoirs and for improving oil discovery and recovery. The contractor shall also conduct research on refinery activities related to efficiency and the environment. The Laboratory's research capabilities are available to the Department for research germane to a hydrogen economy.
- (11) **Environmental Management Programs.** The Laboratory shall be responsible for investigations, monitoring, clean-up, containment, restoration, removal, decommissioning and other remedial activity (including any costs for defense of litigation related thereto), for the management and/or clean-up of oil spills, contamination or releases of any solid wastes, hazardous wastes and constituents, hazardous or

radioactive substances, wastes or materials present in soil, groundwater, air, surface water, facilities and structures (whether subsurface or above ground), as a result of research or other work conducted by the laboratory during the term of the contract.

The Laboratory shall execute pollution prevention efforts to advance cost-effective waste reduction, environmental release reduction, environmentally preferable purchasing, and environmental sustainability in facility construction and operation, in all site operations and facilities covered by this contract.

- (12) Policy, Planning, and Analysis Support. The Laboratory shall conduct analysis activities in support of energy policy issues of concern to DOE, data and model development for projecting energy demand and evaluation of policy impacts as input to DOE's assessment of United States energy strategies.
 - (13) Laboratory-Directed Research and Development (LDRD). The Laboratory shall conduct a LDRD program that leverages the Laboratory's scientific expertise and key technologies toward innovations that are applicable to DOE's, and other sponsor's missions. LDRD contributes to the development of scientific staff capability and vitality through the support of new research programs of great merit and potential, bringing important capabilities to serve DOE and other related national needs.
 - (14) University and Science Education Programs. The Contractor shall develop and implement programs that utilize Laboratory resources, staff, technological expertise, collaborative and cooperative relationships with other academic and research institutions in order to advance science education opportunities and to improve the quality of science, mathematics, computing, and technology education in the United States.
 - (15) User Facilities Operations. The Laboratory shall manage and operate major DOE user facilities: Advanced Light Source, Biomedical Isotope Facility, National Energy Research Scientific Computing Center and Energy Sciences Network, and National Center for Electron Microscopy and develop other user facilities important to DOE missions.
 - (16) Engineering. The Laboratory shall maintain an engineering and machine shop fabrication capability that supports the focus on state-of-the-art research and development to enhance Laboratory technical strengths and to meet the needs of current and future Laboratory programs.
- (d) Administration and Operation of the Laboratory.

The Contractor shall manage, operate, protect, maintain and enhance the Laboratory's ability to function as a DOE multi-program laboratory, provide the infrastructure and support activities, support the accomplishment of the Laboratory's missions, and assure the accountability to the DOE under the results-oriented, performance-based provisions of this contract. The Contractor shall implement a broad scope continual self-assessment process to assess the overall performance in, and drive continuous improvement of, Laboratory operations and administration.

- (1) Strategic and Institutional Planning. The Contractor shall conduct a strategic planning process and develop Institutional Plans and Strategic Facility Plans in consideration of DOE provided planning guidance and strategic planning material to assure consistency with DOE missions and goals and with due regard for Environment, Safety, and Health (ES&H) issues.
- (2) Protection of Workers, the Public and the Environment. The safety and health of workers and the public and the protection and restoration of the environment are fundamental responsibilities of the Contractor. Accordingly, the Contractor shall implement a Laboratory Integrated Safety Management (ISM) system which establishes the environmental, safety, and health processes that support the safe performance of all Laboratory work. The ISM system shall incorporate Environmental Management Systems, in cooperation with regulatory agencies. The ISM system shall be applied to all Contractor activities conducted by or for the Laboratory, through subcontractors or other entities, and shall provide for ES&H oversight of Laboratory and subcontractor operations. The work shall include environmental and cultural resource protection, pollution prevention, the safety management system, risk based worker health program, environmental restoration and waste management, environmental management system, and emergency management programs.
- (3) Integrated Safeguards and Security (ISSM). The Contractor shall protect Laboratory assets, personnel, property, and information, to sustain the science mission in a manner commensurate with risks. The Contractor shall conduct a Laboratory Integrated Safeguards and Security Management program to include physical site security, protection of Government property, cyber security protections, protection of information, personnel security, and access control for Laboratory staff and visitors, export controls, and a counterintelligence program.
- (4) Laboratory Facility Operations and Infrastructure.

- a. The Contractor shall manage and maintain Government-owned facilities, both provided and acquired, to further national interests and to perform DOE statutory missions. Recognizing that these facilities are a national resource, these facilities may also be made available, with appropriate agreements, to private and public sector entities including universities, industry, and local, state, and other government agencies. The Contractor shall perform overall integrated planning, acquisition, upgrades, and management of Government-owned, leased or controlled facilities and real property accountable to the Laboratory. The Contractor shall employ facilities management practices that are best-in-class and integrated with mission assignments and business operations. The maintenance management program shall maintain Government property in a manner that (1) promotes and continuously improves operational safety, environmental protection and compliance, property preservation and cost effectiveness, (2) ensures continuity and reliability of operations, fulfillment of program requirements and protection of life and property from potential hazards, and (3) ensures the condition of the assets will be maintained or improved.
 - b. Commencing February 15, 2008, the Contractor shall assist DOE through direct participation and other support in achieving DOE's energy efficiency goals and objectives in electricity, water, and thermal consumption, conservation, and savings, including goals and objectives contained in Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management." The Contractor shall maintain and update, as appropriate, its Site Plan (as required elsewhere in the contract) to include detailed plans and milestones for achieving site-specific energy efficiency goals and objectives. With respect to this paragraph, the Plan shall consider all potential sources of funds, in the following order: 1) the maximum use of private sector, third-party financing applied on a life-cycle cost effective basis, particularly from Energy Savings Performance Contracts and Utility Energy Services Contracts awarded by DOE; and 2) only after third-party financing options are evaluated, in the event that energy efficiency and water conservation improvements cannot be effectively incorporated into a private sector financing arrangement that is in the best interests of the Government, then DOE funding and funding from overhead accounts can be utilized.
- (5) Business Management. The Contractor shall manage an effective integrated system of internal controls for all business and administrative operations of the Laboratory.

- (i) Human Resources Management. The Contractor shall establish and maintain human resource systems which attract and retain outstanding employees, and continually motivate them to achieve high productivity in scientific research and Laboratory operations.

The Contractor also shall create and maintain at the Laboratory an environment that promotes diversity and fully utilizes the talents and capabilities of a diverse workforce. The Contractor shall seek to recruit a diverse workforce by promoting and implementing DOE and Laboratory goals. Special consideration will be given to Historically Black Colleges and Universities/Minority Institutions as potential resource pools. The Contractor shall also strive to promote diversity in all of the Laboratory's subcontracting efforts with emphasis on the use of the types of businesses identified in the Small Business Subcontracting Plan clause of this contract.

- (ii) Financial Management. The Contractor shall maintain a financial management system responsive to the obligations of sound financial stewardship and public accountability. The overall system shall include an integrated accounting system suitable to collect, record, and report all financial activities; a budgeting system which includes the formulation and executions of all resource requirements needed to accomplish projected missions and formulate short- and long-range budgets; an internal control system for all financial and other business management processes; and a disbursements system for both employee payroll and supplier payments.
- (iii) Purchasing Management. The Contractor shall have a DOE-approved purchasing system to provide purchasing support and subcontract administration. The Contractor shall, when directed by DOE and may, but only when authorized by DOE, enter into subcontracts for the performance of any part of the research work under this contract.
- (iv) Property Management. The Contractor shall have a DOE approved property management system that provides assurance that the Government owned, contractor held property is accounted for, safeguarded and disposed of in accordance with DOE's expectations and policies. The Contractor shall perform overall integrated planning, acquisition, maintenance, operation, management and disposition of Government-owned personal and real property, and Contractor-leased facilities and infrastructure used by the Laboratory. Real property management shall include

providing office space for the DOE Berkeley Site Office as directed by the DOE Berkeley Site Office Manager.

- (6) Legal Services. The Contractor shall maintain legal support for all contract activities including, but not limited to, those related to patents, licenses, and other intellectual property rights; subcontracts; technology transfer; environmental compliance and protection; labor relations; and litigation and claims.
- (7) Information Resources Management. The Contractor shall maintain information systems for organizational operations and for activities involving general purpose programming, data collection, data processing, report generation, software, electronic and telephone communications, and computer security. Contractor shall provide computer resource capacity and capability sufficient to support Laboratory-wide information management requirements. The Contractor also shall conduct a records management program.
- (8) Other Support. The Contractor shall provide other administrative services necessary for Laboratory operations and logistics support to the DOE Berkeley Site Office as requested by the Contracting Officer.

C.5 - PLANS AND REPORTS

The Contractor shall submit periodic plans and reports, in such form and substance as required by the Contracting Officer. These periodic plans and reports shall be submitted at the intervals, and to the addresses and in the quantities as specified by the Contracting Officer. Where specific forms are required for individual plans and reports, the Contracting Officer shall provide such forms to the Contractor. The Contractor shall require subcontractors to provide reports that correspond to data requirements the Contractor is responsible for submitting to DOE. Plans and reports which may be submitted in compliance with this provision are in addition to any other reporting requirements found elsewhere in other clauses of this contract. It is the intention of DOE to consult with the Contractor in determining the necessity, form and frequency of any reports required to be submitted by the Contractor to DOE under this contract.