

MEMORANDUM OF UNDERSTANDING
between
U.S. NUCLEAR REGULATORY COMMISSION
and
ELECTRIC POWER RESEARCH INSTITUTE, INC.
on
COOPERATIVE NUCLEAR SAFETY RESEARCH

PURPOSE

The U.S. Nuclear Regulatory Commission (“NRC”) and the nuclear power industry (“Industry”) each conduct research on nuclear reactor safety. The NRC’s Office of Nuclear Regulatory Research (“RES”) conducts independent research in all areas regulated by the NRC, including ongoing and potential safety issues, risk-informed and performance-based regulation, and operating experience analysis. The Electric Power Research Institute, Inc. (“EPRI”) is engaged in research and development in the public interest and on behalf of Industry with respect to the production, transmission, distribution, and utilization of electric power, including research designed to improve the safety, reliability, and economy of nuclear power plants. While the research efforts of the NRC and EPRI may be conducted for different purposes, the underlying data and the results obtained have common value to both the NRC and EPRI. Accordingly, to conserve resources and to avoid unnecessary duplication of effort, both the NRC and EPRI agree to cooperate in selected research efforts and to share information and/or costs related to such research, whenever such cooperation and cost sharing is appropriate and mutually beneficial.

This Memorandum of Understanding (“MOU”) is authorized pursuant to Section 31 of the Atomic Energy Act and/or Section 205 of the Energy Reorganization Act. The roles, responsibilities, terms and conditions of this MOU should not be interpreted in a manner inconsistent with, and shall not supersede, applicable federal laws and regulations.

This MOU describes the parameters within which cooperative research programs between the NRC and EPRI will be considered and conducted. Individual cooperative research programs are described in addenda to this document (“Cooperative Research Programs”).

PRINCIPLES OF COOPERATION

Article 1 – Responsibility of the Parties

- 1.1 **Organizational Accountability within the NRC and EPRI:** This MOU will be implemented by the NRC’s Office of Nuclear Regulatory Research (“RES”) on behalf of the NRC and by EPRI’s Nuclear Power Sector (“NPS”) on behalf of EPRI. RES and NPS are responsible for conducting cooperative research with third parties in the field of nuclear energy for the NRC and EPRI, respectively.
- 1.2 **Contacts:** The NRC’s Senior Management Contact shall be the Director of the Office of Nuclear Regulatory Research and EPRI’s Senior Management Contact shall be its Chief Nuclear Officer (“Senior Management Contacts”). RES and EPRI will each identify their respective overall coordination contacts (“Overall Coordination Contacts”) to serve as the primary interfaces for routine interactions between the NRC and EPRI.

1.3 Management of Cooperative Research Programs:

- a. Meetings: The Senior Management Contacts will confer, either via conference call or in meetings¹, as needed throughout the year, but will formally meet a minimum of once each year to review the status of ongoing Cooperative Research Programs, to identify opportunities, if any, for additional Cooperative Research Programs, and to expand, modify, or close-out existing Cooperative Research Programs. The Senior Management Contacts shall agree on the priority, terms and conditions of new Cooperative Research Programs and shall provide direction on ongoing work and other matters, as necessary. The Overall Coordination Contacts and appropriate Cooperative Research Program personnel may meet more frequently as necessary to manage the Cooperative Research Programs.

- b. Selection of Potential Cooperative Research Programs: The NRC and EPRI shall identify potential Cooperative Research Programs of interest to the NRC and the Industry. Factors to be considered when selecting potential programs shall include:
 - mutual interest in the subject matter;
 - applicability of research results;
 - contribution to plant safety;
 - impact upon risk reduction;
 - opportunity to leverage resources; and
 - timeliness.

Once an area of potential cooperative research is identified, a Cooperative Research Program may be pursued if mutual agreement is reached on the technical requirements of the project, including objectives, scope, approach and quality assurance requirements, and the roles and responsibilities of each party.

- c. Documentation of Cooperative Research Programs: Once approved by the Senior Management Contacts, each Cooperative Research Program will be documented in an Addendum to this MOU. Each Addendum shall set forth in detail the goals and objectives of the Cooperative Research Program, the scope of work to be performed or undertaken by the NRC and EPRI, and, as appropriate, the contractors to be employed, the technical requirements, the financial responsibility and resource commitment of the NRC and EPRI, and the

¹NRC published its complete policy statement on meetings open to the public in the Federal Register on May 28, 2002 (67 FR 36920-36924). In general, meetings related to Cooperative Research Programs will not be open to public attendance if the subject matter to be discussed includes discussions related to proprietary information or could result in the inappropriate disclosure and dissemination of preliminary, unverified information.

anticipated schedule. Each addendum shall also include an affidavit, in accordance with the requirements of 10 CFR §2.390, "Public inspections, exemptions, requests for withholding," which provides the basis for withholding from public release EPRI reports that may be shared with the NRC in the process of performing the work associated with the specific Addendum². The affidavit will generally describe the documents or information expected to be exchanged for the specific research program for each addenda.

- d. Management of Cooperative Research Programs: Each Cooperative Research Program will be managed by cognizant program managers and/or a technical review group comprised of NRC staff and EPRI employees.
- e. Termination of a Cooperative Research Programs. Either the NRC or EPRI may elect to terminate a Cooperative Research Program due to unsatisfactory contractor performance, lack of funds, changes in priority, or other reason. To effect a termination, the Senior Management Contact of the terminating party shall provide at least 30-days written notice of the intent to terminate continued participation in the specified Cooperative Research Program to the other party's Senior Management Contact. The terminating party shall provide confirmation of termination and the effective date thereof to the other party. The non-terminating party may continue with the research which is the subject of the Cooperative Research Program and shall have sole control over and use of the results and information obtained from the Cooperative Research Program subsequent to the effective termination date. Results obtained prior to the effective date of termination are governed by Article 2.2.
- f. No Conflict with Federal Rules or Regulations. The NRC's role as an independent agency shall be maintained. Notwithstanding anything to the contrary herein or in any addendum to this Agreement, the cooperation, approval, involvement or guidance of the NRC staff with regard to the Cooperative Research Programs shall not bind the NRC in any manner, especially its rulemaking, licensing or adjudicatory processes. The occasional use of the term "agree" or mandatory language, such as "shall" or "will" in this MOU, or any addendum hereto, is not intended to constitute a binding obligation and does not create an enforceable right of action on the part of either party. EPRI shall not function as an advisory entity to the NRC. To maintain NRC's regulatory independence, the parties shall not jointly interpret the results or implications of the data derived from the Cooperative Research Programs. EPRI shall not claim or publish in its studies, releases, reports, or publications any statements that indicate the NRC's approval or endorsement of any Cooperative Research Program or any related study, report, or publication without the prior written approval of the NRC's Senior Management Contact.

²This is applicable only to formal reports or other intellectual property that EPRI has already developed. Data acquired during the course of the subject collaborative work is considered privileged information and thus will be routinely withheld from release until the final report(s) on this work is/are made publicly available.

Article 2 – Guidelines for Cooperative Research

- 2.1 The purpose of each Cooperative Research Program shall be to produce research data. To maintain independence and to avoid conflicts of interest, or even the appearance of any conflicts of interest, the NRC and EPRI shall not jointly derive any conclusions regarding the data obtained from a Cooperative Research Program or the application of such data to any regulation or regulatory guidance. The NRC and EPRI may cooperate in the validation and verification of data to ensure it is ready for use by decision-makers. Any regulatory analysis of the data to determine applicability to and impact on existing or new regulation shall be done independently.
- 2.2 All final data or results produced by a Cooperative Research Program shall be shared by all participants, and each party shall be free to disseminate them to whomever they choose at no additional cost. Proprietary information supplied by EPRI to support conduct of the research will be marked and protected in accordance with applicable Federal laws, rules, and/or regulations, including 10 CFR §2.390. The addenda to this MOU will describe the documents or information to be exchanged for the specific research program involved. In accordance with 10 CFR §2.390, and prior to or contemporaneous with such exchange, EPRI will submit an affidavit covering such material and stating the basis for withholding it from public disclosure if the information has not been described in a previous affidavit.
- 2.3 Publication of privileged data or results from Cooperative Research Programs in journals or conference proceedings, by any party or contractor, prior to its public release in the final report(s) on this work, shall require the written approval of each of the Senior Management Contacts.
- 2.4 The NRC and EPRI will determine on a project-by-project basis if appropriate patent or copyright applications should be filed with regard to the data or results generated by a Cooperative Research Program.
- 2.5 Upon request, each party shall have access, contingent upon meeting any required security clearances, to the contractors' facilities, separately or jointly, and may review the data developed by the other party's contractor that is associated with a specific Cooperative Research Program.
- 2.6 Either the NRC or EPRI may, at its own expense, conduct additional research beyond the scope of the Cooperative Research Program using the same contractor or facility employed with respect to a Cooperative Research Program if it so desires, or may employ such other contractors or facilities as it deems appropriate.

Article 3 – Terms of Agreement

- 3.1 The term of this MOU shall commence effective upon signing by both NRC and EPRI Senior Management Contacts and shall expire on September 30, 2016. The addenda that were active as of September 30, 2006, remain as such until they are terminated in accordance with the requirements of this MOU. A list of addenda that were active as of September 30, 2006 is attached hereto as Exhibit A.

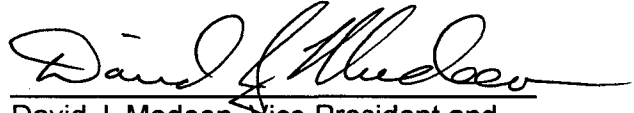
- 3.2 Either party may terminate this MOU at any time upon 90 days prior written notice of such termination.
- 3.3 This MOU supersedes and replaces the Memorandum of Understanding dated November 25, 1997.

The parties hereto acknowledge that this MOU is non-binding and is solely intended to promote cooperative relationships between the parties.



Brian Sheron, Director
Office of Nuclear Regulatory Research
U.S. Nuclear Regulatory Commission

Date: March 14, 2007



David J. Modeen, Vice President and
Chief Nuclear Officer
Electric Power Research Institute, Inc.

Date: March 14, 2007

Exhibit A

Addenda to NRC-EPRI MOU on Cooperative Nuclear Safety Research
that were active and in effect on 30 Sept. 2006³

ADDENDUM TITLE	DATE SIGNED	CURRENT POCs
Fire Risk Fire Risk (Rev. 1)	30 Oct. 1998 18 May 2001	Salley Kassawara
Vessel Head Penetration Inspection, Crack Growth & Repair (Alloy 600)	Dec. 2004	Santos King
NDE of Nickel Based Components and Dissimilar Metal (DM) welds (PINC Participation)	(Pending final signature)	Moyer Selby

³ This listing is a one-time compilation of active Addenda as of 30 Sept. 2006, provided for information. It does not commit the parties to future revisions of this MOU as addenda are added, revised or deleted. Subsequent updates to this list will be managed separately by the Overall Coordination Contacts.