Antkowiak and Mahoney
Enterprises, Inc.
3 Valley Court
Chester, NY 10918

April 19, 2005

MSIB
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Mr. John Nicholson
Licensing Assistance Team
Division of Nuclear Materials Safety
US Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

RE: Mail Control Number 136610
Docket Number 030-19526
License Number 29-19918-01

Dear Mr. Nicholson,

In response to your letter dated March 25, 2005 regarding the final status survey for the Elan Operations facility in Princeton, New Jersey, I submit the following information for your review. The items are numbered relative to the order that they were numbered in your letter.

1) The Elan Operations facility in Princeton consists of a total of 49,500 square feet. Of that total, 12,000 square feet were dedicated to laboratory space.

2) The subject of release criteria was addressed during the site visit by Mr. James Schmidt of your office in September 2004. At that time it was determined that the limits presented in Reg Guide 1.86 would be used to decommission the facility. See table below.

Nuclide	Average	Maximum	Removable
Beta-gamma emitters	5000 dpm/100 cm^2	15000 dpm/100 cm^2	1000 dpm/100 cm^2

3) The equation is adapted from NUREG-1507 - Minimum Detectable Concentrations with Typical Radiation Survey Instruments for Various Contaminants and Field Conditions. I would also like to offer the following information on the instrumentation used.

Based on the information in MARSSIM Chapter 6, section 6.7, the scanning minimum detectable concentration for these systems can be determined based on the following equation:

$$Scan\ MDC = MDCR / [p^{1/2} * e_i * e_s * (\text{probe area} / 100\ cm^2)]$$

where

MDCR = minimum detectable count rate

e_i = instrument efficiency

e_s = surface efficiency (typically = 0.5)

p = surveyor efficiency (typically = 0.5)

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NMSS/RGN1 MATERIALS-002

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Assuming a background count rate of 300 cpm, the MDCR for the model 43-68 probes for this project is 185 cpm. This is based on a scan rate of 1 probe width per second, with a requirement of 95% correct detections and an acceptable rate of false positives equal to 60%.

Using the same parameters and a background count rate of 800 cpm, the MDCR for the model 239-IF floor monitor is 302 cpm. The Scan MDCs are then as presented in Table 1, assuming typical values of 0.5 for both surveyor efficiency and surface efficiency, and efficiency for carbon-14 of 0.13.

Table 2: Instrument Scan MDCs

Instrument	MDCR (cpm)	Scan MDC (dpm/100 cm^2)
Ludlum Model 12 w/Model 43-68 probe	185	4,025
Ludlum Model 12 w/Model 43-37-1 probe Floor Monitor	302	1,129

4) Elan ceased full operations at the site on July 31, 2003. All research activities had ceased by May 31, 2003.

If you require further information, please feel free to contact me at 845-406-1917, or via e-mail at jantkowiak@optonline.net.

Sincerely,
Antkowiak and Mahoney Enterprises, Inc.

Joel Antkowiak, President
Acting RSO for Elan Operations Inc.