

COMMITTEE TO BRIDGE THE GAP  
1637 Butler Avenue, Suite 203  
Los Angeles, California 90025  
(213) 478-0829

April 22, 1983

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)

CBG'S ANSWER TO APPLICANT'S APRIL 12 PLEADING CONSIDERING SABOTAGE CONSIDERATION

I. Introduction

The Board's Memorandum and Order of March 23, 1983, directed parties who wished to comment on Board consideration of removal of the sabotage subpart of Contention XIX from consideration in the proceeding to do so by April 1 (later extended to April 4), and provided opportunity for parties to respond to each other's response.

On April 4, all participants in the proceeding except the Applicant submitted argument on the matter. Applicant submitted no initial response, but on April 12 submitted a reply to CBG's pleading.

Concerned that such a procedure denied it the opportunity to respond to Applicant's argument, CBG requested leave to submit such a response, which was granted by the presiding officer by phone on April 21. CBG responds as follows.

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## II. Discussion

In a single sentence on page 3, Applicant dismisses, without any explanation, relevance of the Columbia case to the matter at hand. This is most puzzling, because Columbia is, of course, the only case where such matters relating to research reactors have been litigated, and it is right on point as to the matter at hand. In Columbia, sabotage scenarios were considered as part of accident scenarios, and, in part because of that consideration, conditions were imposed on the license strengthening the specific protective measures to be taken against sabotage.

On April 6, 1970, the Atomic Safety and Licensing Board convened to rule on the application by the Trustees of Columbia University for a license to operate its TRIGA reactor in mid-Manhattan certified to the Appeal Board a question as to what type of major accident should be hypothesized for purposes of site analysis in that proceeding, where a research reactor "is proposed to be operated in the midst of a densely populated community?" The licensing board was concerned that whereas the specific kind of accident for site evaluation purposes was defined for power reactors (as in 10 CFR 100), there was no such regulatory guidance for research reactors.

On May 26, 1970, the Appeal Board responded. In the Matter of Trustees of Columbia University, ALAB-3, 4 AEC 349. The Appeal Board indicated that lack of specific criteria was no impediment, that Part 50 of the regulations provided a "framework for the systematic identification, analysis, and assessment of potential facility hazards, all of which is to be done in the light of the circumstances relevant to the particular license application being considered." Columbia, supra, at 352. Given that framework for systematic assessment of "potential facility hazards,"

the Appeal Board suggested the Licensing Board consider the various hazards scenarios put forth by the parties in reaching its ultimate decision as to safety.

The Appeal Board also commented on sabotage considerations (at 353),

Thus, as respects the possibility of industrial sabotage or civil disturbance, it will properly be the role of the Board to determine, on the basis of the record, whether the applicant's proposed industrial security measures for this particular facility are adequate.\* In evaluating the adequacy of those security measures, their effectiveness in preventing any credible hazards to the public should be examined, as should be the inherent and engineered safety characteristics of the facility which bear on the matter.

\* (footnote not relevant)

At the Appeal Board's direction, the Licensing Board thus considered the various hazards scenarios put forward by the various parties. Among the scenarios considered was a particular sabotage scenario, in particular "sabotage of the reactor by high temperature destruction of the fuel elements with the shielding water removed." Trustees of Columbia University, 4 AEC 594,610 (1971). After consideration of the evidence of record, which included the particular characteristics of the particular TRIGA reactor in question (which appeared to require for successful sabotage "determined saboteurs with advanced knowledge of physics and mechanics [who] could plan and successfully execute without prior detection a most complex feat, even under ideal experimental conditions, involving extensive preparation, highly specialized skills and tools, and serious personal risk." (ibid.)), the Board made a determination for site and safety evaluation purposes of the event which would result in the maximum potential hazards. In part because of uncertainty about fission product release fraction, the Board declined to issue the requested license.

The Appeal Board, in its subsequent review of the Licensing Board decision, particularly with regards sabotage protection measures and "the inherent and engineered safety characteristics of the facility which bear on the matter," requested additional information. Trustees of Columbia University, ALAB-26, 4 AEC 647,651 (1971). As the Appeal Board later summarized its intent:

...we requested the applicant, through oral argument and through a brief if it desired to submit one, to address itself to the sufficiency of the physical security measures it proposed to adopt. We did this since we are of the opinion that the physical security of the reactor must be such that there is reasonable assurance that the public health and safety will not be compromised as a result of willful damage or destruction.

ALAB-50, 4 AEC 849,855 (emphasis added)

Based on its review of the record (including consideration of consequences from successful sabotage, inherent and engineered safety characteristics of the facility that bear on the degree of sabotage protection necessary for the facility in question, and the specific proposed protective measures against sabotage), the Board concluded that "the operating license which we are authorizing in this decision must include specified conditions designed to enhance the physical security of the reactor." Part 73-- nor the lack of specific guidelines contained therein as to how to meet the sabotage protection goal--provided no bar to addition of extra protective measures from those proposed by the Applicant. As the Appeal Board put it:

Unfortunately, as in the case of standards for evaluating the effects of a postulated accident in research reactors,<sup>7</sup> there are no standards available for evaluating the physical security of a research reactor, and it is necessary for use to establish conditions for the purpose of providing reasonable assurance that the public health and safety will not be compromised by willful damage or destruction.

<sup>7</sup> See Part 3 of this Decision [which indicated that lack of regulations regarding accident analysis and site criteria for research reactors was no bar to reaching that issue]

The license then issued with additional conditions designed to protect against sabotage, because the consequences of such sabotage if successful could be inimical to public health and safety.

### III. Conclusion

The Applicant is in error that, for some unexplained reason, reliance on the Columbia case is somehow "misplaced." In Columbia, sabotage scenarios were explicitly considered in the context of accident analysis (4 AEC 610). Consequences from such a scenario were also explicitly considered (4 AEC 616). And the Appeal Board directed that inherent features that might bear on the matter also be considered. (4 AEC 651).

Lack of specific regulations explicitly mandating what type of accident to consider in hazards analysis was ruled to be no bar to considering all credible scenarios and ruling, without regulatory criteria, on the basis of the record. That is precisely what the Columbia case was all about.

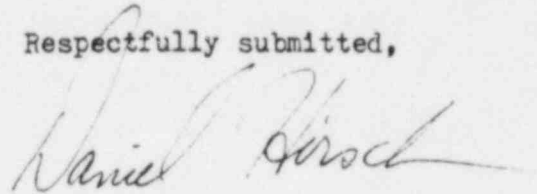
Significantly, Applicant does not argue (because it cannot) that there is any regulation prohibiting consideration of sabotage for hazards and site evaluation purposes, but rather argues that no regulation specifically requires such consideration. The lack of a regulation specifically authorizing consideration of a specific contention in a contested proceeding regarding a research reactors (for which, as was the problem in Columbia, there are few explicit regulations) in no way makes such a contention an impermissible challenge to a regulation as per 10 CFR 2.758, because, of course, there is no regulation that is being challenged. How to make the public health and safety determination in off-normal situations for a research reactor in the absence of specific regulations providing explicit guidance was, of course, the precise matter dealt with in the Columbia case.

The Columbia case answers the questions raised by the Board in the UCLA case. Sabotage was considered in the context of accident analysis in that case and, in part because of that consideration, a greater degree of sabotage protection that proposed was required by the Appeal Board, in the form of conditions on the license. Sabotage consideration as part of site and hazards evaluation, and review of possible inherent protections against sabotage (as alleged by Staff), is not only not prohibited, but appears necessary in reaching the Part 73 determinations whether sabotage protection as proposed is adequate or whether additional conditions should be imposed. (It is very important to keep in mind that both Staff and Applicant assert that no protection against sabotage is required or necessary for the UCLA reactor.)

Finally, Applicant asserts that the motions by it and the Staff for summary disposition of Contention XIX (which includes the sabotage consideration) have not been disposed of by the Board. This is, of course, patently false. The Memorandum and Order of February 8, 1982, (Ruling on Motions for Summary Disposition), explicitly ruled, "UCLA's and Staff's motions for summary disposition of Contention V, XIX, VIII, XV, XII, and XIII are hereby denied." (Order, p. 38), and (p. 6), "UCLA and Staff, having failed to carry their burden, are not entitled to summary relief. Consequently we deny the motions to the extent that they address the following contentions... [of which Contention XIX is included]." UCLA's assertion that its summary disposition motion on this contention has not been denied by the Board is, thus, less than truthful. In the face of UCLA's continued assertion it need not protect against radiological sabotage, and given the Columbia precedent, no justification for removing the sabotage subpart of Contention XIX, for which summary disposition has been denied, exists. Quite the contrary.

As the Appeal Board put it in ALAB-50, sabotage consideration must be thorough so that there is "reasonable assurance that the public health and safety will not be compromised as a result of willful damage or destruction."

Respectfully submitted,

A handwritten signature in cursive script that reads "Daniel Hirsch". The signature is written in dark ink and is positioned above the typed name.

Daniel Hirsch  
President  
COMMITTEE TO BRIDGE THE GAP

dated at Ben Lomond, CA

this 22nd day of April 1993

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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Docket No. 50-142

(Proposed Renewal of  
Facility License)

DECLARATION OF SERVICE

I hereby declare that copies of the attached: CBG's ANSWER TO APPLICANT'S  
APRIL 12 PLEADING CONSIDERING SABOTAGE CONSIDERATION

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: \_\_\_\_\_.

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. Glenn O. Bright  
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

Counsel for NRC Staff  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
attention: Ms. Colleen Woodhead

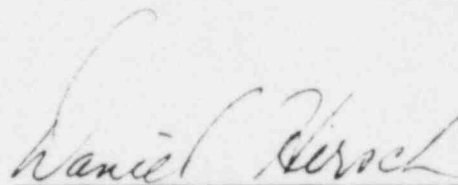
William H. Cormier  
Office of Administrative Vice Chancellor  
University of California  
405 Hilgard Avenue  
Los Angeles, California 90024

Christine Helwick  
Glenn R. Woods  
Office of General Counsel  
590 University Hall  
2200 University Avenue  
Berkeley, CA 94720

Mr. John Bay  
3755 Divisadero #203  
San Francisco, CA 94123

Lynn Naliboff  
Deputy City Attorney  
City Hall  
1685 Main Street  
Santa Monica, CA 90401

Carole Kagan  
Atomic Safety and Licensing Board Panel  
U.S. NRC  
Washington, DC 20555



Daniel Hirsch  
President  
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