

James A. FitzPatrick
Nuclear Power Plant
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Michael J. Colomb
Site Executive Officer

April 24, 2000
JAFP-00-0098

U.S. Nuclear Regulatory Commission
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Subject: James A FitzPatrick Nuclear Power Plant
Docket No. 50-333
Request for Approval of Relief Request NO. VRR-07 to the JAFNPP's In-Service Testing Program Re: Revised Excess Flow Check Valve Testing Frequency

Reference: BWROG Report B21-00658-01, "Excess Flow Check Valve Testing Relaxation," dated November 1998.

Dear Sir:

Pursuant to the provisions specified in 10CFR50.55a(a)(3)(i), this submittal requests relief from the Code requirements for examinations of Excess Flow Check Valves (EFCVs). Specifically, the Authority requests approval of an alternative to the Operations and Maintenance Standard, Part 10 (OM-10), valve exercising test frequency specified in subsections 4.2 and 4.3 for Category A and C valves, respectively. Currently, in accordance with the James A. FitzPatrick's In-Service Testing (IST) Program, each EFCV is required to be exercised once per refueling outage. The proposed alternative would relax the number tested each refueling outage to a representative sample of EFCVs, such that each EFCV will be tested at least once every 10 years (nominal).

The basis for the alternative testing requirements are contained in a Boiling Water Reactor Owner's Group (BWROG) Topical Report, B21-00658-01, dated November 1998 and a Response to Request for Additional Information provided by the BWROG to the NRC on January 6, 2000. The NRC reviewed the topical report and the additional information and issued a safety evaluation, dated March 14, 2000. This relief request and basis are consistent with the topical report and a similar licensing action that was approved by the NRC for the Duane Arnold Energy Center (DAEC). On December 29, 1999, the NRC approved an amendment to the DAEC nuclear power plants Technical Specifications (TS) that revised Surveillance Requirement (SR) 3.6.1.3.7 to allow a representative sample of reactor instrumentation line EFCVs to be tested every 24 months, instead of testing each every 24 months.

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Members of the NRC staff and the BWROG EFCV Committee met on August 6, 1998 to discuss the report contents (documented in GE meeting summary OG98-0327-213, dated August 17, 1998). In keeping with the August 6th meeting, this proposed change does not relocate the SR from the TS as justified in the report. This specific request is solely for the relaxation in the testing frequency as described above.

The James A. FitzPatrick TS Surveillance Requirement 4.7.D.1.b requires the EFCVs to be tested for proper operation in accordance with the IST program. The 1989 edition of the American Society of Mechanical Engineers (ASME) Section XI, Subsection IWV specifies the IST requirements for valves. Subsection IWV of the 1989 edition of ASME Section XI specifies that the requirements are contained in the ASME/ANSI Operations and Maintenance Standards, Part 10 (OM-10), "Inservice Testing of Valves in Light-Water Reactor Power Plants." This submittal requests relief from the OM-10 Code requirements.

The BWROG report provides justification for both relocation of the TS SR and relaxation of the testing intervals for the EFCVs as described above. The report demonstrates, through operating experience, a high degree of reliability with EFCVs and the low consequences of an EFCV failure. Reliability data in the report (Table 4-1) documents zero EFCV failures (failure to close) for the FitzPatrick plant. The reactor vessel instrument lines at FitzPatrick have a flow-restricting orifice upstream of the EFCVs to limit reactor water leakage in the event of rupture. Previous evaluations contained in the James A. FitzPatrick Final Safety Analysis Report (FSAR) of such an instrument line rupture do not credit the EFCVs for isolating the rupture. Thus a failure of an EFCV, though not expected as a result of this request, is bounded by the analysis. Therefore, the proposed alternative to the required exercise testing frequency for EFCVs prescribed by OM-10 provides an acceptable level of quality and safety.

The reduced testing associated with this change will result in dose savings during refuel outages in which the testing is performed. An increase in the availability of instrumentation during outages, in addition to cost savings, are also considered potential benefits from this request.

Attachment 1 contains the James A FitzPatrick's Valve Relief Request (VRR-07) for EFCVs. We request approval by August 31 to allow planning and implementation prior to the start of the next scheduled refueling outage, October 06, 2000. If you have any questions, please contact Mr. George Tasick, Licensing Manager, at (315) 349-6572.

Very truly yours,



Michael J. Colomb
Site Executive Officer

STATE OF NEW YORK
COUNTY OF OSWEGO

Subscribed and sworn to before me
this 24 day of April 2000.


Notary Public

NANCY B. CZEROW
Notary Public, State of New York
Qualified in Oswego County #4884611
Commission Expires 1-26-01

INSERVICE TESTING PROGRAM FOR PUMPS AND VALVES***APPENDIX B*****Valve Relief Requests****VRR-07****SYSTEM:**

Various

COMPONENTS:

02-2EFV-PS-128A,B	02-3EFV-19A,B	14EFV-31A,B
02-2EFV-PT-24A,B	02-3EFV-21A,B,C,D	23EFV-01A,B
02-2EFV-PT-25A,B	02-3EFV-23A,B,C,D	23EFV-02A,B
02-2EFV1-DPT-111A,B	02-3EFV-23	29EFV-30A,B,C,D
02-2EFV12-FT-110A,C,E,G	02-3EFV-25	29EFV-34A,B,C,D
02-2EFV2-DPT-111A,B	02-3EFV-31A,B,C,D	29EFV-53A,B,C,D
02-2EFV2-FT-110A,C,E,G	02-3EFV-31E,F,G,H	29EFV-54A,B,C,D
02-3EFV-11	02-3EFV-31J,K,L,M	
02-3EFV-13A,B	02-3EFV-31N,P,R,S	
02-3EFV-15A,B	02-3EFV-33	
02-3EFV-15N	13EFV-01A,B	
02-3EFV-17A,B	13EFV-02A,B	

CATEGORY:

A and C

CLASS:

1

FUNCTION:

The reactor instrumentation lines excess flow check valves close to limit the flow in the respective instrument lines in the event of an instrument line break downstream of the EFCVs outside containment.

TEST REQUIREMENT:

OM-10, Inservice Testing of Valves in Light Water Reactor Power Plants, section 4.2, "Inservice Tests for Category A and B Valves" and section 4.3, "Inservice Tests for Category C Valves", requires these valves to be tested nominally every 3 months, except as specified by paragraphs 4.2.1.2 and 4.3.2.2. The FitzPatrick IST program took exception to the testing requirements per sub-paragraphs 4.2.1.2(e) and 4.3.2.2(e), which states 'if exercising is not practicable during plant operation or cold shutdowns, it may be limited to full-stroke during refueling outages. Therefore, each EFCV is exercise tested once every refuel outage. The James A FitzPatrick refueling schedule is a nominal once every two years.

RELIEF REQUESTED:

Relax the number of EFCVs tested every refuel outage from "each" to a "representative sample" every refuel outage (nominally once every 24 months). The representative sample is based on approximately 20 percent of the valves each cycle such that each valve is tested every 10 years (nominal).

BASIS FOR RELIEF: The BWROG Topical Report, B21-00658-01, dated November 1998, and associated NRC safety evaluation, dated March 14, 2000, provides the basis for this relief. The report provides justification for relaxation of the testing frequency described above. The BWROG report provides justification for relocation of the TS SR from the TS and relaxation of the testing intervals for the EFCVs. This specific request is solely for the relaxation in the testing frequency as described above.

The report demonstrates, through operating experience, a high degree of reliability with EFCVs and the low consequences of an EFCV failure. Reliability data in the report (Table 4-1) documents zero EFCV failures (failure to close) for the FitzPatrick plant. The instrument lines at FitzPatrick have a flow restricting orifice upstream of the EFCVs to limit reactor water leakage in the event of rupture. Previous evaluations contained in the James A. FitzPatrick Final Safety Analysis Report (FSAR) of such an instrument line rupture do not credit the EFCVs for isolating the rupture. Thus a failure of an EFCV, though not expected as a result of this request, is bounded by the analysis. Based on the BWROG report and the analysis contained in the FSAR, the proposed alternative to the required exercise testing frequency for EFCVs prescribed by OM-10 provides an acceptable level of quality and safety.

ALTERNATIVE TESTING: Exercise test, by full-stroke to the position required to fulfill its function, a representative sample of EFCVs every refuel outage. The representative sample is based on approximately 20 percent of the valves each cycle such that each valve is tested every 10 years (nominal). EFCV failures will be documented in the FitzPatrick's Corrective Action Program as a surveillance test failure. The failure will be evaluated and corrected. An Equipment Failure Evaluation (EFE) will be required per the Corrective Action Program. The EFE will encompass common failure mode identification, industry experience evaluation, and review of similar component failure history.

To ensure EFCV performance remains consistent with the extended test interval a minimum acceptance criteria of less than or equal to 1 failure per year on a 3 year rolling average will be required. Upon exceeding the criteria a root-cause evaluation is required to determine cause, extent of conditions, an evaluation of the testing interval to ensure reliability of the EFCVs, and a risk analysis of the effects of the failures on cumulative and instantaneous plant safety. Corrective actions and performance goals will be established based on the results of the root-cause analysis.

REFERENCES: BWROG Report B21-00658-01, "Excess Flow Check Valve Testing Relaxation," dated November 1998.