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March 12, 2007

Alexander Adams  
US Nuclear Regulatory Commission  
Mail Stop  
O - 12 - G -15  
One White Flint North  
11555 Rockville Pike  
Rockville, Maryland 20852-2738

Re: Termination of NRC License # R-73

Dear Alexander:

Thank you for allowing the University of Washington's D & D team to clarify a couple of outstanding issues via a conference call on March 8, 2007. Based on that discussion, we are respectfully submitting a revised Page 16 to the Final Status Survey Report dated February 22, 2007

We believe that this final piece to the final status survey process establishes that the More Hall Annex is now suitable for release from radiological controls. The previously submitted revised Final Status Survey Report, along with this single revised page, provides the necessary documentation demonstrating the radiological condition of the facility and responds to the NRC review comments. This documentation also supports the conclusion that the University of Washington has complied with NRC decommissioning requirements. Based on this, the University of Washington is now requesting termination of United States Nuclear Commission License number R-73. Please contact me with any questions about this request.

Sincerely,

A handwritten signature in cursive script, appearing to read "Stanley J. Addison".

Stanley J. Addison, M.S.  
UW Radiation Safety Officer

I declare under penalty of perjury that, to the best of my knowledge, the forgoing is true and correct. Executed 2/26/07

Copy: Marty Howlett, Project Manager, Capital Projects Office  
Jeff Angeley, Associate Construction Manager, Capital Projects Office

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Table 5-2 provides a summary of the alpha detection probability using formula 6-12 presented in Section 6.7.2.2 of the MARSSIM. The formula is:

Detection Probability (6-12) 
$$P(n \geq 1) = 1 - e^{-\frac{GE d}{60v}}$$

Where

- P(n≥1) = the probability of detecting a single count
- G = Contamination activity (DPM)
- E = Detector efficiency
- d = Width of detector in the direction of the scan
- v = Scan speed (cm/s)

**Table 5-2 Alpha Scan Probability of Detection**

Detector Type	Total Efficiency	Probe Dimension in Direction of Scan	Scan Rate	Probability of Detecting 300 DPM/100cm <sup>2</sup> (Table 4-1)
Alpha Gas Proportional	10.5%	9-cm	3-cm/s (1/3 probe/sec)	79%
Alpha Gas Proportional	10.5%	9-cm	4.5-cm/s (1/2 probe/sec)	65%

Using the total efficiency, discussed in Section 5.3.5, the probability of detection exceeds 67% which is listed in Draft ANSI Standard N13.12 (1978) when scanning for alpha emitters. The data evaluation supports the premise that this detection probability is unrealistically low as evidenced by the numerous detections of alpha activity less than 300 dpm/100cm<sup>2</sup> demonstrated during the FSS evolution.

A single count detected during a scan is cause for the surveyor to pause until the probability of achieving another count has reached 90%. This time interval may be calculated using formula 6-13 from the MARSSIM as presented below.

Time Interval Probability (6-13) 
$$t = \frac{13800}{CAE}$$

Where