PERMAGUARD PRODUCTS, INC.

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Stephen A. McGuire
Senior Health Physicist
United States Nuclear Regulatory Commission
Washington, DC 20555

Subject: 10 CFR Part 36

Dear Mr. McGuire:

Thank you for the copy of the Federal Register Notice concerning the proposed irradiator licensing requirements. We are a user of a fixed source underwater cool irradiator. To us, I think the key provisions in this regulation will be proper separation from a pool storage system as compared to an underwater fixed source system. The natural activities of the source material in this system are quite different. As outlined in the Federal Register, in the pool system you have sources that are going to maintain a surface temperature that is essentially constant at around 100°F. In the pool storage system, you have a cycling situation where the source temperature in an air environment goes from 80°F to 100°F to 400°F.

Fire Protection

In the case of fire protection, the cycling source system can obviously, if contacted by the material being irradiated, be subject to starting a fire and this has been well documented in the industry. In the case of the fixed source system, the source temperature is constant and the pool water is obviously sufficient to take care of any fire requirements.

Water Quality

In the case of the moving source, water quality is extremely important because the source is cycling in an air environment from a high temperature to a low temperature. In the case of a pool system with a fixed source, the corrosive environment is not present and the cycling is not present. In the fixed storage system it would be extremely difficult to maintain a conductivity of 10 Microsiemens per centimeter. In the normal environment one is continually bringing irradiation cannisters into the pool and all of this would effect the conductivity. In addition that conductivity is also reading items that will not appreciably affect the corrosive nature of the system. In our case we are working with organic monomers which become a food for bugs and between trace amounts of monomer and protein getting into the water system, both of these items increase the conductivity of the system.

Basically, we have no problem with the remaining sections.

Very truly yours,

A. E. Witt
President

AEW/jh

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