

March 17, 2005

The Honorable Edward J. Markey  
United States House of Representatives  
Washington, D.C. 20515

Dear Congressman Markey:

I am writing on behalf of the Commission in response to your letter of February 10, 2005, concerning the two radioactive sources imported from Russia by Halliburton Energy Services that were unaccounted for from October 9, 2004, to February 9, 2005. Specific responses to your questions are provided in the enclosure to this letter.

I want to assure you that the security of radioactive materials has been, and continues to be, a priority for the U.S. Nuclear Regulatory Commission (NRC). The NRC, Department of Transportation (DOT) and Department of Homeland Security (DHS) are working to ensure the protection of the public and prevent losses of radioactive sources. 10 CFR Part 20 requires a telephone report to the NRC Operations Center immediately after it becomes known to the licensee when a source exceeding 1000 times the values in Appendix C of 10 CFR Part 20 becomes lost, stolen, or otherwise missing. Agreement State regulations contain similar requirements. The NRC issued Orders to licensees who manufacture and distribute sources requiring Additional Safety Measures (ASMs) for high-risk sources. These ASMs specified that the licensee have procedures for addressing delayed, misdirected, or lost packages; use common carriers which have appropriate security procedures; coordinate arrival and departure times; investigate immediately if shipment does not arrive at a pre-determined time, and notify the NRC and law enforcement authorities when it does not arrive. The Orders also require advanced notification of certain imports and exports. DOT regulations (Title 49 of the CFR) set the requirements for transport of radioactive material via common carriers within the continental U.S., and DHS (e.g., Customs and Border Protection, and Coast Guard) oversees the import and export of radioactive material shipments at the Ports of Entry. To put this event into perspective, I would like to emphasize that the NRC and the DOT require special packaging for shipment of well logging sources of this nature and that these sources do not represent a health hazard if they are kept in their shipping container, as they were in this case.

With regard to the recent situation with Halliburton as referenced in your letter, the NRC is taking the necessary steps to determine how and why this situation occurred. The State of Texas, as an Agreement State regulator, completed an inspection of the Halliburton facility in Houston the week of February 28, 2005. The NRC's Region IV is following up with the State of Texas to obtain information on their inspection and any subsequent State actions. Prior to this event, Region IV had already scheduled an inspection of Halliburton the week of March 14, 2005, relative to the Security Orders issued to licensee's who manufacture and distribute sources. Region IV will complete this inspection as planned. Since DOT has

jurisdiction of shipments in transit, including storage incidental to shipment, the NRC has offered assistance to the DOT in any inspection activities DOT considers warranted. Lastly, NRC headquarters staff with input from Region I will conduct a lessons learned evaluation of this event. The NRC will follow-up with appropriate action based on the findings from these on-going activities.

If you have further questions regarding this matter, please feel free to contact me.

Sincerely,

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Jeffrey S. Merrifield  
Acting Chairman

Enclosure:  
Response to Questions

## Response to Questions

**Question 1: When was the Commission first informed about the missing shipment?  
Please provide all relevant documentation.**

Answer:

Halliburton Energy Services contacted the NRC Operations Center at approximately 5:40 p.m. EST on February 8, 2005. In addition to reporting the missing sources, Halliburton Energy Services faxed to the Operations Center a timeline for the shipment, U.S. Customs Clearance documents, and a freight pick up document from Forward Air (see attachments).

**Question 2: What specific actions did the Commission take to a) investigate the cause of the material's disappearance, b) assist in its location and recovery and c) alert other government, state and local officials to its disappearance?**

Answer:

The NRC staff convened a conference call with key headquarters and Regional representatives at 6:21 p.m. EST on February 8, 2005, to discuss necessary coordination and near-term actions. As part of that call, a representative of Halliburton was brought onto the line to answer questions from the NRC representatives. During the call, NRC decided to contact appropriate agencies including the Federal Bureau of Investigation (FBI), Department of Homeland Security (DHS), Department of Energy (DOE), Department of Transportation (DOT), the State of Texas, and the New York City Bureau of Radiological Health (NYC/BRH), to inform them of the event and alert them to a planned conference call on the morning of February 9, 2005. NYC/BRH was contacted at 7:30 p.m. EST on February 8, 2005, and a representative of that office indicated that he would have inspectors at JFK Airport that evening to look into the event.

NRC held a conference call with external stakeholders at 12:00 p.m. EST on February 9, 2005. At that time, NYC/BRH informed the parties of their survey efforts and interviews at Cargolux and Forward Air Freight and their plans to do more detailed surveys later that afternoon. A representative of the New York City office of the FBI indicated that agents were at JFK airport examining the paper trail associated with the shipment and that they planned to visit a Newark, New Jersey, location identified as part of their review of that paperwork. NRC's Region IV office was in touch with Halliburton to confirm what additional steps they planned to take in followup and, subsequent to the call, learned that Halliburton had sent their Global Lead Radiation Safety Officer (RSO) to NYC to investigate the whereabouts of the shipment.

As a result of the FBI field work in Newark, the location of the sources was determined late in the afternoon of February 9, 2005. The sources were located at the Forward Air Freight facilities in Chelsea, Massachusetts. The sources were apparently shipped to the Boston area after a Boston label was inadvertently placed on the package in Newark. The sources were examined by the Halliburton RSO and prepared for shipment back to Houston. Halliburton contracted FedEx to ship the sources to Houston, Texas. The sources arrived at Halliburton in Houston, Texas on February 14, 2005.

Enclosure

**Question 3:** In past correspondence (see [http://www.house.gov/markey/Issues/iss\\_dirtybombs\\_ltr041021.pdf](http://www.house.gov/markey/Issues/iss_dirtybombs_ltr041021.pdf)), you indicated that although an NRC/DOE working group recommended the establishment of a National Source Tracking System in May 2003 (see [http://www.zyn.com/flc/meeting/presentations/Chavez\\_Radioactive.pdf](http://www.zyn.com/flc/meeting/presentations/Chavez_Radioactive.pdf)), the system won't be complete until early 2007. Don't you think that if such a system requiring cradle to grave tracking of all radioactive sources had existed, locating these missing sources would have occurred much more quickly? Why or why not? In light of this incident, will you accelerate the development of such a system? Why or why not?

Answer:

The National Source Tracking System proposed rule is under development, and we are not able to apply the concept to the facts of this case yet.

We also note that a proposed rule governing imports and exports has been published for public comment, and the Commission expects to publish a final rule this spring. As published for comment, the proposed rule would require notification to the NRC for imports and exports of Category 1 and 2 shipments. Such notification would include an estimated arrival date.

NRC is currently focusing extensive efforts to complete the National Source Tracking System within the current established timeline. The NRC staff was aggressive in setting the original goal of early 2007, and will take every action to develop the system on schedule. It is worth mentioning that the NRC has established an interim source database, which is operational at this time.

**Question 4:** Has the Commission investigated the facility in Boston in which the sources were stored? If not, why not? If so, a) could any of the individuals working in the facility been exposed to radiation as a result of this incident, b) why wasn't the extremely large package found earlier and c) was the item stored in a part of the facility that was secure?

Answer:

NRC and the DOT have a Memorandum of Understanding (MOU) to separate overlapping regulatory jurisdiction of radioactive material transportation activities. While a shipment is in transit, including storage incidental to the transportation (such as at the warehouse in Boston), the radioactive material is under DOT jurisdiction. The MOU specifies each agency will conduct an inspection and enforcement program within its jurisdiction, and also permits cooperation on inspection findings. In this regard, DOT would have the Federal lead for any inspection activities at the warehouse; for its part, NRC has offered to assist DOT in any inspections they consider warranted.

Since the material was in transit to Houston when it was misplaced, and Halliburton is a licensee of the Agreement State of Texas, the NRC is working in coordination with the State of Texas and DOT in conducting inspections into this matter. As noted above, Halliburton concluded on

February 8, 2005, that the sources were missing and reported it to the NRC on the same day. We have not yet concluded that Halliburton has violated any requirements, either NRC requirements or those of Texas as the Agreement State regulator. We will provide you the results of all follow-up inspections once they are completed.

Again, to put this event into perspective, we would like to emphasize that the NRC and DOT require special packaging for shipment of well logging sources of this nature and that these sources do not represent a health hazard if they are kept in the shipping containers, as they were in this case.

**Question 5: Was this package labeled as being radioactive? If so, how could an almost 200-pound package with clear markings indicating it was radioactive go unnoticed for 4 months?**

Answer:

Photographs of the package reveal that it was labeled radioactive. As noted above, we are looking into the matter and will provide you the results of all follow-up inspections once they are completed.

**Question 6: How did this incident occur? Will penalties be imposed on Halliburton Energy Services or other entities for failure to comply with applicable NRC laws and regulations? Why or why not?**

Answer:

As noted above, we are looking into the matter and will provide you with the results of all follow-up inspections once they are completed and a determination has been made whether further action is warranted.