



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W., SUITE 2900
 ATLANTA, GEORGIA 30323-0189

Report No. 52-24986-01/94-01

License No. 52-24986-01

Docket No. 030-30532

Licensee: Puerto Rico Sun Oil Company
 Yabucoa, Puerto Rico

Inspection Conducted: August 10-30, 1994

Inspector: Elm. Alpine Sr.
 H. Bermúdez, Sr. Radiation Specialist

9/1/94
 Date Signed

Approved By: Elm. Alpine Sr.
 Hosey, Chief
 Nuclear Materials Inspection Section
 Nuclear Materials Safety and Safeguards Branch
 Division of Radiation Safety and Safeguards

9/1/94
 Date Signed

SUMMARY

Scope:

This routine, unannounced inspection of activities conducted under NRC License No. 52-24986-01 included a review of the organization and administration of the licensee's program, radiation safety training, and personnel radiation protection.

Results:

A significant weakness involving the conduct of activities not authorized under the license was identified. The weakness appears to result from inadequate knowledge of the conditions upon which the license was granted on the part of licensee staff. Of particular concern was the fact that licensee employees were performing maintenance and/or repair of a device containing a sealed source without being specifically licensed to do so.

Within the scope of this inspection, one violation was identified.

- Failure to have a trained responsible individual capable of responding to an emergency involving licensed materials in the Refinery 24 hours a day.

In addition, the following apparent violations were identified.

- Performing maintenance and/or repair of a device containing a sealed source without being specifically licensed to perform such services (Section 3).
- Failure to wear personnel monitoring devices when working in close proximity to the americium-241 source (Section 3).

REPORT DETAILS

1. Persons Contacted

F. Báez, Emergency Response Shift Supervisor
+J. de Arce, Radiation Safety Officer
W. Galarza, Instrumentation Technician
*E. Lozada, Laboratory Manager
*H. McLeod, Health, Safety, and Emergency Response Manager
D. Rodríguez, Safety Specialist
J. Seda, Electrical and Instrumentation Superintendent
*J. Shea, President

*Attended exit interview.

+By telephone on August 29, 1994.

2. Program Scope and Licensee Organization

License No. 52-24986-01 was originally issued on June 22, 1988, was most recently renewed on August 3, 1993 and, as of the time of the on-site inspection, was most recently amended on January 6, 1994. The license authorized the possession and use of americium-241 sealed sources in fixed and portable gauges for process control and in tank level detection meters, respectively. At the time of the inspection, the licensee possessed one portable tank level detection meter in storage and one sulfur-in-oil analyzer in use. The licensee was in the process of amending its license to include authorization to possess and use cesium-137 sealed sources in fixed gauges for measuring the properties of materials and/or controlling industrial processes.

Technicians from the licensee's Electrical and Instrumentation (E&I) staff had been trained by the manufacturer of the sulfur-in-oil analyzer and were responsible for maintaining the device operational. Radiation safety issues associated with the use of the analyzer were handled by the licensee's Radiation Safety Officer (RSO). The RSO reported to the Health, Safety and Emergency Response Manager, who reported to the President.

3. Inspection Findings

Condition 15 of License No. 52-24986-01 requires, in part, that maintenance and repair of devices containing sealed sources be performed by the device manufacturer or by persons specifically licensed by the Commission or an Agreement State to perform such services. While interviewing a licensee E&I technician, the technician referred to an occasion on which he had to dismantle the sulfur-in-oil analyzer to install a temperature sensor. The technician described to the inspector the steps he took to install the sensor and showed the inspector a manual prepared by the manufacturer which showed how to disassemble the analyzer. The inspector noted that the operation involved the removal, handling and replacement of the radioactive source holder. The technician indicated he had been shown how to perform this task by the

manufacturer during initial training regarding the use of the device. During a telephone conversation with the RSO on August 29, 1994, the RSO indicated to the inspector that she personally supervised the operation and that appropriate radiation surveys with a calibrated radiation survey instrument were performed. Through interviews and review of licensee records the inspector determined that the operation described above took place on February 17, 1994, and the technician who performed the operation was not specifically licensed by the Commission or an Agreement State to perform such services. The licensee's performing of maintenance and/or repair of a device containing a sealed source without being specifically licensed to perform such services was identified as an apparent violation of Condition 15 of License No. 52-24986-01.

Condition 25.A of License No. 52-24986-01 requires that the licensee conduct its program in accordance with the representations and procedures contained in the renewal application dated April 27, 1993. Item 10 of the renewal application, under "Personnel Radiation Monitoring," requires, in part, that all personnel performing any service in close proximity to the americium-241 source wear personnel monitoring devices that will document the radiation exposure of the extremities and the whole body. Through discussions with the technician in question and the RSO, the inspector determined that the technician did not wear personnel monitoring devices that will document the radiation exposure of the extremities and the whole body during the operation. The failure to wear personnel monitoring devices while in close proximity to the radioactive source was identified as an apparent violation of Condition 25.A of License No. 52-24986-01.

Item 9.6 of the renewal application dated April 27, 1993 requires, in part, that the licensee have at least one trained responsible individual available to respond to an emergency involving licensed materials 24 hours a day. Through discussions with licensee representatives, the inspector determined that the licensee intended to train its 24-hour emergency response shift supervisors on the basic radiation safety aspects associated with the possession and use of licensed materials. Through discussions with licensee representatives, including one 24-hour emergency response shift supervisor, the inspector determined that the 24-hour emergency response personnel had not received the basic radiation safety training and that, on many occasions, the licensee did not have any other trained responsible individual available to respond to an emergency involving licensed materials 24 hours around the clock. The failure to have at least one trained responsible individual in the Refinery available to respond to an emergency involving licensed materials 24 hours around the clock was identified as another apparent violation of Condition 25.A of License No. 52-24986-01.

4. Exit Interview

The inspection scope and results were summarized in an exit interview on August 10, 1994, with those individuals identified in Section 1 above. The inspector reviewed the program areas inspected and discussed in detail the inspection findings. The NRC's enforcement policy was

reviewed with licensee representatives. Licensee representatives indicated that the necessary steps to correct the deficiencies discussed in this report would be taken. There is no proprietary information contained in this report.

ENCLOSURE 3

PROPOSED ENFORCEMENT CONFERENCE AGENDA

Puerto Rico Sun Oil Company

NRC Region II Office, Atlanta, Georgia

Executive Conference Room

Tuesday September 27, 1994, at 2:00 p.m.

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| I. Opening Remarks | NRC |
| II. NRC Enforcement Policy and Procedure | NRC |
| III. Discussion of NRC Concerns | NRC |
| IV. Inspection Findings and Apparent Violations | NRC |
| V. Causes of Apparent Violations and
Corrective Actions | Licensee |
| VI. Closing Comments | NRC and Licensee |