



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

November 18, 2009

EA-09-247

Mr. Charles G. Pardee
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO), Exelon Nuclear
4300 Winfield Road
Warrenville IL 60555

**SUBJECT: RESPONSE TO DISPUTED NON-CITED VIOLATION BYRON STATION,
UNIT 2, INSPECTION REPORT 05000455/2009003**

Dear Mr. Pardee:

On September 8, 2009, Mr. Daniel J. Enright, Exelon Generation Company, LLC (Exelon), Byron Station, Unit 2 provided a response to an NRC Inspection Report issued on August 7, 2009, concerning activities conducted at your facility. Specifically, the Exelon letter contested one non-cited violation (NCV) contained in the inspection report, namely NCV 05000455/2009003-01, associated with the "Failure to comply with Technical Specification (TS) 3.4.13.B reactor coolant system (RCS) pressure boundary leakage." By our letter dated October 8, 2009, the NRC acknowledged your letter and advised you that we were evaluating your reply and would inform you of the results of our evaluations. We have completed our review of your response.

In the September 8, 2009 letter, your staff stated that on June 24, 2009, Byron Station Unit 2 correctly complied with TS 3.4.13.B. Specifically, the leakage from the process sampling line was an isolable reactor coolant system pressure boundary leak and therefore excluded from TS 3.4.13 pressure boundary limit. Your staff provided information to support this position, including:

- an interpretation of the definition of a "nonisolable" fault and inferred definition of "isolable" fault;
- the potential for uncontrolled RCS leakage growth and further deterioration did not exist in this process line fault condition because an isolation valve upstream of the fault was closed;
- the leakage was bounded by 0.5 gpm, the design seat leakage past this valve's seat. At the time of the event, the leakage past the valve seat was very small;
- the very small leakage past the isolation valve's seat was acceptable because leak tightness (zero leakage) is not a requirement as evidenced by allowed leakages for other TS valves; and

- the NCV is not consistent with how the NRC approached similar situations at other utilities.

NRC Staff's Review:

The NRC staff reviewed the information you provided to determine whether the leakage from the process sampling line should be classified as a pressure boundary leak as stated in the Inspection Report or as identified leakage as presented in your September 8, 2009, letter. These staff members were independent of the initial inspection effort. The staff members reviewed several documents including Regulatory Guide 1.45, "Guidance on Monitoring and Responding to Reactor Coolant System Leakage," and NUREG 1431, "Standard Technical Specifications Westinghouse Plants," recordings of discussions associated with a request for a Notice of Enforcement Discretion, Action Report 000934800, numerous emergency notifications, and licensee events reports. After careful consideration of the information you provided, we have concluded that the violation occurred as stated in the inspection report.

Pressure boundary leakage as defined by TS 1.1 is "LEAKAGE (except SG [steam generator] LEAKAGE) through a nonisolable fault in an RCS component body, pipe wall, or vessel wall." On June 26, 2009, your staff identified a pinhole in a weld on a reactor coolant system piping connection between a closed sample isolation valve (2PS9350B) and the closed inboard containment isolation valve (2PS9355B). The source of the leakage was pressure boundary piping. Your staff provided information with respect to the definition of "nonisolable." The staff agrees that an isolation device in a piping system could be used to isolate a leak such that the leak would not be considered pressure boundary leakage as defined above. The staff agrees the leakage would be bounded by the design seat leakage of about 0.5 gpm during the periods of time the sample isolation valve (2PS9350B) remained closed. However, prior to the repairs on June 26, the as-found position of the sample isolation valve (2PS9350B) did not isolate the pressure boundary flaw, that is, leakage continued through the weld.

Your letter presented a position that valve seat for 2PS9350B did not need to be leaktight as evidenced by the allowance of leakage past pressure isolation valve seats. The staff agrees that NUREG 1431, "Standard Technical Specifications Westinghouse Plants," specifically states that the leakage past the pressure isolation valve seats is not pressure boundary leakage; however, no such distinction is made with other valves. The leakage limit for the pressure isolation valves is an indication that the pressure isolation valves themselves are degraded or degrading and is not indicative of material degradation of a pressure retaining component, piping wall or vessel wall.

Although the leakage through the weld was very small, the staff concluded the leak through the pinhole in the weld was a breach in the pressure boundary and indicative of degradation of the material of pressure retaining components. Therefore, the leak through the pinhole in the weld constituted pressure boundary leakage and the violation as stated is valid. With respect to an apparent inconsistency with how the NRC approached similar situations at other utilities, each situation was evaluated independently. The staff does believe that the Standard Technical Specifications should be clarified to avoid future confusion on this issue. Accordingly, the staff will engage the Technical Specifications Task Force, and work with them to provide a solution, which can be made available for adoption by licensees through the NRC's Consolidated Line Item Improvement process.

C. Pardee

-3-

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and your September 8, 2009, response will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

/RA/

Cynthia D. Pederson
Deputy Regional Administrator

Docket No. 50-455
License No. NPF-66

cc w/encl: Distribution via ListServ

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and your September 8, 2009, response will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

/RA/

Cynthia D. Pederson
Deputy Regional Administrator

Docket No. 50-455
License No. NPF-66

cc: Distribution via ListServ

DOCUMENT NAME: G:\Byron\disputed violation letter.doc

Publicly Available Non-Publicly Available Sensitive Non-Sensitive

To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	RIII		RIII		RIII		RIII	
NAME	RSkokowski:ntp	AMStone	SOrth *PL for*(see below)	SWest	CPederson			
DATE	11/10/09	11/10/09	11/10/09	11/16/09	11/18/09			

OFFICIAL RECORD COPY

- *also indicates that NRR and OE have reviewed this position and concur*

Letter to C. Pardee from C. Pederson dated November 18, 2009.

SUBJECT: RESPONSE TO DISPUTED NON-CITED VIOLATION BYRON STATION,
UNIT 2, INSPECTION REPORT 05000455/2009003

DISTRIBUTION:

ADAMS (PARS)

RidsSecyMailCenter

OCADistribution

Bruce Mallett

Cynthia Carpenter

Greg Bowman

Gerald Gulla

Eric Leeds

MaryAnn Ashley

Catherine Marco

Marvin Itzkowitz

Mark Satorius

Eliot Brenner

Hubert Bell

Guy Caputo

Daniel Holody

Caroline Evans

William Jones

Viktoria Mitlyng

Prema Chandrathil

Allan Barker

Harral Logaras

James Lynch

Patricia Lougheed

Paul Pelke

Magdalena Gryglak

OEMAIL

OEWEB

RidsNrrDorLpl3-2 Resource

RidsNrrPMByron Resource

RidsNrrDirslrib Resource

Carole Ariano

Linda Linn

DRPIII

DRSIII

Patricia Buckley

Tammy Tomczak

[ROPreports Resource](#)