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Subject: Comments on the DRAFT Focused Feasibility Study of Methods to Minimize Mixed Hazardous and Low Level Radioactive Waste from Soil Vapor and Ground Water Treatment Facilities at the Lawrence Livermore National Laboratory Livermore Site

Dear Phil and Pete:

Attached are the initial comments of Tri-Valley CAREs (TVC) that address the DRAFT Focused Feasibility Study (FFS) on methods to minimize mixed waste. We are pleased that LLNL has decided to deal with this problem, and we think that the alternatives analyzed present a variety of potentially feasible remedies.

We have a number of comments for your consideration, and look forward to discussing them (along with DOE, LLNL and regulatory agency comments and responses) at the upcoming November 18, 2010 TAG meeting.

Sincerely,

Marylia Kelley  Peter Strauss  
Tri-Valley CAREs  PM Strauss and Assoc.

cc:  
John Lucey, US EPA  
Jacinto Soto, DTSC  
Agnes Farres, RWQCB  
Ariel Robertson, DOE  
Claire Holtzapple, DOE  
Scott Wilson, LLNL
Tri-Valley CAREs' Comments

1. Alternative 1 (no action) does not satisfy the objective of mitigating inadvertent generation of mixed waste at the four treatment facilities, and should be rejected.

2. Alternative 2a and 2b, although possibly avoiding the administrative definition of mixed waste, do not actually reduce the amount of mixed waste (MW) that would be produced. We do not believe that this is an adequate approach because it does not deal with the environmental problem that we are trying to eliminate – it only gets around the administrative definition of MW. In this alternative, the same amount of radionuclides would be disposed of, albeit they would be diluted. The Granular Activated Carbon (GAC) with radionuclides would be regenerated off-site, releasing small amounts of tritium, or buried off-site, contributing to an increased load of radioactive contaminants. Therefore TVC strongly rejects this approach.

3. Alternatives 3 - 6, in combination or separately may comply with the major objective of this FFS (i.e., mitigating inadvertent generation of mixed waste) and could be acceptable to the community.

4. Alternative 3, as is stated, applies only to TF518-N. This option consists of controlling tritium migration using a hydrogeological recirculation cell with treatment of the recirculated water for VOCs in a manner that does not generate mixed waste. TVC recommends that it not be combined with Alternatives 2a and 2b for the reasons previously stated. We recommend that it be combined with Alternative 5 and 6. Furthermore, if this alternative is chosen, it may require additional understanding of the subsurface and how the various HSUs interrelate. In general, circulating groundwater wells require a well-defined contaminant plume so as to prevent the spreading or smearing of the contamination. Additionally, contaminant mobility can be increased as a result of increased water in the soil, so that additional monitoring wells may be necessary.

5. Regarding Alternative 4: If GAC is still going to be used, Alternative 4b appears preferable, although 4a and 4c could also be acceptable. The positive aspect of 4c involves the improvement of the CRD units, which TVC supports. However, we are concerned about both the policy and environmental implications of reinjecting VOCs back into the groundwater. Perhaps an additional treatment, such as Alternative 5, could be used in conjunction with alternative 4c to improve its effectiveness and acceptability. Each of these options (4a, b, c) will require some type of treatability study before it is implemented.

6. Alternative 5 could also be acceptable, if it can be demonstrated to work. TVC considers it an advantage that the VOCs would be broken down and not transferred to another medium. As above, some type of treatability study would be required before it is implemented.

7. Alternative 6a and 6b (abiotic and biotic treatment) are our most preferred options because they would destroy the contaminants in-situ, and would not have to bring tritiated water to the surface. These will also have to be demonstrated prior to full approval.

8. Please provide the authorized limit for mixed waste in the introduction; that is, the minimum amount of radiation mixed with a hazardous waste that is regulated as a mixed waste.

9. Thank you for adding the sustainability analysis. This is an important feature in feasibility studies that has long been overlooked.

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