ARIR Incident Number 2023-0021 February 2022 Near Miss for Contamination on Transfer Pot

Several pots containing samples of technetium were received from production for quality testing. When checking the pots for dose rate it was noted by the operator that certain areas on of one of the pots was approx. 700 μ Sv/hr. This dose rate is much higher than usual. The pot was fully locked but a small gap between the outer parts of the shielding port was visible. The event was categorised as a near miss. No actual contamination occurred.

The affected pot was placed in the shielded castle and locked pending a Health Physics investigation. The direct cause was not determined as the pot was inspected and found intact. The procedure did not include a limit on pot contamination for an internal transfer between stations. A swab of the external surface was not taken so external contamination cannot be ruled out as a root cause. The expected dose rate established based on historical dose rate measurements was recorded in the logbook.

The procedure was updated to include requirements for a swab test and clean before a transit, a clear threshold of the allowable dose rate, and additional shielding at the receiving end for a contaminated pot as a contingency.