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U.S. Nuclear Regulatory Commission
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Dresden Nuclear Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

Subject: Deviation from BWR Vessel and Internals Project (BWRVIP) Guideline – Steam Dryer Lifting Lug Repair Weld Filler Metal

Reference:
1) BWRVIP-181-A: BWR Vessel and Internals Project, Steam Dryer Repair Design Criteria. EPRI, Palo Alto, CA: 2010. 1020997.

2) BWRVIP-84, Revision 1: BWR Vessel and Internals Project, Guidelines for Selection and Use of Materials for Repairs to BWR Internal Components. EPRI, Palo Alto, CA: 2011. 1022836.

3) BWRVIP-94NP, Revision 2: BWR Vessel and Internals Project, Program Implementation Guide. EPRI, Palo Alto, CA: 2011. 1024452

Exelon Generation Company, LLC (Exelon) is a member of the BWR Vessel and Internals Project (BWRVIP) and has committed to implementing BWRVIP products and to providing timely notification to the NRC staff if an applicable aspect of a BWRVIP product will not be implemented.

During disassembly of the reactor pressure vessel and internals for the Dresden Unit 2 refueling outage, D2R22, a steam dryer lifting lug was identified to be rotated out of position.

A modification to the lifting lug assembly was performed to correct the as-found condition of the lifting lug and to prevent any future rotation of the remaining three lifting lugs. The modification prevents rotation through the use of an anti-rotation pin. The pin contains a square head and is retained in place with two fillet welds on either side of the head. This modification may also be installed on the Dresden Unit 3 lifting lugs in a future outage.

The modification is performed in accordance with BWRVIP-181-A (Reference 1) which requires that materials, fabrication and welding shall be in accordance with the current revision of BWRVIP-84 (Reference 2). The requirements of both documents are classified as BWRVIP "needed" guidance.

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Both the anti-rotation pin and the existing lifting lug are made from XM-19 material. The fillet welds between the pin and the lug are made with 316L filler metal. BWRVIP-84, Revision 1, Appendix C, only recognizes E/ER209 filler metal for welding to XM-19 metal. Therefore, use of 316L filler metal deviates from the existing guideline.

A Deviation Disposition was prepared in accordance with BWRVIP-94, Revision 2 (Reference 3). The Deviation Disposition contains an evaluation documenting the acceptability of using the alternative weld filler metal.

The use of 316L filler metal, rather than E/ER209, for underwater welding of XM-19 base metals for repair of the steam dryer lifting lug assemblies is technically justified based on the following:

- This is a non-structural weld and the extra strength provide by E/ER209 material is not required.
- The probability of this fillet weld cracking is reduced by using 316L filler metal.
- The vendor has experience and qualified procedures for applying 316L underwater.
- Other utilities have used 316L successfully in similar underwater repair applications on steam dryers.

This evaluation provided adequate justification for the repairs of the steam dryer lifting lug assemblies at Dresden Units 2 and 3.

This letter is being transmitted in accordance with Section 3.5 of BWRVIP-94 for information only and no action is required.

If you should have any questions, please contact Robert Testin at 815-416-3112.

Respectfully,

David M. Czufin
Site Vice President
Dresden Nuclear Power Station

cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector – Dresden Nuclear Power Station
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