

1142

Source: OEDO

Task Number: G20120712

General Information

Lead Assignee: OEDO - *Roger Rihm*

OEDO Due Date: 10/18/2012

Other Assignees:

SECY Due Date: 10/22/2012

Other Parties:

Subject: Expired Permit for Shipping Sensitive Electronics that Contain Radioactive Properties

Description:

CC Routing: NMSS, OCA, OGC

ADAMS Accession Numbers - Incoming:

Response / Package:

Other Information

Cross Reference LTR-12-0533

SRM\Other: No

Process Information

Action Type: Letter

OEDO Concurrence: No

Signature Level: OEDO Signature

OCM Concurrence: No

Special Instructions:

OCA Concurrence: No

Please prepare response in accordance with OEDO Notice 2009-0441-02 (ML093290179). NMSS to provide input to Roger Rihm, OEDO, if required. Roger Rihm will coordinate with OGC and OCA.

Document Information

Originator Name: Senator John F. Kerry

Date of Incoming: 09/07/2012

Originator Org:

Document Received by OEDO Date: 09/20/2012

Date Response Requested by
Originator:

Addressee: Rebecca Schmidt,

Incoming Task: Letter

OEDO POC: Roger Rihm

Template: SECY-017

E-RIDS: SECY-01

OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

Date Printed: Sep 20, 2012 16:27

PAPER NUMBER: LTR-12-0533 **LOGGING DATE:** 09/20/2012
ACTION OFFICE: EDO
AUTHOR: SEN John Kerry
AFFILIATION: CONG
ADDRESSEE: Rebecca Schmidt
SUBJECT: Constituent Correspondence - Concerns an expired permit for shipping sensitive electronics that contain radioactive properties
ACTION: Signature of EDO
DISTRIBUTION: OCA to Ack.
LETTER DATE: 09/07/2012
ACKNOWLEDGED: No
SPECIAL HANDLING:
NOTES:
FILE LOCATION: ADAMS
DATE DUE: 10/22/2012 **DATE SIGNED:**

EDO --G20120712

United States Senate

WASHINGTON, DC 20510-2102

One Bowdoin Square
Tenth Floor
Boston, MA 02114
(617) 565-8519

September 7, 2012

Robert Letteney
Deputy Assistant Secretary for Government Affairs
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Rebecca Schmidt
Director, Office of Congressional Affairs
Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Mr. Letteney and Ms. Schmidt,

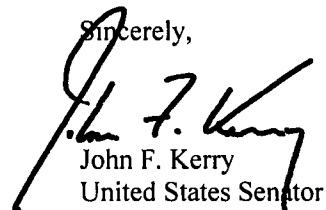
I am forwarding to you a copy of a correspondence from Aridio Sanchez, a small business owner from my state.

As you will read, Mr. Sanchez is the President of Si-REL LLC, which sells sensitive electronics that contain radioactive properties. In order to ship this equipment, Si-REL previously held a permit from the U.S. Department of Transportation (DOT). That permit expired earlier this summer and Si-REL is facing the prospect that it may not be able to ship its product.

As it is my desire to be responsive to all of my constituents, I respectfully request that both the DOT and U.S. Nuclear Regulatory Commission carefully review the enclosed documents from Si-REL and work with Mr. Sanchez to expedite his shipping request. If you have any questions or require additional information, please contact my aide Cheri Rolfes at (617) 565-8519.

I thank you for your cooperation in this matter and I look forward to your response.

Sincerely,



John F. Kerry
United States Senator

Enclosed:
Si-REL correspondence
Copy of original U.S. DOT permit
Memo re: shipping package
U.S. DOT correspondence 7/13/12



Proving Space Technology

**101 Brick Kiln Road
Units 2 & 3
Chelmsford, MA 01824
(978) 340-3442**

www.Si-REL.com

August 15, 2012

Senator John Kerry
Boston
One Bowdoin Square
Tenth Floor
Boston, MA 02114

Dear Senator Kerry,

I would like to express my sincere appreciation for your support of small business. As an entrepreneur who recently started a small technology business in Chelmsford, I need your help.

This past year, my three business partners and I personally financed and built, and now manage and operate, a company that provides vital quality assurance testing of electronics used in military and commercial satellites. Military and commercial satellite manufacturers require tests that include simulating the radiation environment experienced in earth orbit. Sensitive electronics aboard satellites are particularly vulnerable to space radiation effects so it is vital they be tested in a similar environment before being launched. This testing is known as Radiation Hardness Assurance (RHA).

There is an increasing demand for RHA electronics by the Department of Defense and commercial satellite providers. Correspondingly, there is an increasing demand for radiation test facilities capable of RHA testing. There are very few independent testing facilities in the United States capable of performing RHA testing. Maintaining competition in such a limited market is needed to keep RHA electronics costs as low as practical, both for federal government and commercial entities.

Si-REL (Silicon Radiation Effects Laboratory) was established to provide such testing for government and industry. We recently have received contracts for RHA testing with Microsemi Corporation, Analog Devices Incorporated, International Rectifier, and Symmetricom (all of which are in Massachusetts) and other electronics providers. Each of these companies provides RHA electronics to the Department of Defense, NASA, and commercial satellite manufacturers. With these hard won initial contracts, we are beginning to build our small business.

Here is the bad news. To remain successful and to grow, we are purchasing an important new piece equipment used for a special type RHA testing that is required for all military electronics used in space. This particular equipment uses a radioactive source known as cobalt 60 to simulate the space radiation environment. Thousands of similar devices are used safely and securely in laboratories, hospitals, and industrial facilities throughout the U.S. Si-REL is licensed by the State of Massachusetts (under agreement with the U.S. Nuclear Regulatory Commission) to possess and use cobalt-60.

Unfortunately, the company providing the equipment is experiencing some difficulty with the U.S. Department of Transportation. The company, J.L. Shepherd & Associates (JLSA) of California, has had a special permit (enclosure 1) from the USDOT since 2008 to ship radioactive sources throughout the U.S using a shipping container specially designed and approved for such shipments. The DOT Special Permit expired on June 30th.

New regulations have made the JLSA shipping package obsolete. JLSA has recently submitted a design for a new shipping package, based upon the new regulations, to the US Nuclear Regulatory Commission (NRC). The NRC is the federal agency that certifies the design of containers used to ship radioactive materials. The NRC review may take up to two years for approval.

To complicate matters, JLSA receives their radioactive sources from General Electric (GE). The certificate of compliance issued by the NRC for the GE shipping package also expired on June 30 (enclosure 2).

Regardless of whether some blame lies with GE or JLSA, or the regulators, two facts should be considered: (1) Hundreds of shipments involving similar radioactive materials were made in the past with these same shipping packages and there were no transportation incidents jeopardizing the public health and safety. Do the regulators consider these previous shipments to have been unsafe? Will the new regulations and new shipping packages improve upon this safety record? (2) The current situation with GE and NRC, and JLSA and DOT, if left unresolved, will mean the equipment for our company cannot be obtained before 2014. As a result, the principal means for generating income for Si-REL will be unavailable, possibly resulting in the loss of our start-up company, future hires, and the ripple effects on the RHA electronics divisions at the aforementioned companies. In fact, one of the companies mentioned has indicated to us that if Si-REL does not become viable for RHA testing this year, their company will establish a radiation testing facility in the Philippines.

The DOT has offered to make very limited exceptions for new special permits (enclosure 3). While most of the objective conditions can be met and answered by JLSA, there is one condition that is particularly subjective and unamenable. Item 3 of enclosure 3 requires "...justification for...a demonstrated time-dependent life, health, safety, property, security, extreme economic, or other critical impact..."

After reading all this, you may be as confused and frustrated as we are.

I sincerely ask your assistance by requesting the NRC to temporarily extend the certificate of compliance for GE to December 31, 2012, and by requesting DOT to provide a special permit to allow JLSA to ship the needed equipment to us also by December 31, 2012.

It is our understanding that the office of Senator Feinstein also has been asked to assist in this matter by JLSA. Iyad Shihadeh of the Senator's California office (415-989-0707) has been assigned the casework.

We are very grateful for any assistance you may provide and please contact me if you need anything additional.

Sincerely,



Aridio Sanchez,
President, Si-REL LLC

Enclosures

October 29, 2008



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 14766

EXPIRATION DATE: June 30, 2010

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: JL Shepherd & Associates
San Fernando, CA
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of specified radioactive materials in designated DOT Specification 20WC-3, 20WC-5, and 20WC-6 packagings after October 1, 2008, in order to allow the grantee a transition period to performance oriented package use. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.
 - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
 - c. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.416(c) insofar as the DOT specification packagings and radioactive contents specified herein are authorized for shipments exceeding a Type A quantity of radioactive material, on or after October 1, 2008.

October 29, 2008

5. BASIS: This special permit is based on the application of JL Shepherd & Associates dated August 27, 2008 and the additional technical information dated October 14, 2008, submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Radioactive material, transported under special arrangement, <i>non fissile or fissile-excepted</i>	7	UN2919	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING -

(1) This special permit is limited to JL Shepherd & Associates DOT Specification 20WC-3 packagings serial numbers 22256 and 22259; DOT Specification 20WC-5 packagings serial numbers 22196, 22232, 22238, 22240, and 22481; and DOT Specification 20WC-6 packagings serial numbers 22027, 22080, 22160, 22280, 22281, 22422, and 22423.

(2) The packages must be in conformance with all aspects of the requirements of 49 CFR Subchapter C in effect on October 1, 2003.

b. OPERATIONAL CONTROLS -

(1) The package/contents combination and consignments must be as described in the application of JL Shepherd & Associates dated August 27, 2008 and the additional technical information dated October 14, 2008.

(2) This special permit authorizes up to 150 consignments consisting of up to 300 packages.

October 29, 2008

(3) Each package may contain no more than either 240.5 TBq (6,500 Ci) of solid, encapsulated Cobalt-60 or 518 TBq (14,000 Ci) of solid, encapsulated Cesium-137.

(4) The sealed source capsule(s) must have no known or suspected defects.

(5) The sealed source capsule(s) must have a current satisfactory leak test in accordance with U.S. Nuclear Regulatory Commission or Agreement State license conditions.

(6) The use, repair, and maintenance of the specification packages must be conducted in accordance with a current U.S. Nuclear Regulatory Commission Quality Assurance Program Approval.

(7) Inspections and shipments must be conducted in accordance with the current revision of JL Shepherd & Associates QAM/QP 13.1, Inspection of Packages Used in Shipping.

(8) As replacement packages become available that are permitted for use in accordance with 49 CFR § 173.416(a), they must be used to the extent practical in lieu of the specification packages described herein.

(9) Motor vehicle transport must be consigned as exclusive use.

c. COMMUNICATIONS -

(1) Each shipping paper issued in connection with a shipment made under this special permit must bear the notation "DOT-SP 14766" and be located so that the notation is clearly associated with the description to which the special permit applies.

(2) The outside of each package used under the terms of this special permit must be plainly and durably marked "DOT-SP 14766".

8. SPECIAL PROVISIONS:

- a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this special permit and the HMR.
- b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.
- c. A quarterly update of package transition activities (actual vs. scheduled milestones for design, testing, application, certification, production, and completion) and must be provided to the Office of Hazardous Materials Special Permits and Approvals by January 1, April 1, July, 1 and October 1 of each year this special permit is in effect.
- d. A quarterly update of actual transportation activities (number of consignments and packages shipped under this special permit) must be provided to the Office of Hazardous Materials Special Permits and Approvals by January 1, April 1, July, 1 and October 1 of each year this special permit is in effect.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle used to transport packages covered by this special permit.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

October 29, 2008

- o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- o Registration required by § 107.601 et seq., when applicable.

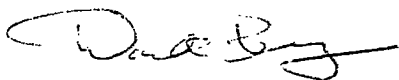
Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Theodore L. Willke
Associate Administrator for Hazardous Materials Safety

October 29, 2008

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: WILLIAMSJ

June 15, 2012

MEMORANDUM TO: Doug Weaver, Deputy Director
Division of Spent Fuel Storage and Transportation, NMSS

FROM: Pierre Saverot, Project Manager /RA/
Licensing Branch
Division of Spent Fuel Storage and Transportation, NMSS

SUBJECT: SUMMARY OF MAY 21, 2012, MEETING WITH GE-HITACHI and
J.L. SHEPHERD & ASSOCIATES REGARDING THE
CONTINUED USE OF THE MODEL NO. 1500 PACKAGE

Background

By letter dated December 5, 2011, GE-Hitachi (GEH) requested authorization for continued use of the Model No. 1500 package from January to December 2012. By letter dated January 20, 2012, staff wrote that any request for authorizing the extension of an expired package beyond June 30, 2012, will be considered as a separate application on a case by case basis and only for specific shipment needs. Staff also requested that GEH explain, in a public meeting, any specific shipment need and critical schedule, as well as the good faith efforts undertaken since 2004 to acquire a replacement package. The May 21, 2012, public meeting was set up to discuss GEH request on behalf of J. L. Shepherd & Associates (JLS).

Discussion

GEH explained that (i) JLS buys Co-60 sources, coming from Argentina, through REVISS, (ii) GEH encapsulates them, and (iii) JLS reconfigures them prior to distribution to its customers, including medical research facilities and the Department of Defense, e.g., the Defense Micro Electronics Agency.

GEH also explained that relicensing of the Model No. 1500 as a -96 package is not feasible, and that the Model No. 2000 package is the only Type B package that GEH is pursuing at this time.

GEH acknowledged that the new Model No. AOS-100 package had been designated as the replacement package for the Model No. 1500 package. However, JLS said that the Model No. AOS-100 package does not meet its needs, because of a 300 Watt limit related to ⁶⁰Co output, thus requiring multiple conveyances as compared to the Model No. 1500 package. JLS also said that the AOS package is available only for sale, and not for lease. GEH and JLS told staff that their extension request for the continued use of the Model No. 1500 expired package is for eight shipments to be completed before June 30, 2013, and that those shipments will be limited to ⁶⁰Co sources.

Staff commented that the sources to be shipped in the Model No. 1500 package were the same than those which were previously shipped in the 20WC package, thus limited to 100 Watts. JLS

indicated that there were over 100 shipments planned to be performed with the 20WC package this year, that either the Model No. 1500 or the Model No. AOS-100 package could be used all along, but that the new AOS package was cost-prohibitive. The Department of Transportation (DOT) staff reminded JLS that no application for a new package design had been submitted all these past years, and that DOT is not considering allowing the use of the 20WC package. JLS responded that it had experienced setbacks in the design of a new package, that an application is being prepared for a scheduled submittal to NRC on June 30, 2012, and that it was willing to work with DOT and NRC staff to be as responsive as possible. Responding to a question from staff on a potential fabrication at risk of the new JLS package, JLS said that this would not provide any real added benefit because manufacturing should take no longer than 180 days after issuance of the Certificate of Compliance.

JLS said that its goal was to maximize services to customers and that some devices will be difficult to decommission without the Model No. 1500 package. Staff responded that, even if this extension request is approved for one year, there will still be source recovery programs to be completed in the future while the 20 WC and the 1500 package will no longer be available. DOT staff also commented that past JLS' claims related to urgent shipment needs from the Department of Homeland Security (DHS) had not been substantiated by DHS.

A stakeholder from the Defense Microelectronics Field Agency indicated that their High Dose Irradiator Source will need to be reloaded within the next 6 to 9 months. Staff did not make any regulatory commitments at the meeting and said that the challenge for NRC will be to consider (i) safety implications, (ii) policy, and (iii) "good faith efforts" that have been made consistent with RIS 2008-18.

Docket No. 71-5939
TAC No. L24654

Enclosure 1: Meeting Attendees
Enclosure 2: Presentations

Distribution: D.Weaver, M. Waters, E. Benner, R. Temps

G:\SFST\Saverot\GE- Hitachi\GE-JLS meeting May 21, 2012.doc

ADAMS P8 Package No.: ML12170A270

ADAMS P8 Memo No.: ML12170A300

<u>Distribut</u>	SFST	E	SFST	C	SFST			
<u>NAME</u>	PSaverot		MDeBose		MWaters			
<u>DATE</u>	06/04/2012		06/05/2012		06/15/12			

C=Without attachment/enclosure E=With attachment/enclosure N=No copy

OFFICIAL RECORD COPY

**Meeting Between GE-HITACHI, J.L. SHEPHERD & ASSOCIATES, and the
Nuclear Regulatory Commission
May 21, 2012
Meeting Attendees**

NRC/NMSS/SFST

Bernie White	301-492-3303	Bernard.White@nrc.gov
Rob Temps	301-492-3320	Robert.Temps@nrc.gov
Jon Woodfield	301-492-3320	Jon.Woodfield@nrc.gov
Zhian Li	301-492-3235	Zhian.Li@nrc.gov
Michael Waters	301-492-	Michael.Waters@nrc.gov
Pierre Saverot	301-492-3408	Pierre.Saverot@nrc.gov

GE-HITACHI

Earl Saito	910-819-5165	earl.saito@ge.com
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J.L. SHEPHERD & ASSOCIATES

Bill Brown	818-898-2361	info@jlshepherd.com
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DOT/PHMSA

Meridith Kelsch	202-366-7166	meridith.kelsch@dot.gov
Richard Boyle		Richard.Boyle@dot.gov

VIA THE BRIDGELINE

Mohammad Arshad, DMEA
Ted Schantz, DMEA
Carlos Martinez, GE
D. Shepherd, JLS



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

July 13, 2012

Mary F. Shepherd
JL Shepherd & Associates
1010 Arroyo Avenue
San Fernando CA 91340-1822

Dear Ms. Shepherd:

This is in response to your May 1, 2012 application for Special Permit (15650-N) to authorize the continued transportation in commerce of certain expired DOT Specification 20WC radioactive material packagings after October 1, 2008.

If granted, we intend to require each individual shipment under the terms of this special permit to be pre-approved in writing by PHMSA. The goal of this process is to ensure the risks imposed by continued transportation using the expired packages that have not been demonstrated meet the current level of safety provided by the Hazardous Material Regulations (HMR) are evaluated on a demonstrated risk-based need to conduct the transport while taking into consideration the lack of available alternatives. If we grant your request for a special permit, each shipment will be evaluated on a case-by-case basis and will require the following minimum information to be provided by JL Shepherd & Associates and your client entity(ies).

- (1) Package Information - DOT Specification Package Identification (Model and Serial Numbers).
- (2) Shipment Details - (a) Number of consignments; (b) number of packages per consignment; (c) package contents; (d) end use of the radioactive material; (e) origin and destination of transport; (f) approximate travel distance; (g) date of request; (h) general timeframe of transport; and, (i) expected transport completion date.
- (3) Reasons for Request - A justification for granting each use of the expired packages must be provided and include: (a) a demonstrated time-dependent life, health, safety, property, security, extreme economic, or other critical impact, prepared by the affected client entity(ies), if transport were not to be allowed; (b) a demonstration there is no other suitable method to conduct the transport in accordance with the HMR (e.g., rearrange into Type A shipments, wait for

radioactive decay or approved replacement packagings, alternate vendor or supplier, etc.); (c) a demonstration there is no available alternative packaging allowed by the HMR that may be used. A current search must be conducted and the details of that search must be provided; (d) written affirmation by both the client entity(ies) and JL Shepherd & Associates that no other supplier, vendor, methodology, process, or combination thereof can provide the transport in accordance with the HMR and safely perform any associated functions (e.g., device loading, unloading); (e) an assessment prepared by the client entity(ies) and JL Shepherd & Associates that the societal risks that would result from not conducting the transport are greater than the risks associated with using packages that no longer meet the current level of safety for accident conditions of transport provided by the HMR that would otherwise be protective of transport workers, emergency responders, and members of the public; and (f) whether the requested package contents have been submitted to the U.S. Nuclear Regulatory Commission for replacement package certification; and if so, what the status of that application is; and if not, when it is estimated it will be submitted.

(4) Quality Assurance Program. The current Quality Assurance Program under which the use, repair, and maintenance of the packages will be conducted.

If the requested information is determined, by the U.S. Nuclear Regulatory Commission, to be Safeguards Information, we will work with you to comply with the necessary protections, and may modify this request, as appropriate. For administrative purposes, please provide each request separately and assign the following unique identifier to each requested case: JLS 15650 Request – XXXX, where XXXX is a sequential number beginning with 0001. A copy of this request should be provided to your clients, so they may prepare their responses accordingly. Each transport request is subject to the possibility of required additional follow-up information by JL Shepherd & Associates as well as your client entity(ies).

The additional information requested is necessary for further consideration of your application. If you are unable to submit this information within 30 days, please consider withdrawing your application and reapplying at a later date. Failure to respond within 30 days from the date of this letter may result in a denial of your application.

Sincerely,



for Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

United States Senate

WASHINGTON, DC 20510-2102

OFFICIAL BUSINESS


U.S.S.

Rebecca Schmidt

Director, Office of Congressional Affairs

Nuclear Regulatory Commission

Washington, D.C.

20555-0001

