

Toxic and Radioactive Pollution at Livermore Lab Main Site



Livermore Laboratory was founded in 1952 to design new types of nuclear weapons. Since that time, nuclear weapons activities at the Lab have resulted in toxic and radioactive contamination in the region's air, water and soil resources. Plutonium was found in a nearby children's park in the mid-1990's at up to 1000 times background levels. The Lab estimates that the "affected environment" for environmental impacts extends in a 50-mile radius covering areas as far as San Jose, Stockton and most of the San Francisco Bay Area. More than one million curies of radiation has been released from the Lab over the years. In 1987 EPA officially recognized the Livermore Lab main site as a "Superfund" site; deeming it one of the most contaminated sites in the nation. Soil and/or groundwater at the Livermore Lab main site was found to be polluted with volatile organic compounds, hexavalent chromium, Freon, radioactive tritium, plutonium, and a host of other dangerous wastes.

Cleanup is expected to take at least 70 more years to complete at an estimated cost of one billion dollars!

Contaminated Groundwater Plume

Among the contaminated areas being addressed under the Superfund cleanup is a significant toxic groundwater plume that has migrated from the Livermore Lab main site into the community aquifer. The plume has flowed generally westward and extends under homes, apartments, the arroyo, a city park and a community swimming pool near Charlotte Way and surrounding neighborhoods. The leading edge of the plume contains a solvent, PCE (Tetrachloroethylene), that is known to affect the central nervous system, liver, kidneys and the immune system and cause cancer and other negative health effects.

This contaminated groundwater prompted the State of California to issue a "Determination of Imminent or Substantial Endangerment" in 1984, compelling the Lab to close wells at neighbors' homes along the western perimeter and provide residents with bottled water. Over the past quarter century the Lab has built a system of off-site extraction wells and underground pipelines into the community to carry the contaminated

groundwater back on-site where it is treated to separate pollutants from water.

Clean Up Results So Far

The half-mile long stretch of community aquifer between the Lab's western perimeter and the contaminant plume's "leading edge" is still polluted with solvents although their concentrations have diminished significantly due to the pumping over the years. The Lab's efforts to date have not succeeded in drawing back the leading edge of the groundwater plume. However, the Lab has managed to keep the pollutants in a holding pattern so that they do not appear to be migrating further from the Lab.

Community Participation Improved the Cleanup

Since 1989 Tri-Valley CAREs has participated in the Livermore Lab Main Site Community Work Group to advise the Lab and regulatory agencies on Superfund cleanup practices. With the help of Environmental Scientist Peter Strauss, Tri-Valley CAREs has had numerous successes advocating for health-protective cleanup standards, effective cleanup methods and restored funding in the cleanup budget. Tri-Valley CAREs was the first non-governmental organization to win a national recognition award from EPA for the effectiveness of its work in 2000.

Most recently Tri-Valley CAREs advocated to stop the Lab's scheme to "pump and dump" the leading edge of the offsite plume into the sewer system where the contaminants would ultimately end up in the San Francisco Bay. This plan was withdrawn.

The Current Challenges and What You Can Do

- **Monitor the Arroyo Seco Pipeline Project:** The Lab is planning to build a pipeline to the "leading edge" of the contaminant plume to draw the contamination back for treatment. The pipeline will go through areas with historically elevated levels of plutonium contamination in the surface soil. Get involved and request that the construction be carefully monitored for radioactive and toxic dust. Circulate our sign-on letter.
- **Restore Funding Levels for Cleanup:** Sign our petition to elected officials asking that cleanup funding levels be maintained. Circulate the petition to friends, family and in public spaces.
- **Prevent Further Generation of Mixed Rad Waste:** Submit comments on the generation of mixed radioactive waste from soil vapor and ground water treatment facilities next year. Sign up for our newsletter for details on this plan and more!