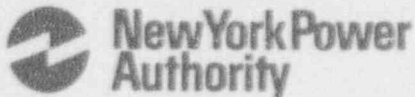


James A. FitzPatrick  
Nuclear Power Plant  
P.O. Box 41  
Lycoming, New York 13093  
315 342-3840



Harry P. Salmon, Jr.  
Resident Manager

March 26, 1993  
JAFF-93-0164

Director, Office of Enforcement  
U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

SUBJECT: James A. FitzPatrick Nuclear Power Plant  
Docket No. 50-333  
Reply and Answer to Notice of Violation  
NRC Inspection Report 50-333/92-21

Dear Sir:

This letter provides the Authority's Reply to the Notice of Violation in accordance with the provisions of 10 CFR 2.201. The reasons for the violations, the corrective actions that have been taken and the results achieved, the corrective actions to be taken to avoid further violations and the date when full compliance will be achieved for the violations is included in Attachment 1.

If you have any questions, please contact Mr. Mike Colomb.

Very truly yours,

Harry P. Salmon, Jr.

STATE OF NEW YORK  
COUNTY OF OSWEGO

Subscribed and sworn to before me  
this 26<sup>th</sup> day of March, 1993

Notary Public

cc: see next page

9303300226 930326  
PDR ADOCK 05000333  
PDR

TAMMY L. DANN 4985563  
Notary Public, State of New York  
Qualified in Oswego County  
Commission Expires 8/19/93

Cont No 138181835  
TEO/11

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*New York Power Authority*

*JAMES A. FITZPATRICK NUCLEAR POWER PLANT*

*RESPONSE TO NOTICE OF VIOLATION*

*ATTACHMENT 1 TO JAFP 93-0164*

*VIOLATION*

- A. 10CFR 50.55a(g) in-service inspection requirements, states that boiling water reactors must meet the requirements of the ASME Boiler and Pressure Vessel Code, Section XI.

The ASME Boiler and Pressure Vessel Code, Section XI, Paragraph IWA-6310, provides that owners shall maintain the records specified in IWA-6340 in a manner to provide protection from deterioration and damage. Paragraph IWA-633C designates non-destructive examination records, including radiographs, as in-service inspection records.

Contrary to the above, on December 3, 1992, a review of the radiographs, filed in the archival storage building at the James A. FitzPatrick Nuclear Power Plant, revealed radiographs for welds ISO 92-168, Item 3"-SHP-902-6, FW-10, exposures 0-1 to 3-0, taken April 24, 1992, and Welder Coupons FW-5 and FW-6, exposures 0-1 to 3-0, taken March 6, 1992, that had areas of undeveloped and/or unfixed emulsion of a dark brown color. This indicates the presence of retained developing chemistry that could prevent the film from lasting for the duration required under the above requirements. Further, the Quality Assurance Program at the James A. FitzPatrick Nuclear Power Plant does not have a procedure to determine the archival quality of radiographic film retained in the archival storage building and therefore has no way of assuring that the radiographic record will last for the duration required above.

*ADMISSION OR DENIAL OF THE ALLEGED VIOLATION*

The Authority agrees with the violation.

*THE REASONS FOR THE VIOLATION*

Procedure deficiency is the primary cause for unfixed chemicals appearing on the edge of some radiographs. The procedure did not adequately address replenishment of processing chemicals and radiographers allowed the level of the chemicals to drop below the level required for 100% coverage of the film during processing. Further, the procedure did not require, and the radiographers did not perform, trimming of the edges of affected film.

## *ATTACHMENT 1 TO JAFP 93-0164*

### THE CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

Radiographic film exhibiting areas of unfixed chemicals was trimmed to remove the affected area. Several samples of processed film were tested using a Kodak Hypo estimator kit. The results indicated satisfactory processing.

Two samples, of the trimmed film, were sent to an independent laboratory for methylene blue testing. The results of those tests, based on the current ANSI Standard 9.1-1989 Imaging Media (Film) - Silver Gelatin Type - Specifications for Stability, have, with correct storage, a potential life of 100 years.

Routine testing of processed film, using the Kodak Hypo test kit, has been implemented. All tests done since implementation have been satisfactory. Periodic testing by the Methylene blue process is now required by procedure, as is the "Hypo Test".

### THE CORRECTIVE STEPS TO BE TAKEN TO AVOID FURTHER VIOLATIONS

Administrative Procedure QAP-9.3-J, "Administrative Controls for Non-Destructive Examination Processes", has been developed and issued to provide guidance on chemical replenishment, hypo testing, and methylene blue testing. The Quality Services Supervisor is currently overseeing these activities to ensure compliance.

### THE DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance has been achieved as of January 3, 1993.

### VIOLATION

- B. 10 CFR 50, Appendix B, Criterion XII, requires that measures shall be established to assure that tools, gages, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits.

Contrary to the above, the James A. FitzPatrick Nuclear Power Plant utilized an uncontrolled, uncalibrated radiographic densitometer for the purposes of determining radiographic densities, an activity affecting quality, as required by ASME Section V, Article 2, Paragraph T-282.1, of the 1986 Edition.

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

The Authority agrees with the violation.

THE REASONS FOR THE VIOLATION

Procedure deficiency is the primary cause of the densitometer being out of calibration. The densitometer accuracy was being verified, according to the manufacturer's recommendation, by checking the film strip only at the approximate mid-range (3.0) (the actual density of film was 2.98). This method allowed the linearity of the densitometer to drift off-scale on the high or low end of the scale without being detected.

THE CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The densitometer was returned to the vendor for service and re-alignment. Two additional densitometers were obtained for determining density. Approximately 870 radiographs for 225 welds were reviewed. The initial review was performed by a contract Level III certified inspector and the final review and disposition of the acceptability of the radiograph and weld by a NYPA Level III certified inspector. Radiographs of 12 of these welds were unacceptable based on film density.

Each of these 12 welds was re-radiographed and determined to be acceptable. A calibrated film strip, traceable to the National Institute of Standards and Technology, was used to monitor the linearity of the densitometers throughout the re-reading effort by reading the film strip at three points; at or near the mid-range, and at or near the high and low points.

QAP-9.3-J, Rev. 0, "Administrative Controls for Non-Destructive Examination Processes", now requires calibration verification of densitometers at a minimum of three points (low, mid, and high) on a calibrated film strip, traceable to the National Institute of Standards and Technology. Linearity (drift) is monitored by maintaining a log of the readings. The densitometer will be returned to the vendor for service and re-alignment when the linearity exceeds .04 deviation from the film strip.

THE CORRECTIVE STEPS TO BE TAKEN TO AVOID FURTHER VIOLATIONS

As described above.

THE DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance has been achieved as of December 31, 1992.



VIOLATION

- C. 10 CFR 50, Appendix B, Criterion IX, requires that special processes, including non-destructive examinations, be performed in accordance with applicable codes, standards, and specifications.

FitzPatrick procedure for Radiography, RT-NIC-013, Revision 3, Dated March 16, 1989, requires conformance with the requirements of the 1986 Edition of ANSI B31.1.0 and ASME Section V, 1986 Edition with 1986 Addenda, as applicable. ANSI B31.1.0 requires, in Paragraph 136.4.5, that radiography be performed in accordance with ASME Section V, Article 2.

- (1) ASME Section V, 1986 Edition, Article 2, Paragraph T-282.2(a), requires that the optical density through the penetrameter be within -15% and +30% of the optical density measured through the area of interest that the penetrameter represents.

Contrary to this requirement, on December 3, 1992, a review of the radiographs, filed in the archival storage building at the James A. FitzPatrick Nuclear Power Plant, revealed radiographs for weld 3"-SHP-902-6, FW 10, Exposures 0-1 to 3-0, where the area of interest was measured to be less than -15% of the optical density through the penetrameter representing the area.

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

The Authority agrees with the violation.

THE REASONS FOR THE VIOLATION

Equipment failure and procedure deficiency are the primary causes. The densitometer lost linearity over time and went undetected by radiographers due to inadequate procedural guidance for verifying densitometer accuracy.

THE CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

Weld 3"-SHP-902-6 FW 10, on 29MOV-77, was re-examined by radiography and is acceptable.

## ATTACHMENT I TO JAFP 93-0164

### THE CORRECTIVE STEPS TO BE TAKEN TO AVOID FURTHER VIOLATIONS

QAP-9.3-J, Rev. 0, "Administrative Controls for Non-Destructive Examination Processes", requires calibration verification of densitometers at a minimum of three points (low, mid, and high) on a calibrated film strip, traceable to the National Institute of Standards and Technology. Linearity (drift) is monitored by maintaining a log of the readings. The densitometer will be returned to the vendor for service and re-alignment when the linearity exceeds .04 deviation from the film strip.

### THE DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance has been achieved as of December 31, 1992.

### VIOLATION

- (2) ASME Section V, 1986 Edition, Article 2, Paragraph T-292, requires that the radiographs shall be examined and interpreted by the licensee as complying with the referencing Code Section. The licensee shall record the interpretation of each radiograph and disposition of the material examined on a radiographic interpretation review form accompanying the radiographs.

Contrary to this requirement, on December 3, 1992, a review of the radiographs, filed in the archival storage building at the James A. FitzPatrick Nuclear Power Plant, revealed radiographs for welds 42-4-WD-153-68B, FW 32, Exposure 3-0, WM-92-682, FW 2, Exposure 3-4, and 10 89A, SW1, Exposure 2-3 that contained indications of lack-of-penetration that had either not been recorded and rejected or had been improperly interpreted and accepted.

### ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

The Authority agrees with the violation.

### THE REASONS FOR THE VIOLATION

The primary cause is personnel error and lack of oversight by management. The interpreter did not recognize the indications as lack of penetration. There was no Level III review of the radiographs.

## ATTACHMENT I TO JAFP 93-0164

### THE CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

- Weld 42-4"-WD-153-68B W32 is a QA Category II/III weld on the non-safety related demineralized water system. The Authority initially planned to perform a visual inspection based on the close proximity of the weld to a bolted flange. We anticipated that the line could be easily drained and the flange opened for inspection. A further review indicated that a temporary operating procedure must be used and a temporary modification installed to gain access. Based on the difficulty in gaining access, and that the line contains demineralized water at 90 psi with no safety related equipment in the vicinity, the Authority will not inspect the internal surface of the weld at this time.

Work Request #107188 has been initiated to Site Engineering for evaluation of weld acceptability and proper classification of line.

- Weld WM92-682 FW2 on 10MOV-39B, the RHR suppression pool cooling outboard containment isolation valve, had an indication. An ultrasonic examination was performed which confirmed undercut in excess of the 1/32" code allowable. The weld was repaired and re-examined by radiography on December 22, 1992 and is acceptable.

### THE CORRECTIVE STEPS TO BE TAKEN TO AVOID FURTHER VIOLATIONS

As described above, and implementation of Level III oversight.

### THE DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Level III review of radiographs was implemented on 12/31/92, in accordance with QAP 9.3-J, "Administrative Controls for Non-Destructive Examination Processes". Engineering evaluation, per Work Request #107188, is scheduled to be completed by April 30, 1993.

### VIOLATION

- (3) The ASME Code, Section V, Article 2, T-270, requires complete coverage of the weld being radiographed.

Contrary to this requirement, on December 3, 1992, a review of the radiographs filed in the archival storage building at J. A. FitzPatrick revealed radiographs for weld 24-10-91, evaluated and accepted, that did not represent 100% of the fusion area of the weld.

### ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

The Authority agrees with the violation.



## ATTACHMENT I TO JAFP 93-0164

### THE REASONS FOR THE VIOLATION

The primary causes are:

- a) Improper technique used by the radiographer. There was interference which prevented the film from covering the heat affected zone.
- b) Inadequate management oversight. There was no Level III review of the film.

### THE CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

Weld 10MOV-27A-10-991 on the RHR LPCI injection outboard containment isolation valve was reexamined by radiography and ultrasonic examination. Full coverage of the area of interest was achieved by the combination of RT and UT and the weld is acceptable.

### THE CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FUTURE VIOLATIONS

QAP-9.3-J, Rev. 0, "Administrative Controls for Non-Destructive Examination Processes", has been developed and implemented, requiring periodic surveillance of the radiography process and review of all radiographs by a Level III.

### DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance has been achieved as of December 31, 1992.

### VIOLATIONS

- (4) ASME Section V, 1986 Edition, Article 2, Paragraph T-282.1, requires the minimum density for each film in a composite view be not less than 1.3. For single film viewing, the film may not be below 2.0 density.

Contrary to this requirement, on December 3, 1992, a review of the radiographs filed in the archival storage building at J. A. FitzPatrick revealed radiographs for welds 10 MOV 27B, Exposures 0-1 to 2-3 and 10 MOV 89A, SW1, Exposures 0-1 to 4-0 that had radiographic densities below 1.3. These radiographs, evaluated and accepted, did not comply with the minimum density requirements.

## *ATTACHMENT I TO JAFP 93-0164*

- (5) ASME Section V, 1986 Edition, Article 2, Paragraph T-282-1, requires the maximum radiographic density of film to be 4.0 for either composite or single film viewing.

Contrary to this requirement, on December 3, 1992, a review of the radiographs filed in the archival storage building at J. A. FitzPatrick revealed radiographs for weld 24-10-997 to be in excess of 4.0 density.

### ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

The Authority agrees with the violations.

### THE REASON FOR THE VIOLATION

Equipment failure, procedure inadequacy, and inattention to detail are contributing factors in the cause of this violation. The densitometer lost linearity over time, and was not detected due to the single point method of verifying calibration of the densitometer. Level II interpreters were not alert to the out of tolerance condition at the upper and lower extremes of the range, and there was no Level III verification of the radiographs.

### THE CORRECTIVE STEPS TAKEN AND THE RESULTS ACHIEVED

Welds 24-10-997 and 24-10-998 on 10MOV-27B were reexamined by radiography and are acceptable.

Weld 10MOV-89A SW1 on the RHR heat exchanger service water outlet valve was reexamined by radiography and is acceptable, with the exception of the lower five to six inches of the inner surface. This section contained water and possible pitting. An ultrasonic examination of this area was performed and is acceptable. The ultrasonic examination also identified the pitting noted on the radiograph. The weld is acceptable based on the combined results of the two volumetric examinations.

### THE CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

QAP-9.3-J, Rev. 0, "Administrative Controls For Non-Destructive Examination Processes", requires three point verification of densitometer calibration on a film strip traceable to the National Institute of Standards and Technology, and Level III review and acceptance of radiographs.

### DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on December 31, 1992.