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Patent Application Number(s)

Patent Number(s)

09/312,427						

If this document is being filed together with a new Patent Application, enter the date the patent application was Month Day Year

Patent Cooperation Treaty (PCT)

Enter PCT application number only if a U.S. Application Number has not been assigned.

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Number of Properties Enter the total number of properties involved. # 01

Fee Amount Fee Amount for Properties Listed (37 CFR 3.41): \$

Method of Payment: Enclosed Deposit Account

Deposit Account (Enter for payment by deposit account or if additional fees can be charged to the Deposit Account Number: #

Authorization to charge additional fees: Yes No

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Mark P. Dvorscak
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Signature

10/26/99
Date

DEPARTMENT OF ENERGY
CONFIRMATORY INSTRUMENT

Application for: PARTIALLY TURBULATED TRAILING EDGE
 COOLING PASSAGES FOR GAS TURBINE NOZZLES

Inventor(s): Jonathan C. Thatcher and Steven Burdick

Serial No.: 09/312,427
Filing Date: May 14, 1999

Participant: General Electric Company
 GE Power Systems

Cooperative Agreement No.: DE-FC21-95MC31176

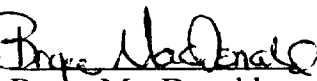
The Invention identified above is a "Subject Invention" under the Patent Rights Clause included in Cooperative Agreement No. DE-FC21-95MC31176 with the Department of Energy. This document is confirmatory of the paid-up license granted to the Government under this Cooperative Agreement in this invention, patent application and any resulting patent, and of all other rights acquired by the Government by the referenced clause.


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

Signed this 27th day of JULY, 1999.

GENERAL ELECTRIC COMPANY

Participant


Bryce MacDonald
Attesting Secretary

By: 
Robert C. Lampe, Jr.
Senior Patent Counsel,
GE Power Systems

GENERAL ELECTRIC COMPANY
1 River Road, Building 37 - 5th Floor
Schenectady, NY 12345

Docket No.: 51DV-9865

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DE-AC 21-95 MC 31176

ADVANCE WAIVER OF PATENT RIGHTS

(a) Definitions.

(1) "Subject Invention" means any invention or discovery of the Contractor conceived or first actually reduced to practice in the course of or under this contract, and includes any art, method, process, machine, manufacture, design, or composition of matter, or any new and useful improvement thereof, or any variety of plants, whether patented or unpatented under the Patent Laws of the United States of America or any foreign country.

(2) "Contract" means any contract, grant, agreement, understanding, or other arrangement, which includes research, development, or demonstration work, and includes any assignment or substitution of parties.

(3) "Government agency" includes any executive department, independent commission, board, office, agency, administration, authority, Government corporation, or other Government establishment of the Executive Branch of the Government of the United States of America.

(4) "To the point of practical application" means to manufacture in the case of a composition or product, to practice in the case of a process, or to operate in the case of a machine and under such conditions as to establish that the invention is being worked and that its benefits are reasonably accessible to the public.

(5) "Patent Counsel" means the DOE Patent Counsel assisting the procuring activity.

(b) Allocation of principal rights.

(1) Assignment to the Government. The Contractor agrees to assign to the Government the entire right, title, and interest throughout the world in and to each Subject Invention, except to the extent that rights are waived to and retained by the Contractor under paragraphs (b) (2) and (c) of this clause.

(2) Greater rights determinations. The Contractor or the employee-inventor with authorization of the Contractor may request greater rights than the domestic and foreign patent rights provided in paragraph (c) of this clause on identified inventions in accordance with 41 CFR 9-9.109-6. Such requests must be submitted to Patent Counsel (with notification by Patent Counsel to the Contracting Officer) at the time of the first disclosure pursuant to paragraph (e) (2) of this clause, or not later than 9 months after conception or first actual reduction to practice, whichever occurs first, or such longer period as may be authorized by Patent Counsel (with notification by Patent Counsel to the Contracting Officer) for good cause shown in writing by the Contractor.

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(c) Rights to the Contractor.

(1) Minimum Contractor license. The Contractor reserves an irrevocable, nonexclusive, paid-up license in each patent application filed in any country on a Subject Invention and any resulting patent in which the Government acquires title. The license shall extend to the Contractor's domestic subsidiaries and affiliates, if any, within the corporate structure of which the Contractor is a part and shall include 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 shall be transferable only with approval of DOE except when transferred to the successor of that part of the Contractor's business to which the invention pertains.

(2) Election to retain waived rights.

(i) Subject to the provisions of paragraph (c) (3) and paragraph (d) of this clause, with respect only to a Subject Invention reported in accordance with paragraph (e) (2) (i) of this clause and with the written report of which is included an election as to whether the Contractor will retain the rights in the invention waived herein, the Contractor reserves the entire domestic right, title and interest in any United States patent application on the Subject Invention filed and any resulting United States patent secured by the Contractor.

(ii) Subject to the provisions of paragraph (c) (3) and paragraph (d) of this clause, with respect only to a Subject Invention reported in accordance with paragraph (e) (2) (i) of this clause and with the written report of which is included an election as to whether the Contractor will retain the rights in the invention waived herein and a statement specifying those foreign countries in which such rights will be retained, and subject to DOE security regulations and requirements, the Contractor reserves the entire right, title and interest in any foreign patent application on the Subject Invention filed and any resulting foreign patent secured by the Contractor in those foreign countries specified.

(3) Terms and Conditions of Waived Rights.

(i) Subject to the rights granted in paragraph (c) (1) of this clause, the Contractor agrees to convey to the Government, upon request, the entire domestic right, title, and interest in any Subject Invention when the Contractor:

(A) Does not elect pursuant to paragraph (c) (2) (i) of this clause to retain such rights;

(B) Fails to have a United States patent application filed on the invention in accordance with paragraph (d) (1) of this clause, or decides not to continue prosecution of such application; or

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(C) At any time, no longer desires to retain title.

(ii) Subject to the rights granted in paragraph (c) (1) of this clause, the Contractor agrees to convey to the Government, upon request, the entire right, title, and interest in any Subject Invention in any foreign country if the Contractor:

(A) Does not elect pursuant to paragraph (c) (2) (i) of this clause to retain such rights in the country; or

(B) Fails to have a patent application filed in the country on the Subject Invention in accordance with paragraph (d) (3) of this clause, or decides not to continue prosecution or to pay any maintenance fees covering the invention. To avoid forfeiture of the patent application or patent, the Contractor shall notify the Patent Counsel not less than 60 days before the expiration period for any action required by the foreign Patent Office.

(iii) Conveyances requested pursuant to paragraphs (c) (3) (i) and (c) (3) (ii) of this clause shall be made by delivering to the Patent Counsel duly executed instruments and such other papers as are deemed necessary to vest in the Government the entire right, title, and interest in the invention to enable the Government to apply for and prosecute patent applications covering the invention in this or the foreign country, respectively, or otherwise establish its ownership of the invention.

(iv) For each invention in which the Contractor initially elects pursuant to (c) (2) (i) or (c) (2) (ii) of this clause not to retain the rights waived, the Contractor shall inform the Patent Counsel promptly in writing of the date and identity of any on sale, public use, or public disclosure of the invention which may constitute a statutory bar under 35 USC 102, which was authorized by or known to the Contractor, or any contemplated action of this nature.

(v) Government License

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.

(vi) 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

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connection with any march-in proceeding undertaken by DOE in accordance with paragraph (c) (3) (viii) of this clause. To the extent data or information supplied under this paragraph is considered by the Contractor, its licensee or assignee to be privileged and confidential and is so marked, DOE agrees that, to the extent permitted by 35 USC 202 (c) (5), it will not disclose such information to persons outside the Government.

(vii) 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 products 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.

(viii) 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 OMB Circular A-124 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:

(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 (c) (3) (vii) 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.

(4) Terminations.

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(i) Any waiver or retention of rights by the Contractor under paragraphs (b) (2), (c) (1), or (c) (2) of this clause may be terminated at the discretion of the Secretary or his designee, in whole or in part, if the request for waiver or retention of rights by the Contractor is found to contain false material statements or nondisclosure of material facts, and such were specifically relied upon in reaching the waiver determination or the agreement to the retention of rights by the Contractor.

(ii) Any waiver of the rights retained in accordance with paragraph (c) (2), as applied to particular inventions, may be terminated at the discretion of the Secretary or his designee, in whole or in part, if the Contractor fails to comply with the provisions set forth in paragraph (c) (3) and paragraph (d) of this clause, and such failure is determined by the Secretary or his designee to be material and detrimental to the interests of the United States and the general public.

(iii) Prior to terminating any waiver of rights under paragraph (c) (4) (i) or (c) (4) (ii) of this clause, the Contractor will be given written notice of the intention to terminate the waiver of rights, the extent of such proposed termination and the reasons therefor, and a period of 30 days, or such longer period as the Secretary or his designee shall determine for good cause shown in writing, to show cause why the waiver of rights should not be so terminated.

(iv) All terminations of waivers of rights under paragraph (c) (4) (ii) shall be subject to the rights granted in paragraph (c) (1) of this clause, and termination shall normally be partial in nature, requiring the Contractor to grant nonexclusive or partially exclusive licenses to responsible applicants upon terms reasonable under the circumstances.

(5) Effective Date of Waivers

The waiver of rights in a Subject Invention shall be effective on the following dates:

(i) For advance waivers of identified inventions, i.e., inventions conceived prior to the effective date of the contract, on the effective date of the contract even though the advance waiver may have been requested after that date;

(ii) For identified inventions under advance waivers, i.e., inventions conceived or first actually reduced to practice after the effective date of the contract, on the date the invention is reported with the election to retain the waived rights in that invention; and

(iii) For waivers of identified inventions (other than under an advance waiver), on the date of the letter notifying the requestor that the waiver has been granted.

(d) Filing of patent applications.

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(1) With respect to each Subject Invention in which the Contractor elects to retain domestic rights pursuant to paragraph (c) (2) (i) of this clause, the Contractor shall have a domestic patent application filed on the invention within 6 months after submission of the invention disclosure pursuant to paragraph (e) (2) (i) of this clause, or such longer period of time as may be approved by the Patent Counsel for good cause shown in writing by the Contractor. For each identified invention, the rights in which are waived to the Contractor, the Contractor shall have a domestic patent application filed on the invention within 6 months after the waiver has become effective. With respect to the invention, the Contractor shall promptly notify the Patent Counsel of any decision not to file an application.

(2) For each Subject Invention on which a domestic patent application is filed by the Contractor, the Contractor shall:

(i) Within 2 months after the filing or within 2 months after submission of the invention disclosure if the patent application previously has been filed, deliver to Patent Counsel a copy of the application as filed including the filing date and serial number;

(ii) Within 6 months after filing the application or within 6 months after submitting the invention disclosure if the application has been filed previously, deliver to the Patent Counsel a duly executed and approved instrument fully confirmatory of all rights to which the Government is entitled, and provide DOE an irrevocable power to inspect and make copies of the patent application filed;

(iii) Provide the Patent Counsel with a copy of the patent within 2 months after a patent is issued on the application;

(iv) Not less than 30 days before the expiration of the response period for any action required by the Patent and Trademark Office, notify the Patent Counsel of any decision not to continue prosecution of the application and deliver to the Patent Counsel executed instruments granting the Government a power of attorney; and

(v) Include the following statement in the second paragraph of the specification of the application and any patents issued on a Subject Invention, "The Government of the United States of America has rights in this invention pursuant to Contract No. _____ (or Grant No. _____) awarded by the U. S. Department of Energy."

(3) With respect to each Subject Invention in which the Contractor has elected pursuant to paragraph (c) (2) (ii) of this clause to retain the patent rights waived in specified foreign countries, or in which the Contractor has obtained a waiver of foreign rights on an identified invention:

(i) The Contractor shall file a patent application on the invention in each specified foreign country in accordance with applicable statutes and regulations and within one of the following periods:

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(A) Eight months from the date of filing a corresponding United States application, or if such an application is not filed, six months from the date the invention is submitted in a disclosure pursuant to paragraph (e) (2) (i) of this clause;

(B) Six months from the date a license is granted by the Commissioner of Patents and Trademarks to file the foreign patent application where such filing has been prohibited by security reasons; or

(C) Such longer period as may be approved by the Patent Counsel for good cause shown in writing by the Contractor.

(ii) The Contractor shall notify the Patent Counsel promptly of each foreign application filed and upon written request shall furnish an English version of the application without additional compensation.

(e) Invention identification, disclosures, and reports.

(1) The Contractor shall establish and maintain active and effective procedures to ensure that Subject Inventions are promptly identified and timely disclosed. Those procedures shall include the maintenance of laboratory notebooks or equivalent records and any other records that are reasonably necessary to document the conception and/or the first actual reduction to practice of Subject Inventions, and records which show that the procedures for identifying and disclosing the inventions are followed. Upon request, the Contractor shall furnish the Contracting Officer a description of these procedures so that he may evaluate and determine their effectiveness.

(2) The Contractor shall furnish the Patent Counsel (with notification by Patent Counsel to the Contracting Officer) on a DOE-approved form:

(i) A written report containing full and complete technical information concerning each Subject Invention within 6 months after conception or first actual reduction to practice whichever occurs first in the course of or under this contract, but in any event prior to any on sale, public use or public disclosure of such invention known to the Contractor. The report shall identify the contract and inventor and shall be sufficiently complete in technical detail and appropriately illustrated by sketch or diagram to convey to one skilled in the art to which the invention pertains a clear understanding of the nature, purpose, operation, and to the extent known, the physical, chemical, biological, or electrical characteristics of the invention. The report should also include any election of foreign patent rights under paragraph (c) (2) (ii) of this clause and any election of rights under paragraph (c) (2) (i) of this clause. Any requests for greater rights shall be made within the period set forth in paragraph (b) (2) of this clause. When an invention is reported under this paragraph (e) (2) (i), it shall be presumed to have been made in the manner specified in Section (a) (1) and (2) of 42 USC 5908 unless the Contractor contends it was not so made in accordance with paragraph (g) (2) (ii) of this clause.

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(ii) Upon request, but not more than annually, interim reports on a DOE-approved form listing Subject Inventions and subcontracts awarded containing a Patent Rights clause for that period and certifying that:

(A) The Contractor's procedures for identifying and disclosing Subject Inventions as required by this paragraph (e) have been followed throughout the reporting period;

(B) All Subject Inventions have been disclosed or that there are no such inventions;

(C) All subcontracts containing a Patent Rights clause have been reported or that no such subcontracts have been awarded; and

(iii) A final report on a DOE-approved form within 3 months after completion of the contract work listing all Subject Inventions and all subcontracts awarded containing a Patent Rights clause and certifying that:

(A) All Subject Inventions have been disclosed or that there were no such inventions; and

(B) All subcontracts containing a Patent Rights clause have been reported or that no such subcontracts have been awarded.

(3) The Contractor shall obtain patent agreements to effectuate the provisions of this clause from all persons in its employ who perform any part of the work under this contract except nontechnical personnel, such as clerical employees and manual laborers.

(4) The Contractor agrees that the Government may duplicate and disclose Subject Invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this clause. If the Contractor is to file a foreign patent application on a Subject Invention, the Government agrees, upon written request, to use its best efforts to withhold publication of such invention disclosures until the expiration of the time period specified in paragraph (d) (1) of this clause, but in no event shall the Government or its employees be liable for any publication thereof.

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(f) Publication.

It is recognized that during the course of the work under this contract, the Contractor or its employees may from time to time desire to release or publish information regarding scientific or technical developments conceived or first actually reduced to practice in the course of or under this contract. In order that public disclosure of such information will not adversely affect the patent interests of DOE or the Contractor, patent approval for release or publication shall be secured from Patent Counsel prior to any such release or publication.

(g) Forfeiture of rights in unreported Subject Inventions.

(1) The Contractor shall forfeit to the Government, at the request of the Secretary or his designee, all rights in any Subject Invention which the Contractor fails to report to Patent Counsel (with notification by Patent Counsel to the Contracting Officer) within six months after the time the Contractor:

(i) Files or causes to be filed a United States or foreign patent application thereon; or

(ii) Submits the final report required by paragraph (e) (2) (iii) of this clause, whichever is later.

(2) However, the Contractor shall not forfeit rights in a Subject Invention if, within the time specified in (1) (i) or (1) (ii) of this paragraph (g), the Contractor:

(i) Prepared a written decision based upon a review of the record that the invention was neither conceived nor first actually reduced to practice in the course of or under the contract and delivers the same to Patent Counsel (with notification by Patent Counsel to the Contracting Officer); or

(ii) Contending that the invention is not a Subject Invention the Contractor nevertheless discloses the invention and all facts pertinent to this contention to the Patent Counsel (with notification by Patent Counsel to the Contracting Officer); or

(iii) Establishes that the failure to disclose did not result from the Contractor's fault or negligence.

(3) Pending written assignment of the patent applications and patents on a Subject Invention determined by the Secretary or his designee to be forfeited (such determination to be a final decision under the Disputes Clause of this contract), the Contractor shall be deemed to hold the invention and the patent applications and patents pertaining thereto in trust for the Government. The forfeiture provision of this paragraph (g) shall be in addition to and shall not supersede other rights and remedies which the Government may have with respect to Subject Inventions.

(h) Examination of records relating to inventions.

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(1) The Contracting Officer or his authorized representative, until the expiration of 3 years after final payment under this contract, shall have the right to examine any books (including laboratory notebooks), records, documents, and other supporting data of the Contractor which the Contracting Officer or his authorized representative reasonably deem pertinent to the discovery or identification of Subject Inventions or to determine compliance with the requirements of this clause.

(2) The Contracting Officer or his authorized representative shall have the right to examine all books (including laboratory notebooks), records and documents of the Contractor relating to the conception or first actual reduction to practice of inventions in the same field of technology as the work under this contract to determine whether any such inventions are Subject Inventions, if the Contractor refuses or fails to:

- (i) Establish the procedures of paragraph (e) (1) of this clause; or
- (ii) Maintain and follow such procedures; or
- (iii) Correct or eliminate any material deficiency in the procedures within thirty (30) days after the Contracting Officer notifies the Contractor of such a deficiency.

(i) Withholding of payment (not applicable to subcontracts).

(1) Any time before final payment of the amount of this contract, the Contracting Officer may, if he deems such action warranted, withhold payment until a reserve not exceeding \$50,000 or 5 percent of the amount of this contract, whichever is less, shall have been set aside if in his opinion the Contractor fails to:

- (i) Establish, maintain and follow effective procedures for identifying and disclosing Subject Inventions pursuant to paragraph (e) (1) of this clause; or
- (ii) Disclose any Subject Invention pursuant to paragraph (e) (2) (1) of this clause; or
- (iii) Deliver the interim reports pursuant to paragraph (e) (2) (ii) of this clause; or
- (iv) Provide the information regarding subcontracts pursuant to paragraph (j) (5) of this clause; or
- (v) Convey to the Government in a DOE-approved form the title and/or rights of the Government in each Subject Invention as required by this clause.

(2) The reserve or balance shall be withheld until the Contracting Officer has determined that the Contractor has rectified whatever deficiencies exist and has delivered all reports, disclosures, and other information required by this clause.

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(3) Final payment under this contract shall not be made by the Contracting Officer before the Contractor delivers to Patent Counsel all disclosures of Subject Inventions and other information required by (e) (2) (i) of this clause, the final report required by (e) (2) (iii) of this clause, and Patent Counsel has issued a patent clearance certification to the Contracting Officer.

(4) The Contracting Officer may, in his discretion, decrease or increase the sums withheld up to the maximum authorized above. If the Contractor is a nonprofit organization, the maximum amount that may be withheld under this paragraph shall not exceed \$50,000 or 1 percent of the amount of this contract, whichever is less. No amount shall be withheld under this paragraph while the amount specified by this paragraph is being withheld under other provisions of the contract. The withholding of any amount or subsequent payment thereof shall not be construed as a waiver of any rights accruing to the Government under this contract.

(j) Subcontracts.

(1) For the purpose of this paragraph the term "Contractor" means the party awarding a subcontract and the term "Subcontractor" means the party being awarded a subcontract, regardless of tier.

(2) The Contractor will include the Patent Rights clause of DEAR 952.227-71 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 or a domestic nonprofit organization. In all other subcontracts, regardless of tier, for experimental, developmental demonstration, or research work, the Contractor shall include the Patent Rights article of 41 CFR 9-9.107-5(a) or 41 CFR 9-9.107-6 as appropriate, modified to identify the parties.

(3) Except as may be otherwise provided in this clause, the Contractor shall not, in any subcontract or by using a subcontract as consideration therefor, acquire any rights in its Subcontractor's Subject Invention for the Contractor's own use (as distinguished from such rights as may be required solely to fulfill the Contractor's contract obligations to the Government in the performance of this contract).

(4) All invention disclosures, reports, instruments, and other information required to be furnished by the Subcontractor to DOE, under the provisions of a Patent Rights clause in any subcontract hereunder may, in the discretion of the Contracting Officer, be furnished to the Contractor for transmission to DOE.

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(5) The Contractor shall promptly notify the Contracting Officer in writing upon the award of any subcontract containing a Patent Rights clause by identifying the Subcontractor, the work to be performed under the subcontract, and the dates of award, and estimated completion. Upon the request of the Contracting Officer the Contractor shall furnish him a copy of the subcontract.

(6) The Contractor shall identify all Subject Inventions of the Subcontractor of which it acquires knowledge in the performance of this contract and shall notify the Patent Counsel (with notification by Patent Counsel to the Contracting Officer) promptly upon the identification of the inventions.

(7) It is understood that the Government is a third party beneficiary of any subcontract clause granting rights to the Government in Subject Inventions, and the Contractor hereby assigns to the Government all rights that the Contractor would have to enforce the Subcontractor's obligations for the benefit of the Government with respect to Subject Inventions. The Contractor shall not be obligated to enforce the agreements of any Subcontractor hereunder relating to the obligations of the Subcontractor to the Government regarding Subject Inventions.

(k) Background Patents.

In paragraphs (k)(2) and (k)(3) relating to Background Patents, GE agrees to the language provided that the words "a subject of this contract" be replaced with "such applications and uses of natural gas and coal gas-fired gas turbines in combined cycle as are developed under this contract" to limit the licensing required to fields of technology covered by the contract.

(1) "Background Patent" means a domestic patent covering an invention or discovery which is not a Subject Invention and which is owned or controlled by the Contractor at any time through the completion of this contract:

(i) Which the Contractor, but not the Government, has the right to license to others without obligation to pay royalties thereon, and

(ii) Infringement of which cannot reasonably be avoided upon the practice of any specific process, method, machine, manufacture, or composition of matter (including relatively minor modifications thereof) which is a subject of the research, development, or demonstration work performed under this contract.

(2) The Contractor agrees to and does hereby grant to the Government a royalty-free, nonexclusive license under any Background Patent for purposes of practicing such applications and uses of natural gas and coal gas-fired gas turbines in combined cycle as are developed under this contract by or for the Government in research, development, and demonstration work only.

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(3) The Contractor also agrees that upon written application by DOE, it will grant to responsible parties for purposes of practicing such applications and uses of natural gas and coal gas-fired gas turbines in combined cycle as are developed under this contract nonexclusive licenses under any Background Patent on terms that are reasonable under the circumstances. If, however, the Contractor believes that exclusive or partially exclusive rights are necessary to achieve expeditious commercial development or utilization, then a request may be made to DOE for DOE approval of such licensing by the Contractor.

(4) Notwithstanding the foregoing paragraph (k) (3), the Contractor shall not be obligated to license any Background Patent if the Contractor demonstrates to the satisfaction of the Secretary or his designee that the Contractor or its licensees are supplying the subject matter covered by said Background Patent in sufficient quantity and at reasonable prices to satisfy market needs, or have taken effective steps or within a reasonable time are expected to take effective steps to so supply the subject matter.

(l) Atomic Energy.

(1) No claim for pecuniary award or compensation under the provisions of the Atomic Energy Act of 1954, as amended, shall be asserted by the Contractor or its employees with respect to any invention or discovery made or conceived in the course of or under this contract.

(2) Except as otherwise authorized in writing by the Contracting Officer, the Contractor will obtain patent agreements to effectuate the provisions of paragraph (1) (1) of this clause from all persons who perform any part of the work under this contract, except nontechnical personnel, such as clerical employees and manual laborers.

(m) Limitation of rights.

Nothing contained in this Patent Rights clause shall be deemed to give the Government any rights with respect to any invention other than a Subject Invention except as set forth in the Patent Rights clause of this contract.

(n) Limitation in Alienation of Waived Rights

Except for the license reserved to the Contractor in (c) (1), the Contractor agrees that any alienation of rights in waived subject inventions by assignment, license or otherwise is subject to written approval of the Contracting Officer; and further that in the event a controlling interest is to be acquired by a foreign entity in the Contractor or to any assignee or licensee of a waived invention, then in that case any rights in the waived invention to be acquired by the foreign entity will be subject to written approval of the Contracting Officer.

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(c) U.S. Competitiveness

GE agrees that any products embodying any waived invention or produced through the use of any waived invention during the term of a United States patent covering the waived invention will be manufactured substantially in the United States unless GE can show to the satisfaction of the Contracting Officer that it is not commercially feasible to do so.