

From: Ryder, Christopher
Sent: Thursday, February 09, 2012 4:12 PM
To: Boeldt, Eric J.
Subject: RE: supplementary information and a related question.

Eric,

The PSU license states, "Authorized place of use: The materials specified ... shall be used in the Breazeale Nuclear Reactor Facility and the Academic Projects Building located at University Park, Pennsylvania. The authorized examinations and tests may be performed in the Academic Projects Building or the Breazeale Nuclear Reactor Facility."

Other locations would have to be approved by applying for a license amendment. You can submit multiple amendments. Depending on what is expeditious, the NRC staff would issue one amended license or several amended licenses. You would not be supplementing the existing application with supplemental material; the application would discuss how the proposed activities will be done safely.

After a 45 day acceptance review, the NRC staff has 150 days to perform a technical review. Typically, the reviews do not take this long. Until then, the SNM must be used only in the locations that are stated on the license.

Chris Ryder

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From: Boeldt, Eric J. [<mailto:ejb6@psu.edu>]
Sent: Thursday, February 09, 2012 2:54 PM
To: Ryder, Christopher
Subject: supplementary information and a related question.

Hello Chris,

Back in 2003 when I submitted the renewal for SNM-95, I asked everyone who had any possible interest if there were any possible plans to use any of this material in locations other than in the Radiation Science and Engineering Center (reactor building) or the Academic Projects Building (where my office is located). The only answers I received were completely and emphatically negative. That was then.

I have recently been asked for authorization to use small mass amounts of various enrichments of U-235 in a building across campus. He is unable to move his research equipment to buildings currently licensed for this material because his research involves a terawatt laser and two or three other

lasers in a newly refurbished laser laboratory. His first step, which I expect will begin in a couple weeks, involves natural and depleted uranium metal.

In a nutshell, he wants to vaporize nanograms of uranium with one laser and analyze the plasma with another laser, or two. All this occurs in a vacuum chamber with filtered exhaust. My calculation of the maximum hypothetical inhalation exposure came out to about 8 mrem TEDE per week. This involved inhaling all the off gas from his experiment – which would be impossible. Actually I received another almost identical application a week later from a different lab group. Fortunately they only need natural uranium.

So now for my questions:

1. Can a change in the location of use for items A and C on my license (U-235 and U-233) be wrapped up in the current amendment, or would this make the current process too much more complicated?
2. Does a change in location require as much a license amendment as the current amendment?

I'll hold off on the supplementary information until I hear back from you hoping this location change can be wrapped up on this amendment.

Thanks in advance,

Eric

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