

U. S. NUCLEAR REGULATORY COMMISSION
NOTICE OF COOPERATIVE AGREEMENT AWARD

<p>1. COOPERATIVE AGREEMENT NO NRC-04-01-050</p>	<p>2. MODIFICATION NO. NEW AWARD</p>	<p>3. COOPERATIVE AGR. PERIOD FROM: 09/ /01 TO: 12/31/04</p>
<p>4. AUTHORITY Pursuant to Section 31a and 141b of the Atomic Energy Act of 1954, as amended</p>	<p>5. TYPE OF AWARD COOPERATIVE AGREEMENT</p>	<p>6. ORGANIZATION TYPE NONPROFIT ORGANIZATION</p>
<p>7. COOPERATOR NAME AND ADDRESS Electric Power Research Institute Attn: Ms. Monique Cruz Sales Contract Specialist Science & Technology Division 3412 Hillview Ave Palo Alto, CA 94304-1395</p>	<p>8. PROJECT TITLE "Cooperative Irradiation-Assisted Stress Corrosion Cracking (IASCC) Research Program (CIR II)"</p>	
<p>9. PROJECT WILL BE CONDUCTED PER GOVERNMENT'S/RECIPIENT'S PROPOSALS DATED <u>10-07-1999</u> AND APPENDIX A - PROJECT COOPERATIVE AGREEMENT GENERAL PROVISIONS</p>	<p>10. TECHNICAL REPORTS ARE REQUIRED</p> <p style="text-align: center;"> <input checked="" type="checkbox"/> PROGRESS AND FINAL <input type="checkbox"/> FINAL ONLY <input type="checkbox"/> OTHER </p>	
<p>11. PRINCIPAL INVESTIGATOR(S) NAME AND ADDRESS Dr. Raj Pathania Corrosion Control Nuclear Power Division, 3412 Hillview Avenue Palo Alto, CA 94304-1395</p>	<p>12. NRC PROGRAM OFFICE (NAME & ADDRESS) U.S. Nuclear Regulatory Commission Office of Nuclear Regulatory Research Attn: Frank Coffman, M/S T-10-E-10 Washington, DC 20555 Telephone No. (301) 415-5704</p>	
<p>13. ACCOUNTING & APPROPRIATION DATA</p> <p>APPN. NO.: 31X0200.160 B&R NO.: 16015110105 JOB CODE: K6266 BOC NO.: 4110 RES ID NO: RES-C01-373</p>	<p>14. METHOD OF PAYMENT</p> <p style="text-align: center;"> <input type="checkbox"/> ADVANCE BY TREASURY CHECK <input type="checkbox"/> REIMBURSEMENT BY TREASURY CHECK <input type="checkbox"/> LETTER OF CREDIT <input checked="" type="checkbox"/> OTHER (See Attachment No. 30 in Appendix A - "Electronic Payment") </p>	

5. NRC OBLIGATION OF FUNDS

THIS COOPERATIVE AGREEMENT ACTION	\$ <u>180,000.00</u>
PREVIOUS OBLIGATION	\$ <u>- 0 -</u>
TOTAL	\$ <u>180,000.00</u>

16. TOTAL FUNDING AGREEMENT

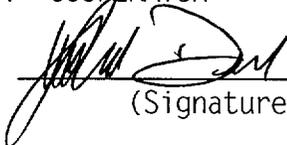
NRC:	\$ <u>840,000.00*</u>
COOPERATOR:	\$ <u>- 0 -</u>
TOTAL	\$ <u>840,000.00*</u>

*PENDING AVAILABILITY OF FUNDS, NRC WILL PROVIDE \$380,000.00 FOR FY 2002 AND \$280,000.00 FOR FY 2003. FISCAL YEARS 2004 AND 2005 WILL NOT REQUIRE ANY NRC FUNDS.

17. NRC ISSUING OFFICE (NAME AND ADDRESS)

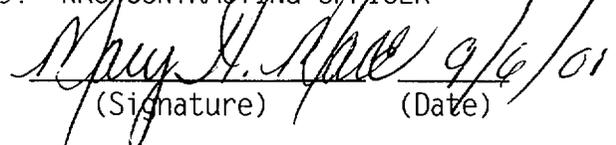
U.S. Nuclear Regulatory Commission
Division of Contracts and Property Management
Contract Management Branch 1, M/S T-7-I-2
Washington, DC 20555

18. COOPERATOR

	<u>9/13/01</u>
(Signature)	(Date)

NAME (TYPED) Wilfred Dere, Esq.
 TITLE Managing Attorney
S&TD Revenue Contracts
 TELEPHONE NO. 650-855-2288

19. NRC CONTRACTING OFFICER

	<u>9/6/01</u>
(Signature)	(Date)

NAME (TYPED) Mary H. Mace
 TITLE Contracting Officer
 TELEPHONE NO. (301) 415-7314

20. COOPERATIVE AGREEMENT PAYMENT INFORMATION

Payment will be made within thirty (30) days after receipt of the billing unless the bill is improper or the cooperator has failed to comply with the program objectives, cooperative agreement award conditions, Federal Reporting requirements or other conditions specified in OMB Circular A-110.

Payment will be made by:

U.S. Nuclear Regulatory Commission
Division of Accounting and Finance
ATTN: GOV/COM Accounts; MS T-9-H-4
Washington, DC 20555

Vouchers shall be submitted in an original and two (2) copies on Standard Form 270 to:

U.S. Nuclear Regulatory Commission
Division of Contracts and Property Management
Contract Management Branch 1, M/SS T-7-I-2
Washington, DC 20555

21. Attached is a copy of the "NRC General Provisions for Grants and Cooperative Agreements Awarded to Institutions of Higher Education and Other Nonprofit Organizations." Acceptance of these terms and conditions is acknowledged when Federal funds are used on this cooperative agreement project.

22. ORDER OF PRECEDENCE

In the event of a conflict between the cooperator's proposal and this Notice of Cooperative Agreement Award, the terms of the Notice of Cooperative Agreement Award shall prevail.

23. By this Cooperative Agreement Award, the Cooperator certifies that payment of any audit-related debt will not reduce the level of performance of any Federal Program.

NRC GENERAL PROVISIONS FOR
GRANTS AND COOPERATIVE AGREEMENTS AWARDED TO
INSTITUTIONS OF HIGHER EDUCATION
AND OTHER NONPROFIT ORGANIZATIONS

This award is subject to the following provisions:

1. General

- a. This award is composed of an award face page (which may incorporate the recipient's proposal by reference) and the NRC General Provisions for Grants and Cooperative Agreements Awarded to Institutions of Higher Education and Other Nonprofit Organizations.
- b. This award constitutes acceptance by the U.S. Nuclear Regulatory Commission (NRC) of the recipient's proposal and budget unless otherwise indicated on the face page.
- c. The recipient is obligated to conduct such project oversight as may be appropriate, to manage the funds with prudence, and to comply with the provisions outlined herein. Within this framework, the Principal Investigator (PI) named on the award face page is responsible for the scientific or technical direction of the project and for preparation of the project performance reports.
- d. This award is funded on a cost reimbursement basis not to exceed the amount awarded as indicated on the face page and is subject to a refund of unexpended funds to NRC.
- e. This award is subject to the policies prescribed in OMB Circular A-110, dated November 29, 1993, as amended.

2. Reporting Program Technical Performance

Recipients are responsible for the performance under grants and other agreements and, where appropriate, ensure that time schedules are being met, projected work units by time periods are being accomplished, and other performance goals are being achieved.

a. Frequency of Performance Reports

Recipient will submit a semi-annual report documenting the results of the Steering Committee Meeting, and will submit an annual, interim report covering the ongoing research at the end of each year. The annual, interim report will be issued in the first quarter of each year.

b. Copies of Performance Reports

One copy of the letter report shall be submitted to the Division of Contracts and Property Management, three copies to the NRC Program Office (at the address indicated on the face page).

c. Content of Performance Report

The report content shall be as follows:

- (1) A comparison of actual accomplishments with the goals established for the period, the findings of the investigator, or both. If the output of programs or projects can be readily quantified, such quantitative data should be related to cost data for computation of unit costs.
- (2) Reasons why established goals were not met.
- (3) Other pertinent information including, when appropriate, analysis and explanation of anticipated cost overruns or high unit costs.
- (4) Between the required performance reporting dates, events may occur that have significant impact upon the project or program. In such instances, the recipient shall inform the Nuclear Regulatory Commission as soon as the following types of conditions become known:
 - (a) Problems, delays, or adverse conditions that will materially affect the ability to attain program objectives, prevent the meeting of time schedules and goals, or preclude the attainment of project work units by established time periods. This disclosure shall be accompanied by a statement of the action taken, or contemplated, and any Federal assistance needed to resolve the situation.
 - (b) Favorable developments or events that enable time schedules to be met sooner than anticipated or more work units to be produced than originally projected.
 - (c) If any performance review conducted by the recipient discloses the need for change in the budget estimates in accordance with the criteria established in Circular A-110, the recipient shall submit a request for budget revision.

d. Publication of Results

It is agreed that unless the co-sponsors of the Cooperative Irradiation-Assisted Stress Corrosion Cracking Research (CIR II) Program agree to a shorter period of time, the NRC and EPRI will not separately and independently publish or otherwise disclose any and all data, material or other information generated by or through the CIR II Program

during the conduct of the program and for a period of two years following completion of the program to the extent permitted by law or regulation. Completion of the program means receipt and acceptance by EPRI of all Final Reports for the scope of work as defined in the minutes of the CIR II Program Steering Committee Meeting on May 7-10, 2001 or upon termination of NRC funding, whichever is latest. Nothing in this clause shall operate to restrict the NRC's right to use or disclose information obtained from the CIR II Program for the purpose of protecting the health and safety of the public. This clause shall take precedence over any other Agreement related to the CIR II Program. Any publications made by either the NRC or EPRI shall give credit to the CIR II Program members as co-sponsors of the project.

3. Suspension or Termination for Cause

a. When in the opinion of NRC, a recipient has materially failed to comply with the terms and conditions of an award, NRC may (1) suspend the award or (2) terminate the award for cause.

b. NRC prefers that deficiencies be corrected whenever practicable. When it is believed that a recipient has failed to comply with one or more of the terms and conditions of an award, the Grants Officer will advise the recipient by letter of the nature of the problem and that failure to correct the deficiency may result in suspension or termination of the award. The recipient will be requested to respond in writing within 30 days of receipt of such letter, describing the action taken or the plan designed to correct the deficiency. Copies of such correspondence will be furnished to the Principal Investigator (PI) and to the NRC Program Officer. If a satisfactory response is not received within 30 days of receipt of such a letter, the Grants Officer may issue a notice suspending authority to further obligate award funds, in whole or in part. The notice of suspension will be sent by certified mail (return receipt requested, to the recipient with a copy to the PI.) The notice will set forth the activities covered by the suspension and its effective date, and the corrective action required by the recipient in order to lift the suspension. However, this policy does not preclude immediate suspension or termination when such action is reasonable under the circumstances and necessary to protect the interests of the Government.

c. If an award is suspended pursuant to this article, no obligations incurred by the recipient during the period of suspension will be allowable under the suspended award other than necessary and proper costs that the recipient could not reasonably avoid during the period of suspension; provided that such costs would otherwise be allowable under the applicable Federal cost principles.

d. The suspension will remain in effect for a maximum of 90 days

during which time the recipient will take corrective action to the satisfaction of NRC or give assurances satisfactory to NRC that corrective action will be taken. In that event, the Grants Officer will issue a notification, to the recipient, that the suspension is lifted.

e. In the event the deficiency is not corrected to the satisfaction of NRC, the Grants Officer may issue a notice of termination. The notice will establish the reasons for the action and its effective date.

f. If an award is terminated pursuant to this article, financial obligations incurred by the recipient prior to the effective date of termination shall be allowable to the extent they would have been allowable had the award not been terminated, except that no obligation incurred during the period in which the award was suspended (except those allowed pursuant to c, above) will be allowed. The settlement of termination costs will be in accordance with the applicable Federal cost principles.

g. Within 90 days of the effective date of termination, the recipient will furnish an itemized accounting of funds expended for allowable costs prior to the effective date of termination and the unexpended award balance.

4. Termination for Convenience

a. Circumstances may arise in which either NRC or the recipient wishes to terminate its performance of a project in whole or in part. If both parties agree, the award may be terminated by mutual agreement.

b. If the recipient wishes to terminate the project, it shall advise the NRC Grant Officer, with a copy to the cognizant NRC Program Officer.

c. If NRC wishes to terminate the project, the Grants Officer will advise the recipient with copies to the PI and the cognizant NRC Program Officer.

d. Within 30 days after receipt of a request from either party for termination by mutual agreement, the other party will provide an appropriate written response.

e. In the event of disagreement between the parties, the Grants Officer will make a final decision subject to the review procedures described in the following article entitled Dispute Review Procedure.

f. The recipient shall not incur new obligations for the terminated portion after the effective date, and shall cancel as many outstanding obligations as possible. The Nuclear Regulatory Commission shall allow full credit to the recipient for the Federal share of the noncancellable obligations, properly incurred by the recipient prior to termination.

5. Dispute Review Procedure

a. Any request for review of a notice of termination or other adverse decision should be addressed to the Grants Officer. It must be postmarked no later than 30 days after the postmarked date of such notice.

b. The request for review must contain a full statement of the recipient's position and the pertinent facts and reasons in support of such position.

c. The Grants Officer will promptly acknowledge receipt of the request for review and shall forward it to the Director, Office of Administration, who shall appoint a review committee consisting of a minimum of three persons.

d. Pending resolution of the request for review, the NRC may withhold or defer payments under the award during the review proceedings.

e. The termination review committee will request the Grants Officer who issued the notice of termination to provide copies of all relevant background materials and documents. It may, at its discretion, invite representatives of the recipient and the NRC program office to discuss pertinent issues and to submit such additional information as it deems appropriate. The chairman of the review committee will insure that all review activities or proceedings are adequately documented.

f. Based on its review, the committee will prepare its recommendations to the Director, Office of Administration, who will advise the parties concerned of his/her decision.

6. Travel

Domestic travel is an appropriate charge to this award, and prior authorization for specific trips is not required. However, foreign travel must be clearly essential to the award effort and must, to be charged against this award, have explicit approval of the Contracting Officer, prior to the inception of the foreign travel, regardless of its inclusion in the approved award budget. In accordance with NRC Management Directive 14.1, Section 3.4.2, which will be made

available upon request, recipient will complete and submit the NRC Form 445 for the Contracting Officer's review and approval for each foreign trip.

All common carrier travel reimbursable hereunder shall be via the least expensive class rates consistent with achieving the objective of the travel. If not available, reimbursement vouchers will be annotated that economy class accommodations were not available. First-class air travel is not authorized.

7. Use of U.S. Flag Carriers

a. The Comptroller General of the United States, by Decision B-138942 of June 17, 1975, as amended, provided guidelines for implementation of Section 5 of the International Air Transportation Fair Competitive Practices Act of 1974.

b. Any air transportation to, from, between, or within a country other than the U.S. of persons or property, the expense of which will be assisted by NRC funding, must be performed on a U.S. flag carrier if services provided by such carrier is available.

c. For the purposes of this requirement:

(1) Passenger of freight service by a certificated air carrier is considered available even though:

(a) Comparable or a different kind of service by a noncertificated air carrier costs less, or

(b) Service by a noncertificated air carrier can be paid for in excess foreign currency, or

(c) Service by a noncertificated air carrier is preferred by the recipient, contractor, or traveler needing air transportation, or

(d) Service by a noncertificated air carrier is convenient for the recipient, contractor, or traveler needing air transportation.

(2) Passenger service by a certificated air carrier is considered to be unavailable:

(a) When the traveler, while enroute, has to wait 6 hours or more for an available U.S. carrier, or

(b) When any flight by a U.S. flag carrier is

interrupted by a stop anticipated to be 6 hours or more for refueling, reloading, repairs, etc., and no other flight by a U.S. air carrier is available during the 6 hour period, or

(c) When the flight by a U.S. air carrier takes 12 or more hours longer than a foreign carrier.

8. Allowable Costs

a. The allowability of costs and cost allocation methods for work performed under this award, up to the amount specified in the award instrument, shall be determined in accordance with the applicable Federal Cost Principles in effect on the effective date of the award and the terms of the award.

b. The Federal Cost Principles applicable to specific types of recipients are as follows:

(1) Institutions of higher education, OMB Circular A-21 is applicable to both public and private institutions of higher education.

(2) Nonprofit Organizations - OMB Circular A-122

9. Retention and Custodial Requirements for Records

Recipients shall retain and permit examination of records as required by OMB Circular A-110. Recipients shall place appropriate requirements on sub-grantees as specified.

10. Payment and Financial Reporting Requirements

Payments by NRC will be made by the method indicated on the face page. Recipient requests for payment, NRC payments, and recipient financial reporting requirements shall be made in accordance with OMB Circular A-110.

11. Property Management Standards

Property shall be accounted for and managed in accordance with OMB Circular A-110.

12. Copyright

Unless otherwise provided in the award instrument, the recipient may copyright any books, publications, films, or other copyrightable materials developed in the course of or under this award. However, any such copyrighted materials shall be subject to a royalty-free,

irrevocable, worldwide, nonexclusive license in the United States Government to reproduce, perform, translate, and otherwise use and to authorize others to use such materials for Government purposes.

13. Patent Rights (Small Business Firms or Non-Profit Organizations, July, 1981)

a. Definitions

(1) Invention means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code (USC).

(2) Subject Invention means any invention of the recipient conceived or first actually reduced to practice in the performance of work under this award.

(3) Practical Application means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to 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) Made when used in relation to any invention means the conception or first actual reduction to practice of such invention.

(5) Small Business Firm means small business concern as defined at Section 2 of Public law 85-536 (15 USC 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standard for small business concerns involved in Government procurement, contained in 13 CFR 121.3-8, and in subcontracting, contained in 13 CFR 121.3-12, will be used.

(6) Non-Profit Organization means universities and other institutions of higher education or an organization of the type described in Section 501(c)(3) of the Internal Revenue Code of 1954 (26 USC 501a) or any non-profit scientific or educational organization qualified under a state non-profit organization statute.

b. Allocation of Principal Rights

The recipient may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause. With respect to any subject

invention in which the recipient 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 any subject invention throughout the world for which the recipient has elected to retain title.

c. Invention Disclosure Election of Title and Filing of Patent Applications by Recipient

(1) After a subject invention has been disclosed in writing by the inventor(s) to recipient personnel responsible for the administration of patent matters, the recipient will:

(i) Disclose such invention to the Nuclear Regulatory Commission (NRC) within six months;

(ii) Elect whether or not to retain title to any such invention by notifying the NRC within twelve months of disclosure to the recipient;

(iii) File its initial patent application on an elected invention within two years after election; and

(iv) File patent applications in additional countries within either ten months of the corresponding initial patent application, or six months from the date a license is granted by the Commissioner of Patents and Trademarks to file foreign patent applications when such filing was prohibited for security reasons.

(2) Notwithstanding the requirements of subparagraph c(1) above:

(i) Disclosure to the NRC shall be made immediately after recipient personnel responsible for the administration of patent matters become aware of any manuscript describing the invention accepted for publication, or any publication, on sale or public use of such invention; and

(ii) In any case where publication, or 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 and filing of a United States patent application may be shortened by the NRC to a date that is no more than 45 days prior to the end of the statutory period.

(3) Requests for extension of the time for disclosure to the

NRC, election and filing, where reasonable, will normally be granted.

(4) The disclosure to the NRC shall be in the form of a written report and shall identify the award under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey 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 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 accepted at the time of disclosure.

d. Forfeiture of Title

(1) The recipient will convey to the NRC, upon written request, title to any subject invention:

(i) If the recipient fails to disclose or elect the subject invention within the times specified in c above, or elects not to retain title.

(ii) In those countries in which the recipient fails to file patent applications within the times specified in c above; provided, however, that if the recipient has filed a patent application in a country after the times specified in c above but prior to its receipt of the written request of the NRC, the recipient shall continue to retain title in that country; or

(iii) In any country in which the recipient decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in a reexamination or opposition proceeding of a patent on a subject invention.

e. Minimum Rights to Recipient

The recipient will retain a non-exclusive, royalty-free license throughout the world in each subject invention to which the Government obtains title except if the recipient fails to disclose the subject invention within the times specified in c above. This license extends to and is revocable and transferable, as specified in Part 5b(2) of Office of Federal Procurement Policy Bulletin 81-22 dated June 30, 1981.

f. Recipient Action to Protect Government's Interest

(1) The recipient agrees to execute or to have executed and

promptly deliver to the NRC all instruments necessary to:

(i) Establish or confirm the rights the Government has throughout the world in those subject inventions for which the contractor retains title; and

(ii) Convey title to the NRC when requested under (d) above and to enable the Government to obtain patent protection throughout the world in that subject invention.

(2) The recipient agrees to require, by written agreement, its employees, other than clerical and non-technical employees to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the recipient each subject invention made under this award in order that the recipient can comply with the disclosure provisions of c above and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. The disclosure format should require, as a minimum, the information requested by subparagraph c(4) above. The recipient shall instruct such employees through the 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.

(3) The recipient will notify the NRC of any decision not to continue 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 thirty days before the expiration of the response period required by the relevant patent office.

(4) The recipient 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 award) awarded by the Nuclear Regulatory Commission. The Government has certain rights in this invention.

g. Subcontracts

(1) The recipient will include this clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental or research work to be performed in the United States by a small business firm or a non-profit organization. The subcontractor will retain all rights provided for the recipient in this clause, and the recipient will not, as part of the consideration for awarding

the subcontract, obtain rights in the subcontractor's subject inventions.

(2) The recipient will include in all other subcontracts, regardless of tier, for experimental, developmental or research work the patent rights clause required by Federal Procurement Regulation 1-9.107-5(a).

h. Reporting on Utilization of Subject Inventions

The recipient 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 recipient or its licenses or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the recipient, and such other data and information as the NRC may reasonably specify. The recipient also agrees to provide additional reports as may be requested by the NRC in connection with any march-in proceeding undertaken by the NRC in accordance with paragraph j of this clause. To the extent data or information supplied under this section is considered by the recipient, its licensee or assignee to be privileged and confidential and is so marked, the NRC agrees that, to the extent permitted by 35 USC 202(c)(5), it will not disclose such information to persons outside the Government.

i. Preference for United States Industry

Notwithstanding any other provision of this clause, the recipient 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 the NRC upon a showing by the recipient or its assignee that reasonable but unsuccessful efforts have been made to grant licenses or similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

j. March-in Rights

The recipient agrees that with respect to any subject invention in which it has acquired title, the NRC has the right in accordance with the procedures in OMB Bulletin 81-22 to require

the recipient, an assignee or exclusive licensee of a subject invention to grant a non-exclusive, 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 recipient assignee, or exclusive licensee refuses such a request, the NRC has the right to grant such a license itself if the NRC determines that:

- (1) Such action is necessary because the recipient 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 recipient, 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 recipient, assignee, or licensees; or
- (4) Such action is necessary because the agreement required by paragraph i of this clause has not been obtained or waived or because a licensee or the exclusive right to use or sell any subject invention in the United States is breach of such agreement.

k. Special Provisions for Awards with Non-profit Organizations

If the recipient is a non-profit organization, it agrees that:

- (1) Rights to a subject invention in the United States may not be assigned without the approval of the NRC, except where such assignment is made to an organization which has as one of its primary functions the management of inventions and which is not, itself, engaged in or does not hold a substantial interest in other organizations engaged in the manufacture or sale of products or the use of processes that might utilize the invention or be in competition with embodiments of the invention (provided that such assignee will be subject to the same provisions as the recipient);
- (2) The recipient may not grant exclusive licenses under United States patents or patent application in subject inventions to persons other than small business firms for a period in excess of the earlier of:
 - (i) five years from first commercial sale or use of the

invention; or

(ii) eight years from the date of the exclusive license excepting that time before regulatory agencies necessary to obtain premarket clearance, unless on a case-by-case basis, the Federal agency approves a longer exclusive license. If exclusive field of use licenses are granted, commercial sale of use in one field of use will not be deemed commercial sale or use as to other fields of use, and a first commercial sale or use with respect to a product of the invention will not be deemed to end the exclusive period to different subsequent products covered by the invention.

(3) The recipient will share any royalties collected on a subject invention with the inventor; and

(4) The balance of any royalties or income earned by the recipient 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.

14. Notice and Assistance Regarding Patent and Copyright Infringement

The provisions of this clause shall be applicable only if the amount of this award exceeds \$10,000.

a. The recipient shall report to the Grants Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this award of which the recipient has knowledge.

b. In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this award or out of the use of any supplies furnished or work or services performed hereunder, the recipient shall furnish to the Government when requested by the Grants Officer, all evidence and information in possession of the recipient pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the recipient has agreed to indemnify the Government.

c. This clause shall be included in all subcontracts.

15. Reporting of Royalties

If this award is in an amount which exceeds \$10,000 and if any royalty payments are directly involved in the award or are reflected

in the award price to the Government, the recipient agrees to report in writing to the Patent Counsel, NRC (with notification by Patent Counsel to the Grants Officer) during the performance of this award and prior to its completion or final settlement the amount of any royalties or other payments paid or to be paid by it directly to others in connection with the performance of this award together with the names and addresses of licensors to whom such payments are made and either the patent numbers involved or such other information as will permit the identification of the patents or other basis on which the royalties are to be paid. The approval of NRC of any individual payments or royalties shall not stop the Government at any time from contesting the enforceability, validity or scope of, or title to, any patent under which a royalty or payments are made.

16. Procurement Standards

a. NRC recipients shall follow the requirements of OMB Circular A-110.

b. In addition, unless these provisions provide otherwise, prior written approval shall be obtained from the NRC Grants Officer before:

(1) Any of the research or other substantive project effort is contracted or otherwise transferred.

(2) Contracting for the commercial production or distribution of books, films, or similar materials.

c. NRC approvals will be made by the Grants Officer, who will specify which requirements of this award must be flowed-down to satisfy the purposes of OMB Circular A-110.

d. Recipient requests for approvals shall include an explanation of the need for the contracting, a proposed performance statement, justification for the price or estimated cost (including a detailed budget for cost-reimbursement type arrangements), and the basis for selecting the contractor.

17. Revision of Financial Plans

Award budget activity under this award is subject to the requirements of OMB Circular A-110.

18. Program Income

Program income is subject to the policy prescribed by OMB Circular A-110.

19. Statutory Requirements

a. Civil Rights

This award is subject to Title VI of the Civil Rights Act of 1964 (P.L. 88-352); Title IV, Sex Discrimination, of the Energy Reorganization Act of 1974, and Executive Order 11246, as amended, Parts II, III, and IV (for awards over \$10,000 within a twelve month period).

The recipient agrees that no person in the United States shall, on the ground of race, sex, color or national origin, be excluded from participation in , be deprived the benefits of, or be otherwise subjected to discrimination under any program or activity for which the recipient receives financial support from NRC.

b. Nondiscrimination Under Federal Grants and Cooperative Agreements

This award is subject to the provisions of the Rehabilitation Act of 1973, Public Law 93-112. The recipient therefore agrees that, No otherwise qualified handicapped individual in the United States (as defined in Section 7(6) of the Act), shall solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Further, this award is subject to the provisions of the Age Discrimination Act of 1975 (42 U.S.C. 6101). The recipient therefore agrees that no age discrimination will occur under this Federally assisted program.

c. Clean Air - Clean Water

(Applicable only if the award exceeds \$100,000, or a facility to be used has been the subject of a conviction under the Clean Air Act (42 U.S.C. 1857c-8(c)(1)) or the Federal Water Pollution Control Act (33 U.S.C. 1319(c)), and is listed by EPA.)

(a) The Recipient agrees as follows:

(1) To comply with all the requirements of section 114 of the Clean Air Act, as amended (42 U.S.C. 1857, et seq., as amended by Public Law 91-604) and section 308 of the Federal Water Pollution Control Act (33 U.S.C. 1251, et seq., as amended by Public Law 92-500), respectively, relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in section 114 and section 308 of the Clean Air Act and the Water Act, respectively, and all regulations and guidelines issued thereunder before the award of this award.

(2) That no portion of the work required by this award will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date that this award was awarded unless and until the EPA eliminates the name of such facility or facilities from such listing.

(3) To use his/her best efforts to comply with clean air standards and clean water standards at the facility in which the award is being performed.

(4) To insert the substance of the provisions of this clause into any nonexempt subcontract, including this paragraph (a)(4).

(b) The terms used in this clause have the following meanings:

(1) The term Air Act means the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Public Law 91-604).

(2) The term Water Act means the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Public Law 92-500).

(3) The term clean air standards means any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, or other requirements which are contained in, issued under, or otherwise adopted pursuant to the Air Act or Executive Order 11738, an applicable implementation procedure as described in section 110 (d) of the Clean Air Act (42 U.S.C. 1857c-5(d)), an approved implementation procedure or plan under section 111(c) or section 111(d), respectively, of the Air Act (42 U.S.C. 1857c-6(c) or (d)), or an approved implementation procedure under section 112(d) of the Air Act (42 U.S.C. 1857c-7(d)).

(4) The term clean water standards means any enforceable limitation, control, condition, prohibition, standard, or other requirement which is promulgated pursuant to the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a State under an approved program, as authorized by section 402 of the Water Act (33 U.S.C. 1342) or by local government to ensure compliance with pretreatment regulations as required by section 307 of the Water Act (33 U.S.C. 1317).

(5) The term compliance means compliance with clean air or water standards. Compliance shall also mean compliance

with a schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency or an air or water pollution control agency in accordance with the requirements of the Air Act or Water Act and regulations issued pursuant thereto.

(6) The term facility means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations, owned, leased, or supervised by the recipient or subcontractor, to be utilized in the performance of work under an award or subcontract. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location or site shall be deemed to be a facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent facilities are collocated in one geographical area.

20. Liability and Losses

NRC assumes no liability with respect to any damages or loss arising out of any activities undertaken by the grant recipient with the financial support of this award.

21. Changes in Principal Investigator or Technical Objectives

a. The recipient shall be permitted to change the methods and procedures employed in performing the research without the need to make special reports on proposed actions or obtain NRC approval. Significant changes in methods or procedures shall be reported to NRC in status reports and final technical reports. However, in the event the methodology or experiment is proposed as a specific stated objective of the research work, it shall not be changed without approval of the Grants Officer.

b. The stated objective of the research effort shall not be changed, except with the approval of the NRC Grants Officer.

c. The phenomenon or phenomena under study, i.e., the broad category of research, shall not be changed except with the prior approval of the NRC Grants Officer.

d. The recipient shall obtain the approval of the NRC Grants Officer to change the principal investigator, or to continue the research work during a continuous period in excess of three months without the participation of an approved principal investigator.

e. The recipient shall consult with the NRC Grants Officer if the

principal investigator plans to, or becomes aware that he will, devote substantially less effort to the work than that anticipated in the approved proposal. If NRC determines that the reduction of effort would be so substantial as to impair the successful prosecution of the research, it may request a change of principal investigator or other appropriate modification of the award or may suspend or terminate the award pursuant to clauses 4 and 5 herein entitled, Suspension or Termination for Cause and Termination by Mutual Agreement, respectively.

22. Site Visits

The NRC, through authorized representatives, has the right, at all reasonable times, to make site visits to review project accomplishments and management control systems and to provide such technical assistance as may be required. If any site visit is made by the NRC on the premises of the recipient or a contractor under an award, the recipient shall provide and shall require his/her contractors to provide all reasonable facilities and assistance for the safety and convenience of the Government representatives in the performance of their duties. All site visits and evaluations shall be performed in such a manner as will not unduly delay the work.

23. Title to Equipment

Unless otherwise specified in the award instrument, title to equipment purchased or fabricated with NRC funds by a college or university, other nonprofit organization, or a unit of State or local Government shall vest in the recipient institution, with the understanding that such equipment (or a suitable replacement obtained as a trade in) will remain in use for the specific project for which it was obtained.

24. Organizational Prior Approval System

a. In order to carry out its responsibilities for monitoring project performance and for adhering to award terms and conditions, each performing organization shall have a system to ensure that appropriate authorized officials provide necessary organizational reviews and approvals in advance of any action that would result in either the performance or modification of an NRC-supported activity where such approvals are required by the award instrument, including the obligation or expenditure of funds where the governing cost principles either prescribe conditions or require approvals.

b. The organization shall designate an appropriate official or officials to review and approve the types of actions described in a, above. Preferably, the official(s) should be the same official(s) who sign(s) or countersign(s) those types of requests that require

submission to and approval by NRC. The designated official(s) shall not be the principal investigator or any official having direct responsibility for the actual conduct of the project, or a subordinate of such individual.

25. Retention and Custodial Requirements for Records

a. Financial records, supporting documents, statistical records, and other records pertinent to this award shall be retained by the recipient for a period of 3 years from submission of the Final Report in accordance with OMB Circular A-110.

(1) Records that relate to audits, appeals, litigation, or the settlement of claims arising out of the performance of the project shall be retained until such audits, appeals, litigation, or claims have been disposed of, but in any event not less than 3 years after final report submission.

(2) Records relating to projects subject to special project team provisions shall be retained until 3 years from the end of the recipient's fiscal year in which the award instrument requirement for reporting income expires.

b. The NRC and Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any pertinent books, documents, papers, and records of the recipient organization, and of the performing organization, if different, to make audits, examinations, excerpts and transcripts. Further, any contract in excess of \$10,000, made by the recipient shall include a provision to the effect that the recipient, NRC, the Comptroller General, or any of their duly authorized representatives, shall have access to pertinent records for similar purposes.

26. Standards for Financial Management Systems

NRC recipients shall have financial management systems that meet the requirements to OMB Circular A-110.

27. Audits

NRC recipients shall be audited in accordance with OMB Circular A-133 which supersedes Attachment F, subparagraph 2h. of OMB Circular A-110.