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February 21, 1985

United States Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Mr. George W. Knighton, Chief
Licensing Branch 3
Office of Nuclear Reactor Regulation

SUBJECT: Beaver Valley Power Station - Unit No. 2
Docket No. 50-412
Meeting on Pressure Isolation Valve Leak Testing

REFERENCE: 2ASR-01654, dated January 25, 1985

Gentlemen:

For your information this letter forwards Duquesne Light Company's (DLC) summary of the meeting held on January 17, 1985, in Bethesda, MA, to discuss Reactor Coolant System pressure isolation valve leak testing criteria.

It was indicated at that time that the NRC would respond on the subject of the Technical Specification Basis for BVPS-2 being similar to BVPS-1 by January 25, 1985. DLC requests a response on this very important subject as soon as possible.

DUQUESNE LIGHT COMPANY

By E. J. Woolever
E. J. Woolever
Vice President

JJS/wjs
Attachments

cc: Mr. B. K. Singh, Project Manager (w/a)
Mr. G. Walton, NRC Resident Inspector (w/a)

SUBSCRIBED AND SWORN TO BEFORE ME THIS
21st DAY OF February, 1985.

Anita Elaine Reiter
Notary Public

ANITA ELAINE REITER, NOTARY PUBLIC
ROBINSON TOWNSHIP, ALLEGHENY COUNTY
MY COMMISSION EXPIRES OCTOBER 20, 1985

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COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF ALLEGHENY)

On this 21st day of February, 1985, before me, a Notary Public in and for said Commonwealth and County, personally appeared E. J. Woolever, who being duly sworn, deposed and said that (1) he is Vice President of Duquesne Light, (2) he is duly authorized to execute and file the foregoing Submittal on behalf of said Company, and (3) the statements set forth in the Submittal are true and correct to the best of his knowledge.

Anita Elaine Reiter
Notary Public

ANITA ELAINE REITER, NOTARY PUBLIC
ROBINSON TOWNSHIP, ALLEGHENY COUNTY
MY COMMISSION EXPIRES OCTOBER 20, 1986

ATTACHMENT 1

Meeting on Pressure Isolation Valve Leak Testing

The meeting was held between DLC (NCD Engineering, RAD, and SUG) and the NRC (NRR) to discuss the RCS pressure isolation valve leak testing criteria for BVPS-2. DLC had previously submitted a response to NRC Mechanical Branch Question 210.40 (draft SER open item 43) followed by telecons between NRR (Owen Rothberg) and DLC (F. Lin). These telecons, although informational interchanges primarily, indicated that a lack of understanding existed between the DLC position and NRC position on RCS pressure isolation valve leak testing (and categc ; of valves for leak testing). The meeting was at DLC's request.

DLC prepared the "Proposed Agenda" (See Attachment 3) to provide an organized manner for the discussion. The first part was intended to provide the NRC with an opportunity to convey their position on RCS boundary valve testing, including the basis for their position. The second part was intended as a means for DLC to substantiate their position, where it differed with the NRC. The results are as follows:

I. NRC POSITION AND BASIS FOR THIS POSITION

1. Mr. F. Cherny indicated that although leak testing of check valves (high-to-low pressure) at the RCS boundary, was intially the NRC concern (Event V LOCA, similar to BVPS-1 Tech Spec, utilizing Franklin Research Institute Study); after TMI any intersystem LOCA was the new NRC basis. This, therefore, includes any high-to-low pressure regardless of whether it is inside or outside containment.

2. The valves are considered as "Two Barriers", not two check valves. This includes "normally closed" motor operated valves or "normally closed" solenoid valves if they are included in the "two barriers".

   NOTE: In detailed discussion it was established by the NRC that the "Two Barriers" did not have to be:

   a. Adjacent (intervening valve can exist)

   b. Both or either on the SC-1 side of the class break (one or both may be SC-2).

   The valves will require a leak test at 1GPM and are to be included in technical specifications.

   NOTE: Other details applicable to 1GPM vs. 5GPM with trending was included in NRC discussion as follows:

   a. It is possible the RHS Barrier Valves (at RHS pump suction, two interlocked per train) may be relaxed to 5GPM maximum.

b. Recent in-process NRC internal discussion could result in an approach based on valve size with less than 1GPM for smaller valves (leak rate based on 1/2 GPM allowable per inch of diameter) to a maximum of 5GPM allowable leakage. Again, this has not been approved.

c. The 1GPM criteria was stated as "in the Standard Tech Specs" and a change to criteria would be a Standard Tech Spec change.

d. NUREG 0677 was also referenced as guidance.

e. Containment isolation valves (which are included as "Two Barriers") are also to be considered as IST Program category A or A/C valves, requiring Leak Rate Testing (Appendix "J", Type "C" Leak Testing alone is not considered adequate). A copy of "The Safety Evaluation of Sequoyah 1 and 2 Inservice Test (IST) Program for Pumps and Valves", with direct reference to paragraph 3.1.4 and 3.1.5 was provided by the NRC to DLC as specific clarification of this point.

4. DLC (R. Fedin and J. Syz Slow Ski) indicated that BVPS-2 had been informed by the NRC (G. W. Knighton) that the Tech Spec Basis for BVPS-2 is to be similar to BVPS-1. This is directly applicable to the RCS Boundary Valves, as the Event V (high-to-low, outside containment) with the Franklin Research Institute Report Guidelines were accepted for BVPS-1 Tech Specs and, therefore, should be acceptable for BVPS-2 Tech Spec application. No other basis/criteria had been established, although Question 210.40 identifies this leak rate concern (a call was placed by Mr. Cherny to Mr. Knighton during the discussion, with indication that this Tech Spec Basis subject would be resolved by NRC by January 25, 1985).

5. The NRC indicated that ASME Section XI testing without Tech Spec Requirements is inadequate, even when the Leak Rate Criteria is the same. This position was based on the following:

A. No assurance that "unacceptable" leak rate would result in repair prior to returning plant to service.

B. Leak Rate Testing could (and may) be performed during decrease in RCS pressure, rather than increase in RCS pressure (ramp up) as intended by NRC.

C. No assurance that valve position was established positively (by Leak Rate Means) after its last change of position.

NOTE: 1.) The NRC (Mr. Cherny) indicated that there is no assurance that a valve will not be faulty (fully open) by "Position Test" alone. A leakage test is

the only acceptable method to assure that interactive system LOCA (high-to-low pressure) will not occur between the RCS Boundary and lower pressure system.

2.) DLC questioned the basis for this position. The NRC cited valve failures/faulty valves resulting in high-to-low pressure occurrences. They also indicated the NRC (Mr. Tedesco) had initiated this basis for the position following TMI and "others" (in NRC management) had maintained this position.

3.) DLC again questioned the basis of this position, as it had not been identified in Licensing Requirements by the NRC.

6. DLC asked the NRC to cite the regulations for all of the above discussed "requirements". The NRC answer as that it (the regulations) are covered, in part, by internal NRC memos and (guidance) NUREG0677. DLC pointed out that they do not have any of these "internal" NRC documents. Mr. Cherny indicated that the NRC is presently working on a revision to the SRP, but it has not been completed. (However the NRC basis is essentially the Standard Technical Specifications.)

II. DLC directed its specific agenda items to the NRC latest telecopy (B. K. Singh to Jim Syz Slow Ski), in which questions were asked by the NRC MEB Engineer and pressure isolation valves (PIV's) were identified (From DLC System information furnished to the NRC earlier via 2NRC-4-184, 11/07/84.)

1. DLC indicated that RHS Valves *MOV701A&B and *MOV720A&B are shown "normally open" as the A/E (SWEC) standard when valves have two modes of operation. In addition Note 5 of the design flow diagram (RM-76A) indicates these valves as interlocked closed until decrease in RCS pressure below 425 psig. It was also indicated that DLC operations (SUG) may show these valve closed if clarification is considered necessary by the operators. This was acceptable to the NRC.

2. The valves identified as "PIV's were not the Final PIV's", as the criteria is "Two Barriers" in high-to-low pressure.

   It was mutually agreed (See I.2., above) that this criteria takes precedence.

3. The DLC position that MOV's are category "B" vs. NRC position that all PIV's are ASME XI category A or A/C was not resolved (see I.5.C, Note 1 above).

4. The Boundary between Class 1 and 2 piping in OM Figure 6-3, indicated as unclear by the NRC, was not resolved during the meeting.

5. The 3/4" MOV's indicated on OM Figure 6-3 (Quantity 3) were not resolved as exempt from PIV status. DLC agreed with the NRC that RCS inventory was the basis for concern, not "Two Barriers". The NRC (O. Rothberg) stated that 3/8" sizing was the NRC criteria related to him by NRC staff (Mr. Lacharda). However, he indicated that he would recheck this and implied that these 3/4" MOV's were not significant (no other utility submitted had included the 3/4" valves as PIV's).

6. The NRC implied that Multiple Valve Testing (more than "Two Barriers") may be an acceptable alternative on a specific case basis. However, the specific case and Leak Rate Testing will require NRC review and approval.

III. SUMMARY

1. The NRC position on "Two Barriers" applicable to Tech Specs is not consistent with previous NRC direction to make BVPS-2 tech specs similar to BVPS-1. This issue will be addressed by the NRC by January 25, 1985 for BVPS-2.

2. The basis of Leak Rate Testing "Normally Closed" MOV's in lieu of acceptance through valve position (ASME XI, Category "B") does not appear to have a clear licensing basis.

3. The definition of "Two Barriers" includes high-to-low pressure interactive systems for both inside containment and those penetrating containment, thus exceeding basis (Event V) for BVPS-1 Tech Specs. However, the "Two Barrier" Valves do not have to be adjacent, nor must they be SC-1. One valve may be an MOV if no other "Two Barriers" are present.

4. The Leak Rate Testing (Limiting Condition of Operation) is presently considered by the NRC as 1GPM, although standard Tech Spec change is in-process to provide some modification applicable to valve size and 5GPM maximum leakage.

5. The NRC Basis for the "Requirements" is the latest standard technical specifications (rev. 4). This is inconsistent with an NRC letter which states that BVPS-2 Technical Specifications should be similar to BVPS-1. In addition, the NRC "Requirements" are not covered in the Federal Regulations or in the SRP.

ATTACHMENT 2

Meeting on Pressure Isolation Valve Leak Testing

Attendance List

Name	Location	Title
B. K. Singh	NRC/NRR/DL/LB#3	Project Manager
F. C. Cherny	NRC/NRR/DE/MEB	Section Leader
O. Rothberg	NRC/NRR/DE/MEB	Engineer
E. Lantz	NRC/NRR/RSB	Nuclear Engineer
J. R. Houghton	DLC/NCD/Eng.	Technical Consultant
F. C. Lin	DLC/NCD/Eng.	Project Engineer
R. W. Fedin	DLC/RAD	Sr. Project Engineer
J. J. Szy Slow Ski	DLC/RAD	Sr. Project Engineer
V. Ruppert	DLC/Ops/SUG	
F. D. Schuster	DLC/Ops/SUG	

ATTACHMENT 3

Meeting on Pressure Isolation Valve Leak Testing
(MEB Question 210.40)

Proposed Agenda

DATE: January 17, 1985
TIME: 1:00 p.m.
LOCATION: Air Rights Building, Room 5033, Bethesda, MD

I. Objective of Review Pertinent to SC-1/SC-2 Interface Valves

II. Discussion of Valve Testing for SC-1/SC-2 Interface including:

A. Other Adjacent Valves

B. Applicability of ASME XI/10CFR50 Appendix "J" Testing

C. Limiting Conditions of Operation (Technical Specifications)