

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:  
Elizabeth S. Bowers, Chairman  
Dr. Oscar H. Paris  
Dr. Emmeth Luebke

In the Matter of:

THE REGENTS OF THE UNIVERSITY  
OF CALIFORNIA

(UCLA Research Reactor)

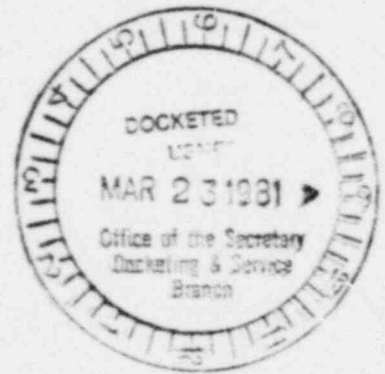
Docket No. 50-142 OL  
(Proposed Renewal of  
Facility License)

March 20, 1981

ORDER SUBSEQUENT TO SECOND PREHEARING CONFERENCE

On December 1, 1980, the NRC Staff submitted three documents to the Board. Attachment A is a stipulation in which agreement was reached on language and admissibility of certain contentions. Attachment B sets forth those contentions where agreement was reached on language but not admissibility. Attachment C sets forth those contentions where agreement was not reached on language or admissibility. The Staff's filing of December 1, 1980 also states the Staff position on the unstipulated contentions in Attachments B and C.

On November 28, 1980, the Intervenor, Committee to Bridge the GAP (CBG), stated the CBG position on those contentions in Attachments B and C. CBG also requested that a prehearing conference be held so that the parties would have an opportunity to respond to the arguments of the other parties.



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On November 28, 1980, UCLA stated its position regarding the contentions in Attachments B and C.

The Board agreed with CBG that it was appropriate to have a prehearing conference and in a conference call in early December suggested the first week of January. It was determined that the first week in February was the earliest convenient time. The prehearing was set for February 4 and 5, 1981.

At the prehearing conference, the Board accepted the stipulation (Attachment A) and commended the parties on the extensive work effort to arrive at a total agreement on all contentions. Tr. 92 We then proceeded to hear argument from CBG, UCLA and the Staff, followed by rebuttal from CBG on each contention in Attachment B and C. We will not repeat the detailed contentions or all the extensive argument from each party on each contention. The transcript reference cited is where the discussion begins on each contention.

#### ATTACHMENT B CONTENTIONS

I.1 Both UCLA and Staff opposed the admission on the basis that the application cited the article relating to the vibration test and therefore did not omit essential information. It appears to us that the article was cited in support of the application, which may or may not be the case. We have determined that it is appropriate to inquire into the matter. The contention is admitted as modified:

"The Application reference to experimental vibration of the reactor is misleading." Tr. 96

V.3. and 11. UCLA originally took the position that these subparts relative to excess reactivity are duplicative in themselves and also duplicate other parts of V, but at the prehearing conference, UCLA agreed to the admissibility of V.3. and 11. The Staff views them as additional bases for stipulated Contention V. We agree with the Staff. V.3. and 11. are admitted. Tr. 109

X. UCLA contends that CBG is attempting to apply regulations that pertain to power reactors and not to a research reactor. The Staff takes the position that 1.a. and b. should not be admitted since they do not relate to research reactors. The Staff supports the admission of 2.a.-g. but has taken the position that 3 and 4 are premature since they would come into play only if an EIS was issued.

The Board agrees with the Staff that 1.a. and b. relate to power reactor. and not research reactors; therefore, they are denied. We also agree with the Staff that 2.a. through g. are appropriate issues which should be addressed; therefore, they are admitted. 3.a., b. and c. and 4.a. through f. are essentially critical of the EIS. Since it is not now known whether an EIS will be prepared, these issues are premature. 3 and 4 with subparts are deferred. Tr. 115

XI. This contention was withdrawn at the prehearing conference.  
Tr. 143

XII.1. through 9. UCLA supports the admission of this contention.  
The Staff supports the admission except for subpart C. The following rewording was suggested by the Board at the prehearing and was accepted by all parties:

"2. The radiation monitor system which activates the scram system is inadequate." Tr. 154

As reworded, Contention XII.1. is admitted. Tr. 144

XV. UCLA opposes this contention relating to the location of the reactor in the building on campus as vague, nonspecific and duplicative of other contentions. The Staff supports admission but believes this contention should be incorporated into Contention X. UCLA agreed with Staff. The Board, however, agrees with the Intervenor and will hear this contention as a separate safety, rather than environmental, issue. Contention XV is admitted. Tr. 155

XVII. UCLA stated originally it only opposed subpart 5 of the contention which relates to seismic activity but at the prehearing suggested that they would have no problem with it if it read "all current information required by 50.34." Tr. 199 The Staff supports the entire contention. The contention is modified to add "current" between "contain" and "information" in the fourth line of the umbrella paragraph and the same addition in subpart 5. The contention as modified is admitted. Tr. 174



XVIII. UCLA opposes this contention as being without basis for the allegation that the Applicant is not financially qualified. The Staff supports the contention as rewritten but points out an adverse finding on Contention II would eliminate subpart 3 of Contention XVIII. The contention is admitted. Tr. 200

XXI. UCLA takes the position that no useful purpose would be served by examining the existing emergency plan since new requirements went into effect November 3, 1980 and the Applicant has until November 2, 1982 to submit the new emergency plans.

The Staff supports the admission of this contention.

UCLA stated at the prehearing conference that it is possible the new emergency plan will be in place before the evidentiary hearing on that issue. Tr. 223

The Intervenor's expressed specific interest in the new plan but to protect their rights want to have the contention admitted at this stage. We considered deferring on this issue but have determined the best course is to admit the contention as modified by inserting the word "Present" between "Applicants" and "Emergency" in the first line of the umbrella paragraph. We will consider future development in this matter and, if appropriate, take further action. The contention as modified is admitted. Tr. 218

ATTACHMENT C CONTENTIONS

- VI.1. UCLA opposes subpart 1 which alleges emissions are excessive as lacking specificity and that it is repetitious. The Staff opposes on the basis that it is repetitious of Contention VI as stipulated. The Board agrees that it is repetitious and adds nothing in the way of specificity. Subpart 1 is denied. Tr. 242
- VI.6. UCLA contends that subpart 6 is an attempt to apply ALARA standards for power reactors to this research reactor and that is not appropriate nor permitted. The Staff also opposes on the same basis and further states that CBG is requesting the Board to set numerical guidelines for Part 20.1 ALARA requirement. In the Staff's opinion this would be rulemaking and outside the jurisdiction of the Board. The parts of VI which have been admitted will give the Board considerable information on the radiation emissions in regard to health and safety and will enable it to take whatever action the Board considers appropriate. Subpart 6 is requesting the Board to engage in rulemaking and outside our jurisdiction. Subpart 6 is denied. Tr. 244

- VIII.3. UCLA states that it opposes subpart 3 because it asserts that this research reactor should be held to 10 CFR Part 100 and that Part 100 does not pertain to research reactors. The Staff opposes for the same reason. CBG stated in rebuttal that the Board in the Columbia University case engaged in rule-making and this Board should have similar authority. The Appeal Board was explicit in the Columbia University case that 10 CFR Part 100 did not apply to research reactors.<sup>1/</sup> The fact the UCLA made a reference to Part 100 in its application does not make Part 100 applicable to research reactors. Subpart 3 is denied. Tr. 260
- X.4.e. UCLA states it doesn't care if this subpart is admitted or not, but the cost of operating a reactor and the cost of decommissioning are not logically related. The Staff suggested since this item was in the same premature category as X.3 and 4. a-f (dependent on the issuance of an EIS) the agreement to defer 3 and 4 would also apply to 4.e. We agree. The ruling on subpart e. is deferred. Tr. 267
- XIII. The contention consists of two sentences. The first is an allegation that information relative to the special nuclear materials license is lacking in the application. UCLA stated it would stipulate that it would furnish any and all information the Staff or the Board requested. All required information will

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<sup>1/</sup> Trustees of Columbia University (Columbia Research Reactor) ALAB-50, 4 AEC 849, 854 (1972).

be furnished so the allegation in the first sentence may no longer be a dispute. Tr. 270

The second part relates to the enrichment level and quantity of the fuel. CBG does not contend that regulations have been violated but alleged that there is an unnecessary threat to the health and safety of the public. The Staff takes the position that the Board cannot inquire into the matter unless there is a health and safety question. UCLA takes the position that the fuel on hand is only that required to properly operate the reactor. We have determined that there is a health and safety question involved and the contention is admitted.

Tr. 270 See also Tr. 287

- XIV. UCLA states that CBG has not provided a basis for alleging there are "inherent" problems at Argonaut-type reactors. At the Board's suggestion, CBG deleted the word "inherent" Tr. 309 The Staff position is that the contention is vague and no nexus has been shown between undefined problems and the UCLA reactor. UCLA also stated that the Applicant doesn't have the requested information on the Argonaut reactors in Washington and Florida. At the prehearing, CBG identified several problems at the Washington and Florida reactors they happened to know about but their concern is that they do not know if there have been other problems. The Staff



stated it is not their practice to circulate problems reported in Licensee Event Reports (LER) on research reactors to like facilities but they do provide this information on power reactors.

The Application referenced the other two reactors. The Board has determined that information on problems common to Argonaut type reactors is relevant to the health and safety consideration of the UCLA reactor. The contention is modified by deleting the word "inherent" and changing the words "faced by" to "common to." The contention is admitted as modified. Tr. 290

XVI. 2, 3, 4 and 5. Tr. 318

2. CBG stated at the prehearing that they listed 2, 3, 4 and 5 to point out specific reasons in support of the "umbrella" paragraph relating to the age of the reactor which has been admitted and if the Board determines they are duplicative CBG has no problem because the issues can be raised. The Staff opposes because they are duplicative. UCLA concurs with the Staff. The Board concurs that subpart 2 duplicates the "umbrella" paragraph and is therefore denied.

3. The Staff and UCLA take the same position as on subpart 2. Subpart 3 does not repeat the "umbrella" paragraph in that it specifies "outdated" equipment. The Board has determined that this is a health and safety issue which should be considered. Subpart 3 is admitted.

4. The application under consideration by the Board is for twenty years. We either approve or do not approve that application. Subpart 4 is denied.

5. CBG stated that this subpart contends that the useful life of the reactor is not twenty years but five years would be more appropriate. On the same basis as Subpart 4, the Board denies Subpart 5.

XVII.2. This is repetitive of XVII "umbrella" and Subpart 5 as modified to require "current" information. Subpart 2 is denied. Tr. 328

XIX. At the prehearing conference, CBG stated that this contention, as reported by the Staff in Attachment C, left out important words in the "umbrella" paragraph. CBG stated the paragraph should read:

"The Application's Safety Analysis is flawed because it does not include an analysis of the 'maximum creditable accident' or a 'design basis accident'. In providing such an analysis the following hazard scenarios for the facility have not been considered." Tr. 334

UCLA opposes this contention on the bases that Subpart 1 is not relevant, Subpart 2 is not credible and Subparts 3 and 4 use the term "design basis accident" mistakenly. The Staff states that Subpart 1 is repetitive of Contention XX; Subpart 2 has no basis to support a plane crash hazard and Subparts 3 and 4 are encompassed in Contention X (EIS) and are repetitious. We are considering a small research reactor

based in the heart of a large university campus. We are compelled to consider possible hazard scenarios. Contention XIX is accepted but Subpart 3 is modified by deleting "Design basis accident" and substituting "Multiple failure mode." Tr. 333

XX. UCLA contends that CBG has not provided a basis for this contention relating to security precautions. UCLA also considered the contention untimely. At the first prehearing conference on September 25, 1980, the Staff requested time to modify its position on Contention XX and to meet with CBG and explain the security regulations. This proposed procedure met with the approval of the Board. Tr. 41 The Staff supports the submittal after the prehearing conference as timely. There is no question that good cause existed for the submittal on November 6, 1980 of revised Contention XX since this submittal was with the Board approval. Tr. 359

The Staff opposes this contention "because no basis is provided to support any allegation regarding the asserted inadequacies of the Applicant's security plan." The primary thrust of the Staff position is that the Intervenor is applying the power reactor requirements of 10 CFR §73.55 instead of the relevant requirements of §73.67 pertaining to research reactors. The Staff also challenges numerous factual allegations as being incorrect.

Another area of dispute is the applicability of 10 CFR §73.60. The Staff and UCLA state it does not apply since there will not be 5,000 grams of U-235 at the reactor. CBG stated that 73.60 is applicable since UCLA is requesting 4700 grams unirradiated and 4700 grams irradiated and further their irradiated fuel has less than a hundred rem dose. See Tr. 382 and Tr. 392. The Staff stated that the core fuel is about 4000 grams which emits a hundred rems and the fresh fuel is less than 500 grams so 73.60 would not apply. See Tr. 389.

At the prehearing conference CBG said, "We contend that even under 73.67...that the Applicant doesn't even meet those provisions, and have listed a number of instances where we see those deficiencies. We content further, however, that 73.60 also applies in this case...." Tr. 391

The Board has decided to admit Contention XX modified by the insertion of "pursuant to 10 CFR 73.60 and 73.76" between the words "it possesses," and "thus indicating" in the contention. Tr. 359



XXII. 1, 2, 3 and 4

UCLA opposes on the bases that Subpart 1, this is an administrative change; Subpart 2, there has never been this requirement; Subpart 3, ALARA is in 10 CFR §20.1 and Subpart 4, this was an inadvertent (editorial) omission. The Staff states Subpart 1 is duplicative of I.3.c (ii); Subpart 2 repeats I.3.c (iii). Subpart 3 is in the code. Subpart 4 reference to exhaust stack height and flow rate were part of amendment 10 and need not be in the technical specifications. The Staff agrees there should be access restrictions to the roof and will require its inclusion. CBG contends that Contention I relates to defects in the application. Staff states the only reason to criticize the application in the areas of Subparts 1 and 2 had to be on a health and safety basis.

We agree with the Staff 1, 2, 3 and 4 are duplicative of stipulated Contention I and are therefore denied. Tr. 400

XXIII. All parties are in agreement that the application contains a reference to an intended future action--the installation of decay tanks. The application also states the question of installation of decay tanks would be the subject of an amendment to the license. CBG also contends that UCLA has communicated to NRC and the public that it intends to increase maximum permitted power. Both UCLA and Staff take the



position that the subject of a possible future amendment is not for consideration by this Board since it is not before us and would therefore be beyond our jurisdiction. UCLA stated at the prehearing that the application would be amended to delete the reference to the installation of decay tanks. CBG stated that when that is put in writing they will withdraw the contention.

We will defer ruling until UCLA has a reasonable time to amend. Tr. 425

XXIV. CBG contends that UCLA shipped special nuclear materials without adequate precautions and the grant of the application would be a threat to public health and safety. All parties apparently agree that the one and only shipment UCLA has made to date was in June 1980. CBG also confirms that UCLA contacted the Staff by telephone prior to the shipment and apparently got explicit instructions. The regulations, all are agreed, changed two weeks later. The Staff takes the position that any problems that developed in that shipment are not before the Board but were an Inspection and Enforcement matter for NRC. The Staff stated at the prehearing conference that no I and E punitive action (i.e., report) was taken. CBG has taken the position that because some problems developed in the June 1980 shipment, UCLA cannot be entrusted to operate the facility and consequently arrange for any

possible future shipments. We have determined that UCLA took the precaution of getting instructions from the Staff and that any problems which might have been experienced by the shipper, and under its control, do not establish a pattern that UCLA is irresponsible in shipping nuclear materials. A basis has not been established and the contention is denied. Tr. 450

#### SCHEDULE

Just prior to the close of the prehearing conference, the Staff proposed a schedule for discovery and motions for summary dispositions. Tr. 487 UCLA agreed but Intervenor's requested time to consider the proposal. By letter undated but received March 16, 1981, Intervenor's accepted the proposed schedule. The Board adopts the proposed schedule and can now assign dates to the Staff proposal of "days" following the issuance of this order. The schedule is as follows:

Board Order	March 20, 1981
First Interrogatories (30 days)	April 20, 1981
Response (30 days)	May 20, 1981
Second Interrogatories (20 days) (Follow up questions based on response)	June 10, 1981
Response (20 days)	June 30, 1981
Motions for Summary Disposition (30 days)	July 30, 1981

As discussed in the prehearing conference, 10 CFR §2.749 was amended in October 1980 to permit the Staff to respond in support of a summary disposition motion but the time of forty five (45) days was not changed. Tr. 488 If the Staff does not respond in support with additional information the 45 days would be appropriate. If the Staff responds with additional (new) information in its affidavits, then the Intervenors would have additional time to respond or a total of sixty five (65) days. A 10 CFR §2.752 prehearing date will be set at this time.

It is this 20th day of March 1981

ORDERED

That the above rulings are in effect.

FOR THE ATOMIC SAFETY AND  
LICENSING BOARD

*Elizabeth S. Bowers*  
Elizabeth S. Bowers, Chairman  
ADMINISTRATIVE JUDGE