

**Comments on the  
Draft 2001 Annual Groundwater Treatment System and Water Monitoring Report  
Prepared by Brown and Caldwell for the  
University of California, Davis, April 2002**

Comments Submitted by  
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June 3, 2002

Page 1, under section 0.1 Groundwater IRA Treatment System again misrepresents the purpose of the IRA. This was a pilot study to explore removal of some of the constituents. The statement is made that the IRA operated 18 percent of the time in 2000, due to system modifications. The basic problem with the IRA is that it was inappropriately designed. This was pointed out before the system was constructed. The fouling problems were predicted to be likely before the system began operation. UCD has still not addressed the other pollutants in the extracted groundwater which are reinjected into the groundwater system. These will have to be removed.

Page 2, second paragraph, the calcium carbonate scaling was predicted. It was noted before the system was constructed that there was need to recarbonate the injected water. Without it, it is obvious that there will be calcium carbonate scaling.

Page 3, with respect to Stormwater Monitoring, no mention is made of the mercury issue. It needs to be addressed.

Page 5, section 0.5.3 RI Groundwater Monitoring fails to address the constituents that are being transported outside of the zone of recapture. This is an area that has to be addressed.

Page 5, under 0.5.4 Land Treatment Pilot Study Water Monitoring, there is need to set up an early warning system for the transport of pollutants from the land treatment surface soil layers into the vadose zone. A vadose zone sampling program should be established as an early warning system of potential problems of groundwater pollution. As discussed elsewhere, UCD is trying to use the land treatment system to remove TDS. That system will likely fail. The best that can be done is to dilute the TDS. It is not clear to me that dilution of a waste (TDS) is legal under the Clean Water Act. If this discharge were to surface waters, it would be illegal.

Page 6, first paragraph, the statement about measurement of flow leading to the ability to determine impacts on Putah Creek is not reliable. These impacts are not necessarily related to flow.

Many of the comments presented above on the Executive Summary are equally applicable to the text discussion of the same issues, and will not be repeated.

Page 34, section 4.5.1.2, there is concern about the hexavalent chromium concentrations in stormwater runoff of 26 µg/L. This concentration should be highly toxic to zooplankton, since hexavalent chromium is toxic to zooplankton at about 0.5 µg/L.

Page 35, under section 4.5.2.2 Pesticides and PCBs, there is need to determine whether the concentrations found for DDT, chlordane, etc., are above the US EPA recommended limits in the California Toxics Rule.

The discussion on surface water data is significantly deficient, since it basically is a reporting of what was found in the samples, with no discussion of the interpretation of the results with respect to water quality. I appreciate that, in the past, UCD and its consultants did not have a sufficient understanding of the issues to reliably evaluate water quality. Evidently, the way UCD has addressed this problem is now to not make any statements about water quality implications of the data. This is significantly deficient, and should not be allowed. It is clear again this year that UCD needs to get a consultant or staff who know how to interpret water quality data, and have them become authors of these reports.

Page 41, first line, the IRA was not designed as an Interim Removal Action, but as a pilot study of removal.

Page 42, third paragraph, statements are made about treating for control of nitrate and TDS leading to disposal problems. The disposal costs are part of the cost of operating the system and proper cleanup of the site.

Page 50, the first full paragraph, the last sentence states that, “... *there are no directly applicable promulgated stormwater regulatory thresholds for the COCs.*” That statement is not true. There are regulatory requirements for a number of constituents of concern at the LEHR site. The stormwater runoff data from the LEHR site need to be analyzed in terms of the California Toxics Rule. The concentrations of constituents in stormwater runoff from LEHR cannot exceed a water quality criterion/objective. The analysis that has been done by UCD and its consultants is flawed.

Page 51, at the top of the page, the issue about the volume of stormwater runoff is a smokescreen to regulatory requirements. Regulatory requirements do not consider the issue of volume. They consider the issue of concentration in the runoff waters. UCD again has ignored the mercury problem in the stormwater runoff from the LEHR site. This should be discussed. Overall, the stormwater runoff discussion is, again, significantly deficient, and inadequate for this report.

Page 52, first paragraph, mid-paragraph, the statement about Putah Creek being a non-potable water is more of the propaganda that UCD and its consultants are trying to promote. Putah Creek is regulated as a potable water supply.

Page 52, second paragraph, the issue again is not what is in Putah Creek, the issue is whether stormwater runoff from the LEHR site exceeds a water quality objective, including the California Toxics Rule criteria, which are part of the Basin Plan.

Appendix B, page 2, Location UCD2-026 shows a negative value for EH-F. That looks like it is in error. When negative values like that are encountered, do they remeasure?

Appendix B, "Pesticides/Polychlorinated Biphenyls - Stormwater," page 1 of 2, a comparison should be made between the detection limits used in these studies and the US EPA California Toxics Rule criterion values. This would provide the information as to whether the concentrations that are reported as "less than" the detection limit used are adequate to determine whether there is transport of pesticides and PCBs from the LEHR site to Putah Creek.

Appendix B, "Metals - Stormwater," page 1 of 2, the detection limit used for mercury is grossly inadequate to detect mercury at critical levels. I understand that this issue is finally being addressed, even though DSCSOC has pointed out this problem now for at least half a dozen years.