

EPRI Extended Storage Collaboration Program

High Burnup Demonstration Subcommittee

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December 3, 2013
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Subcommittee Objective

The Subcommittee's main **objective** is to:

Support data collection assessments for the DOE/Industry High Burnup Demo to help develop the necessary technical basis for high burnup spent fuel retrievability and subsequent transport after extended dry storage.

Issues associated with this objective include:

- material degradation that effects cladding hydride formation and orientation,
- reduced ductility,
- creep,
- corrosion, and
- canister drying after loading.

Techniques that will be evaluated to address the objective include:

- Monitoring and inspection technologies to confirm fuel condition (i.e., data collection)
- Providing data for benchmarking predictive models
- Identification of separate effects and small-scale tests to provide data to support the objective using models to extrapolate degradation behavior
- Development of Time-limited Aging Analyses (TLAA)
- Identifying and conducting accelerated aging tests and analyses

Subcommittee Objective: Near-term Focus

The subcommittee's near-term focus is to evaluate and comment on the recently released test plan:

High Burn-up Dry Storage Cask Research and Development Project Draft Test Plan

- This draft test plan has been released for public comment.
 - 30-day comment period closes December 12, 2013.
- Near-term focus for the subcommittee is to identify potential monitoring and inspection technologies to include in the demo:
 - Subcommittee meeting: Wednesday, December 4 @ 3:30pm
 - Monitoring and Inspection Workshop: Friday, December 5
- Assessment of monitoring technologies and instrumentation that could be used in conjunction with a lid penetration is a critical path item.
 - This will require NRC certification amendment for storage and transportation.

EPRI

High Burn-up Dry Storage Cask Research and Development Project
Contract No.: DE-NE-000593

High Burn-up Dry Storage Cask Research and Development Project

Draft Test Plan

Prepared by: EPRI

REVISION LOG

Rev.	Date	Affected Pages	Revision Description
0	August, 19 2013		Initial Draft Test Plan delivered to DOE
1	September 13, 2013		Incorporate DOE comments
2	October 17, 2013	Exec Summary	Noted possible delay in sister rod schedule
3	October 30, 2013	Exec Summary	FN 8 An examination facility exists
4	October 31, 2013	Exec Summary	Clarification added on location and waste disposition

September 13, 2013