

June 2025

Revision 25A

NAC-UMS

Universal Storage System

NAC-UMS RAI RESPONSE SUPPLEMENT 01

NON-PROPRIETARY VERSION

Docket No. 72-1015



Kanadevia Group

Atlanta Corporate Headquarters: 2 Sun Court, Suite 220, Peachtree Corners, Georgia 30092 USA
www.nacintl.com

Enclosure 1

Supporting Calculations

for

**NAC-UMS FSAR
Revision 25A**

(Docket No 72-1015)

NAC International

July 2025

Supporting Calculations, NAC-UMS FSAR, Revision 25A

Supporting Calculations

1. 71160-2026, Revision 2
2. EA790-2519, Revision 1

CALCULATIONS WITHHELD IN THEIR ENTIRETY PER 10 CFR 2.390

Enclosure 2

List of FSAR Changes

NAC-UMS FSAR, Revision 25A

NAC International

July 2025

List of Changes for the NAC-UMS FSAR, Revision 25A

Chapter/Page/ Figure/Table	Source of Change:	Description of Change
<u>Chapters 1 thru 10 – no changes</u>		
<u>Chapter 11</u>		
Page 11-x	Revision 25A	Revised title of Table 11.2.16-1.
Pages 11.2.16-3 thru 11.2.16-5	Revision 25A	Revised text, where indicated.
Page 11.2.16-8	Revision 25A	Revised Figure 11.2.16-3.
Page 11.2.16-9	Revision 25A	Revised title of Table 11.2.16-1.
Pages 11.3-5	Revision 25A	Deleted Reference 67.
<u>Chapters 12 thru 13 – no changes</u>		

Enclosure 3

LOEP and FSAR Changed Pages

NAC-UMS FSAR, Revision 25A

NAC International

July 2025

June 2025

Revision 25A

NAC-UMS

Universal Storage System

FINAL SAFETY ANALYSIS REPORT

NON-PROPRIETARY VERSION

Docket No. 72-1015



Kanadevia Group

Atlanta Corporate Headquarters: 2 Sun Court, Suite 220, Peachtree Corners, Georgia 30092 USA
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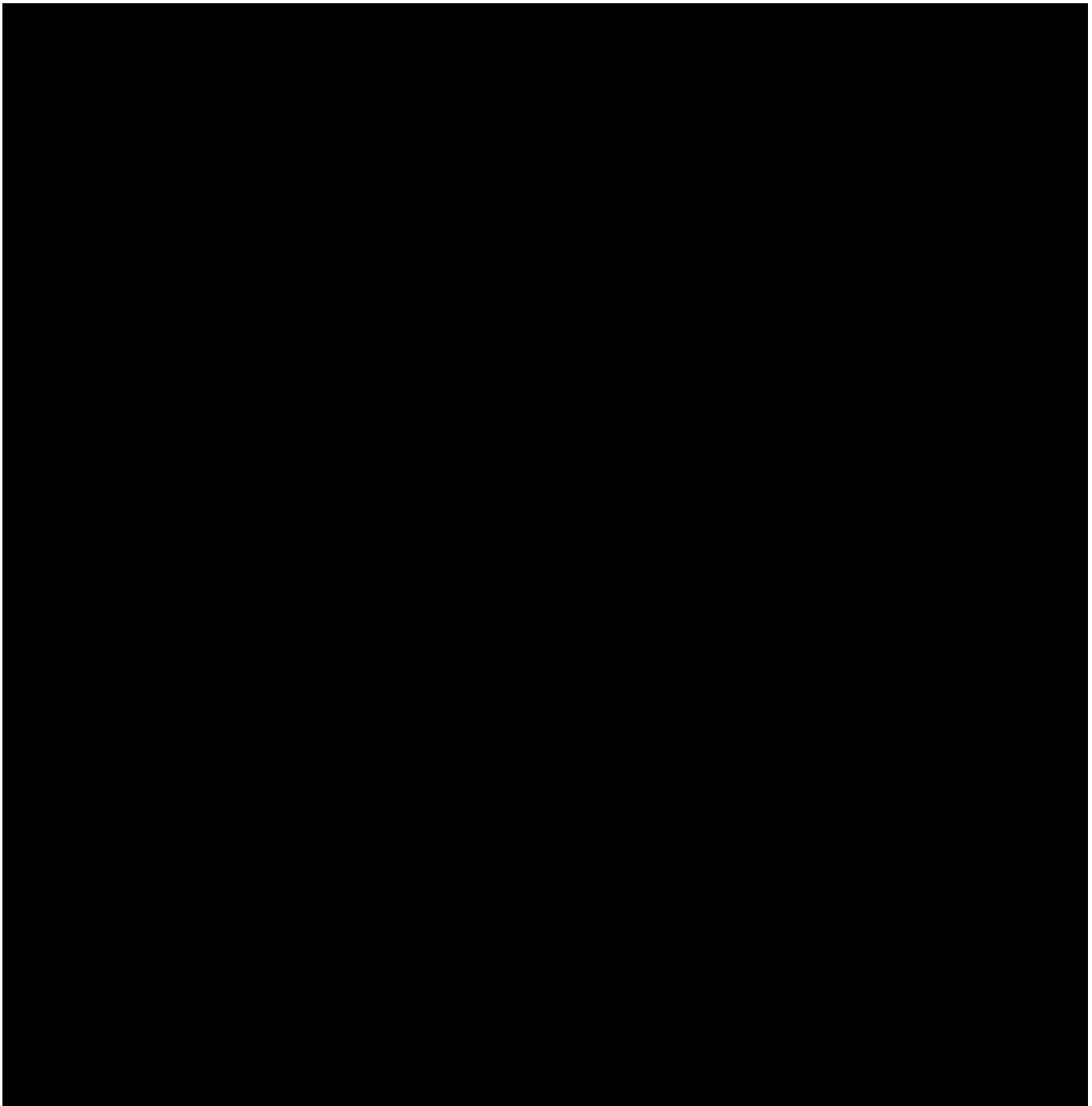
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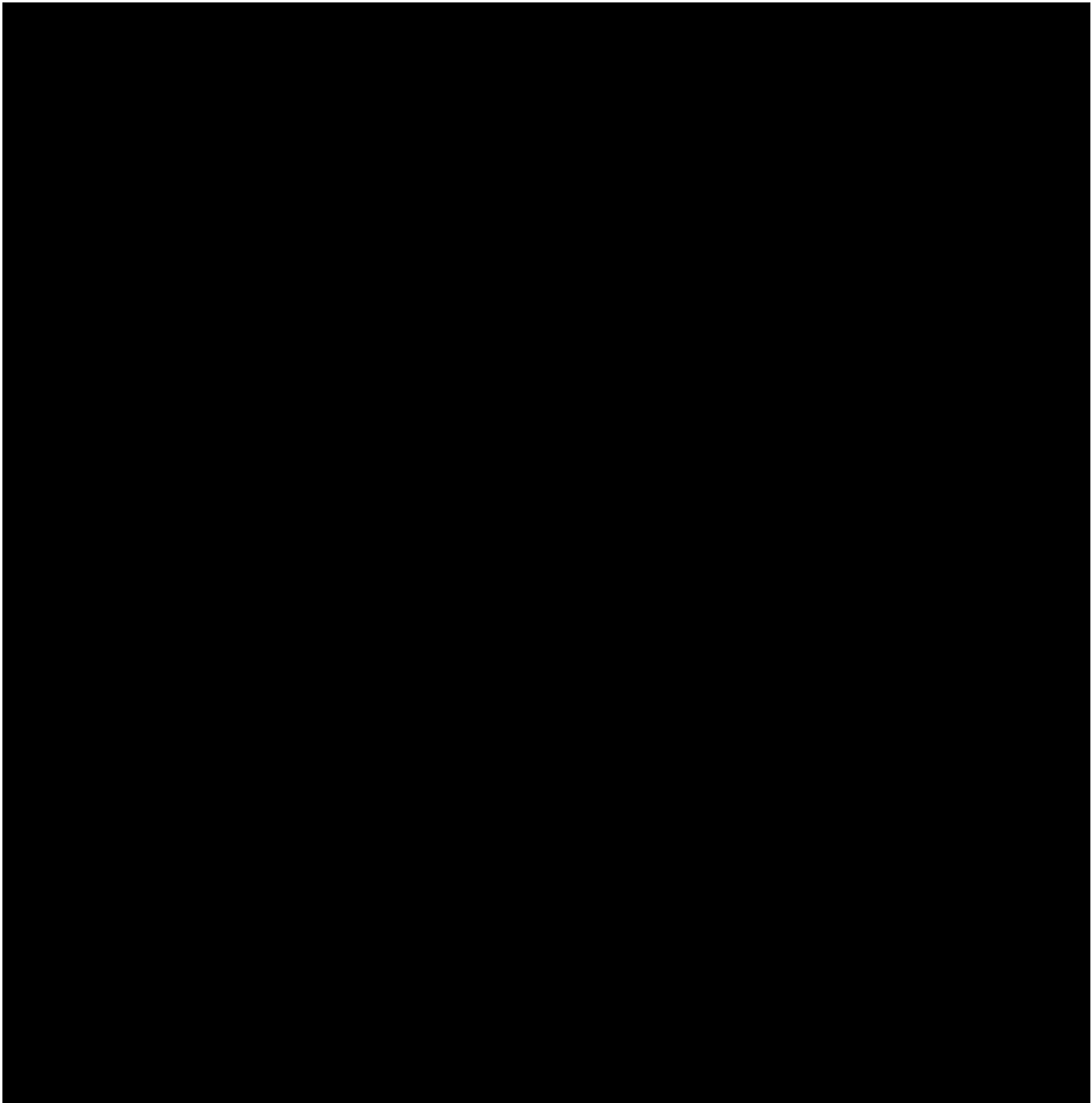


Case	Maximum Stress Intensity (ksi)	Margin of Safety Against Yield Strength
1	25.4	+1.36
2	21.8	+1.75
3	41.9	+0.43
4	34.7	+1.72

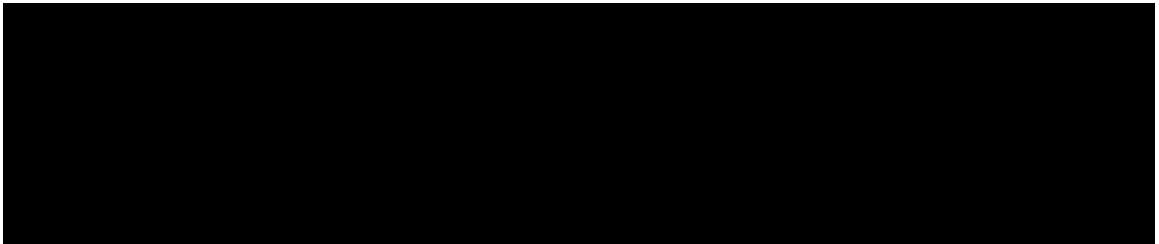
The case using the 60-inch spacing in conjunction with the minimal cross-section (Case 3) is identified as the bounding case. All stresses were shown to be less than the yield strength.

The results confirm that high burnup PWR fuel with a maximum distance of 60 inches from the bottom to the first grid will remain structurally adequate for the storage design basis cask end drop load conditions.

Tip-Over Evaluation



Stresses are evaluated against the cladding yield stress at a bounding fuel temperature of 752°F (400°C) to compute margins of safety. The minimum margins of safety in the three cladding materials all occur in the WE 14×14 Std fuel rod and are summarized in the following table.

A large black rectangular box redacting the content of the table mentioned in the text above.

Therefore, the PWR high burnup fuel rods remain structurally adequate during the cask tip-over accident event.

Figure 11.2.16-3 ANSYS Model for the PWR Fuel Rod Tip-Over Evaluation

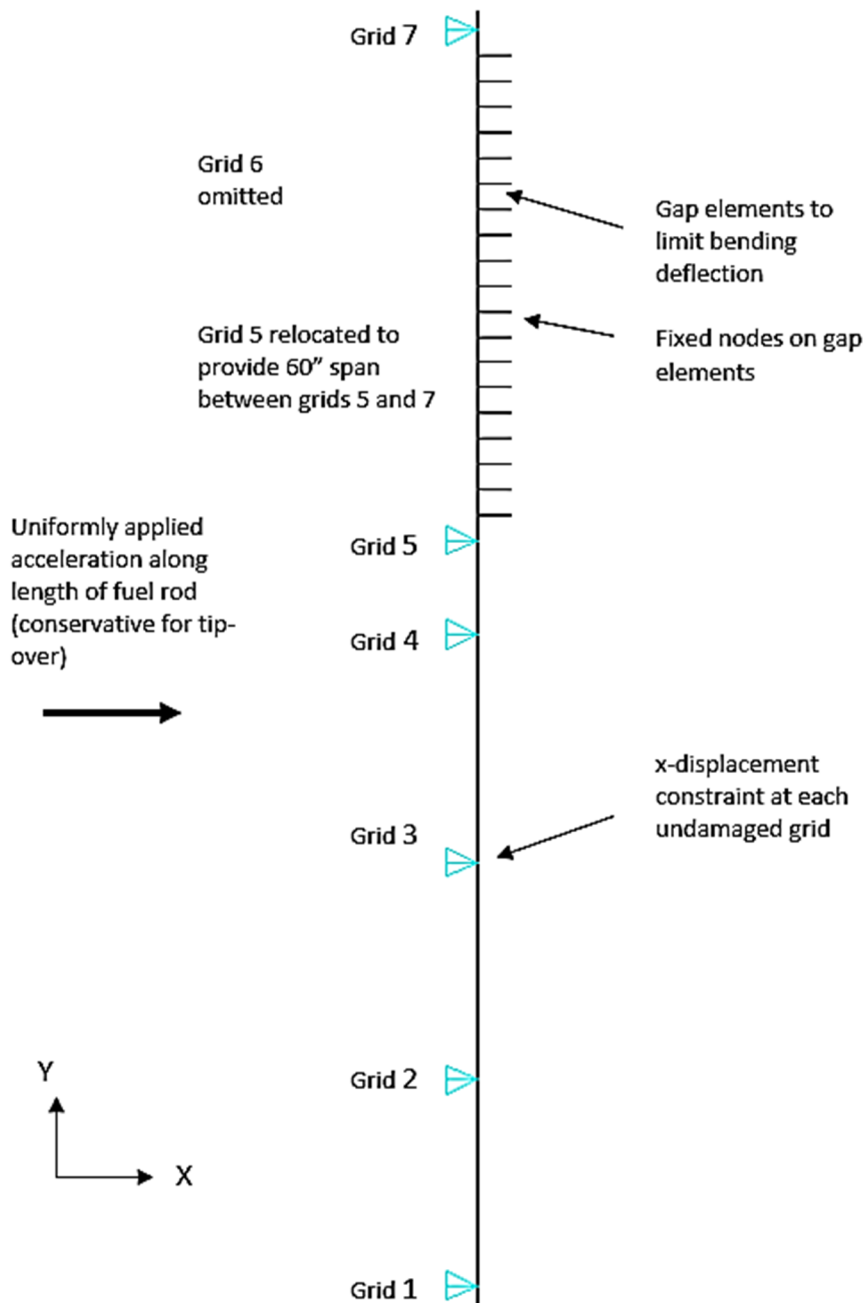
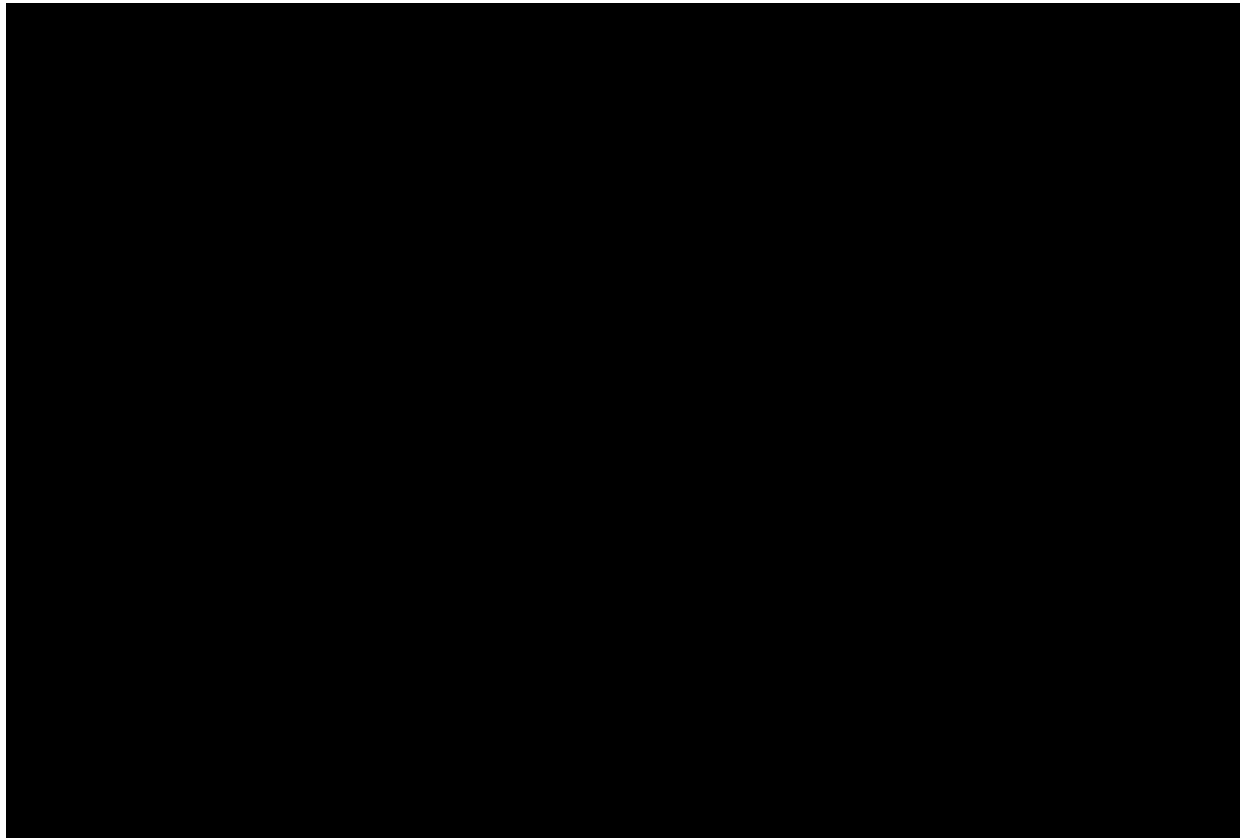


Table 11.2.16-1 PWR Fuel Assemblies for Tip-over Evaluation



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