

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 30-0C388/89-07

License: 42-00090-03

Docket: 30-06388

Licensee: Schlumberger Technology Corporation
Schlumberger Limited
5000 Gulf Freeway
Houston, Texas 77001

Inspection At: Offshore Platform "Rowan New Orleans"
Matagora Island 603, #1

Inspectors: *CX Cain* *Jr* 10/18/89
Linda L. Kasner, Health Physicist, Nuclear Materials Inspection Section Date

Selvan Rajendran 10/18/89
Selvan Rajendran, Radiation Specialist Date
Nuclear Materials Inspection Section

Approved: *Charles L. Cain* 10/18/89
Charles L. Cain, Chief, Nuclear Materials Inspection Section Date

Inspection Summary

Inspection Conducted September 21 and 22, 1989 (Report 30-06388/89-07)

Areas Inspected: Routine, unannounced radiation safety inspection of byproduct material use in well logging activities conducted on an offshore platform. The inspection included a review of training, materials and equipment, source handling procedures, radiation exposure control, and transportation. During the inspection, the inspectors observed the licensee's representatives unpackage sealed sources, perform routine maintenance checks, and load the logging tool while conducting well logging activities.

Results: Within the areas inspected, no violations were identified. The inspectors observed that the licensee's representatives appeared adequately trained in their respective duties and procedures, and that the logging assistants and engineer worked very efficiently in handling sealed sources with remote handling tools to reduce radiation exposure. The inspectors also noted that the licensee's employees adequately restricted access to the rig floor while loading the logging tool to reduce exposure to rig personnel.

The inspectors observed that licensed material was adequately secured and had been packaged and labeled for transportation in accordance with applicable DOT regulations. Required dosimetry devices and radiation survey instruments were available and in operable condition. Interviews of the licensee's staff, drilling rig supervisors, and platform operator staff demonstrated that all parties were well informed regarding operating and emergency procedures pertaining to the use of radioactive material in well logging.

DETAILS

1. Persons Contacted

- *Scott Shannon, General Field Engineer, Schlumberger Well Services
- *Jack Green, Logging Assistant, Schlumberger Well Services
- *David Hemphill, Logging Assistant, Schlumberger Well Services
- **Gary Henderson, Houston Offshore District Manager, Schlumberger Technology Corporation
- **C. E. Racster, Corporate Radiation Safety Officer, Schlumberger Technology Corporation
- Mike Anderson, Senior Geologist, Taylor Energy Company
- Jimmy Cole, Taylor Energy Company
- Lowell Shaw, Taylor Energy Company

*Denotes those present at the exit interview.

**Denotes those contacted for telephonic exit interview.

2. Inspection Overview

The inspectors met the Taylor Energy Company (TEC) geologist in Houston, Texas, at 3 p.m. on September 21, 1989. From Houston, the group flew to Victoria, Texas, where they were transported by helicopter to the offshore platform. They arrived at the platform at approximately 4:45 p.m. Upon arrival, the inspectors met with the company man, Mr. Jimmy Cole, to discuss the drilling status and projected logging time. Mr. Cole informed them that he anticipated reaching total depth by 10 p.m., and barring any unforeseen difficulties during the "short run" and hole conditioning, logging could begin between 2 a.m. and 4 a.m. The licensee's personnel and equipment were still in transit at this time and arrived at approximately 5:30 p.m. The inspectors indicated that they wished to remain unidentified to the licensee's staff to maintain an "unannounced" inspection status.

While drilling was completed, the inspectors were given the required safety orientation and observed the licensee's staff as they proceeded to unload and secure their equipment and materials on the platform. Interviews with several members of the rig and licensee's staff were conducted and surveys of the licensee's material were performed. During this interim, the logging assistants and engineers were occupied preparing their equipment and completing calibration procedures. The licensee's transportation packaging, survey instruments, and required documents were reviewed with the logging assistants.

The inspectors introduced themselves to the logging engineer at approximately 1 a.m. The engineer was interviewed regarding training and procedures while the rig staff prepared for logging the well. At 4 a.m. the logging tool was prepared and sources were loaded. The geologist had requested several types of surveys of the well, one of which was a

relatively fast log to a depth that extended beyond the hole casing, followed by a slower total depth log. The logging engineer anticipated that the entire procedure might take 6-8 hours to complete. The inspectors observed the initial logging procedure until the tool was brought back into the casing and departed from the platform at 1 p.m. on September 22, 1989. Due to the time required to complete the procedure and transportation availability, they were unable to observe the sources being removed from the logging tool.

3. Authorized Materials, Uses, and Users

The inspectors reviewed licensed material present as well as the licensee's method of transporting, storing, and securing the material on the platform. The licensee had one 1.5-curie cesium-137 sealed source (Serial No. 7288), one 0.5-curie and one 16-curie americium-241 sealed sources (Serial Nos. 3047 and 2517, respectively) at the site and authorized under the license. Sources were contained in appropriate DOT transport pigs, each of which were appropriately labeled and bore a lock and security seal. The transport pigs were stored in a large protective transportation overpack which was also locked and appropriately labeled. The logging engineering had the single set of keys to the source containers, to prevent inappropriate removal or handling of licensed material by unauthorized individuals.

The licensee had one survey meter (Ludlum, Serial No. 5817) which had been calibrated on May 4, 1989, and all personnel were equipped with appropriate personal monitoring devices.

During the logging procedure, the inspectors observed that the logging assistants and engineer worked efficiently while loading sources and provided adequate access restriction and surveillance of the rig floor to reduce exposure of rig personnel and themselves to a minimum.

The inspectors also noted that the logging engineer carried a certificate verifying that he had completed a recent annual safety review as required under the license.

No violations were identified.

4. Transportation

The inspectors reviewed the licensee's shipping papers, packaging, and labeling. All containers were appropriately labeled and the required notices and labels were affixed to the overpack. Shipping papers contained the appropriate hazardous material descriptions and required shipping information.

No violations were identified.

5. Exit Interview

The inspectors met with the field engineer and logging assistants to review the scope of the inspection and discuss the findings as presented in this report. The District Manager and Corporate Radiation Safety Officer were subsequently contacted by telephone to review the inspection findings.