



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

October 5, 2004

Docket No. 03030941  
Control No. 135198

License No. 37-28329-01

William H. Button  
Vice President  
Philotechnics, Ltd. - d.b.a. Afftrex Ltd.  
600 State Street  
Clairton, PA 15025

**SUBJECT: PHILOTECHNICS, LTD. - D.B.A. AFFTREX LTD., REQUEST FOR  
ADDITIONAL INFORMATION CONCERNING APPLICATION FOR RENEWAL  
OF LICENSE, CONTROL NO. 135198**

Dear Mr. Button:

This is in reference to your letter dated September 27, 2004, which provided responses to the NRC letter dated August 20, 2004, relating to renewal of Nuclear Regulatory Commission License No. 37-28329-01. In order to continue our review, we need the following additional information:

1. Section 6.b. of Procedure No. AD-2.02 states that the release limits to be used for easily divisible solid material, such as soil or sludge, are those listed in 10 CFR 20 Appendix B, Table 2, Column 2. Appendix B, Table 2, Column 2 is applicable to water effluents not soils or sludge. Volumetrically contaminated materials such as soils or sludge that contain measurable radioactivity above environmental background levels are considered licensed material and must be disposed of in accordance with the appropriate section of 10 CFR 20.2001.

Please confirm that this procedure will be changed to reflect that volumetrically contaminated materials with radioactivity measured to be above environmental background will be disposed of in accordance with 10 CFR 20.2001.

2. Sections E.3.b. and G.3. of Procedure No. AD-2.02 reference Section E.4. regarding the airborne radioactivity level at which posting is required and respirators will be made available for emergency use. Procedure No. AD-2.02 does not contain a section titled E.4.

Please specify the airborne radioactivity level(s) that has been erroneously omitted from Procedure No. A2-2.02.

3. Attachment 1 of Procedure No. RM-4.11 provides the technical basis for estimating laundry liquid effluent discharges. Step 2 of Attachment 1 utilizes an incorrect method of estimating isotopic activities when the particle emission yield is less than one. The

correct calculation needs to adjust all of the relevant isotopic fractions based upon effective yield of the all isotopes being assessed. For example, if isotope A with a beta particle yield of 1 comprises 50% of the mix and isotope B with a beta particle yield of 25% makes up the remaining 50%, the adjusted fraction for isotope A would be  $0.5/((0.5 \times 1) + (0.5 \times 0.25))$  or 0.8. Similarly, since isotope B had the same original 50% fraction, its adjusted fraction would also be 0.8.

Please review Attachment 1 to Procedure No. RM-4.11 and if appropriate, state that the deficiency will be corrected as described above. Alternately, you may provide an alternate methodology of calculation for review by the NRC staff. Please evaluate the impact of this deficiency on past compliance and provide a statement relative the findings of this evaluation. Please state that the discharge tracking database software will be updated to reflect the revised methodology .

In accordance with 10 CFR 2.390, a copy of this letter will be placed in the NRC Public Document Room and will be accessible from the NRC Web site at <http://www.nrc.gov/reading-rm.html>.

We will continue our review upon receipt of this information. Please reply to my attention at the Region I Office and refer to Mail Control No. 135198. If you have any technical questions regarding this deficiency letter, please call Jim Schmidt at (610) 337-5276.

In order to continue prompt review of your application, we request that you submit your response to this letter within 30 calendar days from the date of this letter.

Sincerely,

***Original signed by Judith A. Joustra***

Judith Joustra  
Health Physicist  
Nuclear Materials Safety Branch 2  
Division of Nuclear Materials Safety

cc:  
George Chris Getty, Radiation Safety Officer

W. Button  
Philotechnics, Ltd. - d.b.a. Afftrex Ltd.

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