

ADDENDUM  
to  
MEMORANDUM OF UNDERSTANDING  
between  
U.S. NUCLEAR REGULATORY COMMISSION  
and  
ELECTRIC POWER RESEARCH INSTITUTE, INC.  
on  
COOPERATIVE NUCLEAR SAFETY RESEARCH  
  
Long-Term Operations Beyond 60 Years

I. Introduction

The U.S. Nuclear Regulatory Commission (NRC) and the Electric Power Research Institute (EPRI) are parties to that Memorandum of Understanding on Cooperative Nuclear Safety Research (the MOU, found under Enclosure 1). Pursuant to the MOU, the parties agreed to encourage cooperation in nuclear safety research, which provides benefits for NRC, the nuclear power industry (the Industry), and the public. This Addendum to the Memorandum of Understanding (the Addendum) is entered into by and between the NRC and the EPRI, effective as of the date of signature of the last of the Parties to execute this Addendum (the Effective Date).

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

This Addendum describes a cooperative aging management research and development (R&D) program between EPRI and the NRC's Office of Nuclear Regulatory Research (RES) in the area of nuclear power plant (NPP) long-term operations (LTO) during the subsequent license renewal (SLR) period of operations,

II. Objectives

The objective of the cooperative LTO R&D program is the development of tools, data, and technical information useful to NRC and Industry in the areas related to nuclear power plant aging management. The specific objective of this cooperative program is to ensure the timely exchange of information (e.g., objectives, milestones, technical data, and results) on planned and ongoing aging management research activities.

This cooperative program has the following specific objectives:

1. Ensure the timely exchange and sharing of information, data, and knowledge on aging management programs and research activities, including, but not restricted to:
  - objectives and milestones on planned and ongoing aging management research activities,
  - LTO R&D data and tools, and
  - aging management practices and operational experience needed by the RES and EPRI LTO R&D program.
2. Develop LTO analysis methods, tools, and/or data to support the second, and subsequent, extended licensing periods
3. Enhance access to the nuclear power plant aging management technology, methods, and tools.

### III. Scope and Plan

This program includes a wide variety of collaborative activities (including information exchange meetings, support for expert panels, jointly sponsored projects and research) aimed at achieving the preceding objectives.

The program elements are as follows:

1. Programmatic Information Exchange. Both parties will exchange information concerning the objectives, project scopes, milestones, planned approaches, and schedules for their ongoing and planned aging management/LTO R&D tasks.
2. Technical Information Exchange. Both parties will facilitate the exchange of technical information between researchers and project managers. RES and EPRI agree to a division of effort on the basis of complete exchange of research results. The program element also includes support of working meetings between researchers (on an agreed-upon as-needed basis).
3. Collaborative Research on Aging Management Issues. EPRI and RES are supporting a number of initiatives aimed at aging management and LTO at commercial nuclear facilities. Collaborative efforts to minimize unnecessary duplication of efforts will be associated with the following areas:
  - a. Joint sponsorship of NRC/industry workshop(s) on status of domestic and international research activities and operating experience to address and evaluate the status of materials degradation issues in—including but not restricted to—metallic and non-metallic components, concrete structures, and cable insulation. Particular focus will be on issues identified in the Generic Aging Lessons Learned for SLR (GALL-SLR (NUREG-2191) and in the staff requirements memorandum on

SECY 14-0016 (ADAMS Accession No. ML14241A578) on SLR.

- b. Investigations of aging management through information exchange and data sharing, advances in the development and application of aging management methods, and demonstration of technical tools.
- 4. Other Parties. EPRI and RES will solicit participation by other nuclear industry groups in this effort. Recommendations concerning the participation of other parties, whether domestic or international, will be jointly developed and accepted by both EPRI and RES management.

IV. Period of Performance

The initial period of performance will be from the effective date through September 30, 2021, from the agreement date signed in Section VIII below, to be extended in writing if mutually agreeable to NRC/RES and EPRI.

V. Project Direction and Coordination

All technical interactions, in the exchange of programmatic and technical information, will be managed through a designated point of contact for each party (the Project Contacts). Technical meetings to coordinate this effort and to discuss project progress will be arranged through the respective Project Contacts. The Project Contacts are:

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|---|---|
| NRC:<br>Primary: Raj Iyengar<br>Alternate: Amy Hull<br>Division of Engineering<br>Office of Nuclear Regulatory Research<br>U.S. Nuclear Regulatory Commission | EPRI:<br>Sherry Bernhoft<br>Senior Program Manager<br>Long Term Operations<br>Electric Power Research Institute |
|---|---|

All EPRI data and materials subject to commercial or other use restrictions will be submitted to RES under a general affidavit addressing all documents, data, and materials to be shared with RES pursuant to this Addendum and requesting that such documents, data, and materials be withheld from disclosure to the public pursuant to Title 10, Section 2.390 of the *Code of Federal Regulations* (10 CFR 2.390) as provided in the MOU. Should RES reject EPRI's request to withhold such documents, data, and materials from public disclosure, the project will not proceed.

VI. Costs and Schedules

EPRI and RES are responsible for their respective costs in implementing this Addendum. This Addendum does not create any binding obligation or enforceable right of action of any kind on the part of either party. This Addendum does not obligate any funds and is subject to the availability of appropriated funds.

Until such time as specific collaborative projects are identified and agreed to, no specific milestones have been established.

VII. DISPUTES

If a dispute arises out of or relating to this Addendum or any breach thereof, the parties will first attempt to settle the dispute through direct negotiation between the Project Contacts. If the Project Contacts cannot settle such a dispute, the dispute shall be submitted to the Senior Management Contacts (as defined in the MOU) for resolution.

AGREEMENT

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| <u>/RA/</u>                                | <u>9/28/16</u> | <u>/RA/</u>                                 | <u>9/30/16</u> |
| Michael F. Weber                           | Date           | Neil Wilmshurst                             | Date           |
| Director of Nuclear Regulatory<br>Research |                | Vice President and Chief Nuclear<br>Officer |                |
| U.S. Nuclear Regulatory Commission         |                | Electric Power Research Institute           |                |