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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION '90 NOV 19 P3:42

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judge
Peter B. Bloch

In the Matter of	)	
	)	
THE CURATORS OF	)	Docket Nos. 70-00270-MLA
THE UNIVERSITY OF MISSOURI	)	30-02278-MLA
	)	
(Byproduct License	)	Re: TRUMP-S Project
No. 24-00513-32;	)	
Special Nuclear Materials	)	ASLBP No. 90-613-02-MLA
License No. SNM-247)	)	

INTERVENORS' MOTION FOR RECONSIDERATION OF
MEMORANDUM AND ORDER OF NOVEMBER 1, 1990
(Licensee's Partial Response Concerning Temporary Stay)
PART II

Part I of this Motion was filed on November 12, because of the urgency of the three points dealt with therein. This Part II will therefore commence with Point Number 4.

4. Plutonium 241 is included in the 2 curies of plutonium listed in the regulations as the threshold for emergency planning

Footnote 9, at page 6, further states: "It therefore appears that the NRC did not intend to include ^{241}PU, which is a beta emitter, in the 2 curies of plutonium listed in the regulations as the threshold for emergency planning." It is not clear whether this is a casual comment, or a ruling, or something else.

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Whatever it is, Intervenors respectfully submit that it is erroneous. Section 70.22(i) explicitly applies to each application to possess "in excess of 2 curies of plutonium in unsealed form." There is no basis to suppose that the NRC made a mistake. Even if we should all concede that a mistake had been made (which we do not), however, the regulation must be complied with, not ignored.

Section 70.22(i) says what it says. It "may not be challenged" in this proceeding, either by the parties or by the Presiding Officer. Section 2.1239(a). Even if there were some basis for challenging the regulation, therefore, no such challenge could be made here. Intervenors believe that a number of the regulations are not sensible, but have not been permitted to challenge them.

Further, the Presiding Officer's rationale misses the mark altogether. If his rationale were correct, Table C in Part 30 would list plutonium 239 and 240, which are alpha emitters. But that table does not list any plutonium. The reason is that plutonium is regulated under Part 70, and Schedule C relates only to Part 30. The threshold for emergency planning for plutonium is established by § 70.22(i), and has nothing to do with Part 30 or its Schedule C.

This statement should be deleted.

5. Determination of the total quantity of curies should await evidence and argument

At page 5 the Memorandum states that a conservative estimate of the total curie content of the 10 gms of plutonium that Licensee is authorized to possess -- including 1.21 curies of ^{241}PU -- is 1.992 curies. The Presiding Officer thus continues his zig-zag course through the litigation, jumping to contradictory conclusions based on the paper most recently filed by any party. This practice leads inevitably to error. Determinations of this sort should not be made without

hearing from the opposition. The estimates presented by the Licensee are based on various assumptions with various margins of error. After a hearing, Intervenors expect that there will be evidence that the total curie quantity exceeds two. (Indeed, Licensee's own evidence supports that conclusion. See page 5, *infra*.) These determinations simply should not be made without opportunity for hearing. Intervenors object to the denial of a hearing in relation to the vacating of the temporary stay.

At this point, it should not be necessary to focus on whether the curie content of the "special nuclear material requested" (Reg. Guide 10.2, § 4.3) is equal to two curies. Concentrating on that number is a diversion. The Licensee found its opportunity to focus on that number in the Presiding Officer's mistaken statement that the Part 70 license "permits [the Licensee] to possess a total of two curies of plutonium." Memorandum and Order (Grant of Temporary Stay), October 20, 1990, page 3. That statement was in error, as is implicitly recognized by the Order of November 1, 1990, authorizing amendment of the license to increase the authorized curies. The license amendment explicitly restricts the authority granted the Licensee to the terms of the application, which specifies a maximum of .71[1] curies. See note 1 at page 2 of Part I of this Motion. At no

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[1] The Licensee complains at length of a decimal misplaced by Intervenors' counsel. The decimal was correctly placed in the Declaration of the TRUMP-S Review Panel, and the error was promptly corrected. It should be noted that Licensee's counsel himself had confirmed the number .07. Notes of the telephone conference of October 19, 1990, show the following colloquy:

Judge Bloch:	. . . there was .7 curies before . . .
Green:	I think it was .07 before, wasn't it?
Axelrad:	.07.

point does the license amendment make any reference to a limit of two curies.

However, if the Motion for Summary Disposition is not granted, it may become important to determine whether the special nuclear material requested contains two curies. For this reason, the Presiding Officer's announcement that it contains 1.992[2] curies is disturbing, and should be withdrawn. What the Presiding Officer has done is not only to reverse the burden of going forward with the evidence, but to deny Intervenors any meaningful opportunity to present argument or evidence. Subpart L has major faults, but it is not inherently so utterly unfair as the process being followed here. The theory of Subpart L is that the license application will disclose the isotopes, curie content, safety procedures, and other information; the Intervenors will show wherein the application is deficient; and the Presiding Officer in that event will set aside the license. The Presiding Officer has reversed this process. Here, the license omits the isotopes and most of the curies. When the Intervenors demonstrate the omissions, the Presiding Officer does not set aside the amendment, as he should, but allows the Licensee to produce the information (or some of it) which should have been in the application. The Intervenors do not even have an opportunity to demonstrate deficiencies in that

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[2] This number was erroneously referenced as 1.994 in Intervenors' Motion for Order Recommending Formal Hearing, etc., at page 3. The difference is not material for present purposes. Either is realistically two, plus or minus a standard statistical margin of error, which must be applied. The Licensee has bitterly protested the attribution of this estimate to the Licensee, insisting that the Licensee calculates 1.94 (Licensee's Opposition to Intervenors' Motion for Order Recommending Formal Hearing, etc., at pages 7-8). Intervenors understand that the Presiding Officer derived 1.992 from the Licensee's submittal, so it seemed appropriate to attribute the 1.992 to the Licensee. Apparently Intervenors are missing some detail of significance to the Licensee. But we should not be nit-picking. Both 1.992 and 1.94 are, for practical purposes, two, plus or minus the error bars associated with such estimates.

showing; the Presiding Officer immediately forms conclusions based on what is, in substance, an ex parte showing. The due process shortcomings of Subpart L are compounded by this process, which denies the Intervenors any opportunity to show the deficiencies in the new showing.

This process even precludes Intervenors from showing what conclusion is to be drawn from the evidence submitted by the Licensee. The New Brunswick Lab "Certificate of Analysis" (Exhibit 1 attached to Morris affidavit) is not a certificate at all. If one reads the ordinary small print on Exhibit 1, instead of the fancy large print, one finds that "All values given are not certified . . . " The source of the estimates is not explained, nor is the margin of error set forth. The Licensee was able to calculate a total of barely less than 2, ignoring statistical range of error, by using the last column on page 2 of the 1982 Los Alamos calculation (Attachment 7),[3] but would inevitably have calculated more than 2 if the middle column had been used. The laws of decay are inexorable. Where two different calculations lead to slightly different results, good safety practices require use of the more conservative estimate. The statement (page 5) that a conservative estimate of the total curie content is 1.992 curies is directly in conflict with the evidence submitted by the Licensee, and should be withdrawn.

Any such measurements have a margin of error. A calculated total of 1.99 is basically 2, plus or minus error bands. The Licensee has not set forth the margin of error that must be assigned to the calculation. On the basis of the Licensee's own submission, it is not possible to conclude without a hearing, and real measurements, that the total curies in the Part 70 material are less than two. This

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[3] The Presiding Officer at page 5 refers to this letter as an analysis, but it is not. It is a calculation.

conclusion should be deleted.

6. The admitted facts vindicate the conclusion of the TRUMP-S Review Panel

At page 4 of the Memorandum the Presiding Officer rejects his earlier findings that the Licensee failed to disclose that its material included forms of plutonium other than 239 and 240 and that these forms may contain curie amounts of other plutonium isotopes, not just millicuries or microcuries, and that Licensee's personnel should have known that the curie content of its plutonium was far more than it disclosed. That rejection is clearly erroneous. These findings are all valid. The Licensee now admits that plutonium 241 is present, in the amount of 1.21 curies, and that the curie content of the material is nearly triple the amount stated in the application. Surely the Licensee's personnel should have known that. The sentence respecting those findings should be deleted, and the findings reaffirmed.

On the same page the Presiding Officer states that the TRUMP-S Review Panel concluded that the Licensee had to be using either weapons-grade plutonium or reactor grade plutonium, and that the smallest amount of ^{241}PU content that could be present would be about five curies. That statement misrepresents the conclusions of the TRUMP-S Review Panel, echoing the Morris affidavit. What the TRUMP-S Review Panel concluded in this report was:

1. The Licensee's representation of 710 millicuries "was highly unlikely to be correct" (¶ 15). That conclusion was valid. The Licensee now admits that the correct curie content is nearly three times that number.

2. The neutron capture which produced the Pu-240 would, by the laws of physics, also produce some -241 and -242, and the hazard of ^{241}PU is multiplied because it decays into americium -241, a long-lived and very toxic material (¶ 16).

That conclusion was valid, as the Licensee has at last acknowledged.

3. The information provided to the NRC Staff and the public was insufficient to support a satisfactory review of the license applications, and the Panel would have to make the best assumptions and guesses it could (¶¶ 8, 9, 10, 12, 13, 14). That conclusion is clearly valid.

Because the Licensee included in its application none of the requisite information, as required by the regulations, and has refused to make the information available, the TRUMP-S Review Panel has been compelled to make the assumptions needed to make these calculations. The Panel has pointed out at length the difficulty of evaluating this application without being furnished the necessary information and has meticulously pointed out the assumptions which have been made. Nothing filed by the Licensee casts doubt on the Panel's conclusions.

The Panel demonstrated that the Licensee omitted from the application two of the isotopes and most of the curies, and that any reasonable expert reviewing the application would have looked for ^{241}PU. The Panel was correct. The paragraph beginning on page 4 should be deleted.

7. The facts raise a substantial question of the competence of the Licensee's personnel

At page 7 the Memorandum states that the failure of Licensee to disclose the presence of 1.21 curies ^{241}PU does not cast doubt on the competence of the Licensee's personnel. Surely the NRC must set higher standards than this.

We are talking about the competence of the people who are to be responsible for handling the most highly toxic substances known to man, and are supposed to be sufficiently knowledgeable and skilled in this technology to ensure

the safety of the lab personnel and the public. These people now admit that the true curie content of the special nuclear material they want to use is approximately 280% of the amount set forth in the application. After hearing, that number is likely to increase, but, for now, 280% should be sufficient to raise an eyebrow. It seems clear that this was not a deliberate misrepresentation. It follows that this was a result of ignorance. The fact that the Licensee's new admission puts it right on the border line of the threshold which triggers other requirements of the regulations makes this error all the more significant.

Further, the Part 70 application shows no awareness that the material requested will include a strong alpha and gamma emitting isotope (americium) in quantities sufficient to require the use of a thick metal shield and other equipment to protect the lab personnel from an excessive dose, although such equipment is described in the Part 30 application. This is a serious error in terms of safety, which apparently could result only from the ignorance of the Licensee's personnel, respecting the materials they would be dealing with.

Compare what the application set forth with what it should have set forth:

Application	Proper Application
710 mCi	2 curies
Plutonium 239	Plutonium 239
Plutonium 240	Plutonium 240
	Plutonium 241
	Americium 241

A layman's ignorance of these technical matters is understandable, almost inevitable. That is why we require technical expertise in positions of responsibility for such materials. Even an expert can be forgiven for misplacing a decimal now and then. To err is human. But when the responsible authority misses the mark by this margin, not because of a misplaced decimal but because of ignorance of

the curie content, there is real concern.

This much of the Memorandum should be deleted.

8. When the Licensee writes letters to the Judge, the Intervenors have a right to respond

At note 16 on page 8 the Memorandum states that the letter of October 31, 1990, to the Presiding Officer, in response to the letter of October 30 from the Licensee's counsel, "cannot be considered in this proceeding." If the Licensee's counsel has a right to write a letter to the Judge, arguing the issues, then due process requires that the Intervenors have a right to respond. This ruling should be revoked. In any event, Intervenors hereby re-submit that letter, incorporating it by reference as a part of this motion for reconsideration.

9. All of the conclusions at pages 9-12 , respecting emergency planning, should be deleted.

Jumping at a contradictory conclusion each time another paper is filed destroys the basis of litigation. The Presiding Officer has not only reversed the burden of going forward, but has also reversed the burden of persuasion.

Two witnesses will support Mr. Ottinger's report of what the fire battalion chief said. The way to get at the facts is not to jump to conclusions, but to conduct a hearing with cross-examination, and find out who talked to the fire chief, and whether anyone persuaded him to change his story. Conclusions at this point deny the minimal kind of hearing which is needed to get the truth.

The MURR Emergency Plan was prepared years before anybody thought of an alpha lab, and cannot possibly be designed to deal with a fire involving unsealed transuranics and alpha emitters there. It was not evaluated by the NRC Staff in relation to these two license amendments. As the Presiding Officer agreed

in the telephone conference of August 21, 1990, Adam's affidavit demonstrates that safety was not addressed in reviewing these applications.

There will have to be a lot of evidence respecting the training and equipment of the Columbia Fire Department before anybody can conclude that it is capable of fighting such a fire.

There will be expert testimony explaining that the purported emergency plan is not a plan at all, but a hope and a prayer.

This broad range of conclusions at this point is entirely inappropriate. No conclusions should be reached on the adequacy of emergency planning until there has been a full hearing, with cross-examination.

10. The motion for Summary Disposition is far from irrelevant

At note 29 on page 13 the Memorandum states that "Intervenors' motion for Summary Disposition, October 25, 1990, seems irrelevant." On the contrary, the motion should be granted.

With written presentations, rebuttals, hearings, and arguments over a stay, this case will go on for a long time unless there is a summary disposition. It will waste vast resources of time and money on both sides, aside from the NRC resources. The University can afford to throw money around, although not all the people of Missouri approve, but the Intervenors cannot. If the litigation is ripe for disposition, the litigation should not be made into an endurance contest.

After Intervenors cited a decision of the Supreme Court holding that a new regulation governs any pending matter which has not been finally resolved, the Presiding Officer called for briefs on the question of the applicability of the April 7, 1990, amendments adding §§ 30.32(i) and 70.22(i) to Title 10 of the Code of Federal Regulations. Licensee has been unable to find any case in conflict with

this well settled rule. See Licensee's Written Presentation (Nov. 14, 1990) at 19-22. Licensee simply proclaims that the rule does not apply to an application filed before April 7.

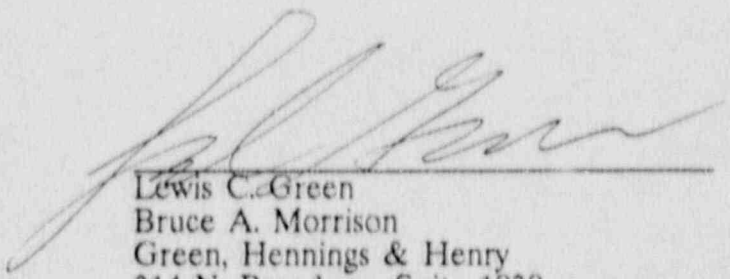
The contention is specious, for two reasons. First, this hearing is not simply an appellate review of the Staff's action in granting the applications; this is a de novo hearing on whether the application is to be granted. That question can only be answered in the affirmative if regulations currently in effect are complied with. Second, even if this were an appellate judicial review of an administrative decision, the new regulation "will be given effect while a case is on direct review." *Linkletter v. Wallace*, 381 U.S. 618, 627 (1965).

Both license amendments are now ripe for disposition, on the admitted facts. A motion for Summary Disposition has been filed on the Part 70 license. The facts at last admitted by the Licensee demonstrate that the license amendments are invalid. As to the Part 30 license there may be a dispute as to whether the Licensee has developed an adequate emergency plan, or whether the Licensee can develop an evaluation showing that the maximum dose to a person offsite would not exceed 1 rem, but those are showings which are to be evaluated by the Staff before disputes are resolved by a Judge. There is no dispute that those matters have not even been presented to the Staff. Accordingly the Part 30 amendment, as well as the Part 70 amendment, should be vacated, and the matter remanded to the Staff for consideration of these matters.

There is no basis for prolonging the litigation. The motions are not irrelevant, but of primary importance. They should be promptly granted. The quoted sentence from note 29 should be deleted.

CONCLUSION

The erroneous portions of the Memorandum and Order should be deleted. The simplest way to handle this would be to withdraw the Memorandum, and all of the Order except ¶ 3.



Lewis C. Green
Bruce A. Morrison
Green, Hennings & Henry
314 N. Broadway, Suite 1830
St. Louis, Missouri 63102
(314) 231-4181
Attorneys for Intervenors

CERTIFICATE OF SERVICE

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True copies of the foregoing were mailed this 16th day of November, 1990, by first class mail, postage prepaid, to:

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OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Maurice Axelrad, Esq.
Newman & Holtzinger, P.C.
Suite 1000
1615 L Street, N.W.
Washington, DC 20036

Director
Research Reactor Facility
Research Park
University of Missouri
Columbia, Missouri 65211

Ms. Betty H. Wilson
Market Square Office Building
P. O. Box 977
Columbia, MO 65205

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