

1 COMMITTEE TO BRIDGE THE GAP
2 1637 Butler Avenue, Suite 203
3 Los Angeles, California 90025
4 (213) 478-0829

DOCKETED
USNRC
January 9, 1984

'84 JAN 12 AM 59

5 UNITED STATES OF AMERICA
6 NUCLEAR REGULATORY COMMISSION
7 BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

8 In the Matter of

9 THE REGENTS OF THE UNIVERSITY
10 OF CALIFORNIA

(UCLA Research Reactor)

Docket No. 50-142

(Proposed Renewal of
Facility License)

11 MOTION FOR CURTAILMENT (III)

12 (Irreparable Injury Associated With Any Further Delay)

13 Introduction

14
15 The day before the repeatedly delayed inherent safety hearings
16 were to conclude in this proceeding, the Applicant, over strong objections
17 by CBG, requested one more delay. Because each additional delay extends
18 the time during which the reactor continues to operate while its safety
19 is in question, the Board expressed concern about the effect of any such
20 continuance, saying, "We are concerned, obviously, because we feel serious
21 safety matters have been raised in the proceeding." The Board therefore
22 granted only a limited continuance, setting a deadline of December 10
23 for final conclusion of the hearings. This last delay was to "finish"
24 the matter, the Board said--if not, the Board would entertain motions
25 to curtail operations at the reactor facility:

26 [I]f for some reason we cannot adhere to that schedule
27 and close the record no later than December 10, we would
28 at that point be willing to entertain motions on a showing
of good cause that operations at UCLA should be curtailed.

1 The December 10 deadline has come and gone, and the hearings
2 have yet to reconvene, let alone conclude. The safety of the UCLA
3 reactor remains an unresolved question, and good cause exists for its
4 operation to be curtailed pending final determination of whether it is
5 safe to operate.

6
7 Irreparable Harm

8 Irreparable injury on a large scale could result if an accident
9 were to occur because one party's strategy of litigation by delay prevented
10 the Board from timely resolving whether the reactor is inherently safe
11 from such accidents. The people of Los Angeles quite frankly cannot
12 comprehend why a nuclear reactor in its midst, about which an NRC atomic
13 safety board says very serious safety questions exist, is able to continue
14 to operate without even the most fundamental of safety issues resolved--
15 how (or if) the reactor can shut itself down in an accident.

16
17 The UCLA reactor sits, without containment structure or buffer
18 zone, in one of the most populated urban areas in the world. It is run
19 by students, who learn by making mistakes. It has \$3 of excess reactivity
20 and enough fission products to expose people out 75 kilometers to radiation
21 doses in excess of legal limits if even a fraction of the inventory were
22 released, with monstrous doses closer in. Three plate-type reactors were
23 violently disassembled with reactivity insertions in the range of that
24 possible for the UCLA reactor. It is located on the virtual intersection
25 of two massive earthquake faults. It is built of combustible materials
26 like those that destroyed the Windscale reactor, releasing tremendous
27 quantities of radioactivity, yet has no plan for fighting such a fire.
28 The potential for disaster is all a matter of record in this proceeding.

1 Some of the above is disputed by Applicant, who says graphite
2 is "considered" a non-combustible material; that essentially no radio-
3 activity could get out of the fuel no matter how violently it was smashed;
4 that \$3 of excess reactivity cannot cause damage; and so on. The Board
5 has not yet been permitted to rule who is right.

6 The Board has ruled that there is a genuine dispute as to the
7 facts-- as to, essentially, whether this reactor can contaminate a significant
8 portion of Los Angeles and the people who reside therein. It is an open
9 question which affects the vital interests-- the health and safety, and
10 indeed the lives-- of hundreds of thousands of people.

11 Will this reactor shut down safely in an accident? The Board
12 does not yet know, in large measure due to UCLA failing to have provided
13 sufficient information in a timely fashion. The delays created by the
14 Applicant-- which work to its advantage as it gets to keep operating longer
15 with each delay-- mean that the time when the Board will be able to decide
16 remains at least months off into the future, assuming no further delays
17 (wishful thinking in this proceeding to date). In the meantime, a
18 tragedy of major proportions might occur at any time, causing irreparable
19 harm. Operations must be curtailed while the Board determines, based on
20 the evidence, whether it can be safely operated.

21 Beyond the irreparable harm that might result to public health
22 and safety were something untoward to occur while the Board was attempting
23 to determine whether something untoward could occur, irreversible damage
24 results to CBG's interests in this proceeding if curtailment is not ordered.
25 It is now nearly four years since UCLA applied for the requested license.
26 Virtually none of CBG's twenty contentions-- ranging from concern about the
27 daily release of excessive Argon-41 directly into a main air inlet for the
28 Math building, to fear of theft of weapons-grade uranium by a group intent

1 on making a clandestine fission explosive and taking advantage of UCLA's
2 grossly inadequate security, to concern about the horrendous record of
3 inadequate managerial controls and non-compliance with NRC regulations
4 at the facility, to concern about the potential for massive accident or
5 radiological sabotage-- have been resolved. The vast majority of the conten-
6 tions have not yet seen even the beginning of the hearing process.

7 If UCLA continues its successful delaying tactics-- and it is
8 certainly not in its interest to stop as long as delays permit extended
9 operation and postpone any possible adverse ruling-- a substantial portion of
10 the proposed 20-year license renewal period will have passed without a final
11 determination of the application. At the rate at which the case is proceeding,
12 UCLA could succeed in getting the desired result (many years of continued
13 operation) solely by frustrating agency attempts to reach a final ruling on
14 the ultimate safety of that requested right of continued operation. If
15 permitted, this would violate the very purpose of the Atomic Energy Act's
16 requirements for licensing of potentially dangerous activities. The
17 requirements for sufficient application, safety review, and public hearing
18 would thus be rendered meaningless. If significant action is not taken now,
19 the hearing process will cease to have any meaning, and the Board's
20 authority to regulate the proceedings nullified.

21
22 Why Couldn't the December 10 Deadline Be Met?

23 The reason the December 10 deadline set by the Board could not
24 be met is primarily the untimeliness and insufficiency of the safety analyses
25 submitted by the Applicant on the key safety issues before the Board.
26 It is the same reason why, four years after the first application was sub-
27 mitted, the safety of the facility remains an unanswered question.

28 The Applicant requested that the hearing record not close as

1 scheduled and that it be granted a continuance solely for the limited pur-
2 pose of preparing rebuttal testimony on a few particular matters identified
3 with specificity by UCLA's representative at TR 3035-9 and 3112. The Board
4 granted the continuance for that limited purpose and indicated once again^{1/}
5 that rebuttal must follow the rules set down by the Board previously-- that
6 it be restricted to new information not included in CEG's January declarations,
7 which were essentially CEG's prefled direct case.^{2/} Any rebuttal to that
8 material was to have been filed last June.^{3/}

9 In filing its "rebuttal" on November 8, however, Applicant went
10 far beyond the limited areas it had identified in its request for continuance
11 and far beyond the Board's repeated limitations as to scope of proper
12 rebuttal. Whereas the entire accident analysis ("Credible Accidents for
13 Argonaut Reactors") contained in the amended application and being litigated
14 in the inherent safety hearings was only thirteen pages long, and the
15 Applicant's direct testimony thereon was 100 pages long, the Applicant
16 filed 140 pages of so-called "rebuttal," the bulk of which was material that
17 could and should have been in its direct case last June.^{4/} CEG filed

19 ^{1/} TR 3113

20 ^{2/} Through a misuse of summary disposition procedures, CEG was forced to
21 prefile what amounted to its direct testimony on virtually every contention
22 many months before the other parties. CEG's inherent safety panel testimony
was merely combined testimony edited from the declarations of its witnesses.

23 ^{3/} See Memorandum and Order of April 7, 1983; affirmed in conference call
of September 1 and letter from Chairman Frye of September 22, 1983.

24 ^{4/} The supposed "rebuttal" consisted in large measure of the following:
25 (1) Dr. Pearlman's Wigner energy calculations which formed the basis for, but
26 were not included in, his direct testimony last June; (2) Mr. Ostrander's
(now admitted to be erroneous) Monte Carlo and uncollided flux calculations,
27 which formed the basis for Dr. Pearlman's attempt in July to modify the Wigner
energy conclusions contained in his direct; (3) rebuttal to the dispersion
28 model used by CEG in its January declarations; (4) neutron flux measurements
which should have been performed long ago; and (5) further attack on the
Hawley fission product release model from smashed fuel, which UCLA had
adopted in its SAR.

1 objections on those grounds on November 16.^{5/}

2 The Board, in a conference call on November 21 (memorialized by
3 Memorandum and Order of November 23) reported to the parties that, due to
4 the volume of UCLA's proposed rebuttal, and the objections thereto of CEG,
5 the November 29 hearing could not be held as scheduled. In addition, the
6 Board indicated its concern over the lateness of UCLA's "Shutdown Analysis,"
7 which it said should have been presented last summer, and said that it was,
8 in addition to being late, incomplete, providing only a partial answer to
9 the key question concerning what the Board said it views as the principal
10 issue in the case. UCLA was therefore directed to supplement the "Shutdown
11 Analysis" with the missing material, and Staff and CEG to make independent
12 in-depth technical analyses thereof, to be submitted in January.

13 Why, then, could the December 10 deadline set by the Board not
14 be met? For two reasons: (1) After requesting the continuance for a very
15 limited purpose, UCLA went ahead and served in the guise of "rebuttal"
16 140 pages of material, the majority of which could and should have been
17 presented last summer as direct testimony, in keeping with the Board's rulings
18 about proper scope of rebuttal, and (2) the "Shutdown Analysis," in addition
19 to being late, was incomplete, failing, according to the Board, to sufficient-
20 ly answer the central question of how this reactor is to shut itself down
21 in an excursion.

22 In two words, the December 10 deadline could not be met because
23 UCLA's safety analyses were late and insufficient. Those are the same
24 reasons why four years after the initial application was filed there is no
25 resolution of the safety issues in question. The history of the Shutdown
26 Analysis episode exemplifies the many delays which have so bogged down the
27 proceeding, while the facility whose safety is unresolved continues to operate.

28 ^{5/} The history and concerns related there are relevant and should be reviewed
in the present context.

UCLA's Shutdown Analysis: Late and Insufficient

In its November 23, 1983, Memorandum and Order,

"The Board indicated its concern over the lateness of UCLA's 'Rebuttal concerning the Shutdown Mechanism in the UCLA Argonaut,' which in the Board's view, concerns the principal issue in this case. Regardless of whether this testimony is proper rebuttal, the Board noted its view that it should have been presented last summer. Nonetheless, it provides only a partial answer to the Board's questions which were first posed last summer."

(emphasis added)

The Board thus directed UCLA to supplement the analysis to provide information as to the fundamental questions: "how does expanding water get out and away from the reactor during a power excursion?" (Order at 2) Noting that UCLA's witness Ostrander had previously testified that there was no place for the water to exit the reactor in the deflector plate region, that the deflector faces a blank wall, the Board directed UCLA to once and for all explain its assertion that the reactor would shut itself down by tossing water out an aperture which faces a brick wall, an avenue of escape which it had previously testified did not exist.^{6/}

How could the most central of issues-- how the reactor shuts itself down in an accident-- be so flagrantly unaddressed by the proponent of the license until this late stage of the proceeding? The Board asks why this analysis was not presented last summer. CBG asks why it was not presented much earlier: in the Safety Analysis Report, amended in 1982; or even more to the point, the SAR filed with the Application in 1980?

^{6/} UCLA's re-re-revised analysis, despite an inventive attempt to identify open reservoirs in a solid core tightly packed with lead and graphite, ends up by admitting that there isn't room for the 35 liters needed to be removed. Around and around we go.

1 Mr. Ostrander testified-- on the first full day of testimony in
2 the inherent safety hearings-- that he removed from the 1980 Application
3 a reference to the deflector plates, the purpose of which he said was to
4 deflect water up and out of the reactor in the event of an excursion. He
5 said he did not "fully understand" how the water could possibly exit the
6 reactor via the deflector plates. TR 1221.

7 He explained the matter further:

8 Q What was it you did not understand about the
9 deflector plates that led you to not include mention
of them in the application?

10 A That large quantities of water could in fact
be ejected by virtue of the deflector plates.

11 Q Could you explain that?

12 A The deflector plates are in essence facing a
blank wall of graphite. It isn't clear where the water
13 would go.

14 TR 1257

15 This was a matter Mr. Ostrander testified he had been aware of since
16 1974, when he arrived at the facility. (TR 1260). And yet the Safety
17 Analysis submitted with the application for relicensing dated February 28, 1980,
18 for which Mr. Ostrander said he was responsible, states as follows:

19 Successive Power Excursions

20 It is typical of the Borax and SPERT reactors, unless
21 the excess reactivity is removed by external means, that an
22 initial power excursion which terminates itself by expelling
23 water from the reactor core will be followed by subsequent
24 excursions as the water falls and flows back into the core.
25 An exception to this behavior occurs when the initial excursion
26 is violent enough to cause a permanent loss of reactivity by
27 throwing a large amount of water completely out of the reactor
28 tank. In the UCTR the total quantity of the water in the core is
small, the submergence of the core is small, and baffles above the
core are so arranged that any water splash is directed to the out-
side so that it cannot return to the core. Consequently, even a
relatively mild power excursion (e.g., one having an exponential
period of from 20 to 30 millisec) in the UCTR should result in
permanent self-induced shutdown of the reactor. By these same
design features, the possibility of large successive power excursions,
such as those studied in the SPERT project, resulting from the ramp
addition of excess reactivity is eliminated.

1 Thus, the Safety Analysis submitted by UCLA in its application
2 for renewal shortly before expiration of its license in 1980 asserts that
3 safe, self-shutdown of the reactor in a power excursion occurs through
4 expulsion of the water via the deflector plate region. The person
5 responsible for inclusion in 1980 of that Safety Analysis in that applica-
6 tion is Mr. Ostrander who, in July of 1983, testifies at the commencement
7 of the inherent safety hearings that he knew at the time of the 1980
8 application that the deflector plates face "a blank wall" and that therefore
9 large quantities of water could not in fact be ejected via the deflector
10 plate region, as stated in the application. This created quite a stir at
11 the hearing, because it was news to almost everyone there. Almost, but not
12 quite everyone-- Applicant had known for years.

13 A significant portion of the remaining sessions of hearing were
14 devoted to analyzing what had previously not been analyzed by Applicant--
15 if the water wasn't going to be tossed out the top (because the top had
16 been bricked up), how then was the reactor going to shut itself down, and
17 would it be fast enough to prevent fuel melting? This matter should have
18 been thoroughly analyzed before-- in the SAR and SER-- rather than on the
19 spot at hearing, but that was the situation forced upon the proceeding by
20 this late disclosure by Applicant.

21 Mr. Ostrander testified that there is no room for copious
22 amounts of water to go if expelled above the core, because of the deflector
23 plate area having been bricked up. TR 1258. Because of this exit being
24 essentially closed off, Mr. Ostrander said shutdown would occur through
25 "other modes of eliminating water from the system," (TR 1259), which he
26 described later (TR 1530) as the rupture disk at the end of a pipe
27 below the fuel boxes.
28

1 Dr. Luebke questioned Mr. Ostrander on this matter:

2 BY JUDGE LUEBKE:

3 Q ...you say, near the bottom of page 1257, "The deflector plates
4 are in essence facing a blank wall of graphite. It isn't clear
5 where the water would go."

6 And I guess the purpose of my question is, if there
7 really is no place for the water to go, in the case of a
8 power excursion, you end up with a potential of a pressurized
9 water reactor, which I guess we don't want. And so, on page
10 1258, you do say in an answer, there is some plate space.

11 And the pertinent question then becomes, if someone is to
12 make a realistic, I think, evaluation of the circumstances
13 that happen during a power excursion, they would need to
14 know, sort of, you know, is it two cubic inches, five cubic
15 inches-- some idea of size of void space.

16 A Well, I think what should be said is that there is a
17 rupture disc in the lower part of the system, and that is where
18 I will count on voiding the water, rather than achieving a
19 copious flow up through that deflector disc area.

20 TR 1530-31, emphasis added

21 Thereafter, Judge Frye pursued the matter of how quickly the
22 rupture disk would act in the midst of a power excursion, yielding a
23 rather stunning revelation:

24 BY JUDGE FRYE:

25 Q How long does it take, if the rupture disc is ruptured,
26 for the system to drain?

27 Well, let me rephrase it. How long does it take the fuel
28 boxes to drain?

29 A Oh, I wouldn't-- it's perhaps easier to drain by that route
30 than into the dump tank, but it's 20 seconds to dump through
31 the three-inch alternate line that goes to the dump tank, and it
32 is 20 seconds, and I think that's a reasonable estimate for the
33 time to go through and empty through the rupture disc.

34 TR 1536

35 Thus, the voiding route (i.e., rupture disk) which Mr. Ostrander "will count
36 on" for shutdown took seconds to void, while the power excursions under
37 discussion take place on the scale of milliseconds.

1 These late disclosures became the focus for considerable
2 discussion as the hearings proceeded. If the deflector plate region was
3 essentially closed off, as Mr. Ostrander testified, and if the route he
4 depended on for voiding took seconds to act, it appeared that shutdown
5 would be delayed many e-folding periods, considerably increasing the
6 energy release and resultant temperatures. Likewise, if the deflector
7 plates could not perform their intended function of tossing water out
8 of the core region to prevent "chugging," what indeed would prevent
9 chugging, and thus additional energy release and potential for damage?

10
11 CEC had raised many of these issues in its January declarations
12 and direct testimony taken therefrom, including the potential for chugging
13 and the delay in shutdown that might be occasioned due to water having
14 to be expelled via the rupture disk area. (See e.g., Kaku declaration,
15 P 78-9, Norton declaration P 60). Yet there was no analysis of these
16 matters in UCLA's direct testimony, let alone its safety analysis report.

17 Based on the new information supplied by UCLA at the hearing--
18 verbally, not in the prefiled direct-- that the deflector plates faced a
19 "blank wall of graphite", CEC's witnesses (primarily Professor Kaku)
20 sketched out the methodology that should be used to calculate the course
21 of the excursion and the information that was needed in order to perform
22 the full calculation.

23 Prior to and independently of Professor Kaku's testimony on
24 this matter, UCLA had requested a continuance to provide a shutdown analysis.
25 Evidently, that analysis could have been performed anytime. It should have
26 been in the original application. It should certainly have been in the
27 amended application. And most certainly, as the Board said in its November
28 23 Memorandum and Order, it should have been in the summer testimony. Yet
UCLA produced no accident analysis whatsoever of its own when it originally

1 applied in 1980, merely adopted the Staff's analyses when it amended its
2 application in 1982 to remove the now embarrassing 1980 material, and
3 ignored these issues in its direct.

4 On rebuttal (!) it attempts to come forward with an analysis of
5 the mechanisms of reactor self-shutdown in the event of an accident following
6 its own witness' revelations about the blockage of these mechanisms. This
7 despite UCLA's own assertions for years prior to the hearing that inherent
8 self-limiting features provide safe self-shutdown. These assertions were
9 made without any analysis of what those features are. UCLA requested the
10 opportunity on rebuttal to provide its first real description of the shutdown
11 mechanism it had so long trumpeted in general but never analyzed in specific.
12 The hearing designed to determine the effectiveness and rapidity of the
13 shutdown mechanism is asked to keep its record open, and to provide additional
14 time for UCLA to figure out, not how effective the shutdown mechanism is,
15 but what the shutdown mechanism is. And that is why the December 10 deadline
16 could not be met, and why this safety proceeding was not resolved many years
17 ago. UCLA never got around to performing a safety analysis of the central
18 safety issues regarding its own reactor-- a reactor it has been operating
19 for 23 years without answering or even asking these questions (until the
20 Intervenor and the Board began asking them).

21
22 And what of the analysis finally put forward-- which the Board
23 says in its November 23 Memorandum and Order is late and provides only a
24 partial answer?

25 Whereas Mr. Ostrander had testified that there was no place
26 for the water to go above the fuel box, his new analysis concedes that
27 the rupture disk below the fuel box is not a reasonable avenue for voiding
28 on the time scales of concern, and that instead water expulsion will occur
through the deflector plate region. There is even an elaborate calculation

1 of release rate through newly-discovered eighth-of-an-inch gaps.

2 The Board noted the inconsistency in the analysis saying, "In
3 an earlier hearing it was testified (Tr. 1257 et seq.) that the deflector
4 plate was really not needed because there was no place for the water to go."
5 (Memorandum and Order at 2). The Board therefore directed UCLA to clarify
6 the text so as to explain fully how water gets out and away, in particular,
7 "Where water exits (between the tight-fitting graphite or concrete blocks
8 or where)." (Order at 2). UCLA's analysis had created an eighth of an
9 inch gap between the deflector region and the lead bricks, but it was an
10 eighth of an inch gap to nowhere. There may be such a clearance, but the
11 deflector region still faced a blank wall. Where, the Board asked, were
12 35 liters of water to go in a solid core of graphite and lead bricks?

13 UCLA responded in essence, "between the tight-fitting blocks."
14 This despite Mr. Ostrander's previous testimony that "it just isn't within
15 my feeling of what could be accomplished" that a substantial portion of
16 the core water could be expelled into the small void spaces which are due
17 to the natural clearances in stacking the graphite in "close adjacent
18 proximity" to the fuel. TR 1258. It should be noted that, despite heroic
19 efforts to find (or create) void spaces in a core UCLA asserts to be tightly
20 packed, its analysis ends up by admitting (p. 38) that the void spaces
21 "do not sum to 35 liters and the question of where the water goes is
22 unanswered." UCLA further asserts that "no detailed information" of the
23 kind necessary to answer the question exists. (id.)

24
25 Why is the question of where the water goes (i.e. how the reactor
26 is to safely shutdown in an excursion) still unanswered-- after two safety
27 analyses in Applications, direct testimony by Applicant, and a continuance
28 granted to finally answer the question, with opportunity for supplementation
provided when the "rebuttal" fails to answer the question? Why is the new

1 analysis a direct refutation of UCLA's previous direct testimony-- that
2 water couldn't exit in significant quantities in the deflector region and
3 would have to exit via the rupture disk? Why is it 1984 and we still don't
4 know how-- or if-- this reactor can safely shutdown to prevent a devastating
5 accident?

6 The answer is simple: the Applicant failed to timely perform
7 and file a sufficient Safety Analysis Report, as required. Had the
8 Application that was filed when the license expired in 1980 been sufficient--
9 instead of including xeroxed pages from an analysis UCLA itself claims was
10 incorrect or inadequate and which it has disavowed-- or even had the
11 amended Application in 1982 been sufficient-- instead of merely including
12 by reference the Staff studies-- then perhaps in 1984 these issues would
13 have long since been resolved.

14
15 The Many Applications: None Timely, None Sufficient

16 The principal reason for the delay in the Board being able to
17 reach a decision as to whether this reactor is safe is the lateness and
18 insufficiency of the Applicant's safety analyses. It is important to
19 remember that we are no longer litigating the Application submitted by
20 UCLA when its license expired. That Application was for \$3.54 of excess
21 reactivity, 9.4 kg U-235, with a different set of Technical Specifications
22 and Emergency Plan. The proposed Emergency Plan, for example, was withdrawn
23 after being rejected for a score of deficiencies by the NRC Staff. And it
24 must be recalled that the original Application-- whether sufficient or not--
25 was not even timely filed, with the Security Plan sections filed ten days
26 after the deadline for timely renewal applications.

27 The Application submitted prior to expiration of the license
28 contained as its sole accident analysis two seven-page sections, one dealing

1 with the safety of a 0.6% delta k/k excess reactivity limitation and the
2 other demonstrating doses in the thousands of Rem to the thyroid from an
3 accident involving an inventory 1/10th that which would be associated with
4 the ten-fold larger power currently requested. There was no analysis
5 whatsoever of the potential effects of an earthquake, fuel-handling accident,
6 fire, Wigner release, or any of the other accidents analyzed by the other
7 parties in this proceeding.

8 That first accident analysis in fact demonstrated that the amount
9 of excess reactivity (2.3% delta k/k) and power level (100 kw) then requested
10 produced fuel melting and unacceptably high radiation doses. When CBG used
11 UCLA's own safety analysis as basis for its contentions, UCLA characteristically
12 withdrew that analysis. Ironically, it had to be introduced as evidence by
13 CBG-- over the objections of the Applicant, which had sworn to its accuracy
14 three years earlier, and of the Staff, which had approved it when submitted
15 for original licensing.

16 When CBG contended that the Application was insufficient in that
17 UCLA had not performed an analysis of the Maximum Credible Accident for its
18 facility, UCLA's representative said the Applicant was going to rely on
19 whatever safety analysis the Staff came up with^{2/}, adding that, "The
20 Applicant can't go out and do a maximum credible accident [analysis] for
21 its unique facility." (prehearing conference TR 337).

22 The day before the final prehearing conference, to close discovery
23 and schedule hearing, UCLA threw out its Application filed when its license

24
25 ^{2/} This is a matter of some controversy in this proceeding, with CBG
26 contending it improperly shifted responsibilities from Applicant, which is
27 supposed to include such an analysis in its application, to Staff, whose
28 proper role is independent review of Applicant's analysis. In this case,
UCLA performed no analysis, and Staff therefore no independent review. In
reality, Staff paid for and wrote UCLA's accident analysis to replace the
one submitted by UCLA itself at the time of license application, and since
repudiated.

1 expired and adopted the Staff's studies in place of the now-disavowed
2 accident analysis. This we might call Application or SAK II.

3 CBG, in its January declarations, pointed out that the Staff
4 studies demonstrated that the reactor could catch fire, release tremendous
5 amounts of radioactivity in a core-crushing or fuel handling accident,
6 had stored dangerous amounts of Wigner energy, and, correcting for certain
7 erroneous assumptions in the analysis, could undergo a destructive power
8 excursion. Under instructions from the Board to include any rebuttal to
9 CBG's declarations in its June testimony, UCLA prepared one hundred pages--
10 far more than its SAR I or II-- of direct testimony that must be considered
11 Safety Analysis Report III.

12 After responding to CBG's interrogatories over and over again
13 by saying they did not know, had no such information, had performed no
14 analyses, etc., UCLA in its direct testimony finally put forth a little
15 bit of the safety analysis that should have been in its original Application.
16 Whereas Mr. Ostrander in interrogatories had said he knew of nothing that
17 would prevent a sample worth \$3.50 from being inserted or withdrawn through
18 the pneumatic "rabbit" system, he now testified that a sample 1/10th that
19 value could not be so inserted. Whereas UCLA had said it had no information
20 as to similarities and differences between SPERT, BORAX, and the Argonaut
21 and how those might affect power excursion modelling (they had even requested
22 a protective order-- denied-- to prevent having to answer because they had
23 performed no such analysis or review), UCLA now put forward, for the first
24 time, an analysis of those reactors and a novel theory to explain their
25 behavior. Whereas UCLA in interrogatory answers said it had no calculations
26 or measurements as to how much Wigner energy its reactor had absorbed, it
27 now presented testimony based on such calculations, though it refused to
28 provide the calculations until the commencement of the hearings themselves.

1 Thus, UCLA filed in June what amounted to SAR III-- in numerous respects
2 at right angles with and even directly attacking SAR I and II. However,
3 it held back much of the material even then.

4 UCLA held back Dr. Pearlman's calculations and only prefiled
5 his conclusions; at the last moment of his testimony, Applicant tried
6 to sneak in a totally new conclusion on the Wigner energy matter (now
7 admitted to be in error). Likewise, it tried to sneak in Mr. Ostrander's
8 Monte Carlo calculations without prefiling even a mention of them (they
9 are also now admitted to have been in error). Equally damaging to thorough
10 review of Applicant's newest safety analyses and to CEG's due process rights
11 was the withholding of the central element of Dr. Olander's testimony. CEG
12 thus had no ability to check the references or to prepare cross examination
13 on a matter that has become extremely important in this case.^{8/}

14
15 So this was the pattern far before the request for continuance:
16 A Safety Analysis submitted and used for two years of delay; when its
17 contents proved embarrassing, disavowed. Safety Analysis II introduced
18 at the last possible minute, again without the work being done by Applicant,
19 who merely adopts Staff's studies. Whereas the first SAR had embarrassing
20 conclusions about power excursions and accident consequences, it had no
21 analysis whatsoever of fire, earthquake, Wigner energy, and so on. And
22 when SAR II is shown to support CEG's positions on several of these matters,
23 UCLA submits, in the guise of direct testimony, what amounts to SAR III,

24 ^{8/} The assertion which was withheld-- that based on a study of TRIGA
25 Fuel, the Hawley release fraction should be reduced by an additional
26 factor of 20-- turned out to be incorrect and irrelevant to the UCLA
27 case, as demonstrated by Professor Anderson's rebuttal. But CEG's
28 ability to cross-examine, and the Board's right to an adequate record,
were compromised by this improper procedure.

1 once again disavowing both SAR I and II, but still holding back the
2 supposed basis for the analysis to prevent scrutiny.

3 SAR III-- the June testimony and the additional material
4 (Ostrander's Monte Carlo, Pearlman's 15°C substitution, Olander's factor
5 of 20, etc.) held back from prefiling-- did not constitute support for
6 the analyses UCLA had previously adopted, but rather rebuttal to the
7 assumptions used in the analyses, particularly the Battelle study.
8 UCLA's SAR II (Battelle) says 2.7% radiiodine release from smashed fuel--
9 UCLA's direct testimony doesn't defend this value but attacks it as excessive-
10 ly high. SAR II says graphite is combustible and a graphite reactor fire
11 cannot be ruled out. SAR III (the direct testimony) argues that SAR II is
12 wrong and graphite is "considered" non-combustible. SAR II (Battelle) says
13 that Wigner energy storage at UCLA can be calculated from stored energy data
14 from Hanford; after CBG showed that method to indicate very high stored
15 energy, UCLA's SAR III direct testimony argues that you can't really use
16 the method of calculation found in SAR II (Battelle). And on and on.

17
18 Unfortunately, three SARs were not enough for UCLA. The November
19 8 "rebuttal" material was yet another attack by the Applicant on its earlier
20 positions, and can be considered SAR IV. So when Mr. Ostrander tells us
21 in July not to expect substantial water expulsion out the top of the fuel
22 boxes because of the surrounding brick walls and to have faith in the rupture
23 disk below, SAR IV tells us to forget the rupture disk because it's too slow
24 and to have faith that the water will exit through the brick walls on top.
25 The Pearlman Wigner calculations and Ostrander Monte Carlo calculations--
26 not admitted in July because of failure to timely file them-- reappear in
27 November in the guise of rebuttal. Dr. Morewitz launches a new attack on
28 the Battelle (SAR II) release fraction assumptions by trying to litigate CsI

1 and containment leak plugging issues relevant to power reactors.

2 SAR I (February 1980) was fourteen pages, xeroxed from the
3 original hazards analysis.

4 SAR II (June 1982) was thirteen pages, including by reference
5 the Staff studies.

6 SAR III (June 1983) was one hundred pages, plus additional
7 material not timely filed.

8 SAR IV (November 1983) was one hundred forty pages, plus
9 additional material (the Ostrander calculations) not
10 timely filed.

11 And the Board found SAR IV insufficient, failing to provide
12 more than partial answer to the principal issue in the case. SAR IVa
13 or SAR V can be considered the new shutdown analysis. (Although done
14 under Board direction to answer specific questions, the revised analysis
15 made numerous unrelated changes, deleting calculations, changing assertions,
16 and otherwise modifying the analysis beyond the Board's questions, a matter
17 to which CBG objects.)

18 What are the Safety and Legal Implications
19 of these Untimely and Repudiated SARs?

20 A. fundamental purpose of the requirements of the Atomic
21 Energy Act and the NRC regulations is to assure that proposed licensed
22 activities undergo careful review prior to being permitted. To this end,
23 applications are required to provide in sufficient detail the information
24 and safety analyses necessary to assure safe operation if the license is
25 granted. The Staff is required to conduct detailed independent analyses
26 of the safety analyses performed by Applicant and forming the basis of its
27 Application. The public is permitted to intervene, engage in discovery to
28 obtain information useful in assessing the Applicant's safety analysis, to
present witnesses who can critique that analysis, and to cross examine the
sponsors of the analysis. For this reason, the Applicant's safety analysis

1 must be timely and sufficient; otherwise the Staff is not able to conduct
2 its review, nor the Intervenor its. In the final analysis, the Board is
3 prevented from performing its duty of ruling on the proposed application
4 if the safety analysis is not timely and sufficient.

5 When UCLA forced CBG to go through two years of discovery on a
6 safety analysis it intended to disavow, the performance of the scrutiny
7 mandated by the Atomic Energy Act was obstructed. When UCLA adopted Staff's
8 safety analyses, the requirements for independent review by Staff of
9 Applicant's safety analysis went out the window. When UCLA, in its direct
10 testimony, disavows major portions of its previous safety analyses, attacking
11 the Battelle assumptions it had adopted, there is no longer the opportunity
12 for discovery or independent review by Staff, or by the Intervenor. And
13 when UCLA, in its supposed rebuttal, puts forward 240 pages of new material,
14 not genuine rebuttal to anything but its own previous sworn analyses and
15 assertions, the entire premise of careful, reasoned scrutiny of Applicant's
16 safety analysis is made a mockery.

17 What is the injury involved with this behavior? Besides the
18 obvious risks involved with continued operation-- the possibility of
19 catastrophe-- the Board's record is made much, much poorer. When CBG was
20 on notice of what documents Dr. Wegst, for example, was relying on for his
21 assertion that forced air flow was required for graphite fire, CBG could
22 be of assistance to the Board in demonstrating that the documents in question
23 did not say what the witness claimed they did. But when Dr. Olander makes
24 an assertion about a calculation not provided, and a reference not timely
25 included in his prefiled direct testimony, there is no way an adequate
26 record can be made on the accuracy or relevance of that assertion.

27 Shielded material, material not timely made available for scrutiny
28 and review, can result in important safety determinations being made on
erroneous bases. It is precisely because of these dangers that behavior

1 such as that exhibited by UCLA is prohibited.

2
3 The Delays

4 It should not be necessary to describe in detail the major delays
5 in the proceeding occasioned by Applicant. Continued operation by delay has
6 proved to be a powerful incentive.

7 Two months of discovery was extended into two years by Applicant
8 refusing to meet its discovery obligations and requiring repeated Board Orders
9 compelling such compliance. The day before the final prehearing conference
10 was scheduled to close discovery, UCLA withdrew the SAR about which all the
11 discovery had been conducted and substituted a new one.

12 At that prehearing conference, the Board in strong language tells
13 the parties not to move for summary disposition on any but narrow areas
14 about which there clearly is no dispute-- estimating that to do otherwise
15 would result in a delay of at least four months. UCLA and Staff ignore the
16 Board's statements and move for summary disposition on all contentions
17 possible; CBG objects on the basis that the motions were filed for purposes
18 of delay. But the delay becomes a reality.

19 At every opportunity, there has been a withholding of key
20 information and manipulation for delay. In April of this year the Board
21 requested that it be provided by June 1 with visual materials about the
22 core internals, saying:

23 "The Board has determined that the information that it has
24 received on the physical description of the Argonaut reactor
25 at UCLA is inadequate for consideration of the inherent safety
of the system."

26 The Board therefore requested graphics showing the spacial relationship
27 of the systems which would be under consideration in the hearings, particular-
28 ly the cooling system, core structure, shutdown system, and so on. However,
UCLA only provided one or two drawings, withholding a series of photographs

1 and numerous drawings, which CBG has only recently obtained access to
2 (after a delay of many weeks following request). The Board still hasn't
3 seen this material. The unanswered questions about reactor shutdown
4 mechanisms would have long ago been answered if UCLA had provided in a
5 timely fashion sufficient information about the core and its components.
6 The brick wall facing the deflector plate region would not have been a
7 surprise, and various matters such as available void space would no
8 longer be unknowns.

9 These delays only reward Applicant. Unless delays and untimely
10 insufficient material are no longer rewarded by continued operation,
11 delays and untimely insufficient material will remain the story of this
12 proceeding, and a decision on the safety of what may be a thoroughly unsafe
13 facility will never be reached. The Board's mission-- ascertainment of the
14 safety of permitting continued operation of this facility-- will never be
15 fulfilled unless the incentive for frustrating that mission is removed.

16 17 Legal Discussion

18
19 The Board, in granting UCLA's request for a limited continuance
20 and in setting the December 10 deadline for close of the hearing record,
21 made it very clear that it would tolerate no further delays and would
22 therefore entertain motions upon a showing of good cause that operations
23 at the facility be curtailed if the deadline were not met. (TR 3112-3).

24 In the preceding sections, we have attempted to demonstrate
25 that good cause does indeed exist for curtailment. The December 10 deadline
26 has not been met because of UCLA's untimely and insufficient safety analyses.
27 The history of the Shutdown Analysis, which should have been presented long
28 ago and yet in the Board's judgement remained insufficient, is just a single

1 illustration concerning a single issue. But it helps explain why, four
2 years after the license expired, none of the major contested issues have
3 been resolved.

4 We have indicated that substantial harm to the public could
5 result if the facility were permitted to continue to operate while serious
6 safety questions remain unresolved. We have further indicated the injury
7 to CBG's due process rights to a speedy resolution of the matters it has
8 brought before this tribunal; as well as the injury to the Board's authority
9 to regulate the proceedings and effectively carry out its mandate to decide
10 the safety of the reactor.

11 Good cause exists for curtailment. Without curtailment, the
12 incentive for delay may yield many, many more years of operation without
13 a final decision. Without curtailment, we may discover "empirically"
14 whether serious accidents can occur at this facility before close of the
15 record permits a judicial finding.

16 As for the Board's authority to order curtailment of operations,
17 it is a question which scarcely needs to be asked. We will argue below
18 that the Board is not only permitted, it is obligated to order curtailment.
19 In any case, it is a question which has already been decided.

20 When the Board set the December 10 deadline, it explicitly
21 solicited motions for curtailment if the deadline could not "for some
22 reason" be met. It did so carefully and with considerable prior
23 deliberation, and no party objected. Certainly the Board was not making
24 an empty gesture, offering consideration of relief it could not give.
25 The Board had already determined what actions were within its authority
26 to regulate the proceeding and to prevent further delay.

27 The key question as indicated below is not whether the Board has
28 the authority to order the curtailment it had itself proposed, but whether
it will have much of its authority left if it does not do so.

Commission Policy: Public Interest Requires
Expeditious Proceedings

It is long standing Commission policy that the public interest requires expeditious proceedings and decisions, and that Licensing Boards are given broad powers to carry out their mandate of avoiding unnecessary delays. 10 CFR 2, Appendix A, the Commission's statement of General Policy and Procedure on the conduct of licensing proceedings, states in pertinent part:

The Statement reflects the Commission's intent that such proceedings be conducted expeditiously and its concern that its procedures maintain sufficient flexibility to accommodate that objective. This position is founded upon the recognition that fairness to all the parties in such cases and the obligation of administrative agencies to conduct their functions with efficiency and economy, require that Commission adjudications be conducted without unnecessary delays.

The paramount consideration is to be the public interest, and it has long been recognized that the public interest is usually served by as rapid a decision as is possible consistent with everyone's opportunity to be heard. Fotomac Electric Power Co., (Douglas Point Nuclear Generating Station, Units 1 & 2), ALAB-277, 1 NRC 539 (1975).

The mandate for adjudicatory bodies to take the measures necessary to expeditiously rule on applications before them is not merely a recommendation-- it is a legal duty imposed upon them by the Administrative Procedure Act, 5 U.S.C. 558(c), which requires the agency to set and complete proceedings within a reasonable time. Indeed, agency failure to timely rule has long been viewed by the courts as a matter subject to judicial review. Section 10(e) of the Administrative Procedure Act, 5 U.S.C. 706(1), regarding scope of judicial review, directs the courts to "compel agency action unlawfully withheld or unreasonably delayed." In order to fulfill their legal obligation to manage proceedings so as to reach timely final decisions, Licensing Boards are given

all powers necessary, as indicated below.

Broad Powers Given to Prevent Delay

10 CFR 2.718 reads in pertinent part:

A presiding officer has the duty to conduct a fair and impartial hearing according to law, to take appropriate action to avoid delay, and to maintain order. He has all powers necessary to those ends, including the power to:

...

(e) Regulate the course of the hearing and the conduct of the participants.

...

(m) Take any other action consistent with the Act, this chapter and sections 551-558 of the United States Code.

(emphasis added)

As the Appeal Board explained in Offshore Power Systems (Floating Nuclear Power Plants), ALAB-489, 8 NRC 194, 204 (1978), the 2.718 powers are very broad: "The Commission and its adjudicatory boards have liberally interpreted the language of 2.718, emphasizing in a number of rulings a licensing board's extensive discretionary authority over the management of licensing proceedings." This is particularly true in terms of the Board's extensive powers in carrying out its duty to avoid delay. In ALAB-321, the Appeal Board emphasized the word "all" in the language of 2.718 granting "all powers necessary" to avoid delay:

For this purpose, our examination of the Commission's regulations begins and ends with 10 CFR 2.718. In terms, that regulation gives the boards "all powers necessary" to accomplish their "duty... to take appropriate action to avoid delay." Then, as if to emphasize that "all" powers are conferred, it enumerates certain powers but concludes by giving the boards the authority to "take any other action consistent with"

the Atomic Energy Act, the Commission's other regulations and the Administrative Procedure Act. 10 CFR 2.718(1).

Kansas Gas and Electric Company and Kansas City Power and Light Company
(Wolf Creek Station, Unit No. 1), ALAB-321, 3 NRC 293, 302 (1976),
emphasis in original, footnote omitted.

Thus, Boards have a duty to take strong action to prevent delay, and are granted all necessary powers under the law to carry out that duty.

A Matter Within the Board's Authority

Staff's special role in licensing proceedings is rather limited: to conduct an independent review of the Application, and to prepare a Safety Evaluation Report and Environmental Impact Report on the proposed action. Determination of whether the Application should be granted, however, is a matter for the Board, which is free to accept or reject the position of Staff as it would any other party. In a proposed licensing action where a Licensing Board has been established, it is the Board which has the authority over the proposed action and matters related thereto.

10 CFR 2.717(b) permits the Staff to take certain administrative actions with respect to a licensee who is a party to a pending proceeding, but grants to the Licensing Board authority to modify any such action related to the subject matter of the pending proceeding as appropriate for the purpose of the proceeding.

This regulation has been interpreted to give Licensing Boards authority to modify existing licenses granted by Staff, even if the existing license is a Part 70 materials license and the Board is convened to rule on an application for an operating license. Cincinnati Gas and Electric Co. (William H. Zimmer Nuclear Station), LEP-79-24, 10 NRC 226,

1 228-230. As stated in the Zimmer case, "[T]here are matters with
2 respect to which independent Staff action is entirely appropriate but
3 which bear enough relationship to the subject matter of a pending
4 proceeding that review by the Licensing Board in that proceeding is
5 appropriate. The materials license here in question is of that type."
6 An existing materials license issued by Staff is thus an "order" as
7 contemplated by 10 CFR 2.717(b) and is therefore subject to modification
8 even by an OL Board.

9 Whereas there are certain functions over which Boards have
10 limited jurisdiction-- primarily those leading up to the preparation
11 of safety and environmental reports by the Staff-- once Staff action
12 has been taken, it is properly a matter for Board review if it bears
13 sufficient relationship to the subject matter of a pending proceeding (id.)
14 In particular, the Zimmer Board drew a distinction between its deter-
15 mination that it had authority to modify an existing materials license
16 and the Board's rulings in the New England Power Company case (NEP,
17 Units 1 and 2), LBP-78-9, 7 NRC 271 (1978) that the Board did not have
18 authority to order suspension of Staff review activities related to an
19 application. As stated in the Zimmer case, in rejecting arguments that
20 New England Power prohibited an OL Board from modifying an existing
21 materials license:

22 In New England Power Company (NEP, Units 1 and 2), LBP-78-9,
23 7 NRC 271 (1978), the Licensing Board held that it did
24 not have the power to exercise supervisory authority over
25 the Staff in the performance of its independent responsibility
26 of preparing an environmental impact statement. That
27 question is not before us here. What we are being asked
28 is to review an action previously taken by the Staff-- a
function which the NEP Licensing Board expressly acknowledged
that it possessed. Id. at 279.

(emphasis added)

Just as the Zimmer Board found that it had the power to modify an

existing license, this Licensing Board clearly has the authority to modify the existing licenses under which UCLA operates.

Further, the "show cause" procedure of 10 CFR 2.206 is not the appropriate course of action in this case. It has long been established that this procedure is not necessary when there is a pending case, but instead is to be used when no case is pending and Staff therefore must deal with the request. The determination in an on-going proceeding as to whether to suspend or modify a license does not, however, rest with Staff, as is indicated in the Union Electric Company case:

A. The Applicability of Show Cause Procedures

Applicant's motion papers appear to suggest that intervenor's request for suspension of the construction permit should have been made under the "show cause" procedure of 10 CFR 2.206. This regulation requires a decision by a high-ranking non-judicial Commission official^{12/} whether a new proceeding looking toward suspension of a license should be instituted. It has never been necessary, however, to invoke this procedure in a pending case.

^{12/} Either the Director of Nuclear Reactor Regulation, the Director of Nuclear Material Safety and Safeguards or the Director of the Office of Inspection and Enforcement.

(emphasis added)

Union Electric Company, (Callaway Plant, Units 1 and 2), ALAB-348, 4 NRC 225, 232.

Thus, it is clear that 10 CFR 2.206 appeals to the Staff for action are unnecessary when there are pending cases; that Staff actions, when completed, are subject to review and modification by Licensing Boards; and in particular that a Licensing Board has the authority to modify or suspend existing licenses.

TIMELY RENEWAL PROVISIONS REQUIRE CURTAILMENT

So far we have considered the responsibility to prevent delay imposed upon Licensing Boards by the Administrative Procedure Act and Commission policy, as well as the broad powers conferred on Boards to carry out that duty. In pursuit of that responsibility and in exercise of those powers, the Board in this proceeding set a December 10 deadline for final closure of the inherent safety record. The Board put the parties (as well as the people of Los Angeles, via the lead item on the evening news) on notice that failure to meet that deadline could result in curtailment of operations at the facility.

In granting UCLA's request for the continuance the day before the inherent safety hearings were to close, the Board said it would tolerate no further delays; and it deliberately and publicly solicited motions for curtailment, a remedy of its own suggestion, if this last continuance did not "finish" the inherent safety matter. This was by no means the first Board attempt to prevent unnecessary delays, nor even the first warning that curtailment might be the result if delays continued. The parties and public were on notice that the Board viewed the public interest factors associated with any further delay as so serious that the only appropriate Board response might have to be curtailment. As shown above, the action proposed by the Board in soliciting this motion is within the Board's 2.718 and 2.717(b) powers. The only remaining potential barrier to the action proposed by the Board is the timely renewal application provisions of 10 CFR 2.109 and 5 U.S.C. 558(c). Review of those provisions makes clear, however, that the timely application rules provide no barrier whatsoever to the proposed Board action. In fact, it is precisely because of UCLA's failure to comply with the provisions of the timely application rules that curtailment of operations is required.

Background of the Timely Renewal Application Provision

On June 11, 1946, President Truman approved the Administrative Procedure Act. Section 9(b), now 5 U.S.C. 558(c), deals with licenses. The third sentence of that section provides protection for licensees who filed timely and sufficient renewal applications from the hardships that might occur due to agency failure to timely act on the renewal request:

When the licensee has made timely and sufficient application for a renewal or a new license in accordance with agency rules, a license with reference to an activity of a continuing nature does not expire until the application has been finally determined by the agency.

(emphasis added)

As the Attorney General's Manual on the Administrative Procedure Act indicates, agencies are permitted in carrying out this requirement to "make reasonable rules requiring sufficient advance application." ^{2/} In 1956, the Atomic Energy Commission promulgated such a rule, requiring that for a licensee to receive the protection of the timely renewal provisions, the application for renewal of an existing license must be submitted "at least 30 days prior to its expiration date." This regulation-- originally 10 CFR 2.103 and now 2.109-- was explicitly promulgated pursuant to the APA. (See Federal Register notice, February 4, 1956).

Thus, for a licensee to receive the protection of the timely renewal provisions, its application must be both timely (defined in the Commission's regulations as filed at least thirty days prior to license

^{2/} Attorney General's Manual on the Administrative Procedure Act, prepared by the U.S. Department of Justice, Tom C. Clark, Attorney General, 1947, p. 92; referred to hereafter as Attorney General's Manual.

1 expiration) and sufficient. In other words, any delay in acting on the
2 license request must be the responsibility of the agency, not the applicant,
3 which is required to have done everything within its power and is therefore
4 provided protection from delay not of its own making. As will be
5 demonstrated below, in order to find that continued operation is permissible
6 in this case, the agency would have to determine that the delay in reaching
7 a decision on the Application is its own fault; i.e., that the application
8 before it was (1) filed thirty days prior to license expiration, and
9 (2) was sufficient in all significant respects. It is evident that
10 precisely the opposite is the case-- the Application was neither timely
11 filed nor sufficient. And it is largely for that reason-- a matter for
12 which Applicant, not the Board, is responsible-- that we still have no
13 decision on the Application and the safety of the proposed renewal.

14
15 UCLA's Application was Neither Timely nor Sufficient

16 1. The original Application was not even timely filed. The timely
17 application rules require that applications be filed at least thirty days
18 prior to expiration of the current license. UCLA's license expired
19 March 30, 1980. A major portion, however, of its original Application,
20 the proposed security plan required to be included therein, was not
21 submitted until March 10, a week and a half beyond the deadline.^{10/}
22 The thirty day minimum is precise, saying not "approximately thirty days
23 before," but rather "at least thirty days before." The original Application
24 was not timely filed.

25
26
27
28 ^{10/} submitted by letter, Wegst to Reid, March 10, 1980

1 2. The Application now before the Board is not the Application filed
2 at license expiration. The Application filed in February and March of
3 1980 has been largely withdrawn by the Applicant, and replaced with
4 different license requests (e.g., \$3 instead of \$3.54 excess reactivity,
5 4.9 kg U-235 rather than 9.4 kg, and so on). New technical specifications
6 are proposed; an entirely new emergency plan is included; and most
7 importantly, the accident analysis originally submitted has been
8 disavowed and replaced with an entirely different one. Whether the original
9 Application was timely filed or not, the Application now pending before
10 the Licensing Board was not.

11 3. The Application filed at the time of license expiration was
12 insufficient. This is essentially admitted by Applicant, through its
13 withdrawal of the proposed Technical Specifications and Emergency Plan
14 and its disavowal of the 1980 accident analysis (which did not, as
15 mentioned earlier, even consider any accident sequence other than one;
16 that one indicating danger). The original Application has similarly
17 been found insufficient by Staff, through its rejection of the proposed
18 emergency plan for a score of deficiencies and its similar rejection of
19 the proposed technical specifications, as well as its challenge to the
20 accuracy and relevance of the original accident analysis. And the
21 insufficiency of the original accident analysis-- not to mention the
22 ones which have seriatim replaced it-- has been likewise determined by
23 the Board, which has indicated its frustration that the various power
24 excursion analyses submitted by Applicant to date have failed to answer
25 the fundamental question of how this reactor is to shut down in an
26 accident-- what the Board says it views as the principal issue in the
27 case. Similarly, the Board has written that it "has determined that the
28 information that it has received on the physical description of the

1 Argonaut reactor at UCLA is inadequate for consideration of the inherent
2 safety of the system." Letter to Applicant and Staff, April 25, 1983.

3 The insufficiencies in the original Application and those
4 that followed it-- and the delays caused thereby-- have been discussed
5 in detail in previous sections of this motion. Suffice it to say that
6 the Application filed in 1980 was insufficient, which is why it has been
7 largely withdrawn by UCLA, rejected by Staff, and found inadequate by
8 the Board. Likewise, it is why the Board was forced nearly four years
9 after the Application was submitted to send UCLA back to the drawing
10 board to complete an analysis which should have been complete many years
11 ago.

12 In short, UCLA's Application was neither timely nor sufficient.
13 If sufficient when filed, we would not be four years downstream with
14 fundamental safety questions still unanswered. The timely application
15 rule requires curtailment of operations at UCLA because continued
16 operation is only permissible when the Application was both timely
17 and sufficient. It is precisely because of UCLA's untimely, insufficient
18 submissions in connection with its application for renewal of a potentially
19 extraordinarily dangerous activity that final determination of the
20 application has been so long delayed and that operations must now be
21 curtailed.

22 DISCUSSION

23
24 The Timely Renewal Provisions are Designed to Protect Applicants
25 from Delays within the Agency, not from Those of its own Making

26 The timely renewal provisions forbid continued operation after
27 expiration of a license unless a sufficient application was timely filed
28 prior thereto. This is a high standard, a standard which UCLA has

1 repeatedly failed in this case. Furthermore, the timely renewal rules
2 do not permit continued operation if, as in this case, the delays are
3 of the Applicant's making rather than those of the agency. To permit
4 continued operation would require that the Board determine that it is
5 the Board that has been responsible for the delays.

6 The legislative history and applicable case law make clear
7 that continued operation is only permissible when the delay has been
8 caused within the agency responsible for determining the Application.
9 Senate Document 248, the Legislative History of the Administrative
10 Procedure Act, 79th Congress, page 35, referring to the last sentence
11 in Section 9b of the Act, indicates that the failure must be on the
12 part of the agency, not the Applicant:

13 The third sentence automatically extends a license in
14 any case in which the licensee has made timely application
15 for renewal but the granting agency fails to act prior
16 to the expiration of the existing license.

(emphasis added)

17 This is made more clear when the timely application rule
18 is viewed in the context of the rest of Section 9b, all of which
19 entails protection for licensees or applicants from the harm that
20 can be occasioned by untimely agency action. Page 368 of the
21 Legislative History cited above explains:

22 Section 9(b) deals with licensing. It requires agencies
23 to determine promptly all applications for licenses, prohibits
24 them from withdrawing a license without first giving the
25 licensee notice and an opportunity to achieve compliance except
26 in case of obvious willfulness or emergency, and in business
27 of a continuing nature precludes any license from expiring
28 until timely applications for new licenses or renewals have
been determined.

These special provisions are necessary because of the
very severe consequences of the conferring of licensing authority
upon administrative agencies. The burden is upon private parties
to apply for licenses or renewals. If agencies are dilatory

1 in either kind of application, parties are subjected to
2 irreparable injuries unless safeguards are provided. The
3 purpose of this section is to remove the threat of disastrous,
4 arbitrary, and irremediable administrative action.

(emphasis added)

4 Thus, the purpose of the timely renewal rule is to protect applicants
5 from disastrous, arbitrary, and irremediable administrative action
6 due to the agency being dilatory. The rule cannot be used to reward
7 dilatory behavior on the part of the applicant itself.

8 This is confirmed by the case law. In Pan-Atlantic Steamship
9 Corp. v. Atlantic Coast L.R. Co. (77 S. Ct. 999), the Supreme Court
10 ruled that the APA sections involved here were designed to protect
11 applicants and licensees from agency failure to timely act:

12 The Administrative Procedure Act, enacted in 1946,
13 was designed to promote general fairness and regularity
14 in administrative action. Section 9(b) partakes of this
15 purpose by requiring administrative agencies to act on
16 license applications with reasonable dispatch and "with
17 due regard to the rights or privileges of all the interested
18 parties or adversely affected persons." It also protects
19 persons who have received licenses from their summary
20 revocation, and from the hardships occasioned by expiration
21 of a license before the licensing agency has been able to
22 pass upon its renewal.

(id. at 1004, emphasis added)

19 In County of Sullivan v. Civil Aeronautics Board [436 F. 2d 1096 (1971)],
20 Judge Friendly described the timely application rule as providing that
21 "the valuable rights conferred by a license for a limited term shall
22 not be lost simply because the agency has not managed to decide the
23 application before the expiration of the existing license." (id. at 1099).

24 The seminal case in interpretation of the timely renewal
25 provisions is Bankers Life & Casualty Co. v. Hallaway [530 F. 2d 625
26 (1965)]. The Court there ruled that the timely application rule is only
27 applicable where delays in determining the application arose within the
28 agency, rather than a substantive problem with the application itself

1 or some other matter over which the Applicant had responsibility.

2 Citing Pan-Atlantic Steamship Co. and County of Sullivan, the Court wrote:

3 This reasoning suggests that the kind of case that the
4 statute was meant to cover was that in which time exigencies
5 within the agency prevent it from passing on a renewal
6 application, where an activity of a continuing nature such
7 as radio broadcasting or shipping services is involved.

6 (Bankers, at 634, emphasis added)

7 The Court went on to determine that such was not the case in the
8 situation before it, in which "a substantive problem arose with the
9 application, which had to be resolved before the Corps could grant a
10 new permit." And that therefore, after the original permit expired,
11 all rights under it expired with it, despite a pending application for
12 renewal. Bankers is discussed in more detail below.

13
14 Renewal Applications Must be Both Timely and Sufficient: A High Standard

15 Can a licensee continue its licensed activity, many, many
16 years after the expiration of its license merely by submitting, for
17 example, an application it doesn't intend to defend, and thereafter
18 blocking an agency ruling by continually revising, altering, and
19 resubmitting the application in different forms, trying over time to
20 fix the numerous insufficiencies in the original application? Can
21 a potentially hazardous activity continue by frustrating agency attempts
22 to rule? That is the question posed by UCLA's failure to file a timely
23 and sufficient application in this case, and its continuing delaying tactics.

24 Continued operation is not an automatic right bestowed on all
25 licensees who wish renewal. It is a right granted only to licensees who
26 have fully and completely performed all of their responsibilities in
27 presenting to the licensing agency the materials necessary for the agency
28 to grant the license. The procedure is designed, as shown above, to protect

1 against agency delays, not to reward delays occasioned by Applicants.

2 What is an "application" in the context of the timely
3 application rule? Could a one-page letter requesting renewal but not
4 providing any of the information necessary for deciding the request
5 constitute a timely-filed application and thus permit continued operation
6 until the necessary information is finally provided, perhaps many years
7 into the future?

8 The answer is clearly no. The contents necessary in an application
9 are defined with specificity in 10 CFR 50.34. Some of the contents
10 required are as follows:

11 (b)Final safety analysis report.

12 Each application for a license to operate a facility shall
13 include a final safety analysis report. The final safety
14 analysis report shall include information that describes the
15 facility, presents the design bases and the limits on its
16 operations, and presents a safety analysis of the structures,
17 systems, and components and of the facility as a whole, and
18 shall include the following:

16 (1) All current information, such as the results of
17 environmental and meteorological monitoring programs, which
18 has been developed since issuance of the construction permit,
19 relating to site evaluation factors identified in Part 100 of
20 this chapter.

19 (2) A description and analysis of the structures, systems,
20 and components of the facility, with emphasis upon the
21 performance requirements, the bases, with technical justification
22 therefor, upon which such requirements have been established,
23 and the evaluations required to show that safety functions
24 will be accomplished. The description shall be sufficient
25 to permit understanding of the system designs and their relation-
26 ship to safety evaluations.

23 (1) For nuclear reactors, such items as the reactor
24 core, reactor coolant system, instrumentation and control
25 systems, containment system, other engineered safety features,
26 auxiliary and emergency systems, power conversion systems,
27 radioactive waste handling system, and fuel handling system
28 shall be discussed insofar as they are pertinent.

...

27 (4) A final analysis and evaluation of the design
28 and performance of structures, systems, and components with

the objective stated in paragraph (a)(4) of this section and taking into account any pertinent information developed since the submittal of the preliminary safety analysis report.

...

(c) Physical security plan.

Each application for a license to operate a production or utilization facility shall include a physical security plan. The plan shall consist of two parts. Part I shall address vital equipment, vital areas, and isolation zones, and shall demonstrate how the applicant plans to comply with the requirements of Part 73...

(emphasis added)

The paragraph (a)(4) referenced in part (4) above refers to

...analysis and evaluation of the design and performance of structures, systems, and components of the facility with the objective of assessing the risk to public health and safety resulting from operation of the facility and including determination of (i) margins of safety during normal operations and transient conditions anticipated during the life of the facility, and (ii) the adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents.

Thus, it is clear that the timely application protections cannot be obtained by just asking for renewal thirty days prior to license expiration. One must submit a sufficient application, one that provides in full detail the information demanded by the regulations. And we know UCLA did not do that. It has admitted that its security plan is not designed to provide protection against sabotage, as required by 10 CFR 73; thus the plan submitted in 1980 as part of the application is insufficient, failing to "demonstrate how the applicant plans to comply with the requirements of Part 73." We know that the Board found that "the information that it has received on the physical description of the Argonaut reactor at UCLA is inadequate for consideration of the inherent safety of the system." (April 25, 1983 letter). We know that the safety analysis submitted did not even touch upon fire, Wigner energy,

1 earthquake, or fuel handling accident, and was deemed inadequate in the
2 dose assessment and reactivity areas by both Staff and Applicant and was
3 disavowed. We know that Applicant submitted that safety analysis in 1980,
4 even knowing that its assertion that shutdown would occur by water exiting
5 via the deflector plate region was incorrect; the pertinent information
6 demanded by 50.34(b)(4) developed since the submittal of the preliminary
7 safety analysis report, i.e. that the deflector plate faced a blank wall,
8 was not included, and has led to tremendous delays due to its late disclosure.
9 The delays in the proceeding have resulted largely because of Applicant
10 trying, in as drawn-out a fashion as possible, to remedy the insufficiencies
11 in the original Application long after a sufficient Application was required
12 to have been timely filed.

13
14 The timely application protections only apply when the
15 application for renewal is both timely and sufficient. 5 U.S.C. 558(c).
16 The courts have interpreted the requirement of sufficiency as a very high
17 standard. An application is not enough; it must be sufficient in every
18 significant respect.

19 The Bankers Life & Casualty Co. case is instructive in this
20 regard. In that case, a company which had been issued a dredge and fill
21 permit by the Corps of Engineers brought an action requesting a declaration
22 that its permit rights had not expired during the pendency of a license
23 renewal application before the Corps because of the timely application
24 provisions. The Court found that those provisions hold only when the
25 delay is due to the agency and not to any insufficiency in the application
26 itself, finding in that case such an insufficiency. The Court set a
27 high standard for sufficiency in applications.

28 In Bankers, the company had obtained its permit from the Corps
in 1957, a permit which was to expire in December 1960. At the request

1 of Bankers, the Corps extended the permit to December 31, 1963. Bankers
2 requested another extension, consideration of which was deferred pending
3 their acquisition of a local fill permit, a matter which took some years.
4 Over the years, the Corps acquired new obligations under law to consider
5 various environmental factors related to applicants such as Bankers.
6 Eventually Bankers went to court, requesting a declaration, in part, that
7 its rights under the original permit had never expired, because of the
8 timely application rule.

9 The Court ruled that the timely application rule did not
10 pertain in this case because Bankers' application at the time filed
11 contained at least one deficiency-- lack of the local permit. The Court
12 upheld the Corps' position that the Bankers' application for renewal was
13 incomplete, and thus 5 U.S.C. 558(c) continuation of license during
14 processing of renewal was not permitted. As the Court described the matter:

15 ...the Corps also argues that section 558(c) does not
16 apply unless the application is sufficient. At the
17 time the renewal application was filed, it was insufficient
18 because it lacked the required local consents. As time
19 passed, it became more incomplete with the addition of new
20 laws requiring the Corps to take ecological considerations
21 into account for dredge and fill permits.^{11/}

22 ^{11/} Our first opinion in this case held that the more
23 stringent requirements of the present apply to Bankers.
24 See 469 F. 2d at 998. The strong national commitment
25 to improvement of the environment also argues strongly
26 for the application of new laws such as the National
27 Environmental Policy Act, 42 U.S.C. 4321 et seq., and
28 the Federal Water Pollution Control Act, 33 U.S.C. 1251
et seq., wherever possible.

(id. at 633)

24 The Court went on to say, "we believe that section 558(c) was not
25 designed to cover this kind of situation." Discussing the Pan-Atlantic
26 and County of Sullivan cases previously described, the Court ruled that
27 the timely application rule only applies in situations "in which time
28 exigencies within the agency prevent it from passing on a renewal

1 application," and that, by contrast, time exigencies played no part in
2 the Corps' failure to act on the renewal. "Instead, a substantive
3 problem arose with the application." (id. at 634).

4 The Court ruled that "Bankers' application for permit renewal
5 contained one deficiency at the time the Corps had to decide whether to
6 extend the permit." And one deficiency alone was sufficient to prevent
7 applicability of the timely application rule; and therefore after the
8 period specified in the 1960 permit expired, all rights under the permit
9 expired with it.

10 If one could submit an application sufficient in all respects
11 but one, pledge to take whatever measures are necessary to remedy that
12 deficiency, and still not be eligible for continued use of the expired
13 license while renewal was under consideration, how then can UCLA be
14 considered eligible for continued use of its expired license when its
15 application (not even timely filed) had so many deficiencies, admitted
16 by Applicant and identified by the Board?

17
18 The timely application rule requires a renewal application to
19 be both timely and sufficient. The standard of sufficiency is a high one--
20 even one deficiency forbids continued exercise of the expired license
21 rights. The Application submitted by UCLA at the time of license expiration
22 was insufficient in a wide variety of ways, failing to meet the Commission's
23 requirements for contents of such applications and failing to provide the
24 adjudicatory board with the information necessary to determine the safety of
25 the proposed licensed activity. This has necessitated numerous delays-- and
26 thus increased the potential for injury to the public-- as information needed
27 due to the insufficiency of the original application has had to be late-filed
28 again and again. Applicant has failed to comply with the timely application
rule, and that is why the Board was unable to decide the Application long

1 ago. Continued operation in light of violation of the timely application
2 rule is thus impermissible.

3
4 Determination of Sufficiency of Application is a Matter of Board Authority

5 At the first prehearing conference, Applicant attempted to argue
6 that the sufficiency of the application was determined by Staff the moment
7 Staff docketed the application, asserting in addition that if there were
8 any deficiencies in it, Applicant would remedy them as the proceeding
9 progressed. Counsel for Staff explained that the case Applicant was citing
10 merely said the decision whether an application was acceptable for
11 docketing was a Staff function because, of course, there is no Board
12 until the application gets docketed and a notice of opportunity for hearing
13 is issued. At that point, Staff Counsel indicated, the issue becomes not
14 whether the application is sufficient for docketing, but whether it is
15 sufficient to obtain a license. TR 17-19. The Board chairwoman commented
16 further on this assertion by UCLA that it is the Staff and not the Board
17 that determines the sufficiency of an application:

18
19 MRS. BOWERS: Ms. Helwick, we, in discussing some
20 of the filings that have come in, we are aware that the Regents
21 time after time after time in their response to the supplemental
22 petition have said, it is the Staff, it is the Staff, it is the
23 Staff. The Commissioners have decided that the docket, just as
24 Mr. Gray [then Staff Counsel] said, was in such shape that it
25 should be noticed for hearing, that it was acceptable as far as
26 it needed to be at that time, and they made the decision that
27 it should be noticed.

28 Now, once the Commissioners decide that a Licensing Board
should be appointed to review the petitions, then this Board
has the responsibility to see whether the Staff and the Regents
and the Petitioners are fulfilling their responsibilities.
And if we do go into a hearing, this Board will then have the
responsibility to look at the adequacy of the application.

MS. HELWICK: Well, I certainly accept your ruling.
But I want to make it clear, then, to this Board that we stand
ready to amend our application at any point in time that we

1 are directed by this Board, or the Staff, for that matter,
2 with an indication that some particular area is somehow
inadequate.

(TR 20)

3
4 Thus, at the outset of this case, the Board made clear that it was its
5 responsibility to determine the adequacy of the application.

6 The case which Applicant had apparently relied upon in its
7 mistaken belief that determination of sufficiency of the Application was
8 a Staff function was New England Power Company (NEP, Units 1 & 2), LEP-78-9,
9 7 NRC 271, 278-281. That case involved a motion by an Intervenor to the
10 Licensing Board, asking it to suspend the activities of the Staff in
11 preparation of the Staff Safety Evaluation Report. The basis for the
12 Intervenor motion was the assertion that the application was incomplete
13 and should not have been docketed. The NEP case made clear that Boards
14 have limited authority over Staff review functions leading to preparation
15 of the Staff's SER, and thus no authority to tell them to stop conducting
16 such a review. The determination whether an application is acceptable for
17 docketing-- and thus the beginning of the Staff's review-- is a decision
18 for Staff to make. The determination whether the application is sufficient
19 in meeting the Commission's regulations for applications (as opposed to
20 sufficient to commence Staff review) is, however, a Board responsibility,
21 as is evaluation of the Staff SER once the review is completed. Once
22 docketed and a notice of opportunity for hearing is published and a licensing
23 board established, it is the licensing board's responsibility to determine
24 the adequacy of the Application.

25 The NEP case refers to the CCRI v. NRC court decision which held
26 that no statutes or regulations are violated by the practice of docketing
27 incomplete applications for licensing. That case, of course, referred to
28 an application for an initial licensing, not for renewal. There is no rule

1 requiring timely and sufficient initial license applications; the rule
2 applies only to renewals. Thus, docketing incomplete applications for an
3 initial license can cause no public harm, because the proposed activity
4 cannot commence until the application is finally sufficient. No delay in
5 making the application sufficient can cause risk to public health and
6 safety, as the activity is prohibited until sufficiency is achieved.

7 Not so with renewals. In the case of relicensings, the activity
8 under the existing license must stop when the license expires, unless and
9 only unless a sufficient application was filed in a timely fashion prior to
10 expiration. Like initial licensings, insufficient renewal applications can
11 be supplemented and deficiencies remedied as the proceeding progresses,
12 but the protection of the timely renewal provision is granted only when
13 the application was sufficient and timely filed. The reason is obvious--
14 application insufficiencies cause delays in resolving whether the proposed
15 action can be conducted safely. In initial licensings, those delays cannot
16 put public health and safety at risk; in renewals, that is not the case.
17 Only those delays occasioned by agency slowness-- not application untimeliness
18 and insufficiency-- can justify continued operation past an expiration date.

19 One should note that the 5 U.S.C. 558(c) provisions for license
20 suspension are not applicable here. Those provisions-- separate from the
21 license renewal provisions-- state:

22
23 Except in cases of willfulness or those in which public
24 health, interest, or safety requires otherwise, the with-
25 drawal, suspension, revocation, or annulment of a license is
26 lawful only if, before the institution of agency proceedings
27 therefor, the licensee has been given-- (1) notice by the agency
28 in writing of the facts or conduct which may warrant the action;
and (2) opportunity to demonstrate or achieve compliance with
all lawful requirements.

Those provisions relate to facilities which have licenses which have not
expired, and guarantee them a warning before license revocation can occur,

(p. 89)

[I]t is clear, too that the provisions of this [second] sentence do not apply to renewal of licenses. Renewals are treated specifically in the next sentence.

This is made clear in the case of Hamlin Testing Laboratories v. USAEC [357 F. 2d 632 (1966)]. Hamlin had a license to use radioactive materials, issued on June 30, 1960, renewed on May 25, 1961, and expired May 31, 1963. Hamlin filed an application for renewal on April 25, and was thus permitted to operate fourteen days (as opposed to the four years so far in the UCLA case) beyond the expiration of the license. On June 14, 1963, the renewal

1 application was denied. Hamlin alleged that the Commission should have
2 followed procedures applicable to withdrawal, suspension, revocation or
3 annulment of license, or regulations dealing with suspensions, modifications,
4 and revocation of existing licenses. The Court ruled that those provisions
5 were not applicable in the case of a license renewal proceeding. (It
6 should be noted further that among the reasons resulting in the Commission's
7 action were repeated violations of NRC regulations; still, decision was
8 taken not as enforcement action but in the license renewal context.)

9
10 CONCLUSION REGARDING TIMELY RENEWAL APPLICATION PROVISIONS

11 The purposes of the timely renewal application rules are
12 perhaps best summed up in the Attorney General's Manual on the APA.
13 After repeating the language of Section 9(b) relating to license
14 renewals, including that continued operation past license expiration
15 is contingent upon having made "timely and sufficient application,"
16 the AG's Manual goes on:

17 It is only fair where a licensee has filed his application
18 for a renewal or a new license in ample time prior to the
19 expiration of his license, and where the application itself
20 is sufficient, that his license should not expire until his
21 application shall have been determined by the agency. In
22 such a case the licensee has done everything that is within
23 his power to do and he should not suffer if the agency has
24 failed, for one reason or another, to consider his application
25 prior to the lapse of his license.

(p. 91-92, emphasis added)

26 Thus continued operation is permitted only when the licensee "has done
27 everything that is within his power to do" and it is the agency that has
28 failed in its licensing duties. If the Board feels the delays that have
occurred are of its making and the UCLA application filed in 1980 was both
timely and sufficient, then the reactor is permitted to continue to operate.
But if the delays are not of the Board's doing, and if the Application filed

1 in 1980 was untimely and/or insufficient, or the safety analyses now being
2 litigated were filed subsequent to the 30 day period prior to expiration
3 required by the rule, then the law and the regulation require curtailment.
4 UCLA did not and has not complied with the rule requiring its application
5 to be timely and sufficient; it has not done "everything that is within its
6 power to do"; it is four years since the license expired and the Board has
7 been unable to determine the major issues related to the application because
8 the application has been continually withdrawn, modified, and contradicted,
9 and because the Board has repeatedly found the information provided inadequate
10 to make the necessary determinations. Continued operation is impermissible.

11
12 APPROPRIATE REMEDY

13 The Board solicited this motion if the December 10 deadline
14 it imposed could not for some reason be met. In so doing, the Board
15 indicated the remedy it felt appropriate-- "curtailment of activities"--
16 but did not define that remedy specifically. Upon inquiry by CBG as to
17 what the Board had in mind when it said it would entertain motions for
18 for "curtailment," the Board responded as follows...

19 JUDGE FRYE: I'm not going to tell you what motion to file.
20 You may file whatever motion you want.

21 JUDGE LUEBKE: I think we could help with some suggestions,
22 and one is--

23 JUDGE FRYE: No. Let's let them.

24 JUDGE LUEBKE: You prefer not to? Okay.

25 JUDGE FRYE: I would like you to tell us what you think the
26 record at this state would require.

27 CBG has given careful consideration to what the appropriate remedy
28 would be to this situation, four years into a proceeding to determine the

1 safety of continued operation of a facility which continues to operate
2 all the while. CBG has carefully reviewed the record to this point,
3 as per Judge Frye's request, to inform the Board what we think the
4 record requires. We think the following points are important in making
5 that determination:

6
7 (1) The Board has still not been able to determine what it said it views
8 as the principal issue in the hearings to date: how-- or if-- this reactor
9 can shut itself down safely in a power excursion. The most fundamental
10 question of shutdown mechanism-- which must be answered before the effective-
11 ness of that mechanism in preventing a destructive reactivity accident can
12 be assessed-- remains unanswered. Will the reactor shut itself off by
13 expelling water through tiny cracks in a wall of lead bricks-- a pathway
14 explicitly denied by UCLA's own witness in July? Or will it shut itself
15 down by expelling water through the rupture disk, a pathway the same witness
16 has testified is too slow-acting? Or will the excursion be self-limiting
17 by an RDA-- a Rapid Disassembly Accident in which the exponentially increasing
18 power stops skyrocketing only by dispersal of the molten fuel in a steam
19 explosion?

20
21 (2) The Board still has not been able to determine even how much reactivity
22 would be available for such an excursion. Even knowing the shutdown mechanism--
23 which remains unknown at this stage-- the Board doesn't know how much
24 reactivity can be put into the system. There is testimony of record that
25 bowing effects alone could contribute \$2.00 extra reactivity to whatever
26 amount was inserted initially. Even if we could reliably estimate reactivity
27 effects at the Argonaut from reactivity effects at reactors of different designs--
28 which substantial testimony of record indicates cannot be done-- the Board

1 has to date been unable to determine how much reactivity can be put into
2 the system.

3
4 (3) The most fundamental input parameters for this reactor-- void coefficient,
5 ρ/β , flux, and the like are not reliably known for this reactor. There
6 is evidence of record of widely divergent calculations and measurements for
7 each of these fundamental core parameters. Even were the Board presented
8 with a reliable method of estimating the course of an accident at the
9 Argonaut from data obtained at SFERT (for power excursions) or Hanford
10 (for Wigner energy storage), it has no reliable, set, uncontroverted core
11 parameter data for making the determination of safety or danger.

12
13 (4) The people responsible for the daily safe operation of the reactor
14 have made repeated, extraordinary errors on the record to date. The
15 reactor manager could not even explain the worth of the control blades
16 or whether the reactor could go critical with only one control blade out
17 of the core; he extrapolated from a 2 inch cadmium sample to a 2 foot
18 sample as though it would be worth only three times more, a position he
19 later had to recant; he boldly announced that it takes only 20 seconds
20 to drain water via the rupture disk when the accident under evaluation
21 occurs in milliseconds. Other witnesses responsible for safety at the
22 facility have made embarrassing gaffes of great safety significance--
23 the official who claims to be in charge of fire safety, for example,
24 apparently thought no fire protection was necessary for the PuBe sources
25 under his care because he thought the intermetallic compound could not
26 undergo an exothermic reaction. The same safety official
27 testified that he had not understood the chart he had relied on for his
28 assertion that graphite combustion cannot occur without forced airflow

1 and that indeed the chart said no such thing. And on and on. Thus the
2 people in charge of safety, while safety is being debated, have already
3 admitted major errors on key safety questions. The safety of the public
4 is seriously at risk while the Board tries to determine whether they are
5 sufficiently competent to be worthy of the public's trust.

6
7 (5) There is no Emergency Plan whatsoever involving any response outside
8 the reactor room itself. UCLA contends there is no need for any plan
9 that prepares for contingencies outside that room, yet reliable evidence
10 of record indicates serious risks to the public in case of accident and
11 the need for a workable emergency plan. If something untoward were to
12 happen now, with the emergency plan issues not even litigated and no
13 emergency plan in place, tremendous unnecessary casualties could result.

14
15 (6) Similarly, there is no fire response plan as to how to fight a fire
16 involving the reactor. The Board has not yet been able to rule whether
17 Dr. Wegst is right that graphite is "considered" a non-combustible
18 material and that there is no need to figure out and prepare how to fight
19 a graphite-uranium/aluminum-magnesium fire at the facility. Were such
20 a fire to occur-- be it accidental or through simple arson-- during the
21 pendency of this proceeding, a Windscale-type radiation release in a
22 tremendously more populated area could occur, with the potential for
23 explosion if water were incautiously applied.

24
25 (7) There is no sabotage protection plan. Were intentional destruction to
26 occur while the security issues are still unresolved, testimony of record
27 already indicates people up to 75 kilometers from the site could be exposed
28 to doses in excess of legal limits with monstrous doses closer in.

1 (8) UCLA continues to argue that it is required only to report theft of
2 weapons-grade material at the facility, not to take measures sufficient to
3 prevent such theft. Theft or diversion of highly enriched uranium, suited for
4 construction of a clandestine fission explosive, would have consequences of
5 international proportion.

6
7 (9) The facility sits virtually on the cross-hairs of two massive earthquake
8 faults in an extremely seismically active area. Applicant and Staff's own
9 study indicates radioiodine releases of 2.7% from crushed fuel. They now
10 attempt to dispute their own study; testimony by Professor Anderson
11 indicates the 2.7% estimate might in fact be low. The Board has yet to
12 be presented with any empirical data from crushed fuel of any sort, let
13 alone U-Al plates. It has three estimates before it-- UCLA's and Staff's
14 2.7%, which results in doses greater than 100,000 Rem to the thyroid close
15 in and doses out many kilometers in excess of legal limits; UCLA's new
16 attack on its SAR estimate, based on assertions about unsmashed fuel of a
17 totally different type; and Professor Anderson's testimony about micro-
18 fractures, stress-risers, and the like resulting in releases far greater
19 than UCLA and Staff's original 2.7%. In the meantime, an earthquake could
20 occur at any time and we could empirically discover who is right.

21
22 (10) Dr. Pearlman now estimates that a Wigner energy release could result
23 in an increase in temperature of 175°C. Testimony from the panel including
24 Dr. Kohn, Professor Kaku, Dr. Wayne, Professor Anderson, Mr. DuPont and
25 others indicates that Dr. Pearlman's input data are in error by roughly
26 an order of magnitude, due to errors made in consideration of operating
27 temperature, storage rate, location of fast flux peaking near fuel not
28 core center, etc. Wigner release could thus ignite the core or melt the
fuel if the CBG panel is found right by the Board-- and could contribute

1 substantially to the course of another accident by adding heat to
2 an event that might not of itself be sufficient to cause fuel damage
3 even if the Board were to finally determine Wigner energy storage to
4 be somewhat less. The Board has made no determination and thus
5 continued operation could result in finding out the hard way.

6
7 (11) The testimony of record indicates the core inventory-- even
8 with intermittent operation-- is so large, given the lack of containment
9 structure or exclusion zone-- that inventory limitations provide no
10 inherent protection whatsoever to the public. Site characteristics,
11 particularly the nearby classrooms and crowded structures all around
12 the reactor, exacerbate the public health risks of accident or of normal
13 operations.

14
15 (12) The reactor continues to release excessive quantities of Argon-41
16 directly into the main air inlet for the nearby Math building, because of
17 unfortunate placement of the reactor exhaust stack lower than the
18 surrounding buildings. This issue has not even begun to be heard, yet
19 the exposures to hundreds of people in the Math Building go on daily.

20
21 (13) No Environmental Impact Statement has been done. If CEG's contention
22 X is eventually found to be correct, asserting that such an EIS is necessary,
23 many more years of delay will have resulted without adequate review of the
24 environmental impacts of the proposed relicensing. If CEG is right that
25 those impacts are substantial, those impacts will have occurred prior to
26 their assessment and a determination as to whether they are warranted.
27 The impacts would be irreversible; the damage done.
28

1 (14) UCLA continues to rack up violation after violation in its
2 inspections. The contention as to UCLA's regulatory compliance has
3 yet to see the beginning of hearing, as is the case with the contentions
4 about inadequate maintenance, poor managerial controls, and the like.
5 Yet those violations and bad managerial controls and maintenance
6 continue, and the public receives the potential impact of same.

7
8 (15) The primary basis upon which both UCLA's amended application and
9 the Staff's Safety Evaluation Report rest-- the Battelle Study and its
10 sponsor Mr. Sean Hawley-- have been to a very large extent discredited,
11 in no small measure by UCLA and Staff themselves as they try to distance
12 themselves from its conclusions and assumptions. Thus the foundation
13 for the safety analysis of both Staff and Applicant is gone.

14
15 The Record Requires Shutdown

16 There are really only two possible solutions to the problem of
17 continued operation of this facility while its safety remains in doubt:
18 shutdown, and severe limitations on operation. It is CBG's view that
19 the record without question requires shutdown-- in fact, nothing but shutdown
20 is permitted under the statute because the violation of the timely and
21 sufficient application provisions makes continued operation after expiration
22 of the license illegal.

23 Why is shutdown required? Because a destructive power excursion
24 could occur tomorrow. A reactor operator or a student could make a mistake--
25 made all the more likely because of their unsupported belief that the reactor
26 is inherently safe-- and we could experimentally determine the radiological
27 consequences of an SL-1 type accident in West Los Angeles rather than the
28 Idaho desert.

1 Why is shutdown required? Because people sometimes behave
2 like idiots, and the Board is unable to determine at this stage that
3 this reactor is idiot-proof.

4 Why is shutdown required? Because fires happen, and UCLA
5 has no plan for fighting a reactor fire, which could release more
6 radioactivity than any other accident.

7 Why is shutdown required? Because there is no sabotage pro-
8 tection plan, and only a plan to report theft of highly enriched uranium,
9 and the consequences of either action would be extraordinarily grave. The
10 Board may at some time in the future determine that the plan needs various
11 improvements to be acceptable, but sabotage or theft could occur long
12 before then.

13 Why is shutdown required? Because every day that the reactor
14 operates, excessive amounts of Argon-41 are released out an exhaust stack
15 shorter than nearby buildings and directly upwind of a main air inlet for
16 the Math Building, causing potential for serious and unnecessary radiation
17 exposures and thus public injury on a daily basis.

18 Why is shutdown required? Because an earthquake could hit at
19 any time, and the radiation exposure that would result could injure many
20 many thousands of people out tens of miles.

21 Why is shutdown required? Because the law requires it.
22 Continued operation after expiration of a license is forbidden by law unless
23 the renewal application were both timely and sufficient. As demonstrated
24 above, UCLA's was neither. It makes no sense whatsoever, and poses
25 tremendous public safety risks, to keep this facility operating while its
26 safety is in serious question; and where the only way it is likely to be
27 granted a new license is with substantial conditions not currently imposed.
28 The long and the short of it is that this reactor could blow up long before
the Board is permitted to determine whether it could blow. The potential

1 consequences of continued operation without an affirmative finding by the
2 Board that it is safe to do so make continued operation unacceptable.
3 Further, there will be no incentive for UCLA to stop waffling and delaying
4 the proceeding. If the Board does not implement the curtailment which
5 the Board itself proposed, the contested issues in this proceeding will
6 never be resolved; the Board will never complete its assigned task; and
7 the public will never be provided the protection which is their right.

8
9 Severe Limitations on Operations

10 It is recognized that the Board, in soliciting this motion,
11 may have had in mind some curtailment of operations short of complete
12 shutdown. We believe the timely application provisions do not permit an
13 action short of shutdown, and that the record in this proceeding indicates
14 the public interest will not be adequately protected by anything less.
15 We do not see how operation of this facility can be permitted to continue
16 as long as the Licensing Board has not determined whether it is safe to do so.

17 Given the magnitude of a potential accident at the UCLA reactor,
18 as indicated in the record to date, only severely curtailed operations
19 could conceivably even pose a possible alternative to complete shutdown.

20 The two principal components of curtailment
21 are: (1) a limitation on power (so as to reduce fission product
22 inventory to such a level that were there an accident while the proceedings
23 continued, public consequences would be acceptable because there was little
24 in the "bottle" to get out if broken); and (2) a limitation on excess
25 reactivity (to reduce the potential for a destructive power excursion).

26 There might be a temptation to bring the facility back to its
27 configuration of the early 1960s-- 10 kw and 0.6% delta k/k. While this
28 might in the short run reduce somewhat the potential for and consequences
of a serious accident at the reactor while the proceeding progressed, sufficient

1 evidence of record now exists to indicate that merely returning to these
2 1962 limits would not solve the problem.

3 A return to the design limitations and self-limiting features
4 of the original Argonne National Laboratory Argonaut, in the
5 might well resolve-- permanently-- many of the issues in this proceeding.
6 The original Argonaut at ANL used a low enriched oxide fuel, offering
7 substantial protection against both fire and power excursions, particularly
8 with the very small amount of excess reactivity available. And it operated
9 at low power, normally 100 watts (1/1000th that of UCLA's). Its inherent
10 negative temperature coefficient was so designed that sustained operation
11 above 1 kw resulted in self-shutdown, making it impossible to generate
12 much of a fission product inventory. (see CBG Panel I testimony P. 9).
13 Furthermore, it had a substantial exclusion zone, which resulted in a
14 further reduction of effective doses by a couple of orders of magnitude.

15 To see how little a reduction of power to the 1962 10 kw limit
16 would yield in terms of resolving the interim safety problems, an
17 examination of the CBG Panel IV testimony data is useful. At 100 kw,
18 doses of approximately 1.4 million Rem to the thyroid result at the
19 facility boundary from a 25% radiiodine release; doses in excess of
20 legal limits extend out 75 kilometers. Reduction of inventory as from
21 a ten-fold reduction in power would thus result in doses of 140,000 Rem
22 to the thyroid close in, and doses in excess of legal limits out 7.5
23 kilometers (see Panel IV, Table 1, page 6). A reduction to 1 kw would
24 yield doses of 14,000 Rem at the facility boundary and in excess of legal
25 limits out about 750 meters. (There are approximately 50,000 within
26 750 meters of the reactor.) Fission product inventory from a 100 watt
27 power limitation would still result in doses of 1400 Rem at the boundary
28 and doses in excess of legal limits out about 200 meters from the facility.
(It is readily seen why the 100 watt operating level of the original ANL

1 Argonaut, with its exclusion zone of several hundred feet, was appropriate.)
2 Similarly, a 10 watt limitation yields exposures in excess of legal limits
3 about 80 meters from the reactor; a 1 watt limitation about 30 meters
4 away. Only a 0.1 watt limitation would meet legal limits.

5 It is nonetheless clear that a reduction in permissible
6 power reduces potential consequences proportionately, although the
7 long-lived isotopes such as Sr-90 and Cs-137 would be unaffected in the
8 short-run by such a power limitation. It is also nonetheless clear
9 that a power reduction to the watt range is required if the public is to
10 be protected by virtue of inventory reduction while the Board determines
11 whether the bottle can break.

12 A power reduction to the watt range would bring the reactor
13 back to the limitation of the original UCLA license (it was brought to
14 10 kw only via a license amendment, and then via another amendment to
15 100 kw). Such a power reduction would reduce in the short run potential
16 risks from all accidents except power excursion, since power excursions
17 generate their own fission product inventory independent of previous
18 history. Whereas previous destructive excursions such as Borax I and
19 SPERT I may have resulted in relatively small releases due to their cores
20 having been clean (see Panel I oral testimony to this effect, and rebuttal
21 testimony by Prof. Anderson on effect of burnup on release fraction), this
22 would not be the case with a power excursion with old fuel at UCLA, even
23 if the recent past was at low power. To provide protection to the public
24 while the larger safety issues are being resolved, fission product inventory
25 would have to be kept low by a very substantial power reduction during
26 normal operation, and a power excursion must also be prevented by significant
27 excess reactivity limitation.

28 As a practical matter, the latter may be quite difficult. As

1 indicated in CRG's Panel I direct and rebuttal testimony, even with, say,
2 a \$1 limit on paper, far more than that amount might be available, through
3 errors in measurement and loading, or bowing effects in the midst of an
4 excursion, or other positive effects.

5 However, it is clear that the reactor can operate with far less
6 excess reactivity installed than it has now, and that such a reduction
7 would produce at least some increased level of safety. Whether it is a
8 sufficient level of safety or not is another matter, as is indicated by
9 the destructive power excursion incident in Argentina a few months ago
10 in a zero power facility which should have had very little excess reactivity
11 available. (The accident occurred when an experienced operator made an
12 error, moving fuel bundles without first draining the water.)

13 The UCLA reactor operated for its first six years with about
14 80¢ worth of excess reactivity, and could operate with considerably less,
15 particularly if the other measure discussed above, power reduction, were
16 adopted. The only excess reactivity needed would be the 25¢ allocated to
17 seasonal changes and about 15¢ for experimental samples. (This is based on
18 Mr. Ostrander's testimony at page 38 of his direct, and his assertion at
19 page 35 that the average worth of a rabbit is 10¢; the temperature defect
20 in going to full power would not exist with a low power limitation, nor
21 would the burnup and poisoning allocation; reduced excess reactivity
22 loading would markedly reduce any reactivity allocated to positioning
23 of the "reg rod," because obviously 90¢ wasn't needed when the total
24 excess reactivity was about 80¢ in the 1960s.) In short, the facility
25 could run just fine with about 40-50¢ excess reactivity installed. This
26 would not eliminate the potentially serious problems of additional reactivity
27 available-- through error, bowing, or positive sample insertion, or
28 otherwise. (Some of these problems do have solutions; they are, however,
unrelated to curtailment.)

1 In sum, curtailment would of necessity involve substantial
2 reductions in permitted power level and permitted excess reactivity
3 loading (necessitating cool-down and fuel removal, reducing core loading,
4 substituting dummy plates for some fuel plates). The facility could operate
5 on 40-50¢ excess reactivity without trouble, which would substantially
6 reduce risk of destructive power excursions, though not eliminate it.
7 Reductions in power to the kilowatt range do not provide sufficient
8 reduction in inventory to acceptably reduce consequences of accidents;
9 reduction to the watt range (quite acceptable for the instructional uses
10 of the facility claimed to be the primary function) would be necessary.

11 Essentially, curtailment, to be effective, would require
12 returning the UCLA reactor to something between the inherent self-limiting
13 features of its original license (power in the watt range, excess reactivity
14 in the sub-dollar range) and those of the original ANL Argonaut.

15 It ought to be noted, once again, that a permanent (as opposed
16 to merely short run) resolution of 95% of the contested issues in this
17 case could be attained by a return to something similar to the self-limiting
18 design features of the original ANL Argonaut with an additional alteration or two.

19 It should be clear, however, that an excess reactivity limit of
20 one dollar on paper and a 10 kw power limit, for example, do very little
21 to alter the potential public injury associated with continued operation
22 while these safety issues are being resolved. Given several dollars of
23 additional reactivity potentially available beyond the amount installed
24 on paper, and given the consequences associated with a 10 kw inventory in
25 a highly populated area without exclusion zone or containment, curtailment
26 of that sort would not protect as required.

27
28 There appears to CBG to be only two alternative that can resolve

1 the problems currently faced. The reactor can be shutdown until the
2 application is determined and the safety of the proposed renewal resolved.
3 Or power can be reduced to the 1 watt range and excess reactivity to the
4 40-50¢ range, a situation where the instructional activities of the facility,
5 which are claimed to be its primary purpose and reason for existence, would
6 be unaffected.

7 It is CBG's view that the timely renewal requirements mandate
8 shutdown. The facility is not permitted continued operation because it
9 did not comply with the requirements to file a timely and sufficient
10 application. Continued operation is statutorily impermissible until and
11 unless the Board finds it safe to renew the license.

12 If the Board disagrees, and determines curtailment to be satisfactory,
13 the record to date indicates that the reduction in power and in excess
14 reactivity must be very severe.

15 CBG notes that, from a practical standpoint, it would make
16 considerable sense, particularly in light of its previous two curtailment
17 motions on security grounds, for curtailment or shutdown to be ordered now,
18 fuel allowed to cool down, then shipped off-site in May or June at the latest
19 in preparation for the Olympics; and, as an incentive to eliminate further
20 delays and as protection to the public, for the fuel not to be returned
21 until the safety and security issues are resolved, if resolved favorably to
22 Applicant, and conditions, if imposed (such as improvements in security or
23 changes in plate spacing or conversion to TRIGA LEU), are in place.

24 Curtailment or shutdown now would make possible off-shipment
25 for the Olympics; fuel off-site would then spur resolution of the issue
26 of the safety of the facility and the necessity of any modifications. If
27 favorably determined, modifications could then be made prior to return of
28 old fuel-- perhaps with redesigned spacing-- or provision of new fuel

1 with more inherent safety.

2
3 Competing Harms

4 The University has repeatedly asserted that the only purpose
5 for the reactor is instruction. In the Contention II hearing, Mr. Ostrander
6 was asked:

7
8 Q You testified, did you not, that the only purpose for the
9 reactor being there is the class room instruction?
There is no other justification?

10 A Yes.

11 Q And, therefore, the only purpose for the reactor operation would
12 be those thirty to sixty hours of operation that are reported
in your reports to the NRC?

13 A I said, the primary and principal and virtually only justification
14 for the reactor being there is the education. Now, there are
some purposes with those other radiations.

15 Q But they are secondary, in your view?

16 A Yes.

TR 153-4

17 And a little later he was asked:

18
19 Q You indicated that the primary purpose and primary-- the central
20 mission of the reactor is education. Is that correct?

21 A Yes.

22 Q Would there be therefore, anything but an incidental effect on
23 that primary mission, were the university to be forbidden
from engaging in those other activities.

24 A No.

TR 162

25 There is evidence of record in the Contention II proceeding that the
26 hours of reactor operation for that "primary mission" of instruction
27 are only one to two hours per week, and that those hours are primarily at
28

1 with more inherent safety.

2
3 Competing Harms

4 The University has repeatedly asserted that the only purpose
5 for the reactor is instruction. In the Contention II hearing, Mr. Ostrander
6 was asked:

7
8 Q You testified, did you not, that the only purpose for the
9 reactor being there is the class room instruction?
There is no other justification?

10 A Yes.

11 Q And, therefore, the only purpose for the reactor operation would
12 be those thirty to sixty hours of operation that are reported
in your reports to the NRC?

13 A I said, the primary and principal and virtually only justification
14 for the reactor being there is the education. Now, there are
some purposes with those other radiations.

15 Q But they are secondary, in your view?

16 A Yes.

TR 153-4

17 And a little later he was asked:

18
19 Q You indicated that the primary purpose and primary-- the central
20 mission of the reactor is education. Is that correct?

21 A Yes.

22 Q Would there be therefore, anything but an incidental effect or
23 that primary mission, were the university to be forbidden
from engaging in those other activities.

24 A No.

TR 162

25 There is evidence of record in the Contention II proceeding that the
26 hours of reactor operation for that "primary mission" of instruction
27 are only one to two hours per week, and that those hours are primarily at
28

1 very low power. Furthermore, the University asserts that the vast majority
2 of instructional uses of the reactor are when it is not operating. Therefore,
3 curtailing power should have no effect whatsoever on the "primary function"
4 and "virtually only justification for the reactor being there." Complete
5 shutdown would thus have only miniscule effect, as the vast majority of hours
6 of instructional use assertedly involve the reactor when it is not operating.
7 Those few uses, a fraction of an hour per week, truly requiring reactor
8 operation could be met by using the NEL's neutron generator as the neutron
9 source for the activation analysis instruction rather than the reactor;
10 or samples could be provided that were previously or elsewhere activated.

11 Thus curtailment would have essentially no effect on the primary
12 function and purpose of the reactor; shutdown only a miniscule impact. If
13 UCLA were to stop its delaying, because the incentive were removed, then
14 the curtailment or shutdown would be short-lived and the effect truly
15 negligible.

16 The harms due to failure to curtail or shutdown are potentially
17 very large. Evidence of record indicates a series of potentially very
18 serious accidents possible at this facility-- from destructive power
19 excursions through fire, earthquake, Wigner release, and so on. Every day
20 longer that the facility operates is another day when that accident-- or
21 sabotage-- can occur. The Board, as said before, may find eventually that
22 the facility is insufficiently protected against serious destructive
23 incidents. The public could be exposed to unacceptable levels of radiation
24 in large numbers, due to inability of the Licensing Board to resolve the
25 safety issues before those safety problems led to a serious incident.

26 Two weeks before what were to be the last session of inherent
27 safety hearings, a 14 year veteran employee of RA-2, an Argentine low power
28

1 research reactor, made an error which led to a power excursion resulting
2 in his death and the injury of people nearby. Such an incident, with far
3 worse consequences, could happen at any time at the UCLA facility; the
4 Board still is unable to rule that self-shutdown will occur safely,
5 rather than destructively.

6 Last month CBC received a letter from a mother who, after
7 a long period of spending "the greater part of six days a week in the
8 Math Sciences Building" at UCLA, terminated a pregnancy in a stillbirth.
9 She writes inquiring whether this could be the result of the daily
10 Argon-41 leakage into the Math Building because of improper height and
11 placement of the reactor's exhaust directly upwind of the Math Building's
12 air inlet. Are there unnecessary injuries being produced in any of the
13 hundreds of people being exposed needlessly? Why should the exposures
14 continue for year after year while there isn't even progress on reaching
15 an answer in the evidentiary proceedings?

16 Within the last several years there have been at least three
17 bomb threats at or near the reactor facility, plus two rather crude
18 attempts at radiological sabotage, according to records already obtained
19 during non-security discovery. Will one such attempt succeed before the
20 Board decides what security would be adequate to provide sufficient
21 protection? Will we find out the hard way that security is inadequate?

22 The competing harms are, quite frankly, some minor inconvenience
23 to a few students who would have to use the reactor at a lower power than
24 normal or use the neutron generator or some other source for activation
25 lessons and the loss of some income from commercial sale of radiation
26 services (the money from which, UCLA claims, merely covers the cost of
27 providing the commercial service anyway). On the other hand, the potential
28 harm is doses in the millions of Rem close by and problem doses out over
areas with hundreds of thousands of people in them, because someone made a

1 mistake (thinking the reactor would shutdown automatically if a sample
2 is yanked, or that it can't catch fire, or that there can't be much
3 Wigner energy stored). A catastrophic mistake, with thousands of injuries
4 on the one hand, or some minor adjustment of a one-hour a week instructional
5 activity on the other.

6
7 CONCLUSION

8 CBG recognizes that this has been a very lengthy motion. But
9 this has been necessitated by a very lengthy and unduly delayed proceeding,
10 and the only hope that this proceeding will resolve the issues before it,
11 is grant of this motion, solicited by the Board itself. This is undoubtedly
12 the most important decision the Board will have made in the many years of
13 of this proceeding; it will determine whether the rest of the proceeding
14 will have any meaning. If not granted, there is little, if any, possibility
15 that the Board will be able to fulfill its responsibility of ruling on
16 the proposed application and the contested issues related thereto before
17 much of the requested renewal period has elapsed. The Applicant will continue
18 to be rewarded for delay, and the continued operation, about which so many
19 critical safety questions are still unresolved, will continue to occur
20 by default.

21 The Board asked for this motion and suggested the relief that
22 would be appropriate. The Board clearly has the power to take the action
23 it proposed. In fact, the law requires it-- both the requirements of
24 prompt determination of the issues in the proceeding, and those forbidding
25 continued operation after license expiration when an application was
26 untimely and insufficient.

27 It is precisely because of the untimely and insufficient nature
28

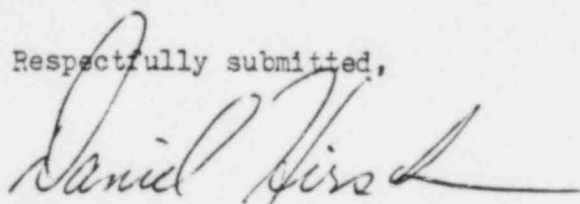
1 of the Applicant's safety analyses that four years later, the Board is
2 still unable to decide the most elementary of safety questions in this
3 case: how or if the reactor will safely shut itself down in an accident.
4 After four years of relicensing proceedings, the inherent safety of the
5 reactor remains in doubt. And after four years, the health and safety
6 of the public remains unprotected. The facility should not be permitted
7 to continue to operate. Otherwise, the proceeding will never end and
8 the public will never receive the protection and law enforcement the
9 Atomic Energy Act and the APA have entrusted to this Board.

10 Both the facts of this case and the law of this case require
11 complete shutdown. Should limitation of operations be seen as an
12 alternative, which CBG feels strongly it should not, then such a
13 limitation must be severe and far-reaching, as argued above.

14 Operations at the UCLA Argonaut must be curtailed-- so that
15 the neighbors of this reactor do not find out, the hard way and before
16 the Board does, whether a devastating destructive incident can occur
17 at this dangerously under-analyzed facility.

18
19
20 executed at Ben Lomond, CA
21 this 9th day of January, 1984

Respectfully submitted,



Daniel Hirsch
President
Committee to Bridge the Gap

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)

DECLARATION OF SERVICE

I hereby declare that copies of the attached: MOTION FOR CURTAILMENT (III)
(Irreparable Injury Associated With Any Further Delay)

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 9, 1984.

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

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

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

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

* Glenn O. Bright
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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

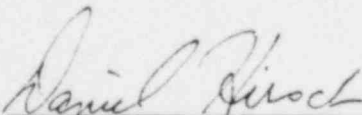
Chief, Docketing and Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dorothy Thompson
Nuclear Law Center
6300 Wilshire Blvd., #1200
Los Angeles, California 90048

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

Ms. Carole Kagan, Esq.
~~Atomic Safety and Licensing Board Panel~~
~~U.S. Nuclear Regulatory Commission~~
~~Washington, D.C. 20555~~

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


Daniel Hirsch
President
COMMITTEE TO BRIDGE THE GAP

* BY EXPRESS MAIL