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(Contention XX)
6 COMMITTEE TO BRIDGE THE GAP

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

7 UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION
8
9 BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

10 In the Matter of

11 THE REGENTS OF THE UNIVERSITY)
OF CALIFORNIA)
(UCLA Research Reactor))

Doc. No. 50-142 OL

Proposed Renewal of Facility License No. R-71

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15 COMMITTEE TO BRIDGE THE GAP'S
16 ESTIMATE OF THE LEVEL OF THREAT FACING THE
17 UCLA REACTOR FACILITY SUBMITTED IN RESPONSE
TO THE APRIL 20, 1984 PRE-HEARING CONFERENCE ORDER

18 A. INTRODUCTION

19 In response to the Licensing Board's April 20, 1984 Pre-
20 Hearing Conference Order, Committee to Bridge the Gap (CBG) submits the
21 following summary of the estimated levels of sabotage, theft and
22 diversion threats facing the UCLA reactor facility. The level of
23 threat to the UCLA reactor facility is dependent upon the value of the
24 facility as a terrorist target or source of nuclear material. This
25 differs when analyzing sabotage and theft, and thus will be treated
26 separately below; however, a common conclusion is possible: The UCLA
27 reactor facility is an attractive target for both potential thieves and
28 saboteurs.

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1 B. THEFT OR DIVERSION THREAT

2 The level of threat of theft or diversion occurring at the
3 UCLA facility is directly related to the value of the SNM on site either
4 for use in the manufacture of weapons, as a means of making threats for
5 blackmail purposes, or for sale on the black market.

6 UCLA possesses at least 4.92 kilograms of 93% enriched
7 uranium. Any group capable of making weapons with 93% enriched fuel
8 would be capable of separating the uranium from the UAL eutectic in the
9 MTR-type fuel at UCLA. This is true for both the irradiated and
10 unirradiated fuel. Furthermore, the irradiation levels that exist in
11 the UCLA reactor core are not sufficient to provide a significant
12 deterrent to dedicated thieves.

13 The value of the 4.92 kilograms of 93% enriched uranium at
14 the facility can be described in three basic ways: its dollar value,
15 its weapons potential, and its blackmail or threat potential. Although
16 it is difficult to state the precise dollar value of the 4.92 kilos,
17 it is reasonable to assume a value on the black market of at least one
18 hundred thousand dollars (\$100,000.00) per kilogram, or nearly one
19 half million dollars worth of nuclear material at the UCLA facility.

20 4.92 kilograms of U-235 is an extremely significant quantity
21 in terms of weapons manufacture. The critical mass of uncompressed
22 U-235 with a thick reflector made of beryllium is approximately 11
23 kilograms. However, if both the core and the reflector are compressed,
24 the critical mass may be reduced by the square of the compression. John
25 S. Foster, weapons specialist and former director of the Lawrence
26 Berkeley Labs, has stated in the public literature that compression of
27 several times normal density is achievable by use of conventional
28 explosives. Indeed, if the compression is merely two times, the

1 critical mass would drop from 11 kilograms to less than 4 kilo-
2 grams. Furthermore, the potential consequences of theft of 4.92
3 kilograms of U-235 is very nearly that of the theft of 5.0 kilograms,
4 the level at which the Nuclear Regulatory Commission has explicitly
5 required greater theft protection.

6 4.92 kilograms of bomb-grade uranium is also significant for
7 its blackmail or threat value. A group possessing such a significant
8 quantity of SNM could make an extremely effective blackmail threat by
9 sending threatened authorities kilogram quantities of U-235. Having
10 the capability to make such a grandiose demonstration would give a
11 blackmailer tremendous leverage and credibility.

12 The PuBe sources possessed by UCLA also add to the value of
13 the UCLA facility as a theft target. The 32 grams Pu-239 contained
14 therein, if released, could potentially result in lethal doses
15 throughout 15,000 square meters of building and significant contamin-
16 ation in 1,600,000 square meters of building. As a direct act or as
17 a threat, the theft of the Pu-239 at the facility could create
18 significant terrorist or blackmail potential. Thus, the PuBe source
19 adds directly to the value of the UCLA facility as a theft or diversion
20 target.

21 In sum, whether one considers the monetary value of the
22 U-235, the fact that it is a significant quantity in terms of manu-
23 facturing weapons, or its blackmail value, the value of the 4.92
24 kilograms of U-235 on site at the UCLA facility and the potential
25 consequences of its theft or diversion are such that one must assume
26 the possibility of a theft attempt being undertaken by a dedicated
27 group of persons acting in concert and willing to use violent means.
28 One must also assume that they will be well-armed and equipped and

1 versed in defeating detection systems.

2 C. SABOTAGE THREAT

3 Like theft or diversion, the level of threat of sabotage
4 facing the UCLA facility is related to its value as a terrorist target.
5 Much more than theft or diversion, however, postulating a level of
6 threat from terrorists is at best uncertain and speculative due to the
7 irrationality or fanaticism which characterizes terrorist actions
8 such as nuclear sabotage, a fact which demands utilization of conserv-
9 ative assumptions.

10 Terrorist activity is on the rise. The numbers of people
11 killed by terrorist activity is also rising along with the apparently
12 increasing willingness of terrorists to engage in actions which result
13 in large numbers of deaths. Nuclear terrorism, i.e., incidents
14 involving nuclear facilities, is also on the rise: Thus, there are
15 terrorist groups which consider nuclear facilities, such as UCLA's,
16 potential targets.

17 In assessing the potential sabotage threat at a nuclear
18 facility, one must account for the qualitative difference between
19 nuclear targets and most other industrial type targets. Nuclear
20 facilities, the nuclear power industry and nuclear weapons are the
21 object of intense public fascination in this country. They are the
22 subject of considerable public and media attention. This public
23 visibility and media attention makes nuclear facilities prime terrorist
24 targets by providing the element of theater which is the center of the
25 terrorist act.

26 The UCLA facility is itself a potential sabotage target.
27 During the upcoming Olympic Games, the attention of the entire world
28 will be focused on Los Angeles. As was brutally demonstrated at Munich

1 in 1972, the Olympic Games offer the perfect stage for terrorist
2 activity. Furthermore, the UCLA reactor has already gained national
3 and international attention as a potential terrorist target. Thus,
4 during the Olympics one must assume a maximal threat from all types of
5 national and international terrorists who will be capable of staging an
6 extremely well-equipped, well-armed and sophisticated violent attack.

7 After the Olympics, the value of the UCLA facility as a
8 terrorist target will obviously diminish. It will, however, remain a
9 significant potential target. The UCLA facility has already, and will
10 continue to, receive publicity and notoriety as a potential target.
11 Los Angeles is a major urban center and one of the most active points
12 of immigration in the United States. All manner of national, sub-
13 national, political and social groups are represented in the Los
14 Angeles area. It is also one of the world's major media centers. The
15 UCLA facility may be even more attractive than other nuclear targets
16 in the Los Angeles area because of its inherently weaker security due
17 to its location on a university campus. All of these factors make UCLA
18 an attractive terrorist target.

19 In sum, terrorism is on the rise as is nuclear terrorism.
20 Even after the Olympics, given the notoriety of the UCLA facility and
21 its location in Los Angeles, one must assume a significant level of
22 threat to the facility from sabotage. One must assume significant
23 resources and sophistication will be brought to bear in a violent
24 terrorist attack by a group of persons acting in concert. It must be
25 assumed that the participants will be well-armed, well-equipped,
26 versed in detection systems and the use of explosives.

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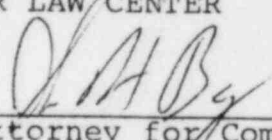
D. CONCLUSION

As both a theft target and a sabotage target, the UCLA facility has significant value to perpetrators of such action. Therefore, one must postulate and protect against a well-equipped, sophisticated attack, assault or diversion effort.

DATED: May 1, 1984

Respectfully submitted,

JOHN H. BAY
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NUCLEAR LAW CENTER

By 
Lead Attorney for Committee to
Bridge the Gap on Contention XX

United States of America
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

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

CERTIFICATE OF SERVICE

I hereby certify that copies of the attached COMMITTEE TO BRIDGE THE GAP'S ESTIMATE OF THE LEVEL OF THREAT FACING THE UCLA REACTOR FACILITY SUBMITTED IN RESPONSE TO THE APRIL 20, 1984 PRE-HEARING CONFERENCE ORDER in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class or express mail, postage prepaid, addressed as indicated, on this date: May 1, 1984

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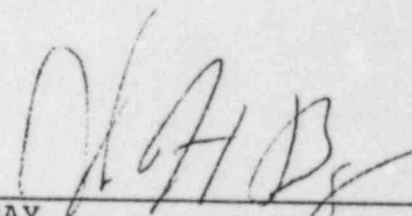
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