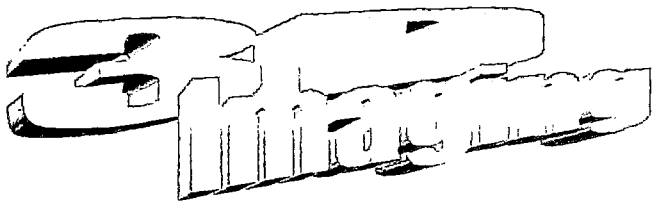

1/17/2017
82FR4925
(1)

Cindy Bladey
Chief, Rules, Announcements, and Directives Branch
Division of Administrative Services
Office of Administration; Mail Stop: OWFN-12-H8
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Cindy.Bladey@nrc.gov

Re: Comment on Draft Report NUREG1556, Volume 21, Revision 1

Dear Ms. Bladey,

I am a licensee in the Agreement State of Arkansas and sit on the Committee for Radiopharmaceuticals at Society of Nuclear Medicine and Molecular Imaging as well as having served on USP Expert Panels for PET drugs and the SNM Pharmacopoeia committee for many years. I have been involved in production and use of radionuclides and radiopharmaceuticals for forty years including academic, commercial radiopharmacy and commercial manufacturing. I have built and run five cyclotron production facilities including license application submissions and acting as RSO, I hold three FDA approved ANDA's, and many IND's and Drug Master Files supporting IND's and I have performed research in radiochemistry, preclinical drug development imaging, and clinical trial imaging. I would like to submit the attached few comments regarding the above-cited Draft Report which was disseminated for the purpose of attracting comments on behalf of myself and 3D Imaging Drug Design and Development LLC.

Sincerely,

Marc Berridge

Marc Berridge, Ph.D.
President

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM -03
Add= R. MacDougall (RXM7)

PO Box 13267 • Maumelle • AR • 72113 ***3DImagingllc.com*** **Ph: 501-801-1253**

Comments on Draft Report NUREG1556, Volume 21, Revision 1
Submitted by Marc Berridge, Ph.D. , President, 3D Imaging Drug Design and Devlopment LLC

1. Guidances such as this can be quite valuable to us as we prepare applications for submission and are appreciated. A major reason they are helpful is that the regulations contain vast amounts of detail which are challenging to assimilate and especially to separate aspects that apply to an application from aspects that treat different circumstances. The guidances can help us identify what applies for a particular application. This is a useful guidance complete with instructive suggestions for application content. Additional precision in the guidance regarding the application of the various requirements mentioned to various types of applicants would be helpful. Applicants include accelerator operators who are commercial nuclide manufacturers, radiopharmaceutical manufacturers, hospitals, universities, and radiopharmacies, all of whom have different types of resources and expertise and different approaches to applications under the current regulations. It would help to consider the interpretations that apply to each of these groups.

2. On page 1-1 line 10 it is stated that a radiopharmacy license is required to also manufacture and commercially distribute radioactive drugs. This may be interpreted as meaning that the facility must be a radiopharmacy, which I believe would be incorrect. While current regulations do allow for a manufacturing radiopharmacy which is licensed by the state board of pharmacy as a nuclear pharmacy, current regulations also allow for a manufacturer that is not a radiopharmacy to produce radioactive drugs under appropriate approvals from the FDA, and with a wholesale distributor license from the applicable state board of pharmacy. While such a license is in fact a license from the board of pharmacy, there is potential confusion over the terminology of "radiopharmacy license" because the facility is not classified as a radiopharmacy nor does it operate under pharmacy regulations. Many distributors are now FDA-approved manufacturers and also pharmacies, but others do not operate as pharmacies. The FDA regulations for production, testing, handling, and product quality are actually more stringent than pharmacy regulations. FDA regulations for drug manufacturers do not require the manufacturer to also be a pharmacy as long as distribution is to authorized pharmacies and authorized individuals such as medical practitioners. Therefore to require a manufacturer that is not currently also a pharmacy to also become a pharmacy would not be expected to contribute to public safety or product quality, could actually slightly increase the risk of product contamination, and would impose a substantial burden for addition of unneeded equipment and staff to comply. I believe this section was not intended to have this effect but the language used leaves room for doubt.

3. Page 8-4 line 31 This section is clear. However, while there is information available regarding production and likely quantities of incidentally activated nuclides in an accelerator facility and these nuclides can be listed as discussed, it would be useful to specifically address the fact that an accelerator can cause production of incidentally activated nuclides that are not anticipated and though such nuclides would necessarily be present in small quantities it is possible that nuclides not listed will be present. At the same time, efforts to identify and quantify all incidentally activated nuclides that may be formed in the structural components of the accelerator and its environment have little practical return in safety and planning for waste handling or facility decommission once the major contributors to induced nuclide emissions are identified.

4. Page 8-11 line 35 It is unclear what purpose is served by the definition of consortium. While such a consortium would not be a fully commercial distributor, it is in fact distributing for clinical and commercial purposes. It may operate as a pharmacy, or not. It is required by FDA regulations to operate as a drug manufacturer and to hold approved drug applications for the radiopharmaceuticals it produces. There would seem to be little justification for creating different standards for such a consortium, as opposed to a local commercial distributor that is not owned by its customers.