

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNI-9415

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region I staff on this date.

Facility:  
Amersham Corporation  
40 North Avenue  
Burlington, Massachusetts 01803

Licensee Emergency Classification:  
 Notification of Unusual Event  
 Alert  
 Site Area Emergency  
 General Emergency  
 Not Applicable

Docket No.: 030-29300  
License No.: 20-12836-01  
Event No.: NONE  
Event Location Code: MAT

Subject: PACKAGE RECEIVED WITH DOSE RATES IN EXCESS OF REGULATORY LIMITS

Amersham Corporation (Amersham) is a byproduct materials licensee involved in the fabrication, servicing and distribution of sealed sources used in radiography devices and instrument calibrators. The principle isotopes used for these purposes are iridium-192 (Ir-192), cobalt-60 (Co-60) and cesium-137 (Cs-137).

On February 24, 1994, Amersham's radiation safety officer informed Region I that they received a package from their parent corporation in England at 7:30 a.m. containing 2.2 curies of Cs-137 (13 Cs-137 sealed sources of approximately 170 millicuries each). She stated that a cursory survey, performed upon the arrival of the package, indicated the external dose rates of the package may have exceeded regulatory limits. The licensee's package receipt survey indicated a maximum dose rate at the surface of the package of approximately 580 millirems per hour and a transportation index of 20. These dose rates exceeded the dose rate limits for packages of radioactive material transported in non-exclusive use vehicles specified in 49 CFR 173.441. 49 CFR 173.441 limits the dose rate at the surface of radioactive packages transported in non-exclusive use vehicles to 200 millirem per hour and the transportation index to 10. The package consisted of a lead pig (Type A package) inside a cardboard box with styrofoam packing. The radiation safety officer stated that visual inspection indicated that the package had not been damaged during transport nor had it shifted in its packaging container to cause the external dose rates to increase. She also stated that the maximum dose rate was not localized and that measurements on several sides of the package indicated dose rates in excess of 200 millirems per hour. Amersham will conduct an investigation to determine why the package arrived with dose levels in excess of regulatory limits, including the company radiation surveys and transportation procedures at the England facilities.

The radiation safety officer stated that the package was shipped from Amersham's parent corporation, Amersham International, Buckinghamshire, England. The package was transported from England by Federal Express. The package was shipped by air to New York. The package was picked up on the evening of February 23, 1994, and shipped by truck by Sharp Airfreight to the Amersham facility in Massachusetts. Federal Express and Sharp Airfreight have been informed of the shipment of a package with external dose rates exceeding regulatory limits. The radiation safety officer stated that she is in the process of evaluating any possible exposures that may have occurred while the package was in transit.

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She stated that there is no indication that an overexposure occurred as a result of the shipment of the package. She stated that she performed a preliminary evaluation of the dose rate at the driver's seat of the Sharp Airfreight truck using conservative assumptions which indicated a dose rate of 0.3 millirem per hour. She stated that she will be performing a complete evaluation of potential exposures that may have been incurred during transport of the package and will report to Region I.

Commonwealth of Massachusetts and the State of New York have been notified.

Region I is prepared to respond to media inquiries. This information is correct as of 2:00 p.m.

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