

Topical Report Update

NSNFP Strategy Meeting
Washington, DC

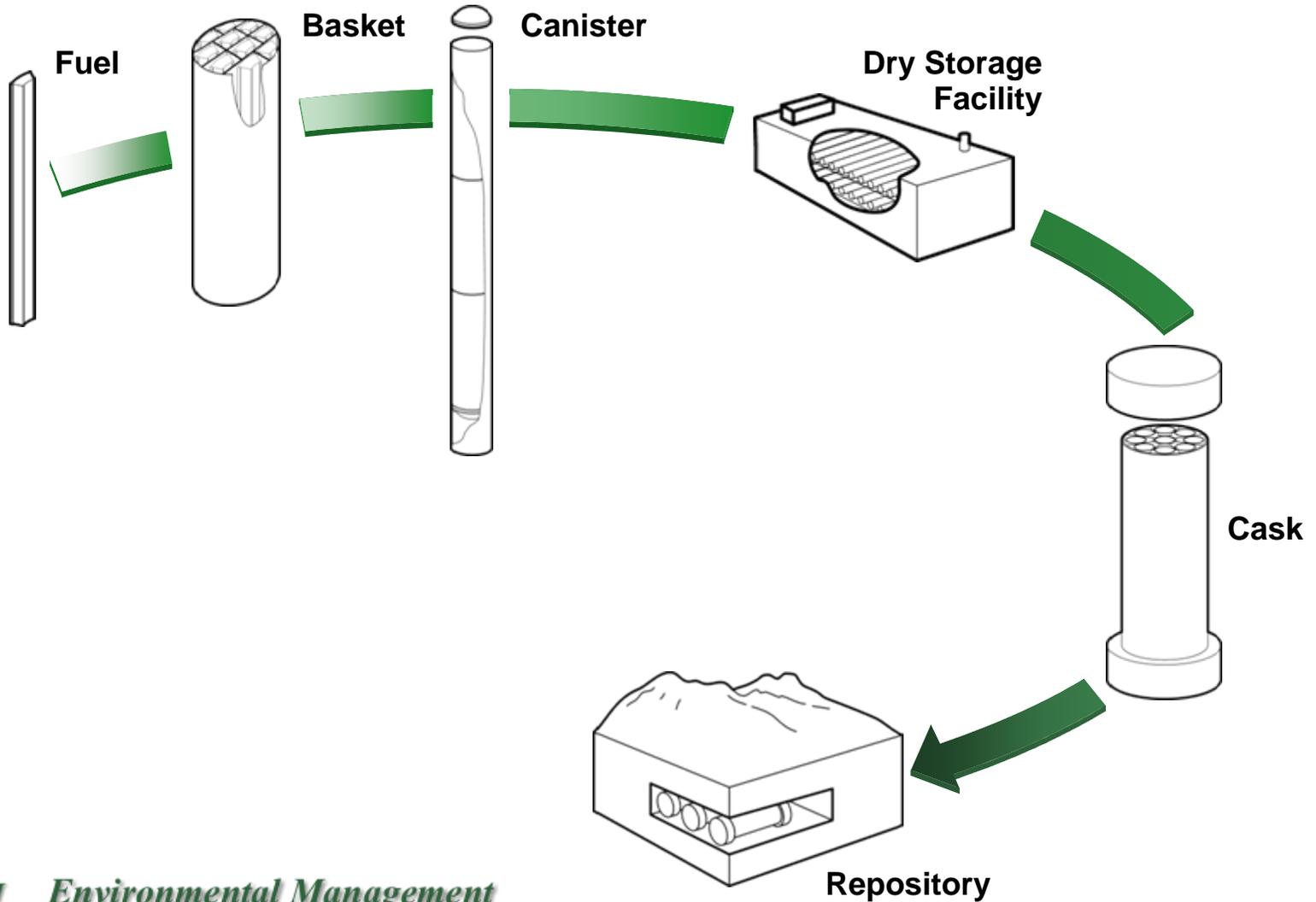
Brett Carlsen
March 2008



EM *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

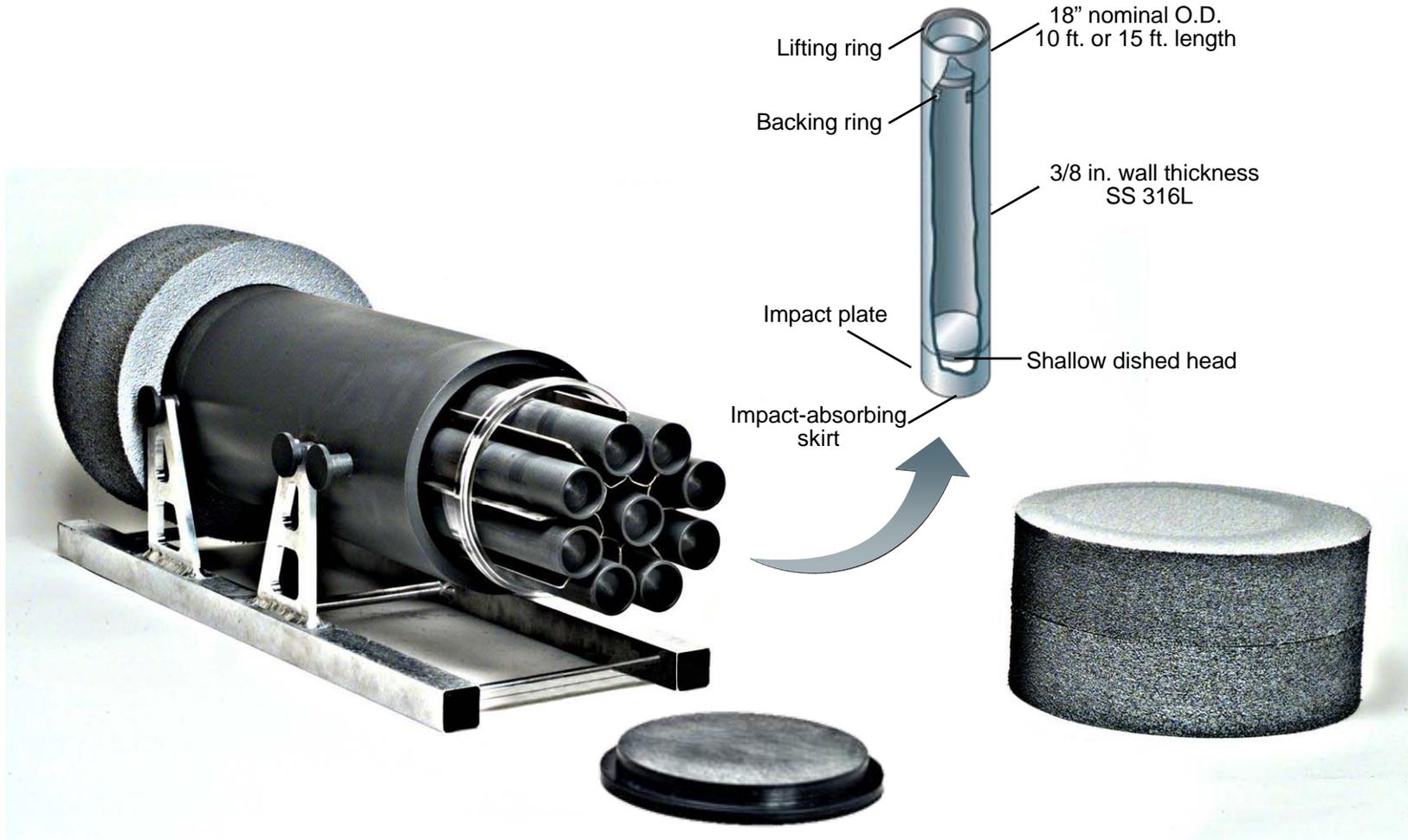
DOE SNF Disposition Path



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

A Redundant Transportation Package



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Overview

Opportunity

- Significantly reduce the fuel-specific analyses (and associated data) needed to demonstrate compliance by crediting the canister boundary for maintaining moderator exclusion

Approach

- Submit a topical report requesting NRC approval for crediting canister leaktightness during transportation

Topical Report Objectives

- Near Term...

To confirm that DOE SNFs packaged into DOE standardized SNF canisters will be acceptable for transportation

- Longer Term.....

To provide a starting point for an applicant to prepare an application for (or an amendment to) a certificate of compliance for a transportation package containing DOE SNF

DOE/SNF/REP-104

December 2007

- Evaluated potential degradation and materials interactions that could affect canister integrity during 50-years of interim storage
- Concluded that there are no credible degradation mechanisms that would significantly degrade canister performance provided that ...
 - Proper heated drying is conducted prior to sealing
 - Canister temperatures remain below drying temperatures
 - A monitoring program confirms pressure within the canister are consistent with analyzed conditions for a period of 10 years



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DOE/SNF/REP-104 (continued)

- Recommended further work
 - Potential for increases in free or physisorbed water which may result from thermal equilibration of hydrated corrosion product
 - Rate of hydrogen production by corrosion with free water vapor particularly at high temperatures
- Benefits of additional work
 - Conditions associated with cited results may be relaxed
 - Program risk is reduced



SRM SECY-07-0185

Moderator Exclusion in Transportation Packages

- Commission disapproved Staff recommendation to codify acceptable uses of moderator exclusion
- Commission directed Staff to focus efforts on use of burnup credit

But.....

- Commission also directed staff to gain experience through processing of applicants' requests for moderator exclusion

Pathforward

- Complete technical work by 6/30
- Compile report – by 7/28
- Informal review – by 8/11
- Comment resolution – by 8/25
- Formal Review – by 9/8
- Comment Resolution – by 9/22
- Submit final draft to DOE-ID – by 9/30
- Submit report to NRC – ??

