

September 12, 2007

The Honorable Thomas R. Carper
Chairman, Subcommittee on Clean Air
and Nuclear Safety
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your and Senator Voinovich's July 17, 2007 letter, regarding your concerns about the Government Accountability Office's (GAO's) ability to set up a false company and obtain a license to buy radioactive material and safety procedures and controls at Nuclear Fuel Services (NFS) in regard to a leak involving a solution containing highly enriched uranium. You noted in your letter that the safety and security of our Nation's nuclear infrastructure and radioactive devices is the NRC's most basic duty. I want to assure you that the NRC takes that duty very seriously. The Commission took quick action to address the two issues you highlighted in your letter and continues to make changes to our policies and processes to ensure the public health and safety. Details about these actions are included in the enclosed reports.

I also want to assure you that the Commission's goal is to strike an appropriate balance between a regulatory process that is open to the public and the protection from disclosure of sensitive information which would be helpful to potential adversaries. The NRC, working with the Department of Energy's (DOE's) Office of Naval Reactors, reconsidered its August 2004 policy on the criteria used for withholding from public disclosure information deemed to be security related for those fuel cycle facilities where NRC and DOE's Office of Naval Reactors have a role, which includes NFS. Consistent with this effort, the NRC has already made publicly available a number of recent documents related to NFS and will make additional documents publicly available once they have been screened for sensitive information.

The Commission agrees that there is also room for improvement in terms of NRC interactions with Congress involving potentially "alarming" reports such as the one regarding GAO's undercover operation. We fully understand and will endeavor to comply to the extent practicable with your expectation that if such similar "alarming" reports concerning the NRC are being presented to Congress in the future, you will receive a personal briefing either on the day the report is presented or as close to that date as possible.

Please be assured that NRC is working very hard to ensure we protect public health and safety while keeping our processes as transparent as possible.

I thank you for the opportunity to respond to your letter. Please let me know if you wish to discuss this matter further.

Sincerely,

/RA/

Dale E. Klein

Enclosures:

1. Government Accountability Office
Radioactive Material License Incident
2. Information on Nuclear Fuel Services Spill

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Ranking Member, Subcommittee on Clean Air
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Government Accountability Office (GAO) Radioactive Material License Incident

1. Synopsis of the incident.

After creating a fictitious company, GAO investigators were able to obtain a valid radioactive materials license from the U.S. Nuclear Regulatory Commission (NRC) Region I office. NRC processed the license application in accordance with established license review guidance and procedures. The reviewer determined that the application was deficient in some safety-related areas, asked the applicant for needed information, and received the required information in the form of a letter faxed to the Region office. Using the discretion afforded them by NRC's procedures in place at that time, NRC staff did not conduct a pre-licensing visit for this application, which involved a Category 4 quantity of sources under the International Atomic Energy Agency (IAEA) Code of Conduct on the Safety and Security of Radioactive Sources. Pre-licensing visits are required for applications for Category 1 or 2 sources and in certain other cases where license reviewers have reason to question the validity of the license application. NRC's reviewer believed that there was no reason to be suspicious. NRC approved the license and, after final approval, the reviewer sent the license to the applicant (four weeks after the initial application arrived).

After obtaining the license from NRC, GAO investigators altered the license so it appeared that the fictitious company was authorized to purchase larger quantities of radioactive sealed sources than the maximum listed on the approved license. GAO then sought to purchase, from two U.S. suppliers, soil moisture density gauges containing sealed radioactive material.

Letters of intent to purchase, which included the altered NRC license as an attachment, were accepted by two suppliers. According to the GAO, these suppliers gave GAO price quotes and commitments to ship the devices containing radioactive materials. When queried later, one supplier of the sources indicated to GAO that his company does not check with NRC to confirm the terms listed on the licenses that potential customers fax to them. The supplier stated that his company checks to see whether a copy of the front page of the license is faxed with the intent to purchase and whether the requested order exceeds the maximum allowable quantity a licensee is allowed to possess at any one time.

One of the two potential suppliers subsequently contacted Troxler Electronic Laboratories, the company that it expected would help it fill the order for the devices requested by GAO. In a July 20, 2007 letter to Chairman Levin of the Permanent Subcommittee on Investigations, Senate Committee on Homeland Security and Governmental Affairs, a Troxler official stated that the company informed the potential supplier that due to the unconventional nature of the request, it would not supply the requested devices and refused to provide a price quote.

The amount of radioactive material GAO agents say they could have acquired from these suppliers was sufficient to reach the IAEA definition of Category 3. According to IAEA, Category 3 sources are dangerous if not safely managed or securely protected and could cause permanent injury to a person who handled them, or was otherwise in contact with them, for some hours. GAO indicated that with patience and the proper financial resources, their agents could have accumulated substantially more radioactive source material.

GAO also attempted to obtain a license from the State of Maryland, an Agreement State, but withdrew the application after State license reviewers stated that they would visit the fictitious company office before granting the license. An official with the Maryland licensing program told GAO that conducting a site visit is a standard procedure for the State of Maryland before radioactive materials license applications are approved and issued.

2. A complete listing of institutional and episodic failures of the Commission and/or of the licensee.

- NRC did not do enough before closing its response to the recommendation in an April 2003 GAO report (GAO-03-804) with respect to Category 3 quantities of concern and below. NRC has concluded that:
 - the November 2006 guidance was ineffective, allowing a weakness in the process that NRC uses to approve license applications to prevent a fictitious company of obtaining an NRC license for malicious intent; and
 - NRC missed the vulnerabilities in its licensing process that resulted in a seemingly legitimate licensee obtaining a license, followed by an alteration of that license for the purchase of a larger amount.
- NRC has not yet conducted an impartial and comprehensive look inward at its own materials regulatory processes, in particular the licensing process.
- NRC was unable to detect GAO's covert intent to procure material for purposes other than their intended purpose. NRC has concluded that:
 - licensing review procedures contained inadequate guidance for examining a license application; and
 - NRC did not have a requirement to perform site visits for new licensees of this type.
- NRC was unable to prevent the use of an altered issued license and the use of altered licensing documents to obtain purchase commitments for more than authorized quantities of radioactive material.
- There was inadequate communication between manufacturers and licensing authorities to verify that the license was valid, and that the licensee was not attempting to acquire more than authorized on the license.
- The National Source Tracking System under development by the NRC would have tracked sources of Category 1 and 2 quantities of concern, but would not have captured aggregated sources of Category 3 quantities of concern.
- Web-based licensing would have validated the license and the authorized levels, but would not have indicated the quantities in possession of the licensee, or the licensee's procurement from multiple vendors.

3. A full report on corrective actions the NRC has identified and a timeline for their implementation.

NRC took immediate action to address the weaknesses identified by GAO. NRC suspended licensing actions for all new applications for materials licenses until it could determine what interim corrective actions were necessary to resolve the weaknesses. NRC held a teleconference with a majority of the 34 Agreement States to discuss the issues. On June 12, 2007, NRC issued supplemental guidance with additional screening criteria intended to help the license reviewers determine whether a site visit or face-to-face meeting with the new license applicant is required. NRC has also convened a pre-licensing working group to develop improved guidance addressing the weaknesses found by GAO.

The NRC staff has developed an Action Plan (Attachment 1) to address the recommendations from the GAO testimony, "Actions Taken by NRC to Strengthen Its Licensing Process for Sealed Radioactive Sources Are Not Effective (GAO-07-1038T)," the Senate Permanent Subcommittee on Investigations report associated with the July 12, 2007 hearing, "Dirty Bomb Vulnerabilities," and the NRC Inspector General's report, "Summary Report and Perspectives on Byproduct Material Security and Control (OIG-07-A-12)." In the Action Plan, the NRC staff proposes to address each recommendation in the foregoing documents, including a schedule for completing the tasks and the resources needed for each task. The Commission is reviewing this Action Plan prior to implementation by the staff to assure that it meets our objectives in responding to the recommendations. We will inform Congress when the Action Plan is approved by the Commission.

4. A list of suggested corrective actions that the NRC does not have the statutory authority or resources to implement in a timely fashion.

The Action Plan (Attachment 1) described above contains this information.

Attachment 1: SECY-07-0147 Response to U.S. Government Accountability Office
Recommendations and Other Recommendations to Address Security Issues in
the U.S. Nuclear Regulatory Commission Materials Program.

Information on Nuclear Fuel Services (NFS) Spill

1. A synopsis of the incident itself.

On March 6, 2006, during the transfer of a solution containing Highly Enriched Uranium (HEU) through a transfer line, approximately 35 liters of HEU solution leaked into a glove box and passed through drains to the floor. When the HEU solution reached the floor, it flowed and began spreading under a door. Neither the worker posted at the vessel being drained nor the worker posted at the vessel being filled were close enough to the glove box to detect the spill. Another worker in the hall outside the door room noticed the spilled solution coming under the door and alerted the other workers. The transfer was completed before actions were taken to address the spill. The operator promptly stopped all processing of HEU in the facility. The Commission summarized the incident in its May 2007 report to Congress on Abnormal Occurrences in 2006.

2. A complete listing of institutional and episodic failures of the Commission and/or the licensee.

Licensee Failures

On June 9, 2006, the U.S. Nuclear Regulatory Commission (NRC) documented special inspection team results in report 70-143/2006-006. The inspection team identified eight (8) apparent violations of NRC requirements. The violations involved:

- untimely notification to NRC in accordance with 10 CFR 70;
- failure to verify proper installation of the tray dissolver filter enclosure drains prior to use;
- failure to meet performance requirements of 10 CFR 70.61(d) for accident sequences related to handling of HEU material in the tray dissolver system;
- failure to meet performance requirements of 10 CFR 70.61(d) for accident sequences related to HEU solution accumulation on the solvent extraction room floor;
- failure to assume that fissile solution could be misdirected from the solvent extraction feed transfer line in nuclear criticality safety analysis for the tray dissolver system;
- failure to ensure that process systems not approved for use were isolated from active special nuclear material bearing systems and failure to implement facility change process requirements of 10 CFR 70.72;
- failure to use a valid procedure to conduct licensed activities;
- failure to capture unusual conditions of yellow solution in the filter enclosure within the corrective action program.

As documented in NRC's most recent assessment of NFS performance (December 2006), licensee actions are still necessary to provide additional assurance that facility operations will continue to be conducted safely. At the heart of the safety and security compliance issues at NFS, the NRC determined that "safety culture" was a common thread for which an independent review was necessary.

NRC Failures

Given the significance of the event, numerous opportunities existed following the HEU spill event at NFS, in which the NRC should have promptly informed Congressional Oversight Committees. The Commission believes that some conditions which would have been appropriate for immediate Congressional notification and/or briefings (prior to the 2006 Abnormal Occurrence Report) included the March 13, 2006 second event notification from NFS, dispatch of the special inspection team to the site, and the March 18, 2006 issuance of the Confirmatory Action Letter (CAL). In reviewing the above opportunities, we are instituting actions to ensure that Congress is informed in a timely fashion for future events involving our regulated facilities. Regardless of the sensitivity or classification of information, we will inform Congress of significant events and agency actions.

We also recognize that the NRC should have shared more information about the event with other agencies and the public. As a result, the Commission directed the staff to review existing guidelines and procedures to ensure that information on licensed activities involving the Category I fuel facilities is publicly available and only that information that poses a significant security risk is withheld from the public. Due to the need to keep the public informed of past agency actions associated with NFS, the Commission determined it was important to release certain documents immediately. On July 18 and July 19, 2007, the NRC released the following documents: Commission transcripts from Agency Action Review Meeting on May 30, 2007, the most recent Licensee Performance Report at NFS dated December 1, 2006, and the alternate dispute resolution Order dated February 21, 2007. The NRC staff, working with the Department of Energy's (DOE's) Office of Naval Reactors, has completed its review and submitted its recommendations to the Commission. The Commission has approved a revised policy which will ensure appropriate material will be made publicly available and that appropriate sensitive material will be protected.

3. A full report on corrective actions the NRC has identified and a timeline for their implementation.

With regard to licensee corrective actions identified by the NRC, the NRC conducted an on-site special team inspection of the event between March 13 -17, 2006. The inspection at NFS was conducted by a team consisting of five inspectors from NRC Region II and headquarters. On June 9, 2006, the NRC documented the results of that inspection in inspection report 70-143/2006-006. NRC staff met with NFS on March 17 and May 10, 2006, to discuss the preliminary conclusions of the special team inspection. The NRC identified eight apparent violations of NRC requirements related to the spill event. The team also concluded that the immediate safety consequences were very significant in that operators were unaware that their actions resulted in the transfer of highly enriched uranium to a filter enclosure. An additional significant safety concern was the lack of criticality prevention controls for the unsafe accumulation point on the Blended Low-Enriched Uranium (BLEU) preparation facility (BPF) floor. The team concluded that NFS's identification of causal factors and contributing factors surrounding the event had been adequate.

The NRC continues to apply an increased level of oversight to NFS. Oversight of the spill event included substantial enforcement actions (Confirmatory Action Letter and Alternate Dispute Resolution [ADR] Order), senior management meetings, readiness inspection efforts, a Commission Meeting with NFS, and on-going verification and validation efforts towards the ADR Order. A number of NRC team inspections confirmed NFS's short-term corrective actions, independently verified through a selective sample of proper system configuration controls, and confirmed that operations were safe to restart the BPF operations. The chronological activities below provide specific NRC actions taken after the special inspection team.

March 18, 2006	NRC issues Confirmatory Action Letter (CAL) 02-06-003 to assure that NRC has the opportunity to review BPF prior to restart and asking NFS for justification for continued operations of the Naval fuel operations.
March 24, 2006	NFS response back to NRC's CAL 02-06-003.
March 27, 2006	NRC Management Meeting with NFS to discuss event investigation.
April 3, 2006	NRC team inspection sent to verify NFS's response to the CAL and to verify that Naval Fuel Operations did not suffer from issues similar to these of BPF.
April 26, 2006	NRC Management Meeting with NFS to discuss corrective actions.
June - July, 2006	NRC conducts inspections verifying BPF corrective actions to support facility startup.
July 25, 2006	NRC authorizes restart of solvent extraction material.
July 24-28, 2006	NRC conducts inspections of BPF.
September 18, 2006	NRC management meeting with NFS on status of remaining BPF corrective actions.
September 28, 2006	First Alternate Dispute Resolution Session between NFS and NRC. Purpose was the disposition of a willful violation. From the session both parties entertain a broader ADR to resolve all significant outstanding enforcement issues, including those from the March 6, 2006 HEU spill.
October 18, 2006	NRC authorizes restart of BPF.
November 30, 2006	Final ADR session to reach agreement on Order.
December 1, 2006	Licensee Issues Performance Report.
February 21, 2007	NRC Issues Alternative Dispute Resolution Order.
March 15, 2007	NRC approves charter for Safety Culture and Configuration Management Oversight Panel.
May 30, 2007	Closed Commission Meeting to Discuss NFS performance Issues.
July 19, 2007	Re-issuance of ADR Order to make publicly available. Release of Closed Commission meeting transcripts.

The NRC has already implemented interim corrective actions as described in the preceding paragraphs. In addition, NRC staff has initiated an internal "lessons learned" review of the specific events associated with the spill to determine if there is any additional appropriate generic actions that should be taken. This review is expected to identify corrective actions, which will be reviewed by NRC management and implemented in a timely manner. The Commission is expected to be provided the results of this review by the end of October 2007.

4. A list of suggested corrective actions that the NRC does not have the statutory authority or resources to implement in a timely fashion.

At this time, the Commission believes that statutory authority and resources are appropriate and adequate to timely implement proposed corrective actions. As requested, we will provide a progress report at the agency's next oversight hearing on the status of actions taken to date.