

New Explosions at Site 300?

**Presentation to the
Northern Region Hearing Board**

Loulena Miles

Staff Attorney

Tri-Valley CAREs

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Who is Tri-Valley CAREs



- Founded in 1983
- 5,000 members
- Oversee environmental cleanup of existing contamination at Site 300 and Livermore Lab main site and advocate to curb new projects that will lead to future contamination and nuclear proliferation

Why is Site 300 a Superfund site?

- Listed as a Superfund Site - August 1990
- Groundwater and soil have been contaminated with solvents and other volatile organic compounds (VOCs), tritium, uranium-238, high explosive compounds (HMX, RDX), nitrate, and perchlorate. The primary health threat is contaminated groundwater. Soil and above ground springs are also contaminated.



Full cleanup is estimated to take up to 500 years to achieve federal drinking water standards.

Cleanup would take even longer to meet California's more stringent cleanup objectives.



Members of Tri-Valley CARES accept the award from EPA representatives.

EPA First Citizen's Excellence in Community Involvement Award (2000 – Region IX)

- “Tri-Valley CARES members put in a tremendous number of hours to educate themselves and the community on all aspects of the Superfund cleanup,” says Kathy Seitan, EPA Region 9 Superfund project manager. “Their persistence and dedication have ensured that community needs are met.”

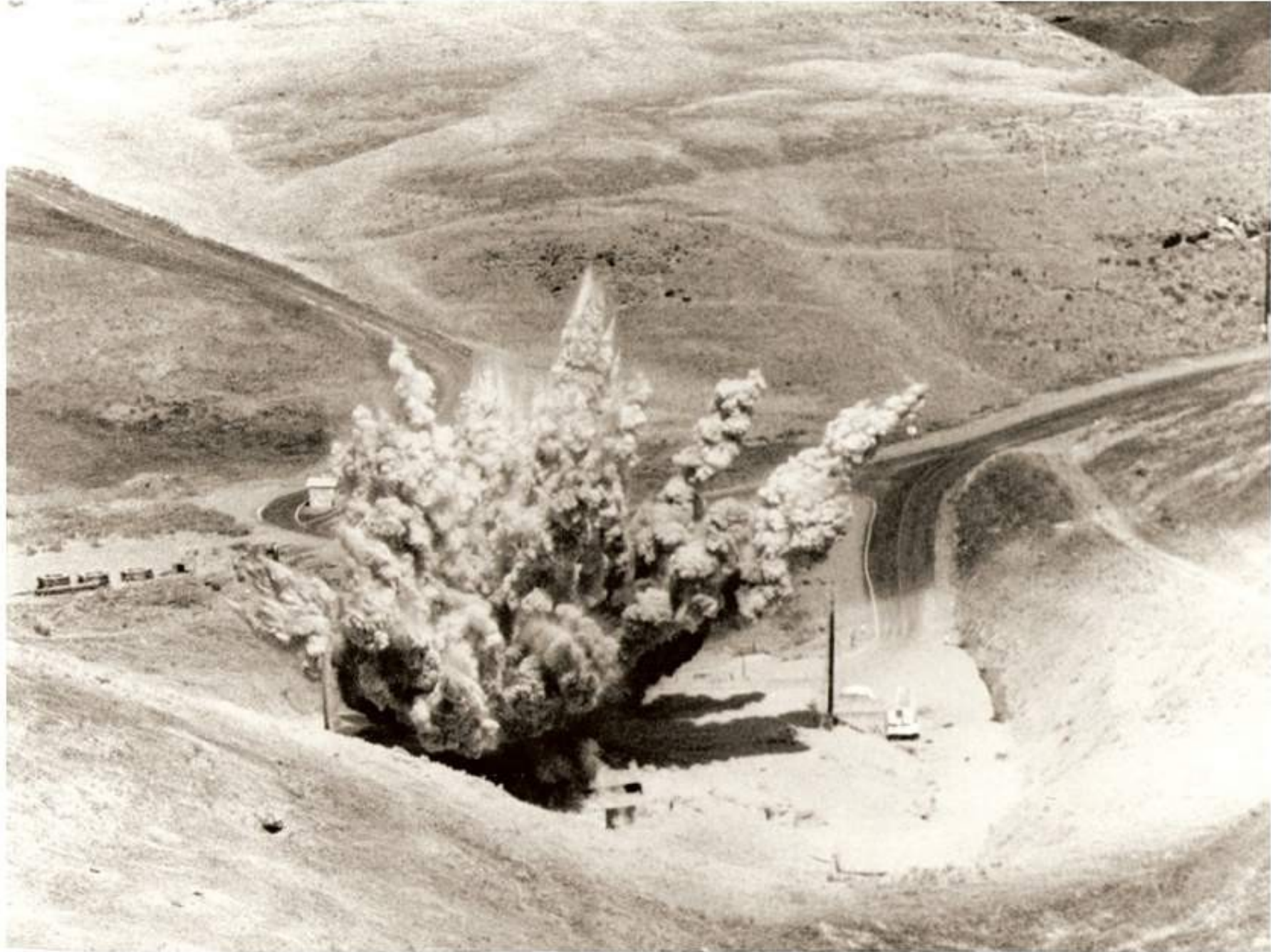
*Peter Strauss has been the technical advisor pursuant to the Technical Assistance Grant on this cleanup. (See his written statement)

Changes in the Area

- A new housing development – represented by Tracy Hills – will be situated very near to the site.
 - *(Note the permit application actually says that this is a remote site 10 miles W. of Tracy)*
- This was not taken into account in the permit application
- Tracy and surrounding areas are growing rapidly and this should be looked at in a CEQA environmental assessment document.*

Proposal

- From up to 1000 lbs of explosives/year to 8000 lbs/year (up to 727 detonations/year)
- From 100 lbs/day to 350 lbs/day
- Permit application is not instructive regarding, and does not discuss or disclose, the range of materials; hazardous, radioactive or non-hazardous, that may be part of the open air tests in addition to the high explosives.



Hydrodynamic (bomb core) test on firing table at Site 300, 1984. Note size of building on left in comparison to blast. These tests are ongoing at Site 300. Debris from these tests are among the contaminants that need to be remediated under the Superfund cleanup. Photo: LLNL



Hydrodynamic (bomb core) test on a firing table at Site 300, 1961. The bright "streaking" effect in the photo is likely from shards of pyrophoric metal, such as Uranium 238, hurtling through the air. U-238 is one of the contaminants of concern in the Site 300 Superfund cleanup. Photo: LLNL

Larry Sedlacek, Deputy Associate Director of Operations in the LLNL's Defense and Nuclear Technologies Group

- Testimony before the Tracy City Council indicated that tritium could be used in the explosions.
- Lab officials have also indicated that Uranium-238 could be used in the blasts.
- U-238, often called DU, is routinely used in “blasts” at Site 300.
- Both of these elements are radioactive and cause cancer and other health problems in humans if ingested or inhaled.

The Permit Application Was Incomplete

- LLNL failed to adequately describe the site surroundings *Referred to Site 300 as a *remote* location and did not evaluate impact on Tracy Hills development, or other nearby properties
- LLNL did not present sufficient information to evaluate aerosol dispersion of radioactive or hazardous contaminants from the explosive tests.
- LLNL failed to adequately disclose noise impacts (see Bob Sarvey's presentation)
- LLNL failed to account for impacts to endangered and threatened species that exist on-site.

CEQA review is triggered

- Although the Board may not have special CEQA expertise, the Board must still determine whether the permit was properly granted
- The level of impacts posed by the project require a CEQA review
- Had a review been done, it would have looked at important impacts such as:
 - Radioactive and other hazardous releases on Tracy and planned development
 - Noise impacts on planned development
 - Impacts on endangered species

CEQA § 21065

"Project" is an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:

(a) An activity directly undertaken by any public agency.

(b) An activity undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.

(c) An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

Use of radionuclides in these tests should be disclosed and studied

Unconfined explosions using gaseous tritium and U-238 will cause these radionuclides to enter the environment, where they may be ingested by wildlife or humans.

-Statement of Site 300 Superfund Expert Peter Strauss that was provided in advance to the hearing board, the district and LLNL.

Statement Excerpts from Mr. Liebman

- The California Environmental Quality Act also requires state agencies to consider the impacts of their actions on endangered and threatened species. Cal. Pub. Res. Code § 21050 et seq.; Salmon Protection & Watershed Network v. County of Marin, 125 Cal. App. 4th 1098 (Cal. Ct. App. 2004).

Endangered and Threatened Species

- Site 300 “could be judged one of the largest native grasslands of this kind currently known in California.”
 - DOE’s Site Wide Environmental Impact Statement 2005
- There are at least 124 federally and state-listed threatened, endangered, and other special status plant and animal species known to occur at the Livermore Lab and Site 300.

Species Cont.

- The red-legged frog and the tiger salamander have been spotted throughout Site 300, and 60% of the site is critical habitat for the frog. (SWEIS Appendix E-18).
- The Alameda Whipsnake (*Masticophis lateralis euryxanthus*), a federally listed threatened species (62 FR 64306), has been seen at Site 300, which contains the constituent elements of the Alameda Whipsnake's critical habitat (SWEIS Appendix E-68).

Liebman Stmt Cont.

- Explosive blasts of up to 350 pounds per day, and 8,000 pounds per year, could cause direct mortality to red-legged frogs, Alameda whipsnakes, and tiger salamanders, as well as protected birds
- Aside from direct trauma, the increase in noise levels, particulate matter, and, potentially, radioactive material will also threaten lives and habitats

Conclusion

- Because this district issued the permit, this is the proper and only forum for this analysis
- There is not enough information in the permit application for the county to properly issue a permit on this proposal without further review
- The district must consider the impacts of the increased blasts on the surrounding populations, animals and environment

Conclusion cont.

- We ask this Board to consider the possibility that increased explosions (yield and volume) should not be allowed to occur in a populated area.
- There are viable alternative locations in the US for these hydrodynamic tests, including a remote site called the BEEF, short for “Big Explosives Experimental Facility” at the Department of Energy’s Nevada Test Site. The BEEF Site is managed by Livermore Lab.
- This Board should remand this permit to the district for further analysis in compliance with CEQA.