

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. 80-01
Docket No. 10 CFR 150.20 License No. _____ Safeguards Group _____
General License
Licensee: Smith-Emery Company
781 East Washington Boulevard
Los Angeles, California 90021

Facility Name: _____

Inspection at: Building 114, Hunter's Point; San Francisco, California

Inspection conducted: July 30, 1980

Inspectors: B. A. Riedlinger August 20, 1980
B. A. Riedlinger, Radiation Specialist Date Signed

S. Rowinski Aug 20, 1980
S. Rowinski Date Signed

Approved by: R. D. Thomas August 21, 1980
R. D. Thomas, Chief, Materials Radiological Protection Section Date Signed

Approved By: H. E. Book August 22, 1980
H. E. Book, Chief, Fuel Facility and Materials Safety Branch Date Signed

Summary:

Report 80-01 documents a radiation - safety inspection conducted on July 30, 1980 regarding radiography procedures performed by the Smith-Emery Company under the general license granted by 10 CFR 150.20.

This inspection disclosed three items of noncompliance. One radiography procedure was conducted by an unauthorized user, one procedure was conducted without filing appropriate forms NRC-241, and two items were found to be in noncompliance with 150.20(b), which requires adherence to certain parts of 10 CFR. First, circumferential surveys of the exposure device after radiographic exposure were not being carried out as required by 10 CFR 34.43(b). Secondly, no NRC-3 had been posted, as required by 10 CFR 19.11(c).

The Smith-Emery Company holds a State of California license 2878-70. They have also applied for an NRC license to conduct radiography in locations under exclusive Federal jurisdiction.

This inspection involved five hours of effort by one NRC inspector. An NRC summer technical intern accompanied during the inspection.

DETAILS

Persons Contacted:

Mr. Ed Ekberg, General Manager, North California, Smith-Emery Company
Mr. Howard Miller, Radiographer
Mr. Tom Dickson, Radiographer
Mr. Scott Wallace, Employee

Background:

The Smith Emery Company holds a State of California license 2878-70. Their corporate office is located at 781 East Washington Boulevard, Los Angeles, California. The company tried to amend its state license to include activities at Building 114, Hunters Point Shipyard (Amendment 5). Later, it was determined that Building 114 was on land under exclusive Federal jurisdiction, and therefore, reciprocity was required. A Form NRC-241 (copy attached) describing these activities was filed on June 11, 1980 and signed by Mr. Ed Ekberg. On July 30, 1980, an unannounced inspection of the activities under the general license granted by 10 CFR 150.20 was conducted.

Inspection

Management Control Systems:

The corporate office of the Smith-Emery Company is located at 781 East Washington Boulevard, Los Angeles, California. The president of the company is Mr. George Battey Jr. The executive vice president is Mr. George Partridge, and the vice president is Mr. Jim Partridge. The licensee also has facilities at 3148-O La Palma Avenue, Anaheim, California, and at Hunters Point Shipyard, Building 114, San Francisco, California.

Mr. Ekberg stated that the State of California license should be amended to show Ray Greene as the Radiation Safety Officer (RSO) for Southern California operations and himself as RSO for Northern California activities.

Amendment 5 of State of California license 2878-70, dated April 17, 1980, listed the following individuals as authorized radiographers: Edwin Ekberg, Raymond Greene, Michael Martin.

During the inspection, Mr. Ken Fess of the State of California was contacted by telephone. He stated that T. Dickson and H. Miller had been added as authorized radiographers (license condition 12) and that Raymond Greene had been added as RSO with Ed Ekberg as alternate RSO (license condition 14). The inspector remarked to Mr. Fess that the State of California must have misunderstood the Smith-Emery license admendment application, since Mr. Ekberg had intended to add Mr. Greene as the RSO for Southern California Operations, with himself as the RSO for Northern California Operations.

Messrs. Ekberg, Dickson, and Miller are the only radiographers at the Hunter's Point facility. Mr. Scott Wallace is employed by Smith-Emery, but he has not yet qualified as an assistant radiographer.

Training:

Personnel training was discussed. Training records are attached to this report for the three radiographers at the Hunter's Point facility. There has been no formal refresher training since the activities in Building 114 were started. The inspector pointed out that refresher training is required every six months by condition 19 of license 2878-70. Since no activities were conducted under the Part 150 general license until July of 1980, there was no item of noncompliance.

Audits:

Mr. Ekberg conducted a personnel audit of one radiographer on June 17, 1980. Results of the audit were documented. Mr. Ekberg stated that problem areas found during the audit were discussed with the radiographer immediately.

Inspection and Maintenance:

The last quarterly maintenance check was conducted by Tom Dickson and reviewed by E. Ekberg on June 5, 1980. Daily maintenance checks are also conducted as indicated on the utilization logs (blank copy attached).

Operating and Emergency Procedures; Regulations:

Mr. Ekberg stated that the operating and emergency procedures for the Smith-Emery Company are provided to each radiographer. A copy was furnished to the inspector. It is entitled "Administrative, Operating and Emergency Procedures for Radiographic Personnel" and is procedure number SE 2000. It was signed by E. Ekberg on March 13, 1980 and by G. Battey on April 7, 1980.

The licensee had a copy of NUREG-0426, containing applicable sections of 10 CFR.

Utilization logs were maintained as required.

The last quarterly inventory was conducted on April 19, 1980.

Uses of materials, facilities and equipment:

Only one exposure cell is currently in use at the Hunter's Point Facility. Access is controlled by a fence and gate equipped with an audible alarm to warn that someone has entered the area. A gamma-alarm located in the exposure cell also actuates a red warning light at the cell entry. The operation of the alarm and interlock was demonstrated during the inspection.

Radiography was first conducted under the general license granted by 10 CFR 150.20 on July 1, 1980 at Building 114, Hunter's Point Shipyard, by Mr. T. E. Dickson. Mr. Dickson was not authorized by the State license at that time. This was identified as an item of noncompliance.

The general license was used for activities conducted on seven other days. One of these uses was carried out aboard the USS MOUNT HOOD at Pier 38 on July 15, 1980. Mr. Ekberg stated that he was not aware of the need for filing additional forms 241 for this use location. No such forms had been filed. This was identified as an item of noncompliance.

The licensee possesses one iridium-192 source, serial number 131, Industrial Nuclear Corporation Model 7, which is housed in a Technical Operations Model 660 projector, serial number 2522. The source was 103 curies on May 9, 1980. The projector is locked in a storage area in the back of a properly placarded camper-truck used for field operations. When the vehicle is not in use, it is sometimes kept inside Building 114 at Hunter's Point. The projector may also be stored in the exposure cell in Building 114.

The licensee had an operable Eberline E-120G survey meter, serial number 5622, which had been calibrated by Industrial Nuclear Company on July 29, 1980 and was due for recalibration on October 26, 1980.

Licensee representatives stated that collimators are used routinely.

Personnel Monitoring Control:

Radiation Detection Company of Sunnyvale, California supplies monthly film badges. The last record available was for the month May 1, 1980 - May 31, 1980. The maximum exposure for that month was 50 mr. Personnel dosimeters are zeroed, worn, and read daily. Results are recorded on the utilization log. One radiographer's dosimeter was examined. It had been calibrated on May 9, 1980 and was due for recalibration on May 9, 1981. The range of the dosimeter was 0-200 mr.

Leak Tests:

Industrial Nuclear Company evaluates source leak tests. The last one was conducted on May 9, 1980 when the current source was supplied.

Surveys:

The physical survey made before securing the exposure device is recorded on the utilization logs. When asked about surveys after each radiographic exposure, licensee representatives stated that a linear survey is conducted between the camera and the collimator. The inspector discussed the fact that this was in noncompliance with 10 CFR 34.43, which requires circumferential surveys of the exposure device after each exposure.

Posting and Labeling:

The exposure room at Building 114 was posted "Radiation Area." In a telephone conversation on August 8, 1980, the inspector discussed the fact that a "Caution, High Radiation Area" sign should be posted at the gate to the radiography cell, since the gate is the last barrier prior to entering a high radiation area. Mr. Ekberg stated that the sign would be changed accordingly.

The licensee did not have copies of Forms NRC-3. One was provided and posted during the inspection.

A ladder outside Building 114 that could be used to gain access to the roof above the exposure cell was posted "Caution-Radiation Area".

Independent Measurements:

The inspector used a Xetex 303A survey instrument, NRC #005780, due for recalibration on or before August 4, 1980, to conduct independent measurements.

Radiation levels at the surface of the Technical Operations Model 660 projector were 25 mr/hr maximum (at the source-connect), 10 mr/hr at the side surface locations, and 2.5 mr/hr at three feet from a side of the projector. With the source in its storage location in the radiography truck, levels were 2 mr/hr maximum at the surface of the vehicle (California license IV34754). With the source inside the collimator in the exposure room, levels outside the exposure room were not detectable. While the source was being cranked-out, levels at the gate to the cell were 3-4 mr/hr, returning to background when the source entered the collimator.

Receiving and Shipping of Material:

There are written procedures for receiving and shipping sources. The procedures are included in SE 2000, and they instruct personnel to record the level at three feet from the shipping container.

Surveys were conducted on source receipt, and records were maintained.

Source transfers take place between Smith Emery Company and Industrial Nuclear Company.

Mr. Ekberg stated that there have been no shipping incidents.