



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 20, 2024

MEMORANDUM TO: Jill Shepherd, Chief
Materials Rulemaking
and Project Management Branch
Division of Rulemaking, Environmental,
and Financial Support
Office of Nuclear Material Safety
and Safeguards

FROM: Yoira Diaz-Sanabria, Chief
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

A handwritten signature in black ink, appearing to read "Yoira Diaz-Sanabria".

Signed by Diaz-Sanabria, Yoira
on 09/20/24

SUBJECT: USER NEED FOR RULEMAKING FOR AMENDMENT NO. 14, AND
REVISION TO AMENDMENT NOS. 0 THROUGH 13 FOR THE
MAGNASTOR® STORAGE SYSTEM

The following information is being provided to request rulemaking support for the following Division of Fuel Management certification activity to amend Title 10 of the *Code of Federal Regulations* (10 CFR) Part 72:

1. Changes to 10 CFR 72.214 rule text (changes appear in bold):

Certificate Number: 1031.

Initial Certificate Effective Date: February 4, 2009, superseded by Initial Certificate, Revision 1, on February 1, 2016, superseded by Initial Certificate, Revision 2, on October 16, 2023, **superseded by Initial Certificate, Revision 3 on TBD.**

Amendment Number 1 Effective Date: August 30, 2010, superseded by Amendment Number 1, Revision 1, on February 1, 2016, superseded by Amendment Number 1, Revision 2, on October 16, 2023, **superseded by Amendment Number 1, Revision 3, on TBD.**

Amendment Number 2 Effective Date: January 30, 2012, superseded by Amendment Number 2, Revision 1, on February 1, 2016, superseded by Amendment Number 2, Revision 2, on October 16, 2023, **superseded by Amendment Number 2, Revision 3 on TBD.**

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Amendment Number 3 Effective Date: July 25, 2013, superseded by Amendment Number 3, Revision 1, on February 1, 2016, superseded by Amendment Number 3, Revision 2, on October 16, 2023, **superseded by Amendment Number 3, Revision 3 on TBD.**

Amendment Number 4 Effective Date: April 14, 2015, superseded by Amendment Number 4, Revision 1, on October 16, 2023, **superseded by Amendment Number 4, Revision 2, on TBD.**

Amendment Number 5 Effective Date: June 29, 2015, superseded by Amendment Number 5, Revision 1, on October 16, 2023, **superseded by Amendment Number 5, Revision 2, on TBD.**

Amendment Number 6 Effective Date: December 21, 2016, superseded by Amendment Number 6, Revision 1, on October 16, 2023, **superseded by Amendment Number 6, Revision 2, on TBD.**

Amendment Number 7 Effective Date: August 21, 2017, as corrected (ADAMS Accession No. ML19045A346), superseded by Amendment Number 7, Revision 1, on October 16, 2023, **superseded by Amendment Number 7, Revision 2, on TBD.**

Amendment Number 8, Effective Date: March 24, 2020, superseded by Amendment Number 8, Revision 1, on October 16, 2023, **superseded by Amendment Number 8, Revision 2, on TBD.**

Amendment Number 9, Effective Date: December 7, 2020, superseded by Amendment Number 9, Revision 1, on October 16, 2023, **superseded by Amendment Number 9, Revision 2, on TBD.**

Amendment Number 10, Effective Date: January 18, 2023, **superseded by Amendment Number 10 Revision 1, on TBD .**

Amendment Number 11, Effective Date: October 16, 2023, **superseded by Amendment Number 11, Revision 1, on TBD.**

Amendment Number 12, Effective Date: October 16, 2023, **superseded by Amendment Number 12, Revision 1, on TBD.**

Amendment Number 13, Effective Date: December XX, 2024¹, **superseded by Amendment Number 13, Revision 1, on TBD.**

Amendment Number 14, Effective Date TBD.

SAR Submitted by: NAC International, Inc.
SAR Title: Final Safety Analysis Report for the MAGNASTOR® System.
Docket Number: 72-1031.
Certificate Expiration Date: February 4, 2029.
Model Number: MAGNASTOR®.

¹ Amendment No. 13 was sent to the Division of Division of Rulemaking, Environmental, and Financial Support (REFS) on June 18, 2024 (Agencywide Documents Access and Management System [ADAMS] Package Accession No. ML24075A113).

2. Purpose and scope of the amendments and Revisions:

By letters dated July 24, 2023 (ML23205A238 and ML23208A062), as supplemented on June 26, 2024 (ML24179A071), October 18, 2023 (ML23291A167), and August 6, 2024 (ML24219A227), NAC submitted an application for Amendment No. 14 and revisions to Amendment Nos. 0 through 13 for Certificate of Compliance (CoC) No. 1031 for the MAGNASTOR® system.

In addition to NRC correcting a typographical error in tables B2-10c and B2-10d in Revision 1 to Amendment Nos. 11 to 13, NAC requested approval of:

- a revised method of evaluation (MOE) for the non-mechanistic tipover accident correcting the parameter's error
- revised definitions of damaged and undamaged fuel in the technical specifications to clarify that damaged or missing grid spacers only applies to pressurized-water reactor (PWR) fuel assemblies
- revised inlet and outlet vent blockage and surveillance requirements in limiting condition for operation (LCO) 3.1.2, "STORAGE CASK Heat Removal System," in Appendix A to the CoC and associated technical specification bases
- removal of the reference to Type II Portland cement in the description of the CoC

3. Proposed Backfitting Discussion for the Direct Final Rule for the Revisions to Amendments 0-13

For the following reasons, the NRC has determined that the regulations in 10 CFR 72.62, "Backfitting," do not apply to this direct final rule. This direct final rule revises Amendment Nos. 0-13 for CoC No. 1031 for the MAGNASTOR® storage system, as currently listed in 10 CFR 72.214, "List of approved spent fuel storage casks." Revision 3 to Amendment Nos. 0-3; revision 2 to Amendment Nos. 4-9; and revision 1 to Amendment Nos. 10-13 to CoC No. 1031 would:

- Add a revised method of evaluation for the non-mechanistic tipover accident
- Clarify inlet and outlet vent blockage and surveillance requirements in LCO 3.1.2 in Appendix A to the CoC and the LCO's associated technical specification bases
- Clarify that damaged or missing grid spacers only applies to PWR fuel assemblies
- Remove the reference to Type II Portland cement in the description of the CoC
- correct a typographical error in tables B2-10c and B2-10d in Revision 1 to Amendment Nos. 11 to 13

Although NAC has manufactured casks under existing CoC No. 1031, Amendment Nos. 0-13, that are being revised by this final rule. As the vendor, NAC, is not within the scope of the backfitting provisions in 10 CFR 72.62.

Under 10 CFR 72.62, general licensees are entities that are within the scope of the backfitting regulations. However, according to NAC (ML22216A110), no general licensees have purchased the MAGNASTOR® systems under CoC No. 1031, Amendment Nos. 0-5, Amendment No. 8, and Amendment Nos. 10-12, which are in part, the subject of these revisions. In addition, by letter dated October 18, 2023

(ML23291A167), NAC provided letters from all its users for the MAGNASTOR storage system. None of the users in the letters are using Amendment Nos. 0-5, Amendment No. 8, and Amendment Nos. 10-12. Therefore, because CoC No. 1031 Amendments 0-5 and 8, and Amendment Nos. 10-12 are not in use by a licensee and no licensee has contracted with NAC to utilize storage casks for these amendments, the changes in the revisions for CoC No. 1031, Amendment Nos. 0-5, Amendment No. 8, and Amendment Nos. 10-12, which are approved in this direct final rule do not fall within the definition of backfitting under 10 CFR 72.62.

Dominion Energy Kewaunee at the Kewaunee independent spent fuel storage installation and ZionSolutions at its independent spent fuel storage installation are the two general licensees using revision 1 to Amendment No. 6 that could be affected by the issuance of revision 2 to Amendment No. 6. In its letter to NAC, Dominion Energy Kewaunee stated that it would voluntarily adopt revision 2 to Amendment No. 6 [ML23291A167]. ZionSolutions also stated in a letter that it intends to implement the revised certificate after its issuance [ML23291A167]. Because both licensees voluntarily intend to implement the revision, the issuance of revision 2 to Amendment No. 6 does not fall within the definition of backfitting under 10 CFR 72.62.

Arizona Public Service Company at the Palo Verde independent spent fuel storage installation and Duke Energy at the Catawba and McGuire independent spent fuel storage installations are the general licensees using Amendment No. 7, revision 1 that could be affected by issuance of revision 2 to Amendment No. 7. In their letters to NAC, Arizona Public Service Company and Duke Energy stated that they intend to implement revision 2 to Amendment No. 7 [ML23291A167]. Therefore, because the licensees voluntarily intend to implement the revision, issuance of revision 2 to Amendment No. 7 does not fall within the definition of backfitting under 10 CFR 72.62.

Constellation Energy Generation at its Three Mile Island Unit 1 independent spent fuel storage installation is the only general licensee using Amendment No. 9, revision 1 that could be affected by issuance of revision 2 to Amendment No. 9. In its letter to NAC, Constellation Energy Generation stated that it intends to implement revision 2 to Amendment No. 9, in a timely manner after NRC approval of the revision has been received [ML23291A167]. Therefore, because the licensee voluntarily intends to implement the revision, issuance of revision 2 to Amendment No. 9 does not fall within the definition of backfitting under 10 CFR 72.62.

Three Mile Island Nuclear Station, Unit 2 Solutions contracted with NAC to utilize storage casks using Amendment No. 13 and could be affected by issuance of revision 1 to Amendment No. 13. In its letter to NAC, Three Mile Island Nuclear Station, Unit 2 Solutions stated that it intends to implement the revised certificate for Amendment No. 13 for the MAGNASTOR® storage system at the Three Mile Island Nuclear Station, Unit 2, independent spent fuel storage installation after NRC approval of the revision [ML24219A227]. Therefore, because Three Mile Island Nuclear Station, Unit 2 Solutions voluntarily intends to implement the revision, issuance of revision 1 to Amendment No. 13 does not fall within the definition of backfitting under 10 CFR 72.62.

4. The proposed CoC, Technical Specifications (TS), and preliminary safety evaluation report (SER) have been placed in ADAMS (see references below) and are available for your use in the rulemaking package. The Division of Fuel Management will designate

these documents as Official Agency Records after the Executive Director for Operations has approved the rulemaking package (ML24211A238).

The Office of the General Counsel has reviewed this memorandum with its referenced documents and has no legal objection to its contents.

Docket No. 72-1031

ADAMS References:

1. Rulemaking Memo Amendment No. 14, and Revision to Amendment Nos. 0 Through 13 for the MAGNASTOR® Storage System (ML24211A239)
2. Proposed CoC 1031 Amendment 14 (ML24211A240)
3. Proposed CoC 1031 Amendment 14, TS Appendix A (ML24211A241)
4. Proposed CoC 1031 Amendment 14 TS Appendix B (ML24211A242)
5. Preliminary SER for CoC 1031 Issuance of Amendment 14 and Revision to Amendment Nos. 0-13 (ML24211A243)
6. Proposed CoC 1031 Amendment 0 Revision 3 (ML24211A244)
7. Proposed CoC 1031 Amendment 0 Revision 3, TS Appendix A (ML24211A245)
8. Proposed CoC 1031 Amendment 0 Revision 3, TS Appendix B (ML24211A246)
9. Proposed CoC 1031 Amendment 1 Revision 3 (ML24211A247)
10. Proposed CoC 1031 Amendment 1 Revision 3 TS Appendix A (ML24211A248)
11. Proposed CoC 1031 Amendment 1 Revision 3 TS Appendix B (ML24211A249)
12. Proposed CoC 1031 Amendment 2 Revision 3 (ML24211A250)
13. Proposed CoC 1031 Amendment 2 Revision 3 TS Appendix A (ML24211A251)
14. Proposed CoC 1031 Amendment 2 Revision 3 TS Appendix B (ML24211A252)
15. Proposed CoC 1031 Amendment 3 Revision 3 (ML24211A253)
16. Proposed CoC 1031 Amendment 3 Revision 3 TS Appendix A (ML24211A254)
17. Proposed CoC 1031 Amendment 3 Revision 3 TS Appendix B (ML24211A255)
18. Proposed CoC 1031 Amendment 4 Revision 2 (ML24211A256)
19. Proposed CoC 1031 Amendment 4 Revision 2 TS Appendix A (ML24211A257)
20. Proposed CoC 1031 Amendment 4 Revision 2 TS Appendix B (ML24211A258)
21. Proposed CoC 1031 Amendment 5 Revision 2 (ML24211A259)
22. Proposed CoC 1031 Amendment 5 Revision 2 TS Appendix A (ML24211A260)
23. Proposed CoC 1031 Amendment 5 Revision 2 TS Appendix B (ML24211A261)
24. Proposed CoC 1031 Amendment 6 Revision 2 (ML24211A262)
25. Proposed CoC 1031 Amendment 6 Revision 2 TS Appendix A (ML24211A263)
26. Proposed CoC 1031 Amendment 6 Revision 2 TS Appendix B (ML24211A264)
27. Proposed CoC 1031 Amendment 7 Revision 2 (ML24211A265)
28. Proposed CoC 1031 Amendment 7 Revision 2 TS Appendix A (ML24211A266)
29. Proposed CoC 1031 Amendment 7 Revision 2 TS Appendix B (ML24211A267)
30. Proposed CoC 1031 Amendment 8 Revision 2 (ML24211A268)
31. Proposed CoC 1031 Amendment 8 Revision 2 TS Appendix A (ML24211A269)
32. Proposed CoC 1031 Amendment 8 Revision 2 TS Appendix B (ML24211A270)
33. Proposed CoC 1031 Amendment 9 Revision 2 (ML24211A271)
34. Proposed CoC 1031 Amendment 9 Revision 2 TS Appendix A (ML24211A272)
35. Proposed CoC 1031 Amendment 9 Revision 2 TS Appendix B (ML24211A273)
36. Proposed CoC 1031 Amendment 10 Revision 1 (ML24211A274)
37. Proposed CoC 1031 Amendment 10 Revision 1, TS Appendix A (ML24211A275)
38. Proposed CoC 1031 Amendment 10 Revision 1, TS Appendix B (ML24211A276)
39. Proposed CoC 1031 Amendment 11 Revision 1 (ML24211A277)
40. Proposed CoC 1031 Amendment 11 Revision 1 TS Appendix A (ML24211A278)

41. Proposed CoC 1031 Amendment 11 Revision 1 TS Appendix B (ML24211A279)
42. Proposed CoC 1031 Amendment 12 Revision 1 (ML24211A280)
43. Proposed CoC 1031 Amendment 12 Revision 1 TS Appendix A (ML24211A281)
44. Proposed CoC 1031 Amendment 12 Revision 1 TS Appendix B (ML24211A282)
45. Proposed CoC 1031 Amendment 13 Revision 1 (ML24211A283)
46. Proposed CoC 1031 Amendment 13 Revision 1 TS Appendix A (ML24211A284)
47. Proposed CoC 1031 Amendment 13 Revision 1 TS Appendix B (ML24211A285)

SUBJECT: USER NEED FOR RULEMAKING FOR AMENDMENT NO. 14, AND REVISION TO AMENDMENT NOS. 0 THROUGH 13 FOR THE MAGNASTOR® STORAGE SYSTEM

DATED: September 20, 2024

DISTRIBUTION:

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ADAMS Accession Nos.: ML24211A238 (pkg), ML24211A239 (memo), ML24211A240 - ML24211A285 (enclosures)

***via email**

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