

Eva J. Pell

Senior Vice President for Research Dean of the Graduate School Steimer Professor of Agricultural Sciences

The Pennsylvania State University 304 Old Main University Park, PA 16802-1504

November 12, 2009

Mary Adams Senior Project Manager Fuel Manufacturing Branch Division of Fuel Cycle Safety and Safeguards Office of Nuclear Material Safety and Safeguards U.S. Nuclear Regulatory Commission Mail Stop E-2-C40M Washington, DC, 20555

License: SNM-95

Docket: 70-113

Dear Ms. Adams:

gerarja

The Pennsylvania State University wishes to amend license SNM-95 to remove two items from our license. Penn State will retain this material and is amending our Pennsylvania license PA-100 to provide authorization under that license. A copy of that license amendment is attached.

Remove Source Material item 6G

Material authorized under this item is in use for research and development purposes and will continue to be utilized under the Pennsylvania license.

Remove Natural Uranium item 6F

This material is in current use in a subcritical sigma assembly used for teaching purposes. PSU will continue to use this material under the Pennsylvania license.

To allow proper ownership of this material during this process, this amendment should not be approved until the attached amendment submitted to the Radiation Protection Buearu of the Pennsylvania Department of Environmental Protection is approved.

A recent amendment to NRC license SNM-95 requested the removal of item 6B, 417 Pathfinder Superheat Fuel Elements from PSU's license and requested the addition of five plutonium isotopes for research and development usage. The changes requested in this amendment are in addition to those in the amendment dated October 9, 2009, not in substitution for it.

Sincerely

denter a constra factoria. E como cânal dorane en anarante factoria de mai

Thank you for your attention to this matter.

그는 물건을 하고 있는 것이 같아.

[]:(r,j)

Attachment PA-100 License Amendment Dated November 12, 2009

814-863-9580 Fax: 814-863-9659 E-mail: ejp@psu.edu Web: www.research.psu.edu

·学校学生和新闻的新闻的新闻和新闻的新闻和新闻和新闻的新闻



1 8 5 5

Eva J. Pell

Senior Vice President for Research Dean of the Graduate School Steimer Professor of Agricultural Sciences

The Pennsylvania State University 304 Old Main University Park, PA 16802-1504

November 12, 2009

John Chippo Radiation Health Physicist Bureau of Radiation Protection Rachel Carson State Office Building 400 Market Street 13th Floor Harrisburg, PA 17101-2301

License: PA-100

Dear Mr. Chippo,

The Pennsylvania State University wishes to amend license PA-100 to add two items to License PA-100. Penn State is amending our NRC Special Nuclear Materials license SNM-95 to remove these items from that license. A copy of that license amendment is attached. These items are:

1. 10 kilograms of source material of any form

2. 2,500 kilograms of natural uranium in cylindrical metal slugs canned in aluminum

Source Material Item 1

This material will continue to be used for teaching and for research and development as defined in 10 CFR 30.4 as authorized by PSU's radiation safety committee. It will be used primarily at the University Park Campus. Although unlikely, the material may be used at other campuses as authorized by license PA-100.

Use of radioactive material <u>within</u> the Breazeale Nuclear Reactor will be in accordance with PSU's Nuclear Regulatory Commission Reactor Operating License No. R-2. Handling of this material before or after use in the reactor will be in accordance with license PA-100.

As with other radioactive material use at Penn State, suitable personal protective equipment will be used as appropriate to the nature of the material, the quantities used, and the tasks performed. Glove boxes and hoods are available when needed.

814-863-9580 Fax: 814-863-9659 E-mail: ejp@psu.edu Web: www.research.psu.edu Penn State has numerous contamination and radiation meters suitable for detecting these materials and has alpha probes suitable for readily discriminating between alpha and beta emitting contamination. As with other licensed materials, appropriate surveys will be performed after each use.

2,500 Kilograms Natural Uranium in Aluminum Item 2

This material will continue to be used as the fuel in a natural uranium and graphite subcritical pile for teaching nuclear engineers. It will also be used for research and development purposes as defined in 10 CFR30.4. It will continue to be used at the University Park Campus primarily at the Radiation Science and Engineering Center (RSEC) or the Academic Projects Building (APB) as authorized by PSU's University Isotopes Committee (Radiation Safety Committee). Although unlikely, the material may be used at other locations at the University Park campus as authorized by license PA-100.

The sources will not be opened or modified in any way. The sources will not be intentionally subjected to potentially damaging conditions such as exposure to corrosive chemicals, dirt, abrasion, mechanical shock, temperature extremes, or high pressure.

The natural uranium fuel is used in conjunction with graphite bars and neutron sources to provide a neutron flux that varies predictably within the enclosure. This uranium has been used without incident for student laboratory experiments in nuclear engineering since about 1958.

The maximum driving force used in conjunction with this material will not exceed that of a 5 curies of Pu-Be. These neutron sources are authorized under NRC license SNM-95.

Penn State will not acquire more natural uranium for this sub-critical device.

To allow proper ownership of this material during this process, this amendment should be approved before the attached amendment submitted to the Nuclear Regulatory Commission is approved.

Thank you for your attention to this matter.

Sincerely,

Eva J. Pell

Attachment: SNM-95 License Amendment Dated November 12, 2009