SECTION C

DESCRIPTION/SPECS./WORK STATEMENT

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C.1 INTRODUCTION

Brookhaven National Laboratory (BNL or the Laboratory) is one of DOE's Office of Science (SC) multi-program national 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 DOE Acquisition Regulation (DEAR) 917.6.

The Laboratory supports DOE's strategic themes in energy security, nuclear security, scientific discovery and innovation, environmental responsibility, and management excellence, in accomplishing the Department's mission. The Laboratory mission is to conduct basic and applied research and development (R&D) to advance scientific knowledge, the nation's energy resources, national security, environmental quality, and to strengthen educational foundations and national economic competitiveness. DOE programs are carried out in partnership with academia, the private sector, other DOE national laboratories, the international scientific community, and other government agencies. The Laboratory also performs work consistent with the DOE mission for entities other than DOE. The Contractor will advance the frontiers of science and technology through broad interdisciplinary R&D programs that answer fundamental questions, solve technical problems (locally, regionally, nationally, and internationally), and develop and apply technologies to address societal needs.

DOE employs a Performance Based Management Contract (PBMC) to enable the Contractor to achieve highly effective and efficient management of the Laboratory resulting in a safe and secure environment, outstanding science and technology results, more cost-effective operations, and enhanced Contractor accountability.

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 line management focused on a systems-based approach with increased reliance on the results obtained from certified, nationally recognized experts and other independent reviewers.

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 employ effective and efficient management structures, systems, and operations

that maintain high levels of quality, safety and security 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.

C.2 IMPLEMENTATION OF DOE'S MISSION FOR BNL

The Laboratory's mission focus is in nuclear physics, condensed matter physics and materials sciences, high-energy physics, chemistry, and biology, with additional expertise in environmental sciences, energy technologies, and national security. BNL brings specific strengths and competencies to the DOE laboratory system to produce excellent science and advanced technologies with the cooperation and involvement of the scientific and local communities. In support of its Office of Science (SC) mission, BNL builds and operates major scientific facilities. These facilities serve not only the basic research of the DOE, but they reflect BNL and DOE stewardship of national research infrastructure that is made available on a competitive basis to a wide range of university, industry, and government researchers.

C.3 CORE EXPECTATIONS

(a) 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 the long-term quality, relevance, and productivity of the laboratories against tomorrow's needs. Accordingly, DOE has substantial expectations of the Contractor in the areas of: program delivery (or development) and mission accomplishment; laboratory stewardship; and excellence in laboratory operations and operational business management.

(b) Program Development and Mission Accomplishment

The Contractor is expected to provide effective planning, management, and execution of assigned research and development programs. The Contractor is expected to execute assigned programs so as to strive for the greatest possible impact on achieving DOE's mission objectives, to aggressively manage the Laboratory's science and technology capabilities and intellectual property to meet these objectives, and to bring forward innovative concepts and research proposals that are well-aligned with DOE

missions. The Contractor shall propose work that is aligned with, and likely to advance, DOE's mission objectives, and that is well matched 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 to the extent such activities are consistent with achieving continuous progress towards DOE's core missions.

(c) Laboratory Stewardship

The Contractor shall 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:

(1) Maintain an understanding of DOE's evolving Laboratory vision and long-term strategic plan and address the evolution of Laboratory capabilities to meet anticipated DOE and national needs.

(2) Attract, develop, and retain an outstanding work force, with the skills and capabilities to meet DOE's evolving mission needs.

(3) 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.

(4) Build and maintain a viable portfolio of research programs that generates the resources required to renew and enhance Laboratory research capabilities over time**.**

(5) Build and maintain a positive relationship with the broader national and international 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.

(6) Build a positive, supportive relationship founded on openness and trust with the community and region in which the Laboratory is located.

(d) Operational and Business Management

The Contractor shall effectively and efficiently manage and operate the Laboratory through best-in class management practices designed to foster world-class research. Contractor shall, at the same time, protect and properly maintain DOE property, facilities, and intellectual assets; as well as ensure the health, safety and security of workers, the public and the environment. The Contractor shall operate the Laboratory in accordance with all applicable laws, regulations, and requirements. The Contractor shall manage the Laboratory cost-effectively, while providing the greatest possible research output per dollar of research investment, and, accordingly, develop, deploy and maintain integrated management systems and practices that are designed to enhance research quality, productivity and mission accomplishment consistent with meeting operational 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 BNL; to accomplish the missions assigned by the DOE to the Contractor; and, to perform all other work described in this Statement of Work (SOW). DOE missions are assigned through strategic planning, program coordination, and cooperation between the Contractor and DOE.

Inasmuch as the assigned missions of the Laboratory are dynamic, this SOW is not intended to be all-inclusive or restrictive, but it is intended to provide a broad framework and general scope of the work to be performed at BNL during the term of this 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 protects the environment, assures the safety, health, and security of employees and the public, and protects the safety and security of federal real, personal, and intellectual property. In performing the contract work, the Contractor shall implement appropriate program, operational and project management systems to ensure safe operations; track progress and maximize cost-effectiveness of 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; utilize appropriate technologies and management systems to improve cost efficiency and performance; and, maintain Laboratory facilities and infrastructure as necessary to accomplish assigned missions.

(b) Research and Development

The central mission of the Laboratory is to provide scientific leadership needed to carry out world class science and technological innovation to support the programs and missions of SC and DOE (http://science.energy.gov/sc-3/mission-and-functions/). While the Laboratory originated as a nuclear science facility, its primary mission focus has evolved to span multiple programs leading research and development in the physical, energy, environmental, and life sciences, with additional activities in energy technologies and national security. A central aspect of this mission, involving its accelerator science and technology core competency, is the conceptualization, design, construction, and operation of major scientific user facilities available to university, industry and government researchers.

(1) Mission Accomplishment

The science and technology delivered by the Laboratory is to have meaningful impacts on the relevant technical fields, and provide quality leadership that advances the mission goals of the DOE, the sponsoring program, and the scientific community. The primary sponsor of work at the Laboratory is DOE SC. Additionally, the Contractor may be authorized to pursue other DOE and non-DOE programs, such as Work for Others (WFO) and Laboratory Directed Research and Development (LDRD), that serve to integrate core capabilities and deploy science and technology to industry in support of the broader DOE mission. Other DOE program sponsors may include National Nuclear Security Administration (NNSA), Environmental Management (EM), Energy Efficiency and Renewable Energy (EERE), and Nuclear Energy (NE). Currently, the most notable non-DOE sponsors are the National Aeronautics and Space Administration (NASA), Department of Homeland Security (DHS), Nuclear Regulatory Commission (NRC), National Institutes of Health (NIH), Department of Defense (DOD), Department of State (DOS), and New York State (NYS).

The current major SC programs and synergistic efforts are summarized below:

(i) Nuclear Physics (NP)

The Contractor shall perform frontier research in experimental and theoretical nuclear physics; build, maintain, and operate state of the art user facilities for nuclear physics; perform research and development work in accelerator science, experimental detector design and computing for the SC Nuclear Physics program; operate the National Nuclear Data Center (NNDC); operate an isotope production facility; perform research in accelerator driven isotope production techniques: and carry out construction projects in the nuclear physics area as assigned.

(ii) Basic Energy Sciences (BES)

The Contractor shall perform frontier research in broad areas of condensed matter and materials physics, chemistry, geosciences, and biosciences; build, maintain, and operate world-class major scientific user facilities in furtherance of BES research priorities that host external scientific user communities as well as Laboratory researchers and industry users. Laboratory programs are to take advantage of the unique scientific user facilities including the National Synchrotron Light Source (NSLS), National Synchrotron Light Source II (NSLS-II) when operational and the Center for Functional Nanomaterials (CFN). The Contractor shall manage all aspects of the design, construction, and operation of NSLS-II as well as the decommissioning or repurposing of NSLS as NSLS-II begins operations.

(iii) High Energy Physics (HEP)

The Contractor shall perform frontier research in experimental and theoretical high energy physics; provide intellectual and technical leadership in international particle physics experiments; perform research and development in accelerator science, experimental detector design and computing for the SC High Energy Physics (HEP) program, operate the Accelerator Test Facility (ATF), and carry out construction projects in the high energy physics area as assigned.

(iv) Biological and Environmental Research (BER)

The Contractor shall conduct research programs in areas including foundational genomics, radiochemistry and imaging

instrumentation, structural and radiobiology, bio-inspired design of nanomaterials, plant and microbial biochemistry, bioinformatics and computational biology, atmospheric systems, terrestrial ecosystem science and carbon sequestration and earth system modeling that build on the unique facilities and expertise available at the Laboratory.

(2) Research Facilities and Major Scientific User Facilities

Central to the Laboratory's leadership and research and development mission is the design, construction and operation of world-class major scientific user facilities and their utilization to provide impactful science and technology results to DOE, the scientific community, and industry. The Laboratory currently hosts three major scientific user facilities for DOE serving more than 4400 scientists per year. The Contractor is responsible for simultaneously maintaining complementary capabilities critical to leadership and excellence in design, construction and operation of scientific user facilities in continuous and close collaboration with DOE. Design ranges from upgrades of current facilities to conceptualizing new facilities that meet the evolving needs of state-of-the-art science with new instrumentation technologies. Construction is typically a multi-year, complex process requiring extremely detailed planning and execution to meet requirements on time and within resource limits. Operation requires efficient and effective integration of a wide range of activities including core research programs, research and development to maintain the capabilities of the facilities, partnerships involving multiple organizations and funding sources, and user support; all with particular attention to safety, security, and productivity. Operation also includes effectively managing the allocation of facility time to optimize the research program of the facility,

The operation of user facilities includes developing and maintaining user communities for the facilities. In addition to the scientific stewardship of the facilities, maintaining user communities requires accommodating the visiting scientists and students that are guests of the Laboratory every year and maintaining the agreements to engage the user facilities. The Contractor shall maintain effective operations of existing and planned user facilities, other appropriate facilities, and provide effective customer service to ensure user facilities are user friendly, readily available, and can operate within conditions requested by user clients.

The three major SC user facilities hosted by the Laboratory are:

(i) The Relativistic Heavy Ion Collider (RHIC) facility complex

RHIC is a large accelerator complex which operates as the only remaining collider in the United States. Two international collaborations totaling 1200 scientists are organized around the two active experiments, STAR and PHENIX. Heavy-ion collisions at RHIC probe matter at temperatures and densities representative of the early universe, microseconds after its birth. RHIC experiments discovered that the infant universe was filled with a previously unknown type of liquid matter, the quark-gluon plasma (QGP). RHIC is also the only collider with a polarized beam and carries out research to investigate the spin structure of the proton. Laboratory scientists and their collaborators are developing plans for upgrades to the existing facility for the heavy ion and polarized proton program. In addition, Laboratory scientists are leading a national effort to develop the science agenda for a future Electron Ion Collider (EIC) facility, for which the Laboratory plan, called eRHIC, is to upgrade the RHIC facility with a high energy electron beam to collide with the existing heavy ion and polarized proton beams.

(ii) National Synchrotron Light Source (NSLS) I and II

The NSLS which operates two electron storage rings: an X-Ray ring and a Vacuum UltraViolet (VUV) ring which provide intense light spanning the electromagnetic spectrum from the infrared through x-rays will cease operations at the end of FY 2014. Users of NSLS and a select set of NSLS beamlines will transition to NSLS-II as it approaches completion. NSLS-II is a new state-of-the-art storage ring designed to deliver world leading brightness and flux with top-off operation for constant output. The facility will be able to produce x-rays up to 10,000 times brighter than those produced at the NSLS it replaces. Operations are expected to begin in 2015.

(iii) Center for Functional Nanomaterials (CFN)

This Center provides researchers with state-of-the-art capabilities to fabricate and study nanoscale materials. Work at the Center has the potential to inspire new technologies and is intimately coupled with, and enabling to, numerous Laboratory programs sponsored by DOE SC.

(iv) Other facilities

In addition to these SC sponsored national user facilities, the Laboratory operates many other facilities in furtherance of its mission. These include the New York Center for Computational Sciences (NYCCS), the High-Field Magnetic Resonance Imaging (MRI) Facility, the NASA Space Radiation Laboratory, the Accelerator Test Facility (ATF), the Brookhaven Linac Isotope Producer (BLIP) facility, the Positron Emission Tomography (PET) Facility, Laser Electron Accelerator Facility (LEAF), the EBCO TR19 cyclotron, the Institute for Advanced Electron Microscopy (IAEM), the Scanning Transmission Electron Microscope (STEM), the Joint Photon Sciences Institute and the RHIC/ATLAS Computing Facility.

(3) Scientific Program Management

The Contractor shall manage the resources and capabilities of the Laboratory and provide leadership for the Laboratory as a scientific institution supporting the DOE mission. Leadership is essential in methods of integrated line management to ensure inter-laboratory team building and intra-laboratory cooperation while supplying a safe working environment. The Contractor is charged with maintaining and enhancing the intellectual resource base in order to avoid erosion of the scientific and engineering foundations at the Laboratory and to promote world leadership prominence in areas as mandated by SC. The Contractor is also responsible for the employment of the principal personnel engaged in the SOW efforts and for the readiness and training of all personnel and on-site facility users and collaborators.

Execution of the Laboratory's mission is built on its core capabilities that are each, in turn, an integration of Laboratory personnel, facilities and equipment. The current Laboratory core capabilities include nuclear and particle physics, accelerator science and technology, condensed matter physics and materials science, chemical and molecular science, climate change science, biological systems science, applied nuclear science and technology, applied materials science and engineering, chemical engineering, systems engineering and integration, large scale user facilities, and advanced instrumentation. These capabilities exist within the Laboratory and provide a foundation to deliver its mission and customer focus, to perform a complementary role in the DOE laboratory system, and to pursue its vision for scientific excellence and pre-eminence in support of the SC and DOE missions. The stewardship of these

capabilities, involving continuous improvement and development of new capabilities where required, is thus a critical aspect of the Contractor's responsibility for scientific program management at the Laboratory. The Contractor shall direct these core capabilities into creative research projects for DOE in partnership(s) with universities, other federal laboratories and agencies, and the private sector to meet the mission of the Laboratory and DOE objectives.

The Contractor shall develop and manage partnership activities in support of the DOE mission. Mechanisms for partnerships include cooperative research and development agreements, direct assistance programs, employee temporary assignments, user facility agreements, memoranda of cooperation, memoranda of understanding, memoranda of agreement, license agreements, privately funded technology transfer, and other arrangements as approved by DOE in which research and development resources are leveraged with private sector partners. Efforts to develop broad based partnerships with academic research institutions, other agencies, other DOE laboratories, the international scientific community, and with the private sector are essential to the long-term viability of the Laboratory.

The Contractor shall ensure the Laboratory contributes to U.S. technological competitiveness by conducting basic and applied research, and through development and demonstration activities facilitating transfer and deployment of technologies into useful products and processes through partnerships with the private sector. The Contractor shall make it possible for the private sector to join in development/operation activities with the Laboratory to enhance teamwork and technology transfer. Cooperation with industrial partners may include long-term strategic partnerships aimed at commercialization of Laboratory inventions or the improvement of industrial products. The Contractor shall respond to specific near-term technological needs of industrial companies with special emphasis given to working with the types of businesses identified in the Small Business Subcontracting Plan clause of this contract. The Contractor may also capitalize on its location in the Northeast by developing productive relationships with regional and local companies and through forums such as conferences, workshops, and traveling presentations. It is anticipated that these organizations will be particularly effective participants in the Laboratory's technology transfer activities in promoting a mutually beneficial relationship between DOE and the communities surrounding the Laboratory.

(c) 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. The Contractor shall establish an environment, safety and health program operated as an integral, but visible, part of how the organization conducts business, including prioritizing work and allocating resources based on risk reduction. A key element is continued implementation of an Integrated Safety Management System to ensure all work activities are performed in a manner that prevents disruption of the Laboratory's missions by preventing fatalities, minimizing injuries and illnesses, minimizing exposures to hazardous substances and materials, preventing environmental releases in excess of established limits, and preventing property loss.

The Contractor shall maintain an organization that supports effective Environment, Safety and Health (ES&H) management by ensuring appropriate levels of ES&H staffing and competence at every level within BNL. Specifically, the Contractor shall assure that employees are trained, qualified, and involved in aspects of the organization's activities, including providing input to the planning and execution of work, and identification, mitigation, or elimination of workplace hazards. The Contractor shall, similarly, assure that subcontractor employees are trained and qualified on job tasks, hazards, DOE and BNL Departmental safety policies, expectations and requirements, and shall freely communicate applicable ES&H requirements down to subcontractors. The Contractor shall, as appropriate, consider ES&H performance in selection of its subcontractors and incorporate ES&H requirements into subcontracts.

The Contractor shall perform all activities in compliance with applicable health, safety, and environmental laws, orders, regulations, national consensus standards, governing agreements and permits executed with regulatory and oversight government organizations.

Incorporating integrated line management, the Contractor shall put in place a system that clearly communicates the roles, responsibilities, and authorities of line managers. The Contractor shall hold line managers, including direct reports, accountable for implementing necessary controls for safe performance of work in their respective area of responsibility. The Contractor shall establish effective management systems to identify deficiencies, resolve them in a timely manner, ensure that corrective actions are implemented, (addressing the extent of conditions, root causes, and measures to prevent recurrence) and prioritize and track commitments and actions.

Finally, the Contractor shall promote effective environmental program management, through continued maintenance of ISO 14001 registration.

(d) Management 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 establish and maintain an integrated management system capable of producing implementation-level plans, programs and procedures for the management and operation of the Laboratory. The Contractor shall implement a broad scope contractor assurance program to assess the overall performance in, and drive continuous improvement of Laboratory operations and management.

(1) Strategic Planning

The Contractor shall conduct a strategic planning process and develop institutional business plans and strategic facility plans in consideration of DOE provided planning guidance and strategic planning material to assure consistency with DOE missions and goals.

(2) Business Management

(i) Human Resources Management (HR)

The Contractor shall have an HR system designed to attract and retain outstanding employees in accordance with DOE expectations, policies, and procedures. The Contractor shall maintain a market based system of compensation and benefit plans to motivate employees to achieve high productivity in scientific research and laboratory operation. 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.

(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 that 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. The internal audit group for the Laboratory shall report to the most senior governing body of the Contractor's parent organization(s).

(iii) Purchasing Management

The Contractor shall have and manage a DOE-approved purchasing system to provide purchasing support and subcontract administration. The Contractor shall, when directed by DOE, enter into subcontracts for the performance of any part of the work under this contract. The Contractor may also enter into subcontracts for the performance of any part of the work under this contract when authorized by DOE.

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.

(iv) Property Management

The Contractor shall have and manage 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 any Contractor-leased facilities and infrastructure used by the Laboratory.

(v) 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; employee and labor relations; contractor ethics; and litigation and claims.

(vi) Information Technology Management

The Contractor shall maintain information systems necessary to meet Laboratory requirements, which includes activities involving general purpose programming, data collection, data processing, report generation, software, electronic and telephone communications, and computer security. The Contractor shall provide computer resource capacity and capability sufficient to support Laboratory-wide information management requirements.

(vii) Other Services

The Contractor shall provide other services necessary for Laboratory operations, including support to the DOE Brookhaven Site Office.

(3) Project Management

The Contractor shall maintain a project management system, consistent with DOE project management requirements, to ensure that projects are completed within scope, budget, and schedule.

(4) Environmental Management

Unless otherwise directed by the Contracting Officer, the Contractor shall plan and execute the DOE's environmental program activities in accordance with DOE program goals, initiatives, strategies, guidance letters, and approved project baselines in areas such as: (i) Environmental remediation and facility deactivation, decommissioning, decontamination, and demolition in accordance with the site's Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Interagency Agreement and with DOE Orders; and (ii) Construction and maintenance of facilities to provide adequate protection of the public, employees, the environment, and Government-owned materials, facilities, and equipment.

The environmental management program shall be conducted in a safe and cost-effective manner leading to increasing DOE, regulatory and public confidence in cleanup efforts. Program elements will include: (i) implementing comprehensive project management systems to track progress, maintain regulatory compliance, and increase cost effectiveness of work activities; (ii) developing integrated plans and schedules for involving the participation of DOE, regulators, and other stakeholders in decision making and

priority setting of environmental restoration activities; and (iii) maintaining technical depth to propose and implement cleanup activities commensurate with commercial practices in the areas of cost, implementation, schedule, and public acceptability.

The Contractor shall establish and maintain systems to effectively manage and implement an environmental restoration program in accordance with goals and objectives set forth by the Department. The systems must ensure that the technical approach is consistent with DOE cleanup strategies to complete all Records of Decision in accordance with the current approved baseline; to implement an overall system to effectively and efficiently manage all groundwater and contaminated soil cleanup activities; to expedite final disposition of facilities awaiting decommissioning and decontamination; and to achieve delisting from the National Priority List. Contractor support shall be provided to DOE as directed by the Contracting Officer.

(5) Community Involvement

The Contractor shall maintain a systematic approach and commitment to involving the community in all aspects of the Laboratory. The Contractor's overall community involvement program shall:

- maintain a strong, integrated, proactive community involvement and communications program;
- appropriately address the community's substantive concerns;
- ensure the community's awareness of the importance of the long-term basic research supported by DOE and the SC;
- ensure the community has positive relationships with the Laboratory and confidence in its decision-making processes; and
- establish constructive external partnerships in support of DOE's overarching mission and strategic objectives.

(6) Safeguards and Security (S&S)

The Contractor shall provide a fully integrated safeguards and security program to ensure that S&S interests and activities are protected from theft, diversion, terrorist attack, industrial sabotage, radiological sabotage, chemical sabotage, biological sabotage, espionage, unauthorized access, compromise, and other acts that

may have an adverse impact on national security; the environment; or pose significant danger to the health and safety of DOE Federal and contractor employees or the public. S&S programs must be based on the results of vulnerability and risk assessments which are used to design and provide graded protection in accordance with an asset's importance or the impact of its loss, destruction, or misuse. The Contractor shall provide a Protective Force (PF) capable of providing a secure environment protecting critical national security assets through the conduct of an integrated risk-based approach to security operations. The Contractor shall establish and maintain policies and procedures for PF personnel and firearms operations in accordance with established DOE requirements. The Contractor shall establish a formal PF training program which ensures appropriate personnel are competently trained, and fully qualified to perform the tasks within their assigned responsibilities under both normal and emergency conditions.

(7) Cyber Security

The Contractor shall ensure the development, operation, management, and integration of an ongoing program for cyber security management consistent with DOE requirements. The Cyber Security Program must assess risks associated with computer and network security from both external and internal perspectives. The Contractor shall develop and maintain a structured Cyber Security risk management process to ensure that priorities are established and cyber security risks are managed through a process of identifying and assessing threats, vulnerabilities, asset value, and existing protection measures; developing and implementing appropriate policies and controls; promoting awareness of those policies and controls; and monitoring, evaluating, and improving the effectiveness of policies and controls.

(8) Emergency Management

The Contractor shall maintain an emergency management system in accordance with DOE requirements including, but not limited to, emergency preparedness plans, procedures, response, drills and exercises, occurrence notification and reporting, and operation of an Emergency Operations Center.

(9) Radiological Assistance Program

The Contractor shall provide health physics and radiological protection expertise and capability in support of the NNSA Region 1 Radiological Assistance Program (RAP). As coordinated and

directed by the NNSA Region 1 Regional Response Coordinator, the Contractor provide Contractor personnel to DOE-led RAP teams. The Contractor will acquire and maintain advanced radiation detection equipment, communications equipment, protective gear, and other necessary equipment and supplies to achieve the RAP mission. Contractor team members shall be fully trained in the use of detection equipment and the hazards of radiation materials.

(10) Waste Management

The Contractor shall maintain and manage a waste management program in an integrated manner such that waste is managed consistently and in compliance with all applicable regulatory requirements and DOE expectations. Waste management activities include: timely characterization, consolidation, segregation, and storage of waste; treatment that complies with storage and/or disposal criteria; efficient shipment of waste for treatment, storage, and/or disposal; maintaining sufficient and compliant waste storage space at the Laboratory to accommodate waste generation and waste backlog; and implementation of an effective waste minimization and pollution prevention programs.

(11) Laboratory Facilities and Infrastructure

The Contractor shall manage and maintain government-owned buildings and facilities at the Laboratory site, together with the utilities and associated infrastructure. Recognizing that these facilities are a national resource, they 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 strive to employ facilities management practices that are best-in-class and integrated with mission assignments and business operations. The maintenance management program shall strive to maintain Government property in a manner that promotes and continuously improves operational safety, environmental protection and compliance, property preservation, and cost effectiveness; ensures continuity and reliability of operations, fulfillment of program requirements, and protection of life and property from potential hazards; and ensures the condition of the assets will be maintained or improved using risk-benefit analysis tools and processes.

The Contractor will implement a capital renewal program to revitalize and/or replace facilities that cannot meet the required functionality in support of mission accomplishment.

(12) Sustainability

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 Contract will support DOE's use of Energy Savings Performance Contracts (ESPC) and Utility Energy Services Contracts (UESC). The Contractor shall maintain and update, as appropriate, its Site Plan to include detailed plans and milestones for achieving site-specific energy efficiency goals and objectives.

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 interval, 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 shall be 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. DOE intends to consult with the Contractor to determine the necessity, form, and frequency of any reports required to be submitted by the Contractor to DOE under this contract.

C.6 RECOVERY ACT PROJECTS

This section identifies active Recovery Act Projects funded at Brookhaven National Laboratory. Upon completion of all projects, this section will be deleted.

The projects are as follows:

(1) Early Career Research Program (BES)

(2) National Center for Research Resources (NCRR) – U.S. National Institutes of Health (NIH) Work for Others (WFO)