



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
325 Broadway
Boulder, Colorado 80305-3328

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July 8, 2008

Mr. Elmo E. Collins
Regional Administrator
U.S. Nuclear Regulatory Commission
Region IV
612 East Lamar Boulevard, Suite 400
Arlington, TX 76011-4125

Subject: Confirmatory Action Letter

Dear Mr. Collins:

I am hereby acknowledging receipt of your July 2, 2008 Confirmatory Action Letter (CAL) in my role as the National Institute of Standards and Technology (NIST) Incident Response Director.

As you know, on June 10, 2008, NIST's facility in Boulder, Colorado, reported a mixed plutonium contamination event, which resulted in contamination of certain areas within the facility, radioactive contamination of several employees, and unplanned releases to the sanitary sewerage. The NRC has been conducting onsite inspections at various times at the Boulder facility since that notification, and continues to review our actions in response to the event. I want to thank the NRC for its review of this incident and assure you of our full cooperation with your efforts. In particular, I want you to know that, at my direction, we have gone beyond the requirements of the Confirmatory Action Letter and suspended all work involving any source covered by our current license, not only those that are the same or similar to the plutonium involved in the incident.

Pursuant to discussions with NIST Deputy Director Dr. James M. Turner, who designated me as the Incident Response Director, and other NIST leaders and staff members, I am hereby affirming on behalf of NIST that NIST will take the following actions by the dates specified:

1. NIST will not use or remove from storage sources at the Boulder facility with the same or similar design as the plutonium source that ruptured until the NRC has approved such activities in writing. In order to obtain NRC approval, NIST will assess the designs of these sources along with NIST procedures, training, and other administrative requirements to determine that the sources can be handled safely.

NIST

2. NIST will make arrangements for thorough dose assessments for individuals potentially exposed to plutonium and submit initial dose assessments to the NRC Region IV office within 30 days of the date of the CAL. Every 30 days thereafter, NIST will provide the NRC with updates to its dose assessments until the dose estimates have been finalized. As a result of this analysis, NIST will assign an estimated dose, including an estimate of possible error, to each worker potentially exposed in accordance with 10 CFR Part 20. In addition to other applicable reporting requirements, NIST will report the dose information to NRC Region IV.

3. Prior to personnel working with licensed material, NIST will ensure that procedures are appropriate to the circumstances, that personnel have received the requisite training, and that the effectiveness of their training has been assessed. Specifically, NIST will review training records, conduct interviews as needed, and review the adequacy of procedures to confirm that personnel using licensed materials have completed the requisite initial and annual refresher training committed to in the license; and that NIST personnel are capable of implementing the procedures required by your license. NIST will ensure that all personnel using licensed material are trained pursuant to the commitments specified in item 8 of application dated December 15, 2004. Individuals using special nuclear material must also be trained pursuant to the commitments specified in item 8 of letter dated February 15, 2007. Furthermore, NIST will ensure that all procedures referenced in these letters are available and are appropriate to the circumstances. If NIST determines that procedures are not appropriate to the circumstances, procedures will be enhanced and appropriate personnel trained in their use prior to working with licensed material.

4. In accordance with the requirements specified in 10 CFR 30.50(c)(2), NIST will submit a written follow-up report no later than July 9, 2008 (within 30 days of the initial report to the NRC). NIST's 30-day report will include the following information:

- a. A written report of the assessment of the release of plutonium into the sanitary sewerage pursuant to the provisions of 10 CFR 20.2003 and the applicable limits specified in Table 3 of Appendix B to 10 CFR Part 20. In addition to providing this assessment to the NRC, NIST will provide the results of its assessment to the Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and Environment, and the City of Boulder, Waste Water Treatment Facility.
- b. The results of the NIST internal investigation of the circumstances surrounding the contamination event that occurred on June 9, 2008, including a root cause analysis and any corrective actions NIST has taken or plans to take to prevent recurrence. This will include the results of reviews of the adequacy of the training NIST personnel received and the reviews of the adequacy of NIST procedures that may have contributed to the June 9, 2008 contamination event.

5. Prior to entering the laboratory to further stabilize the contamination, NIST will provide the NRC, for review and approval, its written plan for stabilizing the contamination within the laboratory. NIST will not enter the laboratory until the NRC has approved its plan. Then, after stabilizing the contaminated laboratory, NIST will secure room number 2124, including the contents, and will allow no entry into that room until the room is ready to be decontaminated as discussed in item 6 below.

6. NIST will obtain services for the decontamination of the facility, including the decontamination of all surfaces and/or removal of all contaminated materials resulting from this event. NIST will procure these services from a service provider holding a license for such work issued by the NRC or an Agreement State. NIST will provide, in writing to the NRC, the plans for decontamination prior to beginning any decontamination work. These plans will be submitted within 60 days of the date of this letter. NIST understands that the NRC will review these decontamination plans against the applicable provisions in Subpart E of 10 CFR Part 20 and the guidance in NUREG 1757, "Consolidated Decommissioning Guidance".

NIST will not begin decontamination activities until the NRC has approved the plan, in writing. After decontamination is complete, NIST will provide the NRC with a written report documenting the results of final radiation surveys of the facility.

NIST will notify you if for any reason it cannot complete the actions within the specified schedule and advise you in writing of its modified schedule in advance of the change. NIST will also notify you in writing when it has completed the actions addressed in the Confirmatory Action Letter.

Sincerely,



Richard F. Kayser
Chief Scientist

Docket No. 030-03732
License No. 05-03166-05

cc:

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