

Public Understanding of Cleanup Levels Discussion

Public Involvement Committee Meeting – Hanford Advisory Board
Wednesday, October 31, 2012 – Red Lion Hanford House, Richland

Cleanup Levels

One of the reasons we want public involvement on cleanup decisions is to gather input about what kind of cleanup end-state the public wants, how clean is clean, or put another way, how dirty is acceptable. Cleanup decisions are complicated. Cleanup levels necessary to be protective dictate which cleanup actions are viable to consider. It is not easy to explain all of the various factors that play a role in setting cleanup levels for specific contaminants and the post-decision process of implementing the cleanup actions. Despite these challenges, it is important for the public to have access to understandable information about cleanup levels.

This conversation is meant to explore some of the factors that play a role in setting cleanup levels and to start thinking about how to make this more understandable to the public.

- 1. How do we characterize cleanup levels and how could we make them more publically accessible?**
- 2. Who plays a role in determining “how clean is clean” or “how dirty is acceptable”?**

Responsible Parties:

- EPA
- Ecology
- DOE

Affected Parties:

- The Public
 - The Hanford Advisory Board

- 3. How do different standards apply to protect water, air and soil?**

- Water:
 - drinking water standards
 - Ambient water quality standards
 - Protective limits.
- Air:
 - picoCuries/liter
 - Parts per million – in water, air
 - Micro-grams per liter
 - Miligrams per liter
- Soil:

4. What standards and regulations play a role in setting cleanup levels?

Standards/Regulations:

- MTCA
- RCRA
- CERCLA
- NCP
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- State's Hazardous Waste Management Act

5. How do current and reasonably anticipated future land uses and exposure scenarios play a role in setting cleanup levels?

Future Uses:

- Residential Use
- Industrial Use
- Waste Management Area

Exposure Scenarios:

Broad-Area Scenarios:

- Recreational Use: avid hunter, avid angler, casual user
- Nonresidential tribal

Local-Area Exposure Scenarios – Occupational:

- Industrial worker scenario
- Resident Monument Worker scenario

Local-Area Exposure Scenarios – Residential:

- Subsistence Farmer
- CTUIR Native American Resident scenario
- Yakama Nation Native American Resident scenario

6. How do we talk about cleanup levels for specific contaminants?

- Water:
 - picoCuries/liter
 - Parts per million – in water, air
 - Micro-grams per liter (ppb)
 - Miligrams per liter (ppm)
- Air: some mass (like micro grams) per cubic meter
- Soil: mg/kg (ppm), ug/kg (ppb), pCi/g
- Container: such as 99% empty, clean closed,

7. What health effects are we preventing by having protective cleanup levels? How is this communicated?

- All health effects
- Cancer
- Non-cancer illness

8. How are exposure pathways linked together?

- Direct exposure (soil cleanups need to be protective of direct exposure as well as leaching into the groundwater, which also needs to be protected so it doesn't contaminated the Columbia River)
- Groundwater – potential use as drinking water (future drilling of wells)
- Columbia River – drinking water

9. How are other organisms protected, other than humans, when cleanup levels are set?

10. How do the properties of contaminants; how they move in the environment, uptake in organisms, time-span for damage (how long they stay in or pass through an organism) play into how cleanup levels are set?

11. What are some examples we could look at to explore more effective ways of talking about cleanup levels?

- PW-1, 3, 6 and CW-5:
- 2015 Vision:
- RCBRA:

12. How do we get more meaningful input on cleanup levels?

Use a Scenario:

- Proposed cleanup levels for Plutonium-238 in the 300 Area: A cleanup level of 155 in an industrial use area is equivalent to a cleanup level 39 in a residential use area.

13. What points in decision process allow for input on how cleanup levels are set?

- Proposed Plans
- Draft EIS

14. What are HAB constituencies saying about cleanup levels?

- “Get it all.”
- “I want 100% cleanup.”
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