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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD '84 JUL 18 A10:34

Before Administrative Judges:

John H Frye, III, Chairman
Glenn O. Bright
Emmeth A. Luebke

In the Matter of	Docket No. 50-142 OL
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA	(Proposed Renewal of Facility License)
(UCLA Research Reactor)	July 17, 1984

MEMORANDUM

On December 23, 1983, this Board referred two charges of misconduct leveled against NRC Staff technical members to the Office of Inspector and Auditor.[1] These charges were made by the intervenor in this proceeding, the Committee to Bridge the Gap (CBG). Additionally, because these charges raised questions concerning the credibility of these Staff members whose affidavits supported Staff's motion for summary disposition of CBG's Contention XX, we required Staff to file an explanation

1 We understand that the Office of Inspector and Auditor has made a report to the Commission on these charges. We have not received or reviewed a copy of this report.

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with us. We also required Staff counsel's explanation of a charge made against her by CBG, although we did not refer that matter to the Inspector and Auditor. Responses to all these charges were filed by Staff counsel on January 10, 1984.

On February 24, 1984, after reviewing UCLA's security plan and the security inspection reports of the NRC Staff, we raised questions regarding the accuracy of representations made by both UCLA and Staff counsel. In that connection, we inquired whether these representations had been reviewed by each counsel's client, and if so by whom. Staff and UCLA counsel responded to this inquiry on March 9, 1984. On April 13, we issued a Memorandum and Order in which we concluded that no basis existed to impose sanctions against Staff counsel and proposed to reprimand UCLA counsel. However, we withheld any review of the representations of the technical staff because Staff counsel, in a March 16 letter, notified us that she had on that date been advised of certain Staff practices which were inconsistent with Staff's position as it had been conveyed to her and was investigating these practices.

UCLA counsel responded on May 1 to our April 13 Memorandum and Order. On June 5 we dismissed the charges pending against him and refused to institute action against UCLA pursuant to 10 C.F.R. § 50.100,

again withholding any review of the technical Staff's representations pending Staff counsel's investigation.[2]

On June 12, Staff counsel filed the supplemental information which had been promised in her March 16 letter. We must now consider the conduct of the NRC technical Staff called into question by our February 24 Memorandum and Order and the charges leveled by CBG which we discussed in our December 23 Memorandum and Order. We discuss these matters in detail below.

Background

All of the alleged misrepresentations at issue here involve CBG's Contention XX which concerns physical security at the Nuclear Energy Laboratory (NEL) where the reactor which is the subject of this proceeding is located. In order to understand the charges, some background is necessary. We begin by noting that 10 C.F.R. Part 73, which states the Commission's regulatory requirements for physical security, sets out three categories or levels of protection which must be implemented by nonpower reactor licensees. The particular category an individual licensee falls into depends upon the amount of special nuclear material (SNM) it possesses.

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2 Our June 5 Memorandum and Order is published as LBP-84-22, 19 NRC ____, with our April 13 Memorandum and Order as an appendix.

The first, or highest category (Category I) applies to Licensees who possess a formula quantity[3] of strategic special nuclear material (SSNM). These Licensees must implement the most stringent protective measures.[4]

The second category (Category II) applies to Licensees who possess less than a formula quantity of SSNM, but whose inventory of SNM is deemed to be of moderate strategic significance.[5]

The third category (Category III) applies to Licensees who possess less than a Category II amount of SNM. Licensees in this category are deemed to possess SNM of low strategic significance and must implement the least stringent security measures.[6]

Licensees are exempt from the regulatory requirements laid out to the extent that they possess SNM which is not readily separable from other radioactive material and which emits a dose in excess of 100 rems

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3 Although the definition of "formula quantity" is more complicated, for purposes of this discussion it may be considered to be 5000 grams or more of U^{235}.

4 10 C.F.R. §§ 73.40(b), (c), and (d); 73.60; 73.67.

5 10 C.F.R. § 73.67(d).

6 10 C.F.R. § 73.67(f).

per hour at a distance of three feet from any accessible point without intervening shielding.[7] Such fuel is deemed self-protecting.

Additionally, § 73.40(a) directs all Licensees to protect against both theft of SNM and radiological sabotage. We held in LBP-83-25A, 17 NRC 927 (1983), and LBP-83-67, 18 NRC 802 (1983), that this provision required UCLA to initiate some measures to protect against sabotage.

The alleged misrepresentations here involved concern: (1) whether Staff misrepresented the regulatory requirements concerning protection against sabotage; (2) whether a Staff affiant improperly stated that a portion of the SNM was self-protecting when it was not; and (3) whether Staff counsel misrepresented the amount of SNM on hand by stating that it was less than a formula quantity of SSNM. We deal with the last charge first.

Allegation that Staff Counsel Misrepresented the Amount of SNM on Hand

In its December 13, 1983, Memorandum on the status of Contention XX (at p. 10), CBG asserts that at a prehearing conference held early in 1981 Staff counsel stated that UCLA had less than a formula quantity of SSNM on hand. CBG points out that this statement came shortly after

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7 10 C.F.R. §§ 73.60, 73.67(b)(1)(i).

Staff had written UCLA indicating that more than a formula quantity was present. CBG's allegation is spelled out in more detail at page five of its February 8, 1983, supplemental response to Staff's motion for summary disposition of this Contention. There, CBG asserts that on January 12, 1981, James R. Miller of the Staff wrote to UCLA informing the latter that, because more than a formula quantity of SSNM was on hand at the NEL, UCLA would have to either: meet the criteria of 10 C.F.R. §§ 73.67 and 73.60; operate the reactor so as to meet the self-protection exemption; or ship a quantity of fuel off site so as to retain less than a formula quantity of SSNM.[8] CBG alleges that at the February 5, 1981, prehearing conference, Staff counsel argued that UCLA possessed less than a formula quantity of SSNM, citing lines 22 and 23, Tr. 388.

This matter is easily dispatched. In the February 5, 1981, transcript (at pages 388-89), Staff counsel makes two arguments: first, that the irradiated fuel in the core, "... somewhere around 4000 grams ...," emits more than the 100 rems per hour required for the exemption to be applicable; and second, that the amount of unirradiated fuel "... is less than 500 grams ...", or less than a formula quantity of SSNM. It is obvious that the figure "500 grams" is a typographical error. Staff

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8 The Miller letter is Exhibit C to Exhibit E attached to CBG's September 7, 1982, response to Staff's motion for summary disposition.

counsel corrected that error in her April 13, 1981, motion for summary disposition of Contention XX at page 10, noting that the correct figure was "5000 grams." This correction was necessary because UCLA had approximately 4700 grams of unirradiated fuel at that time. No dispute between CBG and Staff as to the amount of fuel on hand is revealed by the discussion reflected in this portion of the transcript, and no basis exists to accuse Staff counsel of having misrepresented that amount. This accusation is groundless.

Charges Against James R. Miller

More difficulty is presented by CBG's charge that James R. Miller made a materially false statement in an affidavit supporting Staff's motion for summary disposition.[9] In this affidavit, Mr. Miller asserted that he had verified that the irradiated fuel in the reactor core met the 100 rems per hour exemption criterion of 10 C.F.R. § 73.60. CBG claims that this was false. We referred this matter to the Inspector and Auditor. At the time it was made, Mr. Miller's statement was material because, if the fuel was not self-protecting, UCLA would have had to comply with the Category I requirements which it did not meet.

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9 This charge is made at page 11 of CBG's December 13, 1983, memorandum on Contention XX. It is spelled out in more detail in CBG's February 8, 1983, supplemental response to Staff's motion for summary disposition. When he executed this affidavit, Mr. Miller was Chief, Standarization and Special Projects Branch, Division of Licensing, Office of Nuclear Reactor Regulation.

In order to understand this matter, one needs to begin with the language of the exemption for self-protecting fuel. That exemption states:

> "... that a licensee is exempt from the requirements of this section [§ 73.60] to the extent that he possesses or uses special nuclear material which is not readily separable from other radioactive material and which has a total external radiation dose rate in excess of 100 rems per hour at a distance of three feet from any accessible surface without intervening shielding."

(10 C.F.R. § 73.60)

In making the charge CBG refers to two letters from UCLA which state that UCLA cannot meet this exemption. These are an August 15, 1979, letter from Brown of UCLA to Miller,[10] and an August 29, 1979, letter from Catton of UCLA to Reid of the Staff.[11] CBG also points out that in SECY-79-187C [12] (p. 3) the Staff informed the Commission that UCLA could not meet the 100 rems per hour exemption. CBG then points out that Mr. Miller executed the affidavit in question in April, 1981, asserting that the exemption was met. CBG asserts that it demonstrated

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10 CBG's February 8, 1983, supplemental response to Staff's motion for summary disposition, Exhibit B.

11 Id. Exhibit C.

12 Id. Exhibit D. Exhibit D contains only pages 1-3 of SECY-79-187C. Attachment K to CBG's May 9, 1984 response to Mr. Cormier's and UCLA's response to our April 13, 1984 Memorandum and Order supplied pages 1 and 4.

in its September 8, 1982, submission that UCLA's fuel falls below this standard within eight hours of reactor shutdown. CBG further asserts that it demonstrated this using UCLA's formulae. CBG's arguments summarized above are set out in its February 8, 1983, supplemental response to Staff's motion for summary disposition.

In response, Staff correctly asserts that the correspondence cited by CBG all predates a January, 1981, exchange of correspondence between Miller and Dr. Wegst of UCLA. In Miller's January 12, 1981, letter to Wegst,[13] Staff informed UCLA that it possessed more than a formula quantity of SSNM and consequently would have to take action to meet the applicable Category I requirements, qualify for the self-protecting exemption, or ship some fuel off site. In Wegst's January 29 reply,[14] UCLA informed Staff that it was scheduling reactor operations to meet the self-protecting exemption pending arrangements to ship sufficient fuel off site so as to fall into Category II. It was following this advice that Mr. Miller, assisted by Mr. Carter of his Staff, performed certain calculations which indicated that the UCLA core would meet the self-protecting exemption given certain operational assumptions.[15]

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13 See footnote 8, supra.

14 Exhibit B to Exhibit E to CBG's September 7, 1982, response to Staff's motion for summary disposition.

15 Those calculations are found in the January 9, 1984, affidavits of Miller and Carter attached to Staff's January 10, 1984, response to CBG's allegations of misrepresentation.

On the surface, this would appear to end this inquiry. However, as noted above, CBG asserts that UCLA's calculations were wrong. Miller and Carter's calculations for the Staff determined the dose rate for the entire core, as did UCLA's.[16] CBG maintains that the dose rate for each individual fuel bundle must be calculated.[17] Thus the question presented to the Board was whether Staff's and UCLA's interpretation of the self-protecting exemption was correct. This question became moot because UCLA reduced its inventory of SNM in August, 1982. Staff and UCLA never responded to CBG's position,[18] and we never decided this question.

In the context of CBG's charge against Mr. Miller, the pertinent inquiry becomes whether Mr. Miller, in calculating the dose rate for the core rather than each individual fuel bundle, knowingly departed from a Staff position that, for purposes of the self-protecting exemption, the dose from each fuel bundle rather than the core must be calculated. Such a position would be in accord with the language of the exemption itself which states that the SNM must not be "readily separable" from

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16 See Exhibit H to CBG's September 9, 1983, response to Staff's motion for summary disposition.

17 See CBG's September 9 response to Staff's motion for summary disposition at p. 15.

18 The question of the amount of SNM remaining at the NEL after this shipment was resolved by us in LBP-83-67, 18 NRC at 803-05. There we concluded that the amount remaining fell within Category II.

other radioactive material. We have no basis on which to assess Mr. Miller's knowledge of any such Staff interpretation. However, there is some indication that such an interpretation existed and that his treatment of this problem may not have been in accord with it. This indication is furnished by the following documents.

1. On August 27, 1979, the Staff held a meeting with nonpower reactor Licensees to discuss the impact of the safeguards upgrade rule.[19] A review of the transcript of this meeting reveals the following exchanges of interest.

> MR. FURR: Keith Furr, Virginia Tech.
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> I'd like to address a question to Mr. Burnett [Robert Burnett, Director, Division of Safeguards]. Since we have MTP type fuel rather than the rod type fuel, what is going to be considered the basic thing that has to meet the 100R rule? An element or a plate within that element?
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> MR. RAMOS [Steve Ramos, Project Manager, Division of Project Management]:
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> At the present time, it's a fuel element which can be anywhere from ten plates to 18 plates, depending on the configuration.
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> MR. FURR: Okay. Then you have an answer.
>
> MR. CARLSON [Donald Carlson, Reactor Safeguards Analyst]:
>
> One single element.

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19 The transcript of this meeting was furnished by Staff counsel with her response of January 10, 1984, to CBG's allegations. See, n. 24, p. 18.

MR. RAMOS: An element. Not a plate, now; an element.

MR. CURTNER: Alan Curtner, Virginia Tech.

Our question, that MTR fuel, all you would need is one pair of heavy tin-snips and you could break a --

MR. RAMOS: I'm aware of how your fuel's put together. I've seen a lot of it. I realize that with a good sledge-hammer, you'd probably need a tin-snip, but you know, that is considered not readily separable. The trigger [sic TRIGA ?] people have a bigger problem because they're just really screwed down. It's easy to knock that one off. I almost demonstrated it the other night.

(Meeting Tr. 101-02.)[20]

MR. RAMOS: ... there's a lot of things that have to go into that 100R per hour, how you take the measurements, what do you consider a mass; you know, we consider a single fuel element as the lowest common denominator. Now, when we're done with the study, it may be a different size.

(Meeting Tr. 129.)

MR. KACHEL: Pete Kachel from General Electric.

Is there going to be any credit given for comingling of irradiated fuel above 100R per hour with those who would be somewhat less?

MR. RAMOS: I can't answer that yet because we haven't finished deciding how we're going to handle that yet.

(Meeting Tr. 132.)

2. Exhibit J to CBG's September 9 response. This exhibit purports to be a summary at a "Special Nuclear Material Self Protection Criteria Investigation" conducted by Los Alamos National Scientific Laboratory.

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20 It should be noted that UCLA also employed MTR type fuel.

CBG dates this summary December 27, 1980.[21] Paragraph 2 of the summary estimates the range of doses likely to be received by an adversary attempting to remove irradiated fuel. One of the assumptions on which the estimate is based is that each fuel element has a dose rate of 100 rems per hour. Paragraph 4 evaluates the physical separability of fuel elements for various nonpower reactor fuels. It did not consider plate type fuel bundles of the kind used at UCLA separable into individual fuel plates. One assumes from this paragraph that the authors were considering the smallest units into which fuel is "readily separable" and that they would have considered a fuel bundle readily separable from other fuel bundles.

3. A proposed rule published by the NRC: "Safeguards Requirements for Nonpower Reactor Facilities Authorized to Possess Formula Quantities of Strategic Special Nuclear Material," 46 Fed. Reg. 46333, September 18, 1981. This proposed rule states that, after consideration of whether safeguards credit should be given to certain design features, the Staff concluded that "[a] TRIGA FLIP type fuel cluster may be considered a discrete unit in determining external radiation dose rates for exemption purposes ...". It may be inferred from this statement that, because of the fuel clusters design, it was not necessary to compute the radiation dose rate of each individual fuel unit within the cluster for

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21 See p. 16 of CBG's September 9 response.

exemption purposes.[22] It should also be noted that Staff concluded that some safeguards credit could be given to Argonaut reactors because their design makes it difficult to gain access to the reactor core. The appropriate credit is not indicated, but the proposed rule indicates that the Commission determined that the level of protection afforded by the proposed rule was adequate in light of the credits Staff identified.

4. Exhibit I to CBG's September 9 response. This exhibit is the declaration of Daniel O. Hirsch, President of CBG, reciting a telephone conversation between Hirsch and C. K. Nulsen of the Staff. According to the declaration, Nulsen informed Hirsch that the Staff's position was that the dose from each fuel element (i.e. bundle) must meet the self-protecting standard. The declaration also recites that, in the future on adoption of a new rule on the subject, it might be possible to average the dose for all the fuel elements in the core in order to meet the 100 rems per hour standard, but that at the time of the conversation (August 13, 1982) the dose from each element must meet that standard.

5. A proposed rule published by the NRC: "Physical Protection Requirements for Nonpower Reactor Licensees Possessing Formula Quantities of Strategic Special Nuclear Material," 48 Fed. Reg. 34056, July 27, 1983. The statement of considerations accompanying this proposal

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22 This inference is confirmed at p. 2 of SECY-79-187C, footnote 12, supra.

took into account a number of comments made on the earlier proposal described in paragraph 3, above. Some of these comments noted that the 100 rems per hour dose rate may be difficult for some licensees to maintain and that it could encourage reactor operations simply to meet that standard. As predicted by Mr. Nulsen, the response to this comment stated that "... the Licensee will be allowed to average its irradiated fuel to meet the 100 rem per hour exemption so long as no single fuel unit drops below 50 rem per hour at 3 feet." The response speaks in the future tense, it does not state that licensees at that time were permitted to adopt this approach.

While Staff has not indicated what position, if any, it took with regard to this aspect of the self-protecting exemption, the above materials all indicate that its position was that each "readily separable" fuel unit (in this case, fuel bundle) must emit 100 rems per hour in order to qualify. If this is so, then Mr. Miller departed from that position in determining that UCLA's irradiated fuel was exempt on the basis of the dose rate emitted by the entire core.

Mr. Miller's April, 1981, affidavit in question states that he had:

> "... verified that the irradiated fuel in the UCLA reactor core emits radiation such that the dose at three feet will be in excess of 100 rem per hour and that the design of the reactor makes accessibility to that fuel very difficult. In addition, UCLA has committed to schedule reactor operations to maintain the self protection of the fuel in the reactor core."

The affidavit does not indicate whether the dose was calculated for each fuel bundle or the entire core. The January 9, 1984, affidavits furnished by Miller and Carter[23] indicate that the dose rate was in fact calculated for the entire core. In light of the above materials and the wording of the self-protecting exemption, the possibility exists that UCLA received more lenient treatment on this score than other licensees.

Indeed, some justification exists for treating UCLA's situation more leniently in the circumstances. In his January 29, 1981, letter[24] Dr. Wegst indicated that, while UCLA would conform to the self-protecting standards, scheduling reactor operations to keep the fuel self-protecting was a "temporary arrangement" and that UCLA had already identified two possible recipients who had tentatively agreed to take the fuel subject to approval of the final plans. If the fuel were not self-protecting, UCLA would have been required to implement the additional security precautions mandated for Category I. We assume that these would have involved considerable expense and that practical considerations would have precluded their immediate implementation. In light of the forthcoming shipment of fuel, imposition of Category I requirements on a temporary basis may well have seemed unreasonable. Thus Mr. Miller may have been motivated to depart from the Staff

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23 See footnote 15, supra.

24 See footnote 14, supra.

position (assuming one existed) in making his calculations. Or it may have been Staff's practice to treat such situations more leniently. Indeed, in view of the fact that § 104(c) of the Atomic Energy Act[25] directs the Commission to impose on nonpower reactor licensees "... only such minimum amount of regulation ..." as will permit the Commission to fulfill its responsibilities, some justification for leniency exists.

To conclude that Mr. Miller's statement was false, it must appear that there was no justification under Staff's practices for the approach utilized by Mr. Miller. Given the wording of the statement and our lack of information with regard to Staff's practice, we cannot conclude that it was false. Furthermore, considering the temporary nature of UCLA's reliance on the self-protecting exemption and the provisions of § 104(c) of the Atomic Energy Act, we do not believe that such an ironclad rule should have been enforced in this case. Nonetheless, Mr. Miller should have stated in his affidavit that he had computed the dose rate for the entire core and why he believed this approach was justified. Had this issue not become moot, he would have been required to do so.

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25 42 U.S.C. 2134(c).

Charges Against Donald Carlson

CBG alleges that, in his affidavit supporting Staff's motion for summary disposition, Mr. Carlson made a material false statement.[26] The statement in question asserts that "[t]here are no explicit NRC regulations for the protection of nonpower reactors against radiological sabotage ...".[27] CBG's allegation appears on page 11 of its December 13, 1983, memorandum on the status of Contention XX. It is set forth in more detail in CBG's February 8, 1983, supplemental response to Staff's motion for summary disposition.[28]

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26 At the time the affidavit was executed, Mr. Carlson was a Plant Protection Analyst in the Physical Security Licensing Branch, Division of Safeguards, Office of Nuclear Materials Safety and Safeguards.

27 See footnote 1, p. 4 of the Carlson affidavit accompanying Staff's motion for summary disposition of April 13, 1981; revised and resubmitted August 27, 1982.

28 In this document, CBG also accuses Staff counsel, Colleen P. Woodhead, of a lack of candor in representing Staff's view that UCLA was not required to take measures to prevent sabotage. This allegation need not be discussed here. A similar allegation was made by this Board in its unpublished February 24, 1984 Memorandum and Order. In that document, we raised the question whether counsel's representations had been false in light of evidence that the Staff was, in fact, enforcing such a requirement. Following counsel's response of March 9, 1984, we found in our Memorandum and Order of April 13, 1984 (this Memorandum and Order is an appendix to LBP-84-22, 19 NRC ____, (June 5, 1984)), that counsel's representations accurately reflected the position of the Safeguards Division, NMSS, as it had been conveyed to her. Consequently we concluded that there was no basis to impose sanctions. The discussion of Staff Counsel's representations in that document is equally applicable to CBG's accusations; we conclude that Staff counsel's conduct in this regard was not improper.

In our April 13 Memorandum and Order, we did not reach the question of Staff's candor regarding the regulatory standards applicable to UCLA's reactor. On March 16, 1984, Staff counsel had advised that she had learned that I&E was enforcing a requirement to protect against sabotage and promised to provide further information. That information was submitted on June 12, 1984, and consists principally of the affidavit of Loren Bush of the Operating Reactor Programs Branch, Office of Inspection and Enforcement.

CBG's allegation that Mr. Carlson's statement quoted above is materially false and our concerns over the truthfulness of the representations made to Staff counsel are closely interrelated. In our discussion of these matters below, we have not considered whether these statements and positions are consistent with 10 C.F.R. Part 73. In LBP-83-25A, 17 NRC 927 (1983), and LBP-83-67, 18 NRC 802 (1983), we concluded that 10 C.F.R. § 73.40(a) does require that some steps be taken to protect against sabotage. To the extent that Staff's position is to the contrary, we conclude that it is in conflict with Part 73.

We have qualified our last statement because we have not explored in an evidentiary hearing the exact nature of the Division of Safeguard's position. This Division apparently believes that protection

against theft inherently provides some protection against sabotage.[29] We believe that this Division would not quarrel with the provisions of the UCLA security plan which were designed to protect against sabotage.[30] However, to the extent that Staff maintains that no such provisions are required by the regulations, we have concluded that it is plainly wrong.

Regardless of whether Staff's position is contrary to the regulations, the question which confronts us here is whether that position was misrepresented. In other words, was Staff lying to its counsel and this Board in representing its position. We conclude that it was not. These representations appear to have accurately reflected the position of the Division of Safeguards, NMSS, at the time they were made. However, it also appears that this organization's position, to the extent that it was binding on the rest of the Staff, was not fully communicated to and implemented by the Office of Inspection and Enforcement. The latter office appears to have continued to enforce a requirement that steps be taken to protect against sabotage.

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29 See Staff's December 13, 1983, response to this Board's order concerning Contention XX.

30 These are identified in Appendix B (which contains protected information) to our April 13, 1984 Memorandum and Order.

In order to understand what transpired, we have outlined in chronological order the important events of which we are aware which bear on this issue. This chronology is attached to this Memorandum. The chronology makes it clear that Staff was considering the matter of the need to protect against sabotage from at least January, 1979, when it advised the Commission that the subject was under study, until no later than August, 1981, when it advised the Commission that in its view such protection was not required. Indeed, in June, 1979, the Commission specifically asked for Staff's review of this subject. Although Staff now takes the position that the adoption of § 73.67 in 1979 superseded the sabotage protection requirements of § 73.40(a), the chronology reveals that Staff continued for some period after § 73.67 was promulgated to tell licensees that they must protect against sabotage under § 73.40(a). At some point during this period, Staff apparently reached the conclusion forwarded to the Commission in August, 1981. We cannot be sure when that occurred, but we are told by Mr. Kasun who in June, 1981, was Section Chief of the Section in which Mr. Carlson worked, that he believes Mr. Carlson's statement in his April, 1981, affidavit to accurately represent the collegial position of the Headquarters Safety Staff during the 1980-81 time period.[31] In view of its proximity in time to Staff's memorandum to the Commission of August, 1981, we conclude that Mr. Carlson's statement accurately reflected the Safeguards

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31 See affidavit of Donald J. Kasun attached to Staff's March 9, 1984, response to the Board's allegations of misrepresentation.

Division's position at the time it was made. Similarly, we conclude that the representations made to counsel with regard to Contention XX accurately reflect the position of the Safeguards Division.

We are compelled to note the unfortunate consequences which the Staff's approach to the sabotage issue has caused. It is clear that, even following the promulgation of § 73.67, Staff recognized that § 73.40(a) required protection against sabotage. Mr. Carlson said so in the August, 1979, meeting with nonpower reactor Licensees. He was not corrected. The August draft physical security plan which was circulated by Staff recognized the requirement, and it was specifically mentioned in the letter transmitting this plan for comment. Both of these events occurred after the promulgation of § 73.67 and Regulatory Guide 5.59. Staff's subsequent position that § 73.67 states the only applicable requirements amounts to a repeal of the applicability of § 73.40(a) to nonpower reactors.

Such a repeal cannot properly be made by Staff acting unilaterally. Section 73.40(a) reflects Commission policy that all licensees must protect against sabotage. It codified two decisions to the same effect: Florida Power and Light Co. (Turkey Point Nuclear Generating Station, Units 3 and 4), 3 AEC 173 (1967); and Trustees of Columbia University, 4 AEC 349 (1970). While we assume that Staff took its position that sabotage protection was not required only after due study and deliberation, the fact remains that Staff may not unilaterally repeal the

Commission's policy expressed in its regulations. That may be accomplished only by following the rulemaking procedures set out in the Administrative Procedures Act (APA).[32] Indeed, the APA defines "rule making" as an "agency process for formulating, amending, or repealing a rule."[33] Consequently, the rulemaking provisions of the APA[34] must be followed. See Environmental Defense Fund v. Gorsuch, 713 F.2d 802, 815 (D.C. Cir. 1983); cf. Union of Concerned Scientists v. NRC, 711 F.2d 370 (D.C. Cir. 1983).

Further, had Staff proposed that the Commission amend § 73.40(a), the Commission would have expressly indicated whether sabotage protection was to be required and I&E would undoubtedly have "gotten the word" and conformed its own operations. As things happened, it appears that I&E, perhaps unwittingly, continued to follow the policy expressed in § 73.40(a) while NMSS did not. In short, we believe this situation illustrates the pitfalls of failing to act in a straightforward manner to change the regulations to reflect changes in Staff and Commission policy.

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32 5 U.S.C. §§ 551-559.

33 5 U.S.C. § 551(5).

34 5 U.S.C. § 553.

Two remaining matters which are related to the Staff's position on protection against sabotage remain to be discussed. The first of these involves our concern, expressed in footnote 4, of our April 13, 1984 Memorandum and Order,[35] that Mr. Carlson should have informed Staff counsel that the UCLA security plan did contain provisions aimed at protection against sabotage. We voiced this concern because we believed that Mr. Carlson had reviewed the Security Plan and the response procedures attached to it which were furnished to us by UCLA. However, in his affidavit of May 1, 1984,[36] Mr. Carlson states that such was not the case. While Mr. Carlson did review the Security Plan, the response procedures were not submitted by UCLA.[37] Hence he did not review them and was unfamiliar with the details of those procedures which are aimed at sabotage rather than theft.[38]

However, two provisions of the Plan itself which are aimed at sabotage[39] and a listing of the response procedures were contained in the Plan reviewed by Mr. Carlson. Hence he was aware that these provisions

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35 See 19 NRC at ____ (Slip op. p.26).

36 This affidavit, which contains prctected information, was submitted with Staff's May 1, 1984, response to our questions concerning the Security Plan.

37 Id., page 12, ¶ 37.

38 These procedures are identified in Appendix B (which contains prot cted information) to our April 13, 1984 Memorandum and Order.

39 These are also identified in Appendix B, footnote 38, supra.

existed.[40] We believe plain common sense would have dictated that he inform Staff counsel of their existence so that they could be brought to the Board's attention. In light of our holding in LBP-83-25A that measures such as these were required, we are frankly amazed that Mr. Carlson did not flag them to counsel.[41] The fact that the technical staff considered them not to be required at all[42] is irrelevant. We held them to be required but were uninformed of their existence until we reviewed the Security Plan and Response Procedures for ourselves. Staff failed in its duty to fully inform the Board in this regard.[43]

The second matter which we must address involves two affidavits which accompanied Staff's March 9, 1984, response to our February 24, 1984 Memorandum and Order. These affidavits were executed by Leroy R. Norderhaug, Chief, Safeguards and Emergency Preparedness Branch,

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40 See ¶ 6 of Mr. Carlson's affidavit accompanying Staff's motion for summary disposition of April 13, 1981, revised and resubmitted August 31, 1982.

41 In her affidavit of March 9, 1984, accompanying Staff's response of the same date to our allegations of misrepresentation, Staff counsel states that she was unaware of any such provisions in the Security Plan until reading our February 24, 1984 Memorandum and Order. (See ¶ 4.)

42 See Carlson's affidavit of March 9, 1984, accompanying Staff's March 9, 1984, response to the Board's allegations of misrepresentation.

43 Our discussion of the obligation of parties and counsel to keep Boards informed of relevant and material information in our April 13, 1984 Memorandum and Order is fully applicable to the technical Staff. See 19 NRC at ____ (Slip op. pp. 15-22).

Region V, and Matthew D. Schuster, Chief, Security Licensing and Emergency Preparedness Section, Region V. Both affidavits indicate that following the adoption of § 73.67 in 1979, inspection of nonpower reactor Licensees for protection against sabotage ceased.[44] We bring this matter up because it seems inconsistent with the inspection procedures which have been in use for nonpower reactors.[45] While there may be an explanation for this inconsistency, it is not apparent from the materials which have been furnished us.

Conclusions and Recommendation to the Commission

An Atomic Safety and Licensing Board has no direct authority over the technical staff. While the regulations do empower us to discipline

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44 See ¶ 6, Norderhaug affidavit, and ¶ 5, Schuster affidavit.

45 See ¶¶ 4, 7-8 of Loren Bush's May 16, 1984, affidavit accompanying Staff's June 12, 1984 submittal of supplemental information. There, Mr. Bush indicates that IP81455, "Protection Against Radiological Sabotage," has apparently been in use in the field since 1977. While we have not reviewed this inspection procedure, we note that its existence, according to Mr. Bush, apparently led to the incorporation of language on radiological sabotage in MC 2545, which was adopted in January 1, 1984, and may have been responsible for the language in recent inspection reports which indicates that nonpower reactor licensees were inspected to evaluate their measures to protect against sabotage. The Norderhaug and Schuster affidavits therefore appear on the surface to be inconsistent with the inspection procedures which were in use.

counsel, including counsel for the Staff,[46] they contain no such authority with respect to other Commission employees. We believe that the improper practices outlined in this Memorandum must be brought to the Commission's attention. While we have described areas of concern with respect to specific affidavits executed by Staff members, the information which has been made available to us does not conclusively show misconduct. The information does, however, raise concerns for the integrity of the Commission's adjudicatory process.

These concerns may be summarized as follows:

-- First, when an affidavit stating a conclusion is furnished, that affidavit must state precisely what the conclusion is and on what basis it is founded. Mr. Miller's affidavit executed in support of Staff's motion for summary disposition did neither. It did not clearly inform us that Mr. Miller had determined UCLA's irradiated fuel to be self-protecting based on the dose rate of the entire core. Nor did it inform us why Mr. Miller adopted that approach rather than computing the dose rate for each individual fuel bundle. Had this issue not become moot, we would have required this explanation. Staff's failure to furnish this sort of information in the first instance certainly results in delay and a waste of time at a minimum and, at most, a loss of

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46 10 C.F.R. § 2.713.

confidence in the licensing proceeding and a board decision which is not well founded.

Affidavits should only be executed after the affiant has carefully ascertained the facts sworn to. Obvious, unexplained inconsistencies between an affidavit and established Staff procedures, such as are presented by the Norderhaug and Schuster affidavits, cannot be tolerated. Boards must to be able to rely absolutely on Staff's representation of factual matters. There is simply too much at stake in our adjudications to permit mistakes of fact, particularly by the NRC Staff. Staff affidavits which are ambiguous or incorrect force boards to engage in time-wasting inquiries to determine the facts or risk rendering a decision based ambiguous or incorrect information. Cf. Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-78-18, 8 NRC 293 (1978).

-- Second, Staff has an ironclad obligation to bring relevant and material information to the attention of boards. Mr. Carlson's failure to advise Staff counsel of the provisions in the UCLA Security Plan of the very sort we had held to be required presents a situation that cannot be tolerated in NRC adjudication. Staff, as the keeper of the public trust, must be particularly sensitive to this obligation.

-- Third, while we cannot know specifically what may have led to the concerns we have identified above, we fear that a contributing cause

may have been Staff's embroilment in this proceeding. It is understandably hard to remain detached when one's positions are attacked. However, Staff's obligation is to the public interest, and its members should take care that their actions are directed toward that end rather than toward besting an adversary.

-- Forth, we have already indicated the unfortunate state of affairs created by Staff's failure to seek Commission approval of an amendment to § 73.40(a) upon concluding that protection against sabotage need not be required. We would be surprised if the decision to proceed as Staff did could be laid at the doorstep of any individual whose conduct we have reviewed. However, while Staff is certainly free to interpret the rules, those interpretations must stop short of repealing the applicability of rules. Just as anyone else, Staff is bound by the rules. Until such time as they are amended, Staff must follow the rules.

By means of this Memorandum, we are bringing these concerns to the Commission's attention for whatever action it deems appropriate.

Finally, we wish to address the need for rulemaking to correct the situation created by Staff's treatment of § 73.40(a). We had earlier suggested to the Staff that, in light of its conclusion that sabotage did not pose a risk to Argonaut university training reactors, it should

seek Commission approval of an amendment to § 73.40(a) which would exempt these reactors.[47]

Staff took our suggestion and submitted SECY-83-500 and SECY-83-500A to the Commission. The Commission, in CLI-84-10,[48] rejected this approach apparently out of a concern that it might somehow compromise the adjudicatory process.

This proceeding is in the process of termination.[49] Consequently the Commission's concerns expressed in CLI-84-10 no longer appear valid. Moreover, while appellate consideration of our decision would review the correctness of our holding that § 73.40(a) requires protection against

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47 See LBP-83-67, 18 NRC at 808 (1983).

48 19 NRC ____ (June 8, 1984).

49 On June 14, 1984, UCLA filed a request to withdraw its application and a motion to suspend proceedings. In a letter of even date, UCLA's Chancellor informed the Chairman that UCLA would seek permission to decommission the reactor.

sabotage, it would not reach the crucial question whether such protection is technically necessary. Indeed, under our holding, Staff's position that protection against sabotage is not necessary for these reactors constitutes a clear attack on § 73.40(a) which is prohibited by § 2.758. As a result, we have not considered the merits of Staff's position and do not believe that it would be open to consideration on appeal.

Consequently, we find ourselves in substantial agreement with Chairman Palladino's dissent in CLI-84-10. We view the essential question for the Commission to be not whether we were correct, but whether Staff's technical justification for its position is correct. If the Commission agrees with Staff, it should amend § 73.40(a) so that no ambiguity will exist with respect to what is required of nonpower reactor Licensees. If the Commission does not agree with Staff's technical position, then it should instruct the Staff to modify its position accordingly. We believe that this can best be accomplished through

rulemaking, and therefore recommend that the Commission take up Staff's proposal to amend § 73.40(a).[50]

THE ATOMIC SAFETY AND LICENSING BOARD

Glenn O. Bright
ADMINISTRATIVE JUDGE

Emmeth A. Luebke
ADMINISTRATIVE JUDGE

John H Frye, III, Chairman
ADMINISTRATIVE JUDGE

Bethesda, Maryland,
July 17, 1984.

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50 In making this recommendation, we of necessity express no view on Staff's technical position. However, we do wish to note that, assuming the Staff is correct that sabotage does not pose a risk, UCLA's approach to this matter, in which it recognized that sabotage might be attempted and must be met with a response, makes good sense and is not necessarily inconsistent with the position that sabotage could not result in radiological consequences. After all, experience could prove that position wrong. It appears foolish to simply ignore the possibility of sabotage. The Commission may wish to consider requiring the kind of planning which UCLA voluntarily undertook even if it agrees with Staff that sabotage would not pose a radiological hazard.

CHRONOLOGY
Staff Consideration of Sabotage
at Nonpower Reactors

11/4/73 Sections 73.40, 73.50, and 73.60 adopted, requiring all licensees to protect against sabotage and setting specific requirements for protection of formula quantities of SSNM. (See 38 Fed. Reg. 30537.)

1977 I&E adopts inspection procedures 81405, "Security Plan," and 81455 "Protection Against Radiological Sabotage," both of which deal with sabotage at nonpower reactors. In his affidavit accompanying Staff's June 12, 1984, submittal of supplemental information, Loren Bush of I&E states that these procedures were designed to obtain information useful in evaluating the threat of sabotage at nonpower reactors (see pp. 2-3).

8/9/78 Revised proposed rules governing protection of formula quantities of SSNM were published (see 43 Fed. Reg. 35321). The revisions in the proposed rules were prompted by comments on an earlier version (see 42 Fed. Reg. 34310). In responding to the comment of nonpower reactor Licensees that the cost of the proposed safeguards enhancements might be prohibitive, the Commission stated the proposal was not intended to apply to

such licensees with less than a formula quantity of SSNM, noting that they would continue to be covered by § 73.40.

1/16/79 SECY-79-38, "Physical Protection of Category II and III Material." This paper forwarded the Staff's recommendation that the Commission publish amendments to Parts 70, 73, and 150 dealing with protection of SNM of moderate and low strategic significance against theft. The recommendation notes an earlier proposed rule on the same subject (see 43 Fed. Reg. 22216, May 24, 1978) and reacts to the significant public comments on that proposed rule. The recommendation further states that its purpose is to protect against theft and states on page 5:

> Sabotage at Non-power Reactors
>
> The proposed amendments, that are the subject of this paper, are limited to consideration of theft of SNM and do not include sabotage protection. The NRR Staff is currently examining the necessity to require additional physical protection measures at non-power reactors that have the potential for exceeding Part 100 release limits as a result of sabotage. If this proves to be necessary, NRR plans to propose a new separate section of Part 73 to deal with this issue. Preliminary investigation indicates that these added requirements, if necessary, would be applicable to a very small number of non-power reactors. For that reason, the Staff recommends that Commission approval of the proposed new Section 73.47 not be delayed pending resolution of this issue.

6/79 "Consequences of Sabotage at Nonpower Reactors," NUREG/CR-0843. This study, conducted by Los Alamos National Laboratory, concluded that only one nonpower reactor had the potential to release significant amounts of fission products in the event of sabotage.

6/28/79 Commission directs Staff to identify for Commission consideration alternative approaches to further strengthen the security of licensees with SNM in Categories II and III. Staff was directed to consider protection against sabotage as one six identified topics. (See p. 4, Memorandum for Gossick, et al from Chilk of June 28, 1979, attached to Staff's May 21, 1984, response to CBG's estimate of threat.)

7/24/79 Section 73.47 (subsequently redesignated § 73.67 at 44 Fed. Reg. 68198, Nov. 28, 1979) adopted (see 44 Fed. Reg. 43280). This represents the Commission's decision on SECY-79-38. Consistent with the Staff's representation that it was studying the question of sabotage, the statement of consideration notes that the new rule deals only with theft of SNM.

7/79 Regulatory Guide 5.59, "Standard Format and Content for a Licensee Physical Security Plan for the Protection of Special Nuclear Material of Moderate or Low Strategic Significance,"

issued for public comment. This document does not mention sabotage.

8/9/79 A draft "Sample Physical Security Plan for Non-Power Nuclear Reactor Facilities Possessing Special Nuclear Material of Moderate Strategic Significance" was forwarded to several selected licensees for review and comment. This draft provided that a purpose of the plan is to protect against sabotage. Although followed by UCLA, the draft was never formally issued by the Staff. (See Carlson affidavit, ¶ 3, accompanying Staff's March 9, 1984, response to the Licensing Board's allegations of misrepresentation.) The draft plan also appears to have contained provisions designed to protect against sabotage. (See, e.g. the sections of the plan labelled Vital Areas and Response Procedures, the latter calling for responses to bomb threats, civil disorders, fires or explosions, and industrial sabotage. The Plan is attached to the Carlson affidavit referred to immediately above.) Frank R. Pagano, Chief, Reactor Safeguards Development Branch, Division of Operating Reactors, wrote the University of Missouri at Columbia enclosing the Plan and indicating that the Commission had added § 73.47 (now 73.67) to its regulations so as to require detection of theft of SNM from Category II and III licensees. This letter also states "[a]pplicable nonpower reactor licensees must meet these requirements for

detection of theft in addition to previous regulatory requirements for protection against sabotage." (This letter is also attached to the Carlson affirdavit referred to above.)

8/27/79 Staff meeting with nonnpower reactor licensees at Glen Ellyn, Illinois, on the subject "Impact of the Safeguards Upgrade Rule on Nonpower Reactor Licensees." CBG relies on Mr. Carlson's statements reported in the meeting transcript for the proposition that his affidavit in support of Staff's motion for summary disposition was materially false when it stated that there was no explicit requirement that UCLA take steps to protect against sabotage. Two portions of the meeting transcript are relevant.

> MR. DAVIS: Monte Davis, Georgia Tech.
>
> I have some trouble with some of your comments, Mr. Burnett. It sounds like theft and sabotage are being used interchangeably.
>
> MR. BURNETT [Robert Burnett, Director, Division of Safeguards, NMSS]: Negative.
>
> MR. DAVIS: Because throwing a bomb is -- although I don't know of any kind of a nuclear facility that's been bombed. I would like to know about that.
>
> MR. BURNETT: Well, it depends on what we call the facility, but the visitor center on the West Coast, the Trojan was bombed, but to answer your first question, no, theft and sabotage are not the same, and in the upgrade rule that is being published, I thought it had gone out, we have moved away from individual threats to facilities, and we have defined two types of threats in this country, postulated threats, one being a threat [theft?] and one being a sabotage.

Some facilities would have to meet both threats, like a high-enriched uranium facility that has greater than trigger quantities available. They have both a sabotage and a theft potential, whereas a nonpower reactor, if it's below trigger quantity, most probably, it has a single threat, that being sabotage.

Now, if they have unirradiated cores sitting on hand, then that could put them into the threat, I mean a theft, I meant theft, that could put them into the theft scenario, but no, they're both being treated totally different.

MR. CARLSON [Donald Carlson, Reactor Safeguards Analyst]: What I might add, you have to protect against sabotage under the provisions of 73.40. (Meeting Tr. 55-56.)

MR. BURN: Bob Burn, University of Michigan.

This is perhaps an extension, but I'd at least like to know your feelings on this.

This sabotage aspect of things, that is, right now, we could say well, we could limit our controlled access area to just our fuel vault or maybe also to the pool core or the pool surface if some of the elements are not self-protecting, but then I think to myself, well, somebody could conceivably come down and rupture a bean port, drain the pool, commit sabotage down there so even though things wouldn't be stolen, they could cause a horrible damage.

MR. NULSEN [Robert Nulsen, Project Manager. Division of Safeguards, NMSS]: Category II/III rule does not protect against sabotage.

MR. BURN: I was going to ask you, is sabotage coming?

MR. CARLSON [Donald Carlson, Reactor Safeguards Analyst]:

Sabotage has always been here. In 1974, your initial plans were submitted to protect against sabotage. You have to follow the provisions of 50.35 C which tells you that you have to follow 73, Part 73, and in there, in 73.40, it says you have to protect against sabotage.

Now, the plan that NRR put together to meet a Category II facility encompasses sabotage and protective measures. It protects the reactor as well as the fuel in the reactor, vital equipment, if you will, or the old term of essential equipment which the Staff used in 1974. (Meeting Tr. 142-43.)*/

9/80 Draft inspection procedures 81N22, "Security Organization," and 81N38, "Records and Reports" were put into use by I&E on an interim basis. Procedure 81N22 paraphrased 10 C.F.R. § 73.40(a); procedure 81N38 was designed to check compliance with 10 C.F.R. § 73.71(b).

3/20/81 Contention XX admitted. (See unpublished Board Order subsequent to second prehearing conference at p. 12.)

4/13/81 Staff moves for summary disposition of Contention XX, relying on the Carlson and Miller affidavits.

8/13/81 Staff informs the Commissioners of its conclusion that sabotage of nonpower reactor fuel would create only minimal problems. (See Memorandum for the Commissioners from William J.

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*/ Apparently, the plan referred to in the last paragraph is the plan discussed in the preceding entry.

Dircks dated August 13, 1981, attached to Staff's May 21, 1984, response to CBG's estimate of threat. At page four of his affidavit accompanying Staff's June 12, 1984, submittal of supplemental information, Loren Bush notes that I&E was omitted from the distribution of this Memorandum.)

1/27/84 I&E promulgates Manual Chapter 2545 in order to restore the safeguards inspection program at nonpower reactors which had been discontinued in 1980 for budgetary reasons. MC 2545 listed IP81455, "Protection Against Radiological Sabotage," as an applicable inspection procedure. (Bush affidavit accompanying Staff's June 12. 1984, submittal of supplemental information, pp. 3, 5.)