BSC

Calculation/Analysis Change Notice

Complete only applicable items.

3. Document Identifier:	4. Rev.:	5. CACN:
060-PSA-CR00-00100-000-00A	00A	001

6. Title:
Canister Receipt and Closure Facility Event Sequence Development Analysis

7. Reason for Change:

Provide clarification to the description to the Event Sequence Diagrams end states and the Event Tree end states used in the analysis.

8. Supersedes Change Notice: ☐ Yes If, Yes, CACN No.: _____ ☒ No

9. Change Impact:

Inputs Changed:	☐ Yes	☒ No	Results Impacted:	☐ Yes	☒ No
Assumptions Changed:	☐ Yes	☒ No	Design Impacted:	☐ Yes	☒ No

10. Description of Change:

In Section 4.3.2.1 (Event Sequence Diagrams) the attached text will replace all of the text on page 44 and the items numbered 5 through 8 on the top of page 45.

11. REVIEWS AND APPROVAL

Printed Name	Signature	Date
11a. Originator: Robert Garrett	[signature]	3/14/08
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Five possible mutually exclusive end states are considered in the ESDs, as follows:

1. **OK**—Indicates the absence of the other end states.

2. **Direct Exposure**—Indicates a potential personnel exposure to direct or reflected radiation. Excludes radionuclide release.

3. **Radionuclide Release**—Indicates, in addition to a potential personnel exposure to direct or reflected radiation, the radiation exposure resulting from a release of radioactive material from its confinement. Excludes intrusion of a moderator (such as water).

4. **Radionuclide Release, Important to Criticality**—This end state refers to a situation in which a radionuclide release occurs and a criticality investigation may be indicated.

5. **Important to Criticality**—This end state refers to a situation in which there has been no radionuclide release and a criticality investigation may be indicated.

For the development of event trees, the above end states are further developed to differentiate the consequences of the various states of release and exposure. The eight mutually exclusive end states include:

1. **OK**—Indicates the absence of the other end states.

2. **Direct Exposure, Loss of Shielding**—Applies to event sequences where an SSC providing shielding fails, leaving a direct path for radiation to stream. For example, this end state applies to a breached transportation cask with a transportation, aging, and disposal (TAD) canister inside maintaining its containment function. In another example, this end state applies to shield doors inadvertently opened. This end state excludes radionuclide releases.

3. **Direct Exposure, Degraded Shielding**—Applies to event sequences where an SSC providing shielding is not breached, but its shielding function is degraded. An example is a lead-shielded transportation cask that is dropped from a height significant enough for the lead to slump toward the bottom of the cask at impact, leaving a partially shielded path for radiation to stream. This end state excludes radionuclide releases.

4. **Radionuclide Release, Filtered**—Indicates a release of radioactive material from its confinement, through a filtered path, to the environment. The release is filtered when it is confined and filtered through the successful operation of the heating, ventilation, and air-conditioning (HVAC) system over its mission time. This end state excludes moderator intrusion.

5. **Radionuclide Release, Unfiltered**—Indicates a release of radioactive material from its confinement, through the pool of the Wet Handling Facility (WHF), or through an unfiltered path, to the environment. This end state excludes moderator intrusion.

6. **Radionuclide Release, Filtered, also Important to Criticality**—This end state refers to a situation in which a filtered radionuclide release occurs and a criticality investigation may be indicated.

7. **Radionuclide Release, Unfiltered, also Important to Criticality**—This end state refers to a situation in which an unfiltered radionuclide release occurs and a criticality investigation may be indicated.

8. **Important to Criticality**—This end state refers to a situation in which there has been no radionuclide release and a criticality investigation may be indicated.