

2. AMENDMENT/MODIFICATION NO. 1509	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
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6. ISSUED BY SC Oak Ridge Support Center Office of Science - Oak Ridge U.S. Department of Energy P.O. Box 2001 Oak Ridge TN 37831	CODE 892431	7. ADMINISTERED BY (If other than Item 6) PNSO U.S. Department of Energy Pacific Northwest Site Office P.O. Box 350, K9-42 Richland WA 99352	CODE 06010
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8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE Attn: John Robinson P.O. Box 999 ATTN: John Robinson MSIN K6-46 RICHLAND WA 99352	(x)	9A. AMENDMENT OF SOLICITATION NO.
		9B. DATED (SEE ITEM 11)
	x	10A. MODIFICATION OF CONTRACT/ORDER NO. DE-AC05-76RL01830
		10B. DATED (SEE ITEM 13) 12/30/2002
CODE    CWKJEXDG79A7	FACILITY CODE	

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended.  is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)  
See Schedule

**13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) FAR 43.103 Types of Contract Modifications (a) Bilateral - Mutual Agreement of the Parties

**E. IMPORTANT:** Contractor  is not  is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)  
UEI: CWKJEXDG79A7  
This bilateral contract modification incorporates changes to Part I, Section C, Description/Specifications/Work Statement; and Part III, Section J, Appendix D, List of Applicable DOE Directives and External Requirements.

Reference Continuation Page(s) of SF30 for purpose and description of this modification.

Payment:

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) John M. Robinson, Prime Contract Manager	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Isidro Chavez Chavez
15B. CONTRACTOR/OFFEROR  <i>(Signature of person authorized to sign)</i>	15C. DATE SIGNED
16B. UNITED STATES OF AMERICA  <i>(Signature of Contracting Officer)</i>	16C. DATE SIGNED

## 1.0 Purpose of Modification:

The Department of Energy (DOE), Office of Science (SC), Pacific Northwest Site Office (PNSO) is modifying Contract No. DE-AC05-76RL01830 (Contract) to update Sections C and J, as described in this Modification. The Contract shall be amended as described in this Modification to accomplish the following:

1. Revise Part I, Section C, Description/Specifications/Work Statement; and
2. Revise Part III, Section J, Appendix D – List of Applicable DOE Directives and External Requirements.

## 2.0 Description of Modification:

1. Revise Part I, Section C – Subsection C.2, *Operating Envelope*, modification incorporates Subsubsection, C.2.6.4, “Safety Management Strategy (SMS) for the Testing and Validation Area 2 (T&V2),” in accordance with DOE letter 23-PNSO-0238, dated September 28, 2023, and PNNL letter OUT-0451-2023, dated October 27, 2023. Subsubsection is as follows:

### **C.2.6.4 Safety Management Strategy (SMS) for the Testing and Validation Area 2 (T&V2)**

The Contractor, as part of operating the Grid Storage Launchpad (GSL) facility, shall manage and perform work in accordance with a documented Safety Management Strategy (SMS) for the Testing and Validation Area 2 (T&V2). The T&V2 SMS will address:

1. GSL T&V2 facility description and research overview.
2. Hazard analysis and control derivation.
3. Facility operating limits and administrative controls.
4. Engineered controls summary and the administrative program.

The Contractor shall provide the T&V2 SMS to DOE for review and approval. The Contractor shall review the strategy on an annual basis and obtain DOE approval if changes are made.

2. Revise Part III, Section J – Appendix D, List of Applicable DOE Directives and External Requirements, modification updates CRDs in accordance with Contract Clause I-132 – DEAR 970.5204-2, Laws, Regulations and U.S. Department of Energy Directives in Section J, Appendix D.

PNSO letter 23-PNSO-0214, dated August 22, 2023, and PNNL letter OUT-0395-2023, dated September 27, 2023, document the notification to modify and identification of impacts associated with the following CRD update:

- a. Replace: CRD O 200.1A, Chg. 1 (MinChg), Information Technology Management

Replace With: CRD O 200.1A, Chg. 2 (LtdChg), Information Technology Management

PNSO letter 23-PNSO-0238, dated September 28, 2023, and PNNL letter OUT-0451-2023, dated October 27, 2023, document the notification to modify and identification of impacts associated with the following CRD update:

b. Replace: CRD O 422.1, Chg. 4 (LtdChg), Conduct of Operations

Replace with: CRD O 422.1, Chg. 4 (LtdChg), Conduct of Operations \*\*

3. This modification results in no further changes to the Contract.

**(End of Contract Modification)**  
**[1509]**

## PART I – The Schedule

### Section C

#### Description/Specifications/Work Statement

#### Table of Contents

C-1	Introduction.....	1
C-2	Statement of Work .....	2
	2.1 General .....	2
	2.2 Department of Energy Research and Development Mission.....	2
	<b>2.2.1 Science and Energy Mission Role.....</b>	<b>3</b>
	<b>2.2.2 National Security Mission Role .....</b>	<b>3</b>
	<b>2.2.3 Environmental Management Mission Role .....</b>	<b>4</b>
	2.3 FFRDC Research and Development Mission.....	4
	<b>2.3.1. Strategic Partnerships Program (SPP).....</b>	<b>4</b>
	<b>2.3.2. Cooperative Research and Development Agreements (CRADAs).....</b>	<b>4</b>
	<b>2.3.3. Agreements to Commercialize Technology (ACT).....</b>	<b>5</b>
	2.4 University, Research Institutions, Industry and International Collaboration Efforts .....	5
	<b>2.4.1 Cooperation with Universities and Other Research Institutions .....</b>	<b>5</b>
	<b>2.4.2 International Research Collaboration and Cooperation .....</b>	<b>5</b>
	<b>2.4.3 Technology Transfer with Industry .....</b>	<b>5</b>
	2.5 PNNL Regional and Community Involvement .....	6
	2.6 Operating Envelope .....	6
	<b>2.6.1 PNNL Work Locations and Expectations .....</b>	<b>6</b>
	<b>2.6.2 Hazards/Risks .....</b>	<b>8</b>
	<b>2.6.3 Security.....</b>	<b>9</b>
	<b>2.6.4 Safety Management Strategy (SMS) for the Testing and Validation Area 2     (T&amp;V2).....</b>	<b>9</b>
C-3	Performance Expectations, Objectives, and Measures.....	9
	3.1 Core Expectations.....	9
	<b>3.1.1 General .....</b>	<b>9</b>
	<b>3.1.2 Program Delivery and Mission Accomplishment Expectations .....</b>	<b>10</b>
	<b>3.1.3 Operating Principles.....</b>	<b>10</b>
	<b>3.1.4 Laboratory Stewardship Expectations .....</b>	<b>11</b>
	<b>3.1.5 Operational and Financial Management Expectations.....</b>	<b>11</b>
	<b>3.1.6 Expectations for Program and Project Management for the Acquisition of Capital     Assets .....</b>	<b>12</b>
	<b>3.1.7 Sustainable Practices for the Institution.....</b>	<b>12</b>
	3.2 Performance Objectives and Measures .....	13

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## C-1 Introduction

Battelle Memorial Institute, Pacific Northwest Division (the Contractor) shall, in accordance with the provisions of this Contract, accomplish the missions and programs assigned by DOE and manage and operate the Pacific Northwest National Laboratory (PNNL or the Laboratory).

PNNL 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 other DOE national laboratories, academia, government agencies, the international scientific community, and the private sector. The Contractor will seek to 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 support the development and application of technologies to address societal needs.

The Contractor has the responsibility for 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 to the benefit of the government. The Contractor shall conduct all work in a manner that optimizes productivity, and fully complies with all applicable laws, regulations, and terms and conditions of the Contract.

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 Statement of Work**

### **2.1 General**

The Contractor shall furnish the necessary personnel, facilities, equipment, materials, supplies, and services (except those provided by the Government) to accomplish the statement of work. The statement of work under this Contract is comprehensive in that the Contractor is expected to perform all necessary technical, operational, and management functions to manage and operate PNNL and perform the DOE missions assigned to PNNL.

The Contractor is expected to evaluate and update annually as necessary the PNNL mission statement as part of the Office of Science Laboratory Planning process. The Contractor shall define a long-range vision for PNNL. The long-range vision shall include how the Contractor will steward the core capabilities assigned to it by the Office of Science, define a science strategy for the future with major initiatives, provide a vision for current or future User Facilities, outline a plan for Strategic Partnership Projects and use of laboratory resources, provide a laboratory vision from an infrastructure standpoint (Campus Strategy), identifying gaps to enable a mission ready core capabilities, a clear plan to address those gaps, major investments in campus facilities and grounds, how the Contractor will attract and retain talent, maintain cost control and will status those activities as part of the Laboratory Planning process.

### **2.2 Department of Energy Research and Development Mission**

PNNL's research and development missions and programs support the overarching mission of the DOE through efforts in fundamental, energy and environmental sciences and technologies, and national security. PNNL shall provide highly skilled staff supporting scientific discovery and multi-disciplinary efforts to rapidly translate scientific discoveries into applications in physical, biological, computational, and environmental sciences, and operate scientific user facilities such as the Environmental Molecular Sciences Laboratory (EMSL). PNNL shall support the Department's Science and Technology mission to sustain and nurture the nation's science and technology enterprise, to support national goals in security, energy, environmental quality, human health and economic growth, and to provide a significant resource for scientists world-wide to engage with Laboratory staff in accelerating the nation's progress towards these goals.

Over the term of this Contract, the Contractor shall conduct a broad spectrum of research and development programs in DOE's science, national security, environmental quality, and energy missions as assigned by DOE. The Contractor shall make its government-funded scientific and technical research results broadly available to the public. The Contractor

shall also provide technical advice and guidance to DOE in support of policy development, program planning, and other DOE activities as requested by DOE, and shall bring forward recommendations for new research and development programs designed to achieve DOE mission goals.

In keeping with its overall role as a multi-program national laboratory, the specific research programs conducted and the overall mix of research at PNNL will change, as needed, over the Contract period with DOE's changing mission needs, advances in science and technology, and other drivers. This statement of work does not represent a commitment to, or imply funding for, specific projects or programs.

### **2.2.1 Science and Energy Mission Role**

The Contractor shall deliver the fundamental scientific knowledge and discoveries to advance the frontiers defined by the DOE Office of Science core capabilities. The Contractor shall translate those discoveries into contributions to the DOE's Science & Energy Strategic Objectives of:

- Advancing the goals and objectives by supporting prudent development, deployment, and efficient use of "energy strategy" that also create new jobs and industries.
- Supporting a more economically competitive, environmentally responsible, secure and resilient U.S. energy infrastructure.
- Delivering the scientific discoveries and major scientific tools that transform our understanding of nature and strengthen the connection between advances in fundamental science and technology innovation.

### **2.2.2 National Security Mission Role**

In the national security mission, the Contractor shall support DOE efforts to advance new measurement and analytical systems to transform nuclear and cyber security infrastructure, increase situational awareness and reduce the threat from weapons of mass effect. Contributions to mission include:

- Lowering the risk represented by weapons of mass destruction and other threats to our nation.
- Supporting other operational mission needs with research, policy support, and technology development and deployment, including but not limited to, defense energy and environmental programs,



cyber and data science, infrastructure resilience, chemical and biological forensics and airport security.

### **2.2.3 Environmental Management Mission Role**

The Contractor shall provide science, technology, engineering and deployment support to DOE's effort to aggressively clean up the environmental legacy of nuclear weapons and civilian nuclear research and development programs, permanently dispose of the Nation's radioactive wastes. The Contractor shall provide science and technology contributions that substantially reduce the cost, time, and risk associated with DOE's cleanup, and enable site cleanup and closure decisions to have a sound, scientific basis.

## **2.3 FFRDC Research and Development Mission**

The Secretary of Energy has authorized PNNL to operate as a Federally Funded Research and Development Center (FFRDC) established in accordance with Federal Acquisition Regulation Part 35 and operated under this management and operating (M&O) contract, as defined in FAR 17.6 and DEAR 917.6. DOE is committed to provide the appropriate use of PNNL assets for the benefit of other Federal agencies, private companies, universities, state and local institutions, and international entities within the limits set by DOE policy. The Contractor shall continue to use its multidisciplinary capabilities and apply its expertise to conduct research for the government and the private sector through Strategic Partnerships Program (SPP), Cooperative Research and Development Agreements (CRADAs) and Agreements to Commercialize Technology (ACT).

### **2.3.1. Strategic Partnerships Program (SPP)**

The Contractor is expected to develop and maintain a strategic approach to managing the SPP portfolio to assist Federal agencies and non-Federal entities in accomplishing goals that may otherwise be unattainable and to avoid duplication of effort at Federal Facilities (access to highly specialized or unique facilities, services or technical expertise); increase research and development interactions to transfer technology originating at the laboratory to industry for further development or commercialization; and to maintain core capabilities and enhance the science and technology base at the laboratory. SPP work must be consistent with or complimentary to the missions of DOE and the Laboratory (to include the SC core capabilities).

### **2.3.2. Cooperative Research and Development Agreements (CRADAs)**

The Contractor is expected to use CRADAs consistent with the terms of this Contract to facilitate the commercialization of technology, optimize resources, and protect the Government, the Contractor and the CRADA participant (s) involved.

### **2.3.3. Agreements to Commercialize Technology (ACT)**

The Contractor may conduct privately-sponsored research at the Contractor's risk for third parties. In performing ACT work, the Contractor may use staff and other resources associated with this Contract for the purposes of conducting research and furthering the DOE technology transfer mission in accordance with the terms of this Contract.

## **2.4 University, Research Institutions, Industry and International Collaboration Efforts**

DOE expects the Contractor to establish partnerships with Universities, Research Institutions, Industry, and International institutions. The purpose of these efforts will be to build on the scientific knowledge of the institution, create through collaboration efforts and solutions to scientific issues and develop technologies that can be placed into the commercial sector to benefit the Nation.

### **2.4.1 Cooperation with Universities and Other Research Institutions**

The Contractor shall also manage and operate programs for cooperation with academic and nonprofit research institutions to integrate research and education in scientific and technical fields underlying DOE's programs, as well as facilitate strategic collaborations between PNNL and other research and educational institutions. Such cooperation with academic and nonprofit research institutions shall include but are not limited to:

- Joint appointments;
- Establishment and operation of joint graduate programs with domestic universities; and
- Joint programs and/or institutes with universities in priority areas of science

### **2.4.2 International Research Collaboration and Cooperation**

In accordance with applicable policies, the Contractor shall maintain a broad program of international research collaboration in areas of research interest to the federal government. This collaboration will be both in areas where federal government has formal international cooperation agreements which assign the Contractor a specific role, as well as in areas of general interest to the federal governments' research programs.

### **2.4.3 Technology Transfer with Industry**

The Contractor shall cooperate with industrial organizations to assist in increasing U.S. industrial competitiveness, by assisting in the application of science and technology. Such cooperation may include, when appropriate, an early transfer of information to industry by arranging for

the active participation by industrial representatives in PNNL's programs. Cooperation with industrial entities may include long-term strategic relationships aimed at commercialization of inventions or the improvement of industrial products. The Contractor may respond through appropriate mechanisms to specific near-term technological needs of industrial companies with special consideration given to working with small, small disadvantaged and women-owned businesses as well as regional and local companies through special assistance programs targeting such organizations. The Contractor is expected to develop productive relationships with regional and local companies. Cooperation may also include use by industrial organizations of Laboratory facilities and other assistance as may be authorized, in writing, by the Contracting Officer. The Contractor is also encouraged to engage in strategic collaborations with domestic industry that maintain PNNL capabilities and further small business development.

## **2.5 PNNL Regional and Community Involvement**

The Contractor shall support local and regional economic development and apply existing Laboratory assets in the execution of such support. The Contractor shall also promote the institution within the local and regional communities.

The Contractor is expected to create opportunities to educate and train future generations of scientists, engineers, and innovators to support DOE's workforce development and science, technology, engineering and mathematics (STEM) education efforts.

## **2.6 Operating Envelope**

The Contractor shall achieve assigned objectives in a manner that is safe, secure, legally and ethically sound, as well as fiscally responsible. The operating envelope for PNNL is limited to work authorized by DOE by individual project approvals or through letters of direction, using approved work locations, and conducted in accordance with the approved PNNL Integrated Safety Management System and Safeguards, Security Management Plan and Appendix H.

### **2.6.1 PNNL Work Locations and Expectations**

PNNL facilities may include Government-owned or leased facilities as well as approved Contractor leased facilities at such other locations as may be approved by DOE for use under this Contract. Subject to mutual agreement, other facilities may be used in the performance of the work under this Contract (e.g., Contractor-owned or Contractor-leased facilities) as approved by the Contracting Officer Section J, Appendix H).

Research and development work performed outside approved work locations (i.e. off-site) shall be reviewed and assessed for hazards, risks, application of appropriate mitigating controls and, as necessary, briefing of PNSO personnel prior to the initiation of work.

In accordance with the *Operational Agreement between the Office of Science Pacific Northwest Site Office and the Office of Environmental Management Richland Operations Office (Operational Agreement)*, incorporated as Section J, Appendix F of this Contract, the Contractor shall operate designated DOE Office of Environmental Management (EM) facilities located on the Hanford Site in the 300 Area. The Contractor will maintain the resources and expertise required to support these activities.

The Contractor shall perform overall integrated planning, acquisition, upgrades, and management of Government-owned, leased, or controlled facilities and real property accountable to PNNL. The Contractor shall employ an integrated management approach for management and utilization of PNNL facilities and infrastructure to support mission.

The Contractor shall employ facilities management practices that are integrated with mission assignments and business operations. The maintenance management program shall maintain facilities, equipment and materials in a manner that:

- promotes and improves operational safety, environmental protection and compliance, property preservation, and cost effectiveness;
- ensures protection of life and property from potential hazards, continuity and reliability of operations, and fulfillment of program requirements; and
- ensures the condition of the assets will be maintained or improved to meet the DOE mission.

The Contractor shall initiate and continually improve facility and waste management practices that implement the “Start Clean – Stay Clean” principles whereby research projects and facility operations are planned and executed so to leave no additional residual waste, contamination or liability at the end of each project, irrespective of location. The Contractor shall ensure sufficient project funds are maintained to ensure that full restoration, remediation, and waste disposition can be achieved before project completion.

The Contractor may use sealed radioactive sources in federal and non-federal facilities, if the sources meet the definitions and controls specified in the DOE-approved PNNL Radiation Protection Program and the Site Security Plan (SSP).

In support of normal material management or waste management activities, the Contractor may use PNNL facilities and locations identified in Section J, Appendix H of the PNNL Contract for managing radioactive

materials or waste without prior DOE Site Office Manager notification as long as there is no additional risk of releasing dispersible material.

For all non-federal facilities, and lab spaces therein, DOE Site Office Manager approval must be obtained before 1) using any unsealed radioactive material (as defined in the DOE-approved PNNL Radiation Protection Program) that can contaminate the facility's structure or systems (e.g., ventilation) outside an engineered confinement barrier, or 2) any planned activity that can introduce residual contamination (e.g. beryllium, crystalline perchlorates, hexavalent chromium, nanoparticles, biological agents) that can contaminate the facility's structure or systems (e.g., ventilation) outside an engineered confinement barrier.

Unless otherwise approved by the DOE Site Office Manager, the Contractor shall notify the DOE Site Office Manager at least 30 days before using any unsealed radioactive material (as defined in the DOE-approved PNNL Radiation Protection Program) that can contaminate the federal facility's structure or systems (e.g., ventilation) outside an engineered confinement barrier, unless the facility or its lab spaces were previously radiologically contaminated, used for work involving unsealed radioactive material, or is covered under the 325 Building Safety Basis.

In addition, the Contractor shall notify the DOE Site Office Manager at least 30 days before changing the Facility Use Agreements (FUAs), if the change causes additional liabilities to the federal government (including but not limited to, increasing fire zone levels, adding or raising permit levels, and usage for additional hazards not previously allowed). No work with dispersible radioactive material or waste shall be allowed unless at an authorized DOE-owned facility identified in the Section J Appendix H of the contract or specifically approved by the DOE Site Office Manager. For the purposes of this section only, the PNNL Sequim campus shall be considered a DOE-owned facility. [M1348]

### **2.6.2 Hazards/Risks**

The Contractor as part of its Integrated Safety Management System (ISM) will maintain a risk analysis system acceptable to DOE that addresses institutional/reputational, environment, safety, health or business risks and legacy considerations created by the acceptance of work under this Contract. All proposed work shall clearly identify risks and legacy considerations as part of the work authorization package along with justification for performing the work and controls that will be instituted to mitigate the risks and legacy considerations and where necessary the approvals required to initiate the work. Work will be conducted on the PNNL campus with protection of the public and environment in mind such that higher risk activities are conducted with the greatest buffer and separation practical.

The Contractor shall not conduct research with biological agents that exceed biosafety level II or involve Tier I select agents without prior DOE Site Office Manager approval. The Contractor will maintain individual facility chemical inventories below Threshold Planning Quantities. The Contractor will maintain radiological materials within authorized operating limits. The Contractor shall maintain business systems within compliance of applicable laws, regulations and directives.

DOE maintains its right to not authorize the proposed work based upon analysis of the hazards/risks and legacy considerations involved.

### **2.6.3 Security**

The Contractor shall conduct work in a manner that protects sensitive unclassified information, classified information, special nuclear material, cyber systems and Government property, from sabotage, espionage, loss or theft. The Contractor shall obtain approval of safeguards and security plans from the cognizant security authority (i.e., Site Office Manager) which describes protective measures appropriate to the work being performed. Any significant changes or deviations from the approved safeguards and security plans require the cognizant security authority's review and approval.

### **2.6.4 Safety Management Strategy (SMS) for the Testing and Validation Area 2 (T&V2)**

The Contractor, as part of operating the Grid Storage Launchpad (GSL) facility, shall manage and perform work in accordance with a documented Safety Management Strategy (SMS) for the Testing and Validation Area 2 (T&V2). The T&V2 SMS will address:

1. GSL T&V2 facility description and research overview.
2. Hazard analysis and control derivation.
3. Facility operating limits and administrative controls.
4. Engineered controls summary and the administrative program.

The Contractor shall provide the T&V2 SMS to DOE for review and approval. The Contractor shall review the strategy on an annual basis and obtain DOE approval if changes are made.

## **C-3 Performance Expectations, Objectives, and Measures**

### **3.1 Core Expectations**

#### **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 DOE's missions. Through application of these best practices, DOE seeks to assure 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 laboratory operations and financial management.

### **3.1.2 Program Delivery and Mission Accomplishment Expectations**

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 PNNL'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.

### **3.1.3 Operating Principles**

The Contractor is accountable for providing reasonable assurance to the DOE that PNNL's system of management controls when properly implemented provides an effective and efficient means of meeting all applicable requirements while accomplishing assigned missions.

To provide reasonable assurance, the Contractor must identify, monitor, and address existing and/or emerging risks important to the accomplishment of PNNL's mission and Contract requirements.

Laboratory management is to provide and report in a timely manner performance data to Governance processes, which ultimately provide assurance to DOE.

The Contractor will be responsible for penalties and fines arising from work conducted by Contractor staff which is not consistent with work authorization clause(s) of the Contract which outline the

scope of work the Contractor may appropriately perform under this Contract. DOE shall not be liable for special, consequential, or incidental damages attributed to such actions.

#### **3.1.4 Laboratory Stewardship Expectations**

The Contractor is expected to be an active partner with DOE in assuring that PNNL 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 a Laboratory vision and long-term strategic plan 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 PNNL remains mission ready and is well-positioned to meet future DOE needs.
- (d) Build and maintain a financially viable portfolio of research programs that generates the resources required to renew and enhance Laboratory research capabilities over time.
- (e) Maintain a positive relationship with the broader research community, to enhance the intellectual vitality and research relevance of PNNL, and to bring the best possible capabilities to bear on DOE mission needs through collaborative relationships with the research community.
- (f) Build a positive, supportive relationship founded on openness and trust with the community and region in which PNNL is located.

#### **3.1.5 Operational and Financial Management Expectations**

The Contractor is expected to effectively and efficiently manage and operate PNNL through management practices designed to enable research. The Contractor shall assure the protection and proper maintenance of DOE research and information assets, the health and safety of staff, the public, and the environment. The Contractor is also to develop and deploy management systems and practices that are compliant, efficient and enhance research productivity and mission accomplishment.



### **3.1.6 Expectations for Program and Project Management for the Acquisition of Capital Assets**

DOE's Project Management Principles apply to all capital asset projects using a tailored approach as defined or approved by the sponsoring project office. This includes General Plant Projects (GPPs) and Institutional General Plant Projects (IGPPs) as defined in DOE Order 430.1B. The Contractor is expected to provide for:

- a. Line management accountability
- b. Sound, disciplined, up-front project planning.
- c. Well-defined and documented project requirements.
- d. Development and implementation of sound acquisition strategies that incorporate effective risk handling mechanisms.
- e. Well-defined and managed project scope and risk-based Performance Baselines (PBs) and stable funding profiles that support original cost baseline execution.
- f. Development of reliable and accurate cost estimates using appropriate cost methodologies and databases.
- g. Properly resourced and appropriately skilled project staffs.
- h. Effective implementation of all management systems supporting the project (e.g., quality assurance, integrated safety management, risk management, change control, performance management, and contract management).
- i. Early integration of safety into the design process.
- j. Effective communication among all project stakeholders.
- k. Utilization of peer reviews throughout the life of a project to appropriately assess and make course corrections.
- l. Process to achieve operational readiness is defined early in the project for Hazard Category 1, 2, and 3 nuclear facilities.

For all capital asset projects with a Total Project Cost (TPC) equal to or greater than \$50 million, the Contractor shall comply with the requirements as set forth in DOE Order 413.3B Contractor Requirements Document (CRD). [M1140]

### **3.1.7 Sustainable Practices for the Institution**

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.

### **3.2 Performance Objectives and Measures**

The performance objectives and measures of this contract are stated in the annual Performance Evaluation and Measurement Plan for the Management and Operations of the Pacific Northwest National Laboratory.

**PART III – List of Documents,  
Exhibits and Other Attachments**

**Section J**

**Appendix D**

**List of Applicable DOE Directives & External Requirements**

**SECTION J - APPENDIX D**  
**LIST OF APPLICABLE DOE DIRECTIVES & EXTERNAL REQUIREMENTS**

<b>DOE DIRECTIVES</b>	
<b>DIRECTIVE NO.</b>	<b>DIRECTIVE TITLE</b>
CRD O 130.1	BUDGET FORMULATION
CRD O 140.1A	INTERFACE WITH THE DEFENSE NUCLEAR FACILITIES SAFETY BOARD
CRD O 142.2A Admin Chg 1	VOLUNTARY OFFER SAFEGUARDS AGREEMENT AND ADDITIONAL PROTOCOL WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY
CRD M 142-2-1Admin Chg 1	MANUAL FOR IMPLEMENTATION OF THE VOLUNTARY OFFER SAFEGUARDS AGREEMENT AND ADDITIONAL PROTOCOL WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY
CRD O 142.3B Chg. 1	UNCLASSIFIED FOREIGN NATIONAL ACCESS PROGRAM
CRD O 144.1 Admin Chg 1	DEPARTMENT OF ENERGY AMERICAN INDIAN TRIBAL GOVERNMENT INTERACTIONS AND POLICY
CRD O 150.1B	CONTINUITY OF PROGRAMS
CRD O 151.1D Chg. 1 (MinChg)	COMPREHENSIVE EMERGENCY MANAGEMENT SYSTEM
CRD O 200.1A Chg. 2 (LtdChg)	INFORMATION TECHNOLOGY MANAGEMENT
CRD O 205.1C Chg 1 (LtdChg)	DEPARTMENT OF ENERGY CYBERSECURITY PROGRAM
CRD O 206.1 Chg 1 (MinChg)	DEPARTMENT OF ENERGY PRIVACY PROGRAM
CRD O 206.2 Chg 1 (Ltd Chg)	IDENTITY, CREDENTIAL, AND ACCESS MANAGEMENT (ICAM)
CRD O 210.2A	DOE CORPORATE OPERATING EXPERIENCE PROGRAM
CRD O 221.1B	REPORTING FRAUD, WASTE, AND ABUSE TO THE OFFICE OF INSPECTOR GENERAL
CRD O 221.2A	COOPERATION WITH THE OFFICE OF INSPECTOR GENERAL
CRD O 225.1B	ACCIDENT INVESTIGATIONS
CRD O 227.1A Chg 1 (AdminChg)	INDEPENDENT OVERSIGHT PROGRAM
CRD O 231.1B Admin Chg 1	ENVIRONMENT, SAFETY AND HEALTH REPORTING
CRD O 232.2A Chg 1 (MinChg)	OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION
CRD O 241.1B Chg 1 (AdminChg)	SCIENTIFIC AND TECHNICAL INFORMATION MANAGEMENT
CRD O 243.1C	RECORDS MANAGEMENT PROGRAM
CRD O 252.1A Admin Chg 1	TECHNICAL STANDARDS PROGRAM
CRD O 313.1	MANAGEMENT AND FUNDING OF THE DEPARTMENT'S OVERSEAS PRESENCE
CRD O 410.2 Admin Chg 1	MANAGEMENT OF NUCLEAR MATERIALS
CRD O 411.2	SCIENTIFIC INTEGRITY

<b>DOE DIRECTIVES</b>	
<b>DIRECTIVE NO.</b>	<b>DIRECTIVE TITLE</b>
CRD O 413.2C Chg1 (MinChg)	LABORATORY DIRECTED RESEARCH AND DEVELOPMENT
CRD O 413.3B Chg 7 (LtdChg)	PROGRAM AND PROJECT MANAGEMENT FOR THE ACQUISITION OF CAPITAL ASSETS
CRD O 414.1D Chg 2 (LtdChg)	QUALITY ASSURANCE
CRD O 415.1 Chg. 2 (MinChg)	INFORMATION TECHNOLOGY PROJECT MANAGEMENT
CRD O 420.1C Chg. 3 (LtdChg)	FACILITY SAFETY
CRD O 420.2D	SAFETY OF ACCELERATORS
CRD O 422.1 Chg. 4 (LtdChg)	CONDUCT OF OPERATIONS **
CRD O 425.1D Chg 2 (MinChg)	VERIFICATION OF READINESS TO STARTUP OR RESTART NUCLEAR FACILITIES
CRD O 426.2 Chg. 1 (Admin Chg)	PERSONNEL SELECTION, TRAINING, QUALIFICATION, AND CERTIFICATION REQUIREMENTS FOR DOE NUCLEAR FACILITIES
CRD O 433.1B Chg. 1 (Admin Chg)	MAINTENANCE MANAGEMENT PROGRAM FOR DOE NUCLEAR FACILITIES
CRD O 435.1 Chg 2 (AdminChg)	RADIOACTIVE WASTE MANAGEMENT
DOE M 435.1-1A Chg 3 (LtdChg)	RADIOACTIVE WASTE MANAGEMENT MANUAL
CRD O 436.1A	DEPARTMENTAL SUSTAINABILITY
CRD O 440.2C Chg 3 (LtdChg)	AVIATION MANAGEMENT AND SAFETY
CRD M 441.1-1 Chg. 1 (Admin Chg)	NUCLEAR MATERIAL PACKAGING MANUAL
CRD O 442.1B	DEPARTMENT OF ENERGY EMPLOYEE CONCERNS PROGRAM
CRD O 442.2 Chg 1 (PgChg)	DIFFERING PROFESSIONAL OPINIONS FOR TECHNICAL ISSUES INVOLVING ENVIRONMENT, SAFETY AND HEALTH
CRD O 443.1C	PROTECTION OF HUMAN RESEARCH SUBJECTS
CRD O 452.8	CONTROL OF NUCLEAR WEAPON DATA
CRD O 456.1A	THE SAFE HANDLING OF UNBOUND ENGINEERED NANOPARTICLES
CRD O 457.1A	NUCLEAR COUNTERTERRORISM (applies <u>only</u> to Facility Clearance 16501)
CRD O 458.1 Chg 4 (LtdChg)*	RADIATION PROTECTION OF THE PUBLIC AND THE ENVIRONMENT
CRD O 460.1D Chg 1 (LtdChg)	HAZARDOUS MATERIALS PACKAGING AND TRANSPORTATION SAFETY
CRD O 460.2B	DEPARTMENTAL MATERIALS TRANSPORTATION AND PACKAGING MANAGEMENT
CRD O 461.1C Chg 1 (MinChg)	PACKAGING AND TRANSFER FOR OFFSITE SHIPMENT OF MATERIALS OF NATIONAL SECURITY INTEREST
CRD O 470.3C Chg 1 (LtdChg)	DESIGN BASIS THREAT (DBT) ORDER

<b>DOE DIRECTIVES</b>	
<b>DIRECTIVE NO.</b>	<b>DIRECTIVE TITLE</b>
CRD O 470.4B Chg. 3 (LtdChg)	SAFEGUARDS AND SECURITY PROGRAM
CRD O 470.5	INSIDER THREAT PROGRAM
CRD O 470.6 Chg. 1 (MinChg)	TECHNICAL SECURITY PROGRAM
CRD O 471.1B	IDENTIFICATION AND PROTECTION OF UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION
CRD O 471.6 Chg 3 (Admin Chg)	INFORMATION SECURITY
CRD O 471.7	CONTROLLED UNCLASSIFIED INFORMATION
CRD O 472.2A	PERSONNEL SECURITY
CRD O 473.1A	PHYSICAL PROTECTION PROGRAM
CRD O 473.2A	PROTECTIVE FORCE OPERATIONS
CRD O 474.2A	NUCLEAR MATERIAL CONTROL AND ACCOUNTABILITY
CRD O 475.1	COUNTERINTELLIGENCE PROGRAM
CRD O 475.2B	IDENTIFYING CLASSIFIED INFORMATION
CRD O 483.1B Chg 2 (LtdChg)	DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS
CRD O 484.1 Chg 3 (Admin Chg)	REIMBURSABLE WORK FOR THE DEPARTMENT OF HOMELAND SECURITY
CRD O 486.1A	FOREIGN GOVERNMENT SPONSORED OR AFFILIATE ACTIVITIES
CRD O 520.1B Chg 1 (Ltd Chg)	FINANCIAL MANAGEMENT AND CHIEF FINANCIAL OFFICER RESPONSIBILITIES
CRD O 522.1A	PRICING OF DEPARTMENTAL MATERIALS AND SERVICES
CRD O 550.1 Chg 1 (LtdChg)	OFFICIAL TRAVEL
DOE O 5639.8A	SECURITY OF FOREIGN INTELLIGENCE INFORMATION AND SENSITIVE COMPARTMENTED INFORMATION FACILITIES
DOE/RL-94-02, Rev. 7	HANFORD EMERGENCY MANAGEMENT PLAN– APPLICABLE TO PNNL-MANAGED FACILITIES AND ACTIVITIES ON THE HANFORD SITE
DOE/RL-2001-36	HANFORD SITE TRANSPORTATION SAFETY DOCUMENT, REV. 2

\* The Contractor’s responsibility to implement CRD O 458.1, Chg. 4 “Radiation Protection of the Public and the Environment” is limited to paragraphs 2.d., 2.g., and 2.k.

\*\* In addition to the PNNL Hazard Category 2 nuclear facility, this CRD is applicable to the Testing and Validation Area 2 of the Grid Storage Launchpad facility.