

**This letter contains proprietary information.
Withhold Enclosures 1 through 5 from public disclosure in accordance
with 10 CFR 2.390.**



Entergy Operations, Inc.
1340 Echelon Parkway
Jackson, MS 39213
Tel 601-368-5138

Ron Gaston
Director, Nuclear Licensing

10 CFR 50.55a(z)(1)

2CAN122103

December 10, 2021

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Relief Request ANO2-RR-21-002, Half-Nozzle Repair of
Reactor Vessel Closure Head Penetration #46 – Submittal of Analyses

Arkansas Nuclear One, Unit 2
NRC Docket No. 50-368
Renewed Facility Operating License No. NPF-6

Entergy Operations, Inc. (Entergy) submitted Relief Request ANO2-RR-21-002 for Arkansas Nuclear One, Unit 2 (ANO-2) via Reference 1. A flaw located in the Reactor Vessel Closure Head (RVCH), Penetration #46 was determined to be unacceptable based on requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). In Reference 1, Entergy proposed an alternative to the ASME Code repair/replacement requirements as a repair to the ANO-2 RVCH.

The NRC provided their verbal authorization to utilize Relief Request ANO2-RR-21-002 on November 9, 2021 (Reference 2).

As discussed in Reference 1, Entergy committed to supplying the final one-cycle flaw analytical evaluation, evaluation of repair, and the corrosion evaluation. Attached are these analyses.

Attachment 1 - "ANO-2 CEDM Penetration 46 Modification As-Left J-Groove One Cycle Justification," Document Number 32-9338774-001;

Attachment 2 - "OCJ IDTB Weld Anomaly Assessment at CEDM Nozzle No. 46 at ANO-2," Document Number 32-9338933-001;

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Attachment 3 - "ANO-2 CEDM IDTB Weld Repair One-Cycle Justification," Document Number 32-9338944-001;

Attachment 4 - "PWSCC Evaluation for ANO-2 CEDM Nozzle Penetration No. 46 IDTB Weld Repair," Document Number 51-9338718-001;

Attachment 5 - "Corrosion Evaluation of ANO-2 RVCH CEDM IDTB Weld Nozzle Penetration Repair," Document Number 51-9338948-001

Attachments 1 through 5 contain information proprietary to Framatome Inc. (Framatome).

Framatome requests that these documents be withheld from public disclosure in accordance with 10 CFR 2.390(a)(4). Affidavits supporting this request are contained in Attachments 6, 7, 8, 9, and 10. Attachments 11, 12, 13, 14, and 15 contain non-proprietary versions of the Framatome documents.

There are no new regulatory commitments established in this submittal.

If there are any questions or if additional information is needed, please contact Riley Keele, Manager, Regulatory Assurance, Arkansas Nuclear One, at 479-858-7826.

Respectfully,

Ronald W. Gaston
Digitally signed by
Ronald W. Gaston
Date: 2021.12.10
08:02:48 -06'00'

Ron Gaston

RWG/rwc

References

1. Entergy Operations, Inc. (Entergy) letter to the U. S. Nuclear Regulatory Commission (NRC), "Relief Request ANO2-RR-21-002 Half-Nozzle Repair of Reactor Vessel Closure Head Penetration #46," (2CAN112103), ML21309A007, dated November 5, 2021.
2. T. Wengert (NRC email to R. D. Keele, Jr. (Entergy), "Verbal Authorization of Relief Request ANO2-RR-21-002 (EPID L-2021-0084)," (2CNA112102), ML21314A121, dated November 9, 2021.

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Attachments:

1. "ANO-2 CEDM Penetration 46 Modification As-Left J-Groove One Cycle Justification," Document Number 32-9338774-001 **PROPRIETARY**
2. "OCJ IDTB Weld Anomaly Assessment at CEDM Nozzle No. 46 at ANO-2," Document Number 32-9338933-001 **PROPRIETARY**
3. "ANO-2 CEDM IDTB Weld Repair One-Cycle Justification," Document Number 32-9338944-001 **PROPRIETARY**
4. "PWSCC Evaluation for ANO-2 CEDM Nozzle Penetration No. 46 IDTB Weld Repair," Document Number 51-9338718-001 **PROPRIETARY**
5. "Corrosion Evaluation of ANO-2 RVCH CEDM IDTB Weld Nozzle Penetration Repair," Document Number 51-9338948-001 **PROPRIETARY**
6. Affidavit for Document Number 32-9338774-001
7. Affidavit for Document Number 32-9338933-001
8. Affidavit for Document Number 32-9338944-001
9. Affidavit for Document Number 51-9338718-001
10. Affidavit for Document Number 51-9338948-001
11. "ANO-2 CEDM Penetration 46 Modification As-Left J-Groove One Cycle Justification," Document Number 32-9339466-001 **NON-PROPRIETARY**
12. "OCJ IDTB Weld Anomaly Assessment at CEDM Nozzle No. 46 at ANO-2," Document Number 32-9339477-001 **NON-PROPRIETARY**
13. "ANO-2 CEDM IDTB Weld Repair One-Cycle Justification," Document Number 32-9339421-001 **NON-PROPRIETARY**
14. "PWSCC Evaluation for ANO-2 CEDM Nozzle Penetration No. 46 IDTB Weld Repair," Document Number 51-9339429-001 **NON-PROPRIETARY**
15. "Corrosion Evaluation of ANO-2 RVCH CEDM IDTB Weld Nozzle Penetration Repair," Document Number 51-9339414-001 **NON-PROPRIETARY**

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cc: NRC Region IV Regional Administrator
NRC Senior Resident Inspector – Arkansas Nuclear One
NRC Project Manager – Arkansas Nuclear One
Designated Arkansas State Official

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