



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064

December 23, 1996

EA 96-503

Mr. Loyd Barnett, President  
Barnett Industrial X-Ray, Inc.  
P.O. Box 1991  
Stillwater, Oklahoma 74076

SUBJECT: NRC INSPECTION REPORT NO. 030-30691/96-01 AND INVESTIGATION  
REPORT NO. 4-96-054

Dear Mr. Barnett:

On October 4, 1996, the NRC initiated a reactive inspection in response to your report of an event that occurred on October 3, 1996. The inspection continued at your offices at Stillwater, Oklahoma, on October 8-10, 1996. The Office of Investigation's Region IV Field Office also initiated an investigation of the event. At the conclusion of the inspection and investigation, a telephonic exit briefing was conducted with you on December 9, 1996, to discuss the inspection findings. The enclosed Inspection Report 030-30691/96-01 documents this inspection.

As noted above, this inspection was initiated in response to your notification that on October 3, 1996, a radiographer's assistant attempted to remove the source guide tube from an exposure device following a radiographic exposure and discovered that the source was partially exposed outside the source tube outlet. The causes of the event are noted below and described in detail in the enclosed report. The inspection included a re-enactment of the event, review of dose calculations completed by you and your consultant, interviews of personnel involved in the event, and examination of pertinent records. Our review confirmed that although the assistant received an unintended radiation dose, the dose received by the assistant did not exceed regulatory limits.

Based on the results of this inspection, three apparent violations were identified and are being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. The apparent violations are significant because they contributed to the unnecessary exposure of a radiographer's assistant. These apparent violations involved: (1) the assistant's failure to perform a survey of the exposure device following a radiographic exposure to verify that the sealed source had been returned to its fully shielded position; (2) failure of both the radiographer and the assistant to wear personal radiation monitoring devices during radiographic operations; and (3) failure of the radiographer to provide personal supervision of the assistant during radiographic operations.

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Collectively, the apparent violations have regulatory and safety significance because they represent a failure to use or implement equipment and controls intended to prevent unnecessary radiation exposures of radiography personnel and members of the public. Had circumstances been different, the dose received by the assistant could have been much higher. Accordingly, no Notice of Violation is presently being issued for these inspection findings. In addition, please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review.

In addition, the NRC has concluded, based on the investigation findings, that two of the apparent violations may have been willful. Specifically, the investigation determined that the radiographer's and the assistant's failure to wear personal monitoring devices was deliberate because both individuals acknowledged that they were aware of requirements to wear a film badge, pocket dosimeter, and alarming ratemeter when performing radiographic operations. The investigation also indicated that the radiographer willfully failed to supervise the assistant while he completed that last radiographic exposure on October 3.

Our inspection also included a review of corrective actions taken by Barnett Industrial X-Ray, Inc. (BIX). These included: (1) providing additional training to the assistant, (2) informing other BIX employees of the event and discussing regulatory requirements regarding use of personal monitoring devices and surveys required when performing industrial radiography, (3) establishing disciplinary procedures to emphasize the importance of compliance with NRC requirements and BIX procedures, and (4) performing additional audits of BIX employees in the field to verify compliance. These and other corrective actions taken by BIX are described in the enclosed report and in your letter dated October 16, 1996.

A predecisional enforcement conference to discuss these apparent violations has been scheduled for January 6, 1997, at 1:00 p.m. at the NRC Region IV office in Arlington, Texas. The decision to hold a predecisional enforcement conference does not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference is being held to obtain information to enable the NRC to make an enforcement decision, such as a common understanding of the facts, root causes, missed opportunities to identify the apparent violation sooner, corrective actions, significance of the issues and the need for lasting and effective corrective action. In addition, this is an opportunity for you to point out any errors in our inspection report and for you to provide any information concerning your perspectives on 1) the severity of the violations, 2) the application of the factors that the NRC considers when it determines the amount of a civil penalty that may be assessed in accordance with Section VI.B.2 of the Enforcement Policy, and 3) any other application of the Enforcement Policy to this case, including the exercise of discretion in accordance with Section VII.

Barnett Industrial X-Ray, Inc.

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Although you have previously described corrective actions taken in response to the event during the inspection and investigation, and in your October 16, 1996, letter, you should be prepared to discuss the effectiveness of those actions and any additional actions proposed by BIX during the conference. In presenting your corrective actions, you should be aware that the promptness and comprehensiveness of your actions will be considered in assessing any civil penalty for the apparent violations. The guidance in the enclosed excerpt from NRC Information Notice 96-28, "SUGGESTED GUIDANCE RELATING TO DEVELOPMENT AND IMPLEMENTATION OF CORRECTIVE ACTION," may be helpful.

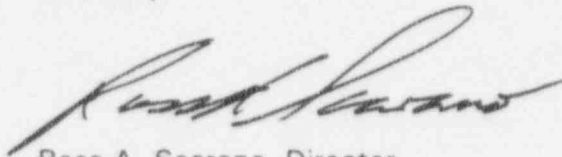
To help you prepare for the conference, we have also enclosed a copy of the NRC's Enforcement Policy for your reference. Your attention is directed to Section IV.C, "Willful Violations," and Section V, "Predictive Enforcement Conferences."

You will be advised by separate correspondence of the results of our deliberations on this matter. No response regarding these apparent violations is required at this time.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosures will be placed in the NRC Public Document Room (PDR).

Should you have any questions concerning this letter or the enclosed report, please contact Ms. Linda L. Howell at (817) 860-8213 or Mr. Richard A. Leonardi, Jr. at (817) 860-8187.

Sincerely,



Ross A. Scarano, Director  
Division of Nuclear Materials Safety

Docket No.: 030-30691  
License No.: 35-26953-01

Enclosures:

1. NRC Inspection Report 030-30691/96-01
2. Enforcement Policy
3. NRC Information Notice 96-28

cc w/Enclosure 1:  
Oklahoma Radiation Program Control Director

Barnett Industrial X-Ray, Inc.

-4-

bcc w/Enclosure 1 to DMB (IE07)

bcc w/Enclosure 1 distrib. by RIV:

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SJCollins

JLieberman, EO MS: 7-H5

DACool, NMSS(T-8F5)

LWCamper, NMSS(T-8F5)

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