



**Public's Perspective on the Adequacy of
UCD/DOE LEHR National Superfund Site
Investigation and Remediation**

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**Review of LEHR Site Investigation & Remediation:
Accomplishments and Problem Areas**



Accomplishments in LEHR Site Investigation/Remediation

- n UCD and DOE Finally Beginning to Remediate the Below-Surface Wastes and Groundwaters at LEHR Site
 - DOE Has Started to Remove Buried Hazardous and Radioactive Wastes at LEHR Site
 - UCD Has Started to Pump and Partially Treat Polluted Groundwater from One of the Several Groundwater-Pollution Areas
 - DOE Has Developed a Time Table for Site Remediation
 - Some, But Limited, Progress toward More Completely Defining the Extent of Pollution of Soil, Groundwater and Putah Creek by Wastes Derived from LEHR and UCD Campus Landfills



Issues That Still Need to Be Adequately Addressed

- n Putah Creek Water Quality Monitoring Still Inadequate
 - Aquatic Life Toxicity
 - Bioaccumulation of Mercury and Other Constituents in Fish

- n Stormwater Runoff to Putah Creek Still Not Being Adequately Monitored
 - UCD Has not Stopped the Flow of Campus Stormwater through the Top of the Exposed Wastes in Landfill No. 3

- n UCD Campus Wastewater Treatment Plant Effluent Discharged to Putah Creek
 - Contains Some LEHR Site Wastes
 - Increased Flow to Overloaded Treatment Plant
 - Polluting Groundwaters along Putah Creek with VOCs



Unresolved Issues

- n Initial Groundwater Cleanup - IRA
 - Inadequate Cleanup of Groundwater
 - Spread Pollution to Clean Parts of the Aquifer
 - Will Require Further Groundwater Cleanup

- n Inadequate Characterization of Groundwater Pollution by UCD
 - HSU-2 Upper Aquifer
 - Little Progress in Addressing the Off-Site Groundwater Pollution
 - Groundwater Pollution Source Identification Highly Inadequate
 - HSU-4 Second Aquifer
 - Full Extent of Groundwater Pollution Unknown

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Unresolved Issues (cont'd)

- n Extent of Remediation of Contaminated Soils near Waste Disposal Pits and Trenches Still Uncertain

- n DOE Tries to Use Limited Field Investigation to Characterize a Waste Disposal Area as “No Need for Remediation”
 - Inadequate Data Base to Conclude Anything Other Than Need for Full Remediation of Area

- n Unreliable Vadose Zone Potential Pollutant Transport Modeling of Residual Waste Constituents to Groundwaters
 - Underestimating the Pollution of Groundwater

- n Cleanup of Dog Pens and Septic Tank Areas Still Needs to Be Defined

- n UCD Trying to Use Area-Wide Groundwater Background Constituent Concentrations, Rather Than the Immediate Upgradient Groundwater Characteristics, as the Groundwater Remediation Goals
 - UCD and DOE Approach Is Not Valid

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Unresolved Issues (cont'd)

- n Full Range of Potential Constituents of Concern Not Being Addressed
- n Extent of Radioactive and Other Wastes in Soils along Old Davis Road Still Not Known
- n Approach for Remediation of UCD LEHR Site Campus Landfills Still Unknown
 - May Try to Use Inadequate Landfill Cover Which Will Only Postpone Further Groundwater Pollution
- n Still No Investigation of the Translocation of Waste Materials from Waste Pits, Trenches, and Soils through Plant Roots to Leaves and Flowers and to the Environment

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Unresolved Issues (cont'd)

- n Adequacy of Off-Site Waste Management Reliability to Ensure That California Public Does Not Have to Pay for Future Superfund Cleanup Because the UCD Administration Did Not Adequately Evaluate the Long-Term Ability of the Off-Site Hazardous Waste Management Facility (Selected by UCD without Public Review) to Protect Public Health and the Environment for as Long as the UCD Wastes Are a Threat
 - Hazardous Waste Management Facilities That Are Approved by the US EPA and State Regulatory Agencies Will Not Prevent Groundwater Pollution for as Long as the Wastes in the Facility Will Be a Threat

- n UCD Has Not Developed a Time Table for Site Cleanup

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Unresolved Issues (cont'd)

- n Inadequate Incorporation of Basic Science, Especially Aquatic Chemistry, and Surface Water Quality Issues in Site Investigation and Remediation
 - Ignore That Organic Nitrogen and Ammonia in Wastes Will Convert to Nitrate
 - Ignore That Chromium III Can Convert to Chromium VI

- n Data Reports Are Allowed to Be Submitted as “Final” When They Contain Obvious Errors in Data Reporting and Interpretation

- n UCD Administration Still Trying to Mislead the Public on the Hazards of the Site and That LEHR Is One of the Few National Superfund Sites in the Country on a College Campus



Recalcitrant Polluter Approach

- n UCD Administration Is Still Following the Approach of a “Recalcitrant Polluter” to LEHR Site Investigation and Remediation Rather Than That of an Environmentally Responsible Public Agency
 - Very Slow Response to Addressing Issues
 - HSU-4 Pollution - 3 Years to Begin to Address the Pollution of This Aquifer after DSCSOC Pointed Out the Need to Define the Extent of Pollution of This Aquifer
 - Stormwater Runoff Monitoring Is Largely a Waste of Public Funds - 3 Years after the Problems Were Reported by DSCSOC
 - Stormwater Runoff Passing through Wastes in Landfill No. 3 - 3 Years after Problem Identified by DSCSOC



Long-Term Threat

UCD and DOE Reluctant to Acknowledge the Need to Reliably Monitor LEHR Site Forever to Detect Potential Public Health and Environmental Problems That Can Occur Due to Residual Waste-Derived Materials Left at the Site after Remediation



Overall

While Some Progress Is Beginning to Be Made in Site Remediation of LEHR Buried Wastes and Groundwater, There Remain Many Unresolved Issues on the Full Magnitude of LEHR Site Pollution and the Adequacy of the Remediation That Will Be Accomplished