



UNIVERSITY OF MISSOURI-COLUMBIA

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July 16, 1992

Director of Nuclear Reactor Regulation
US Nuclear Regulatory Commission
Mail Section PI-137
Washington, DC 20555

REFERENCE: Document 50-186
University of Missouri Research Reactor
License R-103

SUBJECT: Shipment in Excess of License Authorization Due to License Change not Reported to Shipper

Event Description

On June 15, 1992, to fulfill an order, the University of Missouri Research Reactor (MURR) shipped 6.69 curies of Ir-192 to R/A Services in Odessa, Texas. In accordance with MURR shipping procedures, verification of receiver's license authorization was made. The shipment was 0.5 grams of target material contained in 5 quartz vials. It was shipped in an authorized MURR type A package which was correctly labeled with the isotope and activity, and arrived at R/A Services on June 16, 1992.

On June 18, 1992, Ms. Mac Carter-Tritschler of the MURR Shipping Department received a call from Mr. Fred Calaway, R/A Services, stating that the material had been delivered, but that they could not receive the shipment because the activity exceeded their license limit for Ir-192. MURR maintains a file of Customers' licenses, furnished by the Customers, and Ms. Carter-Tritschler immediately verified that R/A Services' license limit had been checked prior to release of this shipment as is required by procedure. She responded to Mr. Calaway that Amendment No. 26 of their license (Texas License L03010) on file at MURR, stated a limit of 10 curies for Ir-192. Mr. Calaway then informed her that R/A Services was operating under Amendment No. 28 which limited Ir-192 to 4 curies. Ms. Carter-Tritschler requested that R/A Services fax a copy of Amendment No. 28 to her and R/A Services was asked to return the shipment to MURR. MURR received the returned shipment on June 19, 1992. It was opened in the MURR hot cell and the activity was measured to total 6.23 curies in all 5 vials at 4:18 pm on June 19, 1992.

Background Information

R/A Services has ordered Ir-192 produced at MURR since February 1990. In Amendment No. 26 of R/A Services' license on file at MURR, the limit for Ir-192 is 10 curies. Expiration of this



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Texas license is listed as May 31, 1991. MURR contacted R/A Services prior to the expiration date and requested documentation of renewal or acknowledgement of timely submittal of the license renewal request.

When R/A Services placed an order for Ir-192 after May 31, 1991, MURR personnel stated that no shipments of any radioactive material would be made until we received their documentation for renewal or acknowledgement of timely submittal. On November 22, 1991 R/A Services sent MURR a July 11, 1991 letter from the Texas Department of Health which stated that the Department had received R/A Services' request for renewal, but that a new application must be submitted before action on the license could be taken. Since this letter did not indicate timely renewal status, MURR again requested such a letter from both R/A Services and from the Texas Department of Health.

On December 6, 1991, MURR received directly from the Texas Department of Health a copy of an October 9, 1991 letter acknowledging R/A Services' timely renewal request. This letter stated that R/A Services was authorized to continue to operate under the provisions of their present license, but it did not state or include indication of more current amendments that would change license limits. Despite the previous efforts of MURR personnel to ensure that we had the most up-to-date copy of R/A Services' license through telephone conversations with their personnel and with the Texas authorities, MURR was provided no indication that amendments to the license beyond Amendment No. 26 had been issued.

Shipments then resumed from MURR to R/A Services based on our file copy of Amendment No. 26 to License L03010 which authorized possession of 10 curies of Ir-192 and the Texas authorities' letter acknowledging the timely renewal request. The following Ir-192 shipments were made from MURR to R/A Services since the shipments resumed:

SHIPMENT	DATE	SHIPMENT ACTIVITY (Ci)
1	December 10, 1991	2.96
2	December 18, 1991	3.65
3	February 24, 1992	2.74
4	March 30, 1992	4.46
5	June 15, 1992	6.69

Shipment activity was based on readings from MURR's hot cell dose calibrator, which is not specifically calibrated for Ir-192 but provides conservative measurements. R/A Services provided instructions to limit the amount of activity when ordering shipments 1 through 3, but did not indicate to MURR personnel that there was any change to their license. No special instructions to limit the activity below 10 Ci were given by R/A Services to MURR when shipments 4 and 5 were ordered. Shipment 4, which was conservatively measured by MURR as 4.4 Ci, was accepted by R/A Service without an indication of any license authorization problem.

MURR was first informed of R/A Services' amended license on June 18, 1992, as described above. The fax of Amendment No. 28 showed the amendment had been issued on October 9, 1991, the same date as the timely renewal letter which the Texas Department of Health had faxed to

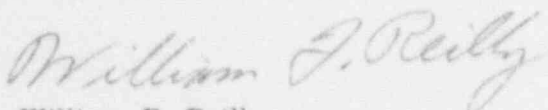
MURR on December 6, 1991. On June 25, 1992, Ms. Maggie Rios, Texas Department of Health, verified that Amendment No. 28 is the current amendment to License L03010. The license is still under timely renewal, which was reiterated by a March 23, 1992 letter from the Texas Department of Health.

After being informed that Amendment 28 is the current license amendment, a copy of Amendment 27, issued July 3, 1990, was obtained but it did not change the authorized limit of Ir-192 from the 10.0 curies authorized by Amendment 26. A complete search of other radioisotope shipments to R/A Services from MURR (Sc-146 and Sb-124 as well as Ir-192) showed that no other shipments exceeded their license authorizations.

Corrective Actions

In transferring radioactive materials, MURR is dependent on licensees providing current copies of their licenses to receive such materials in accordance with 10 CFR 30.41. MURR maintains excellent contact with customers and insists on being notified of any changes to customers' authorized possession limits for byproduct materials. We are now requesting that each order for irradiation service or supply of radioactive materials include the license issuing authority, license number, latest license amendment, and their upper acceptable limit for principal isotope(s) activity for the shipment. This information is then used to verify that our copy of their license is up to date.

Sincerely,

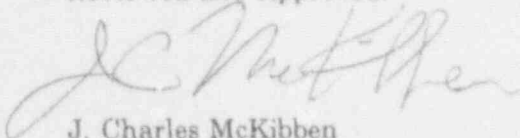


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CHRISTINE M. ERRANTE
NOTARY PUBLIC STATE OF MISSOURI
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MY COMMISSION EXP. APR. 14, 1995

Reviewed and Approved:



J. Charles McKibben
Associate Director

xc: NRC Region III
Reactor Advisory Committee
Reactor Safety Subcommittee
Isotope Use Subcommittee
R/A Services