NRC FORM 250P

# United States of America
Nuclear Regulatory Commission
Washington, D.C. 20555

**NRC LICENSE NO.: PCB101.01**

**LICENSE EXPIRES: September 30, 2017**



Pursuant to the Atomic Energy Act of 1954, as amended, and the regulations issued by the Nuclear Regulatory Commission (NRC) pursuant thereto, and in reliance on statements and representations heretofore made by the applicant/licensee, this license is hereby issued authorizing the licensee to import and/or export the byproduct materials listed below, subject to the terms and conditions herein. This license is only valid if the licensee maintains the requisite NRC or Agreement State domestic licenses.

**LICENSEE**

Weatherford International Inc. &
Subsidiaries & Affiliate Companies
515 Post Oak Boulevard, Suite 600
Houston, Texas 77027-9408

ATTN: Jeff Pettigrew

**APPLICANT'S REFERENCE:** OMN-Benbrook

**ULTIMATE FOREIGN CONSIGNEE(S)**

Weatherford Oil Tool Middle East Ltd.
Dohat Al Adab Street
Way # 3303, Building # 83
Al-Khowier- Muscat
Sultanate of Oman

**INTERMEDIATE FOREIGN AND/OR DOMESTIC CONSIGNEE(S)**

Peeraj Clearing & Forwarding Co. (L.L.C.)
P.O. Box 8436
Dubai, United Arab Emirates

**OTHER PARTY(IES) TO EXPORT/IMPORT**

Listed on Page 3

(Supplier/ Recipients)

**COUNTRY(IES) OF ULTIMATE DESTINATION:** Oman and the United States

**CONDITIONS, NOTES, AND DESCRIPTIONS OF 10 CFR PART 110, APPENDIX P, BYPRODUCT MATERIALS TO BE EXPORTED AND/OR IMPORTED**
(NOTE: SEE PAGE 2 FOR DEFINITIONS OF CATEGORY 1 AND CATEGORY 2)

Export and import to and from Oman of Category 2 quantities of Am-241, Am-241/Be not to exceed 0.74 TBq (20.0 Ci) per source, which may include general license quantities of Cs-137, contained in sealed sources, for use in oil and gas well logging operations, are authorized, not to exceed a maximum activity of 4.44 TBq (120 Ci) of Am-241, Am-241/Be in aggregate for all shipments per year. No more than 3 Category 2 shipments per source, per year to Oman are authorized.

Sealed sources will remain in the custody of either the licensee or its subsidiaries in Oman at all times, and when not in use, will be stored in a secure facility controlled either by the licensee or its subsidiaries in Oman.

Licensee is responsible for compliance with all applicable import, export, and other domestic regulatory requirements, including all terms and conditions of domestic materials license(s). Licensee, if not already submitted with your application, must submit information required by 10 CFR §110.32(d) and pertinent documentation required by 10 CFR §110.32(g) at least **24 hours prior to shipment.** See Page 2 for Mandatory Pre-shipment Notifications.

Licensee shall submit by February 1 of each year one copy of a report of all Americium shipments during the previous calendar year. The report must include: (1) a description of the material, including quantity; (2) approximate shipment dates; and (3) a list of recipient countries, end users, and intended use keyed to the items shipped.

This license replaces PCB101.0 and amends its authority by adding an 'Other Party(ies) to Export/Import.'

Neither this license nor any right under this license shall be assigned or otherwise transferred in violation of the provisions of the Atomic Energy Act of 1954, as amended.

This license is subject to the right of recapture or control by Section 108 of the Atomic Energy Act of 1954, as amended, and to all of the other provisions of said Act, now or hereafter in effect and to all valid rules and regulations of NRC.

THIS LICENSE IS INVALID UNLESS SIGNED BELOW BY AUTHORIZED NRC REPRESENTATIVE

NAME AND TITLE: Scott W. Moore, Deputy Director
Office of International Programs

DATE OF ISSUANCE: September 29, 2010

## MANDATORY PRE-SHIPMENT NOTIFICATIONS PER 10 CFR PART 110.50(b)(4)

The following Prior Shipment Notifications must be made to both the NRC and, in case of exports, the government of the importing country in advance of each shipment:

Prior Shipment Notifications to the NRC are to be emailed to hoo.hoc@nrc.gov (preferred method) or faxed to the NRC at 301-816-5151. In the subject line of the email or on the fax cover page include: "10 CFR 110.50(b)(4) Notification." For technical assistance, use the same e-mail address or call 301-816-5100.

Prior Shipment Notifications to the government of the importing country must be emailed or faxed to the appropriate foreign government authorities. To locate the point-of-contact for international Prior Shipment Notifications see: http://www-ns.iaea.org/downloads/rw/imp-export/import-export-contact-points.pdf. In the subject line of the email or on the fax cover page include: "NOTIFICATION TO THE IMPORTING STATE PRIOR TO SHIPMENT OF CATEGORY 1 OR 2 RADIOACTIVE SOURCES." For technical assistance or for countries not listed, contact the Office of International Programs' export/import staff at 301-415-2344.

**Table 1: Appendix P to Part 110–Category 1 and Category 2 Radioactive Material Threshold Limits**

| Radioactive Material | Category 1 | | Category 2 | |
|---|---|---|---|---|
| | Terabequerels (TBq) | Curies (Ci)[1] | Terabequerels (TBq) | Curies(Ci)[1] |
| Americium-241 (Am-241) | 60 | 1,600 | 0.6 | 16 |
| Americium-241/Beryllium (Am-241/Be) | 60 | 1,600 | 0.6 | 16 |
| Californium-252 (Cf-252) | 20 | 540 | 0.2 | 5.4 |
| Curium-244 (Cm-244) | 50 | 1,400 | 0.5 | 14 |
| Cobalt-60 (Co-60) | 30 | 810 | 0.3 | 8.1 |
| Cesium-137 (Cs-137) | 100 | 2,700 | 1.0 | 27 |
| Gadolinium-153 (Gd-153) | 1,000 | 27,000 | 10.0 | 270 |
| Iridium-192 (Ir-192) | 80 | 2,200 | 0.8 | 22 |
| Plutonium-238[2] (Pu-238) | 60 | 1,600 | 0.6 | 16 |
| Plutonium-239/Beryllium[2] (Pu-239/Be) | 60 | 1,600 | 0.6 | 16 |
| Promethium-147 (Pm-147) | 40,000 | 1,100,000 | 400 | 11,000 |
| Radium-226[3] (Ra-226) | 40 | 1,100 | 0.4 | 11 |
| Selenium-75 (Se-75) | 200 | 5,400 | 2.0 | 54 |
| Strontium-90 (Y-90) | 1,000 | 27,000 | 10.0 | 270 |
| Thulium-170 (Tm-170) | 20,000 | 540,000 | 200 | 5,400 |
| Ytterbium-169 (Yb-169) | 300 | 8,100 | 3.0 | 81 |

**Calculation of Shipments Containing Multiple Sources or Radionuclides:**

The "sum of fractions" methodology for evaluating combinations of radionuclides being transported is to be used when import or export shipments contain multiple sources or multiple radionuclides. The threshold limit values used in a sum of the fractions calculation must be the metric values (i.e., TBq).

I. If multiple sources and/or multiple radionuclides are present in an import or export shipment, the sum of the fractions of the activity of each radionuclides must be determined to verify the shipment is less than the Category 1 or 2 limits of Table 1, as appropriate. If the calculated sum of the fractions ratio, using the following equation, is greater than or equal to 1.0, then the import or export shipment exceeds the threshold limits of Table 1 and the applicable security provisions of this part apply.

II. Use the equation below to calculate the sum of the fractions ratio by inserting the actual activity of the applicable radionuclides or of the individual sources (of the same radionuclides) in the numerator of the equation and the corresponding threshold activity limit from the Table 1 in the denominator of the equation. Ensure the numerator and denominator values are in the same units and all calculations must be performed using the TBq (i.e., metric) values of Table 1.

R1 = activity for radionuclides or source number 1
R2 = activity for radionuclides or source number 2
RN = activity for radionuclides or source number n

AR1 = activity limit for radionuclides or source number 1
AR2 = activity limit for radionuclides or source number 2
ARN = activity limit for radionuclides or source number n

$$\sum_{1}^{n}\left[\frac{R_1}{AR_1}+\frac{R_2}{AR_2}+\frac{R_n}{AR_n}\right]\geq 1$$

[1] The values to be used to determine whether a license is required are given in TBq. Curie (Ci) values are provided for practical usefulness only and are rounded after conversion.

[2] The limits for Pu-238 and Pu-239/Be in this table apply for imports to the U.S. The limits for exports of Pu-238 and Pu-239/Be can be found in § 110.21.

[3] Discrete sources of Radium-226.

**OTHER PARTY(IES) TO EXPORT/IMPORT: Cont'd**

1. Weatherford International Inc.
   & Subsidiaries & Affiliate Companies
   500 Wincott Road
   Fort Worth, Texas 76126

2. Weatherford International Inc.
   & Subsidiaries & Affiliate Companies
   16210 West Hardy Road
   Houston, Texas 77060-1664

3. NSSI/Sources & Services Inc.
   5711 Etheridge Street
   Houston, Texas 77087-4009

4. Weatherford International, Inc.
   & Subsidiaries & Affiliate Companies
   7504 Benbrook Parkway
   Benbrook, Texas 76126

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