



**SVP-15-046**

**June 19, 2015**

**U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001**

**Quad Cities Nuclear Power Station, Unit 1  
Renewed Facility Operating License No. DPR-29  
NRC Docket No. 50-254**

**Subject: Owner's Activity Report Submittal  
Fifth 10-Year Interval 2015 Refueling Outage Activities**

**Reference: Letter from T. Tate (USNRC) to M. Pacilio (Exelon), "Quad Cities Nuclear Power Station, Units 1 and 2 - Safety Evaluation in Support of Request for Relief Associated with the Fifth 10 Year Interval Inservice Inspection Program," dated September 30, 2013.**

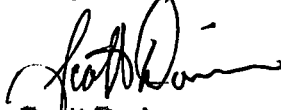
**This letter submits the Owner's Activity Report (i.e., Form OAR-1) and In-vessel Visual Inspection (IVVI) Report for the Quad Cities Nuclear Power Station (QCNPS) Unit 1 refueling outage (Q1R23) which began on March 2, 2015, and was completed on March 23, 2015. This is the first refueling outage conducted in the first inspection period of the fifth 10-year inservice inspection interval for QCNPS Unit 1. A copy of the Owner's Activity Report and the IVVI Report are provided as attachments to this letter.**

**This Owner's Activity Report is submitted in accordance with American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Case N-532-4, "Repair/Replacement Activity Documentation Requirements and Inservice Summary Report Preparation and Submission," and the referenced NRC Safety Evaluation, which authorized use of Code Case N-532-4 at QCNPS (i.e., Relief Request ISR-09). Code Case N-532-4 requires an Owner's Activity Report Form OAR-1 to be prepared and certified upon completion of each refueling outage. In accordance with the conditions of Code Case N-532-4, this OAR-1 form is being submitted within ninety days of the completion of the refueling outage.**

**The IVVI results are provided to report completed vessel internal inspections and to document B-N-1 and B-N-2 relief request exam completion. Additionally, no welds were reclassified or changed status within the IGSCC program this outage.**

**Should you have any questions concerning this letter, please contact Mr. Wally Beck,  
Regulatory Assurance Manager, at (309) 227-2800.**

**Respectfully,**



**Scott Darin**  
**Site Vice President**  
**Quad Cities Nuclear Power Station**

**Attachments: 1. Owner's Activity Report, Form OAR-1**  
**2. In-vessel Visual Inspection Report**

**cc: Regional Administrator -- Region III**  
**NRC Senior Resident Inspector, Quad Cities Station**

Attachment 1  
Owners Activity Report, Form OAR-1

**FORM OAR-1 OWNER'S ACTIVITY REPORT**

Report Number Refueling Outage O1R23 OAR-1

Plant Quad Cities Nuclear Power Station, 22710 206<sup>th</sup> Ave. North, Cordova, IL 61242

Unit No. 1 Commercial Service Date 02/18/1973 Refueling Outage Number O1R23  
(if applicable)

Current Inspection Interval 5<sup>th</sup> Inspection Interval (ISI), 2<sup>nd</sup> Inspection Interval (Containment)  
(1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, other)

Current Inspection Period 1<sup>st</sup> Inspection Period (ISI), 2<sup>nd</sup> Inspection Period (Containment)  
(1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)

Edition and Addenda of Section XI applicable to the Inspection Plans 2007 Edition with 2008 Addenda (ISI),  
2001 Edition with 2003 Addenda (Containment)

Date / Revision of Inspection Plans 9/5/14 / Revision 1

Edition and Addenda of Section XI applicable to repair/replacement activities, if different than the inspection plans N/A

Code Cases used: N-532-4, N-649

**CERTIFICATE OF CONFORMANCE**

I certify that (a) the statements made in this report are correct; (b) the examinations and tests, meet the Inspection Plan as required by the ASME Code, Section XI; and (c) the repair/replacement activities and evaluations supporting the completion of O1R23 conform to the requirements of Section XI (refueling outage number)

Signed , ISI Coordinator  
(Owner or Owner's designee. Title)

Date 6/11/15

**CERTIFICATE OF INSERVICE INSPECTION**

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Illinois and employed by HSB Global Standards of Hartford, Connecticut have inspected the items described in this Owner's Activity Report, and state that to the best of my knowledge and belief, the Owner has performed all activities represented by this report in accordance with the requirements of Section XI

By signing this certificate neither the Inspector nor his employer makes any warranty expressed or implied concerning the repair/replacement activities and evaluation described in this report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection

  
(Inspector's Signature)

Commissions

IL 2211; NB13175 A, N, I  
National Board, State, Province, and Endorsements

Date 16 Jun 15

**Attachment 1**  
**Owners Activity Report, Form OAR-1**

**TABLE 1**  
**ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRED**  
**EVALUATION FOR CONTINUED SERVICE**

[illegible]

Attachment 1  
Owners Activity Report, Form OAR-1

**TABLE 2**  
**ABSTRACT OF REPAIR/REPLACEMENT ACTIVITIES REQUIRED FOR CONTINUED SERVICE**

[illegible]

Attachment 2  
In-vessel Visual Inspection Report

The ASME Section XI inspections credited during Q1R23 IVVI activities include the once-per-period B-N-1 inspection of the reactor vessel interior and B-N-2 inspections of reactor vessel interior attachments. Credit is being taken for the BWRVIP examinations in place of the B-N-1 and B-N-2 examinations in accordance with Quad Cities Station Relief Request I5R-06, "Request for Relief for the Use of BWRVIP Guidelines in Lieu of Specific ASME Code Requirements on Reactor Vessel Internals and Components Inspection In Accordance with 10CFR50.55a(a)(3)(i) Alternative Provides Acceptable Level of Quality and Safety".

To implement the requirements of the Boiling Water Reactor Vessel Internals Program (BWRVIP), GE-Hitachi (GEH) was contracted to perform the In-Vessel Visual Inspections (IVVI). The following components and assemblies were examined:

- Visual inspections of the four Steam Dryer wall support lugs
- Visual inspections of two Jet Pump Attachment welds RB-1
- Visual inspections of six Upper Sample Bracket Attachments
- Visual inspections of six Lower Sample Bracket Attachments
- Visual inspections of four Upper Guide Rod Support Bracket Attachments
- Visual inspections of two Lower Guide Rod Support Bracket Attachments
- Visual inspections of Core Shroud Vertical welds V6, V29, V30, V31, and V32
- RPV interior surfaces in areas near BWRVIP exams in accordance with Relief Request I5R-06.

To implement the requirements of the Boiling Water Reactor Vessel Internals Program (BWRVIP), GE-Hitachi (GEH) was contacted to perform the In-Vessel Visual Inspections (IVVI) and Ultrasonic Testing (UT). The following components and assemblies were examined:

- 67 components on jet pump assemblies in accordance with the BWRVIP-41 Rev. 3, "BWR Jet Pump Assembly Inspection and Flaw Evaluation Guidelines".
- 38 core spray piping welds via visual exam in accordance with the BWRVIP-18 Revision 1-A, "BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines".
- 16 core spray piping P4 welds via UT exam in accordance with the BWRVIP-18 Revision 1-A, "BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines".
- All 12 core spray sparger brackets, 50% of the sparger nozzle S3a/b welds (on the upper spargers), all 4 core spray sparger T-box cover S1 welds, 2 of 4 core spray lower sparger drain plug S3c welds, all 8 core spray sparger T-box S2 welds and all 8 of the sparger pipe end cap S4 welds in accordance with the BWRVIP-18 Revision 1-A, "BWR Core Spray Internals Inspection and Flaw Evaluation Guidelines".

Attachment 2  
In-vessel Visual Inspection Report

- 5 core shroud vertical welds in accordance with BWRVIP-76 Revision 1, "BWR Core Shroud Inspection and Flaw Evaluation Guidelines".
- 4 Attachment welds for the steam dryer support lugs in accordance with BWRVIP-48-A, "Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines".
- 4 Attachment welds for the steam dryer guide rod support bracket in accordance with BWRVIP-48-A, "Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines".
- 2 Attachment welds for the steam separator guide rod support bracket in accordance with BWRVIP-48-A, "Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines".
- 12 Attachment welds for the surveillance sample holder brackets in accordance with BWRVIP-48-A, "Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines".
- Top guide rim weld at 20 cell locations in accordance with BWRVIP-26-A, "BWR Top Guide Inspection and Flaw Evaluation Guidelines".
- 4 top guide aligner assemblies in accordance with BWRVIP-48-A, "Vessel ID Attachment Weld Inspection and Flaw Evaluation Guidelines".
- Steam dryer examinations of the tee to cap doubler welds. Dryer inspections were performed in accordance with BWRVIP-139-A, "Steam Dryer Inspection and Flaw Evaluation Guidelines".

In addition to the BWRVIP inspection guidance, the following augmented examinations were also performed as part of the Q1R23 IVVI activities:

- 21 jet pump components not required by BWRVIP-41 Rev. 3, "BWR Jet Pump Assembly Inspection and Flaw Evaluation Guidelines" per programmatic requirements.
- 2 Nuclear Instrument Dry Tubes in accordance with GEH SIL 409-Rev 4
- Welds and flow-holes on 4 feedwater spargers per NUREG 0619
- Selected cast austenitic stainless steel components in accordance with license renewal commitments.
- Re-inspection of mechanical damage at 1 steam separator location per programmatic requirements.

Multiple indications (gouges and rub marks) were identified on all four of the Steam Dryer wall support lugs. These indications were previously observed in Q1R22. A comparison of the inspection results from Q1R22 to Q1R23 found no significant change to the previous indications and no new indications were identified. These indications are documented in IR 2464537 and evaluated for continued service under EC 400050. Quad Cities will continue to monitor these conditions in accordance with the Reactor Internals Program.