

Long-Term Operations (LTO) Research Project

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LTO Research: Actions Over Preceding Year



- No explicit proposal was discussed in this area during 2009 WGIAGE meeting
- US initially presented concept and proposed to lead effort at the June 2009 PRG meeting
 - CSNI agreed to consider CAP during December meeting
 - US charged with developing CAP
- CAP initially prepared and submitted for approval at fall 2009 PRG meeting
 - CAP modified based on PRG input
 - CAP submitted for final approval
- Approval granted at December 2009 meeting

LTO Research: Current Research Plan



- **Objectives**

1. Identify technical areas of mutual interest related to age-related degradation of materials in safety-related systems, structures, components (SSCs) during long-term (greater than 60 years) operation
2. As a trial exercise, capture operating experience and regulatory treatment associated with degradation in buried tanks and piping

- **Phase I**

- Age-Related Degradation during LTO

- Identify technical and regulatory concerns associated with important SSCs
- Identify common issues among countries
- Develop plan for sharing information and potentially conducting joint research
- Develop and utilize International Forum for Reactor Aging Management (IFRAM)

- Buried Piping and Tank Database

- US has identified this as an issue important for LTO
- Understand regulatory treatment and technical concerns for each country
- Develop database of operating experience associated with age-related degradation
- Serve as a trial for coordinating LTO issues

LTO Research: Current Research Plan, cont.



- **Phase II**

- Additional activities will be proposed in a new CAPS
- Age-Related Degradation during LTO
 - Identify in the cooperative research plan completed during Phase I.
 - Focus on issues that are of interest to the greatest number of countries
- Buried Piping and Tank Database
 - May extend to include operating experience before the previous five year period
 - May expand to more fully characterize initial events that are documented in database

LTO Research: Deliverables & Milestones

- **Phase I**

- Age-Related Degradation during LTO

1. Issue query of potential LTO concerns: June 2010
2. Review concerns and identify possible follow-on activities: December 2010
3. Develop plan for follow-on research activities: May 2011
4. Develop and initiate IFRAM: TBD

- Buried Piping and Tank Database

1. Input on regulatory treatment and technical concerns for each country: June 2010
2. Identify similarities/differences in regulatory treatment: July 2010
3. Develop database scope, structure and content: June 2010
4. Initially populate database with operating experience events: June 2011
5. Develop report summarizing operating experience: December 2011
6. Develop plans/scope for database development: April 2012

- **Phase II**

- Describe in follow-on CAPS.
 - Age-Related Degradation during LTO: Phase I research plan
 - Buried Piping and Tank Database: Agree on scope after Phase I