



National Physical Laboratory

ARMUG Working Group meeting (Sellafield, July 2010)

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**National
Measurement
System**



Participants

- Mike Renouf, Debra Rook and Eliot Williams (Sellafield)
- Raj Bhanot (SFL)
- James Parkin and Jeff Rivers (Lab Impex)
- Julian Dean and Hilary Phillips (NPL)

Apologies:

- David Ryden (Canberra)
- Pete Burgess (Nuvia)

Aims

- Progress guidance in:
 - interpretation of air-filter data
 - positioning of workplace air monitors
- NPL feedback for ‘aerosol standard’ report

Air-filter measurements

- NPL study (alphas) – ratio true activity:monitor value found to be typically 1-5, sometimes ~20
- Other studies had found otherwise, e.g.:
 - 0.1 – 1.4 (Barnett et al., Health Physics, 97(3) pp S161-S168 (Nov 2009))
- NPL work indicated need for further studies - should not be used to derive ‘correction factors’

Air-filter measurements

- Contributory factors, e.g.:
 - Filter type
 - Aerosol size
 - Aerosol penetration
 - Dust loading

- Critical review of NPL and other studies
- Presentations to ARMUG?

- Aerosol standard facility would provide data for 'correction factors'

Positioning of air monitors

- Since Sellafield meeting:
 - ANSI meeting (2010, Salt Lake City)
 - N13.56 to be aligned with ISO 2889
'Sampling airborne radioactive materials from the stacks and ducts of nuclear facilities'
 - 2 – 3 year timescale (!)

- New text 'Radioactive Air Sampling Methods'
(Maiello and Hoover eds., CRC Press 2010)

Next steps

- NPL to complete filter study report
- NPL to contact Jeff Rivers and Tony Richards
- What do members want further re: guidance on:
 - filter measurements?
 - positioning of monitors?

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