



Superfund Reevaluation of Lawrence Berkeley National Laboratory

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INTRODUCTION

At the request of the Committee to Minimize Toxic Waste (CMTW), the U.S. Environmental Protection Agency (EPA) has evaluated the National Tritium Labeling facility (NTLF) located at the Lawrence Berkeley National Laboratory (LBNL) under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or "Superfund"), to determine whether the site is eligible for the federal Superfund list. The federal Superfund list, formally known as the National Priorities List (NPL), is a list of uncontrolled or abandoned hazardous waste sites which have been identified by EPA as a priority for cleanup under Superfund.

In evaluating LBNL for possible inclusion on the NPL, EPA considered data on tritium contamination submitted by CMTW and additional data provided by the U.S. Department of Energy (DOE). Existing data indicate that low levels of tritium at the LBNL are well below U.S. EPA clean air public health standards, and do not indicate a need to add LBNL to the Superfund list. Nevertheless, EPA has requested additional sampling of the air, water and soil in and around the laboratory in order to make a final listing decision.

BACKGROUND

The source of tritium emissions at NTLF is a 10-meter stack which releases tritium to the air when the facility is operating. LBNL continuously monitors these emissions, and in 1995 implemented engineering changes to further reduce the amount of tritium it releases to the environment.

The air emissions standard for protection of human health and the environment from direct exposure to tritium is set by EPA's National Emissions Standard for Hazardous Air Pollutants (NESHAPs) as designated under the Clean Air Act. This standard was selected by EPA to protect public health with an ample margin of safety. EPA requires annual reporting of emissions monitoring and compliance with NESHAPs. Based on LBNL's sampling data, EPA and the California Department of Health Services (DHS) have concluded that tritium emissions from NTLF are well below this standard.

SUPERFUND CONSIDERATIONS

EPA uses the Hazard Ranking System (HRS) as a screening tool to identify potential Superfund sites. Before a facility can be proposed for listing on the NPL, EPA calculates an HRS score. Sites

with an HRS calculation of 28.5 or above can be considered for placement on the NPL. Based on a preliminary HRS score, EPA has determined that LBNL is eligible for listing on the NPL.

Although many sites are eligible for listing on the NPL, based on the HRS "score" alone, EPA also considers other factors before proposing a site to the NPL. For example, if a site is being cleaned up by the State or is otherwise being addressed by other regulatory authorities, the Superfund Program would not consider such a site a high priority for listing. Moreover, some sites do not pose a significant risk - even though they are eligible for listing. In the U.S., there are 1,237 sites on the NPL. In addition, there are about 3,000 sites eligible for the NPL. Most of these sites, for the reasons discussed above, have not been added to the NPL.

WHAT WERE EPA'S CONCLUSIONS?

LBNL is eligible for the NPL because ambient tritium levels, although well below the NESHAPs standard, sometimes exceed the screening criteria used in the HRS for ranking potential NPL sites. EPA believes that tritium emissions at LBNL are well controlled under the federal Clean Air Act NESHAPs standard, and are protective of public health.

Although there are low levels of tritium detected in the soil, groundwater and surface water at LBNL, the concentrations of tritium in surface and groundwater are, with the exception of one sampling location, below the standard for drinking water. Neither surface water nor groundwater in the vicinity is used as a drinking water source. Also, there are no residences, schools, or day care centers located in close proximity to any areas where contaminated soil would be expected.

WHAT WILL HAPPEN NEXT?

The Tritium Issues Work Group was formed in response to a request from the City of Berkeley to California DHS and EPA to consider community input and perform independent sampling at LBNL. The Work Group is developing plans to take additional environmental samples in and around the LBNL site, including new areas that have not previously been sampled.

Additional sampling may include background air, on-site air, off-site air at some nearby residences, surface soil, groundwater, surface water and sediment. EPA will assist the Tritium Issues Work Group to analyze and interpret this data, and will consider this information before making a final decision on listing LBNL.