

<b>NRC FORM 7</b> (8-2007) 10 CFR 110		<b>U.S. NUCLEAR REGULATORY COMMISSION</b> APPROVED BY OMB: NO. 3150-0027 EXPIRES: 06/30/2009	
<b>APPLICATION FOR NRC EXPORT/IMPORT LICENSE, AMENDMENT, OR RENEWAL</b> (See Instructions on Page 5)			
<b>PART A. FOR NRC USE ONLY</b>		DATE RECEIVED <div style="text-align: center; font-size: 1.5em;">5-23-08</div>	
<input checked="" type="checkbox"/> PUBLIC OR <input type="checkbox"/> NON-PUBLIC		LICENSE NUMBER <div style="font-size: 1.5em;">CBP 106</div>	
DOCKET NUMBER		ADAMS ACCESSION NUMBER	
<b>PART B. TO BE COMPLETED FOR ALL LICENSES, AMENDMENTS, RENEWALS OR NOTIFICATIONS</b> (If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)			
1. NAME AND ADDRESS OF APPLICANT/LICENSEE  <b>Halliburton Energy Services</b> <b>2107 City West Blvd., Bldg 2</b> <b>Houston, TX 77042</b>		1a. NAME OF APPLICANT'S CONTACT <div style="text-align: center; font-size: 1.2em;">Cindy Dorris</div>	
1b. APPLICANT'S REFERENCE NUMBER <div style="text-align: center; font-size: 1.2em;">HES2534</div>		1c. PHONE NUMBER <div style="text-align: center; font-size: 1.2em;">(713) 839-4566</div>	
1d. FAX NUMBER <div style="text-align: center; font-size: 1.2em;">(713) 839-4564</div>		1e. E-MAIL ADDRESS <div style="text-align: center; font-size: 1.2em;">cynthia.dorris@halliburton.com</div>	
2. TYPE OF ACTION REQUESTED (Check One) <input type="checkbox"/> EXPORT (Parts B, C, E) <input type="checkbox"/> NOTIFICATION OF EXPORT OF INCIDENTAL RADIOACTIVE MATERIAL (PART C, E) <input type="checkbox"/> IMPORT (Parts B, D, E) <input checked="" type="checkbox"/> COMBINED EXPORT/IMPORT (Parts B, C, D, E) <input type="checkbox"/> AMENDMENT/RENEWAL Existing License Number: _____			
3. CONTRACT NUMBER(S)		4. FIRST SHIPMENT DATE <div style="text-align: center; font-size: 1.2em;">01/18/2008</div>	
5. LAST SHIPMENT DATE <div style="text-align: center; font-size: 1.2em;">12/31/2015</div>		6. PROPOSED EXPIRATION DATE <div style="text-align: center; font-size: 1.2em;">12/31/2015</div>	
<b>PART C. TO BE COMPLETED FOR EXPORT ONLY OR COMBINED LICENSES, AMENDMENTS, OR RENEWALS</b> (If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)			
7. NAME(S) / ADDRESS(ES) OF SUPPLIERS AND/OR OTHER PARTIES TO THE EXPORT		8. NAME(S) / ADDRESS(ES) OF INTERMEDIATE FOREIGN CONSIGNEE(S)	
9. NAME(S) / ADDRESS(ES) OF ULTIMATE FOREIGN CONSIGNEE(S)  <div style="text-align: center; font-size: 1.2em;">HLS Asia, Limited in India</div> <div style="text-align: center; font-size: 1.2em;">See page 3</div>		7a. FUNCTION(S) PERFORMED/SERVICE(S) PROVIDED	
8a. INTERMEDIATE USE(S)		9a. ULTIMATE END USE(S)	
10. DESCRIPTION OF RADIOACTIVE MATERIALS, SEALED SOURCES, NUCLEAR FACILITIES, EQUIPMENT, OR COMPONENTS; FOR NUCLEAR EQUIPMENT INCLUDE TOTAL DOLLAR VALUE OF EQUIPMENT FOR EXPORT		10a. MAX TOTAL VOLUME / ELEMENT WGT (KG), OR TOTAL ACTIVITY (TBq)	
10b. MAX ENRICHMENT OR WGT %		10c. MAX ISOTOPE WGT (KG)	
11. FOREIGN OBLIGATIONS (BY COUNTRY AND BY PERCENTAGE OF MAXIMUM TOTAL VOLUME)		<div style="text-align: center; font-size: 2em; font-family: cursive;">                     Rec'd                      4-23-08                 </div>	

NRC FORM 7  
(8-2007)  
10 CFR 110

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR NRC EXPORT/IMPORT  
LICENSE, AMENDMENT, OR RENEWAL (Continued)

LICENSE NUMBER <b>10BP106</b>	DOCKET NUMBER	ADAMS ACCESSION NUMBER	<input checked="" type="checkbox"/> PUBLIC OR <input type="checkbox"/> NON-PUBLIC
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**PART D. TO BE COMPLETED FOR IMPORT ONLY, OR COMBINED LICENSES, AMENDMENTS, OR RENEWALS**  
(If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)

12. NAME(S) / ADDRESS(ES) OF FOREIGN SUPPLIERS AND/OR OTHER PARTIES TO IMPORT	13. NAME(S) / ADDRESS(ES) OF INTERMEDIATE CONSIGNEE(S)	14. NAME(S) / ADDRESS(ES) OF ULTIMATE CONSIGNEE(S)	
12a. NRC EXPORT LICENSE NUMBER(S) (if applicable)	13a. LICENSE NUMBER(S) / EXPIRATION DATE(S)	14a. LICENSE NUMBER(S) / EXPIRATION DATE(S)	
	13b. INTERMEDIATE USE(S)	14b. ULTIMATE END USE(S)	
15. DESCRIPTION OF RADIOACTIVE MATERIALS, SEALED SOURCES, NUCLEAR FACILITIES  <b>See Attachment 1</b>  <b>Category 2 quantities of Am-241 and Am-24/Be that are in the excess of the 0.6 terebequerels threshold</b>	15a. MAX TOTAL VOLUME / ELEMENT WGT (KG), OR TOTAL ACTIVITY (TBq)	15b. MAX ENRICHMENT OR WGT %	15c. MAX ISOTOPE WGT (KG)
16. FOREIGN OBLIGATIONS (BY COUNTRY AND BY PERCENTAGE OF MAXIMUM TOTAL VOLUME)			

**PART E. TO BE COMPLETED FOR ALL LICENSES, AMENDMENTS, OR RENEWALS**

17. ADDITIONAL INFORMATION PROVIDED ON PAGES 3, 4, AND/OR ON SEPARATE SHEETS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	17a. COPIES OF RECIPIENTS' AUTHORIZATIONS PROVIDED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
18. CERTIFICATION: I, the applicant's authorized official, hereby certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, and that all information provided is correct to the best of my knowledge.		
18a. PRINT NAME AND TITLE OF AUTHORIZED OFFICIAL <b>Cindy Dorris</b> <b>International Trade Compliance</b>	18b. SIGNATURE - AUTHORIZED OFFICIAL <i>Rec'd 4-23-08</i>	18c. DATE <b>03/17/2008</b>

NRC FORM 7  
(8-2007)  
10 CFR 110

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR NRC EXPORT/IMPORT  
LICENSE, AMENDMENT, OR RENEWAL (Continued)

LICENSE NUMBER <i>CBP 106</i>	DOCKET NUMBER	ADAMS ACCESSION NUMBER	<input checked="" type="checkbox"/> PUBLIC OR <input type="checkbox"/> NON-PUBLIC
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ADDITIONAL INFORMATION (Reference applicable block numbers from page 1 and/or page 2 for each entry)

For a license to export and import and Sell Category 2 Americium-241 and Americium-241/Be to  
HLS Asia, Limited (a foreign collaboration with Halliburton Energy Services) in India

HLS Asia Ltd  
C-2, Sector-57  
Noida-201301  
India

HLS Asia Ltd  
109 Aurobindo Place Market  
Kauz Khaz, New Delhi 110016  
India

*Rec'd  
4-23-08*

CBP 106

# HALLIBURTON

International Trade Compliance Group  
2101 CityWest Blvd., Bldg. 2, 4th Flr • Houston, Tx 77042  
Direct: 713-839-2000 • Fax: 713-839-4564

3/19/08

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

2534

March 17, 2007 2

category 2  
CBP 27-1?

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

Deputy Director,

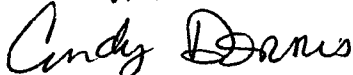
Halliburton Energy Services, Inc. is applying for a **specific license to export and import and sell six (6) each 16 Curie Am<sup>241</sup>Be Logging Sources to *HLS Asia Limited* for the End User *HLS Asia Limited*.** These materials will be used to calibrate downhole well logging equipment for the completion of an oil or gas well prior to the production, or to enhance production of existing wells in ~~India~~. 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 \$4600.00 (Forty six 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 are not inimical to the common defense and security of the United States and the proposed 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  
Ph: 713-839-4566  
Email: [cynthia.dorris@halliburton.com](mailto:cynthia.dorris@halliburton.com)

Rec'd  
4-23-08

Enc: NRC Form 7

Halliburton Check for Application  
Halliburton Energy Services Attachment  
Support Documents

## Attachment 1- Support Documents

**Halliburton Energy Services (HES)  
Application Reference Number HES2534****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 five (5) each 16 Curie Am<sup>241</sup>Be Logging Source used in Compensated Thermal Neutron (CTN) Tool, five (5) each 1.5 Curie Cs-137 Source, eight (6) 2100 nCurie Cs-137 Source, to be used by the ~~End User: HLS Asia Limited in India.~~ 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:**

Neutron Tools use Am<sup>241</sup>/Be 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.

The Ambe source emits neutron into the rock formations and the detector section accurately measures the porosity, fluid type and lithology information for real-time decision making and wireline replacement applications. Knowledge of rock properties is essential in the exploration of oil.

Description
16 Curie Am-241Be Logging Source used with dual spaced Neutron Tool.

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

Licensed materials will be stored at approved **HLS Asia Limited** facilities. These facilities are certificated by the Radiological Physics and Advisory Division in accordance with the Safety Ordinance for Radioactive Isotopes and Installation promulgate by the Bhabha Atomic Research Centre. **HLS Asia Limited** RA Storage Control process (see attached).

**Concern for Diversion:**

As noted in attached letter to Halliburton, **HLS Asia Limited** has acknowledged the importance of and supports safe operations, transportation, and secure storage of RA Sources. **HLS Asia Limited** states they have no intention of using the RA Sources outside India or 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..

Security personnel from **HLS Asia Limited** are responsible for security of the sources.

**INTERMEDIATE AND ULTIMATE CONSIGNEES:**

***HLS Asia Limited***

(A foreign collaboration with Halliburton Energy Services, Inc. USA)

<b>NRC Required Information</b>	
<b>Purchasers Name:</b>	HLS Asia Ltd
<b>Purchasers Physical Address:</b>	C-2, Sector-57 Noida-201301 India
<b>Ultimate Consignee Name (s):</b>	HLS Asia Ltd
<b>Ultimate Consignees Physical Addresses:</b>	C-2, Sector-57 & 109 Aurobindo Place Market Noida-201301      Kauz Khaz, New Delhi 110016 India                      India
<b>End Users Name:</b>	HLS Asia Ltd
<b>End Users Physical Addresses:</b>	C-2, Sector-57 & 109 Aurobindo Place Market Noida-201301      Kauz Khaz, New Delhi 110016 India                      India
<b>Storage Facility P. Address:</b>	HLS Asia Ltd C-2, Sector-57 Noida-201301 India



# **HLS**

## **ASIA LIMITED**

*(Formerly HLS India Limited)*

(A foreign collaboration with HALLIBURTON ENERGY SERVICES Inc.:U.S.A.)

C-2, Sector-57, Noida-201 301 (U.P.) (India)

Tel. : 91-120-2588385, 86, 87, 88, 89, 90 • Fax : 91-120-2589861, 62 • E-mail : hlsasia@vsnl.net

### To whom it may concern

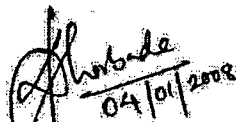
Dear Sir,

HLS Asia Ltd. is a joint venture company with Halliburton Energy Services Inc. – USA and providing wireline logging services in India and Bangladesh to various esteemed oilfield companies since last 20 years.

In conventional logging services, Radioactive sources are commonly used. Since HLS Asia Ltd is in this business for last 20 years, we understand the nature of RA sources and the importance it should be given. So we take extreme care to ensure safe operation, controlled transportation and secure and safe storage of RA sources which is strictly in accordance with the laid down procedures of the company and comply with the rules and regulations established by competent regulatory authorities in India.

HLS Asia Ltd. states that the RA sources purchased from Halliburton will be used in logging services performed by the company and the company will not release or resell the RA sources to any other third party.

Thanks with regards

  
04/01/2008  
(Durgesh Jharbade)

Manager (operations)

HLS Asia Ltd.

## **STORAGE AND SECURITY PROCESSES OF THE R.A. SOURCES**

HLS Asia Ltd. understands the importance of proper storage and security of the R.A. sources and takes extreme care for the security of the sources. We have following arrangements for storage and security of the sources at our facility.

### **Storage:**

- All the R.A. Sources are stored in R.A. Pit in our workshop area. The design of the R.A. Pit is approved from radiological safety point of view by the competent authorities in India.
- The storage area is adequately shielded to keep the radiation levels within regulatory limits and ALARA.
- All the storage area are properly marked for warning and painted yellow.

### **Security:**

- The radioactive sources are kept locked in their containers which are kept in pit under double locks, One at individual pit and one at main storage.
- The keys of R.A. Pit are kept secured with operations manager and the access is restricted to minimum no of personnel and with the permission and knowledge of operations manager.
- All the pit access and source movements are entered into the register and kept in record.
- The office area where the pit is located is secured and guarded 24X7 by security guards.

TELEPHONE :

ता. : बार्क - मुंबई, चेम्बुर  
TELEGRAMS : BARC-MUMBAI, CHEMBUR.  
टेलीग्राम : ०११-६१०१७/०११-६१०२२ बार्क ईन  
TELEX : 011-61017/011-61022 BARC IN  
फैक्स संख्या : ९१-२२-५५६०७५०  
FAX NUMBER : 91-22-5560750



सत्यमेव जयते

भारत सरकार  
GOVERNMENT OF INDIA

भाभा परमाणु अनुसंधान केन्द्र  
BHABHA ATOMIC RESEARCH CENTRE

दोस्रो,  
मुंबई - ४०० ०८५  
TROMBAY,  
MUMBAI-400 085.

RADIOLOGICAL PHYSICS AND ADVISORY DIVISION

Telephone : 551 5040, 4625, 4384, 4452  
FAX : 551 9209, 550 5150, 551 9613  
Telex: 011 61017

CT&CRS,  
Anushaktinagar,  
Mumbai-400094

Ref: RPAD/Adv-WL/NR-002/ 4320 /2001

June 27, 2001

Shri.B.V.S.Murty,  
Safety Co-ordinator,  
HLS India Limited,  
6, Local Shopping Centre,  
Madangir,  
NEW DELHI - 110 062

FAX MESSAGE  
FAX NO: 11- 608 4633

Dear Sir,

This has reference to your letter ref:BVSM/SKG/S-08 dated May 16,2001 and the enclosures therein, regarding the approval of radioactive source storage facility at HLS India Limited, Noida, U.P.

In this connection, we wish to state that the specifications mentioned in your letter for the source storage facility are more than adequate from radiological safety standpoint. With the radioactive sources housed in approved source storage containers during storage, the minimum requirement for the source storage pits are 70 cm depth below the ground level with the pits covered with 3 mm thick mild steel lockable lid from radiological safety standpoint. However, we have no objection to your retaining the specifications for the source storage facility as indicated in your drawing for security reasons and you may go ahead with the construction of the same.

Yours faithfully,

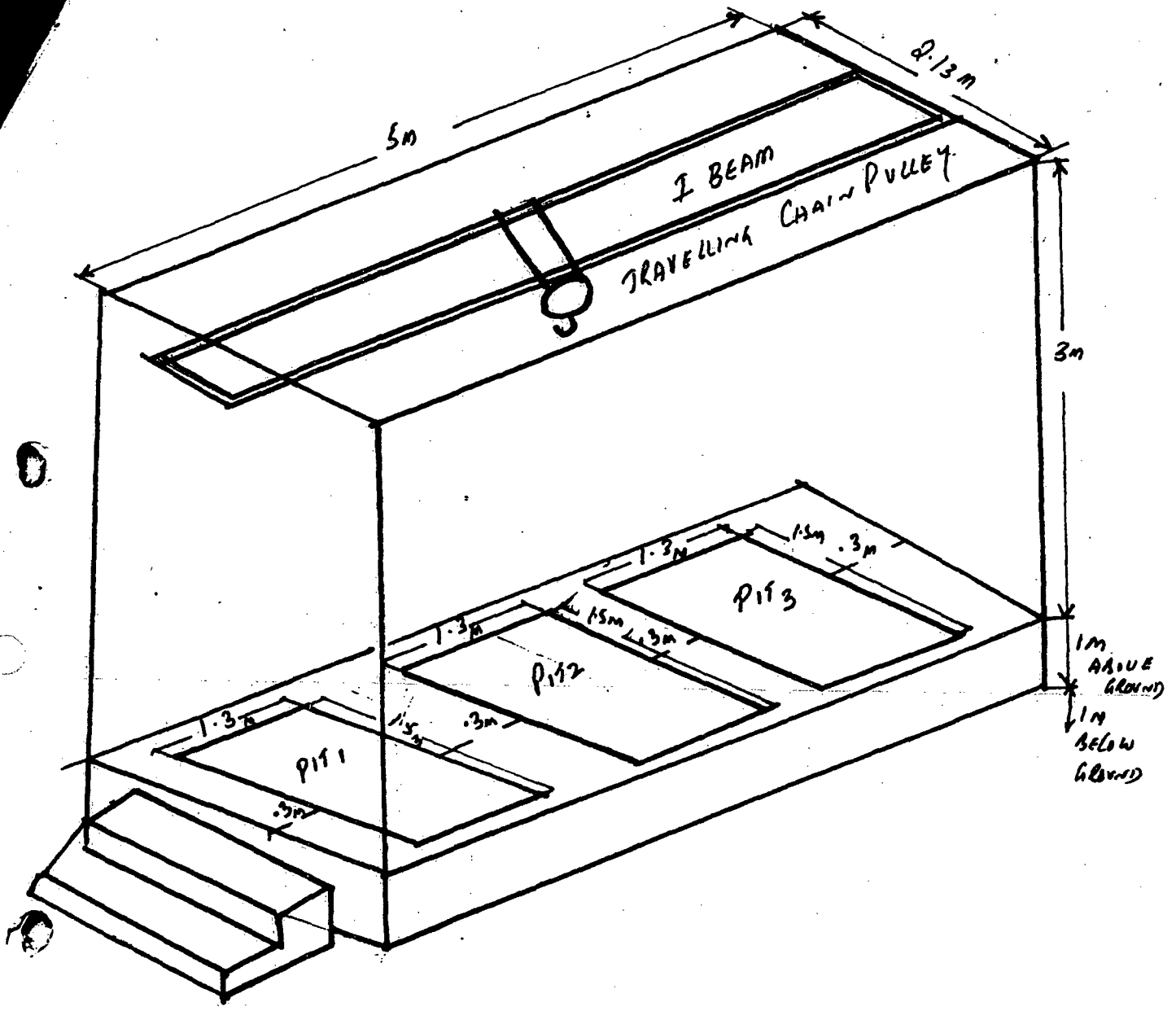
(B.C.Bhatt) 29.6.01

Head,

Radiological Physics & Advisory Division

# LAYOUT PLAN FOR STORAGE AREA.

A1 C-2/ SEC 57.



EACH PIT IS 1m ABOVE GROUND LEVEL  
AND 1m BELOW GROUND LEVEL

ANNEXURE I

