

Argonne National Laboratory Prime Contract**Part I. Section C. Description/Specifications/Statement of Work**

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C.1 - Statement of WorkBackground

Spirit of Cooperation

It is the intent of the DOE and the Contractor that this contract be administered in the spirit of friendly cooperation with the maximum effort in achieving the objective of the Laboratory's mission as stated herein. It is also the intent of the Parties to commit their efforts and resources in order that the Laboratory continues in its role as one of the United States' premier scientific laboratories operating for the benefit of the nation. The relationship has been a success in attracting the best talent to work on problems of national and international import.

Relationship in Carrying out Mission

The DOE recognizes that its role requires it to formulate goals, identify missions and obtain the necessary resources for the execution by the Contractor of research and development in accordance with those goals and missions. The DOE will utilize the managerial capabilities of the Contractor, recognizing that this capability of the Contractor is best employed when the Contractor operates the Laboratory under broad policy guidance from DOE. The DOE will consult with the Contractor in activities pertinent to the mission of the Laboratory and DOE, if appropriate, consistent with applicable laws and the capabilities and experience of Contractor personnel.

Contractor Responsibilities

The Contractor recognizes the role of DOE in formulating policies and general directions for the Laboratory. The Contractor accepts its responsibility to provide DOE with timely and expert advice on matters of science, technology and national policy issues, if appropriate.

The Statement of Work to be performed under this contract is as follows:

(a) Scope of the Undertaking

The programs at the Laboratory may include the following work, in accordance with the programmatic interests and policies of DOE, and subject to the provisions of this contract:

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(1) Basic Research Work

Conduct of basic research in areas of science and technology which are of interest to DOE. This work shall include experimental, theoretical, and other relevant investigations in the physical (including engineering, chemical, earth, and physical sciences), life, and environmental sciences to advance scientific understanding generally and to support development of energy technologies. Major research interests include advanced techniques using synchrotron radiation for research in the physical and life sciences, algorithms and tools for massively parallel computers, studies of the human genome, synthesis of advanced materials, and detector systems for use at other research centers.

(2) National Research Facilities

Development and operation of national facilities for use by university, industry, and national laboratory groups in research on basic and technology-related activities; development of advanced instruments and methods for facilities-centered research.

These facilities shall include:

- (i) DOE-designated "user" facilities available for use by national and international communities and scientists and are the Intense Pulsed Neutron Source, the Argonne Tandem Linear Accelerator System, the High-Voltage Electron Microscope Tandem Facility, the Advanced Photon Source, and the Spallation Neutron Source (as described in Appendix L).
- (ii) Other facilities, such as the Pulsed Electron Linac, which are not officially designated as "user" facilities by DOE, are available to serve significant numbers of outside researchers. Virtually all Laboratory facilities may be made available to outside users on a case-by-case basis.

(3) Energy and Environmental Technology

As directed by DOE, the Laboratory shall conduct research and development in the field of advanced nuclear power systems including nonproliferation, advanced fuel development, spent fuel treatment, safety and decontamination and decommissioning; research and development on selected technologies in conservation, renewable energy, and fossil energy; and supporting research in materials, chemical, and electrochemical technologies. The Laboratory's work

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on other energy technologies includes fusion power development, advanced batteries and fuel cells, thermal sciences, biotechnology, superconducting materials and components, and advanced coal technology. Work on environmental technologies is very broadly applicable, but gives particular attention to the development of processes and technologies for waste treatment, environmental restoration, air, water, and soil monitoring, decontamination and decommissioning, material management, and radioactive assays associated with these activities to support the goals and objectives as set forth in paragraph (4) below.

Because of DOE's overall mission and need to coordinate the work of various domestic and international laboratories, industrial organizations, and other performers, there is a need for close consultation between DOE and the Contractor concerning the scope and development of the work. It is further understood that DOE's needs in this area will require the Contractor to work in close cooperation with other laboratories and organizations to be responsive to the DOE requests. This work will be identified by DOE program guidance letters and carried out in compliance with applicable DOE standards.

Operations of facilities at Argonne National Laboratory-West (ANL-W) in Idaho are anticipated to support development of decontamination and decommissioning technologies using the Experimental Breeder Reactor-II (EBR-II) and other nuclear facilities at ANL-W as models and testbeds; the application of electrometallurgical technologies for treatment of DOE spent fuel; reactor and fuel cycle safety efforts to improve the safety of Soviet-designed reactors and to support light-water reactor safety activities; and nonproliferation technology such as development of high density low-enriched fuel and disposition of surplus weapons plutonium. The primary facilities to be used are the Fuel Manufacturing Facility (FMF), the Sodium Process Facility (SPF), the Fuel Conditioning Facility (FCF), the Analytical Laboratory, Transient Reactor Test Facility (TREAT), and the Hot Fuel Examination Facility (HFEF). All facilities at ANL-W, including those which have been directed by DOE to be placed in a standby or shutdown condition, will be maintained industrially and radiologically safe and in full compliance with all applicable DOE and other agency environmental, safety, and health ("ES&H") requirements.

- (4) Environmental Management. The Contractor shall support the DOE's Environmental Management (EM) Program in accordance with DOE program guidance letters, and approved project baselines in areas such as:

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- (i) Environmental remediation and facility deactivation, decommissioning, decontamination, and demolition.
- (ii) Storage, treatment, and disposal of all regulated waste streams generated on site or existing from previous operations.
- (iii) Construction and maintenance of facilities to provide adequate protection of the public, employees, the environment and Government-owned materials, facilities, and equipment.
- (iv) Implementation of waste minimization and pollution prevention initiatives.
- (v) Research and development tasks to support technologies to reduce costs and improve efficiencies in environmental remediation. Deployment of technologies in demonstration programs and to the commercial sector should be emphasized as a final goal for any research and development cleanup technologies to reduce costs and improve performance.

Specific responsibilities include:

1. Environmental Restoration

Effective programs for environmental restoration and other environmental activities must be established and maintained to provide compliance. Contractor support shall be provided to DOE as requested by the Contracting Officer.

2. Waste Management

Based on DOE funding guidance and other guidance documents, all waste management activities shall be managed in an integrated manner such that waste is managed consistently and in compliance with all applicable regulatory requirements. Plans for all waste, whether generated by processing, manufacturing, research activities, or site cleanup activities, shall be fully implemented to provide appropriate characterization, treatment, storage, transportation, disposal and technology development.

Waste management activities include: (A) timely characterization, consolidation and segregation of waste; (B) treatment that complies with storage and/or disposal criteria; (C) efficient

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shipment of waste for treatment, storage and/or disposal; (D) maintaining sufficient waste

The environmental management program shall be conducted in a manner which leads to increasing DOE, regulatory, and public confidence in cleanup efforts. Program elements will include: (A) implementing comprehensive project management systems to track progress, maintain regulatory compliance, and increase cost effectiveness of work activities; (B) developing integrated plans and schedules for incorporating input from DOE, regulators, and other stakeholders in cleanup activities; (C) maintaining technical depth to propose and manage cleanup activities effectively; and (D) implementing appropriate storage space at the Laboratory to accommodate waste generation and waste backlog; and (E) implementation of waste minimization and pollution prevention programs.

Based on DOE funding guidance and other guidance documents, the Contractor shall provide responsive and complete waste management services for characterization, treatment and storage through the appropriate use of existing facilities, new facilities, other DOE facilities, and private sector capabilities.

The Contractor's short and long range plans and activities for treatment, storage and disposal must be coordinated and integrated with DOE's national waste management program and the DOE, EM and CH Strategic Plans.

The Contractor shall utilize its best efforts to fully integrate all environmental, waste, remediation, and operations activities so that all regulatory requirements and Federal Facility Agreements or consent orders are met.

3. Environmental Technology Development

Where appropriate, the various processes shall be integrated into systems to resolve the complex problems of backlogged waste, waste being generated by normal site operations, and future wastes that will be generated by such activities as environmental restoration and decontamination and decommissioning. The Contractor shall regularly review the plans for environmental

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restoration and waste management to identify technology needs and application/insertion points for technologies that can reduce costs and improve performance. The Contractor shall assure that technology development efforts are coupled with technology deployment initiatives and that practical deployment of ANL developed technology to the commercial sector is a primary goal for technology development.

- (5) Protection of the Worker, 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:

- (i) Take necessary actions to minimize injuries and/or fatalities and prevent worker exposures and environmental releases in excess of established limits.
 - (ii) In concert with DOE, establish specific environmental, safety, and health performance indicators for activities which are the basis for measuring progress toward continuous improvement.
 - (iii) Establish clear environmental, safety, and health priorities and manage activities in proactive ways that effectively increase protection to the environment and to public and worker safety and health.
 - (iv) Reduce ES&H uncertainties by prioritizing and addressing risks, and eliminating threats from site activities.
 - (v) Carryout all activities in a manner that complies with human health, safety and environmental regulations; minimizes wastes; and complies with applicable regulatory requirements and DOE Directives.
 - (vi) Develop and implement an Integrated Safety Management System.
- (6) Technical Evaluation

Characterization and evaluation of nationally important projects, technology options and sites in terms of their environmental, cost, or other implications. Contractor activities in this area include site-specific environmental impact and remediation studies, evaluation of advanced energy technologies, assessments

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of environmental regulatory policies, and providing support to DOE in the evaluation and selection process for identifying construction site(s) for proposed new facilities.

(7) **Technology Transfer and Cooperation with Industrial Organizations**

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

Cooperation with industrial organizations to assist in increasing U.S. industrial competency and contributions to applications of energy science and technology. Such cooperation may include an early transfer of information to industry by arranging for the active participation by industrial representatives in the Laboratory'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 Laboratory will respond to specific near-term technological needs of industrial companies with special consideration given to working with small, small disadvantaged and women-owned businesses. The Laboratory may also capitalize on its location in the industrial Midwest by developing productive relationships with regional and local companies and through forums such as conferences, workshops, and traveling presentations.

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

(8) **Science and Mathematics Education and Other Cooperation with Research and Educational Institutions**

Extensive work with colleges and universities, with special consideration on Historically Black Colleges and Universities/Minority Institutions, and programs to enhance science and mathematics education at all levels. Participation by a diverse group of faculty and students in Laboratory programs brings their talents to bear on important research problems and contributes to the education of future scientists and engineers. The Laboratory also conducts many programs for precollege students and faculty to enrich mathematics and science education.

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A particular purpose of these programs is to encourage members of under-represented societal groups to enter careers in science and engineering.

The Laboratory's broad program of cooperation with the academic and educational community and with nonprofit research institutions has the purpose of promoting research and education in scientific and technical fields of interest to DOE's programs and facilitating interrelationships in these fields between the Laboratory and other research and educational institutions. This cooperation may include, but is not limited to, such activities as the following:

- (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.
- (9) Diversity

The Laboratory shall create and maintain an environment that values diversity, fully utilizes the talents and capabilities of a diverse workforce and does not tolerate discrimination or harassment in any form. The Contractor seeks to recruit a diverse workforce by promoting and implementing Departmental and Laboratory goals with special consideration given to Historically Black Colleges and Universities/Minority Institutions. The Contractor will also strive to promote diversity in all of the Laboratory's subcontracting efforts with consideration on the use of small, small disadvantaged and women-owned businesses, and the Small Business Administration's 8(a) program.

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(10) International Collaboration

In accordance with DOE policies, and in consultation with DOE, the Contractor will maintain a broad program of international collaboration in areas of research of interest to the Laboratory and to DOE. This collaboration will be both in areas where DOE has formal international cooperation agreements which assign the Contractor a specific role, as well as in areas of general interest to the Laboratory's and DOE's research programs.

This collaboration may include, but is not limited to, such activities as:

- (i) Participation in assigned aspects of formal international agreements;
- (ii) Maintenance of liaison with peer groups in the international R&D community;
- (iii) Participation in programs of international scientific organizations;
- (iv) Developing and proposing to DOE, joint experimental programs and/or work for others from international sponsors; or
- (v) Participation in programs involving visits, assignments, or exchanges of staff/students.

(11) General Assistance and Services

The furnishing of 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, as may be authorized, in writing, by the Contracting Officer.

(12) Other Research and Development Work

The Laboratory shall conduct 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, 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

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personnel or facilities of the Laboratory are particularly well adapted and available, as may be authorized, in writing, by the Contracting Officer.

(13) Dissemination of Information

The Laboratory shall undertake activities pertaining to the dissemination of information relating to energy in general and Laboratory programs in particular and the stimulation and encouragement of such work by employees of the Contractor and users of the Laboratory, subject to the patent provisions and other applicable provisions of this contract.

(14) Management and Maintenance of Laboratory Facilities

The Contractor is responsible for the operation, including management and maintenance, of the Laboratory physical plant. This includes the planning in consultation with DOE, and the making of recommendations to DOE, for new buildings, facilities and utilities and alteration of existing buildings, facilities, and utilities on the Laboratory site and elsewhere, including the furnishing of all necessary basic design and operating criteria. The Contractor will provide for the design, engineering, construction, and alteration, by subcontract or otherwise, of such buildings, facilities, and utilities on the Laboratory site and elsewhere as authorized or approved, in writing, from time to time by DOE. Before proceeding with other than design aspects of any project which the Contractor, acting in good faith, considers may reasonably be within the coverage of the Davis-Bacon Act (40 U.S.C. 276a and following), the Contractor shall obtain a written determination by the Contracting Officer as to the applicability of the Davis-Bacon Act to such project. When it is determined that the Davis-Bacon Act does cover a particular work project, the Contractor shall procure by subcontract the covered work in accordance with DOE approved procedures.

(15) Other Subcontracting

The Contractor shall, when directed by the Contracting Officer, in writing, and may, but only when authorized by the Contracting Officer, as set forth elsewhere in this contract, enter into subcontracts for the performance of any part of the work under this Clause.

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(16) Energy Management

The Contractor shall take all reasonable measures to improve the energy efficiency at the Laboratory sites in accordance with paragraph (d) of Clause I.105 - DEAR 970.5204-60 - Facilities Management (NOV 1997)(Deviation).

(b) General Responsibilities of the Parties

(1) Basic Considerations

It is the primary aim of DOE and the Contractor in executing this contract to provide an instrument under which the Laboratory will continue to be strengthened as a research, development and demonstration resource of DOE so that the work outlined in paragraph (a) of this Clause will be carried on most effectively. The Parties agree that the following principles are important to the realization of this goal:

- (i) The benefits of Contractor operation of Government-owned research and development installations are most fully attained when the Contractor, within the terms of the contract, effectively brings its management experience and capabilities to bear on the contract activities.
- (ii) The research and development capability of the Laboratory and the strength of universities of the Midwest and the Nation will benefit by a greater degree of participation by highly qualified university and industry staff in programs at the Laboratory.
- (iii) The direction of the Laboratory must be in the hands of highly competent managerial and professional personnel, capable of attracting, retaining and managing a highly skilled and respected workforce of scientific, administrative and support personnel, possessing skills to manage and operate in a cost-effective manner, a Laboratory with extensive facilities and a wide range of programs.
- (iv) The competence and quality of any research organization is based upon and flows from the competence and quality of those individuals who are actively engaged in the creative scientific and engineering work carried on by the organization.
- (v) The Parties agree that safety of operations and equipment, protection of the environment, and worker and public safety will be given the highest

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priority in the conduct of Laboratory activities; Provided, however, that whenever decommissioning, decontamination or other major environmental, safety or health projects necessitate substantial funding, DOE will cooperate to the extent feasible with the Contractor to permit the projects to be scheduled and funded in such a way as to minimize interference with ongoing research and development programs.

- (vi) Experience has indicated that high quality basic and applied research work can best be carried on and maintained by permitting the individual investigators to pursue work with the freedom essential for effective creative effort.
- (vii) Applied research and development work entails a greater degree of program coordination both by the Laboratory and by DOE. Responsiveness by the Contractor to DOE program needs and requests strengthens the effectiveness of the Laboratory arrangement.
- (viii) DOE recognizes the importance of reasonable programmatic and institutional stability to the success of its multiprogram laboratories, especially in the basic and applied research areas. However, DOE, particularly in development areas, must be able to justify the proposed work with respect to many competing requests for funding and, in order to have adequate funds to support high priority work, DOE must choose among the requests and sometimes cease to fund existing work. It is the intent of DOE, subject to the availability of appropriated funds, to provide the funding necessary to adequately provide for the orderly cessation of work, including but not limited to, decommissioning costs and severance payments. It is recognized by the Parties that such program changes, as well as possible constraints on overall growth, will require staffing adjustments in the Laboratory from time to time. It is important that such staffing adjustments be made promptly and in a manner to retain the most productive Laboratory personnel. Also, it is vital that the Laboratory have an effective program for the recruitment and advancement of competent scientific and engineering talent.
- (ix) Research and development work at the forefront of the scientific and technical fields which lie within the scope of the Contractor's responsibility requires the most suitable equipment, experimental facilities and library resources available.

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- (x) The management of the business and administrative aspects of the Laboratory must be supportive of a creative and dynamic Laboratory.
- (xi) The Parties recognize the importance of fostering an atmosphere at the Laboratory conducive to scientific inquiry and the development of new knowledge and creative and innovative ideas related to important national interests. The Parties further recognize that the free exchange of ideas among scientists and engineers at the Laboratory and colleagues at universities, colleges, and other laboratories or scientific facilities is vital to the success of the scientific, engineering, and technical work performed by Laboratory personnel.
- (xii) In order to further the goals of the Laboratory and the national interest, it is agreed by the Parties that the scientific and engineering personnel at the Laboratory shall be accorded the rights of publication or other dissemination of research, and participation in open debate and in scientific, educational or professional meetings or conferences. Any publication or dissemination must comply with applicable laws, regulations, DOE policies regarding protection and dissemination of information, applicable security provisions, technology transfer agreements and such other limitations as may be required by the terms of the contract. It is agreed by all Parties that it is desirable in public releases to acknowledge fully the contributions of all Parties to work thus reported.

In furtherance of the performance of the work under this contract and in light of the foregoing basic considerations, the Parties have agreed upon the statements of their responsibilities as set forth in the following sections, which shall be carried out in a cooperative spirit toward achieving their common objectives.

(2) DOE's Responsibilities

The proper discharge of DOE's responsibilities requires that it shall have the power to exercise general cognizance over the contract work to adequately fulfill these responsibilities, and to have full access to information concerning performance of such work. In order to discharge its responsibilities under this contract, DOE shall, subject to other provisions of this contract:

- (i) Approve the Contractor's major policies and procedures affecting administration (such as finance, procurement, human resources, litigation management, employee protection, etc.), environmental, safety and

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health, and operation (such as maintenance, construction management, facilities, etc.) of the Laboratory.

- (ii) Formulate a coordinated program, taking into consideration proposals submitted by the Contractor, which it can support with funds appropriated by the Congress.
- (iii) Recognize the need, in planning its budgetary and program actions, to consider the role, mission and long-range objectives of the Laboratory as expressed in the approved Institutional Plan.
- (iv) Plan its budgetary and program actions in consultation with the Contractor, with due recognition of the fact that sharp increases and decreases in funding may affect overall Laboratory effectiveness.
- (v) Recognize the need to provide the Laboratory with the facilities and equipment necessary for the effective execution of approved work.
- (vi) Keep the Laboratory and the Contractor advised, where pertinent, of DOE's scientific and technological activities, of information developed within DOE's programs, and of its current long-range objectives.
- (vii) Conduct reviews of program objectives and accomplishments and effectiveness of Laboratory management and consult with the Contractor regarding matters of mutual interest.
- (viii) Use its best efforts to obtain the appropriation of funds to cover allowable costs under this contract, including allowable costs from losses where such costs exceed the amounts presently obligated under the contract. The obligations of the DOE with respect to the reimbursement of losses according to the terms of this Contract, and under this provision, shall survive completion or termination of the Contract except as released in the Payments and Advances clause of this Contract.

(3) Contractor's Responsibilities

The Contractor agrees that the performance of work and services pursuant to the requirements of this contract shall conform to high professional standards. The Contractor shall use its best efforts to efficiently manage the Laboratory in carrying out DOE-approved programs, in accordance with policies established by DOE and as specifically set forth in other provisions of this contract. The

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Contractor recognizes DOE is responsible for the conduct of all programs and for assuring that the Government funds are properly and effectively utilized.

In order to discharge its responsibilities under this contract, the Contractor shall, subject to other provision of this contract.

- (i) Provide technically competent, productive and efficient scientific, engineering, professional, managerial and support personnel capable of performing outstanding, high quality work.
- (ii) Create and maintain at the Laboratory an intellectual environment conducive to the stimulation of imaginative research and development work for carrying out DOE's program.
- (iii) Formulate, review, and approve Laboratory policies and programs.
- (iv) Develop long-range objectives for the Laboratory; formulate and revise an annual Institutional Plan covering the proposed work to be conducted at the Laboratory, together with master plans for staff and facilities required to carry out the recommended work; evaluate the programmatic accomplishments at the Laboratory on a continuing basis; and assure that the efforts at the Laboratory are consistent with the Institutional Plan and are directed toward programs that show the most promise and away from less promising programs which in the judgment of the Contractor should be reduced or eliminated.
- (v) Assure that the results of the scientific and engineering work performed at the Laboratory and funded by DOE, other Federal agencies, or other sponsors for which an exception from full cost recovery has been made are fully and currently reported to DOE and/or the other sponsors, to the scientific and engineering community, to industry, and to the general public following internal review for quality and accuracy by:
 - (A) Following normal scientific and technical practices in the reporting of results through the recognized technical journals and consistent with guidance provided by DOE, through DOE's reporting system; and
 - (B) Furnishing such additional scientific or technical reports as are requested by DOE. The DOE agrees to collaborate with the

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Laboratory in determining the necessity, form, and frequency of such additional reports.

- (vi) Assure that the Laboratory staff keeps itself abreast of worldwide scientific and technological developments in areas relevant to work under this contract.
- (vii) Recognize the need in developing, formulating and carrying out the policies, programs and contract activities to give due regard to the guidance which DOE may furnish from time to time with respect to its multiprogram laboratories, as well as DOE guidance relating to programs at the Laboratory.
- (viii) Provide for a wide range of advice from other universities and from high technology industry in determining policies for the operation of the Laboratory.
- (ix) Continue, except as otherwise agreed, to maintain the Laboratory as nearly as may be practicable, consistent with adequate direction and control by the Contractor, as a self-contained administrative unit.
- (x) Establish policies and objectives for cooperative research and educational programs between the scientific and technological community and the Laboratory.
- (xi) Operate the Laboratory's facilities and carry on its programs in a manner designed to protect the health and safety of its employees and the general public and to protect the environment.
- (xii) Consistent with the principles of Integrated Safety Management, assure the safety, operability, and functional adequacy of all Laboratory facilities and systems and comply with applicable DOE quality assurance, health, safety and environmental standards.
- (xiii) Assure the safeguards and security of all Laboratory facilities and systems which may include, after consultation with the Laboratory, provision for a protective force at ANL-E. In addition, the Contractor shall comply with DOE safeguards and security directives as directed by the Contracting Officer.

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- (xiv) Manage the Laboratory with prudent business judgment to support a creative and dynamic Laboratory.
- (xv) Keep DOE informed on its major activities under this contract.
- (xvi) Recognize that appraisals are an integral part of DOE administration and be appropriately responsive to such reports and functional and programmatic appraisals conducted by DOE.
- (xvii) Cooperate in every reasonable way with individuals or groups whose expert or consultative services DOE may choose to use to review and evaluate the scientific, technical, or other aspects of the contract work.
- (xviii) Consistent with the principles of Integrated Safety Management, establish and maintain clear and effective operational, environmental, safety and health, and administrative policies and procedures covering the operation of the Laboratory.
- (xix) Review and approve all Laboratory budget proposals, staffing plans, plans for modifying existing facilities and programs, and plans for establishing new facilities and programs.
- (xx) Establish policies regarding the extent to which Laboratory scientific facilities may be made available for use by persons other than the Laboratory staff and to establish criteria and means for deciding priorities among the users of Laboratory facilities. Whenever applicable, due consideration shall be given to the advice of the Laboratory's Program Advisory Committees.
- (xxi) Encourage the training of students, teachers and other research personnel, including university-level students and faculty, at the Laboratory as a means of broadening the training capabilities of the universities of the Midwest and of other educational institutions throughout the country for the purpose of increasing the total capability of the Nation for the training of research personnel.
- (xxii) Secure vigorous participation in the Laboratory's programs by staff from other research institutions and industrial organizations, as appropriate, in a substantial and mutually beneficial manner.

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- (xxiii) Assure that, when Laboratory development work has reached the point at which industry can be expected to carry it into productive use, information regarding such work is made generally available to industry.
- (xxiv) Select, manage and direct the employees at the Laboratory, all of whom are employees of the Contractor, and provide the scientific, technical and managerial personnel necessary to maintain a comprehensive scientific laboratory and to perform the work under this contract. Provide such other personnel or services as are necessary to operate and maintain the Laboratory facilities. In establishing or modifying levels of compensation and fringe benefits for employees, it is understood that the Contractor is guided by the following considerations:
 - (A) The Contractor should adopt wage, salary, and employee benefit policies and practices which will provide a technically competent, productive and efficient workforce consistent with the terms of this contract. One of the factors to be considered in establishing these policies and practices is the various labor markets, local, national and international, from which it competes for its employees.
 - (B) Subject to other considerations stated in the contract, the normal and typical aspects of wages, hours, and working conditions (which are the substance of collective bargaining) are left to negotiations between the Contractor and organized groups of employees.
- (xxv) Encourage employees to continue their intellectual development and, as the occasion arises, to revitalize or re-orient their activities in order to maintain a staff of maximum capability adaptable to the needs of DOE programs.
- (xxvi) Regularly assess the performance benefits of contracting out vs. in-house performance and report the results of these assessments to DOE.
- (xxvii) Maintain a Board of Governors with authority delegated by the Board of Trustees of the University of Chicago to oversee the management of the Laboratory. It is the intent of the Contractor that the Board of Governors, to the extent legally permissible, shall function in the same manner as a corporate board of a private entity of similar size and complexity.

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Among the areas to which the Board of Governors' authority and responsibility are to extend are Laboratory programs, diversity, budget and facility plans, as well as cooperative research and educational programs between the scientific and the technological community and the Laboratory. The Board of Governors' responsibility is to also include development of long-range objectives for the Laboratory.

Additionally, the Board of Governors shall have the duty of directing the Laboratory and its management. The Director of the Laboratory shall function under the Board of Governors with their advice and guidance.

The members of the Board of Governors appointed by the University Board of Trustees shall serve staggered three-year terms and shall be drawn primarily from three groupings:

- (A) The University of Chicago trustees, officers and faculty;
- (B) Scientists, engineers and administrators from other universities;
and
- (C) Scientists, engineers and administrators from high-technology industries.

The President of The University of Chicago shall serve as Chairman of the Board of Governors.

The Board of Governors shall establish such committees as may be necessary for the carrying out of its function, including appropriate review committees.

The bylaws of the Board of Governors shall be on file with the Contracting Officer. The Contracting Officer shall be notified of any changes proposed for such bylaws and be provided an opportunity to comment on any such proposed amendment.

The Board of Governors, or its representative(s), shall meet with the Contracting Officer on a quarterly basis to discuss issues of mutual concern related to the management and operation of the Laboratory.

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(4) Administration of Responsibilities of the Parties

Unless DOE otherwise notifies the Contractor, in writing, DOE's responsibilities under this contract shall be administered by the Group Manager, Argonne Group Office, or designated representative. The Contractor shall keep the Contracting Officer advised of the names of persons authorized to represent it with regard to various matters.