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NRC FORM 7 U.S. NUCLEAR REGULATORY COMMISSION (8-2011)					APPROVED BY OMB: NO. 3150-0027 EXPIRES: 08/31/2012 Estimated burden per response to comply with this mandatory collection request: 2.4 hours.			
APPLICATION FOR NRC EXPORT OR IMPORT LICENSE, AMENDMENT, RENEWAL, OR CONSENT REQUEST(S)				RT CO	This submittal is reviewed to ensure that the applicable statutory, regulatory, and policy considerations are satisfied. Send comments regarding burden estimate to the Information Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0027), Office of Management and			
(See Instructions				di		OMB control nu	mber, the NRC m	an information collection does not ay not conduct or sponsor, and n.
PART A. FOR NRC USE ON	NLY	<b>✓</b> P	UBLIC OF	R 🗍	NON-PUBLIC	14-73	EIVED	
LICENSE NUMBER		DOCKET N	NUMBER 6159			ADAMS AC	CESSION NUM	IBER
PART B. TO BE COMPLETED FOR ALL LICENSES, AMENDMENTS, RENEWALS, OR CONSENT REQUESTS  (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 APPLICAN Halliburton Energy Services 2107 City West Blvd., Bldg 4			1a. NAME OF APPLICANT'S CONTACT DJ Johnson			1	PPLICANT'S RI 3143	EFERENCE NUMBER
Houston, TX 77042			1c. PHONE NU		39-3118	1d. F	AX NUMBER (713)	) 839-3290
			1e. E-MAIL ADI dj.johnson@		rton.com			
2. TYPE OF ACTION REQUESTED	(Check One)							
EXPORT (Parts B, C, E)	IMPO	ORT ts B, D, E)			DMENT/RENEWA License Number:		(Parts	ENT REQUEST B, C) t License Number:
3. CONTRACT NUMBER(S)	4. FIRST SHIP!	MENT DATE 5/10/14	E	5. LAST	SHIPMENT DATE		6. PROPOSE	D EXPIRATION DATE 12/31/15
PART C. TO BE COI (If more space is need								
7. NAME(S) / ADDRESS(ES) OF SUPPLI AND/OR OTHER PARTIES TO THE EX Halliburton Energy Services, Inc 3000 N. Sam Houston Prkwy East Building M Houston, TX 77032-3219	XPORT		S) / ADDRESS(E SN CONSIGNEE		TERMEDIATE	FOREIGN	/ADDRESS(E I CONSIGNEE( Consignees	
7a. FUNCTION(S) PERFORMED/SERVICE(S) F		20 INTERM	EDIATE USE(S)	(40)		9a. ULTIMATE	ENDIISE(S)	-
/8. FUNCTION(3) FERFORINGENSERVINGE(3)	ROVIDED	8d. INTEINME						
10. DESCRIPTION OF RADIOACTIVE MANUCLEAR FACILITIES, EQUIPMENT NUCLEAR EQUIPMENT INCLUDE TO EQUIPMENT FOR EXPORT Category 2: Americium-241, An Cobalt 60, Californium-252, and	r, or componing otal dollar mericium-24	ENTS; FOR VALUE OF 1/Berylliu	3	ELEMEN TOTAL A	TAL VOLUME / IT WGT (KG), OR ACTIVITY (TBq)	10b. MAX E OR WO	NRICHMENT ST %	10c. MAX ISOTOPE WGT (KG) N/A
11. FOREIGN OBLIGATIONS (BY COUN	TRY AND BY D	EDCENTAC	RE OF MAXIMUI	IM TOTAL	VOLUME)			
TI. FOREIGN OBLIGATIONS (BT COON	IKI AND BI FI	ERCENTAG	JE OF WAXINO	JIVI TOTAL	VOLUME)			

NRC FORM 7 (8-2011) 10 CFR 110

U.S. NUCLEAR REGULATORY COMMISSION

LICENSE, AMENDMENT, RENEWAL, OR CONSENT REQUEST(S) (Continued)						
LICENSE NUMBER DOCKET NUM  VX6189.00 1100 (a)		ADAMS ACCESSION NUMBER	PUBLIC OR	NON-PUBLIC		
PART D. TO BE COMPLETED FOR IMPORT 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 Multiple Halliburton Energy Services and subsidiary locations worldwide.	13. NAME(S) / ADDF CONSIGNEE(S)	RESS(ES) OF INTERMEDIATE	14. NAME(S) / ADDRESS(ES CONSIGNEE(S)	S) OF ULTIMATE U.S.		
12a. NRC EXPORT LICENSE NUMBER(S) (if applicable)	13a. LICENSE NUME	BER(S) / EXPIRATION DATE(S)	14a. LICENSE NUMBER(S) /	EXPIRATION DATE(S)		
·	13b. INTERMEDIATE	E USE(S)	14b. ULTIMATE END USE(S)			
15. DESCRIPTION OF RADIOACTIVE MATERIALS, S	FALED SOURCES	15a. MAX TOTAL VOLUME /	15b. MAX ENRICHMENT	15c. MAX ISOTOPE		
NUCLEAR FACILITIES Category 2: Americium-241, Americium-2 Cobalt 60, Californium-252, and Cesium-1	241/Beryllium, 37	ELEMENT WGT (KG), OR TOTAL ACTIVITY (TBq) N/A	OR WGT %	WGT (KG)		
16. FOREIGN OBLIGATIONS (BY COUNTRY AND BY	PERCENTAGE OF MA	AXIMUM TOTAL VOLUME)				
PART E. TO BE COMPLETED FOR ALL LICENSES, AMENDMENTS, RENEWALS OR CONSENT REQUEST(S)						
17. ADDITIONAL INFORMATION PROVIDED ON PAGES 3, 4, AND/OR ON SEPARATE SHEETS?  ✓	YES NO	17a. COPIES OF RECI AUTHORIZATION		YES NO		
18. CERTIFICATION: I, the applicant's authorized official, hereby certify that this application is prepared in conformity with Title10, Code of Federal Regulations, and that all information provided is correct to the best of my knowledge.						
18a. PRINT NAME AND TITLE OF AUTHORIZED OFF DJ Johnson (ITC Analyst) International Trade Compliance	ICIAL	18b. SIGNATURE AUTHORIZ	ED OFFICIAL	18c. DATE 4///b///4		

NRC FORM 7 (8-2011) **10 CFR 110** 

U.S. NUCLEAR REGULATORY COMMISSION

LICENSE, AMENDMENT, RENEWAL OR CONSENT REQUEST(S) (Continued)						
LICENSE NUMBER	LIO D(al 59	ADAMS ACCESSION NUMBER	PUBLIC	OR NON-PUBLIC		
ADDITIONAL INFORMATION (Re	eference applicable block numbe	ers from page 1 and/or page 2 for	each entry)			
Consignee Addresses:			,			
Chevron Iraq (Sarta) Limited Chevron Iraq (Rovi) Limited Empire Business Complex- Bu Airport Road-Erbil-Iraq	uilding C3 2nd and 3rd Floor	r				
Gulf Keystone Petroleum Inter 3rd Floor UB Centre Bakhtyari- Erbil IRAQ	rnational Ltd.					
Oil Search (Iraq) Limited For Boots & Coots Services Ll VILLA # 655, ERBIL IRAQ	LC					
TALISMAN BLOCK 44 B.V. For Boots & Coots Services LI VILLA # 655, ERBIL IRAQ						
WesternZagros Limited House Number 17 Neighborhood 3, Ashty 104 Sulaymaniya, Iraq				,		
TAQ TAQ OPERATING COM 100m St., Italian Village Villa		h				

Erbil / IRAQ

Gazprom Neft Middle East B.V. Lot 232-233, Texas Str., American Village, Erbil, Kurdistan, Iraq

DNO International ASA Empire Business Complex Building C2, Floor 3 Erbil IRAQ

Genel Energy International Limited c/o Ebu Ali Company Ebu Ali Company **ERBIL** IRAQ

# **HALLIBURTON**

International Trade Compliance Group 2107 City West Blvd., Bldg 4, 13th Floor – Houston, TX 77042 Direct 713-839-4566 - Fax: 713-839-4490

Deputy Director, Office of International Programs U.S. Nuclear Regulatory Commission Mail Stop O-4E21 11555 Rockville Pike Rockville, Maryland 20852 4/22/14

RE: Application for License for the Export and Import of Americium-241, Americium-241/Beryllium, Cobalt 60, Californium-252, and Cesium-137

**HES3143** 

Deputy Director,

Halliburton Energy Services, Inc. is applying for a license to export and import Category 2: Americium-241, Americium-241/Beryllium, Cobalt 60, Californium-252, and Cesium-137sources for shipments to Kurdistan. These materials will be used to provide logging and perforating services to our multiple consignees (please see Form 7 for all consignee information) clients by Halliburton Energy Services, Inc. (HES). 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 \$8,700.00 (Eight Thousand, Seven Hundred Dollars, and No Cents) as the application fee for this license.

Sealed sources will remain in the custody of by Halliburton Energy Services, Inc. (HES) at all times, and when not in use, will be stored in a secure facility controlled by Halliburton Energy Services and its subsidiaries.

Halliburton Energy Services, Inc., 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 (1) a completed and signed copy of NRC Form 7, "Application for License to Export Nuclear Material and Equipment," and (1) Halliburton check for license application processing.

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

Sincerely,

DJ Johnson Halliburton Law Department International Trade Compliance

Phone: 713-839-3118 Fax: 713-839-4490 DJ.Johnson@halliburton.com

Enc: NRC Form 7

Halliburton check for application

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### **License Application and Request:**

The purpose of this license application is to request an RA Source license to export to Kurdistan Iraq.

This application criteria is based on business requirements to fulfill by Halliburton Energy Services, Inc. (HES) in the oil and gas field service work both onshore and offshore.

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

#### Scope of Work:

Halliburton Energy Services, Inc. (HES) is one of the world's largest providers of products and services to the oil and gas industries. HES offers a broad array of products and services to upstream oil and gas customers worldwide. 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 evaluations and RA sources are a necessary element to the evaluation. RA sources will be used to provide logging and perforating services to our clients in Kurdistan Iraq.

### Halliburton's Corporate Radiation Safety Program:

Halliburton Energy Services, Inc. (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 Halliburton Energy Services, Inc. (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.

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

Halliburton Energy Services, Inc. (HES) will be the end user of these materials in Kurdistan Iraq.

Licensed materials will be stored at approved by Halliburton Energy Services, Inc. (HES) only. All current facilities are licensed for use and storage as required by local and international law. All future facilities will also be licensed for use and storage as required by local and international law before import or exports or source are allowed.

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 of individuals designated as users.

Random compliance audits check the effectiveness of each facility's 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), and Associated Radiation Safety Officer (ARSO), a Region Radiation Safety Manager, or a qualified individual designated by a GRS).

#### Concern for Diversion:

The RA sources authorized for export under this license will only be used by trained employees of Halliburton Energy Services, Inc. and trained employees of its subsidiaries.

Halliburton's Corporate Radiation Safety Program provides auditable processes for storage, usage, transportation, monitoring, and recordkeeping for all radioactive sources as well as training and internal management review 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 RA sources 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 Energy Services, Inc. and it subsidiaries has consistently maintained, monitored, and reported to the Nuclear Regulatory Commission on all licenses related to the control of radioactive materials.

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## RA SOURCES NEEDED FOR KURDISTAN

ISOTOPE	TOTAL MAXIMUM	TOTAL	END USE
	ACTIVITY OF ALL	NUMBER	
	SOURCES FOR	OF	
	EACH ISOTOPE	SOURCES	
Cs-137	4.2 E-4 TBq	20	Tool and Instrument calibration
Cs-137	6.6E-2 TBq	17	Well Logging
Th-232	1.9 E-4 TBq	17	Tool and Instrument calibration
Am-241	1.9 E-9 TBq	17	Tool and Instrument calibration
Am-241/Be	0.6 TBq	17	Well Logging
Cs-137	3 E-8 TBq	17	Density Verification
Cs-137	1.9 E-8- TBq	17	Density Verification
Am-241	5.5 E-3 TBq	17	Tool and Instrument calibration
Co-60	3.7 E-8 TBq	405	Density Verification; Marker Bead
	_		Assembly
Am-241	4.6 E-3 TBq	8	Tool and Instrument calibration
Co-57	1.1 E-4 TBq	17	Density Verification
Am-241/Be	0.7 TBq	17	Well Logging
Am-241/Be	0.7 TBq	17	Well Logging
Am-241/Be	0.3 TBq	17	Well Logging
Th-232	1.9 E-4 TBq	17	Tool and Instrument calibration
Th-232	1.1 E-4 TBq	17	Tool and Instrument calibration
Am-241/Be	0.55 TBq	17	Well Logging
Am-241/Be	0.15 TBq	17	Well Logging
Cf-252	6.7 E-4 TBq	17	Tool and Instrument calibration
Cs-137	0.07 TBq	41	Well Logging
Cs-137	1.4 E-8 TBq	14	Well Logging
Cs-137	8 E-9 TBq	20	Well Logging
Cs-137	8 E-9 TBq	20	Well Logging
Am-241/Be	0.3 TBq	20	Well Logging
Am-241/Be	7.4 E-3 TBq	20	Tool and Instrument calibration