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February 19, 2013

NL-13-038

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk,
Director, Office of Federal and State Materials and Environmental Management Program
Washington, DC 20555-0001

SUBJECT: Event Report for Discovery of a Condition that Prevented Immediate Protective
Actions to Avoid Exposures to Radiation from Byproduct Material
Indian Point Unit Number 3
Docket No. 50-286
License No. DPR-64

Dear Sir or Madam:

The purpose of this letter is to submit a written follow-up report pursuant to 10CFR30.50 (c) for a condition that meets the reporting requirements of 10CFR30.50. On January 24, 2013, during testing of Cs-137 sources, the calibrator failed its source interlock checks because the sources could be raised while the shield door was open. The source was determined to meet the definition of byproduct material therefore applicable to the requirements of 10 CFR Part 30. This condition was determined to meet the reportability criteria of 10CFR30.50(b)(2) for equipment that failed to function as designed to prevent exposures to radiation and radioactive materials exceeding regulatory limits.

The following information is provided to meet the written reporting requirements of 10CFR30.50(c).

Description of Event

A senior radiation protection technician was exercising the pre-use interlock check during performance of daily source checks on portable radiation meters in accordance with procedure RE-INS-7CH-6. The check is performed with a Shepherd Model 78-2M calibrator (Serial # 9047) designed to preclude access to interior radiation fields of the calibrator when the sources are raised away from their shielded storage positions. The pre-operational source interlock check failed and the sources were secured in the shielded position. The calibrator electrical interlock is designed to prevent drawer motion when a source is raised. A switch in the interlock failed to operate properly and would have allowed a physical condition in which the extremities of personnel could be exposed upon movement of the drawer position.

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The drawer is the mechanism by which an instrument is delivered to the interior of the calibrator and then returned to the exterior for retrieval. In this condition, the Cs-137 source could be raised while the shield door was open thereby defeating the radiological barrier for the prevention of exposures to radiation.

Exact Location of Event

Shepherd Model 78-2M calibrator is located in the Unit 3 Containment Access Facility, 73 foot elevation.

Isotopes, Quantities, and Chemical Form of the Licensed Material

The source involved in the event was a 130 mCi Cs-137 source. There is also a nominal 130 Ci Cs-137 source, but it does not come into use during the interlock test.

Date and Time of Event

The event was discovered on January 24, 2013, at 23:58 hours. The NRC was notified of the event by EN #48701 but the notification was inappropriately reported under 10CFR70.50. A revised report was provided on February 6, 2013 to report the event under 10CFR30.50.

Corrective Actions Taken or Planned and the Results of Any Evaluations or Assessments

- Sources were placed in the shielded position and the lock re-installed on the calibrator device.
- A survey was performed (#133-0166).
- The Shepherd Model 78-2 calibrator was removed from service and the interlock switch is replaced. The calibrator has been repaired and functions properly.

The Extent of Exposure of Individuals to Radiation or to Radioactive Materials

No personnel were exposed to the radioactive sources. A survey of the calibrator after securing the sources showed dose rates within expected ranges (<0.2 to 0.8 mR/hr). The logged out dose for the technician was 0.8 mR.

If you have any questions or require additional information, please contact me.

Sincerely,



RW/cbr

cc: Mr. William M. Dean, Regional Administrator, NRC Region I
NRC Senior Resident Inspectors Office
Mrs. Bridget Frymire, New York State Dept. of Public Service