



April 27, 2006

Q-5

Betsy Ullrich
Division of Nuclear Materials Safety
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

Mail Control No. 138346
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Dear Ms. Ullrich:

This letter is in response to your request for additional, supporting information relative to the application to terminate the Lucent Technologies' license for source material. The records have been reviewed going back more than 20 years. A review of the inventory records shows that uranium was the only material possessed under this license. There is no record of Source Material being used or stored anywhere in the facility except the 1G Radiation Lab. Radiation surveys and wipe tests for removable contamination were conducted on at least a quarterly basis.

Lucent Technologies' Portable Instrumentation for Routine Surveys The portable counting equipment that was used to perform surveys until 10/2005 were calibrated primarily in the Bell Laboratories' Calibration Lab under License 29-28260-01 (terminated). Calibrations of the instruments used were performed on at least an annual basis. The instrument used was typically an Eberline ESP-2 with an AC-3 alpha scintillator to search for alpha emitters. Currently, all portable instrumentation is sent to licensed vendors for calibration.

Lucent Technologies' Low Background Alpha/Beta System Since 1982 counting of swipes for removable contamination was done using the Tennelec LB5100. The system was calibrated using planchet sources whose standardized alpha and β/γ activities were traceable to the National Institute for Standards and Technology (NIST). Prior to each use of the system, standards were counted along with a blank to confirm correct operation. The Minimum Detectable Activities (MDA's) with the use of this system were typically 2 dpm/100 cm² (Alpha) and 25 dpm/100 cm² (Beta). Since lab controls precluded fixed contaminants, the primary compliance test was the swipe for removable contaminants. This assured compliance with the NRC screening value on a continual basis.

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Summary of Results There have been no significant spills in the 1G lab. Small levels of contamination (<100 dpm/100 cm²) that did occur were promptly cleaned up to be indistinguishable from background in subsequent swipes. Regular swipe tests for radioactive contaminants were performed quarterly. The final state of all lab areas, equipment, furniture, and building surfaces was well below the 101 disintegrations per minute per 100 cm² NRC screening value.

The most complete, recent survey was conducted as part of the Lucent Technologies' effort to update the decommissioning funding plan. A survey of all the affected areas in the 1G lab was conducted in early 2006 under contract with EnergySolutions. Using a Ludlum 2360 instrument with a Ludlum 43-93 detector – a large area (100 cm²) Alpha/Beta Scintillator -- no areas of source material contamination were found. The instrument had a typical MDA of 40 dpm for Uranium, well within the NRC guideline. EnergySolutions also performed tests for removable contaminants using a Ludlum 3030 Alpha/Beta scaler with the same conclusion of no source material contamination. This instrument has an MDA for swipe tests of below 10 dpm/100 cm² for removable alpha emitters. RSA Laboratories of Hebron CT calibrated the EnergySolutions equipment.

If you require additional information, please contact me at (908) 582-5907.

Sincerely,



Richard Quick
Senior Manager – Radiation Safety Officer

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This is to acknowledge the receipt of your letter/application dated

4/27/2006, and to inform you that the initial processing which includes an administrative review has been performed.

☒ TEAM. SMB-1260
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

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