

Safety Note 81

1st Edition, January 2022

LEAK TESTING OF SEALED OR ELECTRODEPOSITED SOURCES OF IONISING RADIATION

Summary			
This Safety Note supplements Safety Code of Practice 18, Section 5.6 by describing in more detail the University of Reading's arrangements for radioactive source leak testing.			
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The RPO will agree with the RPS whether the RPS will carry out the physical swabbing or whether the external contractor will be engaged to undertake this task.

The RPO will make necessary arrangements with the external contractor engaged to carry out the analysis of the swab and ensure swabs are supplied in good time.

Where agreed that the RPS will swab, the RPO will provide clean swabs and appropriate packaging to the RPS at least six weeks before the previous test results lapse. The RPS should ensure the leak test is carried out within four weeks from the RPS's receipt of the swabs.

The RPS should carry out the wiping of the swab according to the Radman Associates' Safe Operating Procedure 'Sealed Source Leak Testing'¹ and return bagged and labelled swabs to the RPO.

The RPO will arrange transfer of the packaged swabs to the external contractor responsible for carrying out the analysis. The cost of leak test analysis will be recharged to the School.

The RPO will take receipt of the leak test results and pass them to the RPSs in the form of leak test certificates, one for each source tested.

Copies of leak test certificates should be held by the School responsible for the source. The School's RPS should ensure a copy of each leak test certificate is retained within the School's radiation records. HSS will also retain a copy of leak test certificates.

If a leak test result indicates a leaking source (>200 Bq detected ²on the swab) the RPS must initially take action to prevent persons obtaining access to the locality of the source, to prevent potential further spread of contamination. The RPS should take prompt action to halt School or other activities if they judge this necessary to ensure control of the source and the locality. If the RPS needs assistance from senior academics, the Head of School or HSS to establish control and/or lock-out persons who may otherwise access the area they should seek this assistance without delay.

After the RPS has completed initial "make safe" action they should submit an incident on the H&S incident notification system – with the incident being the elevated leak test result.

The RPS should promptly undertake contamination monitoring around the source, equipment and laboratory, but may seek advice from the RPO before commencing this. The RPO may seek advice from the Radiation Protection Advisor (RPA) at this stage.

The RPO will typically seek RPA advice on remediation to avoid further contamination spread and on how to manage the source or equipment.

RPSs should inform the RPO if they require initial or refresher training on how to undertake leak test swabbing. Please give the RPO plenty of time – ideally 6 months before the next leak test is due for their area.

¹ Available from HSS's radiation webpages or by request.

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