0071705

Department of Energy
HANFORD SITE

Return to View Comments

CERCLA Five-Year review
Submitted Comment

Author: Heart of America Northwest

Date: *05/27/2006*

Comment:

USDOE's Five Year Review of Hanford Clean-Up is Not Credible – EPA Must Reject Heart of America Northwest comments May 24, 2006 The USDOE's Five Year Review of Hanford Clean-Up remedies (a requirement of the federal Superfund law, CERCLA) fails to meet basic requirements and clearly ignored public input. EPA should reject this Review and its conclusions that all but two of the remedies will be effective in protecting human health and the environment. The law required that this review be done, and done right. It was not. Public review meetings were not meaningful, as evidenced by the failure to include or offer meaningful response to comments. (Hanford Advisory Board advice does not even appear in the document or the publicly accessible record of comments on the website, much less others' comments from 2005). The Board spent a great deal of effort providing input. DOE did not reciprocate by spending even the required effort to consider Board and public input. We voiced concern to EPA allowing USDOE to proceed with this Review on its own. Everyone said trust USDOE - but, that EPA retains its ultimate authority to approve or reject the conclusions of this Review. Because the Review fails to meet basic requirements; and, failed to even consider relevant legal standards and new data, it is necessary for EPA to reject the determinations proposed by USDOE. This is a fundamental test of EPA's credibility and independence. The public is watching what EPA will do. The Review is clearly inadequate. It is up to EPA to make the determination of protectiveness, including whether it is still credible that the 300 Area (the Southern gateway to the Hanford Reach National Monument) will be industrial after all buildings are removed, whether the groundwater remedies are effective based solely on claims that institutional controls exist (without assessing if they will be effective in the face of reasonably foreseeable public use pressure), and whether new data on risk has been incorporated. In regard to the high profile 300 Area exposure scenario, and the fundamental question of whether the presumed scenario on which the remedies are based is protective, USDOE fails to address the legal criteria for exposure scenarios in the Review. Instead, USDOE asserts that it determines land use while it owns the land. USDOE acknowledges in the Review that USDOE has no foreseeable industrial use for the 300 Area, and the land may be, in fact, used for recreation and other non-industrial uses, and that the City of Richland's planning documents now recognize that the likely future uses of this area involve exposure to the public from commercial, recreational and similar uses. Nonetheless, USDOE's Review utterly fails to consider or even offer a discussion of the relevant standards for exposure scenarios under MTCA (the state law which is legally required to be met) or CERCLA. State law – which must be complied with pursuant to CERCAL Sections 120 and 121 – requires that an industrial cleanup exposure scenario may only be used when there is no reasonably foreseeable use of the area by children and people other than adults working in the area in buildings or on asphalt for 2000 hours a year. USDOE's approach for the 300 Area is symptomatic of the entire Review. It simply reasserts that USDOE has made a decision, or that a RoD was issued and that ends the discussion of protectiveness. Similar examples can be found for the use of an Uranium cleanup standard that is far in excess of the Drinking Water Standard established in recent years, total

cancer risk requirements, and numerous other issues. USDOE's approach ignores the entire purpose of the Five Year Review mandated by CERCLA. In regard to total cancer risk – not one of the current remedies are protective of human health as required by CERCLA and MTCA. Cleanup decisions considered in the Review utilize alternatively either 15 mrem of radiation exposure as "allowable" or state that the remedy must meet the CERCLA cancer risk range of 1x10-4 (one additional fatal cancer for every ten thousand people exposed) to 1x10-6 (one additional fatal cancer for every one million persons exposed). The federal Superfund law mandates that the allowable risk remaining must meet Washington State's standards for cancer risk at hazardous waste release sites – which is one additional cancer in one hundred thousand exposed children or other sensitive populations (1x10-5). Both Washington State law and EPA's own CERCLA Guidance require that all the cancer risk from all carcinogens be summed together to meet this standard – radionuclides are not legally allowed to be considered separately from other carcinogens. 15 mrem was known at the time of these remedies to result in a cancer risk exceeding the CERCLA allowable risk range of 1x10-4 to 1x10-6. 15 mrem was estimated to result in 3 to 5 fatal cancers in adults for every 10,000 exposed. EPA's own research and guidance documents establish that the incidence of cancer in children is three to ten times greater than adults for the same exposure. Thus, conservatively, the remedies allowed 9 times greater risk to children than CERCLA standards allowed five years ago – before adding in the risk from all other carcinogens at the unit or in the groundwater or surface water. This would be 90 times greater than the risk allowed under Washington's Model Toxics Control Act (MTCA). The federal law (CERCLA) specifies that USDOE and EPA must meet the more stringent state standards. In the last year, a new formal scientific consensus on the risk from exposure to radiation has been issues by the National Academy of Sciences, which is supposed to be binding on EPA, Ecology and USDOE. This is found in the report published in June, 2005 by the NAS: Biological Effects of Ionizing Radiation VII (BEIR VII). As discussed in our prior comments, and in the advice of the Hanford Advisory Board to USDOE, Ecology and EPA, the BEIR VII consensus opinion is that the exposure to fifteen millirem of radiation would result in far more cancers than previously acknowledged and used in the Hanford cleanup decisions. This is new data which the EPA rules for CERCLA Five Year Reviews require to be considered in determining if an adopted remedy will remain protective. The data and findings of the new National Academy of Sciences BEIR VII Report establishes that 15 millirem per year of radiation exposure from contamination at Hanford (or other contaminated sites) would result in far more than 1 additional fatal cancer for every ten thousand persons exposed. Thus, the new report establishes conclusively that the cleanup level for Hanford sites (including the "remedial action objectives") do not achieve EPA's own excess cancer risk threshold standard – and falls far short of the more protective state MTCA standard. In fact, the BEIR VII data establishes that 15 mrem/year of exposure to an adult would be estimated to result in 8 additional cancers per ten thousand exposed adults (8 x 10-4), or 8 times the EPA standard when considering only exposed adults, and at least 80 times the state MTCA standard. (Unlike the EPA standard, the state standard under MTCA requires protection of the most vulnerable individuals who are likely to be exposed. Children are 3 to 10 times more susceptible to cancer from the same dose of ionizing radiation or other carcinogens as are adults. [March 3, 2003. http://epa.gov/ncea/raf/cancer2003.html "Draft Final Guidelines for Carcinogen Risk Assessment"]. Thus, the cleanup levels used in these remedies may result in exposures with risks to children which are 240 to 800 times the allowable risk – allowing the cancer risk to exposed children to be nearly one percent from the radioactive releases alone (0.8%). We urged that this data be considered in the Five Year Review (comments submitted in Fall, 2005). USDOE (Cliff Clark) responded that it was outside the scope of what USDOE would consider. Yet, we pointed out that the Review is legally required to consider if the remedies in place are protective and if there is new data about exposure and risk. This data and the relevant standards are not addressed anywhere in the Review. Childhood risks from exposure to the proposed cleanup levels in the 300 Area should have been explicitly considered in this review – because it is now established that it is reasonably foreseeable that children will be exposed to the contamination. An exclusive industrial use of this area, in which access is prohibited to anyone except adults working in buildings or on

asphalt, is no longer credible. The cancer risk to children and adults (including Native Americans under Treaty Rights) needs to be calculated based on the current plans to leave contamination based on 15 mrem exposure to an adult worker in a building or on an asphalt pad. This exposure is likely to be at least four times greater than presumed in the current remedy. This would increase the childhood cancer risk to 4 percent. USDOE's Review lacks any credibility. Heart of America Northwest urges that the EPA reject this review and conduct a credible review and reach independent determinations. For information: www.hoanw.org
Gerald Pollet, JD; Heart of America Northwest gerry@hoanw.org

---