

personnel understood and properly implemented requirements specified in the license and DOT regulations for transfer of radioactive material. As a result of management's lack of involvement, four apparent violations related to the improper transfer of radioactive material were identified by the inspectors: 1) the failure to measure non-fixed contamination levels in accordance with 49 CFR 173.443(a) prior to offering Mo/Tc generators (Lot nos. 1042811M and 1042816M) containing licensed material for shipment on September 24 and November 23, 1992, respectively. (92-02-01); 2) the failure to affix DOT labels to the radioactive material package containing a Mo/Tc generator (Lot no. 1042811M) housing licensed material for shipment on September 24, 1992, in accordance with 49 CFR 172.403 (92-02-02); 3) the failure to provide a shipping paper for the radioactive material package containing licensed material in a Mo/Tc generator (Lot no. 1042811M) when delivered to a carrier for transport on September 24, 1992, as required by 49 CFR 177.817(a) (92-02-03); and 4) the failure to provide a statement concerning conformance of a "limited quantity" package containing a Mo/Tc generator (Lot no. 1042816M) shipped on November 23, 1992, as required by 49 CFR 173.421-1(a). (92-02-04).

4. Radiation Surveys

The Nuclear Medicine Technologist conducts a survey of each generator prior to transfer to the PRP deliveryman. All surveys were conducted with a Victoreen Model 498 G.M. meter. Each survey, including generator # 1042816M, was recorded as 0.05 mr/hr (background) on contact. The Technologist demonstrated his survey technique to the inspectors using a decaying generator from his storage area that contained about the same activity as generator # 1042816M did on November 23, 1992. The Technologist's survey was rapid and the meter was set on "fast response". Using this survey technique, the generator appeared to be at background or about 0.05 mr/hr on contact. The inspector asked the Technologist to repeat the survey more slowly (1-2 inches per second) which resulted in a higher reading of about 0.5 mr/hr on contact. This reading also agreed with the inspector's survey taken with a Ludlum Model 3 meter and side window GM probe (serial # 035644), last calibrated on September 18, 1992. The Technologist stated that surveys of used generators had been improperly performed and that in the future surveys would be performed slowly to allow for sufficient instrument response time.

Since the Technologist was not making a final disposal of the generator, he was not required to follow the license referenced procedure for disposal and survey contained in Item 11-2 of the June 27, 1988, license application. Nevertheless, the licensee agreed that the incident at H-Power could have been avoided if a proper survey and/or correct observation of the Generator Disposal Record had been made. Accurate radiation surveys and the accurate use and interpretation of radiation safety records are vital aspects of the licensee's program. In order to prevent additional breakdowns in the Radiation Safety Program, management's oversight of surveys and record keeping needs to be improved.