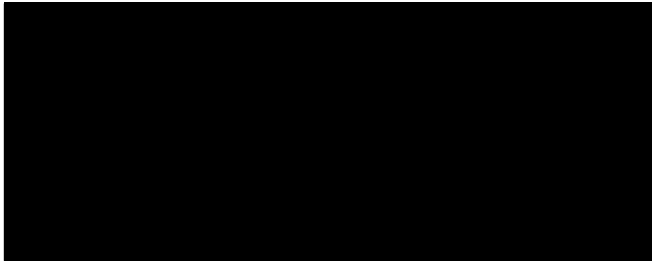


15 February 2019



Re Official Information Request for radioactive waste

I refer to your Official Information Act request of 23 November 2018 for the following information:

- 1. Does the DHB record the amount of radioactive waste being produced as a by-product of operation radiology/diagnostic machines including but not exclusive to X-rays, PET and CT scans and radiation therapy?**
- 2. How much radioactive waste is being produced at the DHB per year?**
- 3. How and where is this radioactive waste disposed of?**
- 4. Does the DHB record the amount of radioactive waste being produced as a by-product of operation radiology/diagnostic machines including but not exclusive to X-rays, PET and CT scans and radiation therapy?**

We have provided the information under each of the questions below

- 1. Does the DHB record the amount of radioactive waste being produced as a by-product of operation radiology/diagnostic machines including but not exclusive to X-rays, PET and CT scans and radiation therapy?**

Radiology/ diagnostic machines producing X Rays such as CT scanners do not "produce" any radioactive waste.

Diagnostic or therapeutic use of radioactive materials in Nuclear Medicine and Radiation Oncology does result in some "waste". Solid waste, such as syringes that may have trace contamination and containment vials with left over radioactive material from bulk solutions, is stored in locked rooms until completely decayed and measured to be at background levels using Geiger Muller (GM) detectors. Details are recorded in log books. The waste is then disposed of as normal waste uncontaminated by radioactive material.

- 2. How much radioactive waste is being produced at the DHB per year?**

Items from procedures and left over supply vials that are radioactively contaminated are disposed of when decayed. Radiation therapy on endocrinology inpatients involving radioisotopes (iodine) leaves a residual presence in urine which is diluted in a delay holding tank in the basement of building 32. Inpatients admitted to Ward 64 are treated in custom built, shielded rooms with ensuite facilities plumbed directly to the delay tanks linked to the hospital sewerage system.

Records are kept of inpatient details, time spent in hospital, and radiation dose rates to enable calculation of compliance by radiation safety auditors.

3. How and where is this radioactive waste disposed of?

No radioactive solid waste is disposed of. Solid radioactive waste “produced” by Radiation Oncology and Nuclear Medicine is stored and not disposed of until inactive. Liquid waste in the form of urine is disposed of via dilution tanks from the main hospital. It is measured in terms of radioactivity and not volume. Only 10 per cent of the permitted maximum activity is discharged. The average concentration of radioactive iodine in the sewage is calculated to be 0.76kBq (kiloBequerel) per day.

5. Does the DHB record the amount of radioactive waste being produced as a by-product of operation radiology/diagnostic machines including but not exclusive to X-rays, PET and CT scans and radiation therapy?

Yes

I trust this information answers your questions.

You are entitled under the Official Information Act to seek a review of this response. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Please note that this response, or an edited version of this response, may be published on the Auckland DHB website.

Yours faithfully



Ailsa Claire, OBE
Chief Executive