NPL Good Practice Guide 82:
Airborne Radioactive Particulate in the Workplace

November 2005

History to Date

- Meeting Feb 2003
  - *Scope the document*
  - *Broad Test Categories*
- First WG Draft May 2003
- Review Meeting Sep 2003
- Second WG Draft May 2004
- Review Meeting July 2004
- Abridged Document issued to ARMUG Nov 2004
- Review Meetings Nov 2004 and April 2005
- New secretary – Julian Dean appointed 2005
- Consultation Draft Issued in September 2005

Current Situation

- Abridged document agreed in 2004
  - *Scope*
  - *Contains summary tables of test required*
- In 2005, main sections agreed and issued for comment
- Six weeks for ARMUG to comment (till Nov 2005)
  - *31 copies sent out, no comment to date (7 Nov)*
- Separate Appendix on source construction ongoing
- Probable final meeting today
  - *Discuss source construction appendix*
  - *Discuss any ARMUG comments*

Types of Equipment

- Airborne Particulate Monitors
  - *Normally some alpha spectrometry*
- Airborne Particulate samplers
  - *Dust samplers*
- Laboratory Counting Equipment

Periodic Tests - Air Samplers

- Parameter Check
- Pump Test
- Flow rate accuracy
- Low flow alarm
- Low differential pressure alarm

- Flow Rate Leakage - TBFU

Periodic Tests - Air Monitors

- All air sampler tests
- Background
- Activity Alarm
- Detection Efficiency
  - *Nuclides recommended by manufacturer*

TBFU - Air monitors

- All Periodic Tests
- Energy Response
  - *cover energies encountered in the workplace*
- Cross Response
  - *Check beta rejection by alpha channel*
- Gamma compensation

Periodic Tests - Lab Equipment

- Parameter check
- Background
- Activity alarm test
- Detection efficiency
- Energy Response – TBFU
- Cross Response – TBFU (check draft)
- Linearity, beta only - TBFU

Generic Advice

- Traceability
  - *Test and calibration sources*
  - *Standard flow meters*
- Certification
  - *Information similar to GPG14 and 29*
  - *Test laboratory certificate*
  - *Work place testing*
  - *Labelling*
- Quantities and Units
  - *Activity in air concentration (DAC, $Bq.m^{-3}$)*
  - *Integrated activity in air (DACh, $Bq.m^{-3}$)*

The Future

- Publish on Internet by end of Feb 2006
- Additional reference information added in later years