It's Time to Speak Up to Stop Dangerous Bio-Warfare Agent Research at Livermore Lab

The Public Comment Period ends on May 11, 2007

Email your comments to samuel.brinker@oak.doe.gov

Important points you can make in your comments:

I/We oppose a bio-warfare research facility (called a BSL-3) at the Livermore Lab main site because:

- Advanced biodefense research (i.e., with bio-warfare agents like live anthrax and plague) should not be collocated with nuclear weapons research. If the U.S. mixes "bugs and bombs," it could complicate enforcement of the Biological Weapons Convention, the international treaty banning bio-weapons.

- Livermore Lab sits within a 50-mile radius of seven million people. This highly populated area is not an appropriate place to conduct experiments with some of the deadliest agents known.

- Livermore Lab is located near active earthquake fault lines. The BSL-3 is a portable building that was brought to Livermore Lab on a truck. This BSL-3 should not be operated in a seismically active area. The revised Environmental Assessment states that new research by the USGS has determined there is a 62% chance that one or more magnitude 6.7 earthquakes will occur in the area within the next 30 years. Other studies predict a quake with MM 10 shaking in the Livermore area (which is very violent – the scale is 1 to 10). The revised EA briefly mentions these key facts, but does not fully account for them in conducting its hazard analysis.

- The revised Environmental Assessment does not do an adequate job of analyzing potential terrorist threats. For example, it too optimistically assumes that most bio-agents would be destroyed in a terrorist attack, and therefore not many would escape into the environment and pose a hazard to workers and the community.

- The revised Environmental Assessment does not analyze the environmental and health impacts of a release of the BSL-3's total inventory of up to 100 liters of bio-warfare agents. In fact, the revised EA fails to even disclose that other Livermore Lab and Department of Energy documents state the BSL-3 facility will house up 25,000 different samples of pathogens adding up to a total of 100 liters of bio-agents at a time. Therefore, the hazard level posed by the Livermore Lab BSL-3 is far, far greater than the revised EA considers.

- The revised Environmental Assessment suggests that a potential terrorist would rather try to find dangerous pathogens in nature than attempt to steal them in larger, more concentrated quantities from the Livermore Lab BSL-3. That assumption is absurd.

- The Department of Energy (DOE) should hold a public hearing so that the public can learn more about this plan and provide oral comments. So far, the number of public hearings that DOE has held on this important issue is ZERO.

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- The 30-day written comment period (which ends May 11, 2007) is too short. Most area residents and other interested members of the public don't know about the comment period. It has not been widely publicized by the Department of Energy or Livermore Lab. Therefore, people are being deprived of their right to comment.

- The written comment deadline should be extended for a minimum of one additional month (to June 11). And, a public hearing (see above) should occur within the extended public comment deadline.

Basic Facts About Livermore Lab's Bio-Warfare Agent Facility

The Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL) purchased a 1500 square foot prefabricated building that will house a high-level Bio-Warfare Agent Research Laboratory inside LLNL. Up to 100 Liters of bio-agents will be used there at any one time. Researchers will aerosolize and genetically modify agents such as plague, anthrax, botulism and rabbit fever.[i] This is a historic decision because these types of high-level agent experiments have never before been located inside a nuclear weapons research laboratory.

Where is it located? It is located in the heart of Livermore Laboratory – a 1.3 square mile facility with nearly 10,000 on-site workers, and residential housing across the street. The DOE considers a 50 miles radius around the lab as the "affected environment" for impacts, an area stretching from San Jose to San Francisco (and including Stockton, Concord and many communities in between).

What Agents will the lab experiment on? The lab is a Bio-safety Level 3 (BSL-3) lab, housing a level three select agents lab (*level 4 is the highest and is reserved for Bio-Agents with no preventative treatment or known cure).* Agents in a BSL-3 are known to cause serious or potentially lethal disease as a result of inhalation. This lab can use any "select agents" – organisms that "have historically been associated with weaponizing efforts".[ii]

What Types of Experiments are planned? Experiments will genetically modify these agents and aerosolize them (spray them) onto testing animals inside of special cabinets. The risks posed by genetically modified pathogens have never undergone a broad independent assessment. The lab will infect a maximum of 100 animals at a time, namely mice, rats and guinea pigs. Scientists and policy makers are concerned that genetic modifications could accidentally or intentionally create super-strains that have no known treatment or cure ultimately resulting in bio-weapons of the future. The environmental study conducted by the lab did not study the hazards of genetic modification.

- Hazards of Genetic Modification: In Sept, 2003 UC Berkeley researchers admitted that they had accidentally created a super-strain of tuberculosis (TB) through genetic modification of ordinary TB that multiplied faster and was more lethal.[iii] US government studies have also led to the creation of extremely deadly forms of mousepox, rabbitpox and cowpox. The mousepox is impervious to anti-viral drugs and vaccines. [iv]

- **Hazards of Aerosolization:** Aerosolization of select agents is potentially a form of weaponizing them. A gaseous suspension of fine particles resulting from aerosolization makes these agents far more dangerous in the event of accidental occupational exposure and, in the case of failure of containment, public exposure.[1]

- **Lack of Independent Oversight:** No independent regulatory agency is responsible for safety at LLNL on a continuing basis. Safety is a matter of self-regulation. This type of management hasn't worked at other federal labs where the anthrax used in the letters to the media and government officials was most likely derived.[v]

- **Dual-Use Nature of this Research**: The bio-warfare agent research at Livermore Lab is inherently dual-use. Although DOE states that this lab is purely defensive – there always remains a chance that they could be used for offensive weapons research. The "defensive research" at LLNL will be virtually indistinguishable from "offensive research". With the secrecy of the program, the US aversion to inspection or verification protocols at the Biological Weapons Convention, the opaque nature of the Institutional Biosafety Committee, and with the lack of independent transparent oversight, its difficult to tell what type of research will be conducted there.

[1] Dr. Mark Wheelis, Professor at UC Davis. See Wheelis Declaration for Tri-Valley CAREs v. Department of Energy.

Bad Public Process: The Department of Energy is attempting to approve this new BSL-3 lab without any public hearings or a thorough environmental review. We believe that a full Environmental Impact Statement should be prepared. The Department of Energy is preparing a full EIS for a BSL-3 lab at Los Alamos. The same should be done in Livermore.

Environmental Dangers: There are a number of pathways for release of these deadly agents.

- HEPA air filters: The Lab will rely upon HEPA filters to prevent environmental release of deadly bio-agents. LLNL retired physicist Marion Fulk argues that HEPA filters can be ineffective under many conditions.[vi]

- Seismic Concerns: The lab sits within one kilometer of the Las Positas and Greenville faults. An earthquake in 1980 injured 44 people and cost the lab many millions in structural damages. In 2004 a lab study found that 108 buildings have potential seismic problems. 22 have unacceptable risks and 41 need detailed evaluation.[vii]

- History of Accidents / Spills: Although LLNL boasts its perfect record of no recorded infections by lab workers, our investigations found that they had several mishaps in the past with their lower level, less-infectious agents where employees poked themselves with needles and possibly threw anthrax out with the general trash.[viii]

    - The Centers for Disease Control and Prevention (CDC) does not formally track lab-acquired infections and all infections are voluntarily reported. As a result, we have no accurate information about infections, releases and accidents. Infections often go under-reported for fear of reprisal and because journals only publish new or unusual infections.

- Transportation Dangers: An estimated 60 shipments per month (in and out) will travel by commercial courier.[ix] Livermore Lab just had an incident in September, 2005, where it mislabeled and improperly packaged "select agents" (biological organisms that are historically associated with bio-warfare purposes) and shipped them to two offsite laboratories. The incident resulted in a suspension of transfers during a Centers for Disease Control and Prevention (CDC) investigation.

Proliferation Threats: Over the last decade or more, the US has demonstrated that it values the secrecy of its commercial and military facilities more highly than the transparency that is needed for effective international monitoring of compliance with the requirements of the 1972 Biological Weapons Convention (BWC). Collocation of nuclear and biological warfare agent research at Livermore Lab could lead other countries to follow-suit causing nearly insurmountable verification problems. Identifying whether a bio-lab is conducting offensive research is generally a matter of intent of the researcher since many of the experiments are the same whether they are for peaceful purposes or for developing a biological weapons program.

- Tri-Valley CAREs believes that bio-warfare agent research should be conducted only as needed, and then ONLY under the auspices of civilian science centers and not inside classified nuclear weapons laboratories. Tri-Valley CAREs also calls for strengthened oversight and reporting requirements for the treaty. Tri-Valley CAREs attended the BWC meeting in December of 2004 and again in 2006.

Institutional Biosafety Committees: Keepers of the BWC ? LLNL claims that an internal committee – the Institutional Biosafety Committee will review all projects involving high-level bio-agents to ensure that experiments comply with international prohibitions against development of bio-weapons and with all other health and safety laws.

- The National Institute of Health requires IBC's to make minutes available to the public and recommends that they hold open meetings.[x] LLNL's IBC improperly withholds minutes and refuses to allow Tri-Valley CAREs to attend meetings or be alerted when they are held.

- Community Members: The lab claims to include "community members" on the IBC, however, such members are kept secret and are hand selected by the committee. According to a study of IBCs, Livermore Lab stands alone in redacting this info. [xi]

Take Action!

- Send money – we need to raise funds to support our efforts.
- Write letters to the editor in publications near you

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- Email your comments on the revised Environmental Assessment before May 11, 2007 to samuel.brinker@oak.doe.gov
- Speak out at City Council meetings – or local club meetings
- Contact Tri-Valley CAREs to get involved.

***ADDITIONALLY*: A 2nd BIO-WARFARE AGENT RESEARCH LAB HAS BEEN PROPOSED FOR SITE 300 – LIVERMORE LAB'S HIGH EXPLOSIVES TESTING RANGE NEAR TRACY. THE SITE 300 BIO-LAB WOULD HAVE 520,000 SQ. FT. OF BSL-3 AND BSL-4 LAB SPACE ON 30 – 100 ACRES. A DECISION ON WHETHER TO MOVE FORWARD WITH THE SITE 300 PROPOSAL WILL BE MADE IN JUNE 2007. CHECK TRI-VALLEY CAREs' WEB SITE AT www.trivalleycares.org FOR OUR PETITION OPPOSING THE BIO-LAB AND FOR REGULAR UPDATES.**

[i] DOE, December 2002, Environmental Assessment for the Proposed Construction and Operation of BSL-3 at LLNL.
[ii] Id. Page 18.
[iii] BBC News, December 26, 2003. 'Super-TB' created by scientists.
[iv] MscKenzie, Debora. New Scientist, October 3, 2003. US Develops lethal new viruses.
[v] Fox News, Anthrax Probe Takes Over Army Labs, July 20, 2004
[vi] See Declaration of Marion Fulk, BSL-3 Lawsuit, April 19, 2004. *Available upon request from Tri-Valley CAREs office.*
[vii] DOE, Draft Site-Wide Environmental Impact Statement for Continued Operations of LLNL. February 2004.
[viii] Records obtained through the Freedom of Information Act and available for public viewing at Tri-Valley CAREs office.
[ix] See footnote 1.
[x] NIH Guidelines on Recombinant DNA Research - Section IV-B-2-a-(6,7).
[xi] Sunshine Project, October 4, 2004. Mandate for Failure: The State of IBC's in an age of Biological Weapons Research.