

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE PAGE OF PAGES
 1 3

2. AMENDMENT/MODIFICATION NO. 0012	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY CODE U.S. Department of Energy Brookhaven Site Office 53 Bell Avenue, Building 464 Upton, NY 11973-5000	06005	7. ADMINISTERED BY (If other than Item 6) Code	06005

8. NAME AND ADDRESS OF CONTRACTOR (No. street, county, State and ZIP Code) Brookhaven Science Associates, LLC 40 Brookhaven Avenue Building 460 Upton, New York 11973-5000	(✓)	9. A. AMENDMENT OF SOLICITATION NO.
		9. B. DATED (SEE ITEM 11)
	X	10. A. MODIFICATION OF Contract/Order NO. DE-SC0012704
		10. B. DATED (SEE ITEM 13) 12/22/2014
CODE N/A	FACILITY CODE N/A	

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 telegram 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 telegram or letter, provided each telegram or letter 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)
N/A

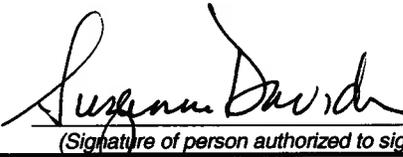
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

	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 date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual agreement of the parties
	D. OTHER (Specify type of modification and authority)

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 heading, including solicitation/contract subject matter where feasible.)

The purpose of this modification is to revise Part I, Section H – Special Contract Requirements; Revise Part II, Section I – Contract Clauses, TOC; Update Clauses I.41, I.42, I.43, I.48, I.77a, I.88, I.161; Revise Clause I.152, Obligations of Funds; Revise Part III, Section J – List of Documents, Exhibits, and Other Attachments; TOC; Replace Appendix C – Special Financial Institution Account Agreement; Replace Appendix I – DOE Directives/List B.

15A. NAME AND TITLE OF SIGNER (Type or print) Suzanne M. Davidson Chief Financial Officer	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Evelyn Landini Contracting Officer
15B. CONTRACTOR/OFFEROR	16B. UNITED STATES OF AMERICA
15C. DATE SIGNED 5/11/15	16C. DATE SIGNED 5/11/15
 (Signature of person authorized to sign)	BY  (Signature of Contracting Officer)

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	DE-SC0012704/0012	2	3

14. Description of Amendment/Modification (continued):

1. Part I, Section H – special contract Requirements: The language in the following clause is consistent with and IAW Policy Flash 2015-16, AL-2015-04, and remains in full force and effect.

a. Clause H.30 – Lobbying Restriction

2. Part II, Section I – Contract Clauses, Table of Contents (TOC): Section I is revised to reflect an update to clauses I.41, I.42, I.43, I.48, I.77a, I.88, I.161.

a. Clause I.65 - FAR 52.225-1, Buy American – Supplies (MAY 2014); Modified by DEAR 970.2570 (NOV 2010): The TOC has been updated to remove the word “Act” from the title.

3. Part II, Section I – Contract Clauses:

The following clauses have been revised; replace the prior versions with the updated attachment provided herein:

- a. Clause I.41 – FAR 52.222-21, Prohibition of Segregated Facilities (APR 2015): This clause has been updated IAW Federal Acquisition Circular (FAC) 2005-81.
- b. Clause I.42 – FAR 52.222-26, Equal Opportunity (APR 2015): This clause has been updated IAW Federal Acquisition Circular (FAC) 2005-81.
- c. Clause I.43 – FAR 52.222-29, Notification of Visa Denial (APR 2015): This clause has been updated IAW Federal Acquisition Circular (FAC) 2005-81.
- d. Clause I.48 – FAR 52.222-50, Combating Trafficking in Persons (MAR 2015): This clause has been updated IAW Federal Acquisition Circular (FAC) 2005-80.
- e. Clause I.88 – FAR 52.244-6, Subcontracts for Commercial Items (APR 2015): This clause has been updated IAW Federal Acquisition Circular (FAC) 2005-81.
- f. Clause I.161 – DEAR 970.5244-1, Contractor Purchasing System (MAR 2015)(DEVIATION): This clause has been updated IAW Policy Flash 2015-17.

The following clause has been added to the contract; insert the attachments provided herein:

g. Clause I.77a – FAR 52.232-39, Unenforceability of Unauthorized Obligations (JUN 2013).

4. Part II, Section I – Contract Clauses, Clause I.152 – DEAR 970.5232.4, Obligation of Funds: The first sentence of paragraph (a) is revised to read as follows:

The amount presently obligated by the Government with respect to this Contract is \$694,194,898.14.

The revised total reflects an increase of \$295,311,077.94 as a result of Modification 0005 through 0011 from \$398,883,820.20 to \$694,194,898.14.

5. Part III, Section J – List of Documents, Exhibits and Other Attachments: Section J is revised to reflect the following: Replace Appendix C – Special Financial Institution Account Agreement; Replace Appendix I – DOE Directives/List B.

a. **Appendix C – Special Financial Institution Account Agreement** has been revised to incorporate the latest amendment; replace the prior version with the updated attachment provided herein.

- b. **Appendix I – DOE Directives List** identified as Modification No. 0005 has been revised; replace the prior version with the attached Appendix I identified as Modification No. 0012. The revisions are as follows:

SUMMARY OF DIRECTIVE CHANGES			
ADDITIONS	TITLE	CHANGE	NOTES
O 475.2B	Identifying Classified Information, 10/3/2014	Updated to latest revision	Cancels 475.2A

Attachments:

- Section I – Contract Clauses
 - ❖ I. 41, I.42, I.43, I.48, I.77a, I.88, I.161
- Part III, Section J – List of Documents, Exhibits and Other Attachments
 - ❖ Appendix C – Special Financial Institution Account Agreement
 - ❖ Appendix I – DOE Directives/List

Clause 41 – FAR 52.222-21 -- Prohibition of Segregated Facilities (Apr 2015)

(a) *Definitions.* As used in this clause--

“Gender identity” has the meaning given by the Department of Labor’s Office of Federal Contract Compliance Programs, and is found at www.dol.gov/ofccp/LGBT/LGBT_FAQs.html .

“Segregated facilities” means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between sexes.

“Sexual orientation” has the meaning given by the Department of Labor’s Office of Federal Contract Compliance Programs, and is found at www.dol.gov/ofccp/LGBT/LGBT_FAQs.html .

(b) The contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in the contract.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

Clause 42 – FAR 52.222-26 -- Equal Opportunity (Apr 2015)

(a) *Definitions.* As used in this clause--

“Gender identity” has the meaning given by the Department of Labor’s Office of Federal Contract Compliance Programs, and is found at www.dol.gov/ofccp/LGBT/LGBT_FAQs.html .

“Sexual orientation” has the meaning given by the Department of Labor’s Office of Federal Contract Compliance Programs, and is found at www.dol.gov/ofccp/LGBT/LGBT_FAQs.html .

“United States” means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b)

(1) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with this clause, except for work performed outside the United States by employees who were not recruited within the United States. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(2) If the Contractor is a religious corporation, association, educational institution, or society, the requirements of this clause do not apply with respect to the employment of individuals of a particular religion to perform work connected with the carrying on of the Contractor’s activities (41 CFR 60-1.5).

(c)

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. However, it shall not be a violation of this clause for the Contractor to extend a publicly announced preference in employment to Indians living on or near an Indian reservation, in connection with employment opportunities on or near an Indian reservation, as permitted by 41 CFR 60-1.5.

(2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. This shall include, but not be limited to --

- (i) Employment;
- (ii) Upgrading;
- (iii) Demotion;
- (v) Transfer;
- (v) Recruitment or recruitment advertising;
- (vi) Layoff or termination;
- (vii) Rates of pay or other forms of compensation; and
- (viii) Selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. The Contractor shall also file Standard Form 100 (EEO-1), or any successor form, as prescribed in 41 CFR part 60-1. Unless the Contractor has filed within the 12 months preceding the date of contract award, the Contractor shall, within 30 days after contract award, apply to either the regional Office of Federal Contract Compliance Programs (OFCCP) or the local office of the Equal Employment Opportunity Commission for the necessary forms.

(8) The Contractor shall permit access to its premises, during normal business hours, by the contracting agency or the (OFCCP) for the purpose of conducting on-site compliance evaluations and complaint investigations. The Contractor shall permit the Government to inspect and copy any books, accounts, records (including computerized records), and other material that may be relevant to the matter under investigation and pertinent to compliance with Executive Order 11246, as amended, and rules and regulations that implement the Executive Order.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended, in the rules, regulations, and orders of the Secretary of Labor, or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting officer may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(d) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

Clause 43 – FAR 52.222-29 -- Notification of Visa Denial (Apr 2015)

(a) *Definitions.* As used in this clause--

“Gender identity” has the meaning given by the Department of Labor’s Office of Federal Contract Compliance Programs, and is found at www.dol.gov/ofccp/LGBT/LGBT_FAQs.html .

“Sexual orientation” has the meaning given by the Department of Labor’s Office of Federal Contract Compliance Programs, and is found at www.dol.gov/ofccp/LGBT/LGBT_FAQs.html .

(b) *Requirement to notify.*

(1) It is a violation of Executive Order 11246 for a Contractor to refuse to employ any applicant or not to assign any person hired in the United States, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, or Wake Island, on the basis that the individual’s race, color, religion, sex, sexual orientation, gender identity, or national origin is not compatible with the policies of the country where or for whom the work will be performed (41 CFR 60-1.10).

(2) The Contractor shall notify the U.S. Department of State, Assistant Secretary, Bureau of Political-Military Affairs (PM), 2201 C Street NW., Room 6212, Washington, DC 20520, and the U.S. Department of Labor, Deputy Assistant Secretary for Federal Contract Compliance, when it has knowledge of any employee or potential employee being denied an entry visa to a country where this contract will be performed, and it believes the denial is attributable to the race, color, religion, sex, sexual orientation, gender identity, or national origin of the employee or potential employee.

Clause 48 – FAR 52.222-50 -- Combating Trafficking in Persons (Mar 2015)

(a) *Definitions.* As used in this clause—

“Agent” means any individual, including a director, an officer, an employee, or an independent contractor, authorized to act on behalf of the organization.

“Coercion” means—

- (1) Threats of serious harm to or physical restraint against any person;
- (2) Any scheme, plan, or pattern intended to cause a person to believe that failure to perform an act would result in serious harm to or physical restraint against any person; or
- (3) The abuse or threatened abuse of the legal process.

“Commercial sex act” means any sex act on account of which anything of value is given to or received by any person.

“Commercially available off-the-shelf (COTS) item” means--

- (1) Any item of supply (including construction material) that is—
 - (i) A commercial item (as defined in paragraph (1) of the definition at FAR 2.101);
 - (ii) Sold in substantial quantities in the commercial marketplace; and
 - (iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and
- (2) Does not include bulk cargo, as defined in 46 U.S.C. 40102(4), such as agricultural products and petroleum products.

“Debt bondage” means the status or condition of a debtor arising from a pledge by the debtor of his or her personal services or of those of a person under his or her control as a security for debt, if the value of those services as reasonably assessed is not applied toward the liquidation of the debt or the length and nature of those services are not respectively limited and defined.

“Employee” means an employee of the Contractor directly engaged in the performance of work under the contract who has other than a minimal impact or involvement in contract performance.

“Forced labor” means knowingly providing or obtaining the labor or services of a person—

- (1) By threats of serious harm to, or physical restraint against, that person or another person;
- (2) By means of any scheme, plan, or pattern intended to cause the person to believe that, if the person did not perform such labor or services, that person or another person would suffer serious harm or physical restraint; or
- (3) By means of the abuse or threatened abuse of law or the legal process.

“Involuntary servitude” includes a condition of servitude induced by means of—

- (1) Any scheme, plan, or pattern intended to cause a person to believe that, if the person did not enter into or continue in such conditions, that person or another person would suffer serious harm or physical restraint; or
- (2) The abuse or threatened abuse of the legal process.

“Severe forms of trafficking in persons” means—

- (1) Sex trafficking in which a commercial sex act is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age; or
- (2) The recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.

“Sex trafficking” means the recruitment, harboring, transportation, provision, or obtaining of a person for the purpose of a commercial sex act.

“Subcontract” means any contract entered into by a subcontractor to furnish supplies or services for performance of a prime contract or a subcontract.

“Subcontractor” means any supplier, distributor, vendor, or firm that furnishes supplies or services to or for a prime contractor or another subcontractor.

“United States” means the 50 States, the District of Columbia, and outlying areas.

(b) *Policy.* The United States Government has adopted a policy prohibiting trafficking in persons including the trafficking-related activities of this clause. Contractors, contractor employees, and their agents shall not—

- (1) Engage in severe forms of trafficking in persons during the period of performance of the contract;
- (2) Procure commercial sex acts during the period of performance of the contract;
- (3) Use forced labor in the performance of the contract;
- (4) Destroy, conceal, confiscate, or otherwise deny access by an employee to the employee's identity or immigration documents, such as passports or drivers' licenses, regardless of issuing authority;
- (5)
 - (i) Use misleading or fraudulent practices during the recruitment of employees or offering of employment, such as failing to disclose, in a format and language accessible to the worker, basic information or making material misrepresentations during the recruitment of employees regarding the key terms and conditions of employment, including wages and fringe benefits, the location of work, the living conditions, housing and associated costs (if employer or agent provided or arranged), any significant cost to be charged to the employee, and, if applicable, the hazardous nature of the work;
 - (ii) Use recruiters that do not comply with local labor laws of the country in which the recruiting takes place;
- (6) Charge employees recruitment fees;
- (7)
 - (i) Fail to provide return transportation or pay for the cost of return transportation upon the end of employment--
 - (A) For an employee who is not a national of the country in which the work is taking place and who was brought into that country for the purpose of working on a U.S. Government contract or subcontract (for portions of contracts performed outside the United States); or
 - (B) For an employee who is not a United States national and who was brought into the United States for the purpose of working on a

U.S. Government contract or subcontract, if the payment of such costs is required under existing temporary worker programs or pursuant to a written agreement with the employee (for portions of contracts performed inside the United States); except that--

(ii) The requirements of paragraphs (b)(7)(i) of this clause shall not apply to an employee who is--

(A) Legally permitted to remain in the country of employment and who chooses to do so; or

(B) Exempted by an authorized official of the contracting agency from the requirement to provide return transportation or pay for the cost of return transportation;

(iii) The requirements of paragraph (b)(7)(i) of this clause are modified for a victim of trafficking in persons who is seeking victim services or legal redress in the country of employment, or for a witness in an enforcement action related to trafficking in persons. The contractor shall provide the return transportation or pay the cost of return transportation in a way that does not obstruct the victim services, legal redress, or witness activity. For example, the contractor shall not only offer return transportation to a witness at a time when the witness is still needed to testify. This paragraph does not apply when the exemptions at paragraph (b)(7)(ii) of this clause apply.

(8) Provide or arrange housing that fails to meet the host country housing and safety standards; or

(9) If required by law or contract, fail to provide an employment contract, recruitment agreement, or other required work document in writing. Such written work document shall be in a language the employee understands. If the employee must relocate to perform the work, the work document shall be provided to the employee at least five days prior to the employee relocating. The employee's work document shall include, but is not limited to, details about work description, wages, prohibition on charging recruitment fees, work location(s), living accommodations and associated costs, time off, roundtrip transportation arrangements, grievance process, and the content of applicable laws and regulations that prohibit trafficking in persons.

(c) *Contractor requirements.* The Contractor shall—

(1) Notify its employees of—

(i) The United States Government's policy prohibiting trafficking in persons, described in paragraph (b) of this clause; and

(ii) The actions that will be taken against employees or agents for violations of this policy. Such actions for employees may include, but are not limited to, removal from the contract, reduction in benefits, or termination of employment; and

(2) Take appropriate action, up to and including termination, against employees, agents, or subcontractors that violate the policy in paragraph (b) of this clause.

(d) Notification.

(1) The Contractor shall inform the Contracting Officer and the agency Inspector General immediately of—

(i) Any credible information it receives from any source (including host country law enforcement) that alleges a Contractor employee, subcontractor, subcontractor employee, or their agent has engaged in conduct that violates the policy in paragraph (b) of this clause (see also 18 U.S.C. 1351, Fraud in Foreign Labor Contracting, and 52.203-13(b)(3)(i)(A), if that clause is included in the solicitation or contract, which requires disclosure to the agency Office of the Inspector General when the Contractor has credible evidence of fraud); and

(ii) Any actions taken against a Contractor employee, subcontractor, subcontractor employee, or their agent pursuant to this clause.

(2) If the allegation may be associated with more than one contract, the Contractor shall inform the contracting officer for the contract with the highest dollar value.

(e) Remedies. In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraphs (c), (d), (g), (h), or (i) of this clause may result in—

(1) Requiring the Contractor to remove a Contractor employee or employees from the performance of the contract;

(2) Requiring the Contractor to terminate a subcontract;

(3) Suspension of contract payments until the Contractor has taken appropriate remedial action;

(4) Loss of award fee, consistent with the award fee plan, for the performance period in which the Government determined Contractor non-compliance;

(5) Declining to exercise available options under the contract;

(6) Termination of the contract for default or cause, in accordance with the termination clause of this contract; or

(7) Suspension or debarment.

(f) *Mitigating and aggravating factors.* When determining remedies, the Contracting Officer may consider the following:

(1) *Mitigating factors.* The Contractor had a Trafficking in Persons compliance plan or an awareness program at the time of the violation, was in compliance with the plan, and has taken appropriate remedial actions for the violation, that may include reparation to victims for such violations.

(2) *Aggravating factors.* The Contractor failed to abate an alleged violation or enforce the requirements of a compliance plan, when directed by the Contracting Officer to do so.

(g) *Full cooperation.*

(1) The Contractor shall, at a minimum—

(i) Disclose to the agency Inspector General information sufficient to identify the nature and extent of an offense and the individuals responsible for the conduct;

(ii) Provide timely and complete responses to Government auditors' and investigators' requests for documents;

(iii) Cooperate fully in providing reasonable access to its facilities and staff (both inside and outside the U.S.) to allow contracting agencies and other responsible Federal agencies to conduct audits, investigations, or other actions to ascertain compliance with the Trafficking Victims Protection Act of 2000 (22 U.S.C. chapter 78), E.O. 13627, or any other applicable law or regulation establishing restrictions on trafficking in persons, the procurement of commercial sex acts, or the use of forced labor; and

(iv) Protect all employees suspected of being victims of or witnesses to prohibited activities, prior to returning to the country from which the employee was recruited, and shall not prevent or hinder the ability of these employees from cooperating fully with Government authorities.

(2) The requirement for full cooperation does not foreclose any Contractor rights arising in law, the FAR, or the terms of the contract. It does not—

(i) Require the Contractor to waive its attorney-client privilege or the protections afforded by the attorney work product doctrine;

(ii) Require any officer, director, owner, employee, or agent of the Contractor, including a sole proprietor, to waive his or her attorney client privilege or Fifth Amendment rights; or

(iii) Restrict the Contractor from—

(A) Conducting an internal investigation; or

(B) Defending a proceeding or dispute arising under the contract or related to a potential or disclosed violation.

(h) *Compliance plan.*

(1) This paragraph (h) applies to any portion of the contract that—

(i) Is for supplies, other than commercially available off-the-shelf items, acquired outside the United States, or services to be performed outside the United States; and

(ii) Has an estimated value that exceeds \$500,000.

(2) The Contractor shall maintain a compliance plan during the performance of the contract that is appropriate—

(i) To the size and complexity of the contract; and

(ii) To the nature and scope of the activities to be performed for the Government, including the number of non-United States citizens expected to be employed and the risk that the contract or subcontract will involve services or supplies susceptible to trafficking in persons.

(3) *Minimum requirements.* The compliance plan must include, at a minimum, the following:

(i) An awareness program to inform contractor employees about the Government's policy prohibiting trafficking-related activities described in paragraph (b) of this clause, the activities prohibited, and the actions that will be taken against the employee for violations. Additional information about Trafficking in Persons and examples of awareness programs can be found at the Web site for the Department of State's Office to Monitor and Combat Trafficking in Persons at <http://www.state.gov/j/tip/>.

(ii) A process for employees to report, without fear of retaliation, activity inconsistent with the policy prohibiting trafficking in persons, including a means to make available to all employees the hotline phone number of the

Global Human Trafficking Hotline at 1-844-888-FREE and its email address at help@befree.org.

(iii) A recruitment and wage plan that only permits the use of recruitment companies with trained employees, prohibits charging recruitment fees to the employee, and ensures that wages meet applicable host-country legal requirements or explains any variance.

(iv) A housing plan, if the Contractor or subcontractor intends to provide or arrange housing, that ensures that the housing meets host-country housing and safety standards.

(v) Procedures to prevent agents and subcontractors at any tier and at any dollar value from engaging in trafficking in persons (including activities in paragraph (b) of this clause) and to monitor, detect, and terminate any agents, subcontracts, or subcontractor employees that have engaged in such activities.

(4) Posting.

(i) The Contractor shall post the relevant contents of the compliance plan, no later than the initiation of contract performance, at the workplace (unless the work is to be performed in the field or not in a fixed location) and on the Contractor's Web site (if one is maintained). If posting at the workplace or on the Web site is impracticable, the Contractor shall provide the relevant contents of the compliance plan to each worker in writing.

(ii) The Contractor shall provide the compliance plan to the Contracting Officer upon request.

(5) Certification. Annually after receiving an award, the Contractor shall submit a certification to the Contracting Officer that—

(i) It has implemented a compliance plan to prevent any prohibited activities identified at paragraph (b) of this clause and to monitor, detect, and terminate any agent, subcontract or subcontractor employee engaging in prohibited activities; and

(ii) After having conducted due diligence, either—

(A) To the best of the Contractor's knowledge and belief, neither it nor any of its agents, subcontractors, or their agents is engaged in any such activities; or

(B) If abuses relating to any of the prohibited activities identified in paragraph (b) of this clause have been found, the Contractor or

subcontractor has taken the appropriate remedial and referral actions.

(i) *Subcontracts.*

(1) The Contractor shall include the substance of this clause, including this paragraph (i), in all subcontracts and in all contracts with agents. The requirements in paragraph (h) of this clause apply only to any portion of the subcontract that—

(A) Is for supplies, other than commercially available off-the-shelf items, acquired outside the United States, or services to be performed outside the United States; and

(B) Has an estimated value that exceeds \$500,000.

(2) If any subcontractor is required by this clause to submit a certification, the Contractor shall require submission prior to the award of the subcontract and annually thereafter. The certification shall cover the items in paragraph (h)(5) of this clause.

CLAUSE I.77a – UNENFORCEABILITY OF UNAUTHORIZED OBLIGATIONS (JUN 2013)

a) Except as stated in paragraph (b) of this clause, when any supply or service acquired under this contract is subject to any End User License Agreement (EULA), Terms of Service (TOS), or similar legal instrument or agreement, that includes any clause requiring the Government to indemnify the Contractor or any person or entity for damages, costs, fees, or any other loss or liability that would create an Anti-Deficiency Act violation (31 U.S.C. 1341), the following shall govern:

(1) Any such clause is unenforceable against the Government.

(2) Neither the Government nor any Government authorized end user shall be deemed to have agreed to such clause by virtue of it appearing in the EULA, TOS, or similar legal instrument or agreement. If the EULA, TOS, or similar legal instrument or agreement is invoked through an "I agree" click box or other comparable mechanism (e.g., "click-wrap" or "browse-wrap" agreements), execution does not bind the Government or any Government authorized end user to such clause.

(3) Any such clause is deemed to be stricken from the EULA, TOS, or similar legal instrument or agreement.

(b) Paragraph (a) of this clause does not apply to indemnification by the Government that is expressly authorized by statute and specifically authorized under applicable agency regulation and procedures.

Clause I.88 – FAR 52.244-6 -- Subcontracts for Commercial Items (Apr 2015)

(a) *Definitions.* As used in this clause—

“Commercial item” has the meaning contained Federal Acquisition Regulation 2.101, Definitions.

“Subcontract” includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)

(1) The Contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (Apr 2010) (41 U.S.C. 3509), if the subcontract exceeds \$5,000,000 and has a performance period of more than 120 days. In altering this clause to identify the appropriate parties, all disclosures of violation of the civil False Claims Act or of Federal criminal law shall be directed to the agency Office of the Inspector General, with a copy to the Contracting Officer.

(ii) 52.203-15, Whistleblower Protections Under the American Recovery and Reinvestment Act of 2009 (Jun 2010) (Section 1553 of Pub. L. 111-5), if the subcontract is funded under the Recovery Act.

(iii) 52.219-8, Utilization of Small Business Concerns (Oct 2014) (15 U.S.C. 637(d)(2) and (3)), if the subcontract offers further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$650,000 (\$1.5 million for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(iv) 52.222-21, Prohibition of Segregated Facilities (Apr 2015).

(v) 52.222-26, Equal Opportunity (Apr 2015) (E.O. 11246).

(vi) 52.222-35, Equal Opportunity for Veterans (Jul 2014) (38 U.S.C. 4212(a));

(vii) 52.222-36, Equal Opportunity for Workers with Disabilities (Jul 2014) (29 U.S.C. 793).

(viii) 52.222-37, Employments Reports on Veterans (Jul 2014) (38 U.S.C. 4212).

(ix) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (Dec 2010) (E.O. 13496), if flow down is required in accordance with paragraph (f) of FAR clause 52.222-40.

(x)

(A) 52.222-50, Combating Trafficking in Persons (Mar 2015) (22 U.S.C. chapter 78 and E.O. 13627).

(B) Alternate I (Mar 2015) of 52.222-50 (22 U.S.C. chapter 78 and E.O. 13627).

(xi) 52.222-55, Establishing a Minimum Wage for Contractors (E.O. 13658) (Dec 2014).

(xii) 52.225-26, Contractors Performing Private Security Functions Outside the United States (Jul 2013) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; 10 U.S.C. 2302 Note).

(xiii) 52.232-40, Providing Accelerated Payments to Small Business Subcontractors (Dec 2013), if flow down is required in accordance with paragraph (c) of FAR clause 52.232-40.

(xiv) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. App. 1241 and 10 U.S.C. 2631), if flow down is required in accordance with paragraph (d) of FAR clause 52.247-64.

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

**CLAUSE I.161 – DEAR 970.5244-1 – CONTRACTOR PURCHASING SYSTEM
(JAN 2013) (DEVIATION) (DEVIATION PER POLICY FLASH
2011-98, AUG 2011) (DEVIATION PER AL 2013-10, JUN 2013)**

(a) *General.* The Contractor shall develop, implement, and maintain formal policies, practices, and procedures to be used in the award of subcontracts consistent with this clause and 48 CFR subpart 970.44. The Contractor's purchasing system and methods shall be fully documented, consistently applied, and acceptable to the Department of Energy (DOE) in accordance with 48 CFR 970.4401-1. The Contractor shall maintain file documentation which is appropriate to the value of the purchase and is adequate to establish the propriety of the transaction and the price paid. The Contractor's purchasing performance will be evaluated against such performance criteria and measures as may be set forth elsewhere in this contract. DOE reserves the right at any time to require that the Contractor submit for approval any or all purchases under this contract. The Contractor shall not purchase any item or service, the purchase of which is expressly prohibited by the written direction of DOE, and shall use such special and directed sources as may be expressly required by the DOE Contracting Officer. DOE will conduct periodic appraisals of the Contractor's management of all facets of the purchasing function, including the Contractor's compliance with its approved system and methods. Such appraisals will be performed through the conduct of Contractor Purchasing System Reviews in accordance with 48 CFR subpart 44.3, or, when approved by the Contracting Officer, through the Contractor's participation in the conduct of the Balanced Scorecard performance measurement and performance management system. The Contractor's approved purchasing system and methods shall include the requirements set forth in paragraphs (b) through (y) of this clause.

(b) *Acquisition of utility services.* Utility services shall be acquired in accordance with the requirements of subpart 970.41.

(c) *Acquisition of Real Property.* Real property shall be acquired in accordance with 48 CFR subpart 917.74.

(d) *Advance Notice of Proposed Subcontract Awards.* Advance notice shall be provided in accordance with 48 CFR 970.4401-3.

(e) *Audit of Subcontractors.*

(1) The Contractor shall provide for—

(i) Periodic post-award audit of cost-reimbursement subcontractors at all tiers; and

(ii) Audits, where necessary, to provide a valid basis for pre-award or cost or price analysis.

(2) Responsibility for determining the costs allowable under each cost-reimbursement subcontract remains with the contractor or next higher-tier

subcontractor. The Contractor shall provide, in appropriate cases, for the timely involvement of the Contractor and the DOE Contracting Officer in resolution of subcontract cost allowability.

(3) Where audits of subcontractors at any tier are required, arrangements may be made to have the cognizant Federal agency perform the audit of the subcontract. These arrangements shall be made administratively between DOE and the other agency involved and shall provide for the cognizant agency to audit in an appropriate manner in light of the magnitude and nature of the subcontract. In no case, however, shall these arrangements preclude determination by the DOE Contracting Officer of the allowability or unallowability of subcontractor costs claimed for reimbursement by the Contractor.

(4) Allowable costs for cost reimbursable subcontracts are to be determined in accordance with the cost principles of 48 CFR part 31, appropriate for the type of organization to which the subcontract is to be awarded, as supplemented by 48 CFR part 931. Allowable costs in the purchase or transfer from contractor-affiliated sources shall be determined in accordance with 48 CFR 970.4402-3 and 48 CFR 31.205-26(e).

(f) Bonds and Insurance.

(1) The Contractor shall require performance bonds in penal amounts as set forth in 48 CFR 28.102-2(a) for all fixed-priced and unit-priced construction subcontracts in excess of \$100,000. The Contractor shall consider the use of performance bonds in fixed-price non-construction subcontracts, where appropriate.

(2) For fixed-price, unit-priced and cost reimbursement construction subcontracts in excess of \$100,000, a payment bond shall be obtained on Standard Form 25A modified to name the Contractor as well as the United States of America as obligees. The penal amounts shall be determined in accordance with 48 CFR 28.102-2(b).

(3) For fixed-price, unit-priced and cost-reimbursement construction subcontracts greater than \$25,000, but not greater than \$100,000, the Contractor shall select two or more of the payment protections at 48 CFR 28.102-1(b), giving particular consideration to the inclusion of an irrevocable letter of credit as one of the selected alternatives.

(4) A subcontractor may have more than one acceptable surety in both construction and other subcontracts, provided that in no case will the liability of any one surety exceed the maximum penal sum for which it is qualified for any one obligation. For subcontracts other than construction, a co-surety (two or more sureties together) may reinsure amounts in excess of their individual capacity, with each surety having the required underwriting capacity that appears on the list of acceptable corporate sureties.

(g) *Buy American.* The Contractor shall comply with the provisions of the Buy American Act as reflected in 48 CFR 52.225-1 and 48 CFR 52.225-9. The Contractor shall forward determinations of non-availability of individual items to the DOE Contracting Officer for approval. Items in excess of \$500,000 require the prior concurrence of the Head of Contracting Activity. If, however, the Contractor has an approved purchasing system, the Head of the Contracting Activity may authorize the Contractor to make determinations of non-availability for individual items valued at \$500,000 or less.

(h) *Construction and Architect-Engineer Subcontracts.*

(1) *Independent Estimates.* A detailed, independent estimate of costs shall be prepared for all construction work to be subcontracted.

(2) *Specifications.* Specifications for construction shall be prepared in accordance with the DOE publication entitled "General Design Criteria Manual."

(3) *Prevention of Conflict of Interest.*

(i) The Contractor shall not award a subcontract for construction to the architect-engineer firm or an affiliate that prepared the design. This prohibition does not preclude the award of a "turnkey" subcontract so long as the subcontractor assumes all liability for defects in design and construction and consequential damages.

(ii) The Contractor shall not award both a cost-reimbursement subcontract and a fixed-price subcontract for construction or architect-engineer services or any combination thereof to the same firm where those subcontracts will be performed at the same site.

(iii) The Contractor shall not employ the construction subcontractor or an affiliate to inspect the firm's work. The contractor shall assure that the working relationships of the construction subcontractor and the subcontractor inspecting its work and the authority of the inspector are clearly defined.

(i) *Contractor-Affiliated Sources.* Equipment, materials, supplies, or services from a contractor-affiliated source shall be purchased or transferred in accordance with 48 CFR 970.4402-3.

(j) *Contractor-Subcontractor Relationship.* The obligations of the Contractor under paragraph (a) of this clause, including the development of the purchasing system and methods, and purchases made pursuant thereto, shall not relieve the Contractor of any obligation under this contract (including, among other things, the obligation to properly supervise, administer, and coordinate the work of subcontractors). Subcontracts shall be in the name of the Contractor, and shall not bind or purport to bind the Government.

(k) *Government Property.* The Contractor shall establish and maintain a property management system that complies with criteria in 48 CFR 970.5245-1, Property.

(l) *Indemnification*. Except for Price-Anderson Nuclear Hazards Indemnity, no subcontractor may be indemnified except with the prior approval of the Senior Procurement Executive.

(m) *Leasing of Motor Vehicles*. Contractors shall comply with 48 CFR subpart 8.11 and 48 CFR subpart 908.11.

(n) [Reserved]

(o) *Management, Acquisition and Use of Information Resources*. Requirements for automatic data processing resources and telecommunications facilities, services, and equipment, shall be reviewed and approved in accordance with applicable DOE Orders and regulations regarding information resources.

(p) *Priorities, Allocations and Allotments*. Priorities, allocations and allotments shall be extended to appropriate subcontracts in accordance with the clause or clauses of this contract dealing with priorities and allocations.

(q) *Purchase of Special Items*. Purchase of the following items shall be in accordance with the following provisions of 48 CFR subpart 8.5, 48 CFR subpart 908.71, Federal Management Regulation 41 CFR part 102, and the Federal Property Management Regulation 41 CFR chapter 101:

- (1) Motor vehicles—48 CFR 908.7101
- (2) Aircraft—48 CFR 908.7102
- (3) Security Cabinets—48 CFR 908.7106
- (4) Alcohol—48 CFR 908.7107
- (5) Helium—48 CFR subpart 8.5
- (6) Fuels and packaged petroleum products—48 CFR 908.7109
- (7) Coal—48 CFR 908.7110
- (8) Arms and Ammunition—48 CFR 908.7111
- (9) Heavy Water—48 CFR 908.7121(a)
- (10) Precious Metals—48 CFR 908.7121(b)
- (11) Lithium—48 CFR 908.7121(c)
- (12) Products and services of the blind and severely handicapped—41 CFR 101-26.701
- (13) Products made in Federal penal and correctional institutions—41 CFR 101-26.702

(r) *Purchase versus Lease Determinations*. Contractors shall determine whether required equipment and property should be purchased or leased, and establish appropriate thresholds for application of lease versus purchase determinations. Such determinations shall be made—

- (1) At time of original acquisition;

(2) When lease renewals are being considered; and

(3) At other times as circumstances warrant.

(s) *Quality Assurance.* Contractors shall provide no less protection for the Government in its subcontracts than is provided in the prime contract.

(t) *Setoff of Assigned Subcontractor Proceeds.* Where a subcontractor has been permitted to assign payments to a financial institution, the assignment shall treat any right of setoff in accordance with 48 CFR 932.803.

(u) *Strategic and Critical Materials.* The Contractor may use strategic and critical materials in the National Defense Stockpile.

(v) *Termination.* When subcontracts are terminated as a result of the termination of all or a portion of this contract, the Contractor shall settle with subcontractors in conformity with the policies and principles relating to settlement of prime contracts in 48 CFR subparts 49.1, 49.2 and 49.3. When subcontracts are terminated for reasons other than termination of this contract, the Contractor shall settle such subcontracts in general conformity with the policies and principles in 48 CFR subparts 49.1, 49.2, 49.3 and 49.4. Each such termination shall be documented and consistent with the terms of this contract. Terminations which require approval by the Government shall be supported by accounting data and other information as may be directed by the Contracting Officer.

(w) *Unclassified Controlled Nuclear Information.* Subcontracts involving unclassified uncontrolled nuclear information shall be treated in accordance with 10 CFR part 1017.

(x) *Subcontract Flowdown Requirements.* In addition to terms and conditions that are included in the prime contract which direct application of such terms and conditions in appropriate subcontracts, the Contractor shall include the following clauses in subcontracts, as applicable:

- (1) Davis-Bacon clauses prescribed in 48 CFR 22.407.
- (2) Foreign Travel clause prescribed in 48 CFR 952.247-70.
- (3) Counterintelligence clause prescribed in 48 CFR 970.0404-4(a).
- (4) Service Contract Act clauses prescribed in 48 CFR 22.1006.
- (5) State and local taxes clause prescribed in 48 CFR 970.2904-1.
- (6) Cost or pricing data clauses prescribed in 48 CFR 970.1504-3-1(b).
- (7) Nondisplacement of Qualified Workers clause prescribed in 48 CFR 970.1504-3-1(b).
- (8) Service Contract Reporting clause prescribed in 48 CFR 4.1705.
- (9) Minimum Wages under Executive Order 13658 clause prescribed in 48 CFR 22.1906.

(y) *Legal Services.* Contractor purchases of litigation and other legal services are subject to the requirements in 10 CFR part 719 and the requirements of this clause.

APPENDIX C

SPECIAL FINANCIAL INSTITUTION ACCOUNT AGREEMENT

**Applicable to the Operations of
Brookhaven National Laboratory**

APPENDIX C

SPECIAL FINANCIAL INSTITUTION ACCOUNT

History of Amendments

<u>Amendments</u>	<u>Dated</u>
Original Letter of Credit	December 22, 1997
Amendment to Agreement	April 3, 2003
Amendment to Agreement	April 8, 2004
Amendment to Agreement	September 29, 2004
Amendment to Agreement	November 30, 2007
Amendment to Agreement	December 31, 2009
Amendment to Agreement	May 3, 2010
Extension of Agreement	January 5, 2015
Extension of Agreement	February 10, 2015
Amendment to Agreement	March 13, 2015

CHECKS-PAID METHOD OF LETTER OF CREDIT FINANCING

This agreement is entered into this First day of January 1998, between the UNITED STATES OF AMERICA, represented by the Department of Energy (hereinafter referred to as DOE); Associated Universities, Inc., corporation/legal entity existing under the laws of the State of New York, or successor contractor, (hereinafter referred to as the Contractor); and Chase Manhattan Bank, a banking institution wholly owned by Chase Manhattan Corporation, existing under the laws of the State of New York, located at 33 Water Street, Room 718, New York City, NY 10041, (hereinafter referred to as the Bank).

RECITALS

- (a) On the effective date of August 21, 1995, DOE and the Contractor entered into Modification No. MJ27 of Contract No. DE-AC02-76CH00016, or successor contract, providing for transfer of funds on a payments-cleared basis.
- (b) DOE requires that amounts transferred to the Contractor thereunder be deposited in a Special Demand Deposit Account at a financial institution covered by the U.S. Department of Treasury - approved Government deposit insurance organizations that are identified in I TFM 6-9000.

These special demand deposits must be kept separate from the Contractor's general or other funds; and the parties are agreeable to so depositing said amounts with the Bank.

- (c) The special demand deposit account shall be designated Associated Universities, Inc. (or successor Contractor)/Brookhaven National Laboratory General Operating Account.

COVENANTS

In consideration of the foregoing, and for other good and valuable considerations, it is agreed that:

- (1) The Government shall have a title to the credit balance in said account to secure the repayment of all funds transferred to the Contractor and said title shall be superior to any lien or claim of the Bank or others with respect to such accounts.
- (2) The provisions of said contract(s) between DOE and the Contractor relating to the transfer of funds into and withdrawal of funds from the special demand deposit account, but the Bank shall not be responsible for the application of funds withdrawn from said account. After receipt by the Bank of directions from DOE, the Bank shall act thereon and shall be under no liability to any party hereto for any action taken in accordance with the said written directions. Any written directions received by the Bank from the Government upon DOE stationary and purporting to be signed by, or signed at the written direction of, the Government may, insofar as the rights, duties, and liabilities of the Bank are concerned, be considered as having been properly issued and filed with the Bank by DOE.
- (3) DOE, or its authorized representatives, shall have access to financial records maintained by the Bank with respect to such a special demand deposit account at all reasonable times and for all reasonable purposes, including, but without limitation to, the inspection or copying of such financial records and any or all memoranda, payment requests, correspondence, or documents pertaining thereto. Such financial records shall be preserved by the Bank for a period of six (6) years after the final payment under this Agreement.

- (4) In the event of the service of any writ of attachment, levy of execution, or commencement of garnishment proceedings with respect to the special demand deposit account, the Bank will promptly notify the Department of Energy at the Chicago Operations Office, 9800 S. Cass Avenue, Argonne, Illinois 60439.
- (5) DOE shall authorize funds that shall remain available to the extent that obligations that have been incurred in good faith thereunder by the Contractor [Associated Universities, Inc., or successor Contractor] to the Bank for the benefit of the special demand deposit account. The Bank agrees to honor upon presentation for payment all payments issued by the Contractor and to restrict all withdrawals against the funds authorized to an amount sufficient to maintain the average daily balance in the special demand deposit account in a net positive as close to zero as administratively possible.

If the calculated average daily balance for the month, inclusive of the time deposit account, results in a positive account balance which exceeds the balance needed to cover transaction costs for that month, and the financial institution had no control over the positive balance, the financial institution will compensate DOE for the loss of the availability of funds by multiplying the average daily balance for the month by the Treasury Tax and Loan Funds Rate divided by 12. If the financial institution caused the positive account balance, it shall compensate by multiplying the excess fund balance by the Federal Funds Rate adjusted for the proper period of time. The compensation will be remitted to the cognizant DOE finance office.

The Bank agrees to service the account in this manner based on the requirements and specifications contained in this Agreement, in consideration of the placement by DOE of a noninterest-bearing time deposit in an amount agreed upon. The Bank agrees that per item costs, detailed in the Attachment C "Quotation Pricing Sheet" contained in the Bank's aforesaid bid will remain constant during the term of this Agreement, but may be reviewed for adequacy at the request of either party, with a formal review required semiannually. The contractor will withdraw \$563,000 in funds from the special demand deposit account in the Bank. This account will hereinafter be defined as the time deposit account. The funds in the time deposit will remain on deposit and shall not be withdrawn or used for any purposes without the authorization of DOE. The amount of the deposit may be adjusted upward or downward but only with the approval of DOE.

- (6) The Bank will post collateral, acceptable under Department of Treasury Circular No. 176, with the Federal Reserve Bank in amount equal to the net balances (including the noninterest-bearing time deposit account) in all of the accounts included in this Agreement.
- (7) This Agreement, with all its provisions and covenants, shall be in effect for a term of two years, beginning on the first day of January, 1998, and ending through the thirty-first day of December, 1999.
 - (a) DOE may extend the term of this Agreement for an additional one year term by written notice to the Contractor and the Bank provided that DOE shall give the Contractor and Bank a preliminary written notice of its interest at least 90 days before this Agreement expires. The preliminary notice does not commit DOE to an extension.
 - (b) If the DOE exercises this option, the extended agreement shall be considered to include this option provision.
 - (c) The duration of the Agreement, including the exercise of any options under this Covenant, shall not extend past December 31, 2000.

- (8) DOE or the Contractor may terminate this Agreement at any time within the agreement period submitting written notice to the other parties 90 (ninety) days prior to the desired termination date. The specific provisions for operating the account during the 90 (ninety) day period are contained in Covenant (11).
- (9) DOE or the Contractor may terminate this Agreement at any time within the agreement period upon 30 days written notice to the bank if DOE or the Contractor, or both parties find that the bank has failed to substantially perform its obligations under this Agreement or that the Bank is performing its obligations in a manner that precludes administering the program in a effective and efficient manner or that precludes the effective utilization of the Government's cash resources.
- (10) Notwithstanding the provisions of Covenants 8 and 9, in the event the contract (referenced in Recital (a) between the DOE and the Contractor) is not renewed or is terminated, this Agreement between DOE, the Contractor and the Bank may be terminated automatically by DOE or will be assignable to a successor Contractor upon the delivery of written notice to the Bank.
- (11) In the event of termination or expiration the Bank agrees to retain the Contractor's special demand deposit account for an additional 90-day period to clear outstanding payment items. Within seven (7) days of expiration of the agreement an analysis of the special demand deposit account shall be made by the DOE to determine whether an insufficient or excessive balance was maintained in the time deposit account to compensate the Bank for services rendered up to the expiration date.
- (a) If the analysis indicates that the Bank has been insufficiently compensated for services rendered up to the expiration of the Agreement, the Contractor shall-
- (1) Maintain on deposit, during this 90 day period; sufficient Federal funds to reimburse the Bank for prior cumulative loss of earnings, and
 - (2) Maintain on deposit in the time deposit account sufficient Federal funds to compensate the bank for services rendered.
- (b) If the analysis indicates that the Bank has been overcompensated for services rendered up to the expiration of the Agreement, DOE shall close out the time deposit account and secure from the Bank a payment in an amount equal to the cumulative excess compensation less compensation for estimated services to be rendered during the 90-day period.
- (c) If cumulative excess compensation is not sufficient to compensate the Bank for services rendered during the 90-day period, adjustments will be made to the time deposit account to compensate the Bank for the difference between the cost of services rendered during the 90-day period and the cumulative excess compensation.

During the entire 90 day period, it is further understood that:

- (a) The Bank shall maintain collateral in an amount sufficient to collateralize the highest balance in the account, less Federal Deposit Insurance Corporation coverage on the accounts.
- (b) All service charges shall be consistent with the amounts reflected in this Agreement.
- (c) All terms and conditions of the aforesaid bid submitted by the Bank which are not inconsistent with this 90-day additional term shall remain in effect

(d) This agreement shall continue in effect, with exception of the following:

- (1) Funds Authorized (Covenant 5)
- (2) Term Agreement (Covenant 7).
- (3) Termination of Agreement (Covenant 8 and 9).

The Bank has submitted the forms entitled "Offeror Representations and Certifications" and "Quotation Pricing Sheet," the latter of which includes the calculation of required compensating balance. These forms have been accepted by the Contractor and the Government and are incorporated herein with the document entitled "Financial Institution's Information on the Checks-Paid Letter of Credit" as an integral part of this agreement.

Any direction received by the Bank from DOE which alters any portion of the terms and conditions of this agreement, including the amount of the time deposit agreed to herein, shall not be valid unless signed by the Contracting Officer.

IN WITNESS WHEREOF the parties hereto have caused this Agreement which consists of 5 pages including the signature pages, to be executed as of the day and year first above written.

12-5-97
Date Signed

ROBERT P. GORDON
CONTRACTING OFFICER

By _____
(Typed name of Contracting Officer)

[Signature]
(Signature of Contracting Officer)

WITNESS

(Typed Name of Witness)

Associated Universities, Inc.
(Typed Name of Contractor)

(Signature of Witness)

By Jerome Hudis
(Typed Name of Contractor's Representative)

[Signature]
(Signature of Contractor's Representative)

Note-In case of corporation,
Witness not required. Type
Names under all signatures.

Vice President and Controller
(Title)

1400 16th Street, N.W.
Washington, DC 20036

(Address)

December 3, 1997
(Date of Signature)

(Typed Name of Witness)

The Chase Manhattan Bank
(Typed Name of Bank)

Signature of Witness)

By Joseph M. Bognanno
(Name of Bank Representative)

[Signature]
(Signature of Bank Representative)

*See attached letter.

Note-In case of corporation,
Witness not required. Type
Names under all signatures.

Vice President
(Title)

One Chase Square - Tower 8
Rochester, NY 14643

(Address)

December 22, 1997
(Date of Signature)

NOTE-The Contractor, if a corporation, should cause the following Certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Agreement and the Certificate.

CERTIFICATE

I, Leland F. Willis, certify that I am the Vice President of Environmental Safety and Health of the corporation named as Contractor herein; that Jerome Hudis, who signed this Agreement on behalf of the Contractor was then Vice President and Controller of said corporation; that said Agreement was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

 (Signature) _____ (Corporate Seal)

NOTE-Bank Depository, if a corporation, should cause the following certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Agreement and the Certificate.

CERTIFICATE

I, _____, certify that I am the _____
Of the corporation named as Bank Depository herein: that _____
Who signed this Agreement on behalf of the Bank Depository was then _____
Of said corporation, the said Agreement was duly signed for and in behalf of said corporation by
Authority of its governing body, and is within the scope of corporate powers.

_____ (Corporate Seal)
(Signature)

AG(C)

**AMENDMENT TO AGREEMENT
CHECKS-PAID METHOD OF LETTER OF CREDIT FINANCING**

This is an Amendment to the Agreement entered into the First day of January 1998 between the UNITED STATES OF AMERICA, represented by the Department of Energy (hereinafter referred to as DOE); Associated Universities, Inc., corporation/legal entity existing under the laws of the State of New York, or successor contractor, (hereinafter referred to as the Contractor); and Chase Manhattan Bank, a banking institution wholly owned by Chase Manhattan Corporation, existing under the laws of the State of New York, located at 55 Water Street, Room 718, New York City, NY 10041, (hereinafter referred to as the Bank).

WHEREAS, the parties entered into an Agreement dated the First day of January 1998 entitled "Checks-Paid Method of Letter of Credit Financing;" and

WHEREAS, Brookhaven Science Associates, LLC succeeded Associated Universities, Inc., as the Contractor for Brookhaven National Laboratory effective the First day of March 1998; and

WHEREAS, The Chase Manhattan Corporation merged with J.P. Morgan & Co. Incorporated on December 31, 2000; and

WHEREAS, the parties have proceeded under the aforesaid Agreement from the First day of March 1998 until the date hereof; and

WHEREAS, the parties are desirous of formally extending the term of the aforesaid Agreement;

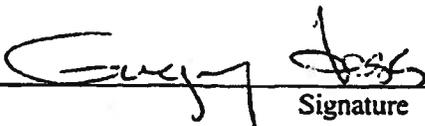
NOW THEREFORE, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. The Term of the Agreement with all its provisions and covenants is hereby extended through the Fourth day of January 2004.
2. DOE may extend the Term of the Agreement for an additional period of time to be contemporaneous with any extension of time granted by DOE to the Contractor for the operation of Brookhaven National Laboratory, provided DOE gives written notice to the Contractor and the Bank at least ninety days prior to the Fourth day of January 2004. Such notice shall not commit DOE to the extension, which shall only occur after a formal amendment to the agreement is executed by the parties.

NOTE: The Contractor, if a Company, should cause the following Certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, Gregory Fess, certify that I am the Secretary of the Company named as Contractor herein; that Brian P. Sack, who signed this Amendment on behalf of the Contractor was then Chief Financial Officer of said Company; that said Amendment was duly signed for and in behalf of said Company by authority of its governing body, and is within the scope of its Company powers.



Signature (Company Seal)

NOTE: Bank Repository, if a Corporation, should cause the following certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, Margaret E. Gannin, certify that I am ~~the~~ an Assistant Secretary of the Corporation named as Bank Depository herein; that Joseph M. Bugnane who signed this Amendment on behalf of the Bank Depository was then a Vice President of said Corporation; that said Amendment was duly signed for and in behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.



Signature (Corporate Seal)

IN WITNESS WHEREOF the parties hereto have caused this Amendment which consists of three pages including the signature pages. to be executed as of the day and year first above written.

4-4-03
Date Signed

By: Robert P. Gordon, Contracting Officer
(Typed Name of Contracting Officer)

Robert P. Gordon
(Signature of Contracting Officer)

WITNESS

(Typed Name of Witness)

Brookhaven Science Associates, LLC
(Typed name of Contractor)

(Signature of Witness)

By: Brian P. Sack
(Typed name of Contractor's Representative)

Brian P. Sack
(Signature of Contractor's Representative)

Chief Financial Officer
(Title)

Note-In case of Company.
Witness not required. Type
names under all signatures.

P.O. Box 5000, Bldg. 460, Upton, NY 11973
(Address)

4/2/03
(Date of Signature)

(Typed Name of Witness)

JPMorgan Chase Bank
(Typed name of Bank)

(Signature of Witness)

By: Joseph M. Bognanno
(Name of Bank Representative)

Joseph M. Bognanno
(Signature of Bank Representative)

Note-In case of Company.
Witness not required. Type
names under all signatures.

Vice President
(Title)

One Chase Square-Tower 10, Rochester, NY 14643
(Address)

4/3/03
(Date of Signature)

**AMENDMENT TO AGREEMENT
CHECKS-PAID METHOD OF LETTER OF CREDIT FINANCING**

This is an Amendment to the Agreement entered into the First day of January 1998 between the UNITED STATES OF AMERICA, represented by the Department of Energy (hereinafter referred to as DOE); Associated Universities, Inc., corporation/legal entity existing under the laws of the State of New York, or successor contractor, (hereinafter referred to as the Contractor); and Chase Manhattan Bank, a banking institution wholly owned by Chase Manhattan Corporation, existing under the laws of the State of New York, located at 55 Water Street, Room 718, New York City, NY 10041, (hereinafter referred to as the Bank).

WHEREAS, the parties entered into an Agreement dated the First day of January 1998 entitled "Checks-Paid Method of Letter of Credit Financing;" and

WHEREAS, Brookhaven Science Associates, LLC succeeded Associated Universities, Inc., as the Contractor for Brookhaven National Laboratory effective the First day of March 1998; and

WHEREAS, The Chase Manhattan Corporation merged with J.P. Morgan & Co. Incorporated on December 31, 2000; and

WHEREAS, the parties have proceeded under the aforesaid Agreement from the First day of March 1998 until the date hereof; and

WHEREAS, the parties are desirous of formally extending the term of the aforesaid Agreement;

NOW THEREFORE, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. The Term of the Agreement with all its provisions and covenants is hereby extended through the Second day of July 2004.
2. DOE may extend the Term of the Agreement for an additional period of time to be contemporaneous with any extension of time granted by DOE to the Contractor for the operation of Brookhaven National Laboratory. Such notice shall not commit DOE to the extension, which shall only occur after a formal amendment to the agreement is executed by the parties.

IN WITNESS WHEREOF the parties hereto have caused this Amendment which consists of three pages including the signature pages, to be executed as of the day and year first above written.

Date Signed

By: Robert P. Gordon, Contracting Officer
(Typed Name of Contracting Officer)


(Signature of Contracting Officer)

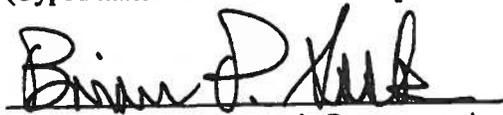
WITNESS

(Typed Name of Witness)

Brookhaven Science Associates, LLC
(Typed name of Contractor)

(Signature of Witness)

By: Brian P. Sack
(Typed name of Contractor's Representative)


(Signature of Contractor's Representative)

Note-In case of Company,
Witness not required. Type
names under all signatures.

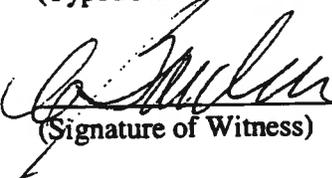
Chief Financial Officer
(Title)

P.O. Box 5000, Bldg. 460, Upton, NY 11973
(Address)

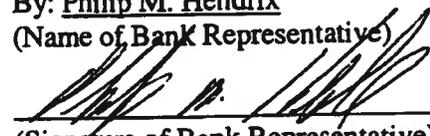
(Date of Signature)

Catherine I. Bowden
(Typed Name of Witness)

JPMorgan Chase Bank
(Typed name of Bank)


(Signature of Witness)

By: Philip M. Hendrix
(Name of Bank Representative)


(Signature of Bank Representative)

Note-In case of Company,
Witness not required. Type
names under all signatures.

Vice President
(Title)

One Chase Square-Tower 10, Rochester, NY 14643
(Address)

April 8, 2004
(Date of Signature)

NOTE: The Contractor, if a Company, should cause the following Certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, Gregory Fess, certify that I am the Secretary of the Company named as Contractor herein; that Brian P. Sack, who signed this Amendment on behalf of the Contractor was then Chief Financial Officer of said Company; that said Amendment was duly signed for and in behalf of said Company by authority of its governing body, and is within the scope of its Company powers.

Gregory Fess (Company Seal)
Signature

NOTE: Bank Repository, if a Corporation, should cause the following certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, Margaret E. Garrity, certify that I am ~~the~~ an Assistant Secretary of the Corporation named as Bank Depository herein; that Philip M. Hendrix, who signed this Amendment on behalf of the Bank Depository was then a Vice President of said Corporation; that said Amendment was duly signed for and in behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.

Meggy (Corporate Seal)
Signature

**AMENDMENT TO AGREEMENT
CHECKS-PAID METHOD OF LETTER OF CREDIT FINANCING**

This is an Amendment to the Agreement entered into the First day of January 1998 between the UNITED STATES OF AMERICA, represented by the Department of Energy (hereinafter referred to as DOE); Associated Universities, Inc., corporation/legal entity existing under the laws of the State of New York, or successor contractor, (hereinafter referred to as the Contractor); and Chase Manhattan Bank, a banking institution wholly owned by Chase Manhattan Corporation, existing under the laws of the State of New York, located at 55 Water Street, Room 718, New York City, NY 10041, (hereinafter referred to as the Bank).

WHEREAS, the parties entered into an Agreement dated the First day of January 1998 entitled "Checks-Paid Method of Letter of Credit Financing;" and

WHEREAS, Brookhaven Science Associates, LLC succeeded Associated Universities, Inc., as the Contractor for Brookhaven National Laboratory effective the First day of March 1998; and

WHEREAS, The Chase Manhattan Corporation merged with J.P. Morgan & Co. Incorporated on December 31, 2000; and

WHEREAS, the parties have proceeded under the aforesaid Agreement from the First day of March 1998 until the date hereof; and

WHEREAS, the parties are desirous of formally extending the term of the aforesaid Agreement;

NOW THEREFORE, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. The Term of the Agreement with all its provisions and covenants is hereby extended through the Fourth day of January, 2008.
2. DOE may extend the Term of the Agreement for an additional period of time to be contemporaneous with any extension of time granted by DOE to the Contractor for the operation of Brookhaven National Laboratory. Such notice shall not commit DOE to the extension, which shall only occur after a formal amendment to the agreement is executed by the parties.

IN WITNESS WHEREOF the parties hereto have caused this Amendment which consists of three pages including the signature pages, to be executed as of the day and year first above written.

Sept 29, 2004
Date Signed

By: Robert P. Gordon, Contracting Officer
(Typed Name of Contracting Officer)


(Signature of Contracting Officer)

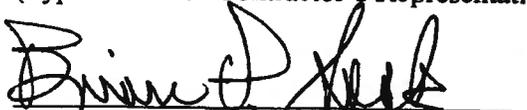
WITNESS

(Typed Name of Witness)

Brookhaven Science Associates, LLC
(Typed name of Contractor)

(Signature of Witness)

By: Brian P. Sack
(Typed name of Contractor's Representative)


(Signature of Contractor's Representative)

Note-In case of Company,
Witness not required. Type
names under all signatures.

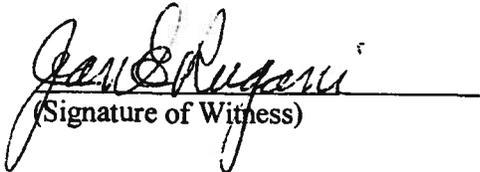
Chief Financial Officer
(Title)

P.O. Box 5000, Bldg. 460, Upton, NY 11973
(Address)

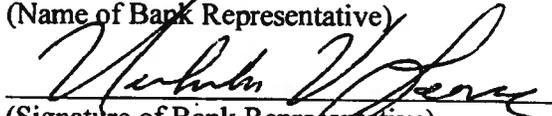
September 29, 2004
(Date of Signature)

Jean E Rugani
(Typed Name of Witness)

JPMorgan Chase Bank
(Typed name of Bank)


(Signature of Witness)

By: Nicholas V. Leone
(Name of Bank Representative)


(Signature of Bank Representative)

Note-In case of Company,
Witness not required. Type
names under all signatures.

Vice President
(Title)

277 Park Avenue, New York, NY 10172
(Address)

(Date of Signature)

NOTE: The Contractor, if a Company, should cause the following Certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, Gregory Fess, certify that I am the Secretary of the Company named as Contractor herein; that Brian P. Sack, who signed this Amendment on behalf of the Contractor was then Chief Financial Officer of said Company; that said Amendment was duly signed for and in behalf of said Company by authority of its governing body, and is within the scope of its Company powers.

Gregory Fess (Company Seal)
Signature

NOTE: Bank Repository, if a Corporation, should cause the following certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, GRISUN USA LLC, certify that I am the ASSISTANT SECRETARY of the Corporation named as Bank Depository herein; that NICHOLAS V. LEONE, who signed this Amendment on behalf of the Bank Depository was then VICE PRESIDENT of said Corporation; that said Amendment was duly signed for and in behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.

Nicholas V. Leone (Corporate Seal)
Signature

**AMENDMENT TO AGREEMENT
CHECKS-PAID METHOD OF LETTER OF CREDIT FINANCING**

This is an Amendment to the Agreement entered into the First day of January 1998 between the UNITED STATES OF AMERICA, represented by the Department of Energy (hereinafter referred to as DOE); Associated Universities, Inc., corporation/legal entity existing under the laws of the State of New York, or successor contractor, (hereinafter referred to as the Contractor); and Chase Manhattan Bank, a banking institution wholly owned by Chase Manhattan Corporation, existing under the laws of the State of New York, located at 55 Water Street, Room 718, New York City, NY 10041, (hereinafter referred to as the Bank).

WHEREAS, the parties entered into an Agreement dated the First day of January 1998 entitled "Checks-Paid Method of Letter of Credit Financing;" and

WHEREAS, Brookhaven Science Associates, LLC succeeded Associated Universities, Inc., as the Contractor for Brookhaven National Laboratory effective the First day of March 1998; and

WHEREAS, The Chase Manhattan Corporation merged with J.P. Morgan & Co. Incorporated on December 31, 2000; and

WHEREAS, the parties have proceeded under the aforesaid Agreement from the First day of March 1998 until the date hereof; and

WHEREAS, the parties are desirous of formally extending the term of the aforesaid Agreement;

NOW THEREFORE, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. The Term of the Agreement with all its provisions and covenants is hereby extended through the Fourth day of January, 2010.
2. DOE may extend the Term of the Agreement for an additional period of time to be contemporaneous with any extension of time granted by DOE to the Contractor for the operation of Brookhaven National Laboratory. Such notice shall not commit DOE to the extension, which shall only occur after a formal amendment to the agreement is executed by the parties.

IN WITNESS WHEREOF the parties hereto have caused this Amendment which consists of three pages including the signature pages, to be executed as of the day and year first above written.

11-16-07
Date Signed

By: Robert P. Gordon, Contracting Officer
(Typed Name of Contracting Officer)


(Signature of Contracting Officer)

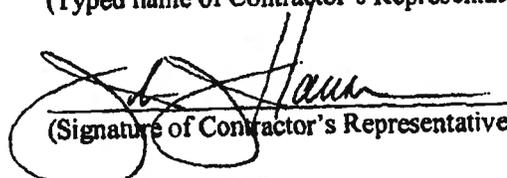
WITNESS

(Typed Name of Witness)

Brookhaven Science Associates, LLC
(Typed name of Contractor)

(Signature of Witness)

By: John J. Hauser
(Typed name of Contractor's Representative)


(Signature of Contractor's Representative)

Chief Financial Officer
(Title)

Note-In case of Company,
Witness not required. Type
names under all signatures.

P.O. Box 5000, Bldg. 460, Upton, NY 11973
(Address)

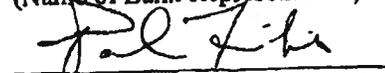
11-16-07
(Date of Signature)

(Typed Name of Witness)

JPMorgan Chase Bank
(Typed name of Bank)

(Signature of Witness)

By: Paul Lionikis
(Name of Bank Representative)


(Signature of Bank Representative)

Note-In case of Company,
Witness not required. Type
names under all signatures.

Vice President
(Title)

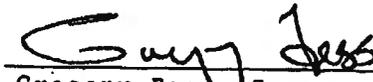
420 West Van Buren Street, Floor 09, Chicago, IL 60606
(Address)

11/30/07
(Date of Signature)

NOTE: The Contractor, if a Company, should cause the following Certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, Gregory Fess, certify that I am the Secretary of the Company named as Contractor herein; that John J. Hauser, who signed this Amendment on behalf of the Contractor was then Chief Financial Officer of said Company; that said Amendment was duly signed for and in behalf of said Company by authority of its governing body, and is within the scope of its Company powers.



Gregory Fess, Secretary Signature (Company Seal)
Brookhaven Science Associates, LLC

NOTE: Bank Repository, if a Corporation, should cause the following certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, _____, certify that I am the _____ of the Corporation named as Bank Depository herein; that _____ who signed this Amendment on behalf of the Bank Depository was then _____ of said Corporation; that said Amendment was duly signed for and in behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.

Signature (Corporate Seal)

SEE ATTACHED
CERTIFICATE

**CERTIFICATE OF
JPMORGAN CHASE BANK, NATIONAL ASSOCIATION**

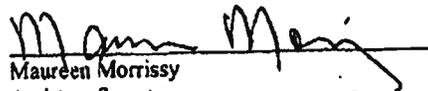
I, Maureen Morrissy, DO HEREBY CERTIFY that I am a duly elected and qualified Assistant Secretary of JPMorgan Chase Bank, National Association, a national banking association duly organized and existing under the laws of the United States of America (the "Bank") and that set forth below is a true and correct copy of resolutions duly adopted by the directors of the Bank pursuant to a unanimous written consent dated January 17, 2007. I further certify that said resolutions, at the date hereof, are still in full force and effect.

RESOLVED that loan agreements, contracts, indentures, mortgages, deeds, releases, conveyances, assignments, transfers, certificates, certifications, declarations, leases, discharges, satisfactions, settlements, petitions, schedules, accounts, affidavits, bonds, undertakings, guarantees, proxies, requisitions, demands, proofs of debt, claims, records, notes signifying indebtedness of JPMorgan Chase Bank, N.A. (the "Bank"), and any other contracts, instruments or documents in connection with the conduct of the business of the Bank, whether or not specified in the resolutions of the Bank's Board of Directors (the "Board") may be signed, executed, acknowledged, verified, delivered or accepted on behalf of the Bank by the Chairman of the Board, the Chief Executive Officer, the President, the Chief Operating Officer, a Vice Chairman of the Board, a Vice Chairman, any member of the Operating Committee or Executive Committee, any Executive Vice President, the Chief Financial Officer, the Treasurer, the Controller, the Chief Risk Officer, the Secretary, any Senior Vice President, any Managing Director, any Vice President, or any other officer who the Secretary or any Assistant Secretary certifies as having a functional title or official status which is equivalent to any of the foregoing, and the seal of the Bank may be affixed to any thereof and attested by the Secretary, any Vice President or any Assistant Secretary; *provided, however*, that any guarantees, comfort letters or other letters of support issued by the Bank in respect of obligations of any of the Bank's affiliates or subsidiaries ("Support Documents") may be executed only where consistent with such resolutions of the Board dated the date hereof, as may be amended, relating to the provision of Bank guarantees and other support issued by the Bank in respect of obligations of its subsidiaries and affiliates;

RESOLVED that powers of attorney may be executed on behalf of the Bank by the Chairman of the Board, the Chief Executive Officer, the President, the Chief Operating Officer, a Vice Chairman of the Board, a Vice Chairman, any member of the Operating Committee or Executive Committee, any Executive Vice President, the Chief Financial Officer, the Treasurer, the Controller, the Chief Risk Officer, the Secretary, any Senior Vice President, and by any Managing Director having a rank equivalent to Senior Vice President; *provided, however*, that such powers of attorney may not provide authority for signing Support Documents except as where consistent with such resolutions of the Board dated the date hereof, as may be amended, relating to the provision of Bank guarantees and other support issued by the Bank in respect of obligations of its subsidiaries and affiliates.

I further certify that PAUL M. LIONIKIS is a Vice President of JPMorgan Chase Bank, National Association and is empowered to act in conformity with the above resolutions.

WITNESS my hand and the seal of JPMorgan Chase Bank, National Association as of this 3rd day of December, 2007.


Maureen Morrissy
Assistant Secretary

(Corporate Seal)

**AMENDMENT TO AGREEMENT
CHECKS-PAID METHOD OF LETTER OF CREDIT FINANCING**

This is an Amendment to the Agreement entered into the First day of January 1998 between the UNITED STATES OF AMERICA, represented by the Department of Energy (hereinafter referred to as DOE); Associated Universities, Inc., corporation/legal entity existing under the laws of the State of New York, or successor contractor, (hereinafter referred to as the Contractor); and Chase Manhattan Bank, a banking institution wholly owned by Chase Manhattan Corporation, existing under the laws of the State of New York, located at 55 Water Street, Room 718, New York City, NY 10041, (hereinafter referred to as the Bank).

WHEREAS, the parties entered into an Agreement dated the First day of January 1998 entitled "Checks-Paid Method of Letter of Credit Financing;" and

WHEREAS, Brookhaven Science Associates, LLC succeeded Associated Universities, Inc., as the Contractor for Brookhaven National Laboratory effective the First day of March 1998; and

WHEREAS, The Chase Manhattan Corporation merged with J.P. Morgan & Co. Incorporated on December 31, 2000; and

WHEREAS, the parties have proceeded under the aforesaid Agreement from the First day of March 1998 until the date hereof; and

WHEREAS, the parties are desirous of formally extending the term of the aforesaid Agreement;

NOW THEREFORE, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. The Term of the Agreement with all its provisions and covenants is hereby extended through the Fourth day of January, 2015.
2. DOE may extend the Term of the Agreement for an additional period of time to be contemporaneous with any extension of time granted by DOE to the Contractor for the operation of Brookhaven National Laboratory. Such notice shall not commit DOE to the extension, which shall only occur after a formal amendment to the agreement is executed by the parties.

IN WITNESS WHEREOF the parties hereto have caused this Amendment which consists of three pages including the signature pages, to be executed as of the day and year first above written.

12-30-09
Date Signed

By: Robert P. Gordon, Contracting Officer
(Typed Name of Contracting Officer)


(Signature of Contracting Officer)

WITNESS

(Typed Name of Witness)

Brookhaven Science Associates, LLC
(Typed name of Contractor)

(Signature of Witness)

By: Mark Israel
(Typed name of Contractor's Representative)


(Signature of Contractor's Representative)

Assistant Laboratory Director for Finance
(Title)

P.O. Box 5000, Bldg. 460, Upton, NY 11973
(Address)

12-28-09
(Date of Signature)

Note-In case of Company,
Witness not required. Type
names under all signatures.

(Typed Name of Witness)

JPMorgan Chase Bank
(Typed name of Bank)

(Signature of Witness)

By: Chris Casey
(Name of Bank Representative)


(Signature of Bank Representative)

Note-In case of Company,
Witness not required. Type
names under all signatures.

Vice President
(Title)

1 Chase Manhattan Plaza, Floor 8, New York, NY 10005
(Address)

12-31-09
(Date of Signature)

NOTE: The Contractor, if a Company, should cause the following Certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, Michael Goldman, certify that I am the Secretary of the Company named as Contractor herein; that Mark Israel, who signed this Amendment on behalf of the Contractor was then Assistant Laboratory Director for Finance of said Company; that said Amendment was duly signed for and in behalf of said Company by authority of its governing body, and is within the scope of its Company powers.



Signature (Company Seal)

NOTE: Bank Repository, if a Corporation, should cause the following certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, _____, certify that I am the _____ of the Corporation named as Bank Depository herein; that _____ who signed this Amendment on behalf of the Bank Depository was then _____ of said Corporation; that said Amendment was duly signed for and in behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.

Signature (Corporate Seal)

**AMENDMENT TO AGREEMENT
CHECKS-PAID METHOD OF LETTER OF CREDIT FINANCING**

This is an Amendment entered into as of January 1, 2010 (the "Amendment") to the Agreement entitled "Checks-Paid Method of Letter of Credit Financing" entered into the First day of January 1998 (the "Agreement") between UNITED STATES OF AMERICA, represented by the Department of Energy (hereinafter referred to as "DOE"); Associated Universities, Inc., corporation/legal entity existing under the laws of the State of New York, or successor contractor, (hereinafter referred to as the "Contractor"); and Chase Manhattan Bank, a banking institution wholly owned by Chase Manhattan Corporation, existing under the laws of the State of New York, located at 55 Water Street, Room 718, New York City, NY 10041, now known as JPMorgan Chase Bank, N.A., a national banking association organized under the laws of the United States of America with offices at 1 Chase Manhattan Plaza, Floor 8, New York, NY 10005 (the "Bank").

WHEREAS, the DOE, the Contractor and the Bank may be referred to collectively in this Amendment as the "parties"; and

WHEREAS, Brookhaven Science Associates, LLC succeeded Associated Universities, Inc., as the Contractor for Brookhaven National Laboratory effective the First day of March 1998; and

WHEREAS, through several mergers, JPMorgan Chase Bank, N.A. succeeded Chase Manhattan Bank as the Bank;

WHEREAS, the parties have proceeded under the aforesaid Agreement as amended from time to time from the First day of March 1998 until the date hereof; and

WHEREAS, the parties are desirous of formally extending the term of the aforesaid Agreement;

NOW THEREFORE, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. The term of the Agreement with all its provisions and covenants as amended from time to time is hereby extended through the Fourth day of January, 2015.
2. DOE may extend the Term of the Agreement for an additional period of time to be contemporaneous with any extension of time granted by DOE to the Contractor for the operation of Brookhaven National Laboratory. Such notice shall not commit DOE, the Contractor or the Bank to the extension, which shall only occur after a formal amendment to the Agreement is executed by the parties.

IN WITNESS WHEREOF the parties hereto have caused this Amendment which consists of three pages including the signature pages, to be executed as of the day and year first above written.

March 30, 2010
Date Signed

By: Robert P. Gordon, Contracting Officer


(Signature of Contracting Officer)

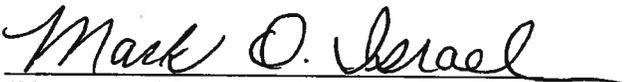
WITNESS

(Typed Name of Witness)

Brookhaven Science Associates, LLC
(Typed Name of Contractor)

(Signature of Witness)

By: Mark O. Israel


(Signature of Contractor's Representative)

Assistant Laboratory Director for Finance
(Title)

Note-In case of Company,
Witness not required. Type
Names under all Signatures.

P.O.Box 5000, Bldg 460, Upton, NY 11973
(Address)

(Date of Signature)

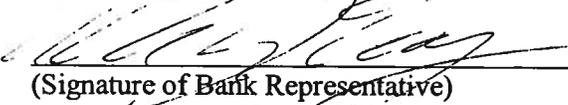
(Typed Name of Witness)

JPMorgan Chase Bank, N.A.
(Typed Name of Bank)

(Signature of Witness)

By: Christopher J. Casey
(Name of Bank Representative)

Note In-case of Company,
Witness not required. Type
Names under all Signatures.


(Signature of Bank Representative)

Vice President
(Title)

1 Chase Manhattan Plaza, Floor 8, New York, NY 10005
(Address)

MAY 3, 2010
(Date of Signature)

NOTE: The Contractor, if a Company, should cause the following Certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, Michael Goldman, certify that I am the Secretary of the Company named as Contractor herein; that Mark Israel, who signed this Amendment on behalf of the Contractor was then Assistant Laboratory Director for Finance of said Company; that said Amendment was duly signed for and in behalf of said Company by authority of its governing body, and is within the scope of its Company powers.



Signature (Company Seal)

NOTE: Bank Repository, if a Corporation, should cause the following certificate to be executed under its corporate seal, provided that the same officer shall not execute both the Amendment and the Certificate.

CERTIFICATE

I, Dale R. Granchalek, certify that I am an Executive Director of the national banking association named as Bank herein; that Christopher J. Casey who signed this Amendment on behalf of the Bank was then Vice President of said association; that said Amendment was duly signed for and in behalf of said association by authority of its governing body, and is within the scope of its corporate powers.



Signature (Association Seal)

J.P.Morgan

Rikki O. Jones
Executive Director and Associate General Counsel
Legal and Compliance Department

January 5, 2015

Anne Troutman, Legal Counsel
Brookhaven Science Associates, LLC
Brookhaven National Laboratory, Building
460
Upton, NY 11973

RE: DOE Contract DE-AC02-98CH10886 Extension

Dear Ms. Troutman:

As requested, we are confirming our agreement to extend the terms of the current Letter of Credit arrangement under DOE Contract DE-AC02-98CH10886 to your new DOE Contract DE-SC0012704, effective January 5, 2015 through February 5, 2015.

Very truly yours,

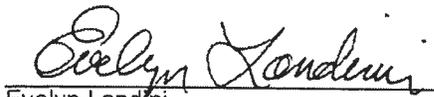


Rikki O. Jones
Executive Director and Associate General Counsel

CC: Eugene Waiters
Jonathan Jenkins



Anne Troutman
BSA/BNL Legal Counsel



Evelyn Landini
DOE Business Management Division Director

J.P.Morgan

February 10, 2015

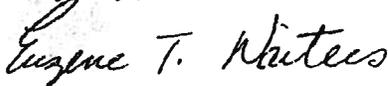
Anne Troutman, Legal counsel
Brookhaven Science Associates, LLC
Brookhaven National Laboratory, Building 460
Upton, NY 11973

RE: DOE Contract DE-AC02-98CH10886 Extension

Dear Ms. Troutman:

As requested, we are confirming our agreement to extend the terms of the Letter of Credit arrangement under DOE Contract DE-AC02-98CH10886 to your new DOE Contract DE-SC0012704, effective February 6, 2015 through March 8, 2015.

Very truly yours,



Eugene T. Waiters
Executive Director

CC: Rikki O. Jones
Jonathan Jenkins
Patricia Miele

Accepted for Brookhaven Science Associates, LLC



Accepted for the U.S. Department of Energy



4 New York Plaza, 13th Floor, New York, New York 10004

JPMorgan Chase Bank, N.A.

**AMENDMENT TO AGREEMENT
CHECKS-PAID METHOD OF LETTER OF CREDIT FINANCING**

This is an Amendment entered into as of January 4, 2015 (the "Amendment") to the Agreement entitled "Checks-Paid Method of Letter of Credit Financing" entered into as of January 1, 1998, as amended (the "Agreement") between United States of America, represented by the Department of Energy (the "DOE"); Brookhaven Science Associates, LLC, legal entity existing under the laws of the State of Delaware, or successor contractor, (the "Contractor"); and JPMorgan Chase Bank, N.A., a national banking association organized under the laws of the United States of America with offices at 4 New York Plaza, Floor 13, New York, NY 10004 (the "Bank").

WHEREAS, the DOE, the Contractor, and the Bank may be referred to collectively in this Amendment as the "Parties"; and

WHEREAS, the Parties have proceeded under the aforesaid Agreement from the most recent amendment dated May 3, 2010 until the date hereof; and

WHEREAS, on November 12, 2014 DOE selected Brookhaven Science Associates, LLC for a new five-year base contract (Contract No. DE-SC0012704) to begin January 5, 2015 to manage and operate Brookhaven National Laboratory; and

WHEREAS, the Parties are desirous of formally extending the term of the aforesaid Agreement;

NOW THEREFORE, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. The term of the Agreement with all its provisions and covenants is hereby extended through September 4, 2015.
2. The Parties may extend the term of the Agreement for an additional period of time to be contemporaneous with any extension of time granted by DOE to the Contractor for the operation of Brookhaven National Laboratory. Such notice shall not commit DOE, the Contractor, or the Bank to the extension, which shall only occur after a formal amendment to the agreement is executed by the parties.
3. Covenant 5 of the Agreement is hereby amended by replacing the first paragraph with the following two new paragraphs: "DOE shall authorize funds that shall remain available to the extent that obligations that have been incurred in good faith thereunder by the Contractor (Brookhaven Science Associates) to the Bank for the benefit of the special demand deposit account. The Bank agrees to honor upon presentation for payment all payments issued by the Contractor and to restrict all withdrawals against the funds authorized to an amount sufficient to maintain the average daily balance in the special demand deposit account in a net positive as close to zero as administratively possible."

Notwithstanding the foregoing, in the event that the Bank has knowledge that funding in the DOE account at the Federal Reserve Bank of Richmond (the "DOE Fed Account") may be insufficient or unavailable, whereby the Bank would be unable to drawdown immediately available funds sufficient to fully fund the payments issued by the Contractor, the Bank may, in its sole discretion, hold and not release any or all of the payments issued by the Contractor. The Bank will resume normal processes once it is satisfied, in its sole discretion, that adequate funding is available via the DOE Fed Account."

4. Covenant 9 of the Agreement is hereby deleted in its entirety and the following substituted in its place: "DOE, the Contractor or the Financial Institution may terminate this Agreement at any time within the agreement period upon submitting written notification to the other parties

90 days prior to the desired termination date. The specific provisions for operating the account during this 90-day period are contained in Covenant 11.7

**Appendix I - Part I
DOE DIRECTIVES LIST**

DOE Directives may be found at the following address: <http://www.directives.doe.gov>

ISSUED	TYPE	NUMBER	THROUGH CHANGE	TITLE Includes Compliance Notes as Necessary
9/29/1995	Order	130.1		Budget Formulation
5/2/2001	Policy	141.1		Department of Energy Management of Cultural Resources
9/4/2008	Manual	142.2-1	Admin Chg. 1 6/27/13	Manual for Implementation of the Voluntary Offer Safeguards Agreement and Additional Protocol with the International Atomic Energy Agency
12/15/2006	Order	142.2A	Admin Chg. 1 6/27/13	Voluntary Offer Safeguards Agreement and Additional Protocol with the International Atomic Energy Agency
10/14/2010	Order	142.3A		Unclassified Foreign Visits and Assignments Program
3/31/2014	Order	150.1A		Continuity Programs
11/2/2005	Order	151.1C		Comprehensive Emergency Management System
6/27/2007	Order	153.1		Departmental Radiological Emergency Response Assets
12/23/2008	Order	200.1A		Information Technology Management
1/7/2005	Order	203.1		Limited Personal Use of Government Office Equipment Including Information Technology
5/8/2001	Policy	205.1		Departmental Cyber Security Management Policy
5/16/2011	Order	205.1B	Admin Chg. 3 4/29/14	Department of Energy Cyber Security Program
4/17/2006	Manual	205.1-3	Admin Chg. 1 12/20/12	Telecommunication Security Manual
1/16/2009	Order	206.1		Department of Energy Privacy Program
2/19/2013	Order	206.2		Identity, Credential and Access Management (ICAM)
4/8/2011	Order	210.2A		DOE Corporate Operating Experience Program
4/19/2008	Order	221.1A		Reporting Fraud, Waste, and Abuse to the Office of Inspector General
2/25/2008	Order	221.2A		Cooperation with the Office of Inspector General
3/4/2011	Order	225.1B		Accident Investigations
8/30/2011	Order	227.1		Independent Oversight Program
6/27/2011	Order	231.1B	Admin Chg. 1 11/28/12	Environment, Safety and Health Reporting
8/30/2011	Order	232.2	Admin Chg. 1 3/12/14	Occurrence Reporting and Processing of Operations Information
12/13/2010	Order	241.1B		Scientific and Technical Information Management
3/11/2013	Order	243.1B		Records Management Program
2/2/2006	Order	243.2		Vital Records
2/23/2011	Order	252.1A	Admin Chg. 1 3/12/13	Technical Standards Program

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11/19/2009	Order	313.1		Management and Funding of the Department's Overseas Presence
10/18/2007	Order	341.1A Parts: 1.(a-b) 2.a(1-3) 2.a(4)(a-h)		Federal Employee Health Services
2/23/2010	Order	350.1	Chg. 5 9/30/14	Contractor Human Resource Management Programs
9/29/2014	Order	350.3		Labor Standards Compliance, contractor Labor Relations, and Contractor Workforce Restructuring Programs
11/16/2011	Order	NA 350.2	Rev. 1 10/18/12	Use of Management and Operation Contractor Employees for Services to NNSA in the Washington, D.C., Area
5/31/2011	Order	350.2B		Use of Management and Operating or Other Facility Management Contractor Employees for Services to DOE in the Washington D.C. Area
4/14/2014	Policy	364.1		Health and Safety Training Reciprocity
8/17/2009	Order	410.2	Admin Chg. 1 4/10/14	Management of Nuclear Materials
4/21/2005	Order	412.1A	Admin Chg. 1 6/21/14	Work Authorization System
10/28/2008	Order	413.1B		Internal Control Program
4/19/2006	Order	413.2B	Admin Chg. 1 1/31/11	Laboratory Directed Research and Development
11/29/2010	Order	413.3B		Program and Project Management for the Acquisition of Capital Assets
4/25/2011	Order	414.1D	Admin Chg. 1 5/8/13	Quality Assurance
12/3/2012	Order	415.1		Information Technology Project Management
2/8/2011	Policy	420.1		Department of Energy Nuclear Safety Policy Compliance Note: Only applicable to BNL facilities categorized as Hazardous Category 1,2 or 3 nuclear facilities
12/4/2012	Order	420.1C		Facility Safety Compliance Note: Chapters 1, 3, and 5 are applicable to BNL facilities categorized as hazardous category 1, 2, or 3 nuclear facility is proposed by BNL and approved by DOE
7/21/2011	Order	420.2C		Safety of Accelerator Facilities

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6/29/2010	Order	422.1	Admin Chg. 1 6/25/13	Conduct of Operations Compliance Note: Applicable to Hazardous Category 1, 2, or 3 nuclear facilities and other facilities as defined by BSA in a Program Plan to be approved by BHSO for incorporating
4/16/2010	Order	425.1D	Admin Chg. 1 4/2/13	Verification of Readiness to Start Up or Restart Nuclear Facilities Compliance Note: Only applicable to BNL facilities categorized as Hazardous Category 1, 2, or 3 nuclear facilities
4/21/2010	Order	426.2	Admin Chg. 1 7/19/13	Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities
11/7/2013	Policy	434.1A		Conduct and Approval of Select Agent and Toxin Work at Department of Energy Sites
7/9/1999	Order	435.1	Admin Chg. 1 8/28/01	Radioactive Waste Management
7/9/1999	Manual	435.1-1	Admin Chg. 1 6/19/01	Radioactive Waste Management Manual
5/2/2011	Order	436.1		Departmental Sustainability
11/27/2002	Order	440.2C	Admin Chg. 1 6/22/11	Aviation Management and Safety
3/7/2008	Manual	441.1-1		Nuclear Material Packaging Manual
6/6/2001	Order	442.1A		Department of Energy Employee Concerns Program
7/29/2011	Order	442.1A		Differing Professional Opinions for Technical Issues Involving Environment, Safety and Health
3/7/2011	Order	443.1B		Protection of Human Research Subjects
4/25/2011	Policy	450.4A		Integrated Safety Management Policy
7/21/2011	Order	452.8		Control of Nuclear Weapon Data
5/31/2011	Order	456.1	Admin Chg. 1 2/14/13	The Safe Handling of Unbound Engineered Nanoparticles
9/15/2005	Policy	456.1		Secretarial Policy Statement on Nanoscale Safety
2/11/2011	Order	458.1	Admin Chg. 3 1/15/13	Radiation Protection of the Public and the Environment
5/14/2010	Order	460.1C		Packaging and Transportation Safety
12/22/2004	Order	460.2A		Departmental Material Transportation and Packaging Management
6/4/2008	Manual	460.2-1A		Radioactive Material Transportation Practices Manual
11/10/2008	Order	462.1	Admin Chg. 1 7/10/13	Import and Export of Category 1 and 2 Radioactive Sources Aggregated Quantities
12/29/2010	Policy	470.1A		Safeguards and Security Program
8/12/2008	Order	470.3B		Graded Security Protection (GPS) Policy
7/21/2011	Order	470.4B		Safeguards and Security Program

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1/16/2009	Manual	470.4-4A	Admin Chg. 1 10/12/10	Information Security Manual Compliance Note: This Directive is cancelled by Order 471.6 except for Section D - Technical Surveillance Countermeasures which will be retained in its entirety.
6/2/2014	Order	470.5		Insider Threat Program
3/1/2010	Order	471.1B		Identification and Protection of Unclassified Controlled Nuclear Information
4/9/2003	Order	471.3	Admin Chg. 1 1/13/11	Identifying and Protecting Official Use Only Information
4/9/2003	Manual	471.3-1	Admin Chg. 1 1/13/11	Manual for Identifying and Protecting Official Use Only Information
6/20/2011	Order	471.6	Admin Chg.1 11-23-12	Information Security Compliance Note: This Directive contains a Partial deletion of Manual 470.4-4A
7/27/2011	Order	472.2	Admin Chg. 1 10/8/13	Personnel Security
6/27/2011	Order	473.3		Protection Program Operations
6/27/2011	Order	474.2	Admin Chg. 2 11/19/12	Nuclear Material Control and Accountability
12/10/2004	Order	475.1		Counterintelligence Program
10/3/2014	Order	475.2B		Identifying Classified Information
1/3/2001	Manual	481.1-1A	Admin Chg. 1 9/28/01	Reimbursable Work for Non Federal Sponsored Process Manual
11/6/2013	Order	483.1A		DOE Cooperative Research and Development Agreements
8/17/2006	Order	484.1	Admin Chg. 2 6/30/14	Reimbursable Work for the Department of Homeland Security
11/3/2004	Order	522.1		Pricing of Departmental Materials and Services
1/6/2003	Order	534.1B		Accounting
4/2/2012	Order	551.1D		Official Foreign Travel
3/30/2012	Order	580.1A	Admin Chg. 1 10/22/12	Department of Energy Personal Property Management Program