TRI STATE ASSOCIATES, INC.

MATERIALS TESTING & INSPECTION SERVICES

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October 15, 1990

Director, Office of Enforcement
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Attn: Document Control Desk

Docket No: 030-30391
License No: 45-24967-01

Subject: Reply to a Notice of Violation (NRC Report No: 45-24967-01/90-02

Gentlemen:

This correspondence refers to a response to the apparent violations identified by the NRC in Report No.: 45-024967-01/90-02.

Finding: 1) Overexposure of an individual in a calendar quarter.

3) Failure to report an overexposure to NRC and an individual.

Admission/Denial Violation - Licensee admits to the findings.

Reason for Violation: Administrative oversight. The exposure record for February 25-March 24, 1990, was placed in the appropriate file without the Radiation Safety Officer's review. The administrative oversight which resulted in Finding (1) also lead to Finding (3).

Corrective steps taken and results achieved:

Findings Nos. 1 and 3. The company supplying film badge services (Tech/Ops Landauer) was immediately notified and a review of the film badge was conducted. Their report was received by Fax on August 14, 1990, and their review noted no unusual filter patterns or heat damage and confirmed the original exposure of 3440 MR.

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The individual's pocket dosimeter logs were reviewed for that period; a total of 14 MR was recorded for four (4) radiographic operations.

The individual was contacted on August 14, 1990, and was informed of the exposure results and was asked if he could recall any unusual event that could account for the higher exposure. He replied in the negative. Most of the involved individual's activities during that period consisted of visual inspections.

No data was presented which provided any information regarding this overexposure or the circumstances under which it occurred. Therefore, the exposure is presumed to be correct.

An updated occupational exposure summary has been prepared and mailed to the individual involved. A report of this incident has been prepared and submitted to the NRC headquarters and Region 2 as required by 10 CFR 20.405.

Corrective steps taken to avoid further violations:

Management has instituted new filing procedures so that documents will not be filed until reviewed by the RSO, President and Secretary who will all signify their completion of their review by initialing and dating the document.

The services of a Certified Health Physicist will be obtained to provide a quarterly review of the documents, activities, training and general radiation safety of the company. This person will also consult with the Radiation Safety

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Officer to provide additional training and insight into radiation protection standards, procedures and regulatory requirements. It is anticipated that these services will be provided for one year.

We have contacted Landauer/Tech Ops and they are going to call us when any film badge reported has an exposure rating of over 400 MR in a one month period. This should give us additional awareness of the dosage ratings, and prevent any film badge exceeding the 1.25 rems per calendar quarter.

Finding No. 2: Failure to perform a radiation survey adequate to alleviate the hazard presented by the radiographer's lost film badge.

Admission/Denial of Violation: Licensee admits to the violation.

Reason for Violation: Administrative oversight identified in Findings 1 and 3 also contributed to this Finding.

Corrective steps taken and results achieved:

As a result of the radiographer's reporting his March, 1990, film badge lost, a reconstruction of his dose for that period was performed using the pocket dosimeter logs for that period. Tri State Associates uses the calendar month in which the badges are issued as the month of record. As a further check, the dosimeter logs for the months preceding and following that period were reviewed to insure consistency between the film badge readings and the log entries. The dates used for the log entries corresponded with the change dates of the film badges. These readings are detailed as follows:

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| Month | Film Badge Reading | Pocket Dosimeter Reading |
|---|---|---|
| Dec. 1989 | 20 MR | 77 MR |
| Jan. 1990 | 40 | 83 |
| Feb. 1990 | 2840 | 81 |
| Mar. 1990 | -- | 52 |
| Apr. 1990 | 50 | 51 |

Generally, the pocket dosimeter reading agrees with the film badge readings; therefore, a value of 52MR should be added to the radiographer's cumulative exposure history.

Using the above value, the cumulative exposure for the radiographer for the first quarter 1990, was 2932 MR. As mentioned in the evaluation of the first individual's exposure, there was no evidence of an elevated exposure in the pocket dosimeter records, and the review of the February film badge performed by Landauer Tech/Ops indicated no unusual patterns or heat damage. The elevated exposure as recorded by the film badge must be assumed to be accurate.

An updated occupational exposure summary has been prepared and mailed to the second individual and the NRC.

Corrective steps taken to avoid further violations:

Corrective steps taken to avoid further violations coincide with Findings 1 and 3. In addition, the RSO will perform periodic, unannounced audits during radiography operations to insure that film badges and pocket dosimeters as well as alarming dosimeters, are being worn and that film badges are properly stored away from heat and radiation sources after working hours.

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Finding No. 4: Failure to submit required annual report.

Admission/Denial of Violation: Licensee admits to the Violation.

Reason for the Violation:

Licensee thought that Landauer Tech/Ops was preparing this report.

Corrective steps taken and results achieved:

The annual report has been prepared and submitted to the NRC.

Corrective steps taken to avoid further Violations:

Landauer Tech/Ops has been contacted to prepare the annual report for submittal to the NRC. Also, the services of a Certified Health Physicist has been obtained to provide a quarterly review of the documents, activities, training and general radiation safety status of the company.

Finding No. 5: Failure to register with the NRC the use of a shipping package.

Admission/Denial of Violation: Licensee admits to the Violation.

Reason for Violation: Administrative oversight.

Corrective steps taken and results achieved:

The Licensee has registered with the NRC as a secondary user of the Amersham 660 radiography device (NRC certificate of compliance 9033) and Amersham Model 650 source changer (NRC certificate of compliance 9032).

Corrective steps taken to avoid further violations:

The services of a Certified Health Physicist has been obtained to provide a quarterly review of the documents, activities, training and general radiation safety status of the company.

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Finding No. 6: Failure to post a High Radiation Area.

Admission/Denial of Violation: Licensee denies the violation.

Reason for violation: Responsible individual had the area under personal surveillance with a survey meter. This was performed on the 2nd floor above. There were high radiation signs posted around the source and it was roped off and controlled by a radiographer. The individual posted on the 2nd floor was there to prevent access.

Corrective steps taken and results achieved:

Additional training has been conducted and all radiographers and assistant radiographers have been made aware that High Radiation signs will be utilized on the vacant floors in addition to monitoring the area.

Corrective steps taken to avoid further violation:

The RSO will perform periodic unannounced audits during radiography operations to insure compliance with the regulations.

Additional comments: We feel our procedure was safer than using a sign because people constantly ignore signs. We feel we went beyond the regulations by having the area under direct observance because of our experience with people walking through areas. I do not feel a violation occurred or that one is warranted. We feel that having areas secured by personnel is safer; however, we have instructed our employees to post the High Radiation signs.

Full date of compliance: October 1, 1990

Sincerely,

TRI STATE ASSOCIATES, INC.

JoAnn Dunn

JoAnn Dunn, President

JAD/sj