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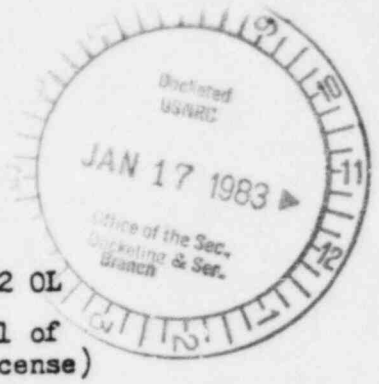
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD



In the Matter of THE REGENTS OF THE UNIVERSITY OF CALIFORNIA (UCLA Research Reactor)	Docket No. 50-142 OL (Proposed Renewal of Facility License)

DECLARATION OF DR. HERBERT SCOVILLE

I, Herbert Scoville, declare as follows:

1. I am presently President of the Arms Control Association. Prior to that time I was Assistant Director of the U.S. Arms Control and Disarmament Agency; before that I was Deputy Director of the Central Intelligence Agency for research. From 1948 to 1955 I was employed by the Armed Forces Special Weapons Project (now the Defense Nuclear Agency) of the Defense Department, studying nuclear weapons effects. A more detailed description of my professional qualifications is attached.

2. It is my understanding that UCLA has requested from the NRC a license for up to 4999 grams of Uranium-235 at 93% enrichment, recently amended from a request for 9400 grams.

3. It is my professional opinion that, absent extremely compelling reasons to the contrary, the facility should instead employ low-enriched fuel, i.e. special nuclear material that cannot be used directly in nuclear weapons. My reasons are as follows.

4. 93% enriched uranium is weapons-grade. In other words, it can be used directly in nuclear weapons without further enrichment. As such, it is extremely sensitive material which needs to be carefully safeguarded. More particularly, it should only be used where absolutely necessary.

5. The move to cut down the amount of HEU at the research reactor at UCLA can have very salutary international effects as well as ones locally. It is important from a U.S. policy standpoint to make as difficult as possible the acquisition of material such as HEU that can be easily fabricated into a bomb.

6. However, we cannot hope to have one standard in the U.S. for availability of HEU and for safeguards on its use and a different standard for other countries. The precedent set at UCLA will be useful in dealing with other countries such as India or Brazil as they seek HEU for their research reactors.

7. A recent example of this problem arose in Iraq. The French were supplying Iraq with a research reactor using HEU. We tried to persuade the French to provide only lower enriched material but the Iraqi government refused to accept this. When the HEU became available in Baghdad the Israelis felt it necessary to carry out a preemptive bombing raid to destroy this reactor. While I think such a violent reaction was very ill-advised, it nevertheless demonstrates the dangers of having large amounts of HEU available in locations where it might be seized and converted to a weapons program. It is perhaps more likely that a nuclear war will start with a bomb being used by a small country or terrorist organization in the Middle East than that the Soviet Union and the United States will start a nuclear war with their thousands of warheads. Therefore the control of HEU is very important, and the standards set in the UCLA case should be useful in dealing with such a problem in the future.

8. For many research reactors it is no longer necessary to have HEU with 93% enrichment; 20% may be quite satisfactory, and this cannot be used for weapons. Therefore, a second step at UCLA, in which the reactor would be converted to use only 20% material, would be very important. It is hoped that having taken the first step of reducing its inventory of 93% material, it will now move on to this conversion to 20% enriched fuel.

I, Herbert Scoville, swear under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Herbert Scoville, Ph.D.

Executed on October 17, 1982,
at Los Angeles, California

PROFESSIONAL QUALIFICATIONS OF DR. HERBERT SCOVILLE

I am presently President of the Arms Control Association, which I co-founded in 1970.

From 1963-1969 I was Assistant Director of the United States Arms Control and Disarmament Agency. Prior to that I was Deputy Director for Research (Science and Technology) of the Central Intelligence Agency.

From 1948 to 1955 I was Technical Director of the Armed Forces Special Weapons Project (now the Defense Nuclear Agency) of the Defense Department, studying nuclear weapons effects.

From 1946 to 1948 I was Senior Scientist at Los Alamos, studying weapons effects for the Atomic Energy Commission.

I received my B.S. from Yale in 1937 and my Ph.D. in physical chemistry from the University of Rochester in 1942.