Clearance and Exemption Principles, Processes and Practices for Use by the Nuclear Industry

Adopted by AWE, BE, BNFL,DSTL, UKAEA

Why?

- To produce a degree of uniformity in the way the nuclear industry treats materials for clearance.

What does it cover?

- Regulatory background
  - RSA 93
  - Exemption Orders including SoLA
  - Interpretation of limits for naturals, Schedule 1
  - Interpretation of limits for artificials + some naturals
  - Interpretation of background
  - Insolubility criteria
  - Transport regs
  - etc

Industry practices

- Use of history – if there's no reasonable chance it is contaminated or activated then it is declared clean
- Deliberate dilution not acceptable
- How to treat inhomogeneous activity
- Confidence levels
- Sentencing volumes
- Surface contamination

Management principles

- Safety and environment – concentrate and contain better than dilute and disperse
- No significant impact on human health from anything released
- Adequate records
- Design plant with dismantling in mind
- Segregate contaminated items ASAP
- Monitor regularly

Quality assurance

- Procedures
- Training
- Audit programmes
- Everything someone’s responsibility
- Clear systems and responsibilities
- Good clearance certificates
- Practicable and proportionate procedures

Clearance and sentencing processes 1

- Solid items believed to be clean
- Surface contaminated items
- High surface to volume items and materials
- Potentially activated solids
- Potentially tritiated solids
- Potentially contaminated loose solids
- Potentially contaminated porous solids

Clearance and sentencing processes 2

- Potentially contaminated impervious solids with accessible surfaces
- Potentially contaminated impervious solids with inaccessible surfaces
- Potentially contaminated sludges and suspensions
- Potentially contaminated liquids and gasses

Statistical basis

- How many samples required?
- Where should they be taken?
- Treatment of analysis results

Measurement

- Covers portable and installed equipment and methods for:
  - Direct surface contamination
  - Direct bulk activity
  - Wiping
  - Radiochemical analysis

Usefulness to others?

- Lots of flow charts to make categorisation easy
- Regulators have commented favourably on the first draft
- NPL have made a significant input
- A useful compendium on the subject
- Hopefully not too boring/tedious/long winded
- Hopefully becomes a national reference (almost a GPG)

Where?

- On the UKAEA web site in the next month or so.