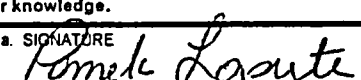


<b>NRC FORM 7</b> (5-2003) 10 CFR 110		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>		APPROVED BY OMB: NO. 3150-0027		EXPIRES: 05/31/2008	
<b>APPLICATION FOR LICENSE TO EXPORT NUCLEAR MATERIAL AND EQUIPMENT</b>				Estimated burden per response to comply with this mandatory collection request: 2.4 hours. This submittal is reviewed to ensure that the applicable statutory, regulatory, and policy considerations are satisfied. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to <a href="mailto:infocollects@nrc.gov">infocollects@nrc.gov</a> , and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0027), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.			
<i>(See Instructions on Reverse)</i>							
1. APPLICANT'S USE		a. DATE OF APPLICATION <b>10-12-05</b>		b. APPLICANT'S REFERENCE		2. NRC USE	
						a. DOCKET NUMBER <b>CBP0002</b>	
3. APPLICANT'S NAME AND ADDRESS				4. SUPPLIER'S NAME AND ADDRESS <i>(Complete if applicant is not supplier)</i>			
a. NAME Halliburton Energy Services				a. NAME See Attachment 1			
b. STREET ADDRESS (Facility Site) 2101 City West Blvd., Bldg. 2				b. STREET ADDRESS			
c. CITY Houston,		d. STATE TX		e. ZIP CODE 77242		b. STREET ADDRESS	
f. TELEPHONE NUMBER (713) 839-4549		g. FAX (713) 839-4564		h. E-MAIL <a href="mailto:pam.loprete@hal">pam.loprete@hal</a>		c. CITY	
						d. STATE	
						e. ZIP CODE	
5. FIRST SHIPMENT SCHEDULED 12/01/2005		6. FINAL SHIPMENT SCHEDULED 12/31/2015		7. APPLICANT'S CONTRACTUAL DELIVERY DATE		8. PROPOSED LICENSE EXPIRATION DATE 12/31/2015	
						9. CONTRACT NO.	
10. ULTIMATE FOREIGN CONSIGNEE				11. ULTIMATE END USE <i>(Include plant or facility name)</i>			
a. NAME Halliburton Energy Services				Halliburton Energy Services and Subsidiaries in the following NRG countries: Argentina, Russia, Australia, Italy, Singapore, Austria, Japan, Spain, Belarus, Latvia, Belgium, Turkey, Brazil, Mexico, Canada, Netherlands, United Kingdom, Denmark, New Zealand, United States			
b. STREET ADDRESS (Facility Site) See Attached				11a. DATE REQUIRED 12/05/2005			
c. CITY		d. COUNTRY		12. INTERMEDIATE FOREIGN CONSIGNEE			
a. NAME				13. INTERMEDIATE END USE			
b. STREET ADDRESS (Facility Site)				13a. DATE REQUIRED			
c. CITY		d. COUNTRY		14. INTERMEDIATE FOREIGN CONSIGNEE			
a. NAME				15. INTERMEDIATE END USE			
b. STREET ADDRESS (Facility Site)				15a. DATE REQUIRED			
c. CITY		d. COUNTRY		16. COM CODE			
17. DESCRIPTION <i>(Include chemical and physical form of nuclear material; give dollar value of nuclear equipment and components)</i>				18. MAX. ELEMENT WEIGHT		19. MAX. WT. %	
See Attachment 1 Category 2 Americium-241 and Americium-241/Be for shipments that are in excess of the <span style="background-color: black; color: black;">[REDACTED]</span> threshold.						20. MAX. ISOTOPE WEIGHT	
						21. UNIT	
22. FOREIGN OBLIGATIONS BY COUNTRY AND PERCENTAGE <i>(Use separate sheet if necessary)</i>							
23. ADDITIONAL INFORMATION ON CONSIGNEES, END USES, AND PRODUCT DESCRIPTION <i>(Use separate sheet if necessary)</i> See Attachment 2 - Support Document							
24. The applicant certifies that this application is prepared in conformity with Title 10, Code of Federal Regulations; and that all information in this application is correct to the best of his/her knowledge.							
25. AUTHORIZED OFFICIAL				a. SIGNATURE 			
				b. TITLE Manager, International Trade Compliance			

**Attachment 1**  
**USNRC Form 7, Items 16 – 23**

Halliburton's license application criteria is based on specific shipments that exceed NRC threshold limits as per 10 CFR Part 110. Our current inventory includes 19 curie Ambe sources that will require this license for all exports, re-exports, or imports returning to the U.S.

The new regulation requires the use of the 'sum of calculations' methodology for multiple or consolidated shipments. Halliburton has several Ambe sources that are less than the threshold but could exceed the limits if consolidated.

For this reason we are requesting a quantity of 200 'events' or movements. Each shipment will be considered one event and therefore one pull down on the license and one notification to the NRC.

Description	Unit Value (rounded )
Am241Be Logging Source used with dual spaced Neutron Tool.	
Am241Be Logging Source used with dual spaced Neutron Tool	
Am241 source for use with the Fluid Density Tool	
Am241 calibration source for tool calibration	
Am241Be sealed source with transport shield used in Compensated Thermal Neutron (CTN) Tool	
Am241Be sealed source with transport shield used in Compensated Neutron Porosity Tool (CNPh)	
Am241Be sealed source installed in Compensated Thermal Neutron (CTN) verifier for calibration of CTN Tool.	

As noted in the support documents these 'events' would occur between Halliburton Energy Services and Subsidiaries in the following Nuclear Suppliers Group (NSG) countries; Argentina, Russia, Australia, Italy, Austria, Japan, Spain, Belarus, Latvia, Belgium, Turkey, Brazil, Mexico, Canada, Netherlands, United Kingdom, Denmark, New Zealand, United States (Imports), France, Norway, Germany, Greece

**Attachment 2**

**Support Documents**

**Halliburton Energy Services**

**Application Reference Number HES6000**

**Halliburton Energy Services (HES)**

**Application Reference Number HES6000**

**October 12, 2005**

**Introduction**

Halliburton is one of the world's largest providers of products and services to the oil and gas industries. Halliburton Energy Services Group (HES) offers a broad array of products and services to upstream oil and gas customers worldwide, ranging from the manufacturing of drill bits and other downhole and completion tools to pressure pumping services.

The Drilling and Formation Evaluation segment is primarily involved in drilling and evaluating the formations related to borehole construction and initial oil and gas formation evaluation.

The products and services in this segment incorporate integrated technologies, which offer synergies related to drilling activities and data gathering. The segment consists of drilling services, including directional drilling and measurement-while-drilling/logging-while-drilling; logging services; and drill bits. Included in this business segment are Sperry Drilling Services, Logging Services, and Security DBS Drill Bits.

**License Application and Request**

The purpose of this license application is to request specific authorization for the import, export and re-export of the byproduct materials *Americium-241* and *Americium-241/Be* as per the amendments to Nuclear Regulatory Commission (NRC) 10CFR Part 110, published in the Federal Register July 1, 2005. These recent amendments provide for enhanced tracking of certain exports and imports of radioactive materials and sources including requirements for specific export and import licenses when amounts exceed threshold limits noted in Appendix P to Part 110. The following information is provided in support of this application and to ensure the NRC that Halliburton is in compliance with the rules and regulations set forth in the export-import provisions of the Code of Conduct on the Safety and Security of Radioactive Sources.

Halliburton transfers these tools between our facilities as required by the workload and as required for repair or redeployment of the tools. The primary location for redeployment is the HES United States facility located in Houston, Texas. For this reason we are requesting permission for imports as well as exports and re-exports.

## Usage of RA Americium-241 and Americium-241Be

Halliburton uses several strengths of Ambe 241 encapsulated sources (sources). The material is placed into a special capsule that is threaded on one end. These capsules are designed to be screwed inside of an electronic wireline logging sonde. The sources are lowered into the well formations inside the sonde which is tethered on the end of a steel cable. The sonde is equipped with a transmitter and detector section. The Ambe source emits neutron into the rock formations and the detector section measures the decay rate in the rock. This decay rate tells the geologist on the surface what kind of rock has been encountered. Knowledge of rock properties is essential in the exploration of oil.

Am241Be [REDACTED] sources are used with dual spaced neutron tools and in Compensated Thermal Neutron (CTN) Tools. The export of these tools will require license authorization beginning in Dec. 2005. Other Americium tools used for logging and calibration are [REDACTED]. If a shipment is consolidated, these smaller sources might also exceed the [REDACTED] limit and will therefore require a license authorization after Dec. 2005

## Halliburton's Corporate Radiation Safety Program

Halliburton Energy Services (HES) ensures compliance with radioactive source regulations by Company Policy and through the training, execution, and monitoring of our Corporate Radiation Safety Program (CRSP). The purpose of the CRSP program is to define and implement processes that minimize radiation exposure of personnel, property, and the environment resulting from working with radioactive materials and sources used by the company. Key areas covered by the program include:

- Organization and Authority Descriptions
- Radiation Safety Procedures Development and Maintenance
- Radiation Safety Training
- Radiation Exposure Control
- Procedures for Receipt, Handling, Identification, and Disposal of Radioactive Materials
- Radiological Emergencies and Incidents
- Radiation Protection Equipment Calibration and Maintenance
- Recordkeeping

It is the policy of HES that the CRSP be executed both nationally and internationally. HES facilities located in countries with less restrictive regulations shall comply with this program as the minimum acceptable standard of radiation safety. A copy of these guidelines can be provided as required.

### **End User Authorization to Receive and Possess the Material**

Halliburton Energy Services and subsidiaries will be the end users of these materials in the following countries where HES currently has operations:

Argentina	Greece	Russia
Australia	Italy	Spain
Austria	Japan	United Kingdom
Belarus	Latvia	United States (Imports)
Belgium	Turkey	
Brazil	Mexico	
Canada	Netherlands	
Denmark	New Zealand	
France	Norway	
Germany	Russia	

### **Recipient's Technical and Administrative Capability, Resources, and Regulatory Structure**

Licensed materials will be stored at approved Halliburton Energy Services facilities only. These facilities are licensed for use and storage as required by local and international law.

The licensed materials shall be used by, or under the supervision and in the physical presence of the Halliburton Energy Service's Radiation Safety Officer, or individuals who have been trained as specified in Halliburton's materials license application letters dated March 21, April 1, and July 18, 1997. The licensee shall maintain records of individuals designated as users.

Halliburton Energy Services NRC materials license no. 42-01068-07 has been in place since 1997. This license authorizes HES to receive, acquire, possess, and transfer byproduct materials as noted in the conditions of the license.

Random compliance audits check the effectiveness of each facilities radiation safety program maintenance while providing oversight by the Global Radiation Safety Group. The audit covers all major aspects of all the radioactive material usage. This audit is conducted by a Global Radiation Safety Officer (GRSO), an Associate Radiation Safety Officer (ARSO), a Region Radiation Safety Manager, or a qualified individual designated by a GRSO).

Audit records are created based upon location and product service line. A copy of the audit report are distributed via e-mail to the Country/NWA Vice President, Global PSL Operations Manager, Global PSL Service Quality Coordinator,

Global PSL HRD Manager, Country/NWA HSE Lead, Country/NWA PSL Operations Manager, Local/Facility Radiation Safety Officer, and Assistant/Facility Radiation Safety Officer/Representative for the facility audited.

### **Concern for Diversion**

The items authorized for export under this license will only be used by employees of Halliburton Energy Services and its subsidiaries.

Halliburton's Corporate Radiation Safety Program provides auditable processes for storage, usage, transportation, monitoring and recordkeeping of all radioactive sources as well as training and internal management reviews to ensure the safety of the people and the environment.

All movements of radioactive sources are pre-screened and approvals are required prior to shipment by the Radiation Safety Group and the International Trade Compliance Department.

The items authorized for export or import will not be used for any nuclear activities or by any nuclear end users.

The commodities will not be resold without prior approval and notification as required by the NRC and local regulations.

Halliburton has consistently maintained, monitored, and reported to the Nuclear Regulatory Commission on all licenses related to the control of radioactive materials.