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Australian Nuclear Science and Technology Organisation

## Media Statement

27 April 2007

# Radiopharmaceutical Worker Received Low Radiation Dose

An ANSTO\* radiopharmaceutical production worker received a radiation dose to his hands above the annual limit earlier this month, which is being thoroughly investigated. This week ARPANSA\*\* was sent a report about dose levels and current action to date.

Although the worker's hand-dose is not health-threatening, it was above the yearly limit of 500 millisieverts (mSv) to each hand. The incident was the result of a failure in process during a production run of yttrium-90, used in the treatment of cancer. When the recorded dose was registered, the worker was immediately removed from radiation handling duties. The worker will be retrained and remain on non-radioactive handling duties for the next year.

The production incident occurred in a controlled, monitored laboratory in a building separate to the reactor complex. The worker was using gloves that extended into a boxed working area when the exposure took place. The worker was wearing radiation monitors on his finger and wrist during the processing. The dose was discovered when those monitors were read.

The allowed dose limits for hands is much higher than the whole body because the hands are less vulnerable to radiation effects as they contain no vital organs.

The primary effect of high doses of radiation to hands or feet are skin reddening or burns, which would only show up if there was an instantaneous dose of at least 2000mSv. No such effects appeared in this case. This can be compared to exposure to the sun, where low levels have minimal health effects but intense exposure causes problems.

ANSTO takes safety very seriously. The incident is being thoroughly investigated and the importance of safety and following correct procedure has been underlined to staff. Procedures are also being reviewed with the aim of reducing the amount of manual processing in the laboratories.

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**For more information and to arrange interviews please contact:**

**ANSTO Media Adviser, Sharon Kelly**

**(02) 9717 9575 or 0400 394 085**

\*ANSTO is the Australian Nuclear Science and Technology Organisation, the country's national nuclear research and development organisation and the centre of Australian nuclear expertise – over 70 per cent of all radioisotopes used in Australian nuclear medicine are made in ANSTO's reactor.

\*\*Australian Radiation Protection and Nuclear Safety Agency