

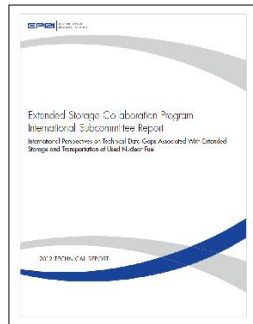


EPRI Extended Storage Collaboration Program (ESCP)

Update on the ESCP International Data Gap Analyses

Holger Völzke

Federal Institute for Materials Research and Testing (BAM)
Berlin, Germany



Holger Völzke

INMM 30th Spent Fuel Management Seminar
Jan 12-14, 2015, Arlington, VA, USA

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International Subcommittee Objectives

- **Conduct an international technical data gap survey**
 - ➔ Data Gap Report REV. 0 was published in 2012
 - ➔ Data Gap Report REV. 1 is going to be finalized in 2015
- **Share information with international R&D programs to close gaps identified in gap report**
- **Share information with IAEA CRP on “Demonstrating Performance of Spent Fuel and Related Storage System Components during Very Long Term Storage” (CRP T13014)**
- **Initiation of further R&D projects in participating countries**
- **Meetings twice a year in different countries to get local stakeholders involved**
- **Technical reports about major issues**
- **Consideration of the „transportation after storage“ issue**

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Brief History of International Subcommittee Meetings

1. **Vienna – June 2010** (in conjunction with IAEA Spent Fuel Storage Conference)
2. **London – October 2010** (in conjunction with PATRAM 2010)
3. **Charlotte, NC – December 2010**
4. **Berlin – June 2011** (expanded country participation (32 participants from 9 countries))
5. **Charlotte, NC – December 2011**
6. **St. Petersburg, FL – May 2012**
7. **Charlotte, NC – November 2012** (Data Gap Report published)
8. **Munich, Germany – May 2013** (in conjunction with OECD NEA CSNI Workshop)
9. **Charlotte, NC – December 2013**
10. **St. Petersburg, FL – May 2014**
11. **Tokyo, Japan – November 2014**
 - in conjunction with IAEA Demo 2nd RCM
 - 37 attendees from 13 countries
12. **Charlotte, NC – December 2014**
 - Discussion about definition and criteria for gap ranking and prioritization in an international perspective

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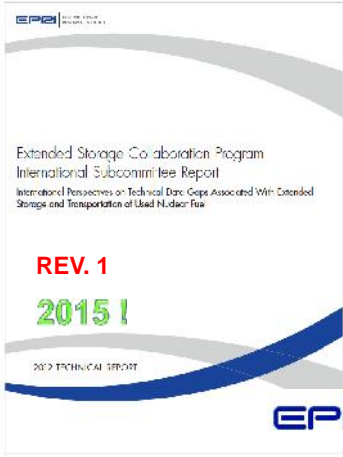
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Update of International Data Gap Report



Contributors

- Germany
- Hungary
- Japan
- Korea
- Spain
- UK
- USA

New:

- France
- Russia
- Argentina

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Approach to update the international data gap analyses:

- I. **Identification of degradation mechanisms concerning materials and relevant stress factors for extended storage**
 → Extended Storage: Interim storage period beyond the initially approved storage period (until final disposal or reprocessing)
- II. **Identification of data gaps taking into account the current state of knowledge**
- III. **Ranking of identified data gaps and the need to close them related to safety (Ranking levels)**
- IV. **Prioritization of approaches for closing data gaps concerning specific boundary conditions**

Ranking of data gaps

- Definition of **Ranking levels high, medium, low concerning safety related data needs for extended storage periods (→ Importance of R&D).**
- **Ranking criteria:**
 - Importance to safety goals shielding, safe enclosure, subcriticality, heat removal (Component or material is related directly, indirectly or even not related to a safety goal but may be of functional relevance)
 - Component is accessible and could be (easily) changed or not
 - Availability and quality of still existing data for the long-term
 - Existing safety margins are already known as high or low
 - Relevant degradation mechanism are well understood or there's lack of knowledge or uncertainty.
 - Decrease or increase of stress factors during long-term storage
 - Relevance for normal operation or accident conditions or even other (site) specific boundary conditions
- Gap reports by individual organizations may define and use different rankings depending on their specific goals and target groups.



Prioritization of data gaps

Can be done individually by each organization or country.

In any case criteria need to be defined and their relevance explained.

➤ **Prioritization criteria:**

- Ranking level **high, medium, low**
- Importance for licensing (regulatory considerations)
- Availability of resources (financial, technical, scientific)
- Complexity of issues
- Expected project time frames
- Spent fuel management policies
- Public perception



Future Meetings

13th EPRI/ESCP International Subcommittee Meeting

Options:

- Subsequently to the TopFuel Conference in Zürich on Friday, Sept. 18, 2015
- Alternatively at ITU (EU Institute for Transuranium Elements) Karlsruhe at another date

14th EPRI/ESCP International Subcommittee Meeting

Dec. 2015 in Charlotte, NC, USA

(in conjunction with ESCP main meeting)

15th EPRI/ESCP International Subcommittee Meeting

Potentially in conjunction with the IAEA Demo 3rd RCM in Spain (April 2016 ?)