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January 24<sup>th</sup>, 2013

Licensing Assistance Team  
US NRC Region 1  
2100 Renaissance Boulevard  
Suite 100  
King of Prussia, PA 19406-2713

Subject: Request for Technical Assistance (License No.: 20-08361-01)  
Docket No. 03004675

To Whom It May Concern:

We are asking for technical assistance in ensuring that five different proposed waste disposal procedures meet NRC regulations. We would greatly appreciate your assistance in this process.

1. As a result of an environmental Sr-90 analysis procedure, we generate a liquid waste stream of 14N nitric acid saturated with tri-n-butyl phosphate and typically containing  $5.4E-7$   $\mu\text{Ci}/\text{mL}$  of Sr-90. We typically generate up to four 2.5L bottles of this waste per year, which contain a maximum waste bottle activity of  $1.4E-3$   $\mu\text{Ci}$  of both Sr-90 and Y-90 and a maximum waste stream activity per year of  $5.4E-3$   $\mu\text{Ci}$  of both Sr-90 and Y-90. Chemically the waste meets the RCRA definition of hazardous.

We propose applying 10 CFR 30.18.a in conjunction with 10 CFR 30.71, Schedule B, for each waste stream and transferring the material to the waste broker as exempt for final disposition in an agreement state. In order to ensure negative environmental consequences are minimal (ALARA), we will additionally apply the limit in table 3 of appendix B to part 20.

2. We may receive solid or liquid food products containing radioactivity from environmental contamination that is below FDA's derived intervention levels (DIL's) and, therefore, is released to the public. For example, a sample containing  $2.7E-5$   $\mu\text{Ci}/\text{mL}$  of Cs-137 is FDA lab class 1 and acceptable for consumption. We may also receive solid FDA-regulated products (e.g. cookware, cosmetic containers, medical devices, etc.) containing detectable radioactivity due to contaminated scrap metal components. We propose disposing samples that contain activities that meet 10 CFR 30.71, Schedule B, exemptions as trash. In order to ensure negative environmental consequences


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are minimal (ALARA), we will additionally apply the FDA DIL's, if applicable.

3. Liquid scintillation vials found or known to contain radioactivity will be accumulated in waste trays after segregation by chemical hazard. Once a tray is full, similar waste streams will be aggregated in a larger waste bottle. We propose applying 10 CFR 30.18.a in conjunction with 10 CFR 30.71, Schedule B, for each waste stream and transferring the material to the waste broker as exempt for final disposition in an agreement state. In order to ensure negative environmental consequences are minimal (ALARA), we will additionally apply the limit in table 3 of appendix B to part 20. For waste streams containing multiple radionuclides, the sum of the ratios test will be applied.
4. If a liquid waste stream is created that is above the amounts listed in 10 CFR 30.71, Schedule B, but a decay-in-storage interval (consistent with EPA and State regulations governing chemically hazardous wastes) will bring the activity below these limits, we propose utilizing decay-in-storage until the waste meets the limits described in 10 CFR 30.71, Schedule B, for each waste stream and additionally applying the limit in table 3 of appendix B to part 20 before transferring the material to the waste broker as exempt for final disposition in an agreement state.
5. If a standard contains less than the activity specified in 10 CFR 30.71, Schedule B, we propose purchasing it as an NRC exempt standard. Once the standard is received it would not be subject to the security, receipt, swipe or tracking procedures that we apply for non-exempt standards.

Please contact Mr. Edmond J. Baratta, Radiation Safety Officer, should you have any questions or need for additional information.

Sincerely,



Brian Baker  
Center Director

Cc: Edmond J. Baratta  
Radiation Safety Officer