U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No.	03033722/2007001
Docket No.	03033722
License No.	31-30187-01
EA No.	08-158
Licensee:	Quality Inspection Services, Inc.
Address:	37 Franklin Street Buffalo, New York 14202
Locations Inspected:	Manchester, Connecticut
Inspection Dates:	March 13-14, 2007, April 5, 2007, and August 30, 2007, with continued in-office review and exit meeting held July 21, 2008
Date Followup Information Received:	QISI response dated April 30, 2007 to Confirmatory Action Letter

Inspector:

Original signed by: CGordon ***8/12/08***

Craig Z. Gordon — date
Senior Health Physicist

Approved By:

Original signed by MMiller ***8/12/08***

Marie Miller, Chief — date
Materials Security and Industrial Branch
Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Quality Inspection Services, Inc. (QISI)
NRC Inspection Report No. 03033722/2007001

An NRC safety inspection was conducted on March 13-14, 2007, to review the design features of a newly constructed permanent radiographic installation located at the licensee's Manchester, Connecticut facility. NRC found that test exposures with an iridium-192 (Ir-192) source were performed within the proposed facility by the QISI Corporate Radiation Safety Officer (CRSO) without the facility being set up and used as a temporary job site. During further onsite inspections and in-office reviews conducted from April 5, 2007, through July 21, 2008, NRC determined that additional exposures were taken in the facility between November 15, 2006, and March 2, 2007, prior to NRC approval of the permanent radiograph material license.

As a result of the licensee's activities at the Manchester facility, the NRC issued a Confirmatory Action Letter (CAL) No. 1-07-003, dated March 28, 2007, wherein the licensee committed to: 1) not conduct radiographic operations in the proposed permanent radiographic installation until authorized by the NRC; 2) transfer the Ir-192 source to a QISI licensed facility authorized to receive it; 3) develop and implement an investigation plan to determine the circumstances and causes related to the unauthorized use of the proposed permanent radiographic installation, and develop and implement a corrective action plan to ensure all NRC requirements have been met prior to conducting radiographic activities at the Manchester facility.

NRC review of the licensee's April 30, 2007, response to the CAL determined that all the commitments listed in the CAL were met. Inspection of the facility on August 30, 2007, found that material was transferred appropriately and the facility had not been used for radiographic operations. An investigation plan to determine the circumstances and causes related to the unauthorized use of the facility was completed and the corrective actions taken were appropriate. The NRC by letter dated October 10, 2007, closed CAL 1-07-003.

As a result of the NRC inspection four apparent violations were identified:

(1) Failure to provide complete and accurate information, both in records presented to and in statements made to the NRC regarding use of the licensee's proposed permanent fixed installation in Manchester facility, as required by 10 CFR 30.9(a).

(2) Failure of the CRSO to perform radiography at the Manchester facility, a location other than a permanent radiographic installation, while accompanied by at least one other qualified radiographer or an individual who met the minimum requirements of 10 CFR 34.43(c), as required by 10 CFR 34.41(a).

(3) Failure to conduct all radiographic operations at locations of use authorized on the license in a permanent radiographic installation, unless specifically authorized by the Commission, as required by 10 CFR 34.41(b).

(4) Failure to maintain utilization logs for radiographic operations conducted between November 15, 2006 and March 2, 2007, as required by 10 CFR 34.71.

REPORT DETAILS

I. Organization and Scope of the Program

a. Inspection Scope

The inspector reviewed the organization and scope of the radiation safety program.

b. Observations and Findings

License No. 31-30187-01 authorizes industrial radiography operations at Quality Inspection Services, Inc.'s (QISI) Manchester, Connecticut and Idaho Falls, Idaho facilities, and at temporary job sites in NRC jurisdiction. At the Connecticut facility the Operations Manager (OM) was assigned as the site Radiation Safety Officer (RSO). Qualified radiographers (ASNT) including the OM performed radiography operations at temporary job sites in the area. On February 13, 2007, the licensee submitted an amendment request to eliminate the site located in Warren, Pennsylvania from the license. Sufficient transfer information and final surveys were provided indicating that all sealed sources were removed from that facility on January 4, 2007. The licensee's radiographic operations at the Connecticut site were discussed with the Corporate Radiation Safety Officer (CRSO) and site RSO, including construction and final testing of a proposed permanent fixed installation at the site.

c. Conclusions

No violations or safety concerns were identified.

II. Management Oversight of the Program

a. Inspection Scope

The inspector reviewed the management and oversight of the radiation safety program.

b. Observations and Findings

Oversight of the radiation safety program was provided by the CRSO from QISI's Buffalo, New York office. The CRSO and QISI Vice President, Northeast Operations (VPNO) were involved in the Connecticut operations through site visits on a regular basis. Initial interviews with the site RSO and CRSO, and review of utilization logs indicated that radiographic operations was limited to work at temporary job sites in August through October, 2006, with an additional one-day use at the proposed permanent fixed installation on February 7, 2007. Based upon this level of radiography operations, it appeared that management oversight of the radiation safety program was acceptable.

c. Conclusions

No violations or safety concerns were identified.

III. Material Receipt, Use, Transfer, and Control

a. Inspection Scope

The inspector reviewed material receipt, use, transfer, and control of the radiation safety program.

b. Observations and Findings

Prior to the inspection the CRSO contacted the inspector to discuss NRC requirements relative to the permanent fixed installation. The CRSO stated he traveled to the Connecticut office to perform exposure testing in the facility. Based upon the test results, he believed the facility was ready for use, and planned to request an amendment to the NRC license to add the fixed installation.

On March 13, 2007, an inspection was performed to review the CRSO's planning and final design of the completed facility. The site RSO was available to provide the site tour and present radiation safety program documentation. The licensee had one Amersham 880D radiography camera (S/N 2331) shown in the inventory log. The camera was received by QISI on February 5, 2007, with a new source, stored inside the warehouse, and secured within the proposed permanent fixed installation. According to the CRSO and site RSO, fixed installation measurements to determine radiation levels in the areas outside the facility were taken alone by the CRSO on February 7, 2007. However, the test exposures had been taken without the facility being set up and used as a temporary job site as defined by 10 CFR 34.3. While Condition 11 of License No. 31-30187-01 authorizes storage of the Ir-192 source and its use at temporary job sites, it does not authorize use of the source at the Manchester, Connecticut permanent radiographic installation. Since the permanent fixed installation was not approved by the NRC for licensee use, an apparent violation of 10 CFR 34.41(a) was identified. 10 CFR 34.41(a) requires that whenever radiography is performed at a location other than a permanent radiographic installation, the radiographer must be accompanied by at least one other qualified radiographer.

Utilization logs reviewed during the March 13, 2007, inspection showed October 26, 2006, as the last date the radiography device was used until the CRSO's measurements on February 7, 2007. However, the next day (March 14, 2007) the site RSO contacted NRC Office of Investigations staff stating that the device was used on additional dates, but that he had failed to document those dates with entries in the utilization logs.

On March 19, 2007, the QISI Vice-President was contacted to discuss the violations identified and understand the specific actions QISI planned to take in order to maintain compliance with NRC regulations. On March 28, 2007, NRC issued Confirmatory Action Letter (CAL) 1-07-003 to QISI, which confirmed the licensee had taken or would take the following actions:

1. radiographic operations would not be conducted in the proposed permanent radiographic installation until authorized by the NRC,

2. the radiographic device containing the Ir-192 source would be transferred to a QISI licensed facility in New York authorized to receive it, and

3. an investigation plan would be developed and implemented to determine the circumstances and causes related to the unauthorized use of the proposed permanent radiographic installation in Manchester, Connecticut. After the investigation was completed, a corrective action plan to ensure all NRC requirements have been met prior to conducting radiographic activities at the Manchester, Connecticut facility would be developed and implemented.

On April 5, 2007, NRC conducted an inspection at the Manchester, Connecticut facility to interview licensee staff involved in radiography operations. The VPNO, CRSO, and site RSO stated that the proposed permanent installation was used on additional dates, but all dates of use were not shown on the utilization log.

In response to the CAL, the licensee submitted to the NRC its completed investigation and corrective action plans on April 30, 2007. In the investigation the licensee provided a Nonconformance Report (NCR) which identified specific dates radiographic operations were performed in 2006 and 2007. The report identifies eight dates between August 15, 2006, and March 2, 2007, that radiography was performed at the Manchester, Connecticut facility (seven dates within the proposed fixed cell) without the information being documented in the utilization log. This is an apparent violation of 10 CFR 34.71 which requires that each licensee shall maintain utilization logs showing for each sealed source the following information:

> a description, including the make, model, and serial number of the radiographic exposure device or transport or storage container in which the sealed source is located;
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> the identity and signature of the radiographer to whom assigned;
>
> and the plant or site where used and dates of use, including the dates removed and returned to storage. The licensee shall retain the logs for 3 years after the log is made.

On August 30, 2007, the Manchester, Connecticut facility was inspected again to review the status of the licensee's commitments identified in the CAL. It was determined that all the commitments listed in the CAL were met. The inspector determined there was no further conduct of radiographic operations in the proposed permanent radiographic installation, that the device containing the Ir-192 source was transferred to a Quality Inspection Services, Inc. facility in New York, the investigation plan to determine the circumstances and causes related to the unauthorized use of the proposed permanent radiographic installation in Manchester, Connecticut was completed, and that corrective actions were developed and implemented. In addition to corrective actions taken on concerns identified in the NCR, staff were retrained on operating procedures for field radiography. A CAL closure letter was transmitted to the licensee on October 10, 2007.

c. Conclusions

Four apparent violations of NRC requirements were identified:

A. 10 CFR 30.9(a) requires, in part, that information provided to the Commission by a licensee, or information required by the Commission's regulations to be maintained by the licensee, shall be complete and accurate in all material respects.

Contrary to the above, during inspection of the licensee's Manchester, Connecticut site on March 13, 2007, the licensee failed to provide complete and accurate information, both in records presented to and in statements made to the NRC staff regarding use of the site's proposed permanent fixed installation. Specifically, during the March 13, 2007 inspection, the licensee's site RSO provided the inspector with a utilization log which indicated the last two dates the proposed fixed installation was used were October 26, 2006 (by the site RSO) and February 7, 2007 (by the CRSO). Additionally, the site RSO and assistant radiographer, in response to questions by the NRC Office of Investigation staff regarding use of the proposed permanent facility, stated that radiographic operations were not performed between October 26, 2006, and March 2, 2007. On March 14, 2008, the site RSO contacted NRC Office of Investigations staff stating the facility was used at other times not shown on utilization logs. Then during inspection of the Manchester, Connecticut facility on April 5, 2007, the site RSO stated the permanent installation was used on several occasions between November 2006 and March 2007. The facility was used on seven occasions during that period, as shown in the QISI investigation report submitted to the NRC on April 30, 2007.

B. 10 CFR 34.41(a) requires, in part, that whenever radiography is performed at a location other than a permanent radiographic installation, the radiographer must be accompanied by at least one other qualified radiographer or an individual who has at a minimum met the requirements of 10 CFR 34.43(c). The additional qualified individual shall observe the operations and be capable of providing immediate assistance to prevent unauthorized entry. Radiography may not be performed if only one qualified individual is present.

Contrary to the above, on February 7, 2007, the QISI CRSO performed radiography at the Manchester, Connecticut facility, a location other than a permanent radiographic installation, and was not accompanied by at least one other qualified radiographer or individual who met the minimum requirements of 10 CFR 34.43(c).

C. 10 CFR 34.41(b) states that all radiographic operations conducted at locations of use authorized on the license must be conducted in a permanent radiographic installation, unless specifically authorized by the Commission.

Condition No. 11A of License No. 31-30187-01 requires that licensed material may be stored at the licensee's facilities located at 318 North Morrison Street, Warren, Pennsylvania and 275 Progress Drive, Manchester, Connecticut.

Condition No. 11B (ii) of License No. 31-30187-01 requires that licensed material may be used and stored only at the licensee's permanent radiographic installation located at 318 North Morrison Street, Warren, Pennsylvania.

Contrary to the above, on seven occasions between December 20, 2006, and March 2, 2007, the licensee used the facility located at 275 Progress Drive, Manchester, Connecticut as a permanent radiographic installation to conduct radiographic operations. This facility not was not approved by the NRC as a permanent radiographic installation.

D. 10 CFR 34.71 requires, that each licensee shall maintain utilization logs showing for each sealed source the following information:

A description, including the make, model, and serial number of the radiographic exposure device or transport or storage container in which the sealed source is located; the identity and signature of the radiographer to whom assigned; and the plant or site where used and dates of use, including the dates removed and returned to storage. The licensee shall retain the logs for three years after the log is made.

Contrary to the above, as of April 30, 2007, the licensee failed to maintain complete utilization logs for radiographic operations conducted between November 15, 2006 and March 2, 2007, utilizing an iridium-192 source at its facility located in Manchester, Connecticut.

IV. Radiation Controls

a. Inspection Scope

The inspector reviewed implementation of the radiation safety program.

b. Observations and Findings

Overall implementation of the radiation safety program was sufficient to allow routine activities to meet regulatory requirements. Associated equipment (drive and source tube cables), survey meters, alarming ratemeters, and pocket dosimeters, were maintained and stored properly in or outside the warehouse. An issue related to dosimetry was discussed with the CRSO. Although dosimetry reports showed that exposures for all personnel were within regulatory limits, a concern was identified with an individual's quarterly exposure results reported at 1942 mR. Followup by the CRSO found the individual's badge had fallen off near the source during a radiographic operation. Further investigation determined that the individual did not receive the exposure reported on the badge.

Pocket dosimeters, alarming ratemeters, and survey meters were all within calibration. Leak tests were conducted at the required frequencies. A single transport (darkroom) vehicle was used to perform radiographic operations in the field and transfer devices between QISI offices. The RSO's annual program review for 2006 and six month radiographer field performance audits were well planned, and identified deficiencies

which were followed up and resolved. The RSO provided initial training via a prepared video, observes walkthrough demonstrations by assistant radiographers approximately every three months, and conducted annual refresher training.

c. Conclusions

No concerns or violations were identified.

V. Exit Meeting

The initial findings of the safety inspection were discussed with the Vice President, Northeast Operations on August 30, 2007. The VPNO indicated that licensed activities would not resume until additional staffing and resources were in place at the Manchester, Connecticut facility. After review of the issues by the NRC staff, the inspector contacted the CRSO by telephone on July 21, 2008 to discuss the results of the inspection and apparent violations identified during the inspection. A predecisional enforcement conference to discuss the apparent violations is scheduled for August 27, 2008.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. D' Anielo, Asst. Radiographer
M. Devine, Vice President, Sales
E. Kendrick, Vice President, Northeast Operations
D. Miskell, Corporate Radiation Safety Officer
D. Murdock, Operations Manager and site RSO
J. Sisson, President