

UNITED STATES OF AMERICA  
 NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
UNION ELECTRIC COMPANY	)	Docket Nos. STN 50-483
(Callaway Plant, Units 1 and 2)	)	STN 50-486

TESTIMONY OF JAMES FOSTER

Q. Please state your name and job title?

A. My name is James Foster. I have been an investigator with the NRC's Office of Inspection and Enforcement, Region III, since 1976. It is part of my job to investigate, with the assistance of the NRC technical Staff, allegations concerning improprieties at the nuclear facilities in the region.

Q. What is the purpose of this testimony?

A. The purpose of this testimony is to address Joint 'Intervenors' Contention II.A.1 dealing with a piece of SA-358 piping.

Q. Could you describe the history of your involvement with this matter?

A. My involvement in the matter raised in Contention of II.A.1 came about as a result of a letter received in the Region III office, dated February 8, 1981, expressing concern that an earlier investigation (documented in I&E Report 50-483/80-10) of the same matter was not resolved adequately. The allegations focused on a section of pipe in an accumulator discharge line from tank TEPO1A at the Callaway facility.

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Insofar as it relates to Contention II.A.1, the letter charged that the pipe was of less than minimum acceptable wall thickness, the pipe was unacceptably out-of-round, and a pipe seam weld was defective.

In response to the letter, I visited the Callaway site three times between February 20 and March 27, 1981. With the assistance of the Resident Inspector and a reactor inspector from the Region III Office, I visually inspected the pipe and reviewed all available documentation (material certifications, radiography and radiographic reader sheets, specifications, shipping documents, and non-conformance reports). In addition, measurements were made of the pipe's ovality and an additional radiograph was taken to assess the acceptability of the allegedly defective weld area subsequent to the removal of excessive weld metal (performed in November 1979, before I first visited the site). The results of my investigation are documented in I&E Investigation Report 50-483/81-04 (Exhibit 7).

Q. Could you address the specific allegations concerning the adequacy of the SA-358 pipe referenced in Contention II.A.1?

A. Concerning the allegation that the pipe was "substantially out-of-round," a set of measurements (taken by the Applicant with the NRC Senior Resident Inspector present) taken in four planes showed a maximum outside diameter variation of 0.0920 inches for the pipe. The pipe has a standard outside diameter of 10.75 inches.

Concerning the allegation that the pipe was "machined below the minimum wall", Applicant's documentation indicated that the specified minimum thickness of the pipe wall was 0.874 inches, and the actual minimum thickness (found only in the inservice inspection weld

preparation area, which was counterbored) measured 0.814 inches. Applicant's architect-engineer (Bechtel) performed two calculations as provided in ASME Section III, Article NC-3640. The first calculation, postulating design pressure and temperature of 2485 psi and 200°F (normal expected pressure and temperature for this section of piping are approximately 700 psi and 150°F), yielded a minimum wall thickness of 0.711 inches. The second calculation, assuming upstream valve leakage from the reactor coolant system (thus increasing line temperature), utilized postulated design pressure and temperature of 2485 psi and 650°F. This calculation yielded a minimum wall thickness of 0.795 inches.

Concerning the allegation that the pipe had "rejectable weld defects on the inside of a longitudinal seam weld," when I first viewed the seam weld in question, no weld defects were apparent as excess weld metal on this seam had been removed on November 5, 1979 as the disposition of Deficiency Report 2SD-0699-P. After discussions I had with the Applicant and its consultant, it was determined that a radiograph of the weld in its present condition would aid in assessing the adequacy of the weld. I was personally present during each step of the radiographic process, and was informed by a Region III reactor inspector (William J. Key) that the radiograph revealed no defects in the weld.

JAMES E. FOSTER

Organization: U. S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Region III

Title: Investigation Specialist

Grade: GS-14

Birth Date: August 11, 1946

Education: B.A. Psychology, Economics, Albion College, Michigan,  
1968  
M.S. Industrial Relations (thesis pending), University  
of West Virginia

Experience:

- 1976 - Present Investigation Specialist - Performs investigations of accidents, incidents, and allegations related to violations of NRC regulations. Coordinate work of technical specialists assigned to investigative duties. (NRC)
- 1974 - 1976 Aviation Security Specialist - Coordinate work of other agents, perform security inspections and surveys, investigate violations of FAA security regulations. (FAA)
- 1973 - 1974 Physical Security Specialist - Perform security inspections and evaluate security programs, investigate violations of FAA regulations, develop and give training programs and public speeches. (FAA)
- 1971 - 1973 Customs Security Officer - "Sky Marshal" program, undercover protection of aircraft in flight, preflight inspection of passengers, coordinate work schedules, travel extensively. (U.S. Customs)
- 1967 - 1971 Student - Graduate assistant during two years of graduate study, conference assistant one year during undergraduate work. Various summer jobs including security guard and shipping clerk.