

**Supplementary comments on the Hanford CERCLA Cleanup  
Five Year Review, June, 2006  
from Heart of America Northwest,  
Heart of America Northwest Research Center**

The Five Year Review failed to consider a long record of public, Tribal, and Hanford Advisory Board (HAB) comments about the adequacy of CERCLA cleanup remedies. Our prior comments referenced disappointment that USDO had not made those comments and HAB advice available for other commentors to utilize in reviewing and commenting upon the Five Year Review. The Review is inadequate for failing to consider those comments and for failing to provide the notices of use restrictions and institutional controls which USDOE relies upon to claim that remedies are protective of human health and the environment.

USDOE staff noted in discussions that they were uncertain which HAB advice was relevant and should have been considered. Therefore, in this supplement to our comments, we provide specific examples along with citing some of the relevant requirements of the Model Toxics Control Act which have not been met for the Review.

The USDOE Review failed to utilize "Considerations for Barrier Application": HAB Advice #174 June, 2005 and "Advice on Central Plateau Values", June, 2005, HAB Advice #173.

Directly relevant and applicable to the Five Year Review, for instance are the following excerpts from Advice #174 regarding Barrier Use – heavily relied upon for the 100, 300 and 200 Area remedies reviewed in the Five Year Review:

"Engineered barriers should not be considered permanent. Risk assessments should examine the magnitude of barrier failure, the likelihood of failed Institutional Controls, and the resulting consequences to human health and the environment."

"There should always be a public review process associated with ongoing reviews, including input on exposure scenarios, future use restrictions, and the failure of institutional controls."

- The above advice (#174) was intended for USDOE use in the Five Year Review, as well as preparation of initial remedial decisions. As discussed, below, USDOE utterly failed to do what this advice urged – despite the requirements of MTCA and CERCLA.

"Required relevant standards call for retrieval and permanent remedies to the extent practical, rather than reliance on institutional controls and caps..." HAB Advice #181, November 4, 2005 – adopted at the same meeting at which the Board was discussing the Five Year Review.

The advice goes on to note that contamination at sites deeper than excavated may require additional excavation, technology application, and that institutional controls is not a solution. The Board urged deeper excavation – which is a principle directly relevant, for example, to the 100 – N Area remedy considered in the Five Year Review. At 100-N, USDOE stopped

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excavation despite massive contamination (including Strontium 90 and other contaminants) within a few feet of where USDOE stopped excavating. No risk assessment – and no process regarding the reliability of institutional control mechanisms and acceptability of the resource restrictions – has been undertaken to support conclusions of the Five Year Review.

Other directly relevant Board Advice included #170 (March, 2005) on buried waste and the need for further characterization.

The Five Year Review neither took note of, nor responded to, Board advice and public comments on the proposed remedies and exposure scenarios, resource restrictions, reliance on institutional controls, and critique of remedies. No effort was made to collect and consider these prior public comments – even the comments on the very remedies under review.

The USDOE's Review asserts – without the notice, public comment or basis as required for such conclusions – that remedies relying on institutional controls are protective.

The HAB advice called for input on the likelihood of failure of existing institutional controls in remedies, input on exposure scenarios utilized and public comment on the acceptability of resource / land use restrictions (as well as whether they were realistic and whether they fail to recognize the likelihood of greater exposure from more realistic reasonable maximum exposure scenarios. This advice should have been particularly applied in the Five Year Review to the 300 Area exposure scenario as well as groundwater units.

The Review failed to address the requirements of the Model Toxics Control Act, reflecting the same requirements for: notice; input; adopting conclusions that reliance on restrictions will be consistent with maximum reasonable exposure scenarios; and, for concluding that institutional controls will not fail over the life of the remedy. These are required elements to be met, and CERCLA recognizes that if they are not met in the CERCLA remedy, the state may take independent action to require meeting:

Specific examples include:

“If the variables proposed to be modified in a (SSRA) or alternative reasonable maximum exposure scenario may affect the significant public concerns regarding land uses, then the department shall assure appropriate public involvement and comment...” -WAC 173-340-600(9)(e)

- requires early public comment (workshops may be best), at outset, on current and future uses, public/community values for use of affected lands and resources. Reliance on zoning or planning alone is not adequate.
- - E.g.: Does a segment of the community have longstanding plans for a park or public access waterway? (as with the southern gateway to the Hanford Reach national Monument). Do children currently use the vicinity for recreation? Do Native Americans view an area or natural resource as having special significance? Does a portion of the public use the fish or vegetation differently than the general public?

Notices must explicitly identify, and seek comment on, **restrictions on land and resource use (institutional controls)** proposed in decrees, orders, draft cleanup plans, interim actions – WAC 173-340-600(4)(g);(9)(e); and, (10) et seq.

The 300 Area relied upon both a site specific risk assessment and alternative maximum reasonable exposure scenario (utilizing an industrial cleanup standard). However, the Five Year Review and initial plan both rely upon a USDOE land use plan, rather than consider the Richland planning process and reasonable maximum exposure scenario, or public concerns about restricting land use to industrial – adult only exposure.

The Five Year Review utterly failed to discuss and consider if the remedies met the requirements for protectiveness under the reasonable maximum exposure scenario:

“the highest exposure that is reasonably expected to occur under current and potential future site conditions considering.... the potential for institutional controls to fail...” -708(3)(d)(i)

For example, the 300 Area and all 100 and 300 Area groundwater units have likely uses that have not been considered, and which institutional controls are not likely to prevent in the future.

It is no longer defensible to assert that the 300 Area maximum exposure scenario is adult industrial use – with fences and protective zoning, no commercial or recreational use, and asphalt paving or buildings. Richland’s planning process has found that there is no demand for such industrial use. Without such demand, it is extremely unlikely that the areas will be paved, fenced, and utilized solely for traditional industrial uses. The city planning process did foresee pressure for recreational and commercial development – requiring that the remedy be revised to reflect the reasonable maximum exposure scenarios for children, Native American uses, etc... SEE WAC 173-340-708(3) and 745.

The 300 Area fails to meet the criteria in MTCA and WAC 173-340-745 for use of industrial cleanup standard and adult industrial exposure as the reasonable maximum exposure scenario. The rule precludes use of fences as an effective institutional control, yet USDOE appears to rely on fences along the River and recreational areas for the short term for some areas, and shockingly, nothing at all for some areas and the longer term. WAC 173-340-745(1)(b)(iii)(B) and (2) preclude use of the industrial cleanup standard where, as is undisputed for the 300 Area, there is subsurface lateral migration of contamination to offsite and the River.

Both the initial remedial action plan and the Review failed to meet MTCA requirements for notice and comment for use of an industrial cleanup standard and exposure scenario – limiting all future public uses:

- Use of Industrial Exposure Scenarios to set Clean-Up Standards or Change Clean-Up Levels is similar to Changing Defaults and Alternate Maximum Reasonable Exposure Scenario:
  - Is industrial exposure really the highest exposure reasonably foreseeable? - 708(3)(d)(i)

- Does this proposed restriction impact significant public values for future land or resource use?
- Do public comments reveal that public access does occur and is likely to continue?
- Must consider potential for institutional controls to fail -708(3)(d)(i); E.g.: restrictive covenant to fail when commercial leases are primary instrument.
- Notice must be explicit. - 600(4)(g)

Our previous comments and materials identified the following as the example of what notice should look like for the 300 Area, pursuant to the 2001 MTCA rule amendments (which USDOE never references in the Five Year Review, which renders the Review inadequate):

**Your Comments Sought:**

on Ecology's Preferred Cleanup Plan for Hanford 300 Area Along Columbia River

- **Fences would permanently restrict public access to River shoreline & interrupt proposed bike trail route**
- Rationale and alternatives to this proposed action are described in a fact sheet available by calling \_\_\_\_ - \_\_\_\_
- A public meeting will be held upon request of 10 or more individuals
- Assistance to organizations or individuals in understanding and commenting on this proposal is available from Ecology's Citizen Technical Advisor: \_\_\_\_ - \_\_\_\_

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