

## **Medical Radioisotopes in the Environment**

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### **ABSTRACT**

The use of radiopharmaceuticals for diagnostic or therapeutic purposes has become a common practice in modern medicine. The most commonly used radionuclides are Tc-99 and I-131 and represent well over 90% of the activity administered worldwide. The amount of activity administered to the patient depends upon the procedure but for I-131 it can be as high as 300 mCi. The NRC regulates the use of radiopharmaceuticals but it specifically exempts human excreta from the concentration limits of 10 CFR 20. As a result large amounts of activity enter sewage systems with the result that I-131, Tc-99 as well as other radiopharmaceuticals have been detected in sewage sludge and in the outfall of waste water treatment facilities. The impact on the REMP as well as the dose consequences are presented.

Paper presented at the 24<sup>th</sup> Annual RETS/REMP Workshop, June 24-26, 2014, Savannah, GA.