FORM PTO-1619A Expires 06/30/99 OMB 0651-0027	U.S. Department of Commerce Patent and Trademark Office PATENT				
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Submission Type Conveyance Type					
New	Assignment Security Agreement				
Resubmission (Non-Recordation) Document ID#	License Change of Name				
Correction of PTO Error	Merger				
U.S. Government					
Corrective Document Reel # Frame #	(For Use ONLY by U.S. Government Agencies) ✓ Departmental File Secret File				
Conveying Party(ies)	Mark if additional names of conveying parties attached Execution Date Month Day Year				
Name (line 1) SOUTHEASTERN UNIVERSITIES	RESEARCH ASSOCIATION, INC. 4/21//2003				
Name (line 2)	Execution Date				
Second Party Name (line 1)	Month Day Year				
Name (inte 1)					
Name (line 2)					
Receiving Party Mark if additional names of receiving parties attached					
Name (line 1) U. S. Department of Energy	If document to be recorded to an assignment and the				
Name (line 2)	recaiving party is not domiciled in the United States, an appointment of a domestic				
Address (line 1) 1000 Independence Avenue, S.W.	representative is attached. (Designation must be a				
	separate document from Assignment)				
Address (line 2)					
Address (line 3) Washington	D.C. 20585-0162				
City	State/Country Zip Code				
Domestic Representative Name and Address Enter for the first Receiving Party only.					
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FORM PTO-1619B Expires 08/30/99 OMB 0851-0027	Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT		
Correspondent Name and Address	Area Code and Telephone Number	202-586-2	810	
Name Betty A. Winchester				
Address (line 1) U. S. Department of Energy				
Address (line 2) 1000 Independence Avenue, S.W.				
Address (line 3) Washington, D. C. 20585-0162				
Address (line 4)				
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Application Number(s) or Patent Nun	nber(s) Mark if ac	Iditional numbers	attached	
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Patent Application Number(s)	5,799,124 Patent	Number(s)		
	3,72,72			
If this document is being filed together with a new Pate was	nt Application, enter the date the patent applicatio	n Month	Day Year	
Patent Cooperation Treaty (PCT)	РСТ	РСТ		
Enter PCT application number only if a U.S. Application Number has not been assigned.	PCT PCT	PCT		
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100711104111	for Properties Listed (37 CFR 3.41): \$		0.00	
Method of Payment: Enclo Deposit Account	Deposit Account			
(Enter for payment by deposit account or if add	ditional fees can be charged to the account.) Deposit Account Number: #			
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Statement and Signature				
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.				
Brenda K. Banks	Brunda K. Banks		1/03	
Name of Person Signing	Signature		Date	

Format F

CONFORMATORY LICENSE

(Nonprofit Organizations or Small Business Firms)

Title: Illuminating System and Method for Specialized Decorative Lighting using

Liquid Light Guides

Inventor(s): Carl J. Zorn, Brian J. Kross, Stanislaw Majewski, Randolph F. Wojcik

Serial No.: 647,677

Filing Date (U.S.): May 15, 1996

Contractor: Southeastern Universities Research Association, Inc. DOE Contract No.: DE-AC05-84ER40150

DOE Case No.: S-71.514

Patent Rights Clause No.: I.107A

Foreign Applications filed in or intended to be filed at Contractor's expense in (countries):

The Contractor, having the right to retain title to Subject Inventions as a result of Public Law 96-517, has reported the above-identified invention as a Subject Invention to DOE with its election to retain title thereto.

Accordingly, this document is confirmatory of the nonexclusive, nontransferable, irrevocable, paid-up license to practice or to have practiced for or on behalf of the United States, required by the Public Law and the above-identified contract, in this Subject Invention, patent application and any resulting patent, throughout the world and of all other rights acquired by the Government by the above-identified patent rights clause, a copy of which is attached hereto and incorporated by reference herein. The undersigned certifies the attached copy to be a true copy of said clause. It is understood and agreed that this license does not preclude the Government from asserting rights under the provisions of said contract or of any other agreement between the Government and the Contractor, or from asserting any other rights of the Government with respect to the aboveidentified Subject Invention.

The Government is hereby granted an irrevocable power to inspect and make copies of the aboveidentified patent application.

SURA/Jefferson Lab Counsel/Assistant Secretary

(Contractor's Official and Title)

12000 Jefferson Avenue, Newport News, Virginia 23606

(Business Address)

(TD 1028)

and agreements by the Contractor to repay all unallowable costs, plus interest, if the costs are subsequently determined to be unallowable.

CLAUSE I.107 - DEAR 970.5204-63 COLLECTIVE BARGAINING AGREEMENTS - MANAGEMENT AND OPERATING CONTRACTS (AUG 1993)

When negotiating collective bargaining agreements applicable to the work force under this contract, the Contractor shall use its best efforts to ensure such agreements contain provisions designed to assure continuity of services. All such agreements entered into during the contract period of performance should provide that grievances and disputes involving the interpretation or application of the agreement will be settled without resorting to strike, lockout, or other interruption of normal operations. For this purpose, each collective bargaining agreement should provide an effective grievance procedure with arbitration as its final step, unless the Parties mutually agree upon some other method of assuring continuity of operations. As part of such agreements, management and labor should agree to cooperate fully with the Federal Mediation and Conciliation Service. The Contractor shall include the substance of this clause in any subcontracts for protective services or other services performed on the DOE-owned site which will affect the continuity of operation of the facility.

CLAUSE I.107A - DEAR 970.5204-71 PATENT RIGHTS - NONPROFIT M&O CONTRACTORS (FEB 1995) (Modification)

(a) Definitions.

- (1) "Invention" means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321, et seq.).
- (2) "Made" when used in relation to any invention means the conception of first actual reduction to practice of such invention.
- (3) "Nonprofit organization" means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of I954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.
- (4) "Practical application" means to manufacture, in the case of a composition or product; to practice, in the case of a process or method; or to operate, in the case of a machine or system; and, in each case, under such conditions as to

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establish that the invention is being utilized and that is benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

- (5) "Small business firm" means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in Government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.
- "Subject invention" means any invention of the contractor conceived or first actually reduced to practice in the performance of work under this contract, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of contract performance.
- (7) "Agency licensing regulations" and "agency regulations concerning the licensing of Government-owned inventions" mean the Department of Energy patent licensing regulations at 10 CFR Part 781.
- (8) "Exceptional Circumstances Subject Invention" means any subject invention in a technical field or task determined by DOE to be subject to an exceptional circumstances under 35 U.S.C. 202 (a)(ii).
- (b) Allocation of principal rights.
 - (1) The Contractor may retain the entire right, title, and interest throughout the world to each subject invention except an exceptional circumstance subject invention subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the Contractor retains title, the Federal Government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world. The right of the Contractor to elect title to subject inventions is further subject to the invention rights disposition in Treaties or International Agreements and existing or future class waivers to third parties by DOE, such as Work-For-Others, User Facility, and Cooperative Research and Development Agreements (CRADA) waivers.
 - (2) The DOE reserves the right to unilaterally identify specific treaties or international agreements entered into or to be entered into by the Government after the effective date of this contract and effectuate those license or other rights which are necessary for the Government to meet its obligations to foreign governments, their nationals, and international organizations under such treaties

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or international agreements with respect to subject inventions made after the date of such unilateral identification.

- (3) The Contractor agrees to assign to the Government, the entire right, title and interest thereto, throughout the world in and to any Exceptional Circumstance Subject Invention except to the extent that rights are retained by the Contractor or an employee-inventor may submit a request for greater rights at the time the invention is disclosed to DOE or within 8 months after conception or first actual reduction to practice, whichever occurs first. At this time, the technical fields determined by DOE to be exceptional circumstances are uranium enrichment technology, the storage and disposal of civilian high-level nuclear waste and spent fuel technology, and those national security technologies which are classified, or sensitive under Section 148 of the Atomic Energy Act (42 U.S.C. 2168), DOE has also made a determination of Exceptional Circumstances for DOE Funding Agreements Relating to the U.S. Department of Energy Steel Initiative and Metals Initiative, the Advanced Battery Consortium Program, and any funding agreements, or subcontracts thereunder, which are funded in part by the Electric Power Research Institute (EPRI) or the Gas Research Institute (GRI). DOE reserves the right to unilaterally amend this contract to identify any new technical fields which may be determined to be exceptional circumstances pursuant to 35 U.S.C. 202 (a)(ii) with respect to subject inventions made after the date of the amendment.
- (c) Invention disclosure, election of title, and filing of patent application by Contractor.
 - (1) The Contractor will disclose each subject invention to the Department of Energy (DOE) within 2 months after the inventor discloses it in writing to Contractor personnel responsible for patent matters. The disclosure to DOE shall be in the form of a written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the DOE, the Contractor will promptly notify that agency of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Contractor.
 - (2) The Contractor will elect in writing whether or not to retain title to any such invention by notifying DOE within 2 years of disclosure to DOE. However, in any case where publication, on sale or public use has initiated the I-year statutory period wherein valid patent protection can still be obtained in the United States,

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the period for election of title may be shortened by DOE to a date that is no more than 60 days prior to the end of the statutory period.

- (3) The Contractor will file its initial patent application on a subject invention to which it elects to retain title within 1 year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Contractor will file patent applications in additional countries or international patent offices within either 10 months of the corresponding initial patent application or 6 months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.
- (4) Requests for extension of the time for disclosure, election, and filing under subparagraphs (c)(l), (2), and (3) of this clause may, at the discretion of the agency, be granted.
- (d) Conditions when the Government may obtain title. The Contractor will convey to the Federal agency, upon written request, title to any subject invention—
 - (1) If the Contractor fails to disclose or elect title to the subject invention within the times specified in paragraph (c) of this clause, or elects not to retain title; provided, that DOE may only request title within 60 days after learning of the failure of the Contractor to disclose or elect within the specified times.
 - (2) In those countries in which the Contractor fails to file patent applications within the times specified in paragraph (c) of this clause; provided, however, that if the Contractor has filed a patent application in a country after the times specified in paragraph (c) of this clause, but prior to its receipt of the written request of the Federal agency, the Contractor shall continue to retain title in that country.
 - (3) In any country in which the Contractor decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.
- (e) (1) The contractor may request the right to reserve a revocable, nonexclusive, royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the contractor fails to disclose the invention within the times specified in paragraph (c) of this clause. When DOE approves such reservation, the contractor's license will extend to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the contractor is a party and includes the right to grant sublicenses of the same scope to the extent the contractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of DOE, except when

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transferred to the successor of that part of the contractor's business to which the invention pertains.

- (f) Contractor action to protect the Government's interest.
 - (1) The Contractor agrees to execute or to have executed and promptly deliver to DOE all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Contractor elects to retain title, and (ii) convey title to DOE when requested under paragraph (d) of this clause and to enable the government to obtain patent protection throughout the world in that subject invention.
 - (2) The Contractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Contractor each subject invention made under contract in order that the Contractor can comply with the disclosure provisions of paragraph (c) of this clause, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by subparagraph (c)(1) of this clause. The Contractor shall instruct such employees, through employee agreements or other suitable educational programs, on the importance of reporting inventions in sufficient time to permit the filling of patent applications prior to U.S. or foreign statutory bars.
 - (3) The Contractor will notify DOE of any decision not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.
 - (4) The Contractor agrees to include, within the specification of any United States patent application and any patent issuing thereon covering a subject invention, the following statement, "This invention was made with Government support under (identify the contract) awarded by the United States Department of Energy. The Government has certain rights in the invention."
- (g) Subcontracts.
 - (1) The Contractor will include this clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental, or research work to be performed by a small business firm or domestic nonprofit organization. The subcontractor will retain all rights provided for the Contractor in this clause, and the Contractor will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

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- (2) The contractor shall include in all other subcontracts, regardless of tier, for experimental, developmental, demonstration, or research work the patent rights clause at 952.227-13.
- (3) In the case of subcontracts, at any tier, DOE, subcontractor, and the Contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and DOE with respect to the matters covered by the clause; provided, however, that nothing in this paragraph is intended to confer any jurisdiction under the Contract Disputes Act in connection with proceedings under paragraph (j) of this clause.
- (h) Reporting on utilization of subject inventions. The Contractor agrees to submit, on request, periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received, by the Contractor, and such other data and information as DOE may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by DOE in connection with any march-in proceeding undertaken by that agency in accordance with paragraph (j) of this clause. As required by 35 U.S.C. 202(c)(5), DOE agrees it will not disclose such information to persons outside the Government without permission of the Contractor.
- (i) Preference for United States industry. Notwithstanding any other provision of this clause, the Contractor agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any product embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by DOE upon a showing by the Contractor or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.
- (j) March-in rights. The Contractor agrees that, with respect to any subject invention in which it has acquired title, DOE has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the agency to require the Contractor, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and, if the Contractor, assignee, or exclusive licensee refuses such a request, DOE has the right to grant such a license itself if DOE determines that--

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- (1) Such action is necessary because the Contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use:
- (2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Contractor, assignee, or their licensees;
- (3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Contractor, assignee, or licensees; or
- (4) Such action is necessary because the agreement required by paragraph (i) of this clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

Special provisions for contracts with nonprofit organizations. If the Contractor is a nonprofit organization, it agrees that—

- (1) Rights to a subject invention in the United States may not be assigned without the approval of the Federal agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions; provided, that such assignee will be subject to the same provisions as the Contractor;
- (2) The Contractor will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when DOE deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;
- (3) The balance of any royalties or income earned by the Contractor with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions will be utilized for the support of scientific research or education; and
- (4) It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms, and that it will give a preference to a small business firm when licensing a subject invention if the Contractor determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the Contractor is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be

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at the discretion of the contractor. However, the Contractor agrees that the Secretary of Commerce may review the Contractor's licensing program and decisions regarding small business applicants, and the Contractor will negotiate changes to its licensing policies, procedures, or practices with the Secretary of Commerce when that Secretary's review discloses that the Contractor could take reasonable steps to more effectively implement the requirements of this subparagraph (k)(4).

(I) Communications.

- (1) The contractor shall direct any notification, disclosure, or request to DOE provided for in this clause to the DOE patent counsel assisting the DOE contracting activity, with a copy of the communication to the Contracting Officer.
- (2) Each exercise of discretion or decision provided for in this clause, except subparagraph (k)(4), is reserved for the DOE Patent Counsel and is not a claim or dispute and is not subject to the Contract Disputes Act of 1978. (3) Upon request of the DOE Patent Counsel or the contracting officer, the contractor shall provide any or all of the following:
 - a copy of the patent application, filing date, serial number and title, patent number, and issue date for any subject invention in any country in which the contractor has applied for a patent;
 - (ii) a report, not more often than annually, summarizing all subject inventions which were disclosed to DOE individually during the reporting period specified; or
 - (v) a report, prior to closeout of the contract, listing all subject inventions or stating that there were none.
- (m) Transfer to successor contractor.
 - (1) In the event of termination or expiration of this contract, the contractor shall transfer any unexpended balance of income received relating to intellectual property, in accordance with instructions from the contracting officer, to a successor contractor, or in the absence of a successor contractor, to such other entity as designated by the contracting officer. The contractor shall also transfer title, as one package, in all patents and patent applications, license agreements, accounts containing royalty revenues from such license agreements, including equity positions in third-party entities, and other intellectual property that arose under the

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performance of this contract, to the successor contractor or to the Government, as directed by the contracting officer.

- (2) The Government agrees that the recipient of such title shall assume any remaining obligations and liabilities in connection with the patents and patent applications.
- (n) Facilities license.

In addition to the rights of the parties with respect to inventions or discoveries conceived or first actually reduced to practice in the course of or under this contract, the contractor agrees to and does hereby grant to the Government an irrevocable, nonexclusive, paid- up license in and to any inventions or discoveries regardless of when conceived or actually reduced to practice or acquired by the contractor at any time through completion of this contract and which are incorporated or embodied in the construction of the facility or which are utilized in the operation of the facility or which cover articles, materials, or products manufactured at the facility

- (1) to practice or have practiced by or for the Government at the facility, and
- (2) to transfer such license with the transfer of that facility. The acceptance or exercise by the Government of these rights shall not prevent the Government at any time from contesting the enforceability, validity or scope of, or title to, any rights or patents herein licensed.

Chause I.108 - DEAR 970.5204-75 PREEXISTING CONDITIONS - ALTERNATE 1 (JUN 1997)

- (a) Any liability, obligation, loss, damage, claim (including without limitation, a claim involving strict or absolute liability), action, suit, civil fine or penalty, cost, expense or disbursement, which may be incurred or imposed, or asserted by any party and arising out of any condition, act or failure to act which occurred before July 1, 1995, in conjunction with the management and operation of Thomas Jefferson National Accelerator Facility, shall be deemed incurred under Contract No. DE-AC05-84ER-40150 as it existed prior to July 1, 1995 and at the time such liability, ebligation, loss, damage, claim, action, suit, civil fine or penalty, cost expense, or disbursement arose.
- (b) The obligations of the Department of Energy under this clause are subject to the availability of appropriated funds.

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RECORDED: 12/11/2003