

**LAR 1014-14, REVISION 1**

**SUMMARY OF PROPOSED CHANGES**

**Proposed Change #1**

Addition of three new loading patterns for the MPC-68M.

**Reason for Proposed Change #1**

This proposed change allows for storage of fuel assemblies with higher per assembly heat loads in the MPC-68M.

**Justification for Proposed Change #1**

The new loading patterns have been thermally evaluated and found to maintain component temperatures below the required limits. The proposed heat loads are below required limits and are also below calculated temperatures in previously approved amendments. Supporting thermal analyses have been performed, and are included in Chapter 4 of the FSAR. Additional supporting changes have also been included in Chapters 1, 2, 4, 5 and 6 of the FSAR. Marked up copies of the affected chapters are included, as well as proposed CoC pages to include the new patterns.

**Proposed Change #2**

Reduce cooling time to 1 year for all fuel types for storage in the MPC-68M.

**Reason for Proposed Change #2**

This change allows fuel assemblies with less than two years cooling time to be stored to support decommissioning of affected plants in a timely manner. The reduced cooling time will facilitate efficient decommissioning of plants.

**Justification for Proposed Change #2**

Thermal and shielding analyses were performed with updated burnup, cooling time and enrichment and the results of these analyses have been added to the FSAR chapters to support the reduced cooling time of 1 year.

**Proposed Change #3**

Add Damaged Fuel Isolators to be used for damaged fuel stored in the MPC-68M. Proposed pages of CoC Appendix A & B as well as supporting changes to FSAR chapters are included.

**Reason for Proposed Change #3**

This change allows fuel assemblies which are damaged but can be handled by normal means and whose structural integrity is such that geometric rearrangement of fuel is not expected, to be

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stored directly in MPC-68M locations approved for storage of damaged fuel. This change allows the use of Damaged Fuel Isolators (DFIs) installed at the top and bottom of the basket cell location as an option in place of storage in Damaged Fuel Containers (DFCs) for fuel meeting the specified conditions. Affected pages of CoC Appendix A & B and supporting changes to the FSAR chapters are provided.

**Justification for Proposed Change #3**

The DFI is designed to prevent the migration of fissile material in bulk or particulate form from the nuclear fuel stored in its cellular storage cavity. The DFI replaces the use of the DFC for damaged fuel which is able to be handled by normal means and whose structural integrity is such that geometric rearrangement of fuel is not expected. No new structural analyses are added as DFIs are not used to handle damaged fuel, and their inclusion does not result in an increase of temperatures or pressures and weights beyond those used in the design basis calculations.

**Clarifications and Editorial Suggestions in the CoC/FSAR**

- A) Modify the description of the vents in the overpack in the CoC. Remove the word “four” from section 1.b describing the air inlet and outlet vents. This was overly descriptive and is being removed.