via email

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Julie Roth, Executive Director
DSCSOC

Julie,

Following up on the last RPM meeting, I want to bring to DSCSOC's attention several issues of concern that were discussed at this meeting.

**Attempting to Predict Groundwater Pollution Based on Soil Contaminant Concentrations**
DOE/Weiss Associates are persisting with their technically invalid approach of trying to predict groundwater pollution based on unsaturated constituent modeling. This has been a chronic problem with DOE/Weiss, where they are attempting to use an unsaturated transport model in such a way as to fail to recognize how constituents move through the unsaturated zone. Contrary to their assumptions that the constituents move through the unsaturated zone based on annual average moisture content, it is well-known that the movement follows a saturated-front model. Annual average moisture in the soil column does not predict transport in the vadose zone. This approach leads to a gross underestimation of when groundwater will be polluted by residual waste constituents in the LEHR site soils.

As I have discussed in the past, all of the DOE/Weiss efforts at trying to predict groundwater pollution are a waste of public funds. They are unreliable and are not accepted by the RPMs or the public. Susan Timm has made it clear that DOE/UCD will need to monitor groundwater for actual pollution by residuals left in the soil column, rather than rely on an unsaturated model transport prediction.

**Translocation of Pollutants Through the Soil Column to the Surface**
Again, as has repeatedly occurred over the past seven years, DOE/Weiss and UCD have ignored translocation of pollutants in the soil column through plant leaves, berries, flowers and roots to the surface. This is a well-known pollutant transport mechanism. We have raised this issue repeatedly. It still is being ignored. Previously, when there was a single attempt to measure the pollutant concentrations in terrestrial vegetation at the site, it was found to contain elevated levels of tritium, indicating that translocation was, in fact, occurring. The issue with respect to the isolated bush in the western dog pen is one of the potential for that bush to be a mechanism for transporting pollutants from the soil column to the surface. It and other vegetation at the site should be sampled to determine if this is occurring for the wide variety of potential pollutants that exist at the site.

**Pollute Up to MCLs**
At the last RPM meeting an attempt was made to try convince the RPMs that UCD could pollute groundwaters up to the drinking water MCL, rather than the regulatory limit of "background." It is obviously technically inappropriate and contrary to the public interest to allow any discharger to add pollutants up to the regulatory limit. This approach uses up the assimilative capacity of the system for additional pollutant load. As Susan Timm pointed out, the proper objective for evaluating potential pollution from a source is the properly determined background, not the MCL.

With respect to background on groundwater at the LEHR, as we have repeatedly pointed out, at this time we still do not have an adequate characterization of background for the site. This is a chronic problem that continues to exist.

If there are questions on these comments please contact me.

Fred