

Exhibit A

NASA Cooperative Agreement No. NCC2-9019

Flowdown Provisions

1. Subcontract Requirements

1.1 The following provisions are required in subcontracts in excess of \$100,000 awarded by the Supplier or a subcontractor, regardless of tier:

1.1.1 Provisions or conditions that will allow for administrative, contractual, or legal remedies in instances in which subcontractors violate or breach subcontract terms and provide for such remedial actions as may be appropriate.

1.1.2 Provisions for termination by the Supplier, including the manner by which termination will be effected, and the basis for settlement. In addition, such subcontracts shall describe conditions under which the subcontract may be terminated for default, as well as conditions where the subcontract may be terminated because of circumstances beyond the control of the subcontractor.

1.1.3 A provision requiring compliance with Executive Order 11246 entitled "Equal Employment Opportunity," as amended by Executive Order 11375, and as supplemented in Department of Labor regulations (41 CFR part 60).

1.1.4 For negotiated subcontracts, a provision to the effect that the Buyer, NASA, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the subcontractor which are directly pertinent to the specific project for the purpose of making audits, examinations, excerpts, and transcriptions.

1.2 All subcontracts, regardless of tier, which may involve international air transportation shall require subcontractor compliance with the "Fly America Act", 49 U.S.C 40118.

1.3 All subcontracts, regardless of tier, which may involve shipment of hazardous materials or other regulated items shall require subcontractor compliance with the 49 CFR part 173.

2. Rights in Data

2.1 Definitions

2.1.1 "Subject Data" means recorded information, regardless of form, the media on which it may be recorded, or the method of recording (e.g., printed information, electronically-stored information, electronically-transmitted information), created or produced under this Purchase Contract. The term includes, but is not limited to, data of a scientific or technical nature, computer software and documentation thereof, and data comprising commercial and financial information.

2.2 Data Categories

2.2.1 General: Data furnished to the Buyer and the Government by Supplier under this Purchase Contract will be exchanged without restriction as to its disclosure, use or duplication except as otherwise provided below in this provision.

2.2.2 Background Data: In the event it is necessary for the Government to furnish Supplier, or Supplier to furnish the Government, with Data which existed prior to, or produced outside of, this Purchase Contract, and such Data embodies

trade secrets or comprises commercial or financial information which is privileged or confidential, and such Data is so identified with a suitable notice or legend, this Background Data will be maintained in confidence and disclosed and used by the receiving Party and its contractors (under suitable protective conditions) only for the purpose of carrying out the receiving Party's responsibilities under this Purchase Contract. Upon completion of activities under this Purchase Contract, such Background Data will be disposed of as requested by the Party from whom the Background Data originated.

2.2.3 Subject Data first produced by Supplier

2.2.3.1 All Data first produced by Supplier under this Purchase Contract shall be Subject Data and shall be considered to have been produced by the Supplier with mixed Government and industry funds. Except as otherwise provided in Paragraphs 2, 3 and 4 herein, all rights and title to Subject Data produced by the Supplier under this Purchase Contract shall be owned by RITA, except as otherwise provided in the RITA Intellectual Property Rights Provisions.

2.2.3.2 The Government shall have certain rights in and access to such Subject Data first produced by the Supplier and considered by Supplier to embody trade secrets or to comprise commercial or financial information which is privileged or confidential. Such data so identified with a suitable notice or legend will be maintained in confidence for a period of five (5) years after development of the data and be disclosed and used by the Government and its contractors (under suitable protective conditions) only for internal government research and development by or on behalf of the Government during that period. In order that the Government and its contractors may exercise the right to use such Subject Data for the purposes designated above, NASA shall have the right to review and request delivery of Subject Data first produced by Supplier. Delivery shall be made within a reasonable time period specified by NASA. Before disclosure by the Government to Government Contractors, the Government will verify that the Supplier-owned Subject Data is marked with an appropriate notice and restrictions binding Government Contractors not to disclose such Subject Data and to use such Subject Data only for carrying out its Government support activities under the RITA effort.

2.2.3.3 Supplier shall have the right to grant licenses to other third parties to use such Background Data/ Subject Data for a fee and/or royalty in accordance with the RITA Intellectual Property Rights Provisions.

2.2.4 Copyright. In the event Data is exchanged with a notice indicating the Data is protected under copyright as a published or unpublished copyrighted work, or is deposited for registration as a published or an unpublished work in the U.S. Copyright Office, the following corresponding paid-up licenses shall apply:

2.2.4.1 For published and unpublished works where it is indicated on the data that the data existed prior to, or was produced outside of, this Purchase Contract, the Buyer, the Government and others acting on their behalf, may reproduce, distribute, and prepare derivative works for the purpose of carrying out their responsibilities under the NRTC Cooperative Agreement;

2.2.4.2 For published works: If the furnished data does not contain the indication of paragraph 2.2.4.1 of this section, it will be assumed that the data is Subject Data that was first produced under this Purchase Contract, and the Buyer, the Government and others acting on their behalf, may reproduce, distribute, and prepare derivative works for the purpose of carrying out their responsibilities under the NRTC Cooperative Agreement, and, in addition, the Government shall be granted a license of the type provided in 14 CFR § 1260.136(a), Intangible Property; and

2.2.4.3 For unpublished works: If the furnished data does not contain the indication of paragraph 2.2.4.1 of this section, it will be assumed that the data is Subject Data that was first produced under this Agreement, and the Buyer, the Government and others acting on their behalf, may reproduce, distribute, and prepare derivative works for the purpose of carrying out their responsibilities under the NRTC Cooperative Agreement, and, in addition, the Government shall be granted a license for internal

Government research and development purposes consistent with 2.2.3.2.

2.2.4.4 When claim is made to copyright, the Supplier shall affix the applicable copyright notice of 17 U.S.C. 401 or 402 and acknowledgement of Government sponsorship to the Subject Data when and if the Subject Data are delivered to the Government.

2.2.5 Oral and Visual Information. If information which the Supplier considers to embody trade secrets or to comprise commercial or financial information which is privileged or confidential is disclosed orally or visually to the Buyer or the Government, such information must be reduced to tangible, recorded form (i.e., converted into Background Data/ Subject Data, as applicable, as defined herein), identified and marked with a suitable notice or legend, and furnished within 10 days after such oral or visual disclosure, or the Buyer and the Government shall have no duty to limit or restrict, and shall not incur any liability for, any disclosure and use of such information.

2.2.6 Disclaimer of Liability. Notwithstanding the above, the Buyer and the Government shall not be restricted in, nor incur any liability for, the disclosure and use of:

2.2.6.1 Background Data/Subject Data not identified with a suitable notice or legend as required by this Article; nor

2.2.6.2 Information contained in any Background Data/Subject Data for which disclosure and use is restricted, if such information is or becomes generally known without breach of the above, is known or is generated independently, is rightfully received from a third party without restriction, or is included in Background Data/Subject Data which Supplier has, or is required to furnish to the Buyer or the Government without restriction on disclosure and use.

2.3 Marking of Data

Any Background Data/Subject Data delivered under this Purchase Contract, by the the Supplier, shall be marked with a suitable notice or legend indicating the data was generated under this Purchase Contract.

2.4 Lower Tier Agreements

2.4.1 If a Supplier enters into a subcontract or lower tier agreement for the performance of work under this Purchase Contract, the Supplier shall, with respect to Subject Data created or produced by the subcontractor as a result of performance under such subcontract:

2.4.1.1 ensure that the Buyer and the Government are accorded license rights in such Subject Data that are consistent with the rights set forth in Paragraphs 2.2.3.2 and 2.2.4 above; and

2.4.1.2 negotiate in good faith with such subcontractor to acquire all rights, title, and interest in such Subject Data for RITA.

2.4.2 If, pursuant to Paragraph 2.4.1.2 above, the Supplier is unable to acquire all rights, title, and interest in Subject Data produced by a subcontractor, the Supplier shall attempt to negotiate in good faith with such subcontractor to acquire, at a minimum, on behalf of RITA, an irrevocable, non-exclusive, no cost right and license for RITA to use such Subject Data, such right and license to use including the right of RITA to sublicense such Subject Data to others in accordance with the RITA Intellectual Property Rights Provisions; provided, that the acquisition of rights by the Supplier in Subject Data created or developed by a subcontractor that are less than the ownership rights specified in Paragraph 2.2.1.2 shall be approved in writing in accordance with the RITA Intellectual Property Rights Provisions prior to the execution of any such subcontract by the Supplier.

3. Patent Rights - Retention by the Supplier (Large Business)

1. Definitions

3.1.1 "Administrator", as used in this clause, means the Administrator of the National Aeronautics and Space Administration (NASA) or his/her designee.

3.1.2 "Invention", as used in this clause, means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the U.S.C.

3.1.3 "Made", as used in relation to any invention, means the conception or first actual reduction to practice such invention.

3.1.4 "Nonprofit organization", as used in this clause, means a domestic 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 1954 (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 domestic nonprofit scientific or educational organization qualified under a State nonprofit organization statute.

3.1.5 "Practical application", as used in this clause, 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 case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

3.1.6 "Reportable Item", as used in this clause, means any invention, discovery, improvement, or innovation of the Supplier, whether or not the same is or may be patentable or otherwise protectable under Title 35 of the United States Code conceived or first actually reduced to practice in the performance of any work under this Agreement or in the performance of any work that is reimbursable under any clause in this Agreement providing for reimbursement of costs incurred prior to the effective date of this Agreement.

3.1.7 "RITA" means the Rotorcraft Industry Technology Association which provides at least on-half of the funding for the performance of this Purchase Contract.

3.1.8 "Small business firm", as used in this clause, means a domestic small business concern as defined at 15 U.S.C. § 632 and implementing regulations of the Administrator of the Small Business Administration.

3.1.9 "Subject Invention", as used in this clause, means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code, and is conceived or first actually reduced to practice in the performance of work under this Agreement.

3.2 Allocation of principal rights

3.2.1 Presumption of title. The NRTC Cooperative Agreement anticipates the granting of an advance waiver of invention rights satisfactory to the parties.

3.2.1.1 Any Reportable Item that the Administrator considers to be a subject invention shall be presumed to have been made in the manner specified in paragraph (1) or (2) of Section 305(a) of the National Aeronautics and Space Act of 1958 (42 U.S.C. § 2457(a)) (hereinafter called "the Act"), and the above presumption shall be conclusive unless at the time of reporting the reportable item the Supplier submits to the Contracting Officer a written statement, containing supporting details, demonstrating that the reportable item was not made in the manner specified in paragraph (1) or (2) of Section 305(a) of the Act.

3.2.1.2 Regardless of whether title to a given subject invention would otherwise be subject to an advance waiver or is the subject of a petition for waiver, the Supplier may nevertheless file the statement described in subdivision 3.2.1.1 above. The Administrator will review the information furnished by the Supplier in any such statement and any other available information relating to the circumstances surrounding the making of the subject invention and will notify the Supplier whether the Administrator has determined that the subject invention was made in the manner specified in paragraph (1) or (2) of Section 305(a) of the Act.

3.2.2 Property rights in subject inventions.

Each subject invention for which the presumption of subdivision 3.2.1.1 above is conclusive or for which there has been a determination that it was made in the manner specified in paragraph (1) or (2) of Section 305(a) of the Act shall be the exclusive property of the United States as represented by NASA unless the Administrator waives all or any part of the rights of the United States, as provided in subparagraph 3.2.3 below.

3.2.3 Waiver of rights

3.2.3.1 Section 305(f) of the Act provides for the promulgation of regulations by which the Administrator may waive the rights of the United States with respect to any invention or class of inventions made or that may be made under conditions specified in paragraph (1) or (2) of Section 305(a) of the Act. The promulgated NASA Patent Waiver Regulations, 14 CFR § 1245.1, have adopted the Presidential memorandum on Government Patent Policy of February 18, 1983, as a guide in acting on petitions (requests) for such waiver of rights.

3.2.3.2 As provided in 14 CFR § 1245.1, Suppliers may petition, either prior to execution of this Agreement or within 30 days after execution of this Agreement, for advance waiver of rights to any or all of the inventions that may be made under this Agreement. If such a petition is not submitted, or if after submission it is denied, the Supplier (or an employee inventor of the Supplier) may petition for waiver of rights to an identified subject invention within eight months of first disclosure of invention in accordance with subparagraph 3.5 below, or within such longer period as may be authorized in accordance with 14 CFR § 1245.105. Further procedures are provided in the REQUESTS FOR WAIVER OF RIGHTS - LARGE BUSINESS provision (14 CFR § 1274.914).

3.3 Minimum rights reserved by RITA and the Government

3.3.1 With respect to each subject invention for which a waiver of rights is applicable in accordance with 14 CFR § 1245.1, the Government reserves:

3.3.1.1 An irrevocable, non-exclusive, nontransferable, royalty-free license for the practice of such invention for government purposes throughout the world by or on behalf of the United States or any foreign government in accordance with any treaty or agreement with the United States; and

3.3.1.2 Such other rights as stated in 14 CFR § 1245.107.

3.3.2 Nothing contained in this paragraph shall be considered to grant to the Government any rights with respect to any invention other than a subject invention.

3.3.3 With respect to each subject invention, whether title is held by Supplier or the Government, Supplier grants to RITA an irrevocable, non-exclusive, royalty-free license, with right to sublicense, for the practice of such invention throughout the world by or on behalf of RITA and any of its Members pursuant to the RITA Intellectual Property Rights Provisions.

3.4 Minimum rights to the Supplier

3.4.1 The Supplier is hereby granted a revocable, non-exclusive, royalty-free worldwide license in each patent application filed in any country on a Supplier subject invention and any resulting patent in which the Government acquires title, unless the Supplier fails to disclose the subject invention (within the times specified) in accordance with subparagraph 3.5 below. The Supplier's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Supplier is a party and includes the right to grant sub licenses of the same scope to the extent the Supplier was legally obligated to do so at the time this Agreement was awarded. Supplier's license also includes the right to grant sub licenses to RITA and all present and future members of RITA.

3.4.2 The Supplier's domestic license may be revoked or modified by the Administrator to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with 14 CFR § 1245.2, Licensing of NASA Inventions. This license will not be revoked in that field of use or the geographical areas in which the Supplier has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the Administrator to the extent the Supplier, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

3.4.3 Before revocation or modification of the license, the Supplier will be provided a written notice of the Administrator's intention to revoke or modify the license, and the Supplier will be allowed 30 days (or such other time as may be authorized by the Administrator for good cause shown by the Supplier) after the notice to show cause why the license should not be revoked or modified. The Supplier has the right to appeal, in accordance with 14 CFR § 1245.211, any decision concerning the revocation or modification of its license.

3.5 Invention identification, disclosures, and reports

3.5.1 The Supplier shall establish and maintain active and effective procedures to assure that its subject inventions are promptly identified and disclosed to Supplier personnel responsible for the administration of this clause within six months of conception and/or first actual reduction to practice, whichever occurs first in the performance of work under this Agreement. These procedures shall include the maintenance of laboratory notebooks or equivalent records and other records as are reasonably necessary to document the conception and/or the first actual reduction to practice of the reportable items, and records that show that the procedures for identifying and disclosing reportable items are followed. Upon request, the Supplier shall furnish the Contracting Officer a description of such procedures for evaluation and for determination as to their effectiveness.

3.5.2 The Supplier will disclose each reportable item in accordance with Paragraph 5.2 within two months after the inventor discloses it in writing to Supplier personnel responsible for the administration of this clause or, if earlier, within six months after Supplier becomes aware that a reportable item has been made, but in any event before any on sale, public use, or publication of such invention known to the Supplier. The Supplier shall be given an opportunity to disclose reportable items after the aforementioned times upon a showing of good cause. The disclosure to the agency shall be in the form of a written report and shall identify the contract under which the subject 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 physical, chemical, biological, or electrical characteristics of the subject invention. The disclosure shall also identify any publication, on sale, or public use of any subject invention.

3.5.3 In accordance with Paragraph 5.2, the Supplier shall furnish the following:

3.5.3.1 Interim reports every 12 months (or such longer period as may be specified by the New Technology Representative or the Patent Representative, as applicable) from the date of this Agreement, listing subject inventions during that period, and certifying that all subject inventions have been disclosed (or that there are no such inventions) and that the procedures required by subparagraph 3.5.1 above have been followed.

3.5.3.2 A final report, within three months after completion of the contracted work, listing all subject inventions or certifying that there were no such reportable items, and listing all subcontracts at any tier containing a patent rights clause or certifying that there were no such subcontracts.

3.5.4 The Supplier agrees, upon written request of the New Technology Representative or the Patent Representative, as applicable, to furnish additional technical and other information available to the Supplier as is necessary for the preparation of a patent application on a subject invention and for the prosecution of the patent application, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions.

3.5.5 The Supplier agrees, subject to the Federal Acquisition Regulation (FAR) at 48 CFR § 27.302(j), 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.

3.6 Examination of records relating to inventions

3.6.1 The Contracting Officer or any authorized representative shall, until 3 years after termination or completion of this contract, have the right to examine any books (including laboratory notebooks), records, and documents of the Supplier relating to the conception or first actual reduction to practice of inventions in the same field of Data/Subject Data as the work under this Agreement to determine whether:

3.6.1.1 Any such inventions are subject inventions;

3.6.1.2 The Supplier has established and maintained the procedures required by subparagraph 3.5.1 of this clause; and

3.6.1.3 The Supplier and its inventors have complied with the procedures.

3.6.2 If the Contracting Officer learns of an unreported Supplier invention that the Contracting Officer believes may be a subject invention, the Supplier may be required to disclose the invention to the agency for a determination of ownership rights.

3.6.3 Any examination of records under this paragraph will be subject to appropriate conditions to protect the confidentiality of the information involved.

3.7 Subcontracts.

3.7.1 Unless otherwise authorized or directed by the Contracting Officer, the Supplier shall:

3.7.1.1 Include this provision PATENT RIGHTS - RETENTION BY THE SUPPLIER - (LARGE BUSINESS)(Paragraph 3) (suitably modified to identify the parties) in any subcontract hereunder (regardless of tier) with other than a small business firm or nonprofit organization for the performance of experimental, developmental, or research work; and

3.7.1.2 Include the provision PATENT RIGHTS - RETENTION BY THE SUPPLIER - (SMALL BUSINESS)(Paragraph 4) (suitably modified to identify the parties) in any subcontract hereunder (regardless of tier) with a small business firm or nonprofit organization for the performance of experimental, developmental, or research work.

3.7.2 In the event of a refusal by a prospective subcontractor to accept such a clause the Supplier:

3.7.2.1 Shall promptly submit a written notice to the Contracting Officer setting forth the subcontractor's reasons for such refusal and other pertinent information that may expedite disposition of the matter; and

3.7.2.2 Shall not proceed with such subcontract without the written authorization of the Contracting Officer.

3.7.3 The Supplier shall promptly notify the Contracting Officer in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Contracting Officer, the Supplier shall furnish a copy of such subcontract, and, no more frequently than annually, a listing of the subcontracts that have been awarded.

3.7.4 The subcontractor will retain all rights provided for the Supplier in the clause of subdivision 3.7.1.1 or 3.7.1.2 above, whichever is included in the subcontract, and the Supplier will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

3.7.5 Notwithstanding subparagraph 3.7.4 above, and in recognition of the Supplier's substantial contribution of funds, facilities and/or equipment to the work performed under this Purchase Contract, the Supplier is authorized, subject to the rights of NASA set forth elsewhere in this clause, to:

3.7.5.1 Acquire, by negotiation and mutual agreement, rights to a subcontractor's subject inventions as the Supplier may deem necessary to obtaining and maintaining of such private support; and

3.7.5.2 Request, in the event of inability to reach agreement pursuant to subparagraph 3.7.5.1 above, that NASA invoke exceptional circumstances as necessary pursuant to 37 CFR § 401.3(a)(2) if the prospective subcontractor is a small business firm or organization, or for all other organizations, request that such rights for the Supplier be included as an additional reservation in a waiver granted pursuant to 14 CFR § 1245.1. Any such requests to NASA should be prepared in consideration of the following guidance and submitted to the contracting officer.

3.7.5.2.1 Exceptional circumstances: A request that NASA make an "exceptional circumstances" determination pursuant to 37 CFR § 401.3(a)(2) must state the scope of rights sought by the Supplier pursuant to such determination; identify the proposed subcontractor and the work to be performed under the subcontract; and state the need for the determination.

3.7.5.2.2 Waiver petition: The subcontractor should be advised that unless it requests a waiver of title pursuant to the NASA Patent Waiver Regulations (14 CFR § 1245.1), NASA will acquire title to the subject invention (42 U.S.C. § 2457, as amended, § 305). If a waiver is not requested or granted, the Supplier may request a license from NASA, as appropriate (see licensing of NASA inventions, 14 CFR § 1245.2) or RITA. A subcontractor requesting a waiver must follow the procedures set forth in the provision 1274.914 REQUESTS FOR WAIVER OF RIGHTS - LARGE BUSINESS (14 CFR § 1274.914).

3.8 Preference for United States manufacture

The Supplier agrees that any products embodying subject inventions or produced through the use of subject inventions shall be manufactured substantially in the United States. However, in individual cases, the requirement to manufacture substantially in the United States may be waived by the Associate Administrator for Procurement (Code HS) with the concurrence of the Associate General Counsel for Intellectual Property upon a showing by the Supplier that under the circumstances domestic manufacture is not commercially feasible.

3.9 March-in rights

The Supplier agrees that, with respect to any subject invention in which it has acquired title, NASA has the right in accordance with the procedures in 37 CFR § 401.6 and any supplemental regulations of the agency to require the Supplier, 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 subcontractor, assignee, or exclusive licensee refuses such a request, NASA has the right to grant such a license itself if the Federal agency determines that: (1) Such action is necessary because the Supplier 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 Supplier, 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 Supplier, assignee, or licensees; or (4) Such action is necessary because the agreement required by paragraph 3.8 above 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. Patent Rights - Retention by the Supplier (Small Business and Nonprofit)

4.1 Definitions

4.1.1 "Invention", as used in this clause, means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the U.S.C.

4.1.2 "Made", as used in this clause, when used in relation to any invention means the conception or first actual reduction to practice such invention.

4.1.3 "Nonprofit organization", as used in this clause, 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 1954 (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.

4.1.4 "Practical application," as used in this clause, means to manufacture, in the case of a composition of 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 establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

4.1.5 "Small business firm", as used in this clause, 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 § 121.901 through 121.911 will be used.

4.1.6 "Subject invention", as used in this clause, means any invention of the Supplier conceived or first actually reduced to practice in the performance of work under this Agreement.

4.2 Allocation of principal rights

1. The Supplier may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. § 203. With respect to any subject invention in which the Supplier retains title, the Federal Government shall have a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States for government purposes the subject invention throughout the world.
2. With respect to each subject invention, whether title is held by Supplier or the Government, Supplier grants to RITA an irrevocable, non-exclusive, royalty-free license, with right to sublicense, for the practice of such

invention throughout the world by or on behalf of RITA and any of its Members pursuant to the RITA Intellectual Property Rights Provisions.

4.3 Invention disclosure, election of title, and filing of patent application by Supplier

4.3.1 The Supplier will disclose each subject invention in accordance with Paragraph 5.2 within two months after the inventor discloses it in writing to Supplier personnel responsible for patent matters. The Supplier shall be given an opportunity to disclose subject inventions after the aforementioned times upon a showing of good cause. The disclosure to the agency 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 agency, the Supplier will promptly notify the agency of the acceptance of any manuscript describing the invention for publication or of any sale or public use planned by the Supplier.

4.3.2 The Supplier will elect in writing whether or not to retain title to any such invention by notifying NASA in accordance with Paragraph 5.2 within two years of disclosure to the Federal agency. However, in any case where publication, on sale or public use has initiated the one-year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.

4.3.3 The Supplier will file its initial patent application on a subject invention to which it elects to retain title within one 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 Supplier will file patent applications in additional countries or international patent offices within either 10 months of the corresponding initial patent application or six 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.

4.3.4 Requests for extension of the time for disclosure election, and filing under subparagraphs 4.3.1, 4.3.2 and 4.3.3 of this clause may, at the discretion of the agency, be granted.

4.4 Conditions when the Government may obtain title

4.4.1 The Supplier will convey to NASA, upon written request, title to any subject invention:

4.4.1.1 If the Supplier fails to disclose or elect title to the subject invention in accordance with paragraph 4.3 of this clause, or elects not to retain title; provided, that the agency may only request title within 60 days after learning of the failure of the Supplier to disclose or elect within the specified times;

4.4.1.2 In those countries in which the Supplier fails to file patent applications within the times specified in paragraph 4.3 of this clause; provided, however, that if the Supplier has filed a patent application in a country after the times specified in paragraph 4.3 of this clause, but prior to its receipt of the written request of the Federal agency, the Supplier shall continue to retain title in that country; or

4.4.1.3 In any country in which the Supplier 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.

4.5 Minimum rights to Supplier and protection of the Supplier's right to file

4.5.1 The Supplier will retain a revocable, non-exclusive, royalty-free license throughout the world in each subject

invention to which the Government obtains title, except if the Supplier fails to disclose the invention in accordance with paragraph 4.3 of this clause. The Supplier's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure to which the Supplier is a party and includes the right to grant sublicenses of the same scope to the extent the Supplier was legally obligated to do so at the time the contract was awarded. Supplier's license also includes the right to grant sublicenses to RITA and all present and future members of RITA in accordance with RITA Intellectual Property Rights Provisions. The license is transferable only with the approval of NASA, except when transferred to the successor of that part of the Supplier's business to which the invention pertains.

4.5.2 The Supplier's domestic license may be revoked or modified by NASA to the extent necessary to achieve expeditious practical application of subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR § 404 and agency licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the Supplier has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of NASA to the extent the Supplier, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

4.5.3 Before revocation or modification of the license, NASA will furnish the Supplier a written notice of its intention to revoke or modify the license, and the Supplier will be allowed 30 days (or such other time as may be authorized by NASA for good cause shown by the Supplier) after the notice to show cause why the license should not be revoked or modified. The Supplier has the right to appeal, in accordance with applicable regulations in 37 CFR § 404 and NASA Reg. 14 CFR § 1245.2, concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

4.6 Supplier action to protect the Government's interest

4.6.1 The Supplier agrees to execute or to have executed and promptly deliver to NASA all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Supplier elects to retain title, and, (ii) convey title to the Federal agency when requested under paragraph 4.4 of this clause and to enable the Government to obtain patent protection throughout the world in that subject invention.

4.6.2 The Supplier 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 Supplier each subject invention made under contract in order that the Supplier can comply with the disclosure provisions of paragraph 4.3 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 4.3.1 of this clause. The Supplier shall instruct such employees, through employee agreements or other suitable educational programs, on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

4.6.3 The Supplier will notify NASA of any decisions 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.

4.6.4 The Supplier 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 agreement) awarded by NASA. The Government has certain rights in the invention."

4.6.5 In accordance with Paragraph 5.2, the Supplier shall provide the following:

4.6.5.1 A listing every 12 months (or such longer period as the Agreement Officer may specify) from the date of the Agreement, of all subject inventions required to be disclosed during the period;

4.6.5.2 A final report, prior to closeout of the Agreement, listing all subject inventions or certifying that there were none;

4.6.5.3 Upon request, the filing date, serial number, and title, a copy of the patent application, and patent number and issue date for any subject invention in any country in which the Supplier has applied for patents; and

4.6.5.4 An irrevocable power to inspect and make copies of the patent application file, by the Government, when a Federal Government employee is a co-inventor.

4.7 Subcontracts

4.7.1 Unless otherwise authorized or directed by the Contracting Officer, the Supplier shall:

4.7.1.1 Include this clause "PATENT RIGHTS - RETENTION BY THE CONTRACTOR (SMALL BUSINESS)(Paragraph 4)", 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; or

4.7.1.2 Include in all other subcontracts, regardless of tier, for experimental, developmental, or research work the patent rights clause "PATENT RIGHTS - RETENTION BY THE CONTRACTOR (LARGE BUSINESS)(Paragraph 3)".

4.7.2 In the event of a refusal by a prospective subcontractor to accept such a clause the Supplier:

4.7.2.1 Shall promptly submit a written notice to the Contracting Officer setting forth the subcontractor's reasons for such refusal and other pertinent information that may expedite disposition of the matter; and

4.7.2.2 Shall not proceed with such subcontract without the written authorization of the Contracting Officer.

4.7.3 The Supplier shall promptly notify the Contracting Officer in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Contracting Officer, the Supplier shall furnish a copy of such subcontract, and, no more frequently than annually, a listing of the subcontracts that have been awarded.

4.7.4 The subcontractor will retain all rights provided for the Supplier in the clause of subdivision 4.7.1.1 or 4.7.1.2 above, whichever is included in the subcontract, and the Supplier will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

4.7.5 Notwithstanding subparagraph 4.7.4 above, and in recognition of the Supplier's substantial contribution of funds, facilities and/or equipment to the work performed under this Purchase Contract, the Supplier is authorized, subject to the rights of NASA set forth elsewhere in this clause, to:

4.7.5.1 Acquire by negotiation and mutual agreement rights to a subcontractor's subject inventions as the Supplier may deem necessary to obtaining and maintaining of such private support; and

4.7.5.2 Request, in the event of inability to reach agreement pursuant to 4.7.5.1 above, that NASA invoke exceptional circumstances as necessary pursuant to 37 CFR § 401.3(a)(2) if the prospective subcontractor is a small business firm or organization, or for all other organizations, request that such

rights for the Supplier be included as an additional reservation in a waiver granted pursuant to 14 CFR § 1245.1. Any such requests to NASA should be prepared in consideration of the following guidance and submitted to the contract officer.

4.7.5.2.1 Exceptional circumstances: A request that NASA make an "exceptional circumstances" determination pursuant to 37 CFR § 401.3(a)(2) must state the scope of rights sought by the Supplier pursuant to such determination; identify the proposed subcontractor and the work to be performed under the subcontract; and state the need for the determination.

4.7.5.2.2 Waiver petition: For other than small business or nonprofit subcontractors, the subcontractor should be advised that unless it requests a waiver of title pursuant to the NASA Patent Waiver Regulations (14 CFR § 1245.1), NASA will acquire title to the subject invention (42 U.S.C. § 2457, as amended, Sec. 305). If a waiver is not requested or granted, the Supplier may request a license from NASA as appropriate (see licensing of NASA inventions, 14 CFR § 1245.2). A subcontractor requesting a waiver must follow the procedures set forth in the clause 1274.914 REQUESTS FOR WAIVER OF RIGHTS - LARGE BUSINESS.

4.8 Reporting on utilization of subject inventions

The Supplier 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 Supplier 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 Supplier, and such other data and information as the agency may reasonably specify. The Supplier also agrees to provide additional reports as may be requested by the agency in connection with any march-in proceeding under-taken by the agency in accordance with paragraph 4.10 of this clause. As required by 35 U.S.C. § 202(c)(5), the agency agrees it will not disclose such information to persons outside the Government without permission of the Supplier.

4.9 Preference for United States Manufacture

Notwithstanding any other provision of this clause, the Supplier agrees that neither it nor any assignee will grant to any person the exclusive rights 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 NASA upon a showing by the Supplier 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.

4.10 March-in rights

The Supplier agrees that, with respect to any subject invention in which it has acquired title, NASA has the right in accordance with the procedures in 37 CFR § 401.6 and any supplemental regulations of the agency to require the Supplier, 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 Supplier, assignee, or exclusive licensee refuses such a request NASA has the right to grant such a license itself if the Federal agency determines that:

4.10.1 Such action is necessary because the Supplier 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;

4.10.2 Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Supplier,

assignee, or their licensees;

4.10.3 Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Supplier, assignee, or licensees; or

4.10.4 Such action is necessary because the agreement required by paragraph 4.10.1 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.

4.11 Special provisions for Agreements with nonprofit organizations

4.11.1 If the Supplier is a nonprofit organization, it agrees that:

4.11.1.1 Rights to a subject invention in the United States may not be assigned without the approval of NASA, except where such assignment is made to (i) the Rotorcraft Industry Technology Association and/or any member thereof, or (ii) an organization which has one of its primary functions the management of inventions; provided, that such assignee will be subject to the same provisions as the Supplier;

4.11.1.2 The Supplier will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when NASA deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. § 202(e) and 37 CFR § 401.10;

4.11.1.3 The balance of any royalties or income earned by the Supplier 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

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

4.12 A copy of all submissions or requests required by this clause, plus a copy of any reports, manuscripts, publications, or similar material bearing on patent matters, shall be sent to the installation Patent Counsel in addition to any other submission requirements in the Purchase Contract. If any reports contain information describing a "subject invention" for which the Supplier has elected or may elect title, NASA will use reasonable efforts to delay public release by NASA or publication by NASA in a NASA technical series, in order for a patent application to be filed, provided that the Supplier identify the information and the "subject invention" to which it relates at the time of submittal. The Supplier shall provide the filing date, serial number and title, a copy of the patent application, and a patent number and issue date for any "subject invention" in any country in which the Supplier has applied for patents.

5. Restrictions on Sale or Transfer of Technology to Foreign Firms or Institutions

5.1 The parties agree that access to technology developments under this Purchase Contract by foreign firms or institutions must be carefully controlled. For purposes of this clause, a transfer includes a sale of the company, or sales

or licensing of the technology. Transfers do not include:

5.1.1 sales of products or components:

5.1.2 licenses of software or documentation related to sales of products or components: or

5.1.3 transfers to foreign subsidiaries of (i) a Supplier or (ii) a Supplier's domestic parent company for purposes related to this Agreement.

5.2 Export sales are controlled by the Bureau of Export Administration, Department of Commerce. The sale of military products is further controlled by provisions of the International Traffic in Arms Regulations (ITAR) United States Code, TITLE 22 - FOREIGN REGULATIONS AND INTERCOURSE, CHAPTER 39 - ARMS EXPORT CONTROL, SUBCHAPTER III - MILITARY EXPORT CONTROLS. Export sales are subject to these regulations.

3. The Supplier shall provide timely notice to the Buyer's Representative in writing of any proposed transfer of technology developed under this Purchase Contract to any foreign firm or institution. If NASA determines that the transfer may have adverse consequences to the national security interests of the United States, or to the establishment of a robust United States industry, the Buyer and the Supplier shall jointly endeavor to find alternatives to the proposed transfer which obviate or mitigate potential adverse consequences of the transfer.

6. Miscellaneous Requirements

6.1 Supplier shall comply with Executive Order 11246 entitled "Equal Employment Opportunity," as amended by Executive Order 11375, and as supplemented in Department of Labor regulations (41 CFR part 60).

6.2 The Buyer, NASA, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the subcontractor which are directly pertinent to the specific project for the purpose of making audits, examinations, excerpts, and transcriptions.

6.3 If this Purchase Contract involves international air transportation, Supplier shall comply with the "Fly America Act", 49 U.S.C 40118.

6.4 If this Purchase Contract involves shipment of hazardous materials or other regulated items, Supplier shall comply with the 49 CFR part 173.

6.5 Articles 21 and 22 of General Provisions Form GP1 shall not apply to this Purchase Contract to the extent superseded by the above flowdown provisions of NASA Cooperative Agreement No. NCC2-9019.