



Comments on Agency Suggestions

- Planned exposures – shouldn't repeat what has already been done in previous agency programs and other international studies
- Existing exposures – support for work on uranium mines and mill tailings



Do we need another Tritium/C-14 Working Group?



No

- The last 3 Agency programs have included a “Special Radionuclides” Working Group, and results in EMRAS have been similar to those obtained in BIOMOVs II and BIOMASS
 - Results are scenario specific and difficult to generalize to other processes, sites, etc
 - Different modelers participate in the different programs, bringing different models
 - The models have different purposes
 - Modellers reluctant to change their models
- Can't tell which models are better from a global perspective



Yes

- We need a healthy environmental tritium community to respond to issues raised by
 - ITER
 - Greenpeace
 - OBT in fish
- Knowledge management
 - Train new people as older ones retire
 - Maintain datasets (we can't do experiments anymore)
 - Environmental tritium work is not strongly supported by other international groups
- The type of validation we've done in the past has benefited individual modelers, and we still have things we want to do



- Test models of
 - OBT formation in plants at night, translocation to fruit and roots, behaviour in chickens and eggs, transformation and losses in cooking
 - Tritium behaviour in winter, including washout by snow, dry deposition to snow and the fate of tritium in the snowpack
 - Tritium behaviour in soils follow deposition from the atmosphere
 - Tritium and C-14 behaviour in the environment in the context of releases from waste disposal facilities
 - Plant uptake of HTO at night and when it is raining
 - HT deposition and conversion to HTO
 - Isotopic discrimination

- Get a better handle on uncertainties



- Development of a standard conceptual model for accidental tritium releases
 - Could be extended to include mathematical models
 - Different models for different environmental conditions (wet and dry, hot and cold)
 - Precedent in TRS-364, SS19
- Tritium dosimetry, especially for infants and pregnant women
- Environmental behaviour of tritium released from getter beds
- Innovative dose assessment methods (e.g., use of tritium concentrations in lichen)



Other Ideas

- The influence of climate change on the validity of environmental transfer models.
- Radiological assessments for terrorist attacks
- Integrated radiological assessment for the nuclear energy cycle
- A risk/benefit analysis for alternative energy sources over the long term