

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  
(Proposed Renewal of  
Facility License)

RESPONSE BY THE COMMITTEE TO BRIDGE THE GAP  
TO MOTIONS FOR SUMMARY DISPOSITION BY THE STAFF AND THE APPLICANT

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I. INTRODUCTION

On September 1 and September 3 respectively, the NRC Staff and the Applicant submitted motions in the above-captioned proceeding for summary disposition of essentially all contentions and subparts thereto. Both parties asserted that not a single material fact was in dispute as to any of the nearly twenty contentions and that no hearing should be permitted on any of the issues raised by the Intervenor.

CBG objected to the all-encompassing scope of the motions, particularly in light of comments by the Board at the June, 1982, prehearing conference that CBG took as direction not to submit extensive summary disposition motions, or "shotgun" it as one of the members of the Board put it, but to only move for summary disposition in those few areas where a material dispute genuinely does not exist and the matter can be resolved without a hearing on it. On the bulk of the issues in the case--which the Board indicated were complex and detailed--questions were likely to arise, and because "you can't ask questions of affidavits" a

hearing where witnesses were available for examination would provide the fullest, most adequate record for the Board to base its decisions.

CBG particularly objected to the delay occasioned by the Staff and Applicant motions, pointing out that this case is unique in that the action for which the license is requested can continue until the license request is acted upon, thus creating a powerful incentive to keep the matters as long as possible from reaching the Board for final decision. CBG viewed, and continues to view, the motions as frivolous, harrassing, and a delaying tactic. Furthermore, CBG, as an Intervenor of limited financial and other resources, found the all-encompassing scope of the motions and the short time provided for response unduly and impossibly burdensome. It requested relief from the Board.

The Board extended the time for response to January 7 (and with agreement by all parties, later granted until January 12 to make the filing because of delays in Christmas mails and the power outages caused by the heavy storms). The Board further divided the response process into two segments. The first segment involved responses focused on determining whether genuine disputes regarding material facts do exist. At this stage, the parties were directed to avoid discussion of the relevance, materiality, or legal conclusions that would stem from facts about which no material dispute exists. Those matters would be addressed later.

What follows is CBG's response, given the time permitted, to the facts asserted by Staff and Applicant to not be in dispute. It should be made clear, due to the bifurcation established by the Board, that by CBG not disputing a particular asserted fact does not mean that CBG views the supposed fact as relevant or material, or based upon admissable evidence,

or sufficient to meet the high legal burden a movant for summary disposition must meet in order to prevail as a matter of law. All of these matters, as to any facts determined to not be disputed, will await the second phase. CBG thus waives no rights to object to the admissability, materiality, or relevance of any of the supposed facts or their cited basis, either in the second phase, if any, of the summary disposition process, or at hearing.

In addition, CBG must make clear that in responding to asserted facts not in dispute, it has not attempted, nor would the burden be appropriate on either it or the Board, to examine all of the vast multitude of facts in opposition. CBG's responsibility was merely to present sufficient counter-information to demonstrate that a material dispute exists, and its presentation of, for example, violations with safety significance is not intended to be an exhaustive listing, merely a sufficient showing to demonstrate that Applicant's and Staff's assertion as material facts that no violations of safety significance have ever occurred is disputed.

CBG, for the record, reiterates its objections to the delays occasioned by what it views as substantial misuse of summary disposition procedures by Applicant and Staff and hopes such maneuvers do not further defer the time for hearing.

Although a discussion of legal standards for grant of summary disposition would appear to await the second phase of this process, as established by the Board, CBG does wish to keep clear the basic standards for summary disposition--that the burden is on the moving party, who must affirmatively demonstrate the absence of a material dispute; that the responses must be viewed in the light most favorable to the party responding to the motion; and that the decision to be made is not which party is deemed the more correct in a dispute, but whether a material dispute exists to begin with. If so, the matter should go to hearing, where an adequate decisional record can be obtained and preserved.

One further point should be made. Intervenors historically have been permitted to make their cases defensively (e.g., through cross-examination of opposing parties' witnesses). This is particularly true under the Commission's rules because the burden of proof rests upon the Applicant in such cases. Summary disposition must not be permitted to become a clever way of shifting the burden of proof. That burden remains on the Applicant, and it has a heavy burden in summary disposition to demonstrate, for example, that it should be, as it has requested, granted the applied-for license without its witnesses or evidence being subject to scrutiny or cross-examination as would happen at hearing.

Because of the nature of summary disposition, CBG, which had intended to present much of its case defensively at hearing, was forced, in a very short time, to put together what amounts to a comprehensive affirmative case of the sort not normally required of Intervenors.

The decision to be made at this stage is not whether CBG's position on these disputes should ultimately prevail--although we think we have made a very good showing on that score--but rather whether Staff and Applicant have demonstrated adequately the lack of existence of genuine disputes. We think the answer will be readily apparent from an examination of what follows and comparison with the showing made in the Staff and Applicant pleadings and affidavits. Most of their "facts" rest on single-sentence unsupported conclusionary statements, insufficient to meet their burden of demonstrating lack of material dispute. But a detailed discussion of whether the moving parties have met their burden will await a further stage.

Because the Board's procedure directed the focus at this stage be on the statements of material fact put forth by the parties, CBG has not responded in this pleading to the arguments put forth by Staff and Applicant in the body of their legal argument. Silence at this stage should, of course, not be taken as assent.

#### DISCUSSION

The central issues in this proceeding cover a wide range of disputes. In what follows, CBG will put forth its showing that:

- \* The use of weapons-grade uranium in kilogram or greater quantities poses a significant and unnecessary proliferation threat, one that runs counter to national and NRC policy to reduce wherever possible HEU available.
- \* Low Enriched Uranium fuels are currently available. The ASLB thus has the current option of carrying out the NRC policy of using its licensing power to reduce the availability of material that, if stolen or diverted, could be used to make a nuclear weapon.
- \* Substantial safety benefits--particularly in protection against destructive power excursions--would result from such conversion as well as the non-proliferation benefit.
- \* Very serious accidents are credible at this reactor facility, with consequences vastly higher than those predicted by UCLA or the Staff for the accidents they have deemed the maximum credible. Because of major errors in analysis, these accident scenarios have been inadequately assessed.
- \* The reactor--composed of graphite, uranium metal, and magnesium--can burn, as in the Windscale accident. This would provide a powerful driving force which could result in a very large fraction of the fission product inventory being released.
- \* The reactor can suffer a severe power excursion--in which the power rises uncontrollably many orders of magnitude in milliseconds--resulting in fuel melting and explosive disassembly of the core, as in the SL-1 accident case and as demonstrated at BORAX and SPERT.

- \* The storage of Wigner energy--stored energy in graphite induced by irradiation at relatively low temperatures--has been severely underassessed at the facility. The true energy storage level, given the calculational methodology employed by the Staff consulting group but using numerical inputs more accurate for the UCLA case, indicates that a temperature rise of only 120°C could be sufficient to release enough Wigner energy to bring temperature to the melting or ignition temperature.
- \* A number of other credible accidents of far larger consequences than those examined by Staff or Applicant to date exist. But even the Staff's maximum credible accident--involving release of .189% of the assumed core inventory of radioiodine and essentially nothing else--produce unacceptable doses to the public, in excess of 9000 rem to the thyroid.
- \* A more realistic release fraction--25% of the radioiodines, the level indicated by the industry standard for site evaluation for research reactors--produces doses in excess of permissible levels for tens of kilometers from the facility and doses as high as a million rem to the thyroid at the facility boundary.
- \* The particular site characteristics at UCLA--lack of exclusion zone whatsoever, dense population immediately around the facility and out a great distance beyond, no containment structure or other engineered features to reduce quantities of fission products that would be released in an accident--greatly exacerbates the consequences of a potential accident at the facility.
- \* The history of regulatory noncompliance, inadequate managerial controls, insufficient attention to maintenance, the age and unreliability of the reactor and its supporting equipment, and a series of calibration errors greatly increase the probability of and consequences from an accident at the facility.
- \* During normal operation, however, doses far in excess of safe levels are indicated in several areas containing large numbers of people. Argon-41 concentrations many times the 10 CFR 20 Appendix B limits are indicated in unrestricted areas, even when operating time is factored in. And because of inadequate shielding, gamma and neutron "shine" above the reactor may be exposing members of the public to very substantial doses, given the available data from radiation surveys. Because the reactor and reactor facility were built for a 10 kw reactor with no construction above, the current 100 kw reactor poses a serious potential for hazard to those people now above it.
- \* The reactor is not used for the purposes for which it was licensed or the purposes which it claims. By far the majority of reactor use now is commercial activity, in violation of the license. The facility has almost no instructional and research utility; whatever such uses may have existed have long since ceased.

- \* The true environmental impacts of the proposed action, and serious alternatives thereto, have not been examined adequately. The impacts are potentially very severe, and the alternatives very attractive.
- \* The University has not been forthcoming with the Board about its current financial situation. The University, and the State, its primary funding source, face the gravest fiscal crisis since the Great Depression. The University system faces cuts the equivalent, says the University President, of closing 2 of the 9 campuses in the system, or shutting all 24 professional schools in engineering, business, agriculture, law, public health, nursing and education. Furthermore, the Applicant has not been forthcoming in alerting the Board to the identification of the reactor program as a low-enrollment, low-cost-effective item that is recommended for consolidation with one of the several other reactor programs within the UC system.
- \* Lastly, the Applicant has failed to be forthcoming in its application. That application contains numerous misleading and materially false statements; furthermore, the University has copied, without independent verification, and often without so identifying it, material from other sources irrelevant or of unproven validity for the UCLA case. This failure, after 22 years, to conduct a safety review of its own for the facility, or a confirmatory review of the analyses it has relied upon, has led to reproduction of major errors in these analyses which have permitted operating conditions that pose substantial risks to the public. The failure to conduct an adequate independent analysis of its own facility and its purported inability to do so raise serious questions about the ability of the Applicant to understand the reactor for which the license is requested and to properly assess the safety implications of proposed facility changes, new experiments, instrumentation alterations, relaxing of previous safety limits, and the like.



To demonstrate the existence of these disputes with the quite different view of the facts held by Applicant and Staff, CBG has relied upon the following experts whose declarations are attached:

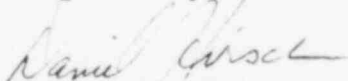
Dr. Herbert Scoville	President of the Arms Control Association; former Assistant Director, U.S. Arms Control and Disarmament Association; former Deputy Director (scientific) Central Intelligence Agency; former Technical Director, DOD Special Weapons Project
Dr. Theodore Taylor	internationally recognized expert in the nuclear safeguards field; former nuclear weapons designer at Los Alamos; one of the designers (with Teller and Dyson) of the TRIGA reactor; member of the Kemeny Commission on the TMI accident
Boyd Norton	Group Leader of the Nuclear Test Section of SPERT; in charge of operation of both the SPERT I and III reactors; the man who "blew up" SPERT I in the final destruct test
Professor James Warf	Professor of Chemistry at USC; former Group Leader of the Analytic Section and the Inorganic Section of the Manhattan Project
Professor Jackson Davis	Professor of Biology and Environmental Studies at the University of California at Santa Cruz
Professor Michio Kaku	nuclear physicist, City University of New York (CCNY campus)
Dr. Ira Monosson	formerly the Chief Medical Officer of CAL-OSEA; now in private practice in occupational and environmental health
Dr. Jan Beyea	a leading expert on dispersion modelling and accident consequence assessment for nuclear facility accidents
Louis Foster	formerly with the Nuclear Environmental Services Division of SAI, implementing radiation monitoring systems at numerous nuclear power plants around the country
Dr. Ed Cooperman	Professor of Physics and Chairman of the Radiation Safety Committee at California State University at Fullerton

Additionally, declarations by the following members of the Southern California Federation of Scientists are included: Dr. Sheldon Plotkin, a safety and systems engineer; Miguel Pulido, a mechanical engineer; David Dupont, a chemist; Dr. Irving Lyon, an environmental consultant; Steven Aftergood, an environmental researcher on the CBG staff; and Daniel Hirsch, CBG President. In addition, declarations are provided by Neal Donovan-Gantz, an environmental intern formerly with CBG, and Leo Baefsky, a certified public accountant.

CONCLUSION

CBG respectfully submits that its responses to the Staff and Applicant motions thoroughly demonstrate the existence of genuine disputes as to material facts put forth and that a full evidentiary hearing on these matters should be expeditiously undertaken.

Respectfully submitted,



Daniel Hirsch  
President  
COMMITTEE TO BRIDGE THE GAP

Dated at Los Angeles, CA

this 12th day of January, 1983

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DECLARATION OF SERVICE

I hereby declare that copies of the attached: CBG RESPONSE TO  
STAFF AND APPLICANT MOTIONS FOR SUMMARY DISPOSITION

in the above-captioned proceeding have been served on the following by  
deposit in the United States mail, first class, postage prepaid, addressed  
as indicated, on this date: January 12, 1983.

John H. Frye, III, Chairman  
Atomic Safety & Licensing Board  
U.S. Nuclear Regulatory Commission

Dr. Emmeth A. Luebke  
Administrative Judge  
Atomic Safety & Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dr. Oscar M. Paris  
Administrative Judge  
Atomic Safety and Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Chief, Docketing and Service Section  
Office of the Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555


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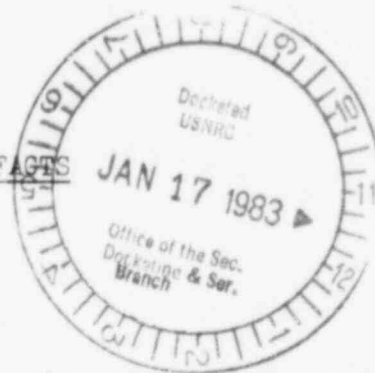
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Daniel Hirsch  
President  
COMMITTEE TO BRIDGE THE GAP

CONTENTION I

RESPONSE TO STAFF'S ASSERTED MATERIAL FACTS



1. NOT DISPUTED
2. NOT DISPUTED
3. DISPUTED (Davis declaration, P20,22-23; "Simulation of Earthquake-Induced Vibrations in a UCLA Reactor Fuel Bundle," unpublished ms. by Richard Lee Rudman, 1968, excerpt attached; Norton declaration for V, P59; Kaku declaration for XIX, P.69)
4. DISPUTED (same citations as in 3 above; plus 1968 inspection report; plus Davis declaration at P21)
5. DISPUTED. (i.e., the accident analysis in the amended application was performed, not by UCLA staff, but by the NRC staff consultants; see Cort and Hawley studies, amended application which includes them by reference, and Davis declaration at P16-17)
6. DISPUTED (Davis P 18,35; Aftergood and Beyea declarations for XII;)
7. LEGAL CONCLUSION
8. LEGAL CONCLUSION
9. DISPUTED (Aftergood declaration for I, entire doc. plus attachments, key passages P 10-14)
10. DISPUTED (Davis, P19-20,23; Plotkin for I, P 6; Norton for V, P59; 1976 Annual Report, internal, quoted in Davis P19; primary coolant leak reported to AEC as reportable occurrence shortly after earthquake)
11. DISPUTED (Plotkin for I, P7-8)
12. DISPUTED (Kaku for XIX, P 85)
13. DISPUTED (Kaku P85; Davis P10-13)
14. DISPUTED (Aftergood and Beyea declarations entire, for XII; Kaku for XIX at P83-4,86; Norton, P76)
15. DISPUTED (Davis P29-33; Cooperman P6-9; Baefsky for XVIII, P9-10; Report of the Universitywide Program Review Committee on Engineering, section attached to Baefsky XVIII declaration)
16. DISPUTED (Norton for V, P12-14, 15-16; Melted fuel from Spert \$3.50 excursion, photo attached to Norton declaration; Kaku for XIX, P44-54)
17. LEGAL CONCLUSION.

RESPONSE TO UCLA'S ASSERTED MATERIAL FACTS

1. DISPUTED. (The two sets of questions submitted by Staff requesting additional information; for example, to break the "research" category of reactor use into categories such as commercial).
2. DISPUTED. (Davis P4,9-14,19-23; Ashbaugh memorandum on wells, following Davis declaration; Donovan-Gantz P2-5; Aftergood for I, P2 and following; Plotkin for I, P 5-9)
3. DISPUTED. (Plotkin for I, P7,9; Pulido P33; Monosson for IV, P21)