ENCLOSURE 1

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 030-05985/88-02

Docket No. 030-05985

License No. 37-00276/25 Priority I Category C1

Licensee: Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division
850 Poplar Street
Pittsburgh, Pennsylvania 15220

Facility Name: Professional Service Industries, Inc.

Inspection At: 650 Elmwood Avenue, Sharon Hill, Pennsylvania and a temporary job site in Phoenixville, Pennsylvania

Inspection Conducted: October 4, 1988

Inspectors: David J. Collins — 2-22-89
David J. Collins, Health Physicist — date signed

Thomas R. Thompson, Health Physicist — 2/22/89
date signed

John J. Miller, Senior Health Physicist — 2-22-89
date signed

Approved by: 2/22/89
John R. White, Chief — date signed
Nuclear Materials Safety Section C

Inspection Summary: Routine Safety Inspection Conducted October 4, 1988, (Report No. 030-05985/88-02)

Areas Inspected: Organization and scope of licensed activities, training and instructions to employees, inspection and maintenance of equipment, equipment and facilities, personnel monitoring, internal audits, utilization log and quarterly inventory, radiation safety at field site, and transportation.

Results: In the areas inspection, two apparent violations were identified: Failure to test the audible/visible alarm on radiography cell (Section 5) and inadequate survey of exposure device (Section 5).

DETAILS

1. Persons Contacted

*Ron Eavey, Senior Division Manager (Site Radiation Safety Officer)
Rod Lukens, Division Manager for Construction Services
*Wally Braden, Assistant Manager (Assistant Site Radiation Safety Officer)
John Archibald, Radiographer
Steven Templin, Trainee

*Present at exit interview on October 4, 1988

2. Organization and Scope of Licensed Activities

Professional Service Industries, Inc. (PSI) is authorized by the NRC License No. 37-00276-25 to perform radiography at fixed and field sites in non-Agreement States and on off-shore drilling platforms in the Gulf of Mexico. Six permanent storage locations are authorized. The company is also licensed in several Agreement States.

The PSI facility located at 650 Elmwood Avenue, Sharon Hill, Pennsylvania is equipped with a permanent radiographic cell. The site Radiation Safety Officer (RSO) is Ron Eavey, who is the Senior Division Manager. Wally Braden is the Assistant Radiation Safety Officer at Sharon Hill. Mr. Eavey reports radiation safety matters directly to the Corporate Radiation Safety Officer, David Price. Two qualified radiographers perform most of the radiography from this office.

The licensee possessed two exposure devices manufactured by Gamma Industries, Inc.. A Gamma Industries Pipeliner contained approximately 45 curies of iridium 192; and a Model Century S contained approximately 42 curies of iridium 192. The licensee is authorized to possess a SPEC Model 2T exposure device, however licensee representatives irdicated that PSI-Sharon Hill never has possessed the Model 2T exposure device. The sources and exposure devices, possessed by the licensee were authorized by License No. 37-00276-25. The licensee has not exceeded their possession limits.

No violations were identified.

3. Training and Instructions to Employees

The inspectors reviewed the training records and examinations for the two active radiographers. The exams and records indicated that the two individuals had been trained and qualified in accordance with 10 CFR 34.31.

No violations were identified.

4. Inspection and Maintenance of Equipment

The inspectors reviewed a representative sample of the records of daily equipment inspections that are conducted by the radiographers. Results of quarterly equipment inspections and maintenance were documented and performed at the required frequency. The inspectors examined two drive cables and determined that one of the cables was bent just below the connector. The inspectors informed the Assistant RSO that use of the bent drive cable should be discontinued and it should be replaced.

No violations were identified.

5. Equipment and Facilities

The licensee's permanent radiographic cell was equipped with audible and visible alarm (MARS Alarm System). All alarms and interlocks were verified to be functioning. When the source was exposed, a restricted area was established by the licensee with rope and signs in the shop area and around the exterior of the building. Radiation levels outside the restricted area boundaries were within the limits specified in 10 CFR 20.105. There was no access to the roof of the facility from inside or outside of the building.

Records of alarm systems tests indicated that the MARS Alarm System was last tested on April 26, 1988. The Assistant RSO stated that he tested the system on September 30, 1988 and failed to make the entry in the records. The RSO stated that he had been working on a weekend approximately two weeks prior to the inspection (September 24) and he had also tested the alarm system. 10 CFR 34.29(c) requires that the alarm system on a permanent radiographic installation be tested at intervals not to exceed three months or prior to the first use thereafter of the source in the installation. Records indicated that radiography was performed in the installation after July 26, 1988 and prior to September 24, 1988.

The licensee's failure to test the alarm system at an interval less than three months and prior to first use thereafter is an apparent violation of 10 CFR 34.29(c).

Survey instruments examined by the inspectors were operable and calibrated within the last three months. The meters were capable of measuring radiation fields from 2 millirem per hour to 1 rem per hour. However, one instrument, a Jordan Nuclear Company Radector Model 500, Serial No. 4040 was determined by the inspectors to have an unusually slow response time. The inspectors observed a radiographer retract a 42 curie iridium-192 source. The radiographer then proceeded to perform a survey (with the meter having the slow response time) of the exposure device and guide tube. The inspector noted that if the source had been in an unshielded position, the meter would not have responded in the short time the radiographer took to perform the survey. 10 CFR 34.43(b) requires that a survey with a calibrated and operable radiation survey instrument be made after each exposure to determine that the sealed source has been returned to the shielded position.

The licensee's failure to survey the exposure device in a manner sufficient to compensate for the slow response time of the survey instrument constitutes an inadequate survey and is an apparent violation of 10 CFR 34.43(b).

6. Personnel Monitoring

The licensee's personnel dosimetry records indicated that no quarterly exposures in excess of 10 CFR 20.101 were received. Pocket dosimeters are calibrated annually, zeroed at the start of each shift and recorded daily according to the records. Radiographers at a jobsite were observed wearing film badges and direct-reading pocket dosimeters .

No violations were identified.

7. Licensee Internal Audits

The Sharon Hill Facility was last audited by the Corporate Radiation Safety Director on November 9, 1987. Deficiencies that were identified were documented and corrected.

The inspectors interviewed J. Archibald, a radiographer, concerning his last quarterly field audit. Mr. Archibald stated that he could not recall the date when his performance was last audited by the licensee. He said he was usually audited by the Assistant RSO and he thought his last audit occurred at the radiography cell at the Sharon Hill facility. He added that he remembered being audited during the winter at a jobsite in Marcus Hook, Pennsylvania.

According to the records, Mr. Archibald was last audited on September 2, 1988 at Fort Dix, New Jersey by the RSO. Utilization records indicated that at the time of this inspection, the radiographer had performed only three jobs since that audit. Although the audit reportedly occurred only about one month earlier, Mr. Archibald could not recall that his performance was actually observed at that time.

The audit records also indicated that prior to the Fort Dix audit, Mr. Archibald was audited on April 29, 1988, by the RSO, at a job site in the Philadelphia Naval Yard. In follow-up, the inspectors attempted to verify and validate this audit record by contacting the security staff at the Philadelphia Naval Shipyard. The audit record indicates that J. Archibald and J. Blair were evaluated by the RSO, Ron Eavey on April 29, 1988. Joseph O'Leary, Physical Security Specialist at the Philadelphia Naval Yard, informed an inspector that his access records indicated that Messrs. Archibald, Blair, and Eavey were not on site at the Naval Shipyard on April 29, 1988.

During a telephone conversation, on October 11, 1988, the inspectors identified to the Corporate Radiation Safety Director (CRSD) the discrepancy between the audit record dated April 29, 1988 and the information furnished by the Philadelphia Naval Yard security specialist. The Safety Director informed the inspectors that he would submit additional documentation regarding the radiographic work conducted on April 29, 1988. In a letter dated October 14, 1988 the licensee submitted a weld radiographic inspection report which indicated that radiographs were made at the Philadelphia Naval Yard by Messrs. Archibald and Blair on April 29, 1988. The licensee's submittal does not verify or validate that the RSO was at the Philadelphia Naval Yard on April 29, 1988. This remains an open item.

8. Utilization Log and Quarterly Inventory

The inspectors reviewed records of quarterly physical inventories documented in accordance with 10 CFR 34.26. They also reviewed a representative sample of the licensee's radiation safety reports (utilization logs).

No violations were identified.

9. Radiation Safety at Field Site

An inspector visited a job site in Phoenixville, Pennsylvania on October 4, 1988. The radiographer's use of a Gamma Industries Pipeliner exposure device was found to be in compliance with regulatory requirements.

No violations were identified.

10. Transportation

The inspectors examined the packaging, labelling, and shipping papers associated with the transport of 45 curies of iridium-192 in an exposure device from Sharon Hill, Pennsylvania to Phoenixville, Pennsylvania.

No violations were identified.

11. Exit Interview

The inspectors met with the licensee representatives denoted in paragraph 1 on October 4, 1988. The inspectors discussed the scope and findings of the inspection and expressed concern about the Jordan Nuclear Company Radector Model 500 survey instrument. The inspectors stated that because of the instrument's slow response time, the instrument was unsafe for use while performing radiography. The RSO stated that previous inspectors never identified these survey meters as a problem and the company had used the survey meters for years. The RSO stated that until the NRC specifies which survey meters are acceptable for radiography, he intended to continue using the Radector survey meter.

On October 11, 1988, the inspectors contacted the Radiation Safety Director to discuss the inspection and their findings. The Radiation Safety Director assured the inspectors that he would investigate the appropr eness of the survey meters that were being used in the Sharon Hill fac..ity and take the appropriate corrective action.

The inspectors also identified to the licensee representatives the discrepancy between the licensee's record for the audit performed on April 29, 1988 and the information provided by the Philadelphia Naval Yard security specialist. The inspectors requested that the CRSD submit additional records to verify that the work was performed and that the RSO performed an audit on that day.

ENCLOSURE 2

CASE No1-88-017

United States
Nuclear Regulatory Commission

Report of Investigation

Professional Services Industries, Inc.:

Falsification of Field Audit Records

Office of Investigations

Reported by OI:RI

Title: PROFESSIONAL SERVICE INDUSTRIES, INC.:

FALSIFICATION OF FIELD AUDIT RECORDS

Licensee:

Professional Service Industries, Inc.
Pittsburgh Testing Laboratory Division
850 Poplar Street
Pittsburgh, Pennsylvania 15220

Docket No.: 030-05985

Case No.: 1-88-017

Report Date: May 10, 1990

Control Office: OI:RI

Status: CLOSED

Reported by:

Ernest P. Wilson, Investigator
Office of Investigations
Field Office, Region 1

Reviewed by:

Chester W. White, Director
Office of Investigations
Field Office, Region 1

Approved by:

Ben B. Hayes, Director
Office of Investigations

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SYNOPSIS

Based upon a written request, dated November 18, 1988, from the Regional Administrator (RA), Nuclear Regulatory Commission (NRC), Region I, the Office of Investigations (OI) was asked to initiate an investigation to determine if the licensee, Professional Service Industries, Inc. (PSI), falsified a field audit record in an effort to mislead NRC Inspectors into believing that audits of radiographic personnel were being performed in accordance with a condition of their license. The priority of this investigation was subsequently elevated when further evaluation of the licensee revealed a poor enforcement history, including NRC civil penalties and a successful prosecution by the Department of Justice on issues related to integrity and wrongdoing.

PSI, which formerly did business as Pittsburgh Testing Laboratory, Inc., is licensed by the NRC to perform radiography at fixed and field sites in non-agreement states; it is also licensed in several agreement states. PSI is authorized to store and utilize iridium-192 and cobalt-60 for industrial radiography. Qualified radiographers perform radiography at the PSI facility and at field sites. An NRC license condition requires that the Radiation Safety Officer (RSO) or Assistant RSO (ARSO) perform unannounced radiation safety inspections (audits) of each radiographer and assistant radiographer at a minimum of once each calendar quarter.

A safety inspection was conducted on October 4, 1988, whereat NRC Inspectors reviewed an "Internal Radiation Safety Performance Audit" (Form RR-19), dated April 29, 1988, which was suspected of being fraudulent. The audit in question had purportedly been conducted at the Philadelphia Naval Shipyard (PNS) by the RSO. The inspector was unable to confirm the presence of PSI employees at the PNS. Subsequently, in response to an NRC request, PSI forwarded to NRC a letter, dated October 14, 1988, that included weld inspection reports that apparently confirmed the presence of two radiographers at PNS on April 29, 1988; it failed, however, to verify the RSO's presence. During this investigation evidence was developed which confirmed that two radiographers were present at the PNS on April 29, 1988, in order to conduct radiography. However, the two radiographers testified that they had no recollection of the RSO or the ARSO being present at PNS on April 29, 1988, to conduct a safety audit, and neither of them believed that an audit had been conducted. Documentary evidence acquired by OI indicates that the ARSO, who testified during this investigation that he performed the April 29, 1988, audit and might have signed the RSO's name on the RR-19, was at two other locations on April 29, 1988, and not at PNS.

Five PSI radiography employees were interviewed, and the majority intimated that more than just the one safety audit of April 29, 1988, might have been faked. One radiographer also claimed his radiation training record had been falsified. Therefore, the investigation was expanded to include an analysis of 24 safety audits which were purportedly conducted by the licensee during the period from January 1988 through September 1989. A representative sample of these 24 audits was selected for inclusion in this Report of Investigation (ROI), in addition to the one allegedly falsified training record.

The RSO testified during this investigation that he did not perform any of the audits during the questioned time frame even though his name is signed on

several of the RR-19's. The ARSO testified during this investigation that he: (1) had performed audits and signed the RSO's name on the RR-19's; (2) conducted unannounced audits of himself; (3) conducted an incomplete audit (but represented it as a complete audit) on a radiographer who conducted radiography inside the PSI cell; and (4) did not, as required by license condition, audit the assistant radiographers. The ARSO denied falsifying documents or faking audits in their entirety.

Testimonial evidence acquired during this investigation revealed that the ARSO generally only went to field sites when he conducted radiography or when a problem arose, and that he did not routinely travel to field sites for the express purpose of conducting any safety audits. Documentary evidence revealed only one occasion when the ARSO noted that a "job survey" had been completed.

For purposes of this investigation, a sampling of 9 out of the 24 audit documents reviewed by OI, in addition to the April 29, 1988, audit at PNS, are referenced in the ROI. Based upon the testimonial and documentary evidence acquired during this investigation, it is concluded that: the licensee, by way of the ARSO, intentionally and willfully falsified the April 29, 1988, PNS audit and at least 7 of the 9 additional referenced audits; the ARSO falsified, at least in part, 1 of the remaining referenced audits; and he represented that he conducted an unannounced audit of himself on another occasion. It is further concluded that the licensee failed to adhere to the license condition requiring quarterly safety audits; and that the ARSO made material false statements to OI during an interview when he stated that he completed the audits as represented and detailed on the RR-19's. The ARSO declined to be reinterviewed by OI.

Evidence acquired by OI did not implicate the RSO as being privy to knowledge or information that the audits were not being performed in accordance with the license. However, it is concluded that the RSO acted with careless disregard for his responsibilities as RSO by not assuring that the radiation safety program was being satisfactorily carried out by the ARSO.

Finally, based on testimonial and documentary evidence, it is concluded that a training record of one of the radiographers had been, at least in part, falsified by the ARSO.