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10 WATCH OF NEW MEXICO, MARYLIA KELLEY,  
JANIS KATE TURNER, TARA DORABJI,  
11 HENRY C. FINNEY and CATHERINE SULLIVAN

12 IN THE UNITED STATES DISTRICT COURT  
13 FOR THE NORTHERN DISTRICT OF CALIFORNIA

14  
15 TRI-VÁLLEY CARES, NUCLEAR WATCH OF )  
NEW MEXICO, MARYLIA KELLEY, JANIS )  
16 KATE TURNER, TARA DORABJI, HENRY C. )  
FINNEY, and CATHERINE SULLIVAN, )

17 Plaintiffs, )  
18 v. )

19 UNITED STATES DEPARTMENT OF ENERGY, )  
20 NATIONAL NUCLEAR SECURITY )  
ADMINISTRATION, LAWRENCE LIVERMORE )  
21 NATIONAL LABORATORY, and LOS ALAMOS )  
NATIONAL LABORATORY, )

22 Defendants. )  
23 )  
24 )  
25 )

Case No. CV-03-3926-SBA

**DECLARATION OF MARION M. FULK IN OPPOSITION TO DEFENDANTS' MOTION TO STRIKE**

Date: May 11, 2004  
Time: 1:00 p.m.  
Judge: Hon. Sandra B. Armstrong

1 I, Marion M. Fulk, declare as follows:

2 1. I am a Chemical Physicist, retired from the University of California, Lawrence  
3 Livermore National laboratory (LLNL) in 1984, where I served for 18 years as a staff scientist in  
4 chemical physics and material sciences. At LLNL most of my work was classified, but it included  
5 the study of radioactive rainout and aerosols; their dynamics, initiation, and growth. At LLNL, I  
6 studied problems associated with aerosolized particles and their capture by High Efficiency  
7 Particulate Air Filters, commonly called HEPA filters. As attested in greater detail in my prior  
8 declaration before this court, I have worked professionally on these issues for the University of  
9 California and the Department of Energy (DOE) and its predecessor agencies, including the Atomic  
10 Energy Commission, since my work at the University of Chicago in Chicago, Illinois, where I  
11 conducted research on biological systems beginning in 1945.

12 2. I have personal knowledge of the following and could and would competently testify  
13 thereto if called upon to do so.

14 3. My prior declaration, dated February 10, 2004, provided information on HEPA filters  
15 and potential scenarios for worker and off-site exposure to biological agents such as live anthrax, Q  
16 fever, botulism, plague and other pathogens that may be handled in the LLNL Biosafety Level 3  
17 (BSL-3) facility. My prior declaration contained information not included in the Environmental  
18 Assessment (EA) and Finding of No Significant Impact (FONSI) for the LLNL BSL-3.

19 4. I have reviewed Defendants' Motion to Strike Extra-Record Declarations and  
20 Memorandum in Support Thereof dated March 22, 2004, which asks the Court to strike my  
21 declaration because it "does not raise information that DOE failed to consider..." Defendants' motion  
22 to strike offers a single, conclusory sentence that "[g]iven the proposed operation of the facility, there  
23 is no expectation that the HEPA filters would become moisture-saturated or torn" to show that the EA  
24 had adequately disclosed safety issues and that HEPA filters never get wet or torn. This repeats the  
25 very problem I sought to address with my declaration; the EA jumped to conclusions  
without considering or analyzing readily available, peer-reviewed, scientifically credible evidence  
that is relevant to the facts regarding HEPA filters, filter failures and the potential consequences.

26 5. HEPA filters are the primary method used at LLNL to filter hazardous and radioactive  
27 particulate emissions. HEPA filters are the last bastion of defense before biological agents reach the  
28 environment from the proposed BSL-3 facility at LLNL.

1           6.       HEPA filters may become wet and/or torn under conditions where wet aerosols are  
2 used and are not properly dried before coming into contact with the filter medium. A simple failure  
3 of the drying mechanism could cause this condition. The EA for the LLNL BSL-3 specifies that  
4 aerosols will be used in the facility. However, the EA did not analyze the potential for aerosolized  
5 agents to come into contact with the filters or discuss mitigation measures.

6           7.       HEPA filters may become wet and/or torn under accident or upset conditions where  
7 fire suppression system effluent is released. The effluent from sprinkler or other fire suppression  
8 equipment could saturate and plug HEPA filter material. The EA did not analyze the potential for  
9 fire suppression effluent to wet or clog filters or discuss mitigation measures.

10          8.       HEPA filters may become torn due to handling and installation. In fact, handling or  
11 installation accounted for 20% of the reported HEPA filter failures, according to the DOE's 17<sup>th</sup>  
12 Annual Air Cleaning Conference (see end note one in my previous declaration). The potential for  
13 filter leaks caused by handling and installation was not analyzed in the EA nor were mitigation  
14 measures discussed.

15          9.       Also among the data relevant to the facts not included in the EA is that filter failures  
16 were found to occur in approximately 12% of all fiberglass paper-glue HEPA filters, a type of HEPA  
17 filter that may be employed in the BSL-3, during a survey conducted at DOE facilities (see also end  
18 note one in my previous declaration).

19          10.       HEPA filters can also fail catastrophically in numerous accident scenarios, including  
20 events initiated by earthquake, fire or explosion. There is evidence of this in DOE's own operating  
21 record. For example, in 1969, a fire at the DOE's Rocky Flats plant near Denver, Colorado blew out  
22 multiple HEPA filters (see end note number 6 in my previous declaration). In 1977, an accident at  
23 LLNL blew HEPA filter media through an exhaust stack (see end note number 7 in my previous  
24 declaration). The potential for catastrophic accidents at the BSL-3 at LLNL was mentioned in  
25 passing in the EA, but dismissed without analysis, and, in any event, the information contained in my  
previous declaration was not in the EA or its Administrative Record.

        11.       Defendants further ask the Court to strike my declaration because it contains the "issue  
of filters becoming brittle with age." The motion to strike offers a single, conclusory sentence from  
the EA and asserts that sentence should lay the matter to rest. The motion to strike repeats the EA's  
claim that HEPA filters "would be tested annually and replaced as necessary." This dismissive  
conclusion does not take into account available information from LLNL's own operating record. For

1 example, HEPA filters have been left in place in high-risk LLNL facilities, such as the plutonium  
2 facility, for more than 25 years over the objection of LLNL's own filter experts who said that the  
3 HEPAs should be replaced after 6 years.

4 12. Defendants' motion to strike characterizes my previous declaration as "simply"  
5 expressing a "contrary opinion" about DOE's information. In fact, it was and is intended to bring  
6 forward information that was or should have been known by DOE and was missing in the EA and the  
7 Administrative Record used to prepare the EA and FONSI.

8 I declare under penalty of perjury that the foregoing is true and correct, and if called as  
9 a witness, I could and would testify competently thereto. Executed this 19<sup>th</sup> Day of April, 2004, in  
10 Livermore, California.

11 \_\_\_\_\_  
12 MARION M. FULK

1 **PROOF OF SERVICE**

2 I am a citizen of the United States of America; I am over the age of 18 years and not a party to  
3 the within entitled action; my business address is 436 – 14<sup>th</sup> Street, Suite 1300, Oakland, California  
94612.

4 On April 20, 2004, I served a true copy of the foregoing document entitled:

5 **DECLARATION OF MARION N. FULK IN OPPOSITION TO DEFENDANTS’ MOTION**  
6 **TO STRIKE**

7 In the above-captioned matter on each of the persons listed below by electronic facsimile  
8 transmission and by placing a true copy thereof in a sealed envelope with postage thereon fully  
prepaid in the United States mail at Oakland, California addressed as follows:

9 Thomas L. Sansonetti, Assistant Attorney General  
10 Barclay T. Samford, Trial Attorney  
U.S. Department of Justice  
11 Environment and Natural Resources Div.  
Suite 945, North Tower  
12 999 – 18<sup>th</sup> Street  
Denver, CO 80202  
13 Tel: (303) 312-7362  
Fax: (303) 312-7379

14 Alletta Belin, Esq.  
15 Belin & Sugarman  
618 Paseo de Peralta  
16 Santa Fe, NM 87501  
17 Tel: (505) 983-8936  
Fax: (505) 983-0036

18 I certify under penalty of perjury that the foregoing is true and correct. Executed on April 20,  
19 2004 at Oakland, California.

20  
21 \_\_\_\_\_  
22 Teddy Ann Fuss  
23  
24  
25