

MAGNAFLUX

Quality Services

EA-81-52
Rec'd 7/14/81

July 9, 1981

United States Nuclear
Regulatory Commission
Office of Inspection and Enforcement
Washington, D. C. 20555



Attention: Mr. Victor Stello, Jr., Director

Subject: NRC Inspection of March 16 and 17, 1981
Corrective Action License No. 12-00622-07 (EA81-52)

Gentlemen:

Pursuant to 10 C.F.R. 2.201, this letter is in response to the inspection conducted by Messrs. W.J. Slawinski and W.P. Reichold of the Commission at our Indianapolis, Indiana facility located at 5307 W. 86th Street on March 16 and 17, 1981. As a result of the inspection, four items (two Severity Level II, one Severity Level III, one Severity Level V) of noncompliance were noted in the Notice of Violation letter dated June 17, 1981. The following is an item by item response as required by 10 C.F.R. 2.201 and the Notice of Violation letter (including Appendix A):

Item 1. A. 10 CFR 34.43(b) required that physical radiation surveys shall be made after each such radiographic exposure to determine that the sealed source has been returned to its shielded position.

Contrary to the above, on February 5, 1981, a radiographer made 29 radiographic exposures and entered the radiography room after each of these exposures, without a survey meter. Thus, he did not make a physical radiation survey after each of these exposures to determine that the sealed source had been returned to its shielded position.

This is a Severity Level II violation (Supplement VII)

(Civil Penalty - \$4,000)

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Page Two
U.S. Nuclear Regulatory Commission
Mr. Victor Stello, Jr., Director

Response

On February 5, 1981, a radiographer made 29 radiographic exposures and entered the radiography room after each of these exposures, without a survey meter. However, the incident was a result of radiographer negligence. The radiographer was properly trained, certified and received periodic retraining in accordance with the provisions of License No. 12-00622-07. The required radiographer audits were performed. Furthermore, the individual had been involved in radiography since 1956. The radiographer has been re-instructed on the proper exposure device survey techniques and requirements. The radiographer is no longer employed by the Magnaflux Corporation. We are in full compliance as of the date of this letter.

Item B.

10 CFR 34.2(h) defines a permanent radiographic installation as meaning a shielded installation or structure designed or intended for radiography and in which radiography is regularly performed. 10 CFR 34.29(b) states that each entrance that is used for personnel access to the high radiation area in a permanent radiographic installation to which this section applies shall have both visible and audible warning signals to warn of the presence of radiation. The visible signal shall be actuated by radiation whenever the source is exposed. The audible signal shall be actuated when an attempt is made to enter the installation while the source is exposed.

Contrary to the above, on February 5, 1981, the licensee's Indianapolis permanent radiographic installation did not have the required visible and audible warning signals to warn of the presence of radiation. Specifically, the licensee's Indianapolis facility had a shielded gamma ray cell designed or intended for radiography and where radiographic operations had been regularly performed for a year or more. The shielding for the cell consisted of outside walls constructed of approximately 24 inches

of concrete and an entrance door that was approximately 5 feet wide and made of lead. A red light near the entrance to the cell, a high radiation area, was actuated by a manual switch, but not by radiation whenever the source was exposed as required. No audible warning signal existed at the cell.

This is a Severity Level III violation (Supplement VII)

(Civil Penalty \$2,000)

Response

On February 5, 1981, the shielded room at the Indianapolis facility was not equipped with a visible and audible alarm system to warn of the presence of radiation. However, we deny that the room constituted a "permanent radiographic installation", because we do not believe that radiography was "regularly" performed there. The shielded room at Indianapolis was originally designed for x-ray use with sporadic use of gamma radiography equipment. When gamma radiography equipment was used, "field radiography" operating practices were observed. Expecting increased work in in-house gamma radiography, a radiation monitor and alarm system was ordered. The monitor and alarm system was ordered from Gamma Industries, Baton Rouge, Louisiana on January 8, 1981 and was received on March 17, 1981. The equipment was installed and is fully operational as of the date of this letter.

Item C.

10 CFR 20.101(a) limits the whole body occupational exposure of an individual in a restricted area to 1.25 rems per calendar quarter, except as provided by 10 CFR 20.101(b). Paragraph (b) allows a whole body exposure of 3.0 rems per calendar quarter provided certain specified conditions are met.

Page Four
U.S. Nuclear Regulatory Commission
Mr. Victor Stello, Jr., Director

Contrary to the above, the individual working in a restricted area on February 5, 1981, received a whole body occupational radiation dose of approximately 7.01 rems.

This is a Severity Level II violation (Supplement IV)

(Civil Penalty - \$2,000)

Response

On February 5, 1981, an individual working in a restricted area received a whole body exposure of approximately 7.01 rems. The radiation exposure of approximately 7.01 rems was the result of a radiographer failing to make the required physical radiation surveys as stipulated in item I.A (Notice of Violation letter 6/17/81). Therefore, the response to item I.A in this letter also applies to item I.C.

Item II. A.

10 CFR 34.24 required that each radiation survey instrument used to make physical radiation surveys shall be calibrated at intervals not to exceed three months.

Contrary to the above, a survey instrument (Gamma Grabber, Serial No. 222) which was not calibrated between May 16, 1980 and October 1, 1980, was used to make surveys during radiographic exposures on September 2 and 3, 1980. This is a period in excess of three months.

This is a Severity Level V violation (Supplement VII)

Response

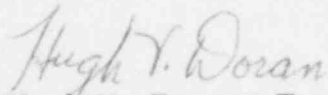
A survey meter without a current valid calibration was used on September 2 and 3, 1980. The survey meter specified in Item II.A. was used by a radiographer without first checking the calibration date. On September 19, 1980 a new survey report was designed and implemented which requires that the radiographer document the survey instrument calibration date. We are in full compliance as of the date of this letter.

Page Five
U.S. Nuclear Regulatory Commission
Mr. Victor Stello, Jr., Director

With the information in this letter concerning the actions taken, we believe we have replied to your Notice of Violation dated 6/17/81 as required by the regulation. Attached is a check for \$8,000.00 made payable to the U.S. Department of Treasury to cover the fines designated in the Notice of Violation. If you have any questions or require additional information, contact our Corporate Radiation Safety Officer, Earl L. Banfield at (312) 867-8000.

Very truly yours,

MAGNAFLUX QUALITY SERVICES
A Division of Magnaflux Corporation



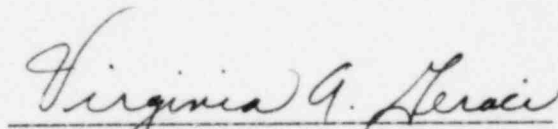
Hugh V. Doran

Hugh V. Doran, President

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Attach.

State of Illinois
County of Cook

I, Virginia A. Geraci, notary public, do hereby certify that Hugh V. Doran has signed this document under oath. Given under my hand and official seal this 9th day of July, 1981.



Virginia A. Geraci
Notary Public

CC: USNRC Region III-Attn:Director
H. Doran
R. Faloon
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Indianapolis RSC
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