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January 31, 2005

VIA Facsimile & U.S. Mail

Ms. Margaret M. Doane
Deputy Director, Office of
International Programs
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0011

Re: Notification of Shipments of Byproduct Material Contained in
Petroleum Exploration Equipment to an Embargoed Destination

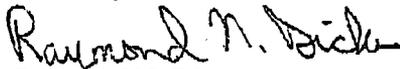
Schlumberger Technology Corporation ("STC") makes this notification to inform the NRC that it made three shipments of well logging devices to Libya, an embargoed destination identified in 10 CFR 110.28, with each shipment containing 10 Ci of Americium-241 and 1.7 Ci of Cesium-137. STC shipped these devices to an affiliate providing oil field services in Libya subsequent to the recent relaxation of U.S. trade sanctions on that country and inadvertently overlooked NRC's continuing export prohibition. Attachment 1 provides the following information for each device: a description, the nuclide, the activity, the country to which it was exported, the date it was shipped, and its end user and intended use.

STC has confirmed that its affiliate, Schlumberger Overseas S.A., has possession and control of these devices. In addition, STC has confirmed that Schlumberger Overseas S.A. is providing physical security for the devices meeting International Atomic Energy Agency and NRC standards to prevent loss, theft, or diversion of these devices. Attachment 2 provides a description of the security measures for these devices.

Because these byproduct materials are in low quantities, are contained in petroleum exploration devices, and are protected by security measures, these shipments create no significant adverse implications for public health and safety or common defense and security.

Attachment 2 to this letter provides additional information regarding this occurrence and STC's corrective actions. If you have any questions regarding this matter, please contact me.

Sincerely,



Raymond N. Dickes
Radiation Safety Officer
Schlumberger Technology Corporation

cc: Regional Administrator, NRC RJV
Trip B. Rothchild, Esq., NRC OGC

Notification of Shipments of Byproduct Material to an Embargoed Destination

Attachment 1

**Shipments of Byproduct Material Contained in
Petroleum Exploration Equipment to an Embargoed Destination**

1. Summary of Total Activity Exported to Libya

Exported to	Total activity for the year (curies)	End user
Libya	30 curies of Am-241	Schlumberger Overseas S.A.
Libya	5.1 curies of Cs-137	Schlumberger Overseas S.A.

2. Listing of Individual Exports

Asset ID	Description	Exported to	Shipment Date	End user and intended use
NSRM-A200	Well Logging Source Am241Be 370 GBq (10 Ci)	Libya	09/19/04	Schlumberger Overseas S.A. - Well Logging for Petroleum Exploration
GSRZ-A2177	Well Logging Source Cs137 63 GBq (1.7 Ci)	Libya		Schlumberger Overseas S.A. - Well Logging for Petroleum Exploration
NSRU-N362	Well Logging Source Am241Be 370 GBq (10 Ci)	Libya	9/20/04	Schlumberger Overseas S.A. - Well Logging for Petroleum Exploration
GSRZ-A2180	Well Logging Source Cs137 63 GBq (1.7 Ci)	Libya		Schlumberger Overseas S.A. - Well Logging for Petroleum Exploration
NSRM-A187	Well Logging Source Am241Be 370 GBq (10 Ci)	Libya	10/28/04	Schlumberger Overseas S.A. - Well Logging for Petroleum Exploration
GSRZ-A2160	Well Logging Source Cs137 63 GBq (1.7 Ci)	Libya		Schlumberger Overseas S.A. - Well Logging for Petroleum Exploration

Attachment 2

Shipments of Byproduct Material Contained in Petroleum Exploration Equipment to an Embargoed Destination

Abstract

Schlumberger Technology Corporation ("STC") makes this notification to inform the NRC that it made three shipments of well logging devices (each shipment containing 10 Ci of Americium-241 and 1.7 Ci of Cesium 137) to Libya, an embargoed destination identified in 10 CFR 110.28. STC shipped these devices to Schlumberger Overseas S.A., an affiliate providing oil field services in Libya, subsequent to the recent relaxation of U.S. trade sanctions on that country and inadvertently overlooked NRC's continuing export prohibition. Attachment 1 provides the following information for each device: a description, the nuclide, the activity, the country to which it was exported, the date it was shipped, and its end user and intended use.

STC has confirmed that its affiliate has possession and control of each of these devices and has implemented security measures to prevent loss, theft, or diversion of these devices. Because these byproduct materials are in low quantities, are contained in petroleum exploration devices, and are protected by security measures, these shipments create no significant adverse implications for public health and safety or common defense and security.

Description of Occurrence

On April 29, 2004, the United States government its embargo in trade with Libya including the prohibition on unlicensed exports of EAR-99 items such as well logging devices (69 *Federal Register* 23626). The United States government took this step following the Libyan government's disclosures to the IAEA of its exports of nuclear materials, and that government's commitment to abide by IAEA non-proliferation requirements. Following this step towards normalization of trade with Libya, on September 19, 2004, STC shipped a well-logging device containing 10 Ci of Am-241 and a well-logging device containing 1.7 Ci of Cs-137 to Schlumberger Overseas S.A. STC made two additional shipments to the same affiliate on September 20, 2004 and October 28, 2004. In each of these shipments, STC shipped a well-logging device containing 10 Ci of Am-241 and a well-logging device containing 1.7 Ci of Cs-137.

On September 16, 2004, the NRC published in the *Federal Register* a proposed amendment to 10 CFR 110.23 regarding exports of byproduct materials. STC reviewed that proposed rule for possible impact on its business operations. This led STC to review recent shipments of well-logging devices made under the general license provided at 10 CFR 110.23(a)(3). In reviewing records of those shipments, STC discovered that it had made the three shipments to Libya noted above, without consideration of the limitations on NRC's general license identified in 10 CFR 110.23(a)(1). STC's review found no

shipments to Libya prior to the U.S. government's relaxation of trade restrictions and no shipments to any other country listed in 10 CFR 110.28.

Apparent Cause of Occurrence

The apparent cause of this occurrence is a lapse in oversight of STC's exports of radioactive materials. STC failed to adequately monitor compliance with the requirements of 10 CFR Part 110, including the prohibition on exports to Embargoed destinations listed in 10 CFR 110.28 and reporting requirements under 10 CFR 110.23(a)(2). Under separate cover, STC has provided a submittal of information required to be reported under this section since February 1, 2001, which describes STC's exports of byproduct materials, made in accordance with the NRC's general license.

STC personnel did not adequately monitor the growing difference between NRC's listing of countries in 10 CFR 110.28 (Embargoed destinations) and 10 CFR 110.29 (Restricted destinations) and other areas of U.S. export controls. For example, Iraq and Libya remain listed in NRC's Embargoed destinations despite relaxation of U.S. trade sanctions with those nations. Similarly, Syria remains listed as an authorized but Restricted destination, notwithstanding a virtually complete embargo by the United States in May 2004, on all exports and re-exports of U.S. origin items (15 CFR Part 736, Supp. 1, General Order No. 2 (2004)). Afghanistan also remains on NRC's list of Restricted destinations.

In sum, STC's process was not sufficient to ensure compliance with the NRC's requirements for exports of byproduct materials in conjunction with other U.S. export requirements.

Analysis of Occurrence

Exports of these petroleum exploration devices to Schlumberger Overseas S.A. in Libya poses no significant concern for public health and safety or for national defense and security. First, the devices contain only small quantities, either 10 Ci of Am-241 or 1.7 Ci of Cs-137. Further, the byproduct material is contained in sealed well-logging devices (well-logging sources). Finally, the well-logging devices are in the possession, custody, and control of STC's affiliate. STC has received confirmation from Schlumberger Overseas S.A. that it has verified control over these devices and has implemented appropriate safeguards to protect against lost, theft, or diversion.

Security for the devices includes:

- The use of two locked barriers for the devices while they are in storage at the affiliate's facility. Access through these locked barriers is limited to those employees in the affiliate's location with both a need-for-access and who are qualified to handle the material. This security is augmented with frequent checks to verify the presence of devices in their locked transport containers and periodic inventories of the devices.

- The locking of each device in a transport container with a lock unique to STC and STC affiliates during shipments to or from the affiliate's location.
- Supervision of each source when outside the transport container by an employee of the affiliate who is qualified to handle the source.

Schlumberger management performed an audit on October 18, 2004 and verified that Schlumberger Overseas S.A. in Libya had implemented these security measures. The audit on October 18, 2004 was conducted as part of a routine audit program.

Accordingly, these exports do not create any significant concern for public health and safety or for national defense and security.

Prior to the discovery of these shipments to Libya, STC's oversight of exports of radioactive materials considered the requirements of regulations administered by the Department of Treasury Office of Foreign Asset Controls ("OFAC") and the Department of Commerce Bureau of Industry and Security ("BIS") and the following requirements of the NRC:

- Notification to the NRC by STC prior to export shipments, if the shipment contains activities above limits set by the NRC,
- Verification by STC that the STC affiliate possessed the required licenses/permits for the radioactive materials, and
- Notification by the STC affiliate that they had received the radioactive materials.

For the shipments of these devices to Libya, notification to the NRC prior to the exports was not triggered by these provision since: no shipment contained activities above the limits set by the NRC; and verification by STC and notification by the STC affiliate that it received each shipment occurred properly.

Corrective Actions

Since discovering these shipments to Libya, STC has:

- Verified that its affiliate has possession and control of the devices as described above;
- Ensured that the Embargoed destinations listed in 10 CFR 110.28 and Restricted destinations listed at 10 CFR 110.29 are adequately considered along with the requirements of regulations administered by OFAC and BIS, and
- Completed a review of NRC export requirements in 10 CFR 110, and will monitor 10 CFR 110 for changes. STC will incorporate changes to 10 CFR 110 into its export controls as they occur.

STC anticipates the need for future exports of similar well-logging devices containing Am-241, Cs-137 or other byproduct materials to Libya. No requests are currently pending. In the event of such a request, STC will seek an exemption from the NRC authorizing the transfer on a case-by-case basis.