

# Regulatory update

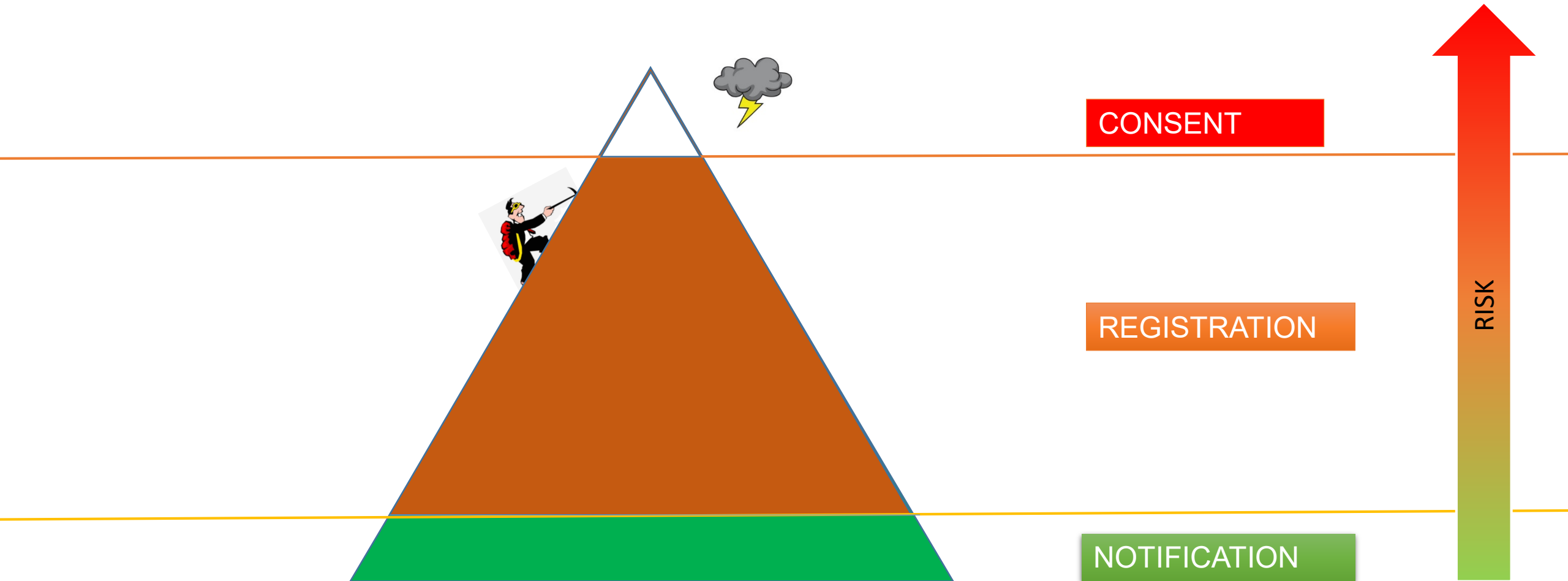
Old and new



Windermere  
Jetty Museum

Update on HSE's new Consent system

# The GRADED APPROACH



# Where does your radiation work fit in?

- Consent
  - Deliberate administration of radioactive substances to persons or animals  
*(600 dentists got this wrong!)*
  - Deliberate addition of radioactive substances in the production or manufacture of consumer products or other products, including medicinal products  
*(any radiolabelling?)*
  - Accelerators (except electron microscopes)
  - Industrial radiography
  - Industrial irradiation
  - Work with HASS
  - Practices discharging significant activity
  - (Long term waste facility – national)
  - (Work in uranium mines)

# Where does your radiation work fit in?

- Registration

- Radiation generators (unless a Consent applies) – *device capable of generating ionising radiation such as X rays, neutrons, electrons or other charged particles*
- Radioactive material or NORM above certain concentrations (*unsealed and sealed source work*)

- Notification

- Work with “smaller” quantities of radioactive material containing artificial radionuclides or NORM between certain concentrations
- Work carried out in an atmosphere containing radon 222 gas at an annual average concentration in air exceeding  $300 \text{ Bq m}^{-3}$

# Coming changes... Consent under IRR17

## Current approach and purpose of review

### Current approach

- Risk assessed, proportional approach under IRR17 for all work
- Specified practices requiring Consent (licence) under IRR17 for higher risk work
- List of questions online, completed by responsible person for each practice  
=> automatic issue of Consent (£25) and initial compliance points
- One Consent per practice (single Consent for multiple different departments)
- Managed by Radiation Team, Safety and Health (Permits)

### Purpose of review

- IAEA review by Integrated Regulatory Review Service (invited, peer review)
- Identified improvements in (mainly) safety regulation

=> changes to Consent for higher risk work – greater scrutiny

=> proactive inspection regime with the intention that every facility working under a Consent is to be inspected

Will be implemented October 2023

# Why the change of approach?

- Recommendation 11 of the International Atomic Energy Agency's (IAEA) Integrated Regulatory Review Service (IRRS) mission to the UK:
  - The ONR, HSE and HSENI should request the applicants seeking authorization for the safety significant activities and facilities to submit a **safety assessment in accordance with IRR17**, which should be reviewed before granting the authorization
  - When deemed necessary, the ONR, HSE and HSENI should be able to impose limits, conditions and controls on the authorized party's subsequent activities
- **Implementation** of the IRRS mission recommendations and adherence to IAEA Standards/Guidance **is UK Government policy**
- Government policy to **cost recover** for regulatory activities

The changes mainly apply to Consents

HSE will ask for more detailed information on registered practices in future

# What is a Safety Assessment (SA)?

“Employers complying with IRR17 should have no difficulties completing a Safety Assessment ”

“A Safety Assessment is not the same as a Radiation Risk Assessment (RRA) required by Reg 8 IRR17 but the RRA can form the basis of a SA”

*HSE, 2023*

Some details...



# Information likely to be relevant to the new Consent system (draft)

- A general **summary** of the type of work and the location(s) at which the practice is being performed
- **Radiation protection policy and management arrangements**
- **Risk assessments and local rules**
- **Details of the nature of the sources** of ionising radiation to being used, or likely to be present

These will already cover many aspects of the safety assessment

Cont...

cont...

- Estimates of the **radiation doses** for the activity for all relevant exposure categories – **effective dose and equivalent dose** (extremities, eyes, skin)
  - maximum dose rates to which **employees and public** can be exposed **during routine work**
  - maximum dose rates to which **employees and public** can be exposed **during accidents**
  - estimates of **annual doses**

cont...

- A description of the engineering control measures and design features
  - Overview of engineering controls – type and function
- Overview of the maintenance and test schedules
  - Frequency , SQEP carrying these out
- Information on and results of Critical Examinations
- Summary of dose rate monitoring or work areas and surrounding areas including where public may access
- Summary of personal dosimetry type (including EPDs), wear period, dosimetry service
- Rationale for classification of workers

cont...

- Information concerning the radiological protection training
  - Planned frequency and refresher training
- Information supplied to female employees concerning their work with ionising radiations in connection with pregnancy and breast feeding
- Possible radiation accident situations (including transport) and details of the steps taken to prevent identified accidents and limit their consequences should they occur
  - Tools and training required, frequency of rehearsals



# A few points to note if working with other employers

- The other employer will also need the necessary Consent if carrying out the work e.g. service work of a cyclotron or equipment containing HASS
- Similarly, for registration and notification
- If a visitor brings their own sources or X ray equipment requiring registration into the university (e.g. to carry out XRF analysis on museum items), the visitor's employer should hold the necessary registration
- These checks should be done as part of the “cooperation between employers” discussions and any permit to work arrangements prior to the work starting

# Process for consent applications

- HSE's new IT system to be in place by 23rd July 2023
- For NEW Consent applications – “submit a SA to HSE for review and inspection with 3 month turnaround time/service level agreement”
- For EXISTING Consents – employers must submit safety assessment in required format when requested (with likely deadline of 3 months from date of request)
- HSE will review the paperwork submitted – if insufficient, they will ask for more information (ONCE only!)
- HSE will then carry out an inspection to verify the details of the assessment
- If any non-compliance is found during an HSE inspection, enforcement action may be taken





# Tasks and responsibilities

- Overall responsibility and accountability lies with the University
- RPSs are carrying out tasks on behalf of their Head of Department
- Local area managers and RPSs will need to carry out SAs for their areas of work and provide assurance that the information is (and remains) correct
- We ALSO expect that a senior manager (e.g. Head of Department) will need to “sign” as the person responsible
- One assessment must be submitted per Consent and this may cover several different departments – the Radiation Team at the Safety Office will have a role in coordinating, collating and submitting information
- “Material changes” will require a new Safety assessment to be submitted but Consents will not have an expiry date (currently!)
- “You will not be permitted to engage consultant RPAs to carry out SAs” (HSE, 2023)

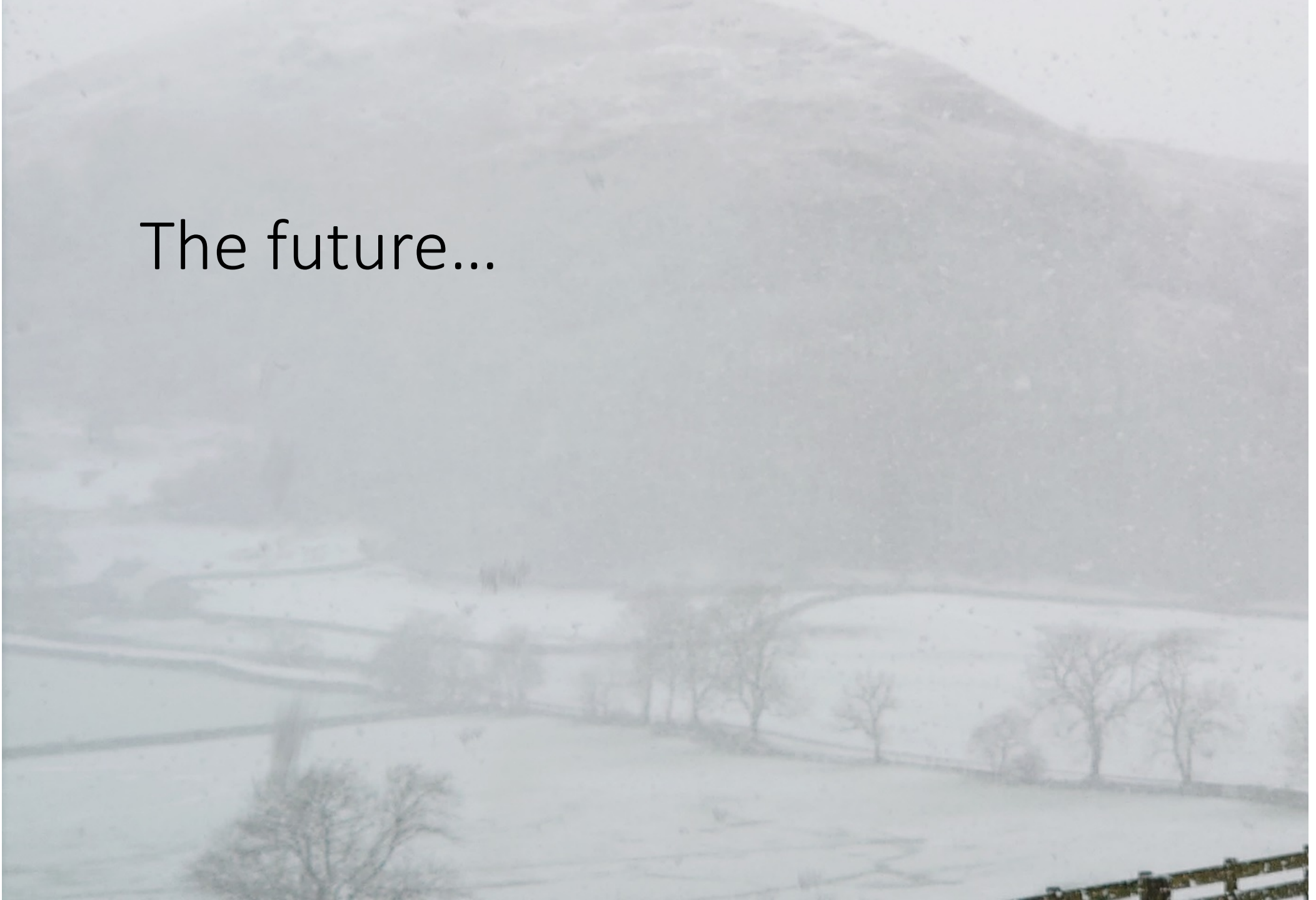
# Granularity...?

We don't yet know...

- How much detail is needed
- How “fixed” is the assessment and how do we avoid having to make “material changes”
- How will one safety assessment cover different work across different departments



The future...



# The future...



- New system to be implemented from October 2023 but timeframe for assessment requests uncertain
- Various technical issues to resolve/agree within HSE
- Lack of HSE information even at this stage
- Additional costs and enforcement implications at application and inspection stages
- Local resources and competency?
- We will provide further information when available

Safeguards  
reporting



# Safeguards reporting

- Includes:
  - Uranium metal, alloy or compound
  - Thorium metal, alloy or compound
  - Ore containing a substance from which the above source materials can be derived
  - Plutonium 239
  - Uranium 233
- Information has been provided to ONR on 2022 holdings and disposals based on information you provided to the Safety Office in 2022
- “Assessment” visit to be carried out by ONR in April 2023

# Safeguards reporting

- Control of acquisitions is vital!
- Reporting likely to be annually to regulator, very specific format
- Any additions (e.g. “found” items) or discrepancies will require special reporting
- More information to follow
- Please check NOW for any items – check your chemical inventory records and check/monitor any chemical stores (Mini900 EP15 or 44A)

# Typically... ?

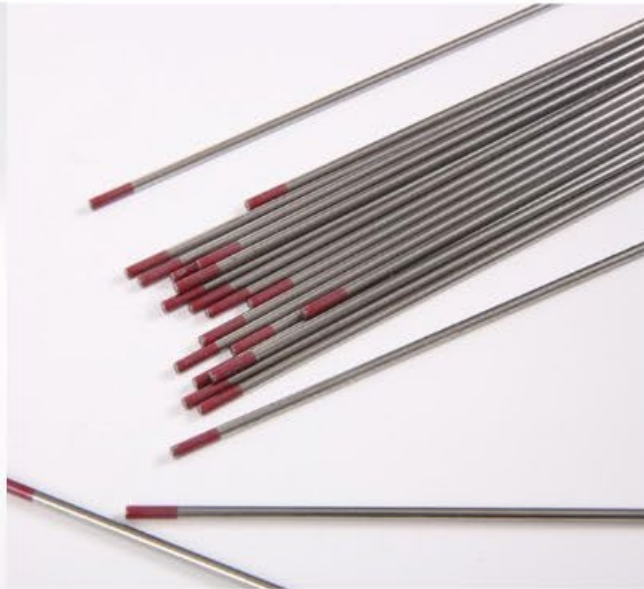


Prepared compounds



NORM

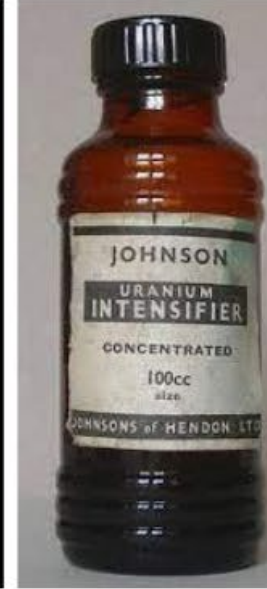
Naturally  
Occurring  
Radioactive  
Material



Thoriated welding rods



Uranium/Vaseline glass



Etc...!

EA and CTSA inspections



# EA and CTSA inspections

- New inspectors... and new RPSs... continuity is vital!
- Pre-visits have been “extremely helpful”
- Your preparation for these visits is also much appreciated!

## Issues raised during unsealed source inspections

- Management arrangements including training and other aspects of permit compliance
- Waste arrangements, stores, records
- All stock/waste records in detail (inspectors picked up errors in user records)
- Lab standards
- (no recent discussions re BAT!)

# EA and CTSA inspections

- Issues raised during sealed source inspections
  - Management arrangements including training, access, emergency arrangements
  - Site security plans (check details – all aspects questioned during inspections)
  - Management of access and review of current users (advised frequency of pin changes – 6 months)
  - Incidents – reasonable response times and appropriate follow up
  - New version of security booklets expected “soon” but currently no info on how new requirements will be implemented to older facilities