Concerning the changes to the NRC’s New Byproduct definition rulemaking:

The Energy Policy Act of 2005

On August 8, 2005, the President signed into law the EPAct. Among other provisions, Section 651(e) of the EPAct expanded the definition of Byproduct material as defined in Section 11e. of the Atomic Energy Act of 1954 (AEA), placing additional byproduct material under the NRC’s jurisdiction, and required the Commission to provide a regulatory framework for licensing and regulating this additional byproduct material.

Specifically, Section 651(e) of the EPAct expanded the definition of Byproduct material by:

1. Adding any Discrete Source of Naturally Occurring Radioactive Material, other than source material, that the Commission, in consultation with the Administrator of the Environmental Protection Agency (EPA), the Secretary of the Department of Energy (DOE), the Secretary of the Department of Homeland Security (DHS), and the head of any other appropriate Federal agency, determines would Pose a Threat similar to the threat posed by a Discrete Source of Radium-226 to the public health and safety or the common defense and security; and is extracted or converted after extraction before, on, or after the date of enactment of the EPAct for use in a commercial, medical, or research activity (Section 11e.(4) of the AEA).

2. Adding Any Discrete Source of Radium-226 that is produced, extracted, or converted after extraction, before, on, or after the date of enactment of the EPAct for use for a commercial, medical, or research activity; or any material That Has Been Made Radioactive By Use Of A Particle Accelerator and is produced, extracted, or converted after extraction, before, on, or after the date of enactment of the EPAct for use for a commercial, medical, or research activity (Section 11e.(3) of the AEA), and

Although Section 651(e) of the EPAct became effective on August 8, 2005, the NRC did not have regulations in place that would specifically apply to this newly covered byproduct material, and therefore did not treat them different whether or not they were regulated by the State or the NRC.

The NRC also allowed the NRC to issue waivers to States and other entities while developing final regulations for NARM.

The waiver for Missouri terminated in March of 2009 with the NRC approving our license amendment in July to place all previously state registered RAM (radium and NARM) under our current NRC license.

The effect on MU’s Authorizations Overall is Minimal as historically MU’s RSP has tracked all RAM under its program regardless to origin and did not treat them different whether or not if they were regulated by the State or the NRC.

However, a significant change is how this will affect our NRC Decommissioning Program as several historical / legacy authorizations may have used such isotopes of Radium and Uranium in their labs and those historical use lab isotopic remnants (if there are any) have now fallen under NRC’s jurisdiction.

Therefore, this new rule making will affect several reconstructions and decommissions activities on campus as well the required funding needs (Decommissioning Funding Plan) in support of decommissioning those facilities previously using such isotopes.
eProcurement

Welcome to UM PeopleSoft Financial System eProcurement

Intro: eProcurement is used by some of our Authorized Users to purchase radioactive material. At this moment Perkin Elmer is the only authorized radioisotope vendor in eProcurement. I will guide you through the steps to order radioactive material using eProcurement. Most importantly, the “Ship To” location code must be changed to C03264. Please share this newsletter with whoever does purchasing in your department. Keep in mind that you will need training and an account to use eProcurement.

1. You can login thru https://fsprd.umsystem.edu, enter User ID (your pawprint) and password.

2. After login go to Main Menu on the left side of your screen and click on eProcurement.

3. Under eProcurement Main Menu click on Create Requisition

4. Under Create Requisition type your User ID (must be all CAPS) in the Requester field.

5. After entering the requester’s name there are three steps to follow:
   Step 1: Name your Requisition which is just the Name that you are giving to this order. Suggestion: Use the name of the company that you buying from, for example Perkin Elmer, and the date.

6. After you named your requisition Step 2 will be to “Add Items and Services”. Click on the SHOW ME SHOP link.
7. The link will take you to two different catalogs in PeopleSoft: the Hosted and the Punchout Catalogs. Perkin Elmer is a hosted catalog vendor.

8. Click on the Perkin Elmer logo to view a search menu option. You can either use phrases (for example: alpha UTP) or the catalog number of the item you want to purchase.

9. Change the quantity if necessary then click “Add to Cart”. Click on the “# item(s) added, view cart” link to review your order.

10. Edit your cart if necessary. Click on the “Save” icon. After the words “Cart was saved successfully” appear, click “Return to PeopleSoft”. Warning: If you don’t save your cart before logging out or returning to PeopleSoft, you will lose your order.

11. Step 3: Review and Submit. Under Requisition Lines click on the triangle next to the empty square on the left of your Perkin Elmer line item (see arrow). This will take you to the Shipping and Accounting Lines.

12. Warning: Change the “Ship To” code to C03264. This code represents the EHS-Radiation Safety address and must be present for us to receive your isotope shipment. Also write “Radiation Safety (AUxxxx)” (AU your authorized user number) on the Attention line so we know where to deliver the shipment. Enter your MoCode and Account number. Please confirm that the “Ship To” code is C03264 before you Save & Submit your order.
Did you know...

US Medical radioisotope shortage will continue in 2010

Most people never consider that over 50,000 medical procedures using a radioactive isotope called Technetium-99 are performed each day in the US.

These tests give doctors valuable information about the function of various organs, help diagnose cancer, monitor a tumor during breast cancer surgery, and more.

Technetium-99 is made from the decay of a fission product molybdenum-99, which is produced from the fission process in a nuclear reactor with highly purified (enriched) uranium.

What a majority of Americans don’t know is that this country is dependent on a 52-year-old Chalk River nuclear reactor in Ontario, Canada for almost half of our supply of Technetium-99. The United States stopped producing molybdenum-99 in 1989 and since then has been shipping highly enriched uranium overseas to obtain its supply of radioactive isotopes. Back in June 2009, a leak in the Canadian reactor resulted in a shutdown that now is expected to continue until at least the spring of 2010. This shutdown has triggered a shortage of molybdenum-99 not only in the US, but throughout the world since that reactor produces almost 40 percent of the global supply of the isotope.

Adding to the crisis is the fact that the 48-year-old Petten reactor in the Netherlands shut down for repairs at the beginning of February 2010 and ending in August 2010. The Canadian and Dutch reactors together account for 70 percent of the US supply of molybdenum-99. Only eight countries around the world have research reactors that produce the radioisotope.

Dr. Robert Atcher, director of the National Isotope Data Center and former president of the Society of Nuclear Medicine told DOT med news that if the Canadian reactor isn’t up and running by April, he believes current technetium supplies are only sufficient for about two-thirds of global demand. Depending on how long the United States goes without a reliable supply of technetium, the effect could be anything from a minor issue to a major catastrophe. With its Chalk River reactor out of service, Canada has been importing medical isotopes from Belgium, France and South Africa, and is reserving much of it for cancer diagnosis and treatment in Canada. But some hospitals there have reported canceling or delaying the majority of their diagnostic studies, as well as tests for heart damage and the spread of cancers. In the US, the Chalk River shutdown has affected some medical facilities more than others. For some studies such as cardiac treadmills, substitutes for technesium-99 (known commercially as cardiolite) can be used. That is not the case for most bone and lung imaging.

Early in December, the American Thyroid Association warned medical professionals that the shutdown had created a critical shortage of the radioisotope I-131 (also made from molybdenum-99) used to diagnosis and treat thyroid and parathyroid disorders and that local US hospitals would not be getting further shipments until late in the month. That has led to prioritizing the use of existing I-131 products for patients with thyroid cancer who need urgent treatment as well as the possibility of rescheduling patients who are in the process of preparing for radioactive iodine scans or treatment.

Experts say that the global shortage of molybdenum-99 is likely to persist even after the Canadian and Dutch reactors are fully operational again if for no other reason than the demand for molybdenum-99 is growing as advances in nuclear medicine have increased the use of radioactive isotopes. One study projected an 8-20 percent increase in demand for the next 2 decades.