PAG Manual

What is it and why?

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First, what is a PAG?

- Protective Action Guide or PAG = a radiation dose to avoid by taking protective actions:
  - evacuation, sheltering, food embargo or alternative water, removing contamination

- Non-regulatory guidance crafted by interagency group of radiation emergency experts

- Implemented by:
  - State radiation & emergency management groups
  - Nuclear power plants
  - Military, research & medical facilities
Why PAGs?

- Radiation emergencies are rare
- Nuclear power -
  - Chernobyl
  - Three Mile Island
  - Fukushima
- Terrorism - like a dirty bomb or non-state nuclear detonation
- For emergency plans, where do we draw the line ~ where a PAG dose might be predicted
PAGs Manual

- 1960s fallout guidance refined in 1975 & 1980
- Protective Action Guides (PAGs) Manual (1992)
  - Guidance for Action in Nuclear Emergencies
  - Early, Intermediate Phases only
  - Promised Water and Late Phase (Recovery) PAGs
When Do PAGs Apply?

- Not for radioactively contaminated sites
- Releases, incidents, or accidents
- Public protection is the focus
- Guidance, not regulatory
- This is not CERCLA or Superfund
- Avoided dose ≠ safe limit to allow
Proposed Revision of PAG Manual

- Clarified the use of PAGs for all radiological incidents, including terrorism
- Requested input on drinking water guidance
- Refers to FDA ‘KI’ & food guidance
- Includes guidance for long-term site restoration
- Updates dosimetry
Summary of Comments

- ~5,000 comments received. Changes we made include:
  - Clarifications and consistent terminology
  - Additional explanation to better describe how the PAGs were set originally
  - Describing how conservative PAGs levels are
  - Further emphasizing how environmental standards are not changing because of this guidance

- Though some guidance is beyond the PAGs
  - Exactly how clean is clean
  - Concern about responsibility/capacity for waste
Proposed 2-tier guide to prioritize alternate water in an emergency

Does not affect everyday drinking water standards

EPA hopes to finalize the drinking water proposal and include it in Intermediate Phase chapter of PAG Manual – currently in OMB review
Next Steps

- OMB review concluded
- Plans to facilitate implementation:
  - Anticipate one year to incorporate into local/state plans
  - Training opportunities through webinars & conferences
- For more information
  - See our web page at https://www.epa.gov/radiation/protective-action-guides-pags