

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 AMES	C-2
C.3 - PERFORMANCE EXPECTATIONS, OBJECTIVES, AND MEASURES	C-3
C.4 - STATEMENT OF WORK	C-8
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 AMES Laboratory (AMES) (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 a national laboratory operated primarily for the DOE's Office of Science (SC). 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 Supplement (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, resulting in a safe and secure environment, outstanding science and technology results, more cost-effective operations, and enhanced Contractor accountability. Toward this end, this contract establishes a process for tailoring existing and new DOE 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 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 or 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 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.

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, 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. 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., in 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 AMES LABORATORY

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) "Mission and Major Programs". 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 in accordance with instructions to be issued by the AMES Site Office 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 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 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 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 in concert 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.

The Contractor is expected to demonstrate benefit to the nation from research and development (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 viable portfolio of research programs that generates the resources required to renew and enhance Laboratory research capabilities over time.
- (e) Maintain a positive 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, safety and security 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 - The Contractor will deliver innovative, forefront science and technology aligned with DOE strategic goals in a safe, environmentally sound, and efficient manner, and will operate the Materials Preparation Center (MPC).
 - (1) Mission Accomplishment (Quality and Productivity of R&D): The Contractor shall produce high-quality, original, and creative scientific results that demonstrate sustained scientific and technological progress and impact, while receiving appropriate external recognition of accomplishments. The Contractor shall also contribute to overall research and development goals of the Department and its customers. Important performance factors for the research and development are: overall productivity/output; impact including the significance of the R&D; leadership including recognition of Science and Technology accomplishments; and delivery including timeliness such as meeting milestones, goals, and commitments.

- (2) Success in Operating Research Facilities & Equipment: Provide quality strategic planning for facilities/equipment needed to insure the Laboratory can meet its Science and Technology missions today and in the future, while effectively and efficiently maintaining current Science and Technology facilities and equipment and providing effective, efficient operation of the Materials Preparation Center.

- (3) Project/Program Management: The Contractor shall provide for effective and efficient stewardship of resources and capabilities, through expert planning, delivery, and risk management. Important performance factors are: establishing a Laboratory vision that includes maintaining key competencies to support research programs and making quality hires; planning including high quality research plans, adequate consideration of technical risks, success in identifying and avoiding/overcoming technical problems and the ability to take advantage of new opportunities; and linking financial data to effective decision making and redirecting resources/projects in response to changing conditions.

- (b) Contractor Leadership/Stewardship - The Contractor shall provide for the effective and efficient management and operation of the Laboratory through a strategic vision and effective planning to assure the Laboratory mission is accomplished. Important performance factors are:
Laboratory-wide strategic vision and effective planning including the creation of partnerships and alliances, selection of Laboratory priorities and culture, educational programs, technology transfers, and developing a working relationship with the local community; responsiveness and accountability; and corporate involvement /contributions, including joint appointments, innovative financing proposals, infrastructure support and an overall investment in the success of the Laboratory.

C.3.3 - Performance Objectives and Measures

The results-oriented performance objectives of this contract are stated in the Performance Evaluation and Measurement Plan (PEMP) (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 Business 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 instructions issued by the AMES Site Office 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 PEMP as called for within the Part II, Section I. 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 Laboratory; to accomplish the missions assigned by the DOE to the Laboratory; and to perform all other work described in this Statement of Work (SOW). DOE research activities are assigned through strategic planning, program coordination, and cooperation between the Contractor 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. 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 and assures the safety, health, and security of employees and the public. This objective is to be accomplished by the Laboratory implementing an Integrated Safety Management System (ISMS) that includes an Environmental Management System. In performing the contract work, the Contractor shall implement appropriate program and project management systems to 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 to reduce costs and improve performance; and maintain Laboratory facilities as necessary to accomplish assigned missions.

(b) Mission and Major Programs

Laboratory Mission. In support of major DOE sponsor organizations, the central mission of the Laboratory is to provide national scientific leadership and technological innovation to support SC's objectives and, more broadly, DOE's objectives and programs. The Laboratory's mission statement shall be documented annually and updated as necessary in the Business Plan.

AMES serves DOE and supports the Office of Science Strategic Plan by conducting fundamental research in the physical, chemical, biological, materials, mathematical and engineering sciences which underlie energy generating, conversion, and transmission and storage technologies; environmental improvement; and other technical areas essential to SC and DOE missions.

AMES has a focus on materials research, with strengths in areas of chemistry and plant biology.

Major Programs. The Laboratory's scientific component is organized into several research programs: Applied Mathematics and Computational Sciences, Biorenewable Resource Consortium, Chemical and Biological Sciences, Condensed Matter Physics, Environmental and Protection Sciences, Materials Chemistry and Biomolecular Materials, Materials and Engineering Physics, Multiphase Systems, and Nondestructive Evaluation. These programs perform research in the areas of synthesis and purification of rare-earth materials; metals and intermetallics; ceramic materials; polymers; advanced computing systems; instrumentation; environmental monitoring of heavy metals; nondestructive analysis; sensing devices; and other areas.

The MPC is a DOE facility for the preparation, purification, and characterization of rare earth, alkaline-earth, and refractory materials. The MPC provides technical expertise in creating materials that exhibit unique properties such as ultra-fine microstructures, high strength, and high conductivity.

(1) Laboratory Goals

The goals of the Laboratory are to deliver successful basic research to meet the demands created by evolving national needs and to advance 21st century technologies. The Laboratory will draw on its core strengths in materials synthesis and processing, chemical analysis, chemical sciences, photosynthesis, materials sciences, applied mathematical sciences, and environmental and protection sciences to conduct the long-term basic and intermediate range applied research needed to solve the complex problems encountered in energy production, utilization and efficiency; national security; environmental health and safety; and environmental restoration and waste management. The Laboratory will continue to operate the MPC, a DOE facility for preparing ultra-high purity and well-characterized metals, alloys, and compounds, as well as single crystals of some of these materials, making these materials available to other DOE laboratories, to other agencies, to universities and to the private sector. AMES will continue to play a significant role in the advancement of science and mathematics through education and mentoring.

(2) Laboratory Business Lines. In support of the DOE mission, the Laboratory will pursue a number of distinct business lines that include:

(i) Fundamental Materials Research

The Contractor shall conduct theoretical and experimental work in condensed matter physics to focus on the synthesis, characterization, magnetic and electronic properties, and theory and modeling of new materials. The work is fundamental to the development and optimization of materials relevant for the utilization in energy technologies.

The Contractor shall conduct research to discover new complex materials and to understand the properties that stabilize these materials, for example polymers, other macromolecular systems, and metal-rich inorganic compounds.

(ii) Research in Chemical Sciences

The Contractor shall conduct research in photochemistry and photobiology that lead to a fundamental understanding of the energy-transfer processes that are basic to solar energy conversion, with potential application to the development of new solar energy technologies.

The Contractor shall conduct fundamental studies in catalysis, coordination chemistry, surface science, and chemical dynamics, including research on the structure, bonding, and dynamics of chemically reactive systems, with goals such as understanding surface phenomena related to heterogeneous catalysis.

The Contractor shall conduct research to develop new methodologies in separations science and analytical chemistry to facilitate advances in heterogeneous and homogeneous catalysis, nanotechnology, environmentally benign chemistry, toxic waste clean-up, and related fields.

(3) Primary Program Sponsors

Work under this contract includes scientific and technical programs sponsored by major DOE organizations. The primary sponsor of work at AMES is the Office of Science (SC), DOE. Other DOE organizations that may sponsor work include:

Nonproliferation & Verification
Energy Efficiency and Renewable Energy
Environmental Management
Fossil Energy
National Nuclear Security Administration
Counterintelligence
Environment, Safety and Health

Additionally, the Contractor may be authorized to pursue other DOE and non-DOE missions that derive from the Laboratory's missions and utilize the Laboratory's core competencies. Collaborations with other federal agencies include the National Institutes of Health, the Environmental Protection Agency, the Department of Justice and the Department of Defense.

A summary of current Laboratory programs follows. Interdisciplinary teams conduct research that cuts across program areas. Descriptions of major programs are to be updated annually in the Business Plan.

(4) Office of Science Programs

- (i) Basic Energy Sciences (BES): The Contractor shall conduct fundamental research in the natural sciences and engineering leading to new and improved energy technologies and to understanding and mitigating the environmental impacts of energy technologies.
- (ii) Advanced Scientific Computing Research (ASCR): The Contractor shall conduct research in applied mathematics and computational sciences. The focus of the Scalable Computing Laboratory will include areas of research such as the development of new methods for hardware and software interconnects, the development of more efficient and robust approaches to resource management, and the development of new methods for handling large data sets.
- (iii) Biological and Environmental Research (BER): The Contractor shall conduct research to advance the understanding of environmental and biomedical knowledge connected to Energy. Work in this area will include research in such areas as Biological Imaging, e.g. the development of new laser-based technologies for the study of biological insult from environmental carcinogens.

(5) Technology Transfer Programs

The Contractor shall contribute to U.S. technological competitiveness through research and development partnerships with industry that capitalize on the Contractor's expertise and facilities. Principal mechanisms to effect such contributions are: cooperative research and development agreements, access to user facilities, reimbursable work for non-DOE activities, personnel exchanges, licenses, and subcontracting.

The Contractor shall cooperate with industrial organizations to contribute to U.S. industrial competitiveness, by assisting in the application of energy science and technology R&D. Such cooperation may include an early transfer of information to industry by arranging for the active participation by industrial representatives in the Contractor's programs. 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 is encouraged to develop 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.

Cooperation may also include use by industrial organizations of Laboratory facilities and other assistance as may be authorized, in writing, by the Contracting Officer.

(6) University and Science Education Program

The Contractor shall work with colleges and universities, with special emphasis on Historically Black Colleges and Universities/Minority Institutions, and initiate new programs to enhance science and mathematics education at all levels. The Contractor shall encourage participation by a diverse group of faculty and students in Laboratory programs to bring their talents to bear on important research problems and contribute to the education of future scientists and engineers. The Contractor shall also conduct programs for students and faculty to enrich mathematics and science education. A particular purpose of these programs is to encourage members of under-represented societal groups to enter careers in science and engineering.

The Contractor shall maintain its programs of cooperation with the academic and educational community and with nonprofit research institutions for the purpose of promoting research and education in scientific and technical fields of interest to DOE's programs. This cooperation may include, but is not limited to, such activities as: (i) joint experimental programs with colleges, universities, and nonprofit research institutions; (ii) interchange of college and university faculty and Laboratory staff; (iii) student/teacher educational research programs at the pre-collegiate and collegiate level; (iv) post-doctoral programs; (v)

arrangement of regional, national, or international professional meetings or symposia; (vi) use of special Laboratory facilities by colleges, universities, and nonprofit research institutes; or, (vii) provision of unique experimental materials to colleges, universities, or nonprofit research institutions or to qualified members of their staffs.

(7) International Collaboration

In accordance with DOE policies, and in consultation with DOE, the Contractor shall maintain a broad program of international collaboration in areas of research of interest to the Laboratory and to DOE.

(8) Other Programs

The Contractor is responsible for the conduct of such other programs and activities as the Parties may mutually agree, including:

- (i) Providing the facilities of the Laboratory to the personnel of public and private institutions for the conduct of research, development, and demonstration work, either within the general plans, programs and budgets agreed upon from time to time between DOE and the Contractor, or as may be specifically approved by DOE. The Laboratory facilities shall be made available on such other general bases as DOE may authorize or approve.
- (ii) The conduct of research and development work for non-DOE sponsors which is consistent with and complementary to the DOE's mission and the Laboratory's mission under the contract, and does not adversely impact or interfere with execution of DOE-assigned programs, does not place the facilities or Laboratory in direct competition with the private sector and for which the personnel or facilities of the Laboratory are particularly well adapted and available, as may be authorized, in writing, by the Contracting Officer;
- (iii) The dissemination and publication of unclassified scientific and technical data and operating experience developed in the course of the work.
- (iv) Furnishing such technical and scientific assistance (including training and other services, material, and equipment), which are consistent with and complementary to the DOE's and Laboratory's mission under this contract, both within and outside the United States, to the DOE and its installations, Contractors, and interested organizations and individuals.
- (v) Laboratory Directed Research and Development (LDRD). The laboratory may conduct an LDRD program that leverages its scientific expertise and key technologies toward innovations that are applicable to DOE's missions.

(c) Administration and Operation of the Laboratory

The Contractor shall manage, operate, protect, maintain and enhance the Laboratory's ability to function as a DOE 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 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 and with due regard for Environment, Safety, and Health (ES&H) issues.
- (2) Protection of the Worker, the Public, and the Environment. The safety and health of workers and the public and stewardship 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 include an Environmental Management System. 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 Contractor shall also implement 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, sound cyber security protections, protection of information, personnel security, and access control for Laboratory staff and visitors, export controls, and a comprehensive emergency management program.
- (4) Laboratory Facilities. 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.

- (5) Waste Management. The Contractor 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 Contractor during the term of the contract.

The Contractor 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.

- (6) 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 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 a Laboratory 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 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. 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 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 AMES Site Office as directed by the DOE AMES Site Office Manager.
- (7) **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.

- (8) 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.

- (9) Other Support. The Contractor shall provide other administrative services necessary for Laboratory operations and logistics support to the DOE AMES 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 interval, 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.