

POR



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
631 PARK AVENUE  
KING OF PRUSSIA, PENNSYLVANIA 19406

AUG 0 4 1980

Docket No. 30-10811

National Valve and Manufacturing Company  
ATTN: Mr. William Biddle  
Senior Vice President, Piping Division  
158 49th Street  
Pittsburgh, Pennsylvania 15201

Gentlemen:

Subject: Inspection 80-01; License No. 37-02895-03

This refers to our report 30-10811/80-01 dated June 30, 1980.

An addendum to this report based on the data available from the thermoluminescent dosimeters which were exposed at your facility is enclosed.

Should you have any questions concerning this addendum to the report, we will be pleased to discuss them with you.

Your cooperation with us is appreciated.

Sincerely,

A handwritten signature in cursive script, appearing to read "John D. Kinneman".

John D. Kinneman, Chief  
Materials Radiological Protection  
Section

Enclosure: Addendum to Report No. 30-10811/80-01

cc:  
Mr. G. Koch, Quality Control Manager, Pittsburgh Operations

8009190 690

4. Evaluation of Doses Received (Addendum)

a. Radiographer A

In addition to the measurements taken using self-reading dosimeters, a number of measurements were taken using thermoluminescent dosimeter chips (TLD's). Two TLD chips were placed on a ring stand at 19 cm from the source behind the collimator, in the position which the reenactment indicated was the position of the radiographer's film badge. These were exposed for one minute, two seconds and indicated a dose rate of 0.17 rem/min and 0.19 rem/min, respectively. Correcting for source decay, these readings indicate an average dose rate of 0.40 rem/min at the position of the radiographer's film badge. For a 40 second exposure, this would indicate a dose of 260 mrem, which is in good agreement with the radiographer's film badge reading of 270 mrem.

Four other TLD chips were placed on the pipe to estimate the dose rates to which the radiographer's hands might have been exposed. The one which was placed opposite the collimator was found to be damaged when it was sent for processing, so that the accuracy of the reading for this TLD chip is questionable. The other three TLD chips were placed on the pipe approximately three centimeters above the collimator, one on the tape which attached the collimator to the pipe, and one on the back of the collimator. These were exposed for one minute, two seconds. Corrected for source decay, they indicate dose rates of 0.45 rem/min, 11.6 rem/min, and 5.9 rem/min.

These measurements support the conclusion that the radiographer's film badge, which read 270 mrem, accurately reflects his whole body dose and that his hands received less than the quarterly limit for extremity dose (18.75 rem).