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April 7, 2000

Mr. Frank Costello
Deputy Division Director, DNMS
U.S. Nuclear Regulatory Commission – Region I
475 Allendale Road
King of Prussia, PA 19406-1415

**Re: Application to Amend Radioactive Materials License No. STA 1455
Supplemental Information – Docket No. 040-08868**

Dear Mr. Costello:

On November 16, 1999, II-VI Incorporated (II-VI) forwarded to you an application to amend License No. STA-1455 to permit us to transfer solid materials (i.e. soils, filtercake, etc.) that contain less than 25 picocuries per gram (pCi/g) each of ^{232}Th and its progeny to an industrial landfill. The purpose for the request was to allow us a cost-effective manner of managing bulk solids that do not pose a radiological risk to members of the general population (i.e., maximum likely doses do not exceed one millirem TEDE).

As a result of a Technical Assistance Request, a USNRC (NMSS) staff analysis was prepared, a copy of which was transmitted to us on March 24, 2000. In that analysis, the technical reviewer concluded that only materials containing less than four (4) pCi/g would meet the USNRC's dose criterion of 25 millirem per year.

On March 27, 2000, representatives of II-VI Incorporated met with the USNRC to discuss our application and the technical reviewer's findings, which we believed to be flawed for the following reasons:

- The assumption was made that the entire 30-year volume of filtercake (6,881 cubic meters) will be placed into a single, near-surface cell within the landfill. This assumption is unrealistic in light of the fact that II-VI Incorporated does not have the wherewithal to stockpile the filtercake for a single shipment at the end of a 30-year period. In addition, the periodic transfers to the landfill will be interspersed with other waste and interim capping materials on a daily basis.

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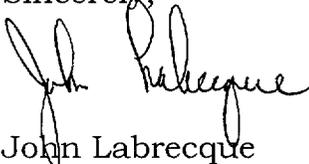
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- In the pathways analysis, the assumption was made that the excavated volume of filtercake from a single disposal cell would be spread on the land surface surrounding the home of a hypothetical farm family, thus subjecting them to exposure by the direct, ingestion and inhalation pathways. This scenario is unrealistic in light of the fact that USEPA regulations require that all uses of former landfill property during the post-closure period not disturb the integrity of the final cover, liner(s) or any other components of the containment system [40 CFR 258.61(c)(3)]. In addition none of the excavated material, likely to be composed of a drainage layer of sand/gravel, a water penetration barrier comprised of native materials with a high clay content, and the II-VI matrix composed of diatomaceous material, holds any promise for sustaining crop growth.

Nonetheless, and as we stated during the March 27th meeting, II-VI Incorporated will, upon issue of our amended license, ensure that no more than two (2) 'effective packages', in the form of 40-yard hoppers, will be sent to any single industrial landfill within any 30-day period. Shipment records to this effect will be maintained and will be available for USNRC review during inspection. The technical basis for this commitment shall be maintained as part of our Radiation Protection Program records.

II-VI Incorporated appreciates the opportunity to meet with the regulatory staff responsible for review of the activities conducted under USNRC License No. STA-1455. We will look forward to continued interaction with the USNRC as generic volumetric release criteria are developed over the next few years. A timely approval of our license amendment application is appreciated. Please do not hesitate to contact me with any additional questions.

Sincerely,



John Labrecque
Radiation Safety Director

cc: Carl J. Johnson, Chief Executive Office