

Information relevant to assessment of the safety record and community environmental cooperation of the University and Laboratory.

1. This is an excerpt from a study commissioned by the City of Berkeley who asked a German Laboratory to review tritium contamination. This Lab was chosen because of its prior experience doing evaluations of environmental contamination of the environments around Chernobyl and Los Alamos.

## **“Review of Radiological Monitoring at LBNL**

### **Final Report**

Bernd Franke and Anthony Greenhouse Prepared under Contract with the City of Berkeley  
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#### **Conclusions and recommendations**

The adequate determination of the consequences of potential accidents at the NTLF is of particular importance to ensure that the facility is in compliance with DOE Standard 1027-92. The Safety Analysis Document concludes on page 3: “The analysis shows that full release of the tritium inventory could not cause “significant localized consequences”, which are defined as accidental doses at 30 m exceeding 10 rem (which equals 10,000 mrem).

The preliminary review indicates that this claim may be incorrect. Parameters in the Safety Analysis Document were selected without assessing that the resulting doses are realistic for the whole array of potential scenarios. This is evidenced by the comparison of doses calculated in the Safety Analysis Document for the worst accident (a fire at NTLF releasing 15,000 Ci of HTO) with results from alternative calculations. While the Safety Analysis Document concludes that the maximum off-site exposure is 4.8 mrem at a distance of 1,100 meters, doses would be between 2,900 to 18,000 mrem using the “jogger scenario” from the SENES Inc. report. This assumes that the tritium is released from the stack with no plume rise from the fire; conditions which could prevail if HTO is released at the onset of a fire. An independent evaluation of the assumptions underlying the scenarios, the calculation model and its parameters is lacking. It is therefore recommended that an independent reassessment of consequences from accidents at NTLF be performed.”

2. Additional information is available at:  
<http://berkeleycitizen.org/main.html#> Scroll to “Lawrence Lab” section (alphabetically listed in the left hand column) and select from pull out menu. Additionally there is a report, complete with maps documenting tritium contamination of the air and soil available at:  
<http://cmtwberkeley.org/contaminantplumes.html>

3. Closer to home, the University’s safety record in our community is revealed in their own assessment, cited below, for the small building, recently demolished, near the proposed Whole Foods site:

**“UNIVERSITY OF CALIFORNIA, BERKELEY,  
CALIFORNIA GILL TRACT RADIOLOGICAL  
HISTORICAL USE ASSESSMENT  
DRAFT NOVEMBER 2007**

**For the**

**Capital Projects Department University of California, Berkeley**

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*Gill Tract Radiological Historical Use Assessment Draft*

**1.0 EXECUTIVE SUMMARY**

A radiological historical use assessment of Gill Tract was conducted in June and July 2007 for the University of California – Berkeley (UCB). The Gill Tract is a university-owned 10-acre agricultural plot on San Pablo Avenue bounded by Marin Street and Codornices Creek in Albany, California. The tract was used for agricultural research and experimentation. As part of the research radioactive materials were used in trace amounts. Historical research has shown that the use of radioactive materials was limited to the Hybridoma laboratory. Use of radioactive materials at Gill Tract ceased in 1997. A close out survey was performed by the University EH&S group. The information provided in this report was current as of the date of publication.

The results of the assessment indicate that the laboratories located within the Hybridoma Laboratory and the storage shed next to the laboratory are impacted from the use of radioactive materials. In addition, drains and sewage piping and ventilation associated with hoods in the laboratories have been impacted. The laboratories and the drainage system would be considered class 1 areas for closure. While no indication of radioactive material use was found for the planting field areas it is recommended that these areas are included in the final closure survey.”