EXHIBIT 1

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IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

TRI-VALLEY CARES, MARYLIA KELLEY, JANIS KATE TURNER, and JEDIDJAH DE VRIES, Plaintiffs, vs. UNITED STATES DEPARTMENT OF ENERGY, NATIONAL NUCLEAR SECURITY ADMINISTRATION, and LAWRENCE LIVERMORE NATIONAL LABORATORY, Defendants	Case No.: DECLARATION OF EDWARD HAMMOND IN SUPPORT OF PLAINTIFFS' MOTION FOR PRELIMINARY INJUNCTION

1. I am Director of the Sunshine Project, whose primary place of business is P.O. Box 41987, Austin, Texas 78704. The Sunshine Project is a 501(c)3 non-profit, non-governmental organization that works to prevent the development and use of biological weapons, avert the use of biotechnology for hostile purposes, and to uphold and strengthen international agreements prohibiting biological warfare.

2. Since 1995, I have worked as Director and Program Officer of non-profit organizations specializing in international policy issues related to biotechnology, participating in that capacity at intergovernmental meetings of the Biological and Toxin Weapons Convention, the Chemical Weapons Convention, the World Health Assembly of the World Health Organization, the Commission on Plant Genetic Resources for Food and Agriculture, the International Plant Protection Convention of the United Nations Food and Agriculture Organization, the Convention on Biological Diversity and its Cartagena Biosafety Protocol of the United Nations Environment Program, and policy and legal development bodies of the Association of South East Asian Nations and the Organization of African Unity.

3. In my capacity as Director of the Sunshine Project, it has been my responsibility to advocate for a strengthened and verifiable Biological and Toxin Weapons Convention (BTWC) and to monitor U.S.-based research on biological weapons agents and delivery technologies for the purpose of identifying any aberration from strict compliance by the United States with its commitments as a state party to the BTWC. Because many of the technologies and knowledge generated in the course of biological defense research have applicability to offensive weapons programs (i.e. are "dual-use"), monitoring of biological defense research is an important element of my work. Through monitoring U.S. biodefense programs, I have gained detailed knowledge of the functions and capabilities of biological defense research facilities operated by the U.S. government and by educational institutions and private entities. Because of the impact of new federal appropriations made following September 11, 2001, and the subsequent anthrax mailings, for the past several years, I have dedicated a large amount of time identifying and tracking the numerous new proposals for construction of biological defense research facilities. Among the venues before which I have appeared, I provided written and spoken expert testimony on

biological defense facilities and programs for the U.S. Congress, Subcommittee on Oversight and Investigations, House Committee on Energy and Commerce on October 4, 2007.

4. There has been a large and unsafe expansion of U.S. laboratories handling biological weapons agents since 2002. This expansion poses significant risks to the public through accidents and incidents of domestic source criminality (bioterrorism). It should be noted that the still-unsolved 2001 anthrax mailings are widely believed to have been perpetrated and/or assisted by a current or former U.S. biological defense worker.

5. The unprecedented expansion of biological weapons agent research has been conducted without a national laboratory needs assessment and appears to far exceed that which is prudent and necessary for our national needs. Alarmingly, there is no comprehensive government source of information available on where these laboratories are and are being built. Inadequate transparency exacerbates risks to the public and threatens international confidence in the objectives and activities of this U.S. research, damaging prospects of improving global biosecurity. This is also highlighted in the testimony of the U.S. Government Accountability Office, "High-Containment Biosafety Laboratories, Preliminary Observations of the Oversight of the Proliferation of BSL-3 and BSL-4 Laboratories in the United States," October 4, 2007 (GAO-08-108T).

6. Because no one knows how many existing BSL-3 laboratories there are in the U.S. and where they are all located, as well as gaps in public information on new federally-funded facilities to study biological weapons agents, it is not possible to calculate the total increase in BSL-3 capacity; however, it is plainly very large. The National Institutes of Health ("NIH") has funded 13 new Regional Biocontainment Laboratories, plus its own new facilities and others constructed by government agencies, including the Departments of Defense, Energy, and Agriculture. In addition, many universities and other institutes have constructed BSL-3 and BSL-4 laboratories with their own funds, seeking to use the existence of the facility as leverage for federal research funding.

7. It is important to note that while BSL-4 labs are most frequently in the public eye because they are purpose-built to handle the most dangerous biological agents, BSL-3 laboratories handle

diseases that are also extremely dangerous to both researchers and the public and which pose potentially catastrophic risks if released by accident or malfeasance. These include diseases capable of transmission through the general population, including pandemic strains of influenza such as 1918 "Spanish" Flu, SARS coronavirus, and plague (*Yersinia pestis*), as well as animal and/or human threats such as Foot and Mouth Disease and H5N1 "Bird Flu" strains.

8. Although the United States clearly needs a biological defense program, in the past six years laboratory expansion has gone far beyond what is prudent and necessary, and without an adequate regulatory framework. According to the most recent statements by the Centers for Disease Control and Prevention ("CDC"), there are now approximately 400 facilities and 15,000 people in the United States handling biological weapons agents. The proposed upgrades and new facilities for biological defense research will facilitate access to biological weapons agents and knowledge of their use for a greatly increased number of individuals. Examples of these skills include growing and purifying large quantities of highly infectious agent in containment, agent aerosolization (in, for example, challenge tests), and genetic alteration of weapons agents. It is plain to see that our own scores of laboratories that study biological weapons agents represent the easiest avenue by which a would-be bioterrorist could obtain the materials and knowledge necessary to commit crime in the United States.

9. In light of the above, a reduction in the number of facilities and persons handling biological weapons agents is a highly desirable step for both safety and security. This could include cancellation or conversion of some planned and under construction facilities and rerouting of some appropriations toward basic research and public health, in order to help address problems that Americans most frequently face, which are not at all typically caused by biological weapons agents.

10. The Department of Energy ("DOE" or "Department") has developed biological weapons agent detection equipment and decontamination equipment. However, this work has little need for its own BSL-3 facilities. Many of the agents considered to be a bioterrorism threat can effectively be simulated by benign organisms or simulant organisms that pose much lower levels of risk to people, animals, and the environment. The U.S. Army maintains facilities (at Dugway

Proving Ground in Utah and elsewhere) for testing detection and decontamination equipment when the need to do so arises. Moreover, the recent proliferation of BSL-3 laboratories suggests there is no merit in DOE's assertion that there is a lack of capacity at offsite commercial or governmental BSL-3 facilities to perform such research on the Department's behalf.

11. The proposed BSL-3 facility at Lawrence Livermore National Laboratory ("LLNL" or "Livermore Lab") will work with a large number of, by DOE's own admission, pathogens "historically used as biological weapons." These are euphemistically termed "select agents" under 42 C.F.R. § 73 (2005).

12. The final Revised Environmental Assessment ("EA") for the proposed BSL-3 facility at LLNL indicates that laboratory cultures of biological weapons agents may be as large as 1 liter of cultured microorganisms (maximum cell density of about 10^8 cells per ml) in each of the laboratories within the BSL-3 facility. Final Revised EA at 20. It is extremely difficult to envisage a legitimate prophylactic use for this quantity of pathogen. For example, *Coxiella burnetii*, the causative agent of Q fever, is among the agents Livermore Lab intends to study at the proposed BSL-3 facility. The human inhalation infectious dose for *Coxiella burnetii* is considered to be 10 organisms. If LLNL produced cultures of *Coxiella burnetii* in one liter quantities, with an assumed saturated solution of 108 organisms per milliliter, the 1 liter culture of *Coxiella burnetii* would have enough organisms to cause 10 billion human infections.

13. Production of gram or sub-gram quantities of any pathogen is sufficient for defensive biological weapons work, particularly for the development of biological weapons agent detection equipment and decontamination equipment.

14. The EA for the proposed BSL-3 facility at Livermore Lab indicates that aerosol challenge tests on rodents are planned for the facility. In order for this type of testing to yield useful information for a biological defense program, the challenge agent (e.g., *Coxiella burnetii*) must be prepared in a manner to simulate warfare conditions and technologies used by potential enemies. Such research poses greater than normal health risks to laboratory workers and the

surrounding communities because it is designed to render the agents more infectious and pervasive in an open environment.

15. The EA mentions a number of organisms likely to be cultured in the near term. Of these, *Coccidioides immitis*, the causative agent of Valley Fever, and *Brucella spp.*, the causative agent of brucellosis, are regarded as incapacitating, rather than lethal, biological weapons and are unusual choices for defensive biological weapons work, particularly at a DOE facility. Both pathogens are readily treatable and rarely fatal. *Brucella spp.* is only known to have been weaponized by the U.S. and the former Soviet Union. It is thought that *Brucella spp.* was the first agent weaponized by the U.S., which has a long history and extensive knowledge of the agent and the disease that it causes.

16. Incapacitating agents, particularly those with long incubation periods like *Brucella spp.*, are extremely unlikely to be used against the U.S. A terrorist posing a biological threat will choose lethal agents over incapacitating ones. Militarily, incapacitating biological agents are far better suited for use to "soften" (weaken) a civilian population or an opponent's military prior to invasion with a large force. Using such a weapon against the United States simply is not practical, nor, since the disease produces only a low level of fatalities and is readily treatable, does it serve the purposes of terrorists.

17. Accidents and other safety and security problems have resulted from the expansion of research involving biological weapons agents. These include laboratory-acquired infections with biological weapons agents, unauthorized persons handling biological weapons agents, failure to account for stocks of biological weapons agents, and other problems. Due to a lack of transparency in this area, in general, it is only possible for the public to acquire information about laboratory mishaps in the limited number of cases where laboratories are (a) subject to open records rules sufficiently forceful to enable access to accident documentation and (b) have policies to record such incidents. There is mounting evidence that, at many facilities, there have been *de facto* policies not to record accidents, including accidents with biological weapons agents.

18. The following is a listing of accidents and other incidents involving select agents and/or BSL-3 labs prompted by the expansion of biological weapons agent research since 2002. Select agents are those biological agents and toxins designated by the Secretary of the Department of Health and Human Services ("HHS") as having "the potential to pose a severe threat to public health and safety." 42 C.F.R. § 73.3 (2005).

- In August-September 2005, Lawrence Livermore National Laboratory ("LLNL" or "Livermore Lab") was responsible for an anthrax release. On September 24, 2007, the Regents of the University of California, Lawrence Livermore National Laboratory agreed to resolve its liability for this alleged violation of the Select Agent Program. The HHS Office of Inspector General ("OIG") alleged that LLNL transferred vials of anthrax to two laboratories located in Florida and Virginia. During the transfers, anthrax was released from the approximately 4,000 shipped vials. Five workers were exposed to anthrax while unpacking the shipments and required treatment with the antibiotic Cipro for a week. As a result of this incident, CDC suspended all transfers of select agents, and Livermore Lab issued a full stand-down of all select agent work. CDC sent LLNL a report listing 29 points that needed to be addressed. It should be noted that this incident occurred while the prior lawsuit involving the proposed BSL-3 facility at Livermore Lab was pending, and LLNL failed to inform either the plaintiffs or the court of the anthrax release. The OIG specifically alleged that Livermore Lab violated the transfer requirements of the select agent regulations by failing to comply with the applicable shipping and packaging laws when transferring a select agent. In addition, the OIG also alleged that LLNL failed to comply with security and access requirements by allowing an individual not authorized to have access to select agents to package the shipments of anthrax, and that LLNL's Responsible Official—the individual designated by Livermore Lab with the authority and control to ensure compliance with the select agent regulations—failed to ensure compliance with the shipping and packaging requirements of the

select agent regulations. Under the terms of the settlement, LLNL agreed to pay the OIG $450,000 to resolve these allegations.

- Texas A&M University ("TAMU") is a Department of Homeland Security (DHS) National Center of Excellence in the study of biological weapons agents and is the lead institution in the DHS National Center for Foreign Animal and Zoonotic Disease Defense. Through the Texas Public Information Act, and significant pressure on TAMU officials, it was established that in 2006 and 2007 the University committed numerous violations of the Bioterrorism Act of 2002 (implemented by the select agent regulations). The most serious of these included an unreported lab-acquired infection with *Brucella sp.* and multiple unreported exposures to Q fever (*Coxiella burnetii*). CDC investigations prompted by Sunshine Project news releases documented additional serious violations that included more unreported lab exposures, irregularities in accounting for biological weapons agents, and, importantly, revelations that TAMU repeatedly permitted access to and handling of biological weapons agents by persons lacking federal permission to do so. In fact, the brucellosis victim was one such person.
- At the University of Wisconsin at Madison in 2005 and 2006, researchers handled genetic copies of the entire Ebola virus (called "full length cDNAs") at BSL-3, despite the fact that the NIH Guidelines require handling at BSL-4 because the genetic constructs had not been rendered irreversibly incapable of producing live virus. The University of Wisconsin at Madison Institutional Biosafety Committee reviewed and approved this research despite federal guidelines to the contrary. The problem was not detected by NIH. On the contrary, NIH funded the research.
- There is evidence that a situation similar to Wisconsin's exists or existed at Tulane University in New Orleans, Louisiana, which also does not have appropriate facilities for such research. Tulane officials refused a half dozen requests to clarify the research, again with Ebola cDNAs, as well as constructs for Lassa fever virus, another BSL-4 hemorrhagic fever agent.