



United States Department of State

Washington, D.C. 20520

*CBP/100*

*6 pages*

BUREAU OF INTERNATIONAL SECURITY &  
NONPROLIFERATION  
OFFICE OF NUCLEAR ENERGY SAFETY AND SECURITY

August 14, 2008

SENSITIVE BUT UNCLASSIFIED

TO: NRC/OIP Robin Barnes; Carlotta Coates,  
Fax 301 415 2395; ph: 301 415 2147/3433/1787;

FROM: ISN/NESS – Robin DeLaBarre  
ph: 7 3978; fax: 7 0775

SUBJECT: Applications by Tucker Energy Services and Thermo Fisher  
for Export of Category 2 Radioactive Sources to Iraq

Transmitted for NRC action are the Executive Branch letters  
recommending approval of the subject applications.

*Rec'd  
8-14-08  
RB*

**United States Department of State***Washington, D.C. 20520*

August 14, 2008

Ms. Margaret M. Doane  
Director, International Programs  
United States Nuclear Regulatory Commission  
Rockville, Maryland

Dear Ms. Doane:

I refer to the request from your office dated April 24, 2008 for the views of the Executive Branch as to whether the issuance of an export license in accordance with the application hereinafter described meets the applicable criteria of the Atomic Energy Act of 1954, as amended (Atomic Energy Act):

Thermo Fisher Scientific, a Division of Thermo Gamma Metrics LLC (TGM) of San Diego, California proposes to export to Iraq two californium-252 (Cf-252) sealed sources to Iraq for use by the Bazian Cement Company for an on-line analyzer which is already installed at the plant. The analyzer identifies elements in the cement mixture by neutron production of gamma radiation which is read by an analyzer and interpreted by software installed in workstation monitors. Each source contains 19 micrograms of Cf-252 with an activity level of 0.000754 Terabequerels (TBq), well below the 0.2 TBq level for Category 2 transfers. The sources will be installed in the analyzer by trained TGM personnel. The access door to the sources is always locked to prevent unauthorized entry. Depleted sources are returned to TGM.

It is the judgment of the Executive Branch that the proposed export will not be inimical to the common defense and security of the United States, and is consistent with the provisions of the Atomic Energy Act, provided that the conditions described above as supplemented by the conditions described in the attachment are applied.

On the basis of the foregoing, the Executive Branch recommends approval of the requested license subject to the above-mentioned proviso.

Sincerely,

A handwritten signature in black ink, appearing to read "R. J. K. Stratford".

Richard J. K. Stratford

Director

Nuclear Energy, Safety and Security Affairs

Attachment: as stated.

**SECURITY CONDITIONS FOR RADIOACTIVE SOURCES**  
**Bazian Cement Company, Iraq**

**Storage Locations**

Exporter personnel and/or the holder shall store each source containing licensed material in a storage container or transportation package. The container or package must be locked and physically secured to prevent tampering or removal of licensed material from storage by unauthorized personnel.

**Transport**

Exporter personnel will lock and physically secure the transport package containing licensed material in the transport vehicle to prevent accidental loss, tampering or unauthorized removal of the licensed material from the vehicle. Exporter personnel shall maintain security during domestic shipments by accompanying the transport package in order to maintain constant control surveillance.

**Plant Site**

Holder shall control access to only approved individuals who require access to the material for maintenance or operation of the on-line analyzer.

**United States Department of State***Washington, D.C. 20520*

August 14, 2008

Ms. Margaret M. Doane  
Director, International Programs  
United States Nuclear Regulatory Commission  
Rockville, Maryland

Dear Ms. Doane:

I refer to the letter from your office dated March 19, 2008 for the views of the Executive Branch as to whether the issuance of an export license in accordance with the application hereinafter described meets the applicable criteria of the Atomic Energy Act of 1954, as amended (Atomic Energy Act):

CBP100 -- Tucker Energy Services (TES) proposes to export Category 2 quantities of americium/beryllium (Am-241/Be) and cesium (Cs-137) in sealed sources to Iraq for use by OilServ Oilfield Services Company, Erbil, Kurdistan Region. TES requests approval to export one Am-241/Be source with an activity level of 16 curies and one Cs-137 source with an activity level of 2 curies. The application also requests authority to export of nine smaller sealed sources containing millicurie and microcurie amounts of Am-241, Am-241/Be and Cs-137.

It is the judgment of the Executive Branch that the proposed exports will not be inimical to the common defense and security of the United States, and are consistent with the provisions of the Atomic Energy Act, provided that appropriate security conditions are applied.

On the basis of the foregoing, the Executive Branch recommends approval of the requested license subject to the conditions listed in the enclosure.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard J. K. Stratford".

Richard J. K. Stratford  
Director

Nuclear Energy, Safety and Security Affairs

Enclosure: as stated.

Base Station and Storage Locations	The holder shall store each source containing licensed material in a storage container or transportation package. The container or package must be locked and physically secured to prevent tampering or removal of licensed material from storage by unauthorized personnel.
	The holder shall control access to only approved individuals who require access to perform their duties
	Portable devices shall have two independent physical controls that form tangible barriers to secure material from unauthorized removal when device is not under direct control and constant surveillance
Transport	Lock and physically secure the transport package containing licensed material in the transporting vehicle to prevent accidental loss, tampering, or unauthorized removal of the licensed material from the vehicle
	The holder shall maintain security during domestic highway and rail shipments by carrier other than the licensee via package tracking systems, driver trustworthiness, constant control/surveillance and immediate communication to summon appropriate responses or assistance etc
Well Logging Job Site	A logging supervisor must be physically present at a temporary jobsite whenever licensed materials are being handled or are not stored and locked in a vehicle or storage place
	A logging supervisor or other individual designated by the logging supervisor shall maintain direct surveillance of the operation to prevent unauthorized entry into a restricted area.
	Each holder shall control access to only approved individuals who require the material to perform their duties
	Portable devices shall have two independent physical controls that form tangible barriers to secure material from unauthorized removal when device is not under direct control and constant surveillance
	Each irretrievable well logging source must be immobilized and sealed in place with a cement plug to prevent inadvertent intrusion on the source, unless the source is not accessible to any subsequent drilling operations

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<sup>1</sup> *Logging supervisor* means an individual who uses licensed material or provides personal supervision in the use of licensed material at a temporary jobsite and who is responsible to the licensee for assuring compliance with the requirements of the Commission's regulations and the conditions of the license.