

# APPLICATION FOR LICENSE TO EXPORT NUCLEAR MATERIAL AND EQUIPMENT

(See Instructions on Reverse)

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 [infocollects@nrc.gov](mailto:infocollects@nrc.gov), 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.

1. APPLICANT'S USE		a. DATE OF APPLICATION 3-31-06		b. APPLICANT'S REFERENCE		2. NRC USE		a. DOCKET NUMBER		b. LICENSE NUMBER XBP0044			
3. APPLICANT'S NAME AND ADDRESS						4. SUPPLIER'S NAME AND ADDRESS (Complete if applicant is not supplier)							
a. NAME Halliburton Energy Services						a. NAME							
b. STREET ADDRESS: (Facility Site) 2101 City West Blvd., Bldg 2						b. STREET ADDRESS							
c. CITY Houston		d. STATE TX		e. ZIP CODE 77242		c. CITY		d. STATE		e. ZIP CODE			
f. TELEPHONE NUMBER (713) 839-4536		g. FAX (713) 839-4564		h. E-MAIL cynthia.dorris@h									
5. FIRST SHIPMENT SCHEDULED		6. FINAL SHIPMENT SCHEDULED		7. APPLICANT'S CONTRACTUAL DELIVERY DATE		8. PROPOSED LICENSE EXPIRATION DATE		9. CONTRACT NO.					
		12/31/2008				12/31/2008							
10. ULTIMATE FOREIGN CONSIGNEE						11. ULTIMATE END USE (Include plant or facility name)							
a. NAME China Petroleum Logging Corporation, LTD						1). China Logging Petroleum Logging Corporation, LTD - Changqing Operations							
b. STREET ADDRESS: (Facility Site) #142, Weiyang Rd						2). China Logging Petroleum Logging Corporation, LTD - Qinghai Operations							
c. CITY Xi'an City, 710021, Sha'anxi Province				d. COUNTRY China		11a. DATE REQUIRED							
12. INTERMEDIATE FOREIGN CONSIGNEE						13. INTERMEDIATE END USE							
a. NAME						13a. DATE REQUIRED							
b. STREET ADDRESS: (Facility Site)						15. INTERMEDIATE END USE							
c. CITY				d. COUNTRY		15a. DATE REQUIRED							
14. INTERMEDIATE FOREIGN CONSIGNEE													
a. NAME													
b. STREET ADDRESS: (Facility Site)													
c. CITY				d. COUNTRY									
16. COM CODE		17. DESCRIPTION (Include chemical and physical form of nuclear material; give dollar value of nuclear equipment and components)				18. MAX. ELEMENT WEIGHT		19. MAX. WT. %		20. MAX. ISOTOPE WEIGHT		21. UNIT	
		See Attachment 1 Am241 Be Logging Source used with the dual spaced Neutron tool Cs-137 Source Thorium 232 Calibration Blankets											
22. FOREIGN OBLIGATIONS BY COUNTRY AND PERCENTAGE (Use separate sheet if necessary)													
23. ADDITIONAL INFORMATION ON CONSIGNEES, END USES, AND PRODUCT DESCRIPTION (Use separate sheet if necessary)													
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 Cindy Dorris				b. TITLE Administration, International Trade Compliance					

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# HALLIBURTON

International Trade Compliance • 2101 CityWest Blvd., Bldg. 2 • Houston, TX 77042-3201  
P.O. Box 42806 Houston, TX 77242  
Phone 713.839.2000 • Fax 713.839.4564

Deputy Director,  
Office of International Programs  
U.S. Nuclear Regulatory Commission  
Mail Stop O-4E21  
11555 Rockville Pike  
Rockville, Maryland 20852

March 31, 2006

**RE: Application for Specific License for the Export of Americium in amounts exceeding  
SI Limits – NRC 10 CFR, Part 110**

Deputy Director,

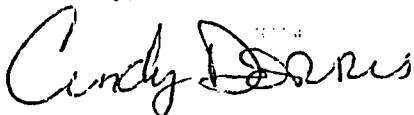
Halliburton Energy Services, Inc. is applying for a specific license to export and sell three [REDACTED] Am241Be Logging Source, three [REDACTED] Cs-137 Source and three Thorium 232 Calibration Blankets to *China Petroleum Logging Corporation*. These materials will be used to calibrate down hole well logging equipment for the completion of an oil or gas well prior to the production, or to enhance production of existing wells in China. These items are subject to the export licensing jurisdiction of the U. S. Nuclear Regulatory Commission. Enclosed please find Halliburton's check in the amount of \$1600.00 (Sixteen hundred dollars) as the application fee for this license.

Halliburton Energy Services in consideration of Title 10, Part 110.42.(c) of the Code of Federal Regulations submits that the NRC-Controlled Items proposed for export and re-export are not inimical to the common defense and security of the United States and the proposed exports and re-exports are consistent with the policies and objectives of the United States Government.

Included in the application package please find a completed and signed copy of NRC Form 7, "Application for License to Export Nuclear Material and Equipment," with attachment.

If you should have any questions please do not hesitate to call or write at the above number or address.

Sincerely,



Cindy Dorris  
Halliburton Energy Services  
International Trade Compliance

# Halliburton

Enc: NRC Form 7  
Halliburton Energy Services Attachment 1  
Halliburton Check for Application

**Halliburton Energy Services (HES)**  
**Application Reference Number HES4009**

**Application Information:**

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.

**License Application and Request:**

The purpose of this license application is to request specific authorization to sell and export three each [REDACTED] Am241Be Logging Source with dual spaced Neutron Tool, three each [REDACTED] Cs-137 Source, three each Thorium 232 Calibration Blankets, three each [REDACTED] Cs-137 pulsar source and 4 each 50 nano Curie Am-241 pulsar source to be used by *China Petroleum Logging Corporation's Changqing and Qinghai Operations* in China. 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 in the Safety and Security of Radioactive Sources.

**Description of Equipment:**

These Neutron Tools use Ambe241 encapsulated source (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.

## Attachment 1 – Support Documents

The Ambe source emits neutron into the rock formations and the detector section measures the decay rate in the rock. The 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.

Description	Sold Value (rounded)
Am241Be Logging Source used with dual spaced Neutron Tool.	
Am241Be Logging Source used with dual spaced Neutron Tool	
Thorium 232 Calibration Blankets	
Es-137 Pulsar Source installed in the Spectral Litho Density Tool	
50 nanoCurie Am-241 Pulsar Source integral to the Compensated Spectral Gamma Detector	

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

Licensed materials will be stored at approved *China Petroleum Logging* facilities. These facilities are Certificated by the Work Permit in accordance with the Safety Ordinance for Radioactive Isotopes and Installation promulgate by the State Council. *China Petroleum Logging Co., LTD's* RA Storage Control process (see attached).

### Concern for Diversion:

As noted in *China Petroleum's* attached letter to Halliburton, *China Petroleum* has acknowledged the importance of and supports safe operations, transportation, and secure storage of RA Sources. *China Petroleum* states they have no intention of using the RA Sources outside China nor will they release or transfer to other parties.

All sources are labeled with the name, strength, and source number. Radiation leak tests are performed monthly. Source warehouse is furnished with radioactive checking devices..

QHSE supervisors are responsible for checking all sources on a regular maintenance schedule and for maintaining records. QHSE, guards and warehouse attendants are also responsible for frequent storage facility inspections.

Halliburton has been doing business with *China Petroleum Logging Corporation* since 2004.

**Intermediate and Ultimate Consignees:**

Contract No.:	CPM06-FST03-06US
Purchasers Name:	China Petroleum Material & Equipment Co.
Purchasers Physical Address:	12 <sup>th</sup> Floor, #5 Gulauwai Dajie, Xicheng District Chaoyang District, Beijing 100102, China
Ultimate Consignee Name:	China Petroleum Logging Corporation LTD.
Consignee Physical Address:	#142, Weiyang Rd. Xi'an City, 710021, Sha'anxi Province, China
End Users Name:	China Petroleum Logging Corporation LTD- Changqing Operations
End Users Physical Address:	Fang Yuan Bldg, Changqing Rd, Jinghe Industrial Park, Gaoling, Xi'an City, 71020 Sha'anxi Province, China
End Users Name:	China Petroleum Logging Corporation LTD- Qinghai Operations
End Users Physical Address:	Dunhuang City, 736202 Gansu Province, China
Storage Facility Physical Address:	Jia Qiao Town, Qingyang County Qingyang City, Gansu Province, China
A schematic of the storage facility:	Attached
Storage and security processes in Place for the control of the RA Material:	Attached
RA Operation Permit from Authority:	Attached